

**FY15 PROJECT PROPOSAL SUMMARY PAGE**  
**Continuing, Multi-Year Projects**

**Project Title:** Science Coordination and Synthesis for the Long Term Monitoring Program (Gulf Watch Alaska)

**Project Period:** February 1, 2016 – January 31, 2017

**Primary Investigator(s):** Kris Holderied and Tammy Hoem Neher, NOAA Kasistna Bay Laboratory  
 Kris.Holderied@noaa.gov, 907-399-4412, 2181 Kachemak Drive, Homer, AK 99603

**Study Location:** North-central Gulf of Alaska region from Katmai National Park to Prince William Sound

**Project Website:** www.gulfwatchalaska.org

**Abstract\*:** 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.

**Estimated Budget:**

**EVOSTC Funding Requested\*** (must include 9% GA):

<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>TOTAL</b>
\$123.5	\$139.0	\$148.35	\$146.06	\$151.62	\$708.50

**Non-EVOSTC Funds to be used:**

<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>TOTAL</b>
\$13.0	\$13.0	\$13.0	\$13.0	\$13.0	\$65.0

\* Funds expressed in \$1000 increments

**Date:** September 1, 2015

## **I. EXECUTIVE SUMMARY**

The overarching goal of the long-term monitoring program (Gulf Watch Alaska) is to provide sound scientific data and products to inform management agencies and the public of changes in the environment and the impacts of these changes on injured resources and services. The science coordination and synthesis efforts support this goal by documenting the overall scientific information from the monitoring program, improving information sharing between program principal investigators (PIs) and with the Herring Research and Monitoring program (HRM), assisting in development of multi-disciplinary datasets and tools, and informing an ongoing evaluation of the long term monitoring program's effectiveness and priorities in meeting EVOSTC goals. This continuing project addresses three primary objectives: 1) improve communication and data sharing; 2) improve and document integration of monitoring results; and 3) improve communication of monitoring information to trustee agency and other resource managers and the general public.

## **II. COORDINATION AND COLLABORATION**

### **A. Within an EVOSTC-Funded Program**

The first objective of the science synthesis project is to improve communication and data sharing between the various projects within the Gulf Watch Alaska program. Below is a list of the projects and coordination activities we propose for year 5 of the program:

#### Gulf Watch Alaska Program Management, Outreach, and Administration Activities

- *Program coordination and logistics – Prince William Sound Science Center (PWSSC) and Alaska Ocean Observing System (AOOS):* The science lead and science coordinator will continue to work closely with PWSSC staff to assist with overall administrative activities of the program, including developing reports, and planning meetings and events.
- *Outreach – AOOS:* The science coordinator will continue to participate in the Outreach Planning Committee and work to report and plan local events (Homer, Alaska) as well as assist with annual updates to website pages and publicly accessible information.
- *Data management –AOOS/Axiom Consulting:* The science coordinator and science lead will continue to work closely with Axiom staff to develop new data management and data access tools, including participating in AOOS tool rating webinars and teleconferences, providing data and feedback for new access tools in the data portal, and providing feedback to improve metadata generation tools. The science coordinator also will continue to work with all project PIs within the program to ensure new data is loaded to the portal, has undergone QA/QC measures, and also has appropriate metadata available for public access.
- *Historical data management and synthesis – National Center for Ecological Assessment and Synthesis (NCEAS):* The science coordinator will continue to facilitate communication between project PIs and NCEAS staff for data collection and synthesis and work to provide feedback for new data management tools and data publication. The science coordinator will also facilitate communication between the NCEAS-led synthesis working groups, and the Gulf Watch Alaska and Herring Research and Monitoring program PIs.
- *Conceptual ecological modeling– Alaska Sea Life Center (ASLC):* The science coordinator will continue to work with ASLC staff to develop sub-model descriptions and updates and

incorporate information into reports as well as plan and coordinate model development during meetings and workshops for the program.

#### Gulf Watch Alaska Field Monitoring Project Coordination Activities

The science coordinator will continue to conduct a variety of activities to facilitate reporting, outreach, sharing, and publication of the information from the various monitoring projects.

These activities will include:

1. Tracking and assisting with data and metadata publication in the program data portal.
2. Editorial review, collation, and writing the program synthesis pieces of reports and work plans.
3. Editorial review, website development and updates, and assistance with coordination of outreach events for each project.
4. Planning and documenting all quarterly teleconferences and meetings, providing notes and information to the group.
5. Attendance and presentation of program information at a variety of scientific workshops to facilitate coordination of ideas and information from outside of the program.
6. Maintenance and updates for program intranet site for purposes of conveying important dates and program information to the group.

These activities will continue to be conducted as a coordinated effort for all of the following monitoring projects within the program:

- *Gulf of Alaska mooring (GAK1) monitoring – University of Alaska Fairbanks (UAF)*
- *Seward line monitoring – UAF*
- *Oceanographic conditions in Prince William Sound – PWSSC*
- *Oceanographic monitoring in Cook Inlet – Kachemak Bay Research Reserve (KBRR)/ University of Alaska Anchorage (UAA) and NOAA Kasitsna Bay Laboratory (KBL)*
- *Continuous plankton recorder – Sir Alister Hardy Foundation for Ocean Science (SAHFOS)*
- *Ability to detect trends in nearshore marine birds – US National Park Service Southwest Alaska inventory and monitoring Network (SWAN)*
- *Long-term killer whale monitoring – North Gulf Oceanic Society (NGOS)*
- *Humpback whale predation on herring – NOAA National Marine Fisheries Service (NMFS) Auke Bay Laboratory*
- *Forage fish distribution and abundance – U. S. Geological Survey (USGS) Alaska Science Center*
- *Prince William Sound marine bird surveys – U.S. Fish and Wildlife Service (USFWS)*
- *Nearshore benthic systems in the Gulf of Alaska – USGS Alaska Science Center/ USNPS SWAN, Coastal Resources Associates*
- *Ecological Communities in Kachemak Bay – UAF*
- *EVOS oil exposure of harlequin ducks and sea otters – USGS Alaska Science Center*

**B. With Other EVOSTC-funded Projects**

As part of the Science Coordination and Synthesis project, the science lead and science coordinator will continue to work closely with the Herring Research and Monitoring program team lead and PIs to maintain reporting consistencies and share information. The science coordinator and HRM program lead will continue to participate in annual meetings, teleconferences and work closely to encourage information sharing and address shared questions between the programs.

**C. With Trustee or Management Agencies**

As described above, the long-term monitoring program science coordinator and science lead coordinate ecosystem monitoring activities with NOAA, USFWS, USGS and USNPS investigators in the Gulf Watch Alaska program. We also coordinate with Alaska Department of Fish and Game researchers and managers through coordination on synthesis activities with the HRM program and in coordination with NCEAS working groups.

**III. PROJECT DESIGN – PLAN FOR FY16**

**A. Objectives for FY16**

This project addresses three primary objectives that are ongoing: 1) improve communication and data sharing; 2) improve and document integration of monitoring results; and 3) improve communication of monitoring information to resource managers and the general public.

**B. Changes to Project Design**

No changes are proposed.

**IV. SCHEDULE**

**A. Objectives for FY16**

**Objective 1.** Improve communication, data sharing and coordinate field work planning between principal investigators of the individual monitoring projects, as well as with other agencies and research organizations.

*Ongoing throughout project.*

**Objective 2.** Improve and document integration of science monitoring results across the Gulf Watch Alaska program - working with the PIs, data management and modeling teams as well as other agencies and research organizations.

*Ongoing throughout project.*

**Objective 3.** Improve communication of monitoring information to resource managers and the public through data synthesis and visualization products and tools – working with the data management, conceptual ecological modeling and outreach teams, as well as other agencies and research organizations

*Ongoing throughout project.*

**B. Measurable Project Tasks for FY 16**

Many of the Science Coordination and Synthesis tasks and activities will be ongoing throughout year 5 and will continue as proposed. These include:

1. Coordinate with program team leads, PIs, administrative team and EVOSTC staff on overall Gulf Watch Alaska program planning, reporting and evaluation. This includes coordinating and planning a joint special issue with the Herring Research and Monitoring program to be used as the programs' five year status summary.
2. Plan agendas and facilitate program and small working group meetings and teleconferences.
3. Maintain program field work schedule and tracking of outreach and research activities.
4. Coordinate with the herring program lead on program implementation and joint information needs.
5. Coordinate with groups outside the Gulf Watch Alaska program (North Pacific Research Board Gulf of Alaska project, USFWS Landscape Conservation Cooperatives, etc.) on joint synthesis of information.
6. Coordinate with PIs to improve integration of multi-disciplinary monitoring activities within geographic regions (PWS, outer Kenai Peninsula coast, lower Cook Inlet) and of monitoring within single disciplines between different regions.
7. Assist in development and refinement of conceptual ecological models with the modeling team, herring program lead, and outside groups.
8. Work with data management team, modeling PI, and outreach team to develop data exploration and visualization tools.
9. Assist with internal "beta" testing of initial data visualizations and tools developed by the data management team.
10. Network with other monitoring programs and regional stakeholders to identify information needs that may be met by improved data visualization tools for the Gulf Watch Alaska program data.

## **B. Measurable Project Tasks for FY 16**

### **FY 16, 1st quarter (February 1, 2016 - April 31, 2016)**

*February: Compile/edit Year 4 annual report for EVOSTC and semi-annual NOAA report.*

*March: Submit Year 4 annual report for EVOSTC and semi-annual NOAA report.*

*April: Plan and coordinate quarterly program teleconference*

*Submit next 5 year program proposal*

*Continue planning for year 5 status summary report or special journal issue, in coordination with HRM lead and EVOSTC staff*

### **FY 16, 2nd quarter (May 1, 2016-July 30, 2016)**

*May: Complete updates to program website and outreach materials*  
*June-July: Coordinate review and response to comments from proposal.*  
*Plan and facilitate quarterly program teleconference*

**FY 16, 3rd quarter (August 1, 2016 – October 31, 2016)**

*August: Compile and edit semi-annual report for NOAA*  
*September 1: Submit revised program proposal for FY 2017 invitation (pending EVOSTC invitation to propose)*  
*October: Plan annual PI meeting and workshops*  
*Coordinate compilation of initial draft of five year status summary or special journal issue manuscripts*

**FY 16, 4th quarter (November 1, 2016- January 31, 2017)**

*November: Annual PI meeting and workshops*  
*December-January: Preparation for and attendance at AMSS*  
*Plan and facilitate quarterly program teleconference*  
*Coordinate preparation and submission date of 5-year status summary or joint special issue with HRM program and EVOSTC staff*

**V. PROJECT PERSONNEL – CHANGES AND UPDATES**

Dr. Tammy Hoem Neher, the long-term monitoring program science coordinator, is included as a PI on the Science Coordination and Synthesis project.

**VI. BUDGET**

**A. Budget Forms (Attached)**

Please see LTM program budget workbook.

**B. Changes from Original Proposal**

No changes.

**C. Sources of Additional Funding**

NOAA Kasitsna Bay Laboratory will provide in-kind salary support (\$13K) for the science lead (Holderied) in year 5 of this project.