

## **EVOSTC ANNUAL PROJECT REPORT**

Recipients of funds from the *Exxon Valdez* Oil Spill Trustee Council must submit an annual project report in the following format by **September 1** of each fiscal year for which project funding is received (with the exception of the final funding year in which a final report must be submitted).

Satisfactory review of the annual report is necessary for continuation of multi-year projects. Failure to submit an annual report by **September 1** of each year, or unsatisfactory review of an annual report, will result in withholding of additional project funds and may result in cancellation of the project or denial of funding for future projects.

**PLEASE NOTE:** Significant changes in a project's objectives, methods, schedule, or budget require submittal of a new proposal that will be subject to the standard process of proposal submittal, technical review, and Trustee Council approval.

**Project Number: 040340**

**Project Title: Long-term oceanographic monitoring of the Gulf of Alaska Ecosystem**

**PI Name: Thomas Weingartner**

**Time period covered by report: 10/1/04 – 8/31/05**

**Date of Report: 8/30/05**

**Report prepared by: Thomas Weingartner**

**Project website address (if applicable): .....**

**Work Performed:** Summarize work performed during the reporting period, including any results available to date and their relationship to the original project objectives. Explain deviations from the original project objectives, procedural or statistical methods, study area or schedule. Also describe any known problems or unusual developments, and whether and how they have been or can be overcome. Include any other significant information pertinent to the project.

We completed the monthly CTD sampling at hydrographic station GAK 1. We recovered and re-deployed the GAK 1 mooring in April 2005 incorporating a fluorometer on the mooring. Two manuscripts using the GAK 1 data were published in the January 2005 issue of *Deep-Sea Research* and a third is undergoing revision for publication in *Continental Shelf Research*. Two presentations incorporating the GAK 1 results were given at the fall (October 2004) PICES meeting held in Honolulu (one by Weingartner and one by Royer).

**Future Work:** Summarize work to be performed during the upcoming year, if different from the original proposal. Describe any proposed changes in objectives, procedural or statistical methods, study area or schedule. **NOTE:** Significant changes in a project's objectives, methods, schedule or budget require submittal of a new proposal subject to the standard process of proposal submittal, technical review and Trustee Council approval.

The September 2005 occupation of the GAK 1 mooring remains to be performed as part of this project. We received additional funding from the Alaska Ocean Observing System (AOOS) to purchase and incorporate autonomous nitrate sensors on the GAK 1 mooring. These instruments will be deployed in March-April 2006 when that mooring is next serviced. The nitrate sensors augment the value of this mooring because these devices allow us to observe how nitrate (an essential phytoplankton nutrient) varies seasonally and interannually. The nitrate data from GAK1 can be extrapolated across the inner 30 km of the Alaska continental shelf (within the Alaska Coastal Current domain). There is no additional cost to EVOS involved in the

deployment of the nitrate sensors as they can be efficiently incorporated into the existing mooring.

**Coordination/Collaboration:** Describe efforts undertaken during the reporting period to achieve the coordination and collaboration provisions of the proposal, if applicable.

Data is shared with all who request it and is available from our website.

**Community Involvement/TEK & Resource Management Applications:** Describe efforts undertaken during the reporting period to achieve the community involvement/TEK and resource management application provisions of the proposal, if applicable.

Not Applicable

**Information Transfer:** List (a) publications produced during the reporting period, (b) conference and workshop presentations and attendance during the reporting period, and (c) data and/or information products developed during the reporting period.

*NOTE: Lack of compliance with the Trustee Council's data policy and/or the project's data management plan will result in withholding of additional project funds, cancellation of the project, or denial of funding for future projects.*

#### A) Papers published using the Seward Line Data

Trites, et al., 2005. Bottom-up forcing and the decline of Steller sea lions in Alaska: Assessing the ocean climate hypothesis. Fisheries Oceanography Accepted

Weingartner, T.J., S.L. Danielson and T.C. Royer. 2005. Freshwater Variability and Predictability in the Alaska Coastal Current, Deep Sea Res. II, 52:169-191.

Royer, T.C., 2005. Hydrographic Responses at a Coastal Site in the Northern Gulf of Alaska to Seasonal and Interannual Forcing, Deep Sea Res. II, 52, 267-288.

Sarkar, N, T. C. Royer, C. E. Grosch. 2005. Hydrographic Variability on Decadal and Interdecadal Scales in the Northern Gulf of Alaska, Cont. Shelf. Res. Accepted

#### B) Presentations made using the Seward Line Data

Weingartner, T., S.L. Danielson and T.C. Royer, Freshwater Variability and Predictability in the Alaska Coastal Current, Presented at the Alaska Marine Science Symposium, Anchorage, Alaska, January 2005 (poster).

Weingartner, T., Ecosystem Structure and Function on the Gulf of Alaska Shelf (an evolving story), Presented at the 13<sup>th</sup> Annual PICES meeting, Honolulu, HI, 20 October (Invited Paper).

Sarkar, N., T.C. Royer, C.E. Grosch. Modeling Seasonal Mixed Layer Depths in the Northern Gulf of Alaska (#OS32C-01) Presented at the Ocean Sciences Meeting, Portland, Oregon, January 2004. [poster]

Schroeder, I. D., C. E. Grosch, and T.C. Royer. EOF analysis of hydrographic data along the Seward Line. Presented at the Ocean Sciences Meeting, Portland, Oregon, January 2004. [poster]

Royer, T.C., C.E. Grosch, T.J. Weingartner and S. Danielson. 2004. A fresher, warmer northern Gulf of Alaska? Presented at the 13<sup>th</sup> Annual PICES meeting, Honolulu, HI, 20 October.

Royer, T.C. 2005. Alaskan Oceanography: Past, Present and Future – A Personal Perspective, Keynote Presentation at the Alaska Marine Science Symposium, Anchorage, Alaska, January 2005 (Invited Paper).

Royer, T.C. and C.E. Grosch. 2005. Sea Level Changes Associated with the Warming and Freshening of the Coastal Northern North Pacific. Presented at the PICES/GLOBEC Workshop on Climate Variability and Sub-Arctic Marine Ecosystems. Victoria, BC 18 May.  
Royer, T.C. 2005. A Maritime Window of Opportunity for Human Migration during the Last Glacial Maximum. Presented at the Paths Across the Pacific IV Conference in Sitka, Alaska 21 July.

C) The data are made available as soon as possible on the project webpage. Although we have asked people to inform us if they use this data, it is not clear if this is always done. The listed papers and references indicate users who have informed us of their using the data.

**Budget:** Explain any differences and/or problems between actual and budgeted expenditures, including any substantial changes in the allocation of funds among line items on the budget form. Also provide any new information regarding matching funds or funds from non-EVOS sources for the project.

**NOTE:** Any request for an increased or supplemental budget must be submitted as a new proposal that will be subject to the standard process of proposal submittal, technical review, and Trustee Council approval.

Not Applicable

We can accept your annual report as a digital file (Microsoft Word or WordPerfect), with all figures and tables embedded. Acrobat Portable Document Format (PDF) files (version 4.x or later) are also acceptable; please do not lock PDF files or include digital signatures.

Please submit reports electronically to [Carolyn Rosner](mailto:Carolyn.Rosner@evostc.state.ak.us) at EVOSTC for posting to the EVOSTC website at [www.evostc.state.ak.us/admin](http://www.evostc.state.ak.us/admin) and uploading to the EVOSTC database. Also, please be sure to post your annual report on your own website, if you have one.



*Thank you!*

*We appreciate your prompt submission of your annual report  
and thank you for your participation in and contribution to EVOS-related research.*

*revised August 2005*