

EVOSTC ANNUAL PROJECT REPORT

**All citations herein refer to the EVOSTC Procedures for the Preparation and Distribution of Reports ("Reporting Policy")*

As required by the Reporting Policy, recipients of funds from the *Exxon Valdez* Oil Spill Trustee Council must submit a semi-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). Please help ensure that continued support for your project will not be delayed by submitting your report by September 1.

Satisfactory review of this report is necessary for continuation of multi-year projects. Failure to submit this report by **September 1** of each year, or unsatisfactory review of a report, may 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: 12120111-Q

Project Title: Modeling the population dynamics of Prince William Sound herring

PI Names: Trevor A. Branch

Time period covered: 2012

Date of Report: 15 February 2013

Report prepared by: Prof. Trevor A. Branch

Project website (if applicable): N/A

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.

Took on MS student Melissa Muradian from the QERM program at the University of Washington, who has a highly quantitative and statistical background, in summer 2012. She has been taking required courses in fisheries population dynamics modeling. She has converted the ASA model into the statistical programming language AD Model Builder (Fournier et al. 2011), and is changing the model from one that minimizes simple sums of squares to a Bayesian model. The key advantages are the ability to weight different data types in a statistically rigorous manner, to obtain estimates of model uncertainty (Bayesian posteriors), and to be able (in the future) to incorporate data from other sources through the Bayesian priors for each parameter.

References

Fournier, D. A., H. J. Skaug, J. Ancheta, J. Ianelli, A. Magnusson, M. N. Maunder, A. Nielsen, and J. Sibert. 2011. AD Model Builder: using automatic differentiation for statistical inference of highly parameterized complex nonlinear models. *Optimization Methods & Software* 2011, doi: 10.1080/10556788.2011.597854:1-17.

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.*

- No difference

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

Exchange of preliminary results with collaborators at the PI workshop in Anchorage in November 2012.

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.

None so far.

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.

Some of the salary budget initially allocated to PI Branch was reallocated to student Melissa Muradian for the summer months. Originally it was anticipated that a student would start in October 2012, but the QERM program has 3 quarters of biostatistics followed by a summer quarter, so she started in the summer quarter following the initial coursework.

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL ANNUAL PROGRAM REPORT YEAR 1			
Budget Category:	Proposed Year 1	Actual Year 1	TOTAL Difference
Personnel	\$20,734	\$14,743	\$5,991
Travel	\$982	\$1,164	(\$182)
Contractual			\$0
Commodities	\$200	\$339	(\$139)
Equipment		\$2,420	(\$2,420)
Indirect Costs (<i>will vary by proposer</i>)	\$11,944	\$6,454	\$5,490
SUBTOTAL	\$33,860	\$25,120	\$8,740
General Administration (9% of subtotal)	\$3,047	\$2,261	\$787
PROJECT TOTAL	\$36,907	\$27,381	\$9,527
Other Resources (Cost Share Funds)	\$0	\$0	\$0
COMMENTS: This project is listed as a subcontract in Pegau. Expenditures reported here are what PWSSC has been billed for by January 31, 2013. This may be less than actual project expenditures if billing to PWSSC is delayed.			
FY12	Program Title: HRM Population Dynamics Modeling Team Leader: Branch		SUMMARY

We can accept your report as a digital file (Microsoft Word), 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 in [ProjectView](#) or by email to catherine.boerner@alaska.gov. Also, please be sure to post your report on your own website, if you have one.



*We appreciate your prompt submission of your report
and thank you for your participation.*