

## ***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 **Sept. 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 Sept. 1.** Timely receipt of your report allows more time for court notice and transfer, report review and timely release of the following year's funds.

Satisfactory review of the annual report is necessary for continuation of multi-year projects. Failure to submit an annual report by **Sept. 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:*** ..... ***10100132***

***Project Title:*** ..... ***PWS Herring Survey: Community Involvement, Outreach, Logistics, and Synthesis***

***PI Name:*** ..... ***W. Scott Pegau***

***Time period covered:*** ..... ***September 2010 thru August 2011***

***Date of Report:*** ..... ***August 4, 2010***

***Report prepared by:*** ..... ***W. Scott Pegau***

***Project website (if applicable):*** ..... ***<http://www.pwssc.org/herringsurvey/>***

**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.

The project has gone as planned so far. We arranged for two vessels to conduct fall juvenile herring survey. One vessel was dedicated to acoustic and bird predation surveys, the second for fish collection (energetics and disease) and oceanographic sampling. We sampled the four SEA bays (Simpson, Eaglik, Whale, and Zaikof) and added five other locations (Lower Herring, Port Fildago, West Twin, and Paddy Bays). The same bays were sampled in the spring along with sampling in Main Bay after reports of large juvenile schools there. Sampling for juvenile herring remained standardized with the approach used in the spring of 2010. We found that many of the juvenile fish were small enough to pass through the finest mesh of the gill nets we are using. Fish collected using the cast net have a greater range of sizes than those collected in the gill net. Since the gill net uses the finest mesh we have found commercially available we will rely on the combination of gill and cast nets to provide an indication of the size distribution of juvenile herring. All juvenile herring were turned over to the energetic or disease programs for analysis. We also arranged vessel time for a summer juvenile herring survey scheduled in August of 2011.

In the fall we caught more age 2-3 fish than we had previously. Interestingly the summer of 2011 aerial observations are finding more schools of what is believed to be age 2-4 fish. We are hopeful this is indicative of a large year class that should recruit in the next couple of years.

The importance of ice shelves as juvenile habitat was evident in the spring with larger numbers of fish found at the ice edge. In Lower Herring Bay we found hundreds of dead juvenile herring coming out from under the ice edge. They are being analyzed for disease. Samples from another location in that bay were noted to have the highest disease prevalence found in the spring.

We contracted with Cordova District Fishermen United to use ten of their vessels to sample a larger number of bays in March 2011. The sampling design was modified to include a gill net for a long deployment that could be compared between boats and cast nets were provided to try and capture enough fish to be used in the energetics projects. We also specified the depth the gill net was to be used. All boats had one bay in common with either the research effort or another CDFU vessel. This was done to see if there was consistency in results. We found that specifying the depth of deployment of the gill nets greatly reduced the bycatch.

The investigators of the herring survey program met in Cordova in May to review results and plan for the next year. The meeting was open to the public and advertised widely on the website (blog and Facebook), local paper, and fliers to provide an outreach opportunity; however, there was limited public participation. We will continue to investigate additional means for advertising this meeting in the future. At this meeting we began the discussion about the synthesis and the questions to be addressed. We also discussed data sharing between P.I.s and the public. Samples from the CDFU efforts have begun to be analyzed to examine interactions between herring year class. Of interest is the question of whether age 0 fish fare worse when age 1 fish are present. The interaction between year classes is likely to be the cause of the four year cycle seen in past recruitment events.

The PWSSC education group was responsible for delivery of most of the outreach products. They produced four project profiles, one-page descriptions of specific projects. These profiles were then modified for inclusion in the PWSSC annual Delta-Sounds Connection paper that describes ongoing science in the Prince William Sound region. This publication has a print number of 10,000 and is distributed widely throughout locations around Prince William Sound including ferry and airport terminals. Three Field Notes radio programs were produced and aired on the PWS public radio station KCHU. There were also three community presentations in Cordova that were available to be viewed in Valdez.

Materials from the herring program were also incorporated into the Discovery Room program, which involves 3<sup>rd</sup> through 6<sup>th</sup> graders in Cordova. The 5<sup>th</sup> grade oceanographic monitoring curriculum was modified to address how oceanographic conditions may affect herring growth and the students worked with herring scales collected by ADF&G to examine growth rates. Basic herring biology and monitoring have also been included in summer camps conducted by PWSSC. Results from the program were also included in the Alaska Geographic Prince William Sound expedition.

**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.*

We do not anticipate major changes to next year's work plan.

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

We are involved with the various projects to ensure boats are available and samples are collected. We brought together all of the PIs in May to update each other and plan the summer and next year's sampling. We maintain contact with all of the PIs to ensure sampling is coordinated. This includes the aerial and acoustic surveys, acoustic and capture surveys, energetic projects and disease sample collection, and oceanographic sampling programs. There have been a few bumps in the road as we learned how to optimize the coordination between efforts, but we have adapted quickly and do not anticipate any larger issues than we have already encountered.

**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.

Local fishermen were contracted to assist with collection of juvenile herring. This allowed a much larger area to be sampled. It also has increased the information flow between scientists and local fishermen. We are now getting more reports regarding herring outside of the sampling efforts.

**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.*

At the Alaska Marine Science Symposium we held a special section to discuss the existing results (presented by Michele Buckhorn) and examine future research needs. We had the coordination meeting that was attended by the principal investigators. We also began working on synthesis of existing information, which will be the basis of future presentations and manuscripts.

**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.*

Expenditures are following what we budgeted to date. We do not anticipate needing any revision to the budget as proposed.

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 in [ProjectView](#) or by email to [catherine.boerner@alaska.gov](mailto:catherine.boerner@alaska.gov). Also, please be sure to post your annual report on your own website, if you have one.



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