

EVOS FY05 Annual Project Report

Project Number: 050757

Project title: Implementing the Pink Salmon Survival Model: Phase 1- Project Development.
Submitted under the BAA, # AB133F-04-RP-0032

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Time Covered by the Report: October 1, 2004 to September 30, 2005

Date of Report: September 30, 2005

Summary of Work Performed:

Various FY05 accomplishments are presented within section headings Coordination / Collaboration and Community Involvement / TEK/ Resource Management and will not be duplicated under this heading. The focus here will be a description of progress specifically relevant to the pink salmon fry (PSF) model.

Our FY05 project initiated the planning process for implementation of the PSF model, a product of the Sound Ecosystem Assessment (SEA) program previously funded by the EVOS Trustee Council. In subsequent years we anticipated submission of proposals for further model refinement and implementation. For FY06, we submitted a timely proposal responsive to the invitation, however, reviewer comments were mixed. The Public Advisory Committee (PAC) and the Executive Director were supportive but called for proposal modification while the Science and Technical Advisory Committee (STAC) found the proposal technically deficient relative to the model.

At their August 10, 2005 meeting, the EVOS Trustees granted our request to allow re-submission of an FY06 proposal that was responsive, primarily to the STAC reviewer's comments. These comments called for a technically explicit description of the PSF model, its mode of operation, and what work was actually accomplished in FY'05. Consequently, we resubmitted a modified proposal which addressed reviewer's comments and provided an organized, comprehensive, and informative description of the PSF model including its various structural components (including model equations, initial values and markings, forcing and boundary conditions, data assimilation, routes and pathways, ocean survival and economics). Within this modeling framework, FY05 accomplishments included advances under each heading.

Summary of Future Work

We will submit a proposal in FY06 for further model upgrading in preparation for implementation and accomplish three important objectives:

Objective 1. Modeling: Prepare the PWSFRAP office for future operation of the PSF model in Cordova by installing the model code in a local server. Test and refine the model formulations and update the design to accommodate new information obtained after 1998 with attention to issues of initial values and fry marking, forcing and boundary conditions, data assimilation and economic applications.

Objective 2. Communication: Continue to expand the PWSFRAP website (www.PWSFRAP.org) as a readily accessible portal to research accomplishments of interest to the EVOSTC, commercial fishers and the public and also use the site as a repository for the results of eventual modeling activities serving all project collaborators, stakeholders and others who wish to access information.

Objective 3. Synthesis: Maintain the PWSFRAP office with funds to support critical collaborations between modeling participants and field investigators in ADF&G, AOOS, PWSOOS, and other cooperating programs such as GLOBEC. Encourage a continual analysis and understanding of previous field and modeling results (an ongoing synthesis) among program participants through interdisciplinary seminars, reports, peer-reviewed manuscripts and workshop / symposiums.

Coordination / Collaboration

PWS Fisheries Research Application and Planning (PWSFRAP) is essentially a collaborative effort among fishermen, marine scientists, and resource management personnel. We are extremely fortunate to have within our group dedicated individuals, a number of whom have been principal investigators of the EVOSTC supported Sound Ecosystem Assessment (SEA) program. We continue to work in collaboration to achieve application of science for improved fisheries management and to help aid the recovery of the EVOS impacted commercial fisheries of PWS.

Our initial efforts in FY05 focused attention on development of a three day workshop entitled "Planning for implementation of the pink salmon fry survival model". Day one consisted of a series of presentations to the public while days two and three were dedicated to more technical meetings with potential project collaborators from PWS Science center, Oil Spill recovery Institute, Alaska Dept of Fish and Game and PWS Aquaculture Corp. Our general intent was to review the various PWS environmental monitoring programs and capabilities already in existence or in development and discuss opportunities for collaboration relative to model implementation. Discussion and planning for the companion ADF&G project involving PIT tagging technology and methodology, to help partition oceanic from estuarine survival, also occurred at this workshop.

Later in the year (June 05), PWSFRAP collaborators participated in the two day Alaska Ocean Observing System (AOOS) workshop held in Cordova and helped identify a series of monitoring priorities relevant to the PSF model and the general PWS fishing community.

It was, however, the expansion and development of the PWSFRAP website in FY 05 that greatly facilitated information exchange, coordination and collaboration among project participants who are widely geographically separated. In addition, weekly or even more frequent teleconferences among planners also aided our collaboration

Community Involvement / TEK / Resource Management.

Our project continuum was initiated by members of the PWS fishing community working cooperatively with marine scientist and resource managers and advisors. In addition to fishermen, representatives from the region's fish processing companies, salmon enhancement programs and others have aided the process of community needs identification and their resolution by way of application of science for improved fisheries management.

Public participation at our meetings is always encouraged. On day one of our three day October 04 planning workshop, a series of presentations were made to the public regarding our project's progress and the intent to implement the PSF model and the need for an ecosystem focus for PWS fisheries management. This was a well attended community meeting.

We continue to provide project status reports to various local organizations and have received letters of support for our efforts from Cordova District Fishermen United (CDFU), Valdez Fisheries Development Association (VFDA), ADF&G, PWS Science Center, City Council of Cordova and a GLOBEC principal investigator. In addition, the fundamental community involvement nature of our project has been acknowledged and supported by members of the EVOSTC's PAC and the EVOSTC staff as well. The expanded PWSFRAP website also provides access and information for the general public.

Regarding our contribution to resource management, we continue to seek a previously unattained goal of the SEA program; specifically, utilization of SEA ecosystem insights to improve pink salmon return forecasting. This need has previously been identified within our fisheries community as a high priority item and we are currently in the planning phase for implementation of the pink salmon survival model, a product of the SEA program that has utility for pink salmon forecasting.

Currently, ADF&G issues forecasts specifically for wild stock pink salmon while VFDA and PWSAC provide forecasts relevant to their own enhancement programs. All forecasting efforts rely solely upon averages derived from returns of several recent years. On a year to year basis, this method of forecasting is of little planning value. It is not uncommon for actual return strength to double the forecast mid range point or, conversely, fall considerably below forecast. The inaccuracy of current forecasting is acknowledged and we have received letters of support from the organizations mentioned above for our efforts to incorporate SEA science results and modeling to help improve this potentially very valuable service for the fishing community.

Information Transfer

As mentioned in previous sections of this report, we conducted a three day workshop in late October of 2004 with day one activities dedicated to public presentations of the history of PWS pink salmon science, fisheries modeling, and the pink salmon fry model specifically. Meeting presentations were recorded for future transcription.

In addition, we have established and expanded the PWSFRAP website which provides viewers a wealth of information relevant to PWS fisheries and our project's progress. Also, presentations have been made at a number of fishery and science organizations within the Cordova community providing updates on our progress.

Quarterly project reports have been provided to our NOAA technical Representative.

Budget

By September 30, 2005, the close of the FY 05 fiscal year, a budgetary surplus exists of approximately eleven thousand dollars. This amount consists primarily of unspent consulting, travel, and catering fees that would have been utilized had we not incurred project delays and a second workshop been held to further model implementation planning among collaborators. Our NOAA contract extended project expenditures until January 15, 2006. It is anticipated that there will be utilization of remaining funds by that deadline.

Project Co –Principal Investigators

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Project Website Address

www.pwsfrap.org