

EVOS ANNUAL PROJECT REPORT

All 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: 040706

Project Title: The Influence of Adult Salmon Carcasses on Energy Allocation in Juvenile Salmonids

PI Name: Ron Heintz

Time Period Covered by Report: FY04

Date of Report: September 1, 2004

1. **Work Performed:** This study began in the June 2004 with the following objectives:
 - I. Characterize the persistence of a marine signal in the lipids of age-0 salmonids.
 - II. Characterize seasonal variation in energy allocation in populations of age-0 Dolly Varden exposed and not exposed to adult salmon carcasses.
 - III. Characterize seasonal growth patterns in Dolly Varden exposed and not exposed to adult salmon carcasses.

As outlined in the proposal, samples were collected monthly between June and August, additional samples will be collected in October and in May 2005. The proposal calls for collecting 6 fish from each of 5 stations on the Anchor River and Happy Valley Creek on each sampling occasion. Fish distribution did not make it possible to follow this design, however a minimum of 12 fish was collected from each stream on each occasion. In addition, 5 chinook salmon were sampled in July in order to characterize the marine signal.

It was not possible to collect age-0 fish from the Anchor River and Happy Valley Creek, as proposed. The reason for proposing to analyze this age class was to minimize the confounding effects of sexual maturation on energy allocation. Consequently, fish with obvious gonad development have been excluded from the collection and all individuals have been aged to confirm that the age distributions of the fish from two systems are identical. All fish sampled range in ages between 1+ and 4+ with the majority at ages 2+

and 3+.. A supplemental sampling program began in streams on the Juneau road system where age-0 Dolly Varden could be encountered in sufficient numbers. This program mirrors the program being followed in the Anchor River and Happy Valley Creek. Age-0 Dolly Varden are being sampled from a stream with no anadromous populations (Upper Sheep Creek) and one with chum, pink and coho salmon runs (Shrine Creek). Between June and August collections were made from 5 stations along each stream. Fish were collected at the same times fish were collected from Kenai Peninsula sites and consisted of age-0 and older age classes. The older age classes will allow direct comparison between the Juneau sites and Kenai Peninsula sites.

Proximate and RNA/DNA analysis is ongoing. Initial results indicate that age-0 Dolly Varden rearing in anadromous streams have lower lipid levels ($P = 0.055$) in June than those in non-anadromous streams. A more complete analysis will be provided at the 2005 EVOS Trustee Workshop.

2. **Coordination/Collaboration:** Sample collections from the Kenai Peninsula depended on the assistance of staff working on project 040726 “Methods to Monitor Marine Derived Nutrients”. Dolly Varden collections will be shared with this project and 040726 and ABL will be processing samples collected by project 040726 for fatty acid composition.

3. **Community Involvement/TEK & Resource Management Applications:** An article describing this project and 040726 appeared in the Kachemak Bay Research Reserve Newsletter.

4. **Information Transfer:** We are still collecting samples and just beginning processing. No data have been reported.

5. **Budget:** The lower than expected number of samples from the Anchor River and Happy Valley Creeks is offset by the number of samples collected from streams in the Juneau area. No change in the budget is required.

Report Prepared By: Ron Heintz
Project Web Site Address: _____

SUBMIT ANNUAL REPORTS ELECTRONICALLY TO brenda_ramos@evostc.state.ak.us. THE REPORTS WILL BE POSTED ON THE TRUSTEE COUNCIL’S WEB SITE AND SHOULD ALSO BE POSTED ON THE PI’S WEB SITE. The subject line of the e-mail transmitting the report must include the project number and the words “annual report” (e.g., “035620 Annual Report”). Electronic reports must be submitted either as an Acrobat Portable Document Format (PDF) file or word processing document

(Microsoft Word 2000 for Windows or lower or WordPerfect 9.0 or lower) with any figures and tables imbedded. Acrobat PDF 4.0 or above file format must be used, preferably in ‘formatted text with graphics’ (called “PDF normal” under Acrobat PDF 4.0) format. Minimally, “PDF searchable image” (called “PDF original image with hidden text” under Acrobat PDF 4.0) may be used if pre-approved by the Trustee Council Office. In either case, the PDF file must not be secured or locked from future editing, or contain a digital signature from the principal investigator.