

**University of Alaska Anchorage
Environment and Natural Resources Institute (ENRI)**

"Biological Monitoring and Water Quality Assessment"

Grant Award \$107,336

Project Match: \$71,614



Description and Purpose:

This project continued the biological monitoring and assessment program, regional reference condition development, and assessment of clear-water, wadeable streams for southeast Alaska. ENRI also provided outreach and stewardship opportunities to local agency personnel and watershed groups by providing them the tools and technical training to help them implement and continue long-term monitoring of local water bodies.

Samples collected from May 2002 were processed and the results used to assess streams, which were provided in the final report. The Quality Assurance Project Plan (QAPP) is on file with ADEC and was followed for all work completed during the project. Results were based on habitat assessments, macro-invertebrate metrics, physical and chemical monitoring, and ASCI scores. The information was used to assess the impacts of specific land use activities such as urban development, forest practices, and mining to surface waters and salmon habitat in these eco-regions.

The field effort for 2003 continued to focus on development of reference condition information for streams in the Gulf of Alaska Coast and Alexander Archipelago regions as identified by the newly completed Unified Eco-regions of Alaska (Nowacki et al. 2001). Project results were used to provide the ADEC and others with regional reference condition information, water quality assessments, best management practices (BMP) effectiveness monitoring, assistance with development of watershed restoration action strategies, and outreach education opportunities for watershed groups in this region.

Project objectives included (1) continued collection of information to develop regional reference conditions for Gulf of Alaska Coast and Alexander Archipelago regions, (2) completed sample processing for samples collected from southeast Alaska streams in FY02, and (3) educational outreach and training opportunities for local watershed groups and agency representatives.

Evaluation of Environmental Benefits:

ENRI evaluated the project using the methods outlined in the ASCI as in previous studies to select and calibrate metrics, determine accuracy and precision, and develop index threshold values. Project success was measured in part by the number of sites assessed, the precision and accuracy associated with these assessments, the number of outreach activities provided, and total numbers of participants.

Deliverables for this project include:

- A final report with preliminary assessment results from the southeast Alaska samples that were collected in May 2002 and
- A status report for the sampling and outreach activities accomplished through 30 June 2003. Itemized components of the work plan that will form the basis of the information provided in the final report include:

- A list of cooperative partners to support the bio-monitoring program, provide assistance with sampling efforts, and advance environmental education and stewardship related to Non-Point Source pollution and prevention.
- Streams prioritized for sampling that meet selection criteria with logistical issues and agency priorities identified.
- Final list of sampling sites; equipment and supplies for fieldwork ordered.
- Sampling schedule and site assignments for teams by date.
- Site characterization and sample collection completed.
- All sample identifications completed with a taxa list by stream and site.
- Data entry into EDAS
- Detailed evaluation of potentially impaired streams for Southeast Alaska.
- Information disseminated about ENRI's monitoring program and list of local watershed efforts with their contact information.
- List detailing the event, date, number of attendees, affiliation of attendees, number of volunteer hours, and number of ENRI hours provided.



Project Contacts:

Grantee Project Manager

Elaine Major, Research Associate
 University of Alaska Anchorage
 Environment and Natural Resources Institute
 707 A Street
 Anchorage, Alaska 99501
 Ph: 907. 257-2731 fax: 907. 257-2707
 Email address: anebg@uaa.alaska.edu

ADEC Project Manager

Kent Patrick-Riley, Environmental Specialist
 DEC, Air and Water Quality
 555 Cordova
 Anchorage, Alaska 99801
 Ph: 907.269-7554 fax: 907.269-7508
 E-mail: kent_patrick-riley@dec.state.ak.us