University of Alaska-Anchorage

Environment & Natural Resource Institute (ENRI) "Biological Monitoring and Water Quality Assessment"

FY02 Grant Award: \$124,269 Project Match: \$82,985



Description and Purpose: This project will expand the State's Bioassessment Program to streams in Southeast Alaska and complete analysis of Cook Inlet area samples collected in June 2001. The University of Alaska, Environment and Natural Resources Institute (ENRI) has developed a biological monitoring and assessment program to assess the health of Alaskan streams. The program uses macroinvertebrates (aquatic bugs) in conjunction with physical and chemical data to assess the degree of pollution and determine how well a stream supports a healthy aquatic community. Regional reference conditions are established

against which the health of individual streams may be determined. Monitoring so far has focused on the Cook Inlet area, where over 100 streams have been assessed. The information from this project will be used to assess the condition of streams, impacts of specific land use activities such as urban development, forest practices, and mining and to help determine the effectiveness of current management practices (environmental safeguards) in protecting water quality and habitat.

Evaluation of Environmental Benefit: The project will begin to develop a powerful tool to determine the condition of Southeast Alaska streams in terms of supporting healthy aquatic communities and salmon. Once the program is implemented, these assessments will be used to determine effectiveness of current management and restoration practices in protecting and restoring stream water quality and aquatic communities (including salmon). The assessments

will also tell us where problems exist so that they can be corrected. During this first year in southeast Alaska, the program will only progress as far as developing partnerships with agencies and interest groups, and collecting (but not analyzing) regional reference data. The program will require several more years to fully establish a biological monitoring program in Southeast Alaska. During this first year ENRI will evaluate the project using the methods outlined in the ASCI to select and calibrate metrics, determine accuracy and precision, and develop index



threshold values. Success will also be measured by the number of sites assessed, the quality of these assessments, and the number of stakeholders engaged in the project.

Deliverables for the Project Include:

- 1. Final report with assessment results from the Cook Inlet samples
- 2. Electronic database of assessment data for Cook Inlet
- 3. Status report for the sampling and outreach activities in southeast Alaska



4. Approved QAPP for Southeast Alaska

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