

Alaska Clean Water Actions Grants - FY07

Below are summaries of the Alaska Clean Water Actions (ACWA) Grants for projects starting in July 2006 and finishing in June 2007. The summaries are arranged by region of the state and include the contact information for the group conducting the project.

Southeast Region

Duck Creek Watershed Monitoring and Recovery Strategy, (Juneau) Mendenhall Watershed Partnership (MWP), \$25,000

Duck Creek is in need of recovery due to water quality concerns with sediment, residues, turbidity, dissolved oxygen, fecal coliform, and altered flows, which has resulted in significant declines in salmon returns. This project will evaluate recovery actions and water quality monitoring results for Duck Creek to assess progress towards reducing pollutant loads identified in the Total Maximum Daily Load (a TMDL outlines what is needed to restore water quality) and identify new actions that should be implemented. The project will also continue targeted water quality monitoring and sampling to fill data gaps and to include macroinvertebrate sampling as biological indicators of stream condition in order to assess the effectiveness of restoration efforts. Contact: Deb Spicer, 907-586-6853.

Jordan Creek Watershed Recovery, (Juneau) Mendenhall Watershed Partnership (MWP), \$44,335

Jordan Creek is currently impaired from trash, sediment, and low dissolved oxygen, which has resulted in declining salmon runs. This project will implement actions identified in the 2006 Jordan Creek Recovery & Management Plan including debris cleanup, removal of a failed and abandoned bridge and activities aimed at preventing additional inputs of nonpoint source pollutants. Efforts to reduce sediment within the stream include: characterizing ATV use and its effects on upper Jordan Creek and working with the City and Borough of Juneau to reduce ATV use impacts on the stream and its riparian zone. In order to assess the effectiveness of restoration efforts, MWP will collaborate with the University of Alaska Southeast to monitor water quality including macroinvertebrate sampling as biological indicators of stream condition. Contact: Deb Spicer, 907-586-6853.

Lemon Creek Evaluation and Recovery Plan (Juneau), Mendenhall Watershed Partnership \$13,211

In 1995 a TMDL and associated recovery plan were developed for Lemon Creek to address and improve sediment, turbidity and habitat modification impairments and concerns. This project will research and evaluate actions that have occurred since the TMDL development, compile information that has been collected since 1995 and update the recovery plan. Based on this information, MWP will collaborate with the University of Alaska Southeast to develop a monitoring strategy for turbidity, debris, sediment, flow, and other standard field parameters including dissolved oxygen, temperature, pH, and conductivity. Contact: Deb Spicer, 907-586-6853.

Granite Creek Recovery & TMDL Implementation, City and Borough of Sitka, \$22,850

Granite Creek is an ACWA high priority water for recovery actions due to turbidity and suspended sediment resulting from gravel mining operations. The Granite Creek

Watershed Recovery Strategy and TMDL were approved in September 2002. This project implements unfinished tasks in the multi-year Action Plan of the Recovery Strategy and TMDL that will result in consistently meeting water quality standards in Granite Creek. The project includes: 1) verifying sediment load reductions and the effectiveness of installed sediment controls (settling ponds, check dams, vegetated swales and buffers) through regular water quality monitoring; 2) protecting and establishing stable and functional stream buffers; 3) validating TMDL sediment load assumptions through data collection and analysis; 4) seeding and stabilizing erodible soils at high priority sites; 5) an inventory of salmon populations and fisheries enhancement opportunities; 6) routine maintenance of existing ponds, ditching and other pollution control systems; 7) continued testing of turbidity reduction treatments on settling pond effluents.

Contact: Mark Buggins, 907- 966-2256.

Sawmill Creek Watershed Assessment (Haines), Takshanuk Watershed Council, \$30,000

The waterbody was placed on Alaska's Impaired Waterbodies list in 1996 for debris, but has had minimal work documented since that listing. This project will remove debris and automobile bodies from the creek and stabilize and re-vegetate the stream banks. The project will also conduct a physical watershed assessment and research historical data and work with DEC and local agencies to determine if additional water quality or habitat data are needed. Depending on that determination, the creek may be removed from the impaired listings or further actions will be identified needed to address any remaining impairments. Contact: Emily Seward, 907-766-3542.

Vanderbilt Creek Recovery Plan, (Juneau) Mendenhall Watershed Partnership, \$12,703

In 1995 a TMDL and associated recovery plan were developed for Vanderbilt Creek to address and improve sediment, turbidity, debris and habitat modification impairments and concerns. This project will research and evaluate actions that have occurred since the TMDL development, compile information that has been collected since 1995 and update the recovery plan. In addition, MWP will collaborate with the University of Alaska Southeast to develop a monitoring strategy for turbidity, debris, sediment, flow, and other standard field parameters including dissolved oxygen, temperature, pH, and conductivity. These proposed objectives will continue the effort to reduce sediment loads and improve habitat on Vanderbilt Creek. Contact: Deb Spicer, 907-586-6853.

Status & Trends of Fish Habitat on Private Timberlands in SE Alaska, Sealaska Corp., \$42,000

This ongoing project will aid in determining how well forestry practices protect fish habitat in SE Alaska timberlands. The objectives of this project are to: 1) continue the status and trend monitoring of fish habitat conditions that was initiated by the forest industry during the 1990s and reestablished jointly with the State and the forest industry through the ACWA program during 2003-2005; 2) expand the database for the long-term monitoring program on private timberlands in Southeast Alaska, and 3) provide data for a continued evaluation of the effectiveness of the Forest Resources and Practices Act (FRPA) buffer zones to protect aquatic habitat. Results will facilitate a state resource agency evaluation of forestry Best Management Practices (BMP) effectiveness. Contact: Ronald Wolfe, 907-586-9277.

Northern/Interior Regions

Copper River Watershed Baseline Assessment, Copper River Watershed Project (CRWP), \$50,000

The Copper River Watershed is used for anadromous fish spawning and rearing, subsistence, and recreation. This project completes water quality baseline monitoring in targeted Copper River waterbodies by collecting the fifth and final year of volunteer-based water quality monitoring data and preparing a comprehensive analysis of trends over the five-year monitoring period which will help establish a baseline water chemistry profile for the Copper River watershed. The CRWP will assemble a human use case study by developing and implementing methods for characterizing human impacts in the Tazlina/Nelchina and Gulkana River drainages. The case study will create a region-specific, systematic approach for assessing impacts on high-value, high-productivity salmon waterbodies that can later be applied to other areas as prioritized by the FishWatch Planning Team. The case study will provide complementary information to habitat assessment work by combining geographic data of human use with physical habitat data in a GIS format. The combination of these efforts will sustain the salmon economies by ensuring clean water and, by direct extension, the continued high quality of Copper River spawning, rearing and migration habitat. Contact: Kristin Smith, 907-424-3334.

Mat-Su Region

Development of GIS Databases and Maps for 4 Mat-Su Waters, The Nature Conservancy (TNC), \$21,014

The Matanuska-Susitna Borough is the fastest growing community in Alaska and also has some of the most productive salmon streams in South-central. This project will compile existing GIS watershed data for four ACWA high priority waters - Fish Creek (Big Lake), Meadow Creek, Wasilla Creek, and Little Susitna River. The types of data to be gathered include roads and trails, culverts, developed areas, land ownership, groundwater, wetlands, critical fish habitat, and fish and wildlife species distribution. Data gaps for the information layers identified in the priority actions will also be identified. The TNC will create maps of the data that can be printed easily by anyone with a computer and printer. Additionally, the TNC will employ an interactive mapping program that will allow users to overlay data layers of their choosing. The collected data, prepared maps, and interactive mapping program will be packaged on a CD that will be distributed to natural resource managers, land use planners, community decision makers, and interested citizens. Contact: Corinne Smith, 907-276-3133 x 121.

Little Susitna River – An Ecological Assessment, Aquatic Restoration & Research Institute (ARRI), \$49,715

The Little Susitna River is a high priority ACWA water that supports a highly popular salmon and trout fishery as well as intensive recreational non-motorized and motorized boating uses. Residential development along sections of the river has increased over the past few years. ACWA resource agencies have identified numerous potential water quality and habitat impacts that may be resulting from these activities. This project will develop and implement a comprehensive evaluation of the ecological condition of the Little Susitna River from the Edgerton Park Road to below the Public Use Site. ARRI will measure the physical channel characteristics, biotic community composition and water chemistry at representative sites. Water chemistry and temperature will be

described through periodic sampling or continuous measures at multiple locations. ARRI will also assess bank and riparian modification caused by residential development and recreational use. This project will provide the information necessary to evaluate risks to the aquatic system in order to assist resource management decisions. This information will be provided to regional agencies representatives and local government, and will be coordinated with other data gathering and database management projects. Contact: Jeff Davis, 907-733-5433.

Anchorage Region

Identification of Sediment Sources in Little Campbell Creek, Municipality of Anchorage, \$32,000

Little Campbell Creek has recently experienced high turbidity, suspended sediments, low dissolved oxygen and fish kills. Many stream channel modifications have been made on Little Campbell Creek such as straightened sections, and impoundments. These stream channel adjustments often result in additional sediment supply due to accelerated stream bed and stream bank erosion. The objective of the proposed project is to monitor six sites along Little Campbell Creek to identify geologic and human caused sediment sources. By measuring total suspended solids (TSS), turbidity, bed load, sediment size distribution, adsorbed pollutants (such as fecal coliform and heavy metals), and stream flow discharge, specific sources can be discerned. As part of the proposed monitoring efforts an additional goal is to identify how channel modifications (straightening and impoundments) affect stream water quality, quantity and ecological function within the creek so Best Management Practices (BMPs) can be developed which improve physical and biological functions of the Creek, and reduce turbidity in Little Campbell Creek. Contact: Tammie Wilson, 907-343-8008.

Scoop the Poop, Anchorage Waterways Council, \$23,953

The Municipality of Anchorage is home to an estimated 60,000 pet dogs producing approximately 45,000 pounds of fecal material daily. A significant amount of this material is deposited in parks and common areas and left to dissolve and run off into local water bodies. The Scoop the Poop project will educate pet owners in Anchorage about simple ways that they can reduce the amount of fecal coliform bacteria that enter local creeks including picking-up after their pets and properly disposing the waste. The twelve water bodies targeted in this outreach campaign are all listed as impaired waters for fecal coliform bacteria. A significant reduction in fecal coliform will allow these water bodies to be removed from the impaired waters list. Contact: Holly Kent, 907-272-7335.

Kenai Region

Minimizing Temperature Impacts on Lower Kenai Peninsula's Salmon Streams, Homer Soil & Water Conservation District, \$67,400

Streams of the lower Kenai Peninsula support healthy sport and commercial fisheries, and provide important subsistence resources for Alaska Natives and other groups. Several years of water quality monitoring show stream temperatures are at levels which may negatively impact fish populations. This project addresses ACWA priority actions for Anchor River, Deep Creek, and Ninilchik Rivers. The project will: 1) determine critical conditions for temperature and periods where ambient air temperature and stream flow conditions cause water temperature to exceed state standards; 2) determine if temperature refugia area exist during fish spawning and migration periods; 3) develop

watershed management strategies; and 4) prioritize ATV crossings to minimize water quality impacts. Determining if natural or human influences are affecting stream temperatures is critical to facilitate resource management decisions that will lead to the protection of these economically important salmon streams.

Partnership Monitoring of the Kenai River Watershed, Kenai Watershed Forum (KWF), \$57,725

The Kenai River is one of the premier commercial and sport fish rivers in southcentral Alaska. It is listed as an ACWA high priority water for protection activities. Extensive use of the Kenai River poses potential impacts if not done in protective manner. Since 2002, the KWF has led a broad partnership among 14 organizations to conduct system-wide monitoring twice a year on the Kenai River to evaluate water quality. The results are evaluated annually, but a comprehensive evaluation of the trends has not been conducted. This project will: 1) complete the baseline monitoring program; 2) organize the data in a useable database that would allow for input into DEC's STORET data system and be available to the public; and

3) statistically evaluate the five years of data and produce a final report on the findings and recommendations for future actions.

Western Alaska Region

Fecal Coliform and Water Quality Assessment of the Lower Nushagak River, Bristol Bay Native Association, \$30,911

The Nushagak River is a large, productive salmon-producing system in Southwest Alaska that empties into Bristol Bay and is an ACWA priority water for protection. Resource agencies have identified a primary need for protection is water quality data, as very little water quality data has been collected on this river system. Currently, monitoring is being conducted in some headwater tributaries, but no monitoring is being conducted below the tributaries. This project will: 1) prepare a Quality Assurance Project Plan (QAPP), Monitoring Strategy and Sampling Plan for continuation of baseline water quality assessment to include selected parameters on Lower Nushagak River; 2) perform baseline water quality assessment to include two sampling trips (August 2006, May 2007); and 3) evaluate the feasibility and usefulness of conducting a macroinvertebrate assessment to determine if it could be a cost-efficient way to monitor water quality on a long-term basis. Water quality parameters that will be measured include: fecal coliform bacteria, flow, sediment, temperature, nutrients, dissolved oxygen, conductivity, pH, and turbidity. Contact: Sue Flensburg, 907-842-5257, ext 341.