

Alaska Clean Water Actions Grants - FY09 Project Descriptions

Below are summaries of the Alaska Clean Water Actions (ACWA) Grants for projects starting in July 2008 and finishing in June 2009. The summaries are arranged by region of the state and include the contact information for the group conducting the project.

Southeast Region

Granite Creek Recovery and TMDL Implementation, City and Borough of Sitka, \$24,500
This project addresses an ACWA Waterbody Recovery priority. Granite Creek is in need of recovery due to water quality concerns with turbidity and suspended sediment resulting from gravel mining operations. Plans for recovery were approved in September 2002. This project continues successful recovery and restoration efforts, targeting riparian buffer protection, best management practices (BMP) effectiveness monitoring, and environmental audits. The project implements unfinished tasks in the multi-year Granite Creek Action Plan of the Recovery Strategy with the goal of Granite Creek consistently meeting water quality standards. Specific activities in FY09 include: 1) verifying sediment load reductions and the effectiveness of installed sediment controls through regular water quality monitoring; 2) continuing to protect and establish stable and functional stream buffers through reseeding and placing physical barriers; 3) completing environmental audits of existing and new developments; 4) analyzing new sediment and turbidity data to update the FY07 load reduction calculations; 5) implementing priority tasks in the updated Recovery Strategy and Action Plan, including completing a riparian protection and enhancement plan for the North Fork of Granite Creek; and 6) hydroseeding erodible soils at new priority sites. Project reports will be developed addressing results of described project tasks. Contact: Mark Buggins, 907- 966-2256.

Haines Borough Fish Passage Assessment, Takshanuk Watershed Council (TWC), \$11,790
This project addresses an ACWA Stewardship priority. Adequate fish passage is particularly crucial to ensure the well-being of anadromous fish populations. The ability of adults to reach spawning grounds and that of juveniles to move within watersheds while rearing and to eventually migrate out to salt water determines the ability of these species to persist in a drainage. To-date a comprehensive assessment of culverts in the Haines Borough has not been completed. This project will identify culverts and other potential impediments to fish passage on Borough land and private parcels. The project will analyze at least 60 culverts with a specified protocol over a known geographical area. The grantee will follow the Department of Fish and Game stream survey protocol for culvert analysis. This project will result in a grading of all culverts as to their relative effect on the potential of fish to pass through them on to quality habitat upstream. Contact: Emily Seward, (907) 766-3542.

Jordan Creek and Vanderbilt Creek Garbage Reduction, (Juneau) Juneau Watershed Partnership (JWP), \$3,500
This project addresses an ACWA Waterbody Recovery priority. Jordan Creek is currently impaired from trash, sediment, and low dissolved oxygen, which has resulted in declining salmon runs. Plans for addressing trash impairment are complete and this project implements

those plans. In order to reduce or eliminate sources of trash to Jordan Creek, the JWP proposes to continue the pro-active “Slash the Trash” garbage reduction program. The JWP will partner with the AK Department of Fish & Game (ADFG) to educate and motivate the community to keep garbage secure and Jordan Creek litter-free through community and in-school education and outreach materials. Contact: Beverly Anderson, (907) 586-6853.

Onemile (Holgate) Creek Discharge Project (Haines), Takshanuk Watershed Council (TWC), \$8,125

This project addresses an ACWA Waterbody Protection priority. Onemile (Holgate) Creek is in need of protection with habitat and water quality being primary concerns and water quantity a secondary concern. This project will protect and maintain anadromous fish and wildlife habitat through conducting stream gaging to establish an instream flow reservation with ADF&G’s Sport Fish Division. TWC will continue to collect discharge measurements using USGS protocols to capture the flow characteristics at the range of flows during all seasons, download gage data, and provide it to the ADF&G to be used for an instream flow reservation. This will be the third of the five years required for filing an instream flow reservation. Contact: Emily Seward, 907-766-3542.

Sawmill Creek Discharge and Sediment Study (Haines), Takshanuk Watershed Council (TWC), \$15,018

This project addresses an ACWA Waterbody Protection priority. Sawmill Creek is in need of protection with habitat and water quality being primary concerns and water quantity a secondary concern. The creek was historically impaired for debris but through a previous ACWA grant, TWC conducted debris removal work. This project will continue to work in partnership with ADF&G Sport Fish Division to conduct stream gaging to establish an instream flow reservation. The project will also complete a sediment study along the urbanized areas of the waterbody, identify particular sources of fine sediments and propose actions to keep sediment from those sources out of the waterbody. A report of the sediment study will be produced. Contact: Emily Seward, 907-766-3542.

Stormwater Management Standards and Guidelines, City & Borough of Juneau (CBJ), \$90,000

This project addresses an ACWA Stewardship priority. The Juneau area has five impaired waterbodies with sedimentation and aquatic habitat as primary concerns. Stormwater is considered a major contributor to local stream pollution. In order to reduce the negative impacts of stormwater runoff in new construction and site redevelopments, this project by the City and Borough of Juneau (CBJ) will develop and implement standards and guidelines for stormwater management. The main objectives of the project are to: 1) Build a manual of technical guidelines and standards, 2) Undergo a participatory process to scope, review, and raise awareness of the manual that involves all related CBJ departments, local designers, local contractors, and state and federal regulators, and 3) Create or modify CBJ ordinances that regulate stormwater management. This project will focus on stormwater management for new construction and redevelopment that can be maintained after construction activities take place. It will complement the existing Alaska Department of Transportation and Facilities (ADOT) Alaska Stormwater Pollution Prevention Plan Guide and the new statewide Alaska Stormwater Manual that the DEC is producing currently. This project will benefit these five streams as well as all streams and

waterbodies throughout the borough by improving the management of quality and quantity of stormwater runoff that enters these streams. Contact: Michele Elfers, (907) 586-0931.

Trends Monitoring of Fish Habitat Conditions on Private Timberlands in SE Alaska, Sealaska Corp., \$26,211

This project addresses an ACWA Stewardship priority. 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 2003-2007, 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. This project will directly benefit the FRPA adaptive management program by providing long-term monitoring data and analyses for evaluating the effectiveness of FRPA best management practices (BMPs) to protect fish habitat and water quality in streams. Results will facilitate a state resource agency evaluation of forestry BMP effectiveness. Contact: Nathan Soboleff, (907) 586-9278.

Water Quality Monitoring Sandy Beach, (Juneau) City and Borough of Juneau (CBJ), \$26,750

This project addresses an ACWA Stewardship priority. Sandy Beach is located in Douglas, in a popular recreation area across Gastineau Channel from Juneau. Sandy Beach is the site of many passive and active recreational activities, including dog walking and swimming during sunny weather events. The City and Borough of Juneau (CBJ) will monitor Sandy Beach for fecal coliform and enterococci bacteria indicators of fecal contamination. CBJ and ADEC will cooperate in collecting samples and will meet with ADEC periodically to review data and discuss opportunities for controlling potential fecal contamination that may be detected during water quality monitoring. The CBJ will notify the public through signage to protect the health and safety of users when sampling results indicate bacteria contamination. Contact: Rick Staskiewicz, 907-364-3388.

Northern/Interior Regions

Stormwater Prevention and Water Quality Sampling, Copper River Watershed Project (CRWP), \$70,377

This project addresses an ACWA Stewardship priority and an ACWA Waterbody Protection priority and has three main components. First, the Gulkana River is in need of protection as the waterbody is used for anadromous fish spawning and rearing, subsistence, and recreation. On the Gulkana River, this project will document boat traffic, make detailed habitat observations at known high use recreation areas and collect water quality samples for measuring petroleum hydrocarbons during low, normal and high use periods on the river. Second, Eyak Lake is in need of protection with stormwater runoff being a primary concern. Working with the City of Cordova, CRWP will build on the successful “Don’t Run Off Salmon” stormwater prevention campaign, identify stormwater prevention BMPs for the City of Cordova, develop treatment alternatives, raise public awareness of the harm caused by stormwater pollution and help identify alternatives for reducing stormwater pollution entering Eyak Lake. Third, in partnership with

ADF&G's culvert assessment program, CRWP will prioritize culverts in selected Copper River sub-basins for restoration attention based on ADF&G's cost-benefit protocol. Contact: Kristin Smith, 907-424-3334.

South Central Region

Dillingham Beach Monitoring Program, Bristol Bay Coastal Resource Service Area, \$14,960
This project addresses an ACWA Stewardship priority. Kakanak Beach is heavily used for salmon subsistence and general recreation including beach combing, picnics, and boat-launching. The area of concern has nine subdivisions with forty three older on-site septic systems on lots of less than one acre in size that drain into Squaw Creek which is near Kakanak Beach. This project will fund a monitoring program for Kakanak Beach including a public notification and advisory program coordinated with the DEC Beach Grant Manager. The summer 2008 sampling will provide a better picture of the persistence of the bacteria pollution documented in 2007 as compared to State Water Quality Standards for protection of human health and the environment. Contact: Andrew deValpine, (907) 842-2666.

Evaluation of Kenai Peninsula Borough Habitat Protection Ordinance, Kenai Watershed Forum (KWF), \$73,887

This project addresses an ACWA Stewardship priority. KWF will work in conjunction with the Kenai Peninsula Borough evaluate the effectiveness of Kenai Peninsula Borough's Anadromous Streams Habitat Protection Ordinance, Chapter 21.18. The ordinance was developed to protect salmon spawning and rearing riparian habitat along the Kenai River and has been amended to include 10 Kenai River tributaries and 14 other streams. This Ordinance can serve as a model to other parts of the state and for other agencies. However, before it is recommended for use in other areas, this project proposes to evaluate and review the ordinance to determine how effective it has been since it was enacted in 1996. The proposed project will: 1) determine the amount of wetlands that have been lost in the 50' Habitat Protection Zone since the ordinance was enacted; 2) develop a geodatabase; 3) conduct a legal review of the ordinance to determine how other Borough Ordinances work in concert with it and how well Kenai Peninsula Borough Ordinances support each other; 4) review and summarize Conditional Use Permits issued and denied and the enforcement process used; 5) develop a Summary Report that includes findings of this project's tasks including the strengths of the Ordinance and any deficiencies that are discovered during the review. If deficiencies are identified, recommendations will be made to the Borough on how to improve the Ordinance. The information generated from this project will be used to educate land owners, rivers users, developers and policy makers about development in river corridors. Contact: Jim Czarneszki, (907) 260-5449.

Extended City of Kenai Stormwater Mapping, Kenai Watershed Forum (KWF), \$10,000

This project addresses an ACWA Stewardship priority. Untreated stormwater discharges can have negative impacts on water quality of local waterbodies. Several anadromous streams are located in the City of Kenai. The Kenai Watershed Forum (KWF) has recently created the first draft of a map of stormwater flow for the Stormwater Mapping Partnership for the City of Kenai, through ACWA funds, to identify where stormwater is draining into these streams. While much of the mapping work is done there are several areas where the route of the stormwater network from inlet to outfall is unknown. This project will fill these data gaps in completing the

stormwater maps. The already mapped subsurface network will also undergo field testing for accuracy. The stormwater mapping will assist local resource managers in dealing with emergency spills, protecting water quality and future planning efforts. Contact: Stephanie Kobylarz, (907) 260-5449.

FRPA Region II Effectiveness Monitoring, Aquatic Restoration & Research Institute (ARRI), \$27,190

This project addresses an ACWA Stewardship priority. ARRI proposes to continue Forest Resources and Practices Act (FRPA) effectiveness monitoring within Forestry Region II. Effectiveness monitoring will be conducted by obtaining pre-harvest stream data at four locations within the Matanuska-Susitna Borough (MSB). Sampling will follow a previously DEC approved sampling plan. The sampling plan includes measures of stream physical, chemical, and biological characteristics. Pre and post-harvest conditions within a stream are compared for a paired sampling approach. Previous sampling has provided a description of reference conditions in small upland stream systems, but these data cannot be used to assess impacts to other stream types. This project will focus on pre-harvest sampling on small lowland stream systems subject to future logging. Post-harvest small upland sites will be selected if harvested. The project addresses two ACWA stewardship priorities, FRPA effectiveness monitoring, and reference temperature data. The project will provide detailed information against which post-harvest data will be compared. Contact: Jeff Davis, (907) 733-5432.

Jewel Lake Fecal Coliform Assessment, Anchorage Waterways Council (AWC), \$24,160

This project addresses an ACWA Waterbody Recovery priority. Jewel Lake is in need of recovery from fecal coliform bacteria due to urban runoff pollution. Plans were approved in 1997 that address the bacteria pollution and attribute some of the fecal coliform exceedances to geese usage of the beach area. The Jewel Lake Fecal Coliform Assessment project will develop and implement a sampling plan for the collection of fecal coliform bacteria and water clarity data to determine what progress has been made in improving water quality. The sampling plan will be developed with an emphasis on determining sources, timing and levels of fecal coliform bacteria. Sampling will begin in July 2008 and will consist of a minimum of 5 stations, sampled weekly, at a minimum of 2 depths, for a 5 month period. Data collection activities will result in the information necessary to quantify the presence and extent of fecal coliform pollution, identify potential sources and develop best management practices for lake shore development and in-lake activities. A project report will be completed that discusses the project results and makes recommendations for next steps. Contact: Kate Malloy, (907) 272-7336.

Jim Creek Water Quality Assessment Project, The Wildlifers, \$43,740

This project addresses an ACWA Waterbody Protection priority. Jim Creek, located in the Matanuska-Susitna Borough, supports a large salmon fishery and is a very popular recreation area. Jim Creek has aquatic habitat and water quality as primary concerns. The Jim Creek area is particularly notorious for target shooting, parties, vandalism, dumping, poaching, car burning, and habitat destruction. This project will collect baseline information on aquatic habitat and water quality by completing the following objectives: 1) Develop a DEC approved monitoring strategy, sampling plan and Quality Assurance Project Plan; 2) Review and utilize information collected from past studies and management plans, maps, and photographic materials pertaining to Jim Creek and the entire Knik River Watershed; 3) Collect baseline water quality data

according to the approved QAPP and sampling plan; 4) Map off-road vehicle creek crossings and debris located below ordinary high water; 5) Assimilate baseline information into a GIS database and any other required DEC approved formats; 6) Analyze and evaluate baseline data collected during the fiscal year 2009 field season; and 7) incorporate data, conclusions, and recommendations into a final report. Contact: Scott Wolfe, (907) 746-8008.

Kenai River Turbidity Water Quality Monitoring, Kenai Watershed Forum (KWF), \$59,143
This project addresses an ACWA Waterbody Protection priority. The Kenai River is one of the premier commercial and sportfish rivers in southcentral Alaska. Recent regulations have been established for the Kenai River to address petroleum hydrocarbon pollution from outboard motor boat activity. Increased turbidity levels caused by human actions have also been identified as a water quality and aquatic habitat concern. Through this project, the KWF will collect sufficient turbidity data in the mainstem of the lower Kenai River for the purposes of establishing summer naturally occurring background and anthropogenic levels of turbidity per DEC guidance. The KWF will develop and follow a DEC approved sampling plan for the monitoring. The sample plan will include monitoring to determine background turbidity, turbidity associated with erodible stream banks, boat activity, and tides. Water quality data will be collected using data loggers to capture data on a continuous basis over a five-month period. Data will be analyzed, organized and submitted to DEC in an interim and final report. This project will also support the annual multi-agency baseline sampling effort, targeting hydrocarbons and turbidity. The information collected in this project will assist resource managers in making management decisions for protecting water quality in the Kenai River. Contact: Robert Ruffner, (907) 260-5449.

Little Susitna River Hydrocarbon Evaluation, Aquatic Restoration & Research Institute (ARRI), \$62,582

This project addresses an ACWA Waterbody Protection priority. Located in the Matanuska-Susitna Borough, the Little Susitna River is an important recreational river. Through a previous ACWA grant, ARRI sampling in 2007 found petroleum hydrocarbon concentrations that exceeded state standards below the public use site on the Little Susitna River during the peak of the coho fishery. Additional water quality data is needed. Project tasks include: (1) further quantifying the spatial and temporal distribution of petroleum hydrocarbon concentrations adjacent to the public use facility and determining the relationship between 2-stroke motor use, stream flow, and hydrocarbon concentrations; (2) measuring stream water turbidity from grab samples and continuous data loggers and to begin the process of determining the relationship between turbidity, invertebrate drift, and juvenile salmon distribution; and (3) obtaining chemical and physical data including water temperature, pH, specific conductivity, and dissolved oxygen. A project report will be completed that analyzes, evaluates and makes recommendations based upon the data collected. Contact: Jeff Davis, (907) 733-5432.

Monitoring Bacteria Levels on Homer Beaches, Cook Inlet Keeper (CIK), \$17,996

This project addresses an ACWA Stewardship priority. Beaches in the Homer area are heavily used for recreation during the summer months by local residents and tourists to the beach. This project will establish the bacteria levels at Mariner Park during its peak-use. Additionally, the project will institute a public notification system and a method for having the City of Homer close beaches for specific activities if bacteria levels raise public health concerns. By informing

the public regarding the sources of various pathogens and establishing a method for the City of Homer to assess bacteria levels and the harms posed to various users when certain levels are exceeded, the Bacteria Levels on Homer's Beaches Project will protect the health of Homer beach users and preserve the beaches for use by various recreational groups. Contact: Tori Lentfer, (907) 235-4068 ext, 29.

Montana Creek Water Quality Monitoring, UAA Environment & Natural Resource Institute (ENRI), \$39,010

This project addresses an ACWA Waterbody Protection priority. More information on Montana Creek is needed to ensure water quality and aquatic habitat is being maintained. Montana Creek receives intense recreational pressure especially during the Chinook and coho fishing seasons. ENRI's Aquatic Ecology Program will conduct water quality monitoring on Montana Creek near Talkeetna, Alaska. This project will: 1) sample macroinvertebrates and algae once in the fall after the end of the coho run and once in the spring prior to the Chinook run. ENRI will collect and process the samples using ENRI's Alaska Stream Condition Index methodology and analyze them using the revised macroinvertebrate index and the new diatom biological index for Cook Inlet Basin streams; 2) collect and analyze 24 fecal coliform water samples at 3 strategic sites during July through August, 2008 and another 24 samples at each site during May through June, 2009 (i.e., a total of 48 fecal coliform bacteria tests at each of the three sites). ENRI will calculate two separate 30-day geometric mean fecal coliform concentrations; 3) collect water temperature data July through October, 2008 and April through June, 2009; 4) collect depth-integrated water samples for total suspended solids and turbidity in July through September, 2008 and May and June, 2009. ENRI will also measure stream discharge during baseflow, high flows, and several intermediate stages to develop a rating curve. A Quality Assurance Project Plan and sampling design for the project will be developed and approved by DEC prior to sample collection. All data will be reported and discussed in a final report. Contact: Dan Bogan, (907) 257-2744.

Stream Temperature Monitoring Network – Cook Inlet, Cook Inlet Keeper (CIK), \$70,117

This project addresses an ACWA Stewardship priority. Water temperature is one of the most significant factors in the health of stream ecosystems. Because temperature plays a critical role in salmonid habitat protection, reproduction and survivorship - and because wild, healthy salmon support vital sport, commercial, subsistence and personal use fisheries across Alaska - there is an urgent need to assess rising temperatures in Alaska salmon habitats. Recently, a partnership of state, federal and nonprofit organizations has developed recommended protocols for collecting stream temperature data as well as a system for selecting temperature monitoring sites. This project augments previously data collection efforts and will 1) implement a Stream Temperature Monitoring Network to collect consistent, comparable temperature data for Cook Inlet's salmon streams; 2) analyze data to establish natural conditions and generate GIS maps of the Cook Inlet basin to illustrate temperature patterns; and 3) provide a user-friendly template to transfer water temperature protocols to other salmon-bearing systems across the state. The Stream Temperature Monitoring Network in Cook Inlet will allow fisheries managers and land-use planners to identify watershed characteristics with the greatest potential to buffer salmon habitats from rising air and water temperatures, and provide the knowledge and data needed to prioritize sites for future research, protection and restoration actions. Contact: Sue Mauger, (907) 235-4068 ext, 24.

Water Quality and Habitat Protection, Homer Soil & Water Conservation District (HSWCD), \$13,500

This project addresses ACWA Waterbody Protection priorities. Streams of the lower Kenai Peninsula support healthy sport and commercial fisheries, and provide important subsistence resources for Alaska Natives and other groups. This project addresses ACWA high priority actions for the Ninilchik River, Anchor River and Deep Creek watersheds. This project will: 1) develop a trail plan for the Watermelon trail and Beaver Creek crossing in order to reduce habitat and water quality impacts; 2) Reassess the Water Hole Trail in the Deep Creek watershed to assure scheduled trail work will effectively minimize water quality impacts. Contact: Tara Schmidt, (907) 235-2847