

Alaska Department of Environmental Conservation  
2019-2020 Alaska Clean Water Actions Grant Summaries

**Southeast Region**

**Ketchikan Watersheds Management**

Southeast Alaska Watershed Coalition, \$37,554  
Applicant Contact: Rob Cadmus, (907) 957-9818

This project addresses an ACWA Restoration priority for Hoadley, Ketchikan and Carlanna Creeks in Ketchikan.

The Ketchikan watershed management plan will evaluate current pollution sources in Ketchikan and protect the urban watersheds and marine waters. The watershed plan will provide stormwater management options for reducing the pollutants (especially bacteria) entering Ketchikan freshwater watersheds and coastal marine waters from known diverse point and nonpoint bacteria discharges and sources. The waters have been found to have concentrations of fecal coliform, ammonia, and heavy metals above water quality standards, and initial assessments suggest a human source of bacteria. The watershed planning process will involve relevant stakeholders from the City, Borough, Ketchikan Indian Community, and interested public to promote a shared understanding of the water quality issue, identify management options and promote collaboration with key stakeholders.

**Jordan Creek Management**

Southeast Alaska Watershed Coalition, \$91,932  
Applicant Contact: Rob Cadmus, (907) 957-9818

This project addresses an ACWA Restoration priority for Jordan Creek in Juneau.

Jordan Creek watershed actions include monitoring stream water and sediment for pollutants of concern related to urban stormwater runoff, developing a watershed plan, and completing two green infrastructure projects to reduce negative impacts of urbanization. The ambient water and sediment quality will be assessed to clarify the severity and spatial and temporal extent of pollution related to urban runoff in lower Jordan Creek. Interstitial dissolved oxygen concentration and sediment monitoring will be used to assess whether there has been any improvement since the 2009 TMDL and to help prioritize future actions to address this impairment and improve in-stream conditions. The watershed plan will address the EPA's nine watershed plan elements. The project will build on previous watershed assessments and TMDL documents, new data collected as part of this project, and outreach to landowners, youth groups, volunteers, and relevant city boards and administrators to maximize the educational impact of these activities, promote better stormwater management practices and encourage enforcement of existing riparian protection.

## Southcentral Region

### **Controlling Urban Runoff to Cottonwood Creek, Phase 2**

Sustainable Design Group, \$58,326

Applicant Contact: Luanne Urfer, (907) 745-3500

This project addresses an ACWA Restoration priority. Cottonwood Creek is an impaired water with bacteria pollution. The bacteria is transported to the creek in stormwater runoff. This project continues restoration work started in 2018 by completing a stormwater remediation project on Fern Street outside of Wasilla. The selected site currently drains polluted stormwater directly into the creek especially during spring break up. This project will use green infrastructure techniques to slow the stormwater runoff down and let it soak into specially designed treatment works to remove pollutants. The project also includes a feasibility and cost analysis to restore another area of the creek that drains the Wasilla urban commercial district to Cottonwood Creek. A final project report will be posted on DEC's website.

### **Reduce Bacteria Pollution – Anchorage Bowl**

Anchorage Waterways Council, \$37,544

Applicant Contact: Cherie Northon, (907) 272-7335

This project addresses an ACWA Restoration priority. Bacteria and water quality data from 2010 – 2018 on Ship, Furrow, Campbell, Fish, Little Rabbit, and Little Survival Creeks will be compiled, reviewed, and entered into a spreadsheet for submission to ADEC's water quality database (AWQMS). A GIS database in the locations of the creeks will be published to display relevant land use layers (e. g. hydrography and pet facilities), monitoring stations, and locations of existing Best Management Practices (BMPs). An analysis of the monitoring data and GIS layers will show how the water quality in the creeks with TMDLs is making progress towards meeting the goals of the TMDLs.

### **Low-Impact Development Planning for the City of Homer**

City of Homer, \$59,785

Applicant Contact: Carey Meyer, (907) 235-3145

This project addresses an ACWA Stewardship priority to highlight and protect healthy waters. The project will assist the City of Homer to begin a stormwater master plan, by implementing a stewardship planning and pollution prevention project. The need for pollution prevention planning has been recognized by the City Council due to development pressures and community growth. This project will identify and map all drainage basins in city limits, estimate stormwater runoff volumes, identify and compare traditional and green infrastructure opportunities for treatment of stormwater runoff for each drainage basin, construct a green infrastructure demonstration project at the new police department, and provide public education and outreach surrounding the police department project.

### **Water Chemistry Evaluation for Bristol Bay**

University of Alaska Anchorage, \$29,866

Applicant Contact: Elizabeth Dickinson, (907) 786-1777

This project addresses an ACWA Stewardship priority to increase the amount known about Alaska's waters by identifying nonpoint sources of pollution. The Nushagak and Kvichak rivers are two of the major river systems that drain to Bristol Bay and the Southwest Alaska Salmon Habitat Partnership includes water quality protection actions as part of their Strategic Conservation Action Plan. These watersheds drain approximately half of the entire Bristol Bay watershed and produce over a third of the total sockeye return to Bristol Bay. The Alaska Center for Conservation Science at the University of Alaska Anchorage will use existing data collected from 40 streams in the Nushagak and Kvichak watersheds to evaluate baseline water quality and habitat conditions. This project will submit data from these 40 streams to DEC to increase the amount known about Alaska's waters by providing information on metals concentrations in the Nushagak and Kvichak watersheds for nonpoint source pollution protection planning. All water quality data will be reviewed for quality assurance and submitted to DEC's Ambient Water Quality Monitoring System (AWQMS). The project team will analyze the data and submit all findings in a final project report.

### **Little Susitna River TAH Monitoring**

Aquatic Restoration and Research Institute, \$56,694

Applicant Contact: Jeffrey C. Davis, (907) 315-4631

This project addresses an ACWA Restoration priority. During the month of August, the Little Susitna River is an impaired water with petroleum hydrocarbon pollution upstream (for 1 mile) and downstream (for 7.5 miles) of the Little Susitna River Public Use Facility boat launch. Starting January 2017, the Alaska Board of Fish restricted fishing from a motorized boat on the Little Susitna River unless the motor was 4-stroke or direct fuel injected 2-stroke. Eliminating fishing from boats with older carbureted 2-stroke motors is expected to improve the river's water quality. This project will collect water quality samples to determine if petroleum hydrocarbon levels in the river have decreased since the motor restriction was put into place. Water sampling will occur during the month of August over several days. A final project report of the results will be submitted to DEC and posted to DEC's website.

### **Kenai River Water Quality Monitoring and Assessment**

Kenai Watershed Forum, \$100,491

Applicant Contact: Branden Bornemann, (907) 260-5449 x1206

This project addresses an ACWA Restoration priority. This project will perform ambient water quality monitoring for stormwater pollutants of concern, as well as develop a comprehensive GIS database that includes potential pollution sources to the Kenai River. The Kenai Watershed Forum (KWF) will expand their bi-annual water quality sampling to include three additional mainstem

sampling sites and four additional tributary sites to obtain additional data on zinc and copper. Recent Kenai River data analysis by DEC found exceedances of zinc and copper water quality criteria. The current quality assurance project plan will be revised to include the additional sites. GIS data sources may include: stormwater maps, snow storage maps, NHD+ catchment information, impervious surface calculations, beach bacteria results, boat count results, fish habitat information, other potential sources of zinc (such as culverts and ELP walkways), and other layers of relevance to pollution sources. Existing map layers will be supplemented with on the ground project photographs taken during “river reconnaissance” trips. All of this project information will be submitted to DEC and used for watershed restoration planning activities.

### **Lake Lucille Lake Management Plan**

City of Wasilla, \$30,000

Applicant Contact: Archie Giddings, (907) 373-9018

This project addresses an ACWA Restoration priority. Lake Lucille is an impaired water with lead and zinc in lake bed sediments. The lake is under an existing recovery plan to correct a low dissolved oxygen impairment. In this project, the City of Wasilla will use a watershed planning process to develop a Lake Management Plan to reduce urban stormwater pollution draining to Lake Lucille. More specifically, the plan will address heavy metals such as copper, lead, zinc, and also polycyclic aromatic hydrocarbons. In addition, the plan will address historic low dissolved oxygen levels in the lake. The City will partner with local stakeholders, the Alaska Department of Transportation, and the Alaska Railroad in the development of the Lake Management Plan while using an environmental consulting firm to assist and oversee plan development. The final Lake Lucille Lake Management Plan will be posted on the City of Wasilla and DEC websites.

## **Interior-Northern Region**

### **Scaling Green Infrastructure in Fairbanks**

Tanana Valley Watershed Association, \$68,500

Applicant Contact: Jewelz Barker, (907) 322-2633

This project addresses an ACWA Restoration priority. The Tanana Valley Watershed Association will construct a small, medium and large scale green infrastructure project in the Chena watershed (Fairbanks area). The small scale projects will be in coordination with the City of Fairbanks through a mini-grants program targeted at local homeowners. The medium scale project will complete on-going fixes to drainage at the Carlson Center to supplement a rain garden that was funded with ACWA. The large scale project will add green infrastructure elements to a stormwater retention facility in downtown Fairbanks. All projects will be designed to reduce stormwater pollution and treat runoff at the source.

## **BEACH**

### **Ketchikan Beaches**

Southeast Alaska Watershed Coalition, \$61,963  
Applicant Contact: Rob Cadmus, (907) 957-9818

This project addresses a BEACH priority. The Southeast Alaska Watershed Coalition (SAWC) will monitor Ketchikan area beaches for a third recreation season in 2019 to evaluate the magnitude, frequency and duration of the fecal coliform and enterococci levels in the Ketchikan coastal marine waters. This project will also have a direct benefit to public health and recreation, as SAWC will assist DEC in notifying recreational beach users of bacteria exceedances and conduct outreach on the risks of disease and precautions users should take. SAWC will additionally assess the 2017-2019 data to evaluate whether beach modeling is appropriate using EPA's Virtual Beach model. The results will help inform and prioritize future action to reduce pollution, directly benefiting the environment.

### **Kenai Beach Bacteria Monitoring and MST Assessment**

City of Kenai, \$56,899  
Applicant Contact: Bob Frates, (907) 283-8261

This project addresses a BEACH priority and continues a project started in the summer of 2018 to establish a natural background level for both enterococci and fecal coliform for North and South Kenai beaches. Bacteria monitoring conducted throughout the summers of 2010 to 2014 found exceedances of Alaska's Water Quality Criteria for fecal coliform and enterococci during the July personal use fishery. For this project, weekly sampling will occur throughout the summer at the North and South Kenai beaches, Ames Bridge, and two locations near the seagull rookery to determine the magnitude, frequency and duration of enterococci and fecal coliform levels at these locations. Microbial source tracking (MST) will also be used to ensure that the bacteria present at these recreational beaches come from natural background sources. Results will be obtained following each sampling event and evaluated for EPA's Virtual Beach Model. In collaboration with the City of Kenai, outreach will be conducted if there are bacteria exceedances. In turn, beach users will be notified of the high bacteria levels as well as the risks of disease and precautions they should take. Presentations will be given to the City of Kenai and KRSMA Board, if requested.