

FY 16 Alaska Clean Water Action Grant Accomplishments

Southeast Region

Jordan Creek Rain Garden and Snow Barrier Fence

Southeast Alaska Watershed Coalition and Juneau Watershed Partnership, \$29,300



Before restoration

This project addresses an ACWA Restoration priority. In collaboration with the Central Council of Tlingit Haida Indian Tribes of Alaska, a rain-garden and infiltration basin were designed and built to intercept stormwater run-off from the airport shopping center south of the Glacier Highway. The project also constructed a barrier fence along the banks of Jordan Creek to prevent contaminated snow from being pushed into the creek. Plus, the project educated the local community including the adjacent landowners on the benefits of these types of green infrastructure projects.



During restoration

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Outcome:

Stormwater runoff from 36,000 ft² (0.83 acres) is now treated in this rain garden prior to discharge into Jordan Creek, improving the overall water quality and stream health. And while the barrier fence

is an attractive addition to this property, snow removal activities no longer include pushing contaminant-laden snow directly into the stream. During outreach efforts, several landowners expressed interest in constructing green infrastructure on their private properties along Jordan Creek.



After restoration



Petersburg Beach Monitoring Program

Southeast Alaska Watershed Coalition, \$26,439

This project addresses an ACWA Stewardship priority. In collaboration with the

Petersburg Indian Association, the first year of recreational beach monitoring was conducted at Sandy Beach Park in Petersburg, Alaska. This beach was identified by DEC as a high priority, because it is commonly used for swimming and wading recreation activities. When monitoring results revealed bacteria levels exceeded the public health criteria, DEC worked with local agencies to notify the public.



Outcome: Beach monitoring conducted at Sandy Beach Park in Petersburg showed the beach was safe for recreation during summer months, however, bacteria levels exceeded public health criteria during a 5-day period in September. The early summer months of 2016 sustained healthy beach water. Press releases and newsletters were published to increase public awareness of the potential sources of bacterial contamination, associated health risks, and actions that can reduce the risk of disease.

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Wrangell Beach Monitoring

Southeast Alaska Watershed Coalition, \$29,804

This project addresses an ACWA Stewardship priority. The second year of recreational beach monitoring was conducted at City Park and Petroglyph Beach in Wrangell, Alaska. These beaches were identified by DEC as a high priority, because of the significant recreational usage by local residents and visitors.



City Park Beach, Wrangell AK



**Petroglyph Beach State
Historic Park, Wrangell AK**

Outcome: A second year of monitoring demonstrated that City Park and Petroglyph Beach are safe for recreation. Newsletters and public service announcements increased public awareness of potential sources and health risks associated with bacterial contamination. The increased public awareness aided in a positive and well-informed public reaction and response during the August 2016 sewer main break into the coastal marine environment.

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Sawmill Creek Rain Garden and Bioswale

Takshanuk Watershed Council, \$18,432

This project addresses an ACWA Restoration priority. In collaboration with the Chilkoot Indian Association and the Haines Borough, the Takshanuk Watershed Council designed and built two green infrastructure projects within the Sawmill Creek watershed in Haines, AK.



**Chilkoot Indian Association
Building rain garden**



Outcome: The rain garden treats stormwater runoff from the building roof and gravel parking area, and redirects the flow from the storm drain to a nearby wetland for retention and treatment. The bioswale collects and treats runoff from a Borough snow storage area prior to discharge into Sawmill Creek. In addition, the Chilkat Forest Investigators after-school program played a key role in developing and implementing the plant selection, design and planting, as well as the interpretive sign. A short film was produced capturing the rain garden concept and involvement by the community <http://www.takshanuk.org>.



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South-Central

Clean Boating in the Susitna Valley & Cook Inlet

Cook Inletkeeper, \$37,612

This project addresses both ACWA Restoration and Protection priorities and continues an ongoing program. Since 2010, DEC, in conjunction with Cook Inletkeeper and local partners, have been educating boat owners about clean boating practices. This project continues the education activities at popular sport fishing areas and other recreational locations throughout Matanuska-Susitna Borough and Kenai Peninsula. Sport fishing is an important economic asset yet some popular fishing locations are polluted or at-risk of pollution by petroleum hydrocarbons and turbidity. The project will partner with the boating community including local businesses to increase the number of boaters that understand clean boating practices. Contact: Rachel Lord, (907) 235-4068 ext. 29.

Outcome: Increased boater awareness of clean boating practices and actions that can be taken to reduce pollution caused by motorized boats. This year's project launched the new business discount card program for participants that complete the online Boat US Foundation clean boating course.

Currently 14 area businesses are providing free or discounted goods or services to people completing the clean boating course. The availability of this new program was a highlight during clean boating outreach events throughout the grant year. Additionally, over 250 clean boating surveys were conducted at boat launches, area sport shows and at local community events. The top three actions that boaters were willing to engage in to support clean boating practices were: 1) use absorbent pads in the bilge; 2) fuel away from the water; and 3) drain boats away from the launch ramp.



Improving Water Quality in Anchorage's Waterbodies

Anchorage Waterways Council, \$50,000

This project addressed an ACWA Restoration priority. The project addressed the problem of fecal coliform bacteria entering Anchorage's waters by taking a multi-pronged approach. First, a compilation of information was prepared as a reference of best management practices undertaken in the previous ten years to mitigate pet waste. The work was done in conjunction with the

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Outcome:

Data from 2010 through 2014 demonstrates that Kenai public use beaches regularly exceed relevant water quality standards for single-sample and 30-day geometric mean values of fecal coliform and enterococci during the personal use fishery in July. Based on MST analysis, it is clear that gull-sourced fecal bacteria makes a large contribution to overall fecal pollution at Kenai public use beaches. Additionally, there is a noteworthy relationship between yearly average bird counts and bacteria levels. Gulls are believed to be attracted to North and South Kenai Beach by unnaturally large quantities of fish waste present during the fishery.



Monitoring Stormwater Discharges in Cordova, AK

Copper River Watershed Project, \$15,900

This project addresses an ACWA Stewardship priority. The project implements recommendations from a 2013 stormwater assessment for the Odiak Pond watershed. The results from this project will enable the City of Cordova public works staff to improve pollutant loading modeling and predictions on the effectiveness of Best Management Practices for stormwater management. The sampling results will be integrated into City operations in street and drainage repairs, snow management, and new construction development.

The project collected screening level water quality data for Total Settleable Solids, petroleum constituents and heavy metals at the stormwater discharge points to Odiak Pond and Orca Inlet in order to gain a better understanding of influences of common stormwater contaminants to these waters. The data was collected



under a DEC approved Quality Assurance Project Plan and Sampling Plan. The monitoring results were provided to DEC and local residents via a number of formats including newspaper advertising and City of Cordova's electronic newsletters and bills. Contact: Kristin Carpenter, (907) 424-3334.

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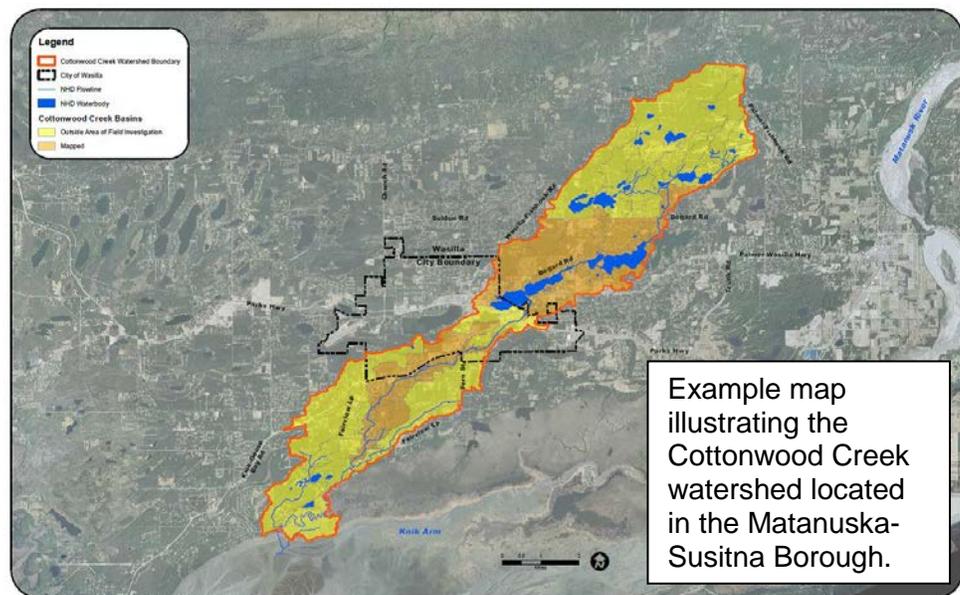
Outcome: A better understanding of the characteristics of stormwater pollution being discharged into two receiving waters in Cordova. Water samples were collected in Odiak Pond and in Orca Inlet throughout the grant year capturing four wet weather events and two dry weather events at each location. In general the results indicate increased concentration of copper, lead and zinc during times when stormwater is actively discharging to these waters. Outreach and education with local residents and decision-makers on ways to reduce stormwater pollution occurred throughout the grant year.

Stormwater Analysis on Cottonwood Creek

Matanuska-Susitna Borough, \$15,000

This project addresses ACWA Stewardship and Restoration priorities. This project will conduct a stormwater infrastructure inventory of the Cottonwood Creek watershed. The inventory will include surveying and mapping of stormwater infrastructure and flow paths, identifying inadequate storm drain collection and treatment systems, and mapping ditches, pipes, and treatment features. The area of focus is the middle and lower sections of Cottonwood Creek watershed within the Matanuska-Susitna Borough

(MSB) boundaries. The stormwater survey will identify specific areas which may be contributing to the creek's pollution, from road runoff and also fecal coliform bacteria, and make recommendations for the physical stormwater control structures, including green infrastructure, which could be used to improve water quality.



The primary project deliverable for the FY16 project was an initial Geographic Information Systems (GIS) stormwater data layer of the watershed with drainage directions and discharge areas mapped. This project will continue through FY17 to capture additional flow conditions in the creek for the stormwater mapping and analyses. The results from FY16 and FY17 will be incorporated into a comprehensive project report in FY17. Contact: Mike Campfield, (907) 861-7719.

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Outcome: Increased knowledge and information on locations, types, and amounts of stormwater discharges to Cottonwood Creek. This project started in the 4th quarter with initial GIS mapping and field reconnaissance completed by the end of June.

Interior

Fairbanks Complete Streets Construction

Tanana Valley Watershed Association, \$19,525

This project addresses an ACWA Restoration priority and builds on on-going work. Several green infrastructure projects will be implemented in conjunction with the Cushman and Barnette Complete Streets improvement projects. The project constructs green infrastructure projects at S Salon, Madden Real Estate, the Big I and the Fairbanks North Star Borough Bus Depot. Signs will be installed at each project location describing the benefits of using green infrastructure techniques to manage stormwater on-site. Contact: Contact: Jewelz Barker, (907) 374-8890.

Outcome: Rain gardens were installed at the Fairbanks North Star Borough Bus Depot, S salon and the Big I. Other green infrastructure applications including permeable pavers and flow-through planters were also installed. The rain garden, planters and pavers all improve the water quality entering the Chena River.

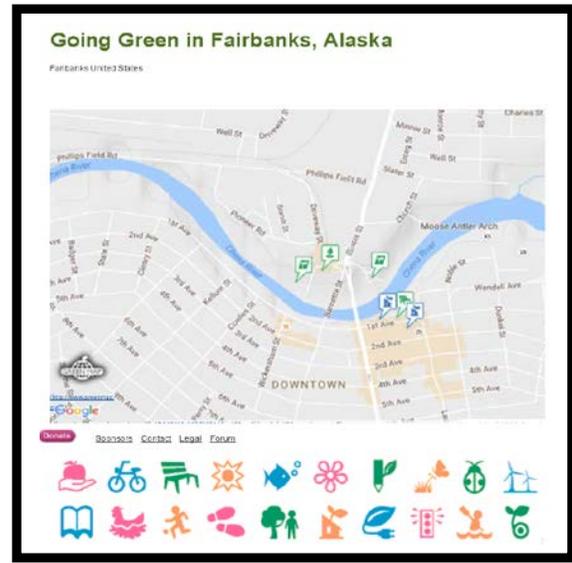


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Project Green Map

Tanana Valley Watershed Association, \$5,256

This project addresses an ACWA Stewardship priority. This project will create maps identifying areas that are the most in need of and feasible for green infrastructure instead of traditional stormwater piping systems, or “gray” infrastructure. The maps will showcase to Fairbanks residents and planners what areas are strategically best suited for green infrastructure projects. Implementing green infrastructure will save water and reduce pollution inputs to the Chena River. Contact: Jewelz Barker, (907) 374-8890.



Outcome: Green infrastructure techniques were promoted to the community through a variety of venues, including outdoor shows and community festivals. An online “green map” for the Fairbanks area was set up using Greenmap.org software. Volunteers were recruited to add sites to the map, which is available online for the public to use as a reference.

Clean Boating Education on the Salcha

Tanana Valley Watershed Association, \$6,747

This project addresses an ACWA Stewardship priority. This project will include education for 200 landowners and 25,000 recreational users on the importance of the Salcha River and ways to keep the river healthy. Using existing outreach materials, face-to-face outreach will occur with boaters at the Salcha boat launch, at popular outdoor sporting shows, and at local boating and hunting events. Permanent signage with clean boating tips will be installed. Contact: Jewelz Barker, (907) 322-2633.



Outcome: TVWA developed clean boating outreach materials which were distributed to residents, at local businesses and at events, including the Outdoor Show in Fairbanks. Mailers were sent to a

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list of residents and business owners. A sign was created for a new kiosk at the Salcha River Boat Launch. Outreach materials focused on good stewardship behaviors to reduce pollution to the river.



Do you enjoy fishing on the Salcha River?

If so - then you should know that the Salcha River has the **LARGEST** return of Yukon River Chinook in the state!



Good boating practices protect fish by reducing pollution.

What You Can Do for the Fish!

- ✦ Have absorbent pads on board to capture oil and fuel spills.
- ✦ Fill your tank slowly, on land, and only to 90%.
- ✦ Wait to drain your bilge away from the launch.
- ✦ Upgrade your old 2-stroke engine to 4-stroke or direct fuel.
- ✦ Stay away from soaps for cleaning up spills.
- ✦ Avoid idling your engine.
- ✦ Look for Elodea and other invasive plants; report them if found!

