



Section 319

NONPOINT SOURCE PROGRAM SUCCESS STORY

Alaska

Debris Removal Restores Water Quality

Waterbody Improved

Debris in Alaska's Sawmill Creek violated water quality standards for residues and prompted Alaska to include the creek on its inventory of impaired waters in 1996. Alaska classified Sawmill Creek as a Category 4b ("impaired water with other pollution controls") in its 2002 Integrated Report. The Takshanuk Watershed Council (TWC) led an effort to clean up and restore Sawmill Creek. With help from the Alaska Department of Environmental Conservation (DEC), TWC organized events and actions that ultimately led to the removal of 27,000 pounds of scrap metal and 132 bags of trash in 2006 and 2007. As a result, the creek met the residue standard, and DEC removed debris from the list of impairments for Sawmill Creek in 2008.

Problem

Sawmill Creek (Figure 1) flows through Haines Borough in southeastern Alaska, approximately 85 miles north of Juneau. The creek drains a 1.61-square-mile urban watershed and ultimately flows into Alaska's Chilkat River. Haines has a population of approximately 2,000 and is a popular site for tourists. Water quality degradation in the creek has been an issue since the mid-1990s. Highway debris, such as litter, is the biggest obstacle to restoring water quality. Along many Alaskan waterways in urban settings, people often illegally dump trash and sometimes large debris (such as cars and machinery). In some cases in the past, abandoned cars were used to stabilize certain stream bank sections. This debris can migrate downstream and clog and damage culverts, frequently blocking fish passage.

The state standard for residue and debris prohibits any deposits on streambeds, shorelines or lakes that negatively affect designated uses. The debris in Sawmill Creek caused the creek to violate the standard, and Alaska included the 6.1-mile long creek on the state's inventory of impaired waters in 1996. Because Haines Borough had already initiated cleanup efforts and planned stream improvements, DEC classified Sawmill Creek as Category 4b ("impaired water with other pollution controls") in its 2002 Integrated Report.



Figure 1. A forested portion of Alaska's Sawmill Creek.

Project Highlights

In 1997 a local citizens group and DEC began restoring Sawmill Creek by replacing a culvert and removing some debris. A 2003 grant from the U.S. Fish and Wildlife Service's (USFWS's) Coastal Program funded a project to reroute the creek away from the road onto private property and monitor the project's success.

With collaborative help from DEC, TWC and citizen volunteers began participating in annual trash removal days in 2004. The Chamber of Commerce now sponsors the annual stream cleanups as part of its Spring Cleanup Week. These cleanups continue to be a successful way to remove debris from the creek and educate citizens about debris impairments. For the 2007 and 2008 cleanups, TWC took the title as King and Queen of Trash in recognition of being the organization that collected the most trash.

The Alaska legislature also provided funding to support the Sawmill Creek restoration effort. TWC alerted State Representative Thomas, who successfully obtained funding from the state capital budget to replace a deteriorating culvert blocking fish passage on Sawmill Creek's mainstem—a project that was completed in early summer 2008. Representative Thomas secured an additional appropriation to replace a culvert in another part of the Sawmill Basin and to support TWC as it works with Alaska Department of Transportation to restore a section of the creek adjacent to its local maintenance yard.

Results

In 2006 and 2007 the TWC and citizen volunteers removed 27,000 pounds of scrap metal and 132 bags of trash from Sawmill Creek, including one large deposit of abandoned vehicles and assorted refuse from the creek's bank. Public education is helping to eliminate the public acceptance of using abandoned vehicles for stream bank stabilization and has increased the number of children and adults in the community who are aware of the habitat values of Sawmill Creek.

TWC believes that raising the profile of the creek and its impairment has helped to change the community's attitude about dumping in the creek and has decreased the prevalence of debris dumping and littering. In fact, TWC has seen no new large-scale dumping in the past few years.

The project partners successfully removed the majority of the debris originally impairing Sawmill Creek, and the creek is now meeting the water quality standard. Consequently, DEC removed debris from the list of impairments for Sawmill Creek in 2008. TWC performs periodic fish and benthic macroinvertebrates sampling to indicate in-stream water quality; while sampling, the group continues to visually monitor Sawmill Creek for debris.

Partners and Funding

Alaska DEC helped TWC organize events and Sawmill Creek restoration activities. The USFWS funded restoring a branch of the creek and subsequent monitoring work. The Alaska legislature provided more than \$360,000 to replace culverts and restore the stream in 2008. TWC received two separate Alaska Clean Water Actions (ACWA) grants (\$5,390 and \$30,000) in 2007 that supported a number of efforts including assessing the watershed, monitoring associated with this assessment, removing debris, and stabilizing and revegetating stream banks. Section 319 funds are a component of ACWA grants and thus contributed to ACWA-funded projects.

Grants from EPA's Environmental Education program, the local Chilkoot Indian Association and the Charlotte Martin Foundation have funded education activities with students in the watershed. Students from the Haines Borough school district helped with a number of the cleanup events. Haines Borough provided equipment and operator time to remove larger items, such as cars, from the creek. Private landowners supported and helped with cleanup efforts on their property.

An additional \$15,000 in ACWA funding will support a 2009 discharge and sediment study. TWC is identifying habitat impairments and rehabilitation needs and forming a partnership with the Department of Fish and Game to set up stream gauging stations. Haines Borough has set aside \$20,000 in funds to purchase land for conservation purposes in the watershed and funded a restoration plan for future work.



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