



# NONPOINT SOURCE SUCCESS STORY Update

## Alaska

### Implementing Sediment Controls Restores Granite Creek

#### Update Overview

Stormwater runoff from gravel mining operations contributed high sediment loads to Granite Creek. As a result, Alaska's Department of Environmental Conservation (DEC) added Granite Creek to the list of impaired waters in 1996. Implementing sediment controls reduced erosion in the watershed. As reported in Granite Creek's [2008 "making progress" nonpoint source success story](#), sediment loads had already begun declining. Recent data show that Granite Creek now consistently meets water quality targets, and DEC removed it from the list of impaired waters in the 2014/2016 cycle (for sediment).

#### Problem

Southeast Alaska's Granite Creek (waterbody AK-10203-005) received elevated sediment loads from gravel mining operations, material stockpiles, road maintenance, and recreational uses (Figure 1). DEC listed a 1.5-long segment of the creek as impaired for sediment in 1996 and worked with the City and Borough of Sitka (CBS) to develop a *Granite Creek Watershed Recovery Strategy and Total Maximum Daily Load (TMDL)* in 2002. DEC updated the recovery strategy in 2008 to reflect monitoring data collected in 2002–2007.

#### Story Highlights

Over the past 25 years, partners implemented many projects including constructing settling ponds, protecting and expanding streamside vegetated riparian buffers, hydroseeding erodible soils, placing physical barriers to limit encroachment on stream banks, improving drainage, grading roads and paving erosion-prone road sections, and educating gravel mine operators. In addition, as recommended in the 2002/2008 recovery strategy and TMDL, the partners have conducted periodic environmental audits to document inspection findings and recommend needed corrective actions. Existing projects and practices are being maintained.

#### Results

Turbidity levels have declined. Of 46 turbidity measurements recorded from January 2010 to June 2013, only two data points (4.3%) exceeded the applicable turbidity target, and these were during very high-flow conditions due to heavy rain and snow-melt. As a result, DEC removed Granite Creek from the list of impaired waters in the 2014/2016 listing cycle for sediment.

#### Partners and Funding

Alaska's DEC, CBS, Alaska Department of Fish and Game, U.S. Geological Survey, and gravel lease operators have worked together to restore Granite Creek. Between 2002 and 2014, CBS received approximately \$250,000 in Alaska Clean Water Actions (ACWA) grant funds and provided matching funds to the state. ACWA is funded through Alaska's Clean Water Act Section 319 Program. ACWA funds supported restoration efforts and ongoing water quality and fish count monitoring.



Figure 1. Granite Creek is in southeast Alaska.

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