

HAINES BOROUGH

Brief History: Haines Borough is surrounded by the rich waters of the Chilkat and Chilkoot rivers and the salt waters of Lynn Canal. Native Alaskans of the Tlingit culture originally settled the Haines area. These first people traveled to the area along the Northwest Coast after the receding glaciers, or came down the mountain valleys from the Interior. The original Native name for Haines was Deishu, meaning “end of the trail.” The town was heavily involved in the Klondike Gold Rush as a supply and entry point. Its strategic location resulted in the first permanent U.S. military installation in Alaska, Fort William H. Seward. Today, Haines is a major trans-shipment point because of its ice-free deep water port and dock and year-round road access to Canada and Interior Alaska. During the late fall Haines Borough is home to the largest concentration of bald eagles in the world, hosting 1,500 to 3,500 eagles. There are also over 100 year-round nesting sites recorded in the area.



Photo by: David Gann

State of Alaska

Pronunciation:	(HAYNZ)
Population (2007):	2,310
Shoreline:	8 miles
Coastal Area:	15 square miles
Annual Precipitation:	60"
Annual Snowfall:	132"
Hours of Daylight Summer:	18 hours, 36 min
Hours of Daylight Winter:	6 hours, 6 min
Regional Native Corporation:	Sealaska Corporation
Legislative District:	5 C

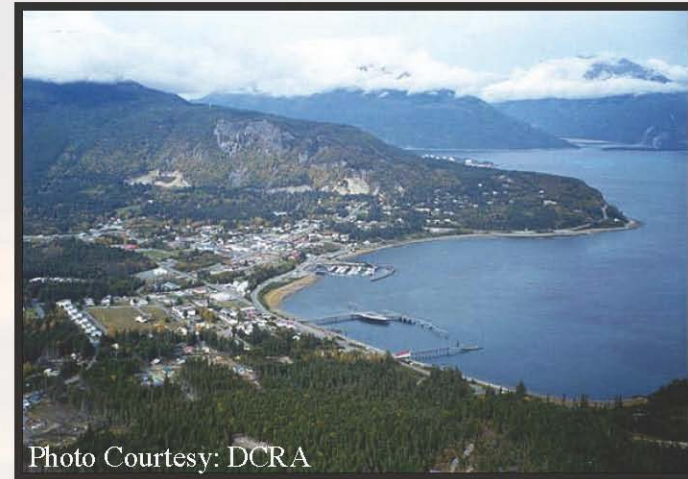


Photo Courtesy: DCRA



Photo by: David Gann

Division of Coastal & Ocean Management



**STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM**

**HAINES BOROUGH
Takshanuk Watershed Council**

The Borough will be conducting this project as a legislatively named CIAP recipient
on behalf of the State of Alaska

PROJECT TITLE: Brown Parcel Acquisition and Conservation

PROJECT CONTACT

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PROJECT LOCATION

The Brown Parcel is located in the Sawmill Creek watershed, less than one mile from the Chilkat River estuary (see attached map). The townsite service area of Haines, Alaska encompasses most of the Sawmill Creek watershed. The Brown Parcel contains two branches of Sawmill Creek where a demonstrative restoration project was completed in 2003.

Haines is located on the western shore of Lynn Canal, between the Chilkoot and Chilkat Rivers. It is 80 air miles northwest of Juneau, just south of the Canadian border at British Columbia, and 600 air miles southeast of Anchorage and Fairbanks. By road, it is 775 miles from Anchorage. The community lies at approximately 59.235830° North Latitude and -135.445000° West Longitude. (Sec. 34, T030S, R059E, Copper River Meridian.)

PROJECT DURATION

The acquisition of the Brown Parcel and conservation easement will be completed within one year of funding being made available to the Haines Borough and Takshanuk Watershed Council.

ESTIMATED COST

Spending Estimate (\$)				
TOTAL	Year 1	Year 2	Year 3	Year 3.5
\$70,000	\$70,000	0	0	0

Funding per Allocation Year of CIAP (\$)				
TOTAL	FY 07	FY 08	FY 09	FY 10
\$70,000	0	0	0	\$70,000

PROJECT DESCRIPTION

The Brown Parcel Acquisition and Conservation Project will benefit the natural coastal environment of Haines through the acquisition of land and the placement of a conservation easement, which will protect salmon habitat in the Sawmill Creek watershed forever. This land will be used as an outdoor classroom for use by all Haines students. The Brown Parcel will provide a safe, convenient and permanent space for ongoing natural history, ecology, and watershed science classes for educators and students of all grade levels.

Background

For the past seven years Takshanuk Watershed Council (TWC) has been providing elementary, middle and high school students in Haines with vivid experiences on a small but important piece of habitat near their school. TWC proposes to complete the purchase of the parcels and to place a conservation easement on the property to protect it in perpetuity. These two tasks will be completed within FY10 by TWC staff and Board of Directors using CIAP funding.

In 2003 TWC completed a restoration project on the Brown Parcel as an educational experience for local citizens and students. With the permission of the landowner, Phyllis Brown, a branch of Sawmill Creek was re-routed from a roadside ditch to a more natural constructed stream channel on the property. Students helped trap and move Coho salmon, cutthroat and Dolly Varden fish from the old channel to the new. Post-project monitoring by TWC continued with the help of students from the Haines Schools tracking the movement of fish in the area and monitoring stream health at the project site. The purpose of TWC's project was, and remains, to provide a permanent outdoor science laboratory for all Haines Borough school children through the acquisition and conservation of the 1.58 acres of land. In 2009, Ms. Brown offered the parcels for sale to TWC and the council agreed to purchase the property for the Haines Borough tax assessed value. Ms. Brown financed the purchase and TWC will make annual payments on the land until paid in full. TWC also seeks to place a conservation easement on the property so that it will be protected from development and saved for use by the community in perpetuity. CIAP funds would be used by TWC to make annual payments to Ms. Brown and to place the conservation easement on the property. Little land remains undeveloped in the Sawmill Creek watershed and this riparian habitat is an important area to conserve and protect. Protected salmon habitat located within walking distance of the Haines Schools is not found elsewhere in the area. The Brown Parcel has become the centerpiece of TWC's outdoor education program.

TWC has the opportunity to generate interest in watershed stewardship through Living in the Forest and other environmental education classes. The availability of an outdoor science classroom is key to this outcome. Currently there is no such outdoor laboratory available to the Haines Borough Schools. This includes four public schools and all private or home-schooled children residing in the Haines Borough- approximately 400 students in all. The Brown Parcel

provides a safe, convenient and permanent space for ongoing natural history, ecology, and watershed science classes for educators and students of all grade levels. Hands-on experience is invaluable to each child's learning. A permanent outdoor science laboratory enables children and educators to develop multiple science projects over several school years. Having continuity of data enables educators and children to conduct long-term research. Some of these long-term research projects are part of international projects such as GLOBE. During the last year alone, students have gone to the site 15 times. Total attendance at these events topped 400 students. Over the last seven years we have led more than a hundred field trips to the site.

The lab will expand the capacity and capabilities of science classes by expanding ways to teach concepts as well as the possibility of alternative education for students. The children have invested their interest in the Brown Parcel, from the initial stream restoration during which they performed 'fish rescue', transplanting 200 juvenile salmon and trout from the old streambed into the new, to the re-vegetation along the banks and trash pick-up. A student can pick out the willow that he or she helped to plant, and track its survival and growth, year after year. Stewardship of the stream is literally in the hands of the children, with the help of TWC.

Takshanuk Watershed Council has assumed a significant debt in order to ensure that it can continue to use the land as an educational asset for the students of Haines. For a small organization this debt represents a heavy burden. The benefit to the community from our past use of the Brown Parcel is demonstrable- essentially every student in the system has learned biological research techniques at the site. Conservation of the property with a legal conservation easement will secure the land for future use by all local residents and will protect this important coastal habitat forever.

MEASUREABLE GOALS AND OBJECTIVES

The Brown Parcel Acquisition will lead to the permanent conservation of 1.58 acres of forested riparian habitat in the Sawmill Creek watershed.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE:

This project will lead to the conservation and protection of the coastal habitat in the Sawmill Creek watershed (*Authorized Use #1: Projects and activities for the conservation, protection, or restoration of coastal areas, including wetland*). Through acquisition of the land by TWC and placement of a conservation easement, the project will protect salmon habitat in the Sawmill Creek watershed forever from impacts associated with development. A legally binding easement will ensure that the parcel will not become subdivided or otherwise developed beyond an outdoor classroom for use by all Haines students. Protection of these parcels that are highly visible and exemplary for Haines students will increase their feelings of stewardship for coastal resources. By ensuring that the parcels remain undeveloped, TWC will be able to focus time and resources on delivering quality environmental education to area students. Because the parcels are already subdivided into house lots and the blocks are located in a suburban neighborhood, significant threat of development is present. Because TWC is under contract to make annual payments on the parcels, funding that can be secured to complete the purchase as soon as possible is important and necessary. As well, the cost of a conservation easement was never included in budgeting for

the parcels because of the limited funds available to TWC for the land payments. As soon as a conservation easement is put into place, the land will be secured as a green space forever, regardless of ownership by TWC or in the event of the dissolution of the corporation, by another entity.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS:

The Brown Parcel Restoration and Monitoring, completed in 2003, was supported with funding from US Fish and Wildlife Service and National Oceanic and Atmospheric Administration. Since that time, stewardship of the Brown Parcel has relied heavily on the partnership forged with the Juneau Field office of the USFWS during the restoration project. As well, the EPA has supported two years of environmental education completed by TWC, during which educators have extensively utilized the Brown Parcel. Funding for land acquisition and conservation has been sought but not found until this opportunity was realized.

COST SHARING OR MATCHING OF FUNDS:

CIAP funds will not be used to match funds for any purpose related to the Brown Parcel Acquisition and Conservation.

ATTACHMENT:

Map of Brown Parcel, Sawmill Creek and Haines, Alaska



Figure 1: Brown Parcel Location

**STATE OF ALASKA
COASTAL IMPACT ASSISTANCE PROGRAM**

**HAINES BOROUGH
Takshanuk Watershed Council**

The Borough will be conducting this project as a legislatively named CIAP recipient on behalf of the State of Alaska

PROJECT TITLE: Sawmill Road Fish Passage Improvement

PROJECT CONTACT

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PROJECT LOCATION

Sawmill Road crosses Sawmill Creek less than one mile from the Chilkat River estuary near Haines, Alaska. The townsite service area of Haines, Alaska encompasses most of the Sawmill Creek watershed. The current culverts have been identified to block juvenile fish at certain flow levels and comprise the furthest crossing downstream in the Sawmill Creek watershed. See map attached to this document.

Haines is located on the western shore of Lynn Canal, between the Chilkoot and Chilkat Rivers. It is 80 air miles northwest of Juneau, just south of the Canadian border at British Columbia, and 600 air miles southeast of Anchorage and Fairbanks. By road, it is 775 miles from Anchorage. The community lies at approximately 59.235830° North Latitude and -135.445000° West Longitude. (Sec. 34, T030S, R059E, Copper River Meridian.)

PROJECT DURATION

The replacement of the Sawmill Road culvert will occur within one year of funding being made available to the Haines Borough and Takshanuk Watershed Council.

ESTIMATED COST

Spending Estimate (\$)				
TOTAL	Year 1	Year 2	Year 3	Year 3.5
\$101,386	\$101,386	0	0	0

Funding per Allocation Year of CIAP (\$)				
TOTAL	FY 07	FY 08	FY 09	FY 10
\$101,386	0	0	0	\$101,386

PROJECT DESCRIPTION

The Sawmill Road crossing impedes fish passage to significant upstream habitat in the Sawmill Creek watershed. In 2007 Takshanuk Watershed Council and US Fish & Wildlife Service identified the culvert as a significant block to juvenile fish passage. Complete hydrology and surveys were completed in 2007 and a preliminary design was completed subsequently. The Sawmill Road Fish Passage Improvement Project seeks funds to complete the removal of the previous culverts and the installation of a properly sized culvert at the Sawmill Road crossing. All of the project work would be completed in the first year of the project.



Figure 2: Downstream end of Sawmill Road Crossing

MEASUREABLE GOALS AND OBJECTIVES

The Sawmill Road Fish Passage Improvement Project will restore access of juvenile Coho salmon, cutthroat trout and Dolly Varden char to over two miles of quality rearing habitat in the Sawmill Creek watershed.

PROJECT CONSISTENCY WITH CIAP AUTHORIZED USE:

This project will lead to the mitigation of damage to fish and wildlife habitat by improving habitat access in the Sawmill Creek watershed (*Authorized Use #2: Mitigation of damage to fish, wildlife, or natural resources*). The Sawmill Road Fish Passage Improvement Project will remove a block to juvenile fish at the lowest crossing on Sawmill Creek. An opportunity for mitigation is made available through the removal of this block and replacement with an appropriately sized culvert that will provide access at a majority of flow levels for juvenile fish.

This is a good mitigation opportunity for improvement of habitat in an important and productive coastal watershed. The inability of a road crossing structure to pass various life stages of resident and anadromous fish can have major impacts on population health in small stream systems. A poor crossing causes a physical block in the passage of juvenile fish moving upstream. Culverts installed at the improper depth or gradient cause a 'jump' in the natural longitudinal profile that is too high or steep for fish to navigate. As well, a length of stream with high velocity creates a block for weak swimming fish such as juvenile salmonids. The design and installation of a replacement structure will pass the stream course under the road without compromise to the longitudinal profile of the creek. In the Haines area Coho salmon fry are considered generally to be the most common and important of the weak swimming fish to consider in many of the road crossings.

Culverts, bridges and bottomless arches are all used to pass streams under roads and have until relatively recently been installed without much consideration of anadromous fish. Several miles of stream habitat can be 'opened up' at this crossing through the replacement of faulty stream crossing structures. Culvert replacements should be completed in a practical sequence to provide the most benefit to fish populations and TWC has worked with landowners, local and state agencies and the Haines Borough to prioritize locations for replacement. The Sawmill Road crossing is the top priority in the Haines townsite.

The backlog of poorly executed stream crossing structures represents a constant drain on the overall productivity of salmon habitat. Every year these structures remain in place the overall production of fish in the area is reduced. Recent work by TWC in the Haines Borough indicates that small stream systems are productive and represent an important habitat option for juvenile salmonids as they move around in the watershed. Similar culvert replacement projects have proven successful in allowing fish passage. TWC was involved in the replacement of a culvert on Muskrat Creek, a tributary of the Chilkat River, in 2005. Pre- project trapping showed that the half-mile of creek upstream of the culvert was occupied by a small number of Dolly Varden while a pool at the downstream end of the culvert had 300 juvenile Coho salmon. Immediately after the culvert was replaced the salmon moved upstream to occupy the now accessible habitat. Long-term post-project monitoring showed that this upstream stretch is highly valuable Coho overwintering habitat.

COORDINATION WITH FEDERAL RESOURCES OR PROGRAMS:

The Sawmill Road Fish Passage Improvement Project will compliment significant funding from US Fish & Wildlife Service that supported the Haines Borough Fish Passage Inventory and Assessment. In 2008, TWC applied for and obtained funds to complete a limited fish passage inventory and assessment for the Haines Borough. Funds from the Alaska Department of Environmental Conservation's Alaska Clean Water Actions (ACWA) grants program and the US Fish & Wildlife Service Coastal grants program funded the survey, mapping and analysis of many road crossings in the Haines Borough. Due to recent and ongoing construction on the Haines Highway (Alaska State Highway 6), culverts on the highway were not assessed for fish passage. A written report served as the first part of the Haines Borough Fish Passage Inventory and Assessment. Additionally the design phase of the culvert occurring in Summer 2010 has recently been supported by the US Fish & Wildlife Service for complete engineered designs of

up to two crossings in the Sawmill Creek watershed. The Sawmill Road crossing is a top priority and will be designed by the end of 2010. The design phase will be complete and use of CIAP funding will allow the project to progress further.

COST SHARING OR MATCHING OF FUNDS:

CIAP funds will not be used to match funds for any purpose related to the Sawmill Road Fish Passage Improvement Project. Specifically, funds have already been secured for fish passage improvements in the Sawmill Creek watershed from the US Fish & Wildlife Service, but these funds do not require a match for completion of the design.

ATTACHMENT:

Map of Sawmill Creek Watershed, Culvert Location and Haines, Alaska Townsite

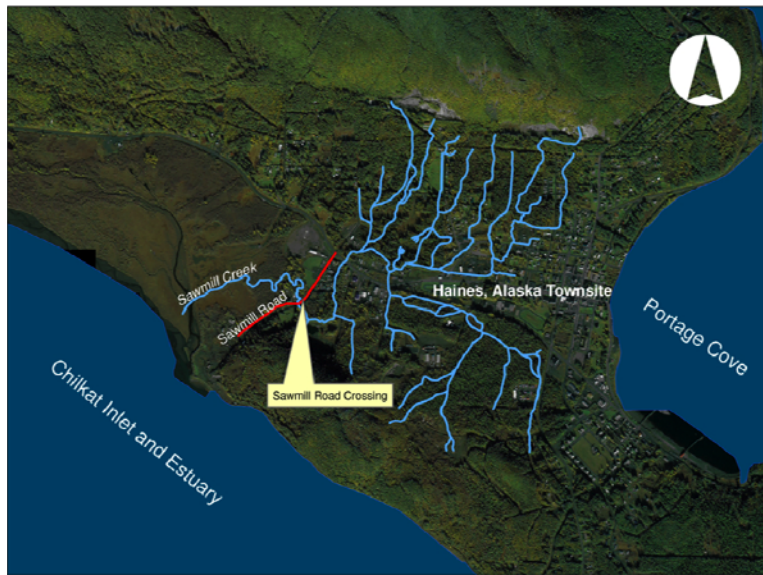


Figure 3: Sawmill Creek and Culvert Location