

Viner River Instream and Riparian Restoration Project, 2001

Objectives

This project is the first phase of a series, designed to provide stable channel structure and a defined channel thalweg. The production of holding and spawning habitat for chum salmon (*Oncorhynchus keta*) as well as rearing and refuge habitat for coho (*Oncorhynchus kisutch*), rainbow (*O. mykiss*) and cutthroat trout (*O. clarki*) is anticipated as a secondary outcome.

FRBC Region / MELP Region
Pacific / Vancouver Island

Author

John Ebell

Proponent

FRBC through Interfor

Watershed / Stream

Viner River

Location

The Viner River is located on Gilford Island the largest island in the Broughton Archipelago at the top of Johnstone Strait. Echo Bay on Gilford Island is the local community center. The largest regional community is Port McNeill on the Northeast Coast of Vancouver Island.

Introduction

The Viner River Watershed has an area of approximately 22km². The river has 4.5 kilometers of mainstem anadromous habitat. It is a third order stream with several tributaries. The anadromous habitat supports coho, chum, sockeye, pink salmon, as well as steelhead, cutthroat and rainbow trout.

Concerns over declining salmon stocks in Viner River, in particular Chum salmon, have been observed by the local organizations. The area has a legacy of historic logging and fishing practices that have contributed to the decline. An inventory of Viner River was initiated by the interests of a diverse array of organizations that include; Broughton Archipelago Stewardship Alliance, Kwicksutaineuk Watershed Project, Kwakiutl Territorial Fisheries Commission,

Interfor, Department of Fisheries and Oceans, Fisheries Renewal and Mainland Enhancement of Salmonid Species Society.

Assessments and Prescriptions

An assessment of the Viner River Watershed was initiated in 2000. Conditions of stream morphology, fish habitat and riparian condition were recorded, analyzed and reported (Clough and Warttig, 2001). The mainstem of Viner River was found to be exhibiting signs of habitat degradation resulting from upstream slides, a deficit of LWD and weak riparian structure. The conclusions of the report were to assist the redevelopment of a naturally sustaining thalweg in the channel through LWD placement and riparian restoration.

Rehabilitation Work

Within the 2001 Viner River Restoration Proposal the overall objective was to repair the instream and riparian components of Reach 2 a 1074 m long reach. Specifically to:

1. Begin restoration of LWD
2. Restore the riparian zone
3. Create local employment

All objectives of the Viner River Restoration Project were achieved. The work began on July 16 and was completed by August 24, 2001.

LWD Placement

The extent of instream restoration was limited by funding. Despite this, seven LWD structures were constructed within Reach 2. Five of the structures were double a-frame structures utilizing 6 or 7 logs and at least 3 stumps each. In addition to these structures two logs were added to enhance an existing logjam and two logs were added to a flood channel gravel bar site to reduce flood velocities and promote revegetation

A B-Star helicopter with a maximum payload of 2400 lbs. was used to import all materials for the project. A total of 55 pieces of LWD were imported including 35 logs and 20 stumps. Forty one boulders were incorporated into the structures with a total weight of 26 400 kg. The

boulders were cabled to the structures to provide structural ballast and to enhance habitat complexity. The structures were lashed together using 5/8" steel cable.

Riparian Restoration

The restoration of the riparian zone along Reach 2 was fully completed with additional work completed within Reach 1, 3 and 4 as well. A total of 4.7 ha of riparian vegetation type (RVT) 4, "deciduous forest over top a poor conifer understory" was treated. This involved brushing, thinning and girdling patches of alder, and clump planting 3,500 cedar. These cedars were all large 2+0 high-quality 620 stock. All cedars planted were wire caged and staked to prevent deer damage. Up to 1000 naturally regenerating spruce and hemlock were also released from salmonberry and alder competition.

Employment

The instream and riparian components of this project were run in concert with each other. Crew and some equipment were shared between the two. A total of 69 days of employment were created by the instream component and 105 days created by the riparian component. A total of 9 employees worked on the project for varying lengths of time. All employees of this project were drawn from members of the partnership groups including first nation, seasonal forestry workers or seasonal fishers. The workers were all residents of the Gilford Island community.

Project Funding and Support

This project was funded through three main sources:

1. Fisheries Renewal BC (FsRBC)
2. Forestry Renewal BC (FRBC)
3. Habitat Restoration and Enhancement Program (HRSEP).

FRBC funds were directed towards the instream component however they were important in leveraging funding for the whole project. As such all components of the project are included in this compendium.

Cost Summary

Instream Component:

Project labour and biological	\$ 26 598
Materials and site costs	\$ 19 462
In-kind contributions	\$ 5 800
Total	\$ 51 860

Riparian Component:

Project labour and biological	\$ 22 740
Materials and site costs	\$ 12 084
In-kind contributions	\$ 3 920
Total	\$ 38 744

Proposed Work

Further assessment, prescription development and fund raising is underway towards the next phase of Viner River watershed restoration.

For Further Information, Contact:

Warren Warttig, RPBio
Tel: (250) 286-4547-24



Riparian: Site brushed and cedars planted in cages, Aug. 2001



Instream: Typical A-frame LWD Structure, December 2001

E-mail: warren_warttig@interfor.com