

Horsefly River Riparian Conservation Area Restoration

Objectives

To develop off-channel habitat for juvenile salmonids, re-establish riparian corridors, and stabilise banks (reduce sedimentation) within the Horsefly River Riparian Conservation Area/ Black Creek Ranch.

FRBC Region/ MELP Region/ MOF Region

Cariboo-Chilcotin/ Cariboo/ Cariboo

Author

Mike Ramsay, MELP

Proponent

Riverside Forest Products, Lignum Forest Products (with technical support from MELP)

Watershed

Horsefly

Location

The Horsefly River watershed is located approximately 50 kilometers north East of Williams Lake.

Introduction

The Horsefly River is one of the Cariboo's highest valued fish streams. Along with being one of British Columbia's leading sockeye streams, it is critical habitat for Quesnel Lake rainbow trout, and chinook and coho salmon. The watershed also displays a high level of habitat degradation, which particularly effects over-wintering salmonids. Two main habitat related problem are excessive sedimentation and high water temperatures. Both are due in part to the lack of riparian cover and poor riparian condition along the river.

Assessments and Prescriptions

The Horsefly River Conservation Area was subject to a riparian assessment (R.L. Case and Associates). The Ministry of Environment, Lands, and Parks Watershed Restoration staff developed prescriptions.

Rehabilitation Work

The focus of the 1999 restoration work was initiated in an attempt to alleviate the two identified limiting factors on rearing juvenile salmonids: high summer water temperatures, and high sedimentation.

In August of 1999 a ground water channel (approximately 400 meters long, 5 meters wide and 2-3 meters deep) was established on the lower Horsefly River Riparian Conservation Area. The ground water source was 9 degrees celsius, producing up to 50 liters per minute. Lower than in-river channel temperatures will provide mid-summer refuge for all salmonids. Warmer than in-river channel temperatures should provide exceptional rearing in mid winter.

Through out the spring, summer and fall riparian planting was conducted. This included willow staking on both mechanically "pulled back" and existing banks and the planting of riparian species such as spruce, cottonwood, willow and red osier dogwood.

Cost Summary

Labour	\$49,000
Bank Stabilisation	\$4,400
Channel Excavation	\$42,100
Total	\$95,500

Monitoring

Project monitoring in 1999 will include:

- quantifying varying levels of willow growth on mechanically "pulled back" versus naturally eroded banks
- estimating juvenile salmonid use in the ground water channel
- evaluating the growth of riparian species

Proposed Work

In 2000 the following works are proposed:

- extension of the ground water channel for another 300 meters
- further riparian planting with several more species and experimentation with scarification
- bank stabilisation treatments using root wads and stems

For Further Information, Contact:

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Figure 1: Pull back of vertical banks along the Horsefly River. Note the sods were staked to new slope, willow stakes inserted, horizontal facine at bottom of slope, and initial groundcover with fall rye.



Figure 2: Beginning the excavation of the groundwater channel along depression in floodplain, Horsefly River.

