

Seymour River

Habitat Restoration Project - Phase I

Watershed Background

The Seymour River, located in North Vancouver, currently has 19 km of anadromous fish access between the Seymour Falls Dam and the river mouth near Second Narrows Bridge. Most of this semi-pristine river is within the Seymour Conservation Reserve, and supports populations of many fish species including cutthroat trout, coho and chum salmon, and endangered runs of summer and winter steelhead.

Restoration Prescriptions

Why Proceed with Fish Habitat Restoration?

To increase the quantity and quality of juvenile salmonid rearing habitat and to ultimately increase the adult fish returns.

Habitat Restoration Techniques

In 2003, the Fish Habitat Assessment Procedure (FHAP) of the Watershed Restoration Program (WRP) was undertaken within the Seymour River and habitat deficiencies and prescriptions for rehabilitation were outlined.

Triangular Large Woody Debris(LWD) structure

Wood structures are designed to increase habitat complexity by trapping drift wood, thereby, creating scour, increasing pool depth, creating cover for summer and winter rearing juveniles, and cover for adults. Additionally, structures collect spawned out carcasses and hence, retain marine derived nutrients and carbon in the system for longer periods of time.

Parallel Large Woody Debris structure

(Similar benefits as the Triangular Large Woody Debris structure)

Boulder clusters

Provide a variety of stream substrate conditions such as depth, and velocity and also rest areas for fish. In addition, boulders improve the social interaction, foraging and predator avoidance behavior for fish using the stream.

Spawning platform

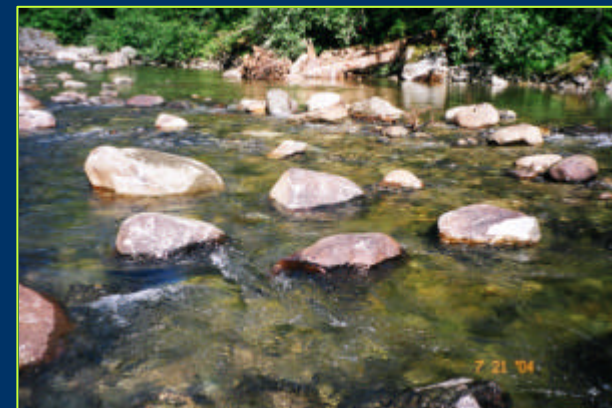
The placement of optimal sized spawning gravels will improve the quantity and quality of existing gravels and therefore improve the reproductive success of spawning salmonids.

The Dilemma!

Our lifestyles, as well as natural factors have strong and often negative impacts on steelhead and salmon. Forestry, agriculture and mining practices, hydroelectric and potable water demands, flood control, over-fishing, artificial fish production, urban development and climate/ocean changes all greatly affect steelhead survival.

Approaching the Issue

As many stocks are at an “*extreme conservation concern*” level, emphasis is shifting from stock assessment towards implementing extensive protection and rehabilitation measures to the fish and aquatic environments they reside in.



Date

July 19, 2004 – Aug 13, 2004

Location

Seymour River Spur 4 – 11 km up the river

Seymour River Spur 6 – 13 km up the river

Key Points

1. Permits, consultation, meetings, project planning
2. Review safety, fire, environmental hazard measures
3. Project Construction
4. Drill, cable and epoxy the structures
5. Public awareness signage and information bulletins

Outcome

- 11 Triangular Large Woody Debris structures
- 2 Parallel Large Woody Debris structures
- 100 Boulder clusters
- 1 Spawning platform

**Spyder Excavator**

The Spyder is fitted with biodegradable lubricants and is able to manoeuvre over rugged terrain and descend/ascend steep slopes with minimal disturbance to the environment.

Partnerships

- Greater Georgia Basin Steelhead Recovery Plan
 - Greater Vancouver Regional District
 - Seymour Salmonid Society
- Ministry of Water, Land, and Air Protection
 - Department of Fisheries and Oceans

Monetary donations: BC Federation of Drift Fishers, South Coast Steelhead Coalition, Kingfishers Rod and Gun Club, Steelhead Society

**Environmental Standards**

Maintaining high environmental standards by setting an oil spill boom

Triangle Structure

Wood accumulation approximately 3 months post-construction



At Work

Fisheries Technicians from the GGBSRP drill, cable and epoxy a triangle structure



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Spur 4 spawning platform downstream view



Posting river awareness signage