

Charters Creek Salmon Habitat Restoration Project

Final Report From The Juan De Fuca Salmon Restoration Society

for the

Pacific Salmon Commission

600 – 1155 Robson Street
Vancouver, BC
V6E 1B5

Report Completed by

Hamly Environmental Technology

501 Obed Ave
Victoria BC
V9A 1K6

Overview

Charters Creek is a fish-bearing tributary to the Sooke River that provides spawning habitat for Chum, Coho, and Chinook, as well as rearing and over-wintering for Coho, Rainbow/ Steelhead and Cutthroat. The proposed 400m, restoration reach lies in a highly visible area between Sooke River Road and the popular Galloping Goose bike trail. Charters Creek has been negatively impacted by stream channelization for highway construction and a CRD reservoir dam that limits sediment input. The local non-profit Juan De Fuca Salmon Restoration Society (JFSRS) along with Hamly Environmental Technology (HET), T'Sou-ke Nation Fisheries (TNF), the South Islands Aquatic Stewardship Society (SIASS), and DFO have been working for the past five years towards restoration of salmon habitat. Other partners in the project include CRD Water and Western Forest Products.

There are four stages to the Charters Creek Salmon Habitat Restoration Project;

1. Mainstem Restoration,
2. Water Storage,
3. Sidechannel Development,
4. Interpretive Park and Center.

This report covers the construction of five LWD structures completed during the summer of 2007. This work was funded by the Pacific Salmon Commission. Other work completed this summer includes the construction of one Newberry Riffle.

Objective:

Construct five DJ-5 type LWD structures at sites described in the report "Rehabilitation Design for Charters Creek", June 2006 by Marc Gaboury of LGL Ltd.

Methods:

Logs (some with root wads) and boulders were hauled to the various site locations. An excavator began construction by removing bedrock from the creek bed to create a 3m X 3m X1.3m deep pool. Once completed the first log was placed with the root wad at the top end of the pool with the root-wad facing upstream. The rest of the logs and boulders are then placed by adapting the DJ-5 design to the specific site where the structure resides. The boulders are placed in strategic location to act as ballast to keep the wood in place during winter flows.

Once the materials are in place, the next step is to tie the structure together using steel cable. Holes are drilled into the rock and epoxy is used to secure the cable to the rock. The cable is then threaded through a hole in the log and attached to another boulder on the other side. Cable is also used to attach the ends of the logs to one another. Staples and cable clamps are also used in the tying process.

Results:

Construction began on July 15, 2007. The first week saw one riffle constructed and two others repaired. The construction of the LWD structures began on July 23. The first three structures were placed in pools associated the riffles constructed earlier. The other two structures were to be built in existing pools. We decided to leave the last two structures until later because we needed to acquire the materials. Also, the excavator had to leave for another job. The first three structures were completed on July 25. Work commenced again on Sept. 24. Logs and ballast rock were hauled in and placed at the site locations. Log and boulder placement was followed by gluing and tying the structures and the project finished on Oct. 4, 2007.

Conclusion:

This years project has been a complete success. The stream morphology now resembles that of a fish stream. It has been a great community based project with incredible volunteer support and sponsorship. The crew we had worked very well together and the machine operators were very good. Close to one hundred people from the community attended the open house, including the mayor of Sooke and one counsel member. The project was also featured on the Shaw Cable, Community Network, Channel 11 program called The Daily.

During construction of the logjams, juveniles had taken up residence in the new pools immediately and were present in good numbers at each of the five LWD sites.

Although the escapement was very low this year for all three species, the utilization of the spawning habitat was very good. No official enumeration was taken however on three visits to the site during the spawning season, adults were found at all three sites on two occasions and at two sites on one occasion.

Expenses:

INVOICE/RECEIPT/COMPANY	PSC	OTHER SOURCES	IN-KIND (in \$)
Transportation/Equipment/			
LHRV Bobcat Service (Trucking)	386.90		
TLM Log Hauling	198.75		
TLM Log Hauling	636.00		
4-M Bobcat & Trucking	275.60		
Townsend Construction (Excavator)	4770.00		
Townsend Construction (Excavator)	1325.00		
Waldo Ventures (on site trucking)			1,027.60
Waldo Ventures LTD (Large Rock)	583.00		
Total	8175.25		
Capital/Supplies/Incidentals			
Slegg Lumber	58.18		
Slegg Lumber	76.95		
National Concrete	201.72		
National Concrete	33.88		
National Concrete	7.35		
National Concrete	33.88		
National Concrete	44.89		
Western Equipment	31.19		
Western Equipment (Wire Rope)	63.62		
Western Equipment	173.54		
Western Equipment	44.70		
Western Equipment	81.16		
Western Equipment	81.16		
Steinvik Holdings LTD. (Large Rock)	137.80		
Total Delivery Systems	25.97		
Save On Gas	10.01		
National Concrete	33.89		
Sooke Equipment Rental	8.26		
Home Hardware	11.27		
Timber West (logs)		700.00	
Total	1159.42		
Payment of Services			
Hamly Environmental Technology			1000.00
HET	1200.00		
HET	750.00		
HET	1350.00		
HET	300.00		
HET Crew	960.00		
DFO Crew		1,000	
DFO		800	
Volunteers			1250.00
LGL Ltd. (Marc Gaboury, Biologist)		1700.00	
Total	4560.00		

A	TOTAL EXPENDITURES	13,894.67	
B	TOTAL OTHER		4,200.00
C	TOTAL IN-KIND		3277.60
D	TOTAL PROJECT COST A+B+C	2137.27	
E	GRANT	14,480.00	
LESS	TOTAL EXPENDITURES A	13,894.67	
	OUTSTANDING GRANT	585.33	