

RESTORING FLOODPLAIN HABITAT

This project was initiated to demonstrate the feasibility of installing large woody debris (LWD) habitat structures in a large coastal river. The project is one component of the recovery strategies implemented to accelerate recovery of the Cheakamus River.

Project implementation was completed through an active partnership with the BC Ministry of Environment (MoE), the British Columbia Conservation Foundation (BCCF) and North Vancouver Outdoor School (NVOS).

RESULTS

Project planning and consultation took place between April and July 2007. Installation of LWD structures was completed in August 2007 and structure anchoring was completed by October 2007. The project involved installation of 11 LWD structures and 55 loads of boulders used for structure anchoring and bank protection.

The 2007 LWD demonstration project created an estimated 850 m² of instream habitat to enhance rearing conditions for juveniles and spawning conditions for adult steelhead trout, coho and chinook salmon and other resident fish species.



CN remains committed to the recovery of the Cheakamus River and continues to work together with environmental consultants and experts on fish recovery and habitat enhancement.

CN Environment is a member of the Cheakamus Ecosystem Restoration Technical Committee (CERTC), which includes additional representation from District of Squamish, Fisheries and Oceans Canada, BC Ministry of Environment and Squamish Nation.

For more information on the recovery of the Cheakamus River, visit www.certc.ca.



Large Woody Debris (LWD) Demonstration Project

CHEAKAMUS RIVER RECOVERY



PROJECT PHASES

The conceptual plan for this project was developed in cooperation with the BC Ministry of Environment (MoE), the British Columbia Conservation Foundation (BCCF), and North Vancouver Outdoor School (NVOS). Sites were selected where structures were not easily accessible and where structures could contribute to bank stabilization. Structure designs were completed by BCCF based on information learned from other river systems.

The project consisted of five general phases.



PHASE 1: CONSULTATION & PLANNING

- Selected sites based on a review of previous habitat assessments
- Identified suitable structural designs based on a review of successful structures in other rivers
- Consulted with local paddling groups, property owners, First Nations and streamkeepers
- Work assessment conducted by Navigable Waters Protection Division of Transport Canada
- Acquired agency approvals and identified appropriate work windows and methods

PHASE 2: SITE ACCESS

- Identified and prepared laydown areas for material storage
- Constructed temporary access roads for heavy equipment
- Prepared individual site access points

PHASE 3: MATERIAL DELIVERY

- Delivered LWD and boulders to staging area
- Transported LWD and boulders to site access points
- Stockpiled material in proximity to construction



PHASE 4: STRUCTURE INSTALLATION

- Installed structural logs to design requirements
- Positioned ballast boulders adjacent to LWD
- Seeded structures with LWD (e.g., rootwads)
- Re-positioned LWD and boulders as required to maximize strength and structural stability
- Installed bank protection boulders and additional ballast as required

PHASE 5: STRUCTURE ANCHORING

- Drilled holes in structural logs and LWD for anchoring cables
- Drilled anchor holes in ballast boulders
- Cut cable to length for individual anchor points
- Epoxied cables in place to anchor structure
- Deactivated access roads by planting coniferous trees and seeding exposed soil

