



CHEAKAMUS ECOSYSTEM RECOVERY

UPDATE

10/08

Making Recovery A Reality

Keeping you informed

This issue of the CN Cheakamus Ecosystem Recovery Community Update provides current information on the ongoing fish population recovery work underway for the Cheakamus River.

Previous issues of this newsletter and further information on the recovery efforts can be found on the Cheakamus Ecosystem Restoration Technical Committee (CERTC) website at www.certc.ca.

COMMITTED TO THE RECOVERY

CN remains dedicated to the recovery of fish populations in the Cheakamus River and works 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.

RECOVERY MONITORING PROGRAMS



Monitoring programs allow CN and the CERTC to evaluate the success of recovery efforts and if necessary adapt recovery strategies to target species of high priority. Some examples of recovery monitoring programs include:

- Acoustic tracking of hatchery steelhead smolts;
- Adult bull trout radio telemetry and snorkel enumeration;
- Chinook coded wire tagging;
- Benthic invertebrate recovery monitoring;
- Non anadromous reach fish abundance monitoring;
- Off channel habitat mark re-capture program;
- Resident fish abundance monitoring program; and,
- Steelhead smolt release strategy;

In addition, CN and CERTC consider information from other programs underway to monitor juvenile and adult fish abundance such as the juvenile salmon outmigration program and adult steelhead enumeration project

RECOVERY PROJECTS

Numerous recovery projects have been undertaken by CN in cooperation with CERTC. These projects are intended to enhance fish habitat in the Cheakamus River and accelerate recovery of affected species.

- **Km 8 Side Channel Re-watering - May 2008**
This project created a new channel 550 linear metres in length with an estimated 2200 m² of wetted habitat, including a low water intake to prevent fish stranding and an estimated 420 m² of cover habitat for juvenile fish.



- **Wilson Slough Reunion – Sept 2007 - May 2008**
This project connects Wilson Slough and Crescent Slough and is expected to improve water quality and rearing conditions for juvenile fish in the Squamish River Estuary.
- **Cheekye River Fish Passage Modification - Oct 2007**
The removal of a remnant concrete apron is expected to improve access for adult fish to important rearing habitat in Brohm River.
- **LWD Demonstration Project- August 2007**
The installation of 11 triangular log structures near the North Vancouver Outdoor School provided an estimated 850 m² of rearing habitat for juvenile fish.



- **Km 6.5 Side Channel – August 2007**
The excavation and re-watering of this relic side channel near the North Vancouver Outdoor School created a new channel approximately 300 metres long with more than 30 woody debris structures and almost 50 boulder clusters to enhance rearing habitat for juvenile fish.
- **Dave Marshall Salmon Reserve Habitat Enhancement Project- Sept 2006**
In 2006 recovery projects endeavoured to enhance juvenile rearing habitat in existing restoration channels of the Dave Marshall Salmon Reserve. This project included installation of woody debris habitat structures and re-excavation of the Mile 49 ground water channel.

Keeping you informed

Reports summarizing activities for these projects are available online at www.certc.ca.

CHEAKAMUS ECOSYSTEM RECOVERY FUND

The Cheakamus Ecosystem Recovery Fund (CERF) established by CN complements other recovery efforts and encourages enhancement projects by local environmental stewardship groups. To date, the total estimated value of the 12 approved and 3 conditionally approved projects is \$1,688,744, with 43% (\$723,684) of the funding being provided by the CERF.

2007 approved projects:

- Early life history survival of hatchery coho smolts
- Squamish River training dyke culvert improvements
- Creel survey of Squamish River recreational fishery
- Tenderfoot Hatchery infrastructure modifications

2008 approved projects:

- Outreach & education project for salmon recovery
- Carson Place culvert installation
- Genetic distinctiveness of sculpin recovery
- Brohm River fish habitat restoration project Phase 1
- Eelgrass restoration in upper Howe Sound
- Land acquisition - Cattermole slough
- Swift Creek flow supplementation project
- Cattermole Creek Loop Boardwalk

2008 conditionally approved projects under review:

- Land acquisition – Mamquam Island
- Cheakamus River LWD project, Phase 2
- Cheakamus River engineered log jam (ELJ) feasibility assessment

CN has allocated a total of \$2,000,000 for the CERF between 2007 and 2011. More information about the CERF, including eligibility criteria and the application form, can be found online at www.certc.ca.

CERP 2008

The Cheakamus Ecosystem Recovery Plan (CERP) was developed by CN and CERTC in 2006. In 2008 a review was completed to summarize monitoring results and recovery projects completed to date. This three-year review is expected to assist CN and CERTC in determining which recovery strategies are effective and if targets are being achieved. The CERP is reviewed and updated annually and copies of the 2006 – 2008 CERP reports are available online at www.certc.ca.

PUBLIC UPDATES

Open houses were hosted by CN and CERTC in 2005, 2006 and 2007 to provide the public with information about recovery efforts. In 2008 CN/ CERTC hosted a public information booth at the Brackendale Fall Fair to answer questions from the public and provide updates on recovery of the Cheakamus River. Copies of information provided at public information events have been posted on the CERTC website. Technical reports from recovery programs and recovery projects are also posted on the CERTC website as they become available, and interested parties are encouraged to check the website often for updates about CERTC activities.



STATUS OF FISH CULTURE

Fish culture programs implemented and proposed, as part of the CN recovery efforts will eventually include the release of up to 3 million fish. The CN-funded fish culture programs are being implemented in co-operation with Fisheries and Oceans Canada, the BC Ministry of Environment, and the Freshwater Fisheries Society of BC.

Status of the Cheakamus River fish culture programs, October 2008:

Species	Goal	Status
Chinook	2005/06 – no egg target 2006/07 – 100,000 eggs 2007/08 – 100,000 eggs 2008/09 – 100,000 eggs	2005/06 – 7,378 fry released 2006/07 – 106,513 fry released 2007/08 – 67,652 fry released 2008/09 – currently underway
Pink	2005/06 – 500,000 eggs 2007/08 – 1,000,000 eggs 2009/10 – 1,000,000 eggs	2005/06 – 574,533 fry released 2007/08 – 467,553 fry released Hatchery infrastructure improvements in progress
Steelhead	2006/07 – 20,000 smolts 2007/08 – 20,000 smolts	2006/07 – 21,482 smolts released 2007/08 – 17,588 smolts released
Coho	2006/08 – no egg target 2007/09 – 80,000 eggs	2006/08 – 41,675 smolts released 2007/08 – 77,606 fry rearing

.....

Keeping you informed

.....