



September 23, 2008

**CHEAKAMUS RIVER STEELHEAD
FISH CULTURE PROGRAM
September 2008 Update**

In spring 2006 the Freshwater Fisheries Society of BC (FFSBC) was directed by the Ministry of Environment (MoE) to lead fish culture efforts to supplement the wild stocks of Cheakamus River steelhead following the spill of sodium hydroxide (NaOH) into the river from a CN train derailment.

The objective of the CN funded steelhead program was to release 20,000 smolts annually for two years to supplement the wild adult returns in 2009 and 2010. These “hatchery” fish will not be subject to harvest but allowed to spawn. The steelhead culture program will be closely monitored to try and determine effectiveness, and the Ministry of Environment will be monitoring the recovery to completion.

Previous program updates have reported on Year 1 and 2 broodstock capture success, spawning methods and mating structure, rearing locations, numbers of parr produced and for year 1 smolt releases. These updates can be accessed at www.certc.ca. This update includes activities to complete Year 2 of the program including smolt release in the spring of 2008.

PROGRAM YEAR 2, 2007/2008

Smolt Releases

A total of 17,618 smolts were released in Year 2 of the program. The method and location of release followed broadly the proposed smolt release strategy of varying release dates, methods and sites to potentially maximize survival and distribution of returning adults while minimizing affects of residuals (McCubbing, 2008 – available at www.certc.ca).

FVTH Reared Fish

A total of 8,857 smolts (av. weight 105 g) were released directly from the Fraser Valley Trout Hatchery (FVTH) of which 58 were tagged with (POST) acoustic tags for monitoring by the Pacific Ocean Shelf Tracking Project (POST). Of these 4,079 were released on May 8th at an upstream site (river kilometre 14.5, reach 8) including 40 acoustic tagged fish. The remaining 4,778 fish (av. weight 110g) were released on May 22nd at Gorbushca channel, including 18 acoustic tagged fish. All FVTH fish were marked with coded wire tags (CWT's) and an adipose clip.

Tenderfoot Hatchery Reared Fish

A total of 8,761 steelhead smolts with an average weight of 79.2g were released volitionally from Tenderfoot Creek Hatchery (TCH) on May 7th. Of these a total of 40 were marked with acoustic tags. Many of these fish passed through the BC Hydro fish enumeration site on Tenderfoot Creek within a few days, and some were observed several weeks later by the BC Rail channel resistivity fish counter upstream of the Tenderfoot confluence. All Tenderfoot origin fish were marked with an adipose clip but were not marked with CWT's.

Residuals

Monitoring for residualized fish is ongoing and results will be presented when studies are complete. Anglers are encouraged to report catches of adipose clipped rainbow trout to InStream Fisheries Research (instream@telus.net) with date and location of capture, and a tag number if the fish has an external visual (Floy) tag.

Program Effectiveness Monitoring

The effectiveness monitoring program started with efforts to evaluate different release strategies (differential marking between FVTH and THC raised fish), analysis of brood stock genetics, and acoustic tagging of released smolts to estimate near-shore ocean survival and residual rates (http://www.certc.ca/_pdf/AcousticTracking_07-08.pdf). The next step is to determine adult return rates and the contribution to angler catch, starting in early 2009. The ultimate measure of success is also the most difficult; spawning success and juvenile production from hatchery fish over successive generations. Work is currently underway to develop an appropriate assessment plan for this. More details, including requests for anglers to participate in the assessment, will be provided in future updates.

Program Contacts:

Dale Larson – Fraser Valley Trout Hatchery FFSBC – 604-504-4709

Greg Wilson – Ministry of Environment, Regional Biologist - 604-582-5365

Bryan Ludwig – Science Division FFSBC - 250-414-4205