The Pacific Streamkeepers Federation

A non-profit society helping streamkeepers take action through support, education and building partnerships

Stream Inspection Log Pilot Project Fall 2006

British Columbia has a multitude of rivers and streams, each with their own genetically diverse stock of Pacific salmon populations, each with their own unique habitat and environmental issues that may threaten these stocks. While pool, riffle sequences and water quality and quantity can readily be measured, this tells us what the area of aquatic habitat is capable of supporting, not if it is supporting, life at this time. Fisheries and Oceans Canada maintains a database of stock assessment information gathered from indicator streams and rivers. They are not able to get current information on a consistent basis for streams not listed as indicator streams. Local community members have banded together as Streamkeepers to monitor and report on the health of their local streams. The Streamkeepers Handbook and Modules consists of 14 hands-on project modules with scientifically sound methods for collecting stream health indicator information.

This project set out to expand on Streamkeepers Module 12, spawner survey techniques to incorporate the Stream Inspection Log (SIL) method of bank and stream walks, to count returning adult salmon within our stream systems. The information gathered can then fit directly into both Federal and Provincial stream information databases as well as into the DFO/Streamkeepers Data Entry Tool.
The Pacific Streamkeepers Federation working with Department of Fisheries and Oceans Canada stock assessment division, tested the (SIL) as a tool for our aquatic stewardship community, partnered with business and BC Hydro to purchase the necessary equipment, solicited enthusiastic streamkeeper members, conducted streamside training sessions and produced a draft video on the how's and whys of spawner survey data collection. While this is an on going project we can share on our progress to date.

Partnerships formed to undertake this pilot project.

DYNAMIC AQUA-SUPPLY LTD.

BC HYDRO FISH & WILDLIFE BRIDGE COASTAL RESTORATION PROGRAM

Oceans, Habitat and Enhancement

SunSpec Eyeware Ltd.

North Shore Streamkeepers
West Vancouver Streamkeepers
Squamish River Watershed Society
Stoney Creek Environmental Society
Byrne Creek Streamkeepers,
MacKay Creek Fish and Game Club
Perseverance Creek Streamkeepers Society
Fanny Bay Salmon Enhancement Society
Hart Watershed,
Tsolum River,
Comox Valley Project Watershed
Little River Enhancement Society
Quadra Island Salmon Enhancement
Simms Creek Stewards.
Hyde Creek Watershed Streamkeepers


MAKING A DIFFERENCE
Solution for showing hatchery success
Mike Gosnell
Our problem
We wanted to know that the Coho salmon from our hatchery out-plants were returning to spawn even after we had discontinued to stock the stream. For seven years we stocked Hastings Creek with 9,000 unfed coho fry, 1991 to 1997. We opened the spawning grounds up by installing fish ladders and baffles at all man made barriers to fish passage. We keep these ladders clear of debris during smolt and adult salmon migration timing.
North Shore Streamkeeper (NSSK) volunteer pokes under logs and undercuts looking for adult salmon
Measuring water depth
A nice clean female
Spawner survey training Hastings Creek North Vancouver. Surveys began in 1995
Our methods
Needed to use method that would fit into DFO stock assessment database, quantifiable
Using North Shore Streamkeepers existing survey area, we piloted the use of DFO's Stream Inspection Log methodology to determine ease of use for volunteers
1150 metres of stream is surveyed weekly. This study area is in the upper reach of Hastings Creek
Each week we poke around every log, waterfall, rock, cutbank and riffle to find the adult salmon hiding in the waterways. Each fish is counted and a note is made of the type of habitat they are holding in. Air and water temp, sky conditions, precipitation levels and depth and clarity of the water is noted
Once the fish have died we check them for overall health, length, percent spawn and whether they are male or female
Tested over time – we compared electroshock method versus hockey stick to encourage fish to come out of hiding, hockey stick method is sole method used now
DNA sampling began in 2002 to determine the genetic makeup of the returning adults
Onsite training of volunteers is done every October, neighbouring watershed community volunteers are able to take part in this training as well
Fry and smolt trapping surveys are conducted in the spring within the same study area in order to determine habitat use and overall water quality
Showing the neighbours fish at any life stage helps to increase community awareness which will lead to a greater ability to make good land use decisions
Our successful results
Neighbours now get excited about their wild salmon
Long term dedicated involvement of the community
Citizens speaking for salmon, streams and our natural environment
District of North Vancouver are working with NSSK to improve habitat and reduce continued degradation of habitat
Data online via the Streamkeepers Data Entry Tool
Produced a video on how to conduct a spawner survey
Updates to Streamkeepers Handbook Module 12
Working with DFO stock assessment for inclusion of volunteer data province-wide into their database to be used for fisheries management
Legend
Hastings Creek Watershed
Fry trapping gives the community a chance to see their local salmon and trout up close
Streamkeeper Modules 1,2,10, 11 and 12
Photo credits: Bob Parrott, Pat and Zo Ann Morten