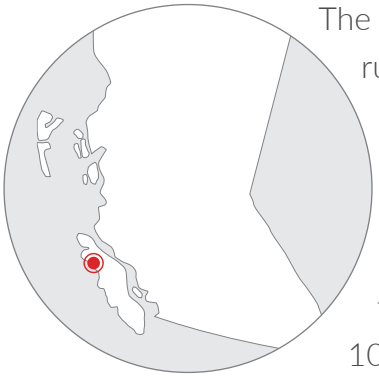
3 | Burman River
Side Channel Reconnection



The Burman River originates in Strathcona Park, West Vancouver Island, and runs through the unceded territory of the Mowachaht/Muchalaht First Nation into Nootka Sound about 18 kilometres southeast of the town of Gold River. The river once supported large numbers of Pink Salmon, along with Chinook, Coho and Chum. Salmon populations declined in the '70s and '80s. In particular, the number of Pink Salmon that returned to spawn each year decreased from an estimated 150,000 to less than 100 individuals by the mid '80s.

Why this project?

Several side channels connect to the main stem of the Burman River. These channels are important refuge for salmon during flooding events and provide access to food and shelter from overhanging vegetation. They are often the best places for spawning and are particularly important for juvenile Coho Salmon that spend the first year of their lives in fresh water before migrating to the ocean. Pink and Chum salmon also use these areas. Fish that have access to side channel habitats to overwinter have better survival rates than those that spend their winters in mainstem rivers.

Forestry and on-going natural processes like erosion and landslides have constantly re-shaped the Burman River drainage and river channels. In the early to mid-part of the 20th century, a series of Burman River side channels were buried or cut off by landslides. Using remote sensing, the project team identified three of these channels that were being fed by groundwater beneath the debris. These channels were historically important habitat for Chinook, Chum, Coho, Pink Salmon and steelhead. Reconnection and restoration of the channels was predicted to restore important habitat.

Outcomes

Three groundwater-fed channels were excavated from the slide debris and shaped into rearing, spawning and overwintering habitat features for salmon. These include rocky, fast-flowing shallows (riffles), deeper pools, and sections of relatively uniform flow and substrate (runs or

Photos: Betty Rebellato; MC Wright & Associates Ltd.

glides). Large pieces of wood were added to provide cover for salmonids of all life phases and to provide habitat for primary producers (like algae) and aquatic invertebrates. Clear-span bridges were built over two of the channels to allow forestry traffic to continue while restoring fish access to the site without disturbing it. A wetland was also created where an old pit had been dug. This wetland was connected to the channels.

Fish are now present throughout the restored areas. Juvenile Coho Salmon, steelhead, and Prickly Sculpin have been found in the channels, and Northwestern Salamanders have moved into the wetland. The presence of these species indicates that the project has been successful at connecting this newly restored habitat to the Burman River main stem, which will be beneficial for salmonid production in the watershed.

"The Burman River is wild west coast B.C. at its best. It supports a great diversity of species including Pink, Chinook, Coho, Chum Salmon and steelhead. Our partners saw that there was a lot of potential in this river, and when they put their shovels in the ground, the water was still there in the channel, buried under the landslide. Now that it's opened back up, it's full of Coho. It's great to see the fish community bounce back so quickly."

Betty Rebellato
National Fish Passage Improvement Coordinator | Canadian Wildlife Federation

Acknowledgements

- Mowachaht/Muchalaht First Nation
- BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development Land Based Investment Strategy
- BC Fish Passage Technical Working Group
- BC Timber Sales

TOTAL PROJECT COST:
$577,776

RESTORED ACCESS TO HABITAT:

DISTANCE:
0.88 km

AREA:
4,400 m²

SPECIES THAT BENEFIT:

CHINOOK, COHO, CHUM AND PINK SALMON. STEELHEAD TROUT

NORTHWESTERN SALAMANDER

AQUATIC INVERTEBRATES

This project is made possible in part by funding provided by the Province of British Columbia and Fisheries and Oceans Canada through the BC Salmon Restoration and Innovation Fund. To learn more and watch the video, visit FishPassage.ca.