



Backgrounder: CWF Fish Passage Projects 2019-2020

Nov. 20, 2020, Vancouver, B.C. - The Canadian Wildlife Federation (CWF) is pleased to release details of 2019-2020 projects restoring fish passage in B.C. thanks to funding from the provincial and federal governments and the support of multiple partners.

Birk Creek Bridge Culvert Replacement: Complete

Not too far from Barriere, in the Thompson-Nicola Regional District of interior B.C., there is a new 18-metre long bridge at Birk Creek. By replacing the 25-year-old closed bottom culvert with the clearspan bridge, fish have improved access to extensive kilometers of historical habitat upstream. This comprehensive remediation project improved passage for Chinook Salmon and Coho Salmon, Bull Trout, and possibly Steelhead. This project was completed in 2019 with support of the Canada Nature Fund for Aquatic Species at Risk.

Branch 100 Creek: Nearing Completion

A spawning channel adjacent to the Squamish River was created in the 1990s using water from an intake on Branch 100 Creek. The channel was created as part of the Forest Renewal BC program and is used by spawning and rearing Coho Salmon. The water from Branch 100 follows a channel adjacent to the Squamish Valley Forest Service Road for approximately 150 m before crossing under the road and into the spawning channel. Partway along this channel paralleling the road, a culvert is present underneath a hydro power pole. The culvert is undersized and due to a buildup of gravels at the upstream end, is blocking flows to the spawning channel. The Squamish River Watershed Society and DFO are working to restore flows by moving the hydro power pole and removing the offending culvert. In addition, repairs to a berm protecting the channel from the mainstem Squamish River and repairs to a beaver box that prevents the outlet to the rearing channel from becoming dammed by beavers will be undertaken this year. [#BCSRIF](#)

Burman River Side Channel Reconnection: Complete

The Burman River Side Channel Reconnection project reconnects the mainstem Burman River with an approximately 1 km long side channel that was buried in a landslide in the 1950s. After the channel was cut off by the landslide, a forestry road was built on top. Two clearspan bridges were installed this summer to restore flows to the side channel. This was a huge undertaking, because the construction teams needed to access the remote site in the Nootka Sound by water.

As part of the project, streambed elevations were lowered to prevent fish from getting stranded, and naturally supportive features known as complexing were provided to the channel to help the fish survive. This includes sections of swift and shallow flows over rocks to hold oxygen and provide important spawning and feeding areas (known as riffles), as well as pools, glides, and large woody debris to provide safe resting and hiding areas and keep stream temperatures cooler through shading along the channel.

Side channels are important for salmon. They can provide safe places to rest during flooding, create greater access to food and shelter from overhanging vegetation, and often provide the best places for salmon to spawn. These areas are particularly important for Coho Salmon juveniles, which spend the

first year of their lives in fresh water before migrating to the ocean. Fish that have access to side channel habitats to overwinter in have better survival rates than those that spend their winters in mainstem rivers. Pink Salmon and Chum Salmon may also benefit. [#BCSRIF](#)

Squamish River Central Estuary Restoration Program: Complete

A five-km long training berm at the outlet of the Squamish River separates the river from the Howe Sound estuary. The training berm was built in the early 1970s to create a deep-water coal port, which never came to fruition. Due to the high velocity flows and long length of the berm, juvenile salmon out-migrating from Squamish River are regularly flushed out into the ocean without accessing the shallow-water estuary along their journey. Access to the estuary is particularly important for Chinook Salmon, who rear and feed in the estuary as they become acclimatized to salt water conditions, a process known as smoltification. The Squamish River Watershed Society is working to improve connections to the estuary for Chinook Salmon. One round culvert under the training berm was replaced last year under a separate funding program, and another was replaced this year with the support of CWF, to improve connectivity under the berm. The original culverts were located too high above the grade of the river, so they could only be accessed when tides were high enough for them to be watered. This year's project involved the replacement of a round culvert with a larger, baffled box culvert. The replacement culvert was placed at a lower grade, to provide access to fish at all ranges of tidal flows. This work is part of a larger program that seeks to replace the lower half of the berm with an open bottom structure that will improve access and flow exchange between the Squamish River and the estuary. [#BCSRIF](#)

Freeman Creek Culvert Remediation: Complete

This project replaced two undersized forest service road culvert crossings with clearspan bridges. Both culverts dried out during low flows, due to lack of sufficient backwatering. Freeman Creek is home to a population of genetically pure resident Westslope Cutthroat Trout and is prone to drying up during late summer and early fall. The culvert barriers were preventing fish from accessing suitable summer refugia (deep pools and isolated channels). In addition, the habitat downstream of the culverts are suitable for rearing but have limited gravels for spawning, while substrate upstream of the culverts are coarser. The first phase of this project was completed in 2019, with the downstream culvert being replaced. The second phase was completed this year. This project was undertaken by BC Timber Sales in collaboration with CWF to improve access to a minimum of 7.5 km of habitat. This project was completed in 2020 with support of the Canada Nature Fund for Aquatic Species at Risk.

Ginlulak Creek Crossing Design and Construction: In Process

A perched culvert along Ishkeenickh Forest Service Road is undersized and poses a partial barrier to fish passage, especially during low flows. At high flows, the road floods, and water travels over the road. This crossing is located within a tidally-influenced zone of the Nass River. There is a large wetland complex upstream of the crossing that provides high-quality rearing habitat to juvenile Coho Salmon. By replacing the crossing with a clearspan bridge, fish passage is now being restored. [#BCSRIF](#)

Nelson Creek Fish Ladder: Complete



This project involved the detailed design and construction of a precast concrete fish ladder at the entrance to Nelson Creek in West Vancouver. The previous entrance to the creek consisted of three step pools that were relatively ineffective at helping fish to negotiate the steep access to the creek. The fish ladder will improve access to Coho Salmon and Chum Salmon, with work being led by the West Vancouver Streamkeepers Society and funding from multiple partners including CWF. The West Vancouver Streamkeepers Society has undertaken a number of habitat restoration

projects in Nelson Creek to ensure access to the creek for the remaining length beyond the creek entrance. The fish ladder is expected to provide enhanced access to approximately 0.6 km of stream habitat for salmon. In addition, the project is hoped to alleviate some of the predation issues from harbour seals that are currently feeding on the salmon as they stage at the entrance to the stream during the spawning season. #BCSRIF. Photo of Nelson Creek fish ladder courtesy CWF.

Seymour River Well Impoundment: Complete

A landslide in 2014 blocked access to 14 km of spawning habitat for Pacific salmon and Steelhead in the Seymour River. The Seymour Salmonid Society has worked for the past five years to restore access to the river by blasting and removing landslide debris. An uncharacteristically high flood event in early 2020 washed blast rock from the slide area into a pool 300 m downstream of the slide, which is now posing a barrier to fish passage. CWF partnered with the Seymour Salmonid Society to remove the blast rock and ensure unimpeded passage for Coho Salmon, Steelhead, Chum Salmon, and Pink Salmon. #BCSRIF

For more information, and a list of projects approved for 2021 visit FishPassage.ca.

About the Canadian Wildlife Federation:

The Canadian Wildlife Federation is a national, not-for-profit charitable organization dedicated to fostering awareness and appreciation of our natural world. By spreading knowledge of human impacts on the environment, carrying out research, developing and delivering education programs, promoting the sustainable use of natural resources, recommending changes to policy and co-operating with like-minded partners, CWF encourages a future in which Canadians can live in harmony with nature. For more information visit CanadianWildlifeFederation.ca.

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