



Helping fish cross roads

How did the fish cross the road? It's a question few people consider as they drive through our national parks. However, this is one of the most pressing concerns for the Parks Canada staff who manage aquatic ecosystems in Banff, Jasper, Kootenay, Yoho, Glacier, Mount Revelstoke & Waterton Lakes national parks.

In 2005/6, biologists assessed 600 culverts that cross under main roads and connect potential fish habitat in the seven mountain national parks. The results were startling. More than two thirds of these culverts could be fully or partially blocking fish movement.

How do I block thee, let me count the ways

Repairing culverts involves fixing barriers that are not always obvious to the casual observer:

Sticks and stones can break their homes

Branches or rocks can block culverts and stop fish from reaching important parts of their habitat.

Most fish are sprinters

Long stretches of fast moving water with no resting places within the culvert can tire some species long before they reach quieter water on the other side.

Would you want to swim in a washing machine?

That's what fast moving water forced through a narrow culvert would feel like to a fish and they don't like it any more than we would.

Whitefish don't jump...nor do many other types of fish

"Hanging" culverts create artificial waterfalls that many fish are unable to swim up.

Who wants to be a fish out of water?

During dry periods, an overly wide culvert may spread water into a thin layer that is too shallow for fish to swim through.

Water, water everywhere...but not a drop in here

In extreme cases, water may run around the culvert instead of into it, making the route impassable for fish.

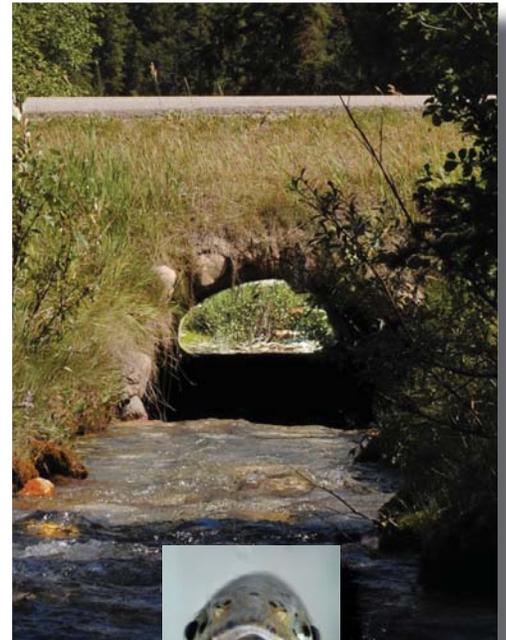


Photo by Shane Petry

The good news is...

Repairs are underway. The four year Restoring and Reconnecting Our Waters *Action on the Ground* project aims to complete detailed plans for the top 20 culvert restoration priorities in the seven mountain national parks, and to repair at least 10 of them.

What's the big deal about bad culverts?



Fish need to move

Fish travel along waterways to find food, mates, good spawning gravel, and safe places for their young to grow. A poorly functioning culvert can stop fish from reaching key parts of their habitat, resulting in lower numbers of fish, fewer species and less genetic diversity to keep populations healthy.



Life in the water and life on land are interconnected

From ducks to dippers, many birds travel these watery corridors to feed on fish and aquatic insects, and to avoid land-based predators. Mink wander stream banks in search of fish. Water shrews make forays from shore to dine on fish eggs and insects. The effects of poorly functioning culverts extend beyond the water's edge.



These ecosystems need our help

Fish face many other challenges. Non-native fish introduced in the early years of national parks compete with native species. Human activities in the backcountry and high visitor use areas can impact water quality. Chemicals carried on the wind, often from countries far away, add toxins to park lakes and rivers. Fixing problem culverts improves the health of local fish populations and makes them more resilient.



Healthy Ecosystems "R" Us

Parks Canada is a world leader in conservation. The first priority for national parks is to restore and maintain healthy ecosystems for the benefit of Canadians now and into the future.

For more information

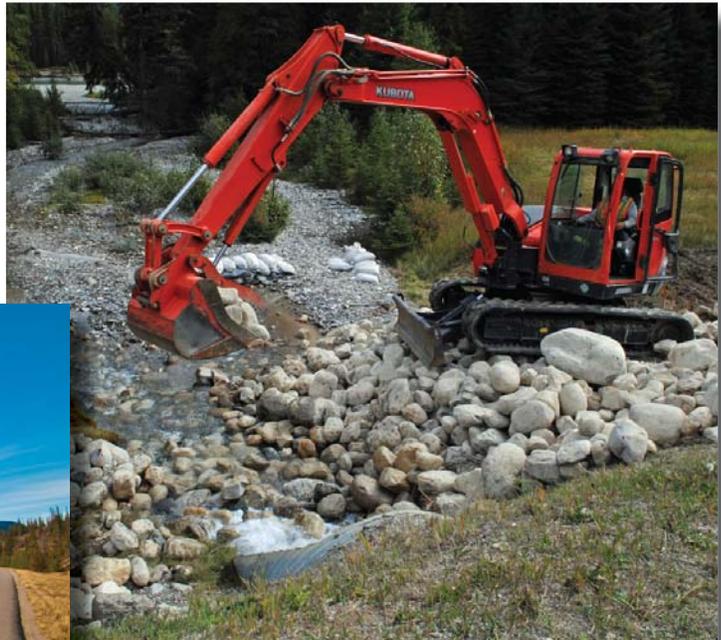
Watch for updates in the media and on-line at www.parksCanada.gc.ca/kootenay, or contact:

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Culvert restoration at Nixon Creek in Kootenay National Park. Rocks were placed in the stream to raise the water level and eliminate an artificial waterfall at the culvert entrance. The rocks also provide resting places for fish as they swim upstream.

A sign marks the recently completed Talbot Lake culvert restoration project in Jasper National Park. Watch for aquatic restoration signs at project locations throughout the mountain national parks. Photo by Dan Rafla.