

Why is fish passage important?

All species and ages of fish require access to a variety of habitats to feed, spawn and hide. Movement between these habitats is vital for their survival. The most obvious problem for migrating fish is the loss of access to habitat upstream of crossing structures that obstruct fish passage. Less obvious are the problems related to habitat fragmentation, isolation of specific fish populations, and species replacement.

How do crossings affect fish passage?

Bridges and other structures that do not cover the natural stream bed usually do not obstruct fish passage, although sometimes the bridge footings are built in the stream channel, reducing the available swimming routes for fish. Culverts are an economical method of crossing small and medium sized streams when building a road. While some culverts are installed in a way that helps provide fish with a means of swimming through the culvert, most are a streamlined channel with higher water velocity throughout the culvert length, making it difficult for fish to swim through. Other physical factors that may influence fish passage include: outlet drop heights, plunge pool condition, turbulence within the culvert, ice or debris blockage, lack of resting pools downstream or upstream and culvert alignment relative to the stream channel.

Some crossings may allow fish to pass through at certain times of year, or in certain water flow conditions, but not others. Similarly, some crossings may be adequate for adult fish, but difficult for small fry to pass through. These crossings would be considered a “partial barrier” or having a “moderate likelihood” of being a barrier.

Recommendation

This investigation has shown that there is a serious impediment to fish passage in many watersheds in BC. Much of the risk is from forestry road crossings that use closed bottom structures. Other developments, such as highways and railway crossings, also impact fish passage and can cut off access to significant amounts of valuable fish habitat.

Accordingly, **the Board recommends that government take the necessary actions to ensure fish access to valuable habitat is maintained and restored.**