

Flood Infrastructure should be Fish-Friendly

Background

Flood control infrastructure is currently being assessed for upgrades as part of the *Lower Mainland Flood Management Strategy*, and by individual municipalities. This infrastructure includes dikes, floodgates and pumps that have been put in place over the last century or more, to protect farms and communities along the Fraser River. Most lower mainland flood control infrastructure requires upgrading to address the likelihood of major flooding due to sea-level rise and increased risk of seasonal in-river flooding. This is a massive financial and logistical challenge that requires coordination across jurisdictions. It is also an historic opportunity to revitalize fish stocks and improve fish habitat.

The lower Fraser Valley was an uninterrupted network of side channels, sloughs and tributaries providing vital nursery habitat for juvenile salmon for the whole Fraser system. Today, these channels are mostly disconnected as a result of the dikes and floodgates that protect important farmlands and built environments from flooding. Recent mapping shows over 1,500 km of disconnected and partially connected waterways in the lower Fraser region—a total length exceeding that of the Fraser River itself.

Most flood control work was done at a time when fish and instream habitat were neither considered nor protected. As a result, water and habitat quality are severely degraded. Currently, many Fraser River salmon stocks have dwindled, and some have reached very low levels that have triggered the closure of various fisheries. Many factors are at play, but one factor that can clearly be addressed by the Province is the connectivity and condition of freshwater habitats impacted by about 155 flood control structures.



photo: Eiko Jones

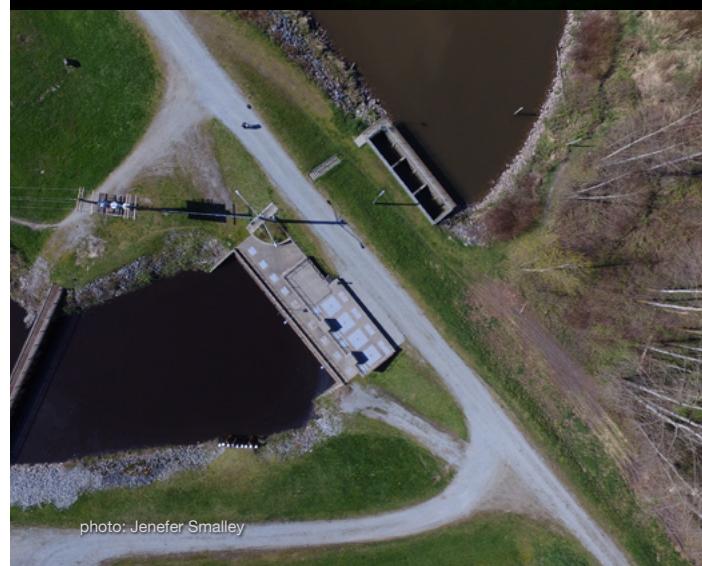


photo: Jenefer Smalley



photo: Jenefer Smalley



photo: Lina Azeez



In most cases, restoring these waterways and side channels to their pre-development state is neither possible nor desirable. However, incremental gains can be made to the benefit of salmon and other native species by allowing better ecological connectivity. Other habitat improvements, such as riparian planting, are also possible. A recent study conducted by Simon Fraser University showed that for those waterways that had floodgates open more often, there were higher native fish biodiversity and better oxygen levels. Other jurisdictions such as Washington State have successfully improved connectivity in diked waterways to the benefit of fish populations, without affecting existing land uses or drainage.

The Solution

Local governments need provincial and federal support to overcome roadblocks and regulatory constraints to adopting green infrastructure and nature-based solutions. This will include infrastructure funding and standards that support the installation of fish-friendly infrastructure in high priority locations.



#75, 210 – 128 West Hastings St.
Vancouver BC, V6B 1G8
On Unceded Coast Salish Territories
604-537-2341
lina@watershedwatch.ca