

Spotlight on Species

Rivers of the South Okanagan-Similkameen

How does a River flow?

Rivers provide a conduit for water to flow from the mountains to the sea. River water is provided by rain and snow that falls in the mountains. Snow is stored through the winter and released in the spring when temperatures rise. This causes high stream flows and sometimes local flooding but is also the time that the sand and gravel on the bed of the river channel moves. In natural river channels, it is this sand and gravel that forms the channel itself. So, the shape of the channel is actually formed during these high flows. Channels develop fast flowing areas called riffles and slow moving areas called pools.

As the sand and gravel are transported and deposited, many river channels shift location and become longer, migrating back and forth creating a flat floodplain at the bottom of the valley. The floodplain is actually part of the river system because it is often flooded by the spring melt. The water here percolates through the floodplain to return to the river below the ground.

A Natural River:

- Provides critical habitat for salmon and trout in the river's pools and riffles. Adult fish rest in pools and spawn on riffles
- Provides critical riparian habitat for dependent species. In the South Okanagan Similkameen this habitat consists of shrubs and trees such as the wild rose, dogwood, willow and cottonwood.
- Reduces the risk of flooding of lands adjacent to the flood plain. Deposits fine sediments on the floodplains which help improve water quality, help the forest and riparian areas grow and improve spawning habitat

"When protected, rivers serve as visible symbols of the care we take as temporary inhabitants and full-time stewards of a living, profoundly beautiful heritage of nature."

John Echeverria, Pope Barrow, Richard Roos Collins
Rivers at Risk: The Concerned Citizen's Guide to Hydropower



The South Okanagan Similkameen valleys are home to two major river systems, the Similkameen River and the Okanagan River. These rivers are part of the Columbia River system that flows to the Pacific Ocean at Astoria, Oregon.

Okanagan River

The Canadian portion of the Okanagan River is 37 kilometers long and has been significantly modified by irrigation and flood control dams, channelization, river flow containment dykes, riparian habitat loss, water extraction and urban development. According to the Outdoor Recreation of British Columbia, it is the 10th most endangered river in the province. See www.orcbc.ca

Similkameen River

The Similkameen River is also part of the Okanagan River basin. It drains approximately 9300 square kilometers of the east slope of the Cascade Mountains and the Interior Plateau. The majority of the watershed is in Canada. The Similkameen River flows into the section of the Okanagan River south of Osoyoos Lake. Historic and proposed dams and weirs are threats to the health of this river system.



COURTESY OF BOB LINCOLN

BC RIVERS DAY
Sunday Sept. 28
9:00 am - 3:00 pm
**PROTECT! SUSTAIN!
DISCOVER!**

Meet on Green Mountain Rd. and Channel Parkway in the parking lot beside Super Save at 9:00 am to clean-up the shorelines of the Okanagan River.

Visit the En'owkin Center for a bowl of soup and refreshments while taking in the many information displays on riparian habitat, water conservation, species at risk, river restoration projects and fisheries.

See the short film "ECommunity Place" which highlights a beautiful conservation area.

How are we protecting our rivers in the South Okanagan Similkameen? Three significant projects:

"These initiatives are all major projects that involve extensive collaborative work. It is very encouraging to not only see projects that benefit the river and salmon but also the commitment shown between First Nations, provincial, federal and municipal governments and local landowners."

Karilyn Long, MSc,
Fisheries Biologist, Okanagan Nation Alliance

The Okanagan River Restoration Initiative

The Okanagan River Restoration Initiative will restore a portion of the Okanagan River to its original configuration and will provide critical habitat for indigenous Okanagan Basin fish such as sockeye salmon, and wildlife species at risk such as, Yellow Breasted Chat, Great Basin Spadefoot and Western Screech Owl.

The designated site is a one kilometer length of the river north of Oliver.

The Okanagan Watershed Fish-and-Water Management Tools Project

In 2001, scientists designed a leading edge system for improving flows in the Okanagan River. The system, called the Fish and Water Management Tool, helps experts select water flows that are optimal for fish and also protect against floods and drought.

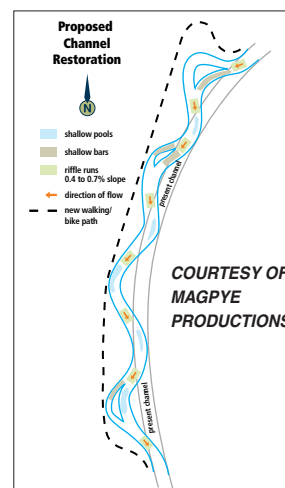
The Tool collects information on lake and river conditions, snowpack levels, climatic conditions, and salmon life history and supplies it instantaneously via satellite to a computer. The computer then predicts the consequences of releasing various levels of flow through the Okanagan Lake dam and down the river.

Preliminary results suggest that it could increase sockeye salmon juveniles by as much as 50 % without adversely affecting other water users.

The Sockeye Salmon Reintroduction Program

Okanagan River sockeye salmon, which spawn near the town of Oliver, B.C. have their farther upstream migration limited by several water control and diversion dams. Stock numbers have been declining for many years. The Okanagan Nation Alliance Fisheries Department (ONAFD) has been working with provincial and federal agencies to restore their numbers and range by reintroducing them into upstream waters where they may once have occurred in substantial numbers. Some investigators have warned that without effective intervention Okanagan sockeye are at risk of extinction.

Barriers that have limited upstream migration into Skaha Lake will need to be modified to allow fish passage. McIntyre Dam, located between Oliver and Okanagan Falls, has limited access since 1914. Modifications to the dam to allow fish passage are in the design stage. Almost 100 years after their migration route was cut off, salmon will have access to another 8km of the Okanagan River as well as to Vaseux Lake. Access to Skaha Lake however, is still dependent on the results of the 12 year reintroduction program.



COURTESY OF MAGPYE PRODUCTIONS

"Water is the most critical resource issue of our lifetime and our children's lifetime. The health of our waters is the principal measure of how we live on the land."

Luna Leopold, Hydrologist

Water to the syilx (Okanagan) people is seen very differently than how it is seen by western society. To the syilx, the water is alive. It is a part of the land known as Turtle Island; which is considered to be a living entity. Our people, since time immemorial, have always considered the water to be sacred and through the teachings of the elders have learned to respect the power of water. Young men and women are brought to creeks, rivers, lakes and small secret springs where they are taught to respect the power and sacredness of the water by the elders. Water is so physically powerful that it can change the shape of solid stone and at the same time is soft and soothing to the touch.

All life – plants, birds, animals and people – is sustained by water. Without water nothing will survive. The rivers, creeks, streams and even the smallest trickle from the mountaintop are like the blood vessels in our bodies that keep us alive. Since water is sacred and considered to be alive, if you talk to it and ask for its help, it will hear you. However, as powerful and as mighty as the water is, it does not boast of its power. It does not seek the high places that are often caused by having power but instead the water is humble and seeks the lowest places on the land to flow through. We, the syilx, recognize and respect the power of the living water and try to be like it by being powerful, strong, constant, tender and humble. Lim lemt tmixw.

Richard Armstrong



COURTESY OF ONE WILD EARTH PHOTOGRAPHY

