

Tracking fish movements in the Peace Region

November 2019

A new program that tracks the movement of fish throughout the Peace Region is providing BC Hydro with valuable information about the potential effects of the Site C project on fish. We use this important information to develop mitigation programs.

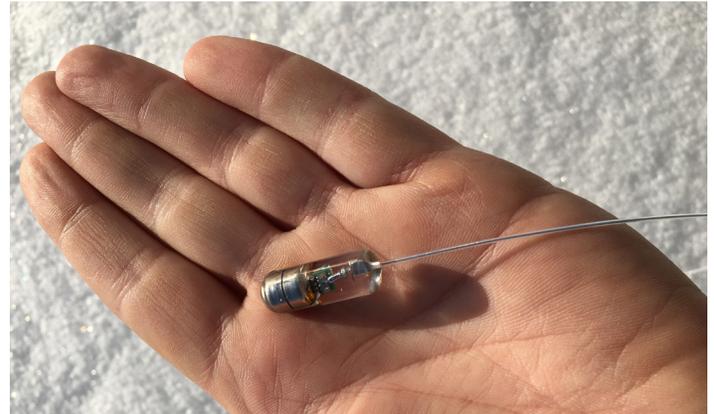
The Fisheries and Aquatic Habitat Monitoring and Follow-up Program focuses on monitoring fish and fish habitat in the Peace River and its tributaries during the construction of the Site C project and for the first 30 years of operation. Our approach consists of 18 unique programs that monitor the abundance and life history of and spawning, rearing and feeding patterns—and a major component of monitoring includes tracking the movements of radio-tagged fish.

Though the program is new, we've been tagging and tracking fish in the Peace Region since the 1990s. Decades of data have helped us form a baseline so we can better understand how movement patterns will change as a result of river diversion, dam construction and operations.

We are focused on understanding the magnitude, direction and seasonal variability of fish movements so we can answer questions about changes associated with the Site C project. This includes gathering critical data during river diversion to assess the effectiveness of the temporary fish passage facility, which is being built to safely move fish upstream of the dam site.

What is radio telemetry?

We will track the movements of fish through radio telemetry, a valuable tool used to monitor the behaviour of fish using radio signals. A radio telemetry system is made up of a transmitter (carefully implanted into a fish's body cavity), a flexible wire antenna (which hangs from the body of the fish and is visible to anglers), and a receiver (located on the banks of the river).



A small, harmless radio transmitter is implanted into a fish. The flexible wire antenna hangs from its body and is visible to anglers.



Biologists implant a radio transmitter before releasing the fish back into the river.

Anglers are required to follow provincial fishing regulations. BC Hydro encourages anglers to release radio-tagged fish back into the river with minimal stress.

How are fish monitored?

Fish are caught, carefully implanted with a harmless radio transmitting device, and released safely back into the river. Radio-tagged fish are detected as they swim by fixed telemetry stations strategically placed along the banks of the Peace River and its tributaries. Each station consists of a radio receiver, radio antennas that point at the river, deep cycle batteries and solar panels to remotely power the electronics, and a cell modem to remotely monitor the performance of equipment. Stations are visited every few weeks to download the logged data, and inspect the test equipment.

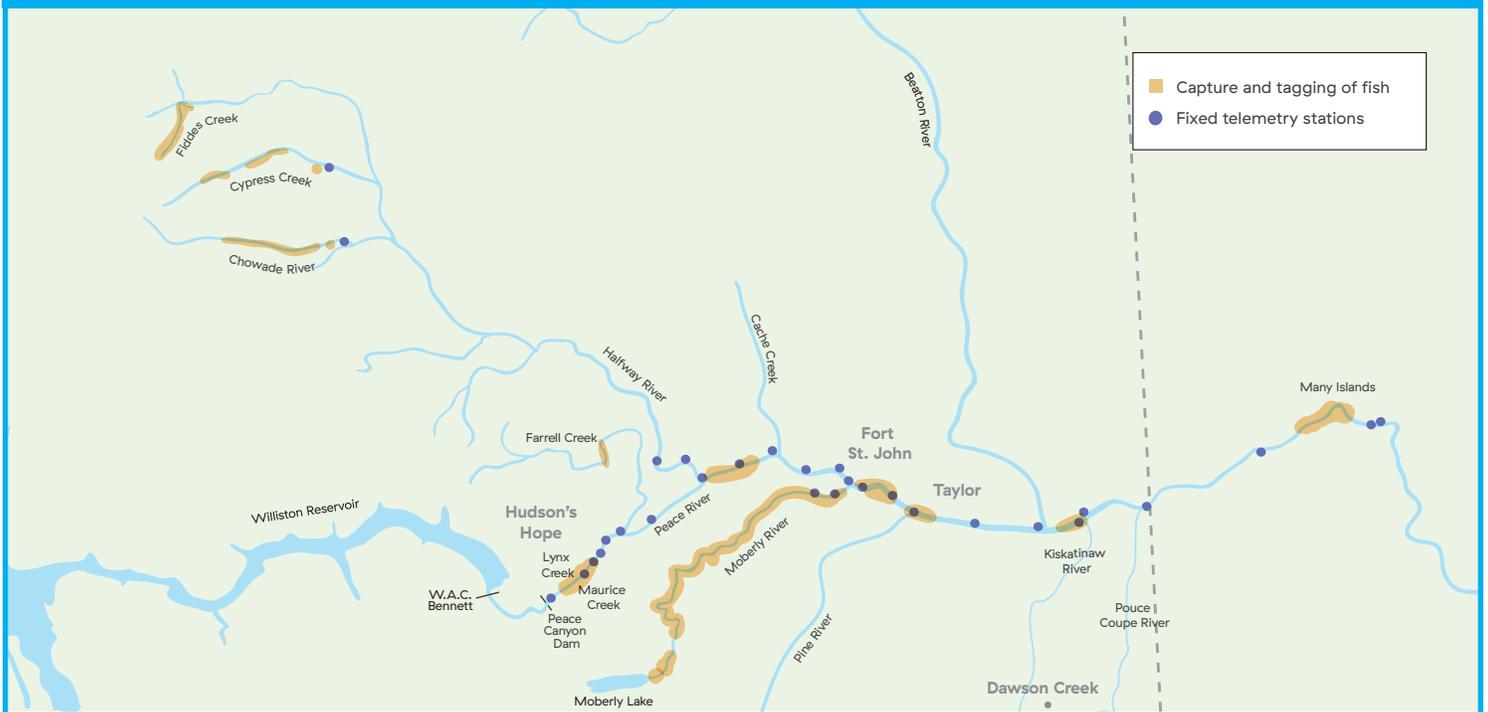


One of 30 new fixed telemetry stations placed on the river bank, which logs data when radio-tagged fish swim by.

Which fish species are being tracked?

BC Hydro is tagging various species of fish, including bull trout, Arctic grayling, rainbow trout, walleye and burbot. More than 300 fish have been tagged and released in the locations shown below. We plan to tag and release an additional 300 fish in 2020.

Radio Tagging and Fixed Telemetry Station Locations



BC Hydro is committed to maintaining the fixed telemetry stations each year through construction of the Site C project and will continue to monitor fish movements throughout operations to ensure the effectiveness of our mitigation measures.

More information on BC Hydro's fish and aquatic program is available on sitecproject.com.