

# BIG BAR LANDSLIDE UPDATE

April 11, 2022



 Response Webpage  BC River Forecast

## SOCKEYE AND CHINOOK FRY ARE ALMOST READY FOR RELEASE WHILE OTHER OPERATIONAL WORK IS UNDERWAY

### ENHANCEMENT UPDATE

Over the winter months, sockeye and Chinook gametes have evolved from eggs into fry and will be ready for release into their natal streams beginning in late April and continuing into the summer. These juvenile salmonids are the progeny of the brood stock that was collected during the 2021 Big Bar emergency conservation program. The salmon release is a joint effort with DFO's Salmonid Enhancement Program (SEP), the Upper Fraser Fisheries Conservation Alliance, Takla Nation, Nak'azdli First Nation and the Spruce City Wildlife Association.

Juvenile sockeye have been reared at four separate locations: two DFO SEP hatcheries and two facilities owned and operated by Takla Nation and the Nak'azdli First Nation. The juvenile Chinook are being reared at a DFO SEP facility, the University of Northern British Columbia's Quesnel River Research Centre, and the Spruce City Wildlife Association located in Prince George.

In total, 690,000 sockeye and 320,000 Chinook will be released in 2022, including four different populations of sockeye and 13 populations of Chinook. Most of the releases will occur between late April and mid-June with an additional release in late September. Three groups of Chinook will be held back an additional year to be released as smolts in 2023.

Identifying optimal release locations and transport methods has been a critical undertaking. Although most fry will be released by truck, helicopters will be used in some cases due to a lack of road access. This method will also ensure the fry are deposited in optimal habitat conditions.



**EARLY STUART FRY TRANSFER, DECEMBER 2020**



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### ***HYDROGRAPHIC AND BATHYMETRIC WORK AT BIG BAR***

In March 2022, local First Nations and researchers from Simon Fraser University (SFU) met on-site at Big Bar to collaborate on the Fraser River Landslide Research project, which is supported by the BC Salmon Restoration and Innovation Fund (BCSRIF). SFU and its partners used sonar equipment to survey areas above and below the slide to acquire more detailed bathymetry. Other work included capturing river flow velocities in the canyon in order to validate the velocity data that is regularly calculated using local cameras that can derive the speed of moving water.

Road conditions made field access challenging, but perseverance and impressive logistical organization yielded successful field work.

The Fraser Salmon Management Council provides Indigenous liaison support to the project team for the First Nations engagement component, which is critical to the project's success. The Big Bar tripartite governance partnership model is a key example of how inclusive, open and transparent teamwork benefits collaborative projects like the BCSRIF Fraser River Landslides Research effort.

### ***SNOWPACK AND RIVER CONDITIONS***

DFO's environmental watch (EWATCH) program interprets the critical information provided by the BC River Forecast Centre on snowpack and river conditions to determine whether those conditions could cause passage issues for some salmon, especially early-timed sockeye.

As of April 1, snowpack levels in the Fraser River watershed decreased slightly from March 1, and are in the moderate to slightly high range. The Chilcotin is at 72% of normal, Upper Fraser East is 117% of normal, while Quesnel is 116% of normal and the North Thompson is 119% of normal. Snowpack levels are just one factor that determines freshet flows. Ambient spring temperatures, presence/absence of rain, and prolonged early heat are all factors which affect the timing, magnitude, and duration of freshet.

Areas with larger snowpacks may contribute to greater flows for the Fraser River. Spring temperatures between April and mid-June 2022 will shape the impact on salmon migration. Data in the Basin Snow Water Index, managed by the Ministry of Environment and Climate Change, showed lower than average snow levels for March 2022, 2021 and 2022. The key areas causing higher freshets at Big Bar are the Upper Fraser East, Upper Fraser West, Quesnel and Nechako. Although the Chilcotin River poses a concern for sediment and localized flooding, it does not contribute significantly to the overall Fraser River discharge at freshet. The Chilcotin River area will be monitored if snowpack levels increase.

Updated information can be found on the [River Forecast Centre](#) website.

