

BIG BAR LANDSLIDE UPDATE

JULY 27, 2021



Response Webpage

BC River Forecast



LEFT: Crews remove pumps from the water to inspect them for damage. **RIGHT:** Flume maintenance.

Mckay Creek Wildfire

Since our last update, and until July 20, the Mckay Creek wildfire was exhibiting normal fire behavior, and crews were able to safely access the Big Bar slide area to continue operations. Crews have been monitoring the Flat Lake, Churn Creek and Chasm wildfires, which all had the potential to impact the site, site access, or crew accommodation.

On July 21, the Mckay Creek wildfire evacuation order was issued for an area encompassing all Big Bar landslide response operations and the Peter Kiewit Sons ULC (Kiewit) camp at kilometre 96. All crews have evacuated safely. As of July 22, crews were awaiting updates from BC Wildfire Service (BCWS) on the status of the evacuation order. Aspects of the program that are outside of the area covered by evacuation order continue.

Crews remain in daily communication with the BCWS members assigned to the Mckay Creek wildfire to monitor any changes and ensure the safety of everyone on site.

Ongoing Site Operations

Last week, crews continued to work on maintenance of the fish ladder. Crews also completed an inspection of the system's pumps by removing them from the water and replacing a damaged pump.

The West Pavilion Road re-opened on July 13 for heavy equipment hauling but was closed again on July 21 due to the evacuation order for the Mckay Creek fire. Crews also worked on revising their fire prevention plan and lightning monitoring procedures.

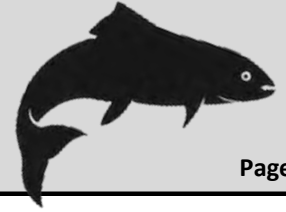
2021 BIG BAR SALMON COUNTS ([Daily counts available online](#))

Date	Salmon radio tagged below the Big Bar landslide site	Salmon transported by truck past the slide site and released upstream		Fish 40 km upstream of Big Bar landslide site (detected via SONAR)
		Chinook	Sockeye	
TOTAL as of July 26	401	15	-	79,158



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Monitoring Program

At this time, salmon—including Early Stuart sockeye—are finding natural passage and migrating past the Big Bar landslide site. This is a direct result of the improvements made to the “nature-like” fishway this past winter. In addition to natural migration, technical experts have confirmed that the migration is occurring through a broader range of river flows. River conditions are also more favourable in 2021 in comparison to the extreme high water conditions witnessed in 2020. As of July 26, 2021, 79,158 fish have been detected upstream of the slide site at the Churn Creek sonar station.

The total number of salmon tagged as of July 26, 2021 is 461, of which 302 are Chinook and 159 are sockeye. Over 60 of these were radio-tagged by the Pacific Salmon Foundation in the lower Fraser near Matsqui.

“Trap and transport” crews are standing by, ready to move fish by truck if required.

Enhancement Program

As part of the Big Bar emergency enhancement program, the first 476 Early Stuart sockeye collected from the Lillooet and Big Bar fish wheel sites were transported to the Cultus Lake Research Laboratory between July 12 and 23. These salmon are being collected as broodstock to support impacted populations. The adult sockeye will be spawned at various facilities and their fertilized eggs incubated. Once the eggs hatch, the fry will be reared for varying lengths of time before being released back into their natal streams.

The program’s target is to collect 803 Early Stuart sockeye while the collection of Chinook broodstock from natal streams is set to begin on July 26.

Next Steps for the Big Bar Landslide Response

Ever-evolving site conditions have impacted the safe and timely implementation of the permanent concrete fishway at Big Bar. As a result, Fisheries and Oceans Canada (DFO) is suspending further construction on that structure, and the contract with Kiewit will be terminated following the completion of summer site operations and Kiewit’s demobilization. The tripartite remediation team (Indigenous, federal and provincial representatives) is pursuing a structured analysis to review options and establish a long-term solution to safely restore natural fish passage through the area.

Following an analysis in mid-2020, a permanent fishway was identified as the most certain and reliable option to restore natural fish passage in advance of the 2022 salmon migration season. Between February and March 2021, multiple rock fall incidents and extreme weather impacted crew safety and forced a halt to work on the permanent fishway construction. The prime contractor, Kiewit, immediately undertook further slope stability assessments, which determined that installation of a permanent fishway, as originally designed, was not possible by May 2022. The completion of the structure and the

construction costs cannot be adequately estimated due to slope stability issues and the challenges posed by inclement weather and unsafe site conditions.

Therefore, DFO will suspend the installation of the permanent fishway and conclude the contract with Kiewit. With the support of First Nations partners and the Province of British Columbia, DFO is undertaking an analysis to explore alternatives and develop a suitable long-term solution to address the complex challenge of safely restoring fish passage at Big Bar.

The analysis will allow DFO and its partners adequate time to study existing and incoming data—including input from First Nations partners and third-party consultants—and consider the performance of the “nature-like” fishway. Together with First Nations and the Province, DFO and Public Services and Procurement Canada will continue to coordinate short-term enhancement, monitoring, and fish transport programs while pursuing a long-term solution.

