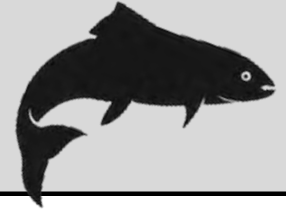



# BIG BAR LANDSLIDE UPDATE

OCTOBER 4, 2021



 Response Webpage

 BC River Forecast

## FINAL EARLY STUART SOCKEYE RELEASE MARKS THE CONCLUSION OF THIS YEAR'S BIG BAR ENHANCEMENT FIELD WORK



On September 28, the last 51,600 Early Stuart sockeye parr were released into the important sockeye habitat of the Takla-Trembleur region of the Upper Fraser watershed. These parr, a stage between fry and smolt, were reared from eggs collected from adults at the slide site in the summer of 2020. This fall release, combined with the 60,800 fry released in spring of 2021, will result in higher adult returns.

These operations are critical to the ongoing Big Bar landslide response to help a population under severe conservation threat and listed as “endangered” by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). DFO and Indigenous partners will evaluate the results and impact of this conservation work when the adults return to spawn in 2024 and 2025.

The Big Bar landslide response team would like to thank the Takla Nation, Nak’azdli Whut’en, Tl’azt’en Nation, the Carrier Sekani Tribal Council, Upper Fraser Fisheries Conservation Alliance and DFO’s Salmonid Enhancement Program (SEP) for their contribution to the long-term survival of this key, sockeye population.

**PICTURED:** Last week, First Nations and community partners joined DFO staff to release Early Stuart sockeye parr into the Takla-Trembleur region of the Upper Fraser watershed.

## COHO SALMON EXPECTED AT BIG BAR IN COMING WEEKS

As the pink salmon run concludes, sonar data is recording the arrival of small numbers of coho 40 km upstream of the slide site at Churn Creek. The coho migration through this area will continue through early November.

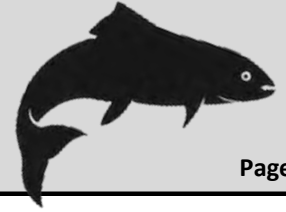
To date, 23 radio tags have been applied by technicians to coho captured at the Lillooet fish wheel. Tagging will continue until mid-October 15, when the fish wheel will be demobilized for the winter.

UPDATE CONTINUES ON PAGE 2



# BIG BAR LANDSLIDE UPDATE

OCTOBER 4, 2021



## FINAL STAGES OF DEMOBILIZATION



**LEFT:** Top soil being spread at the former site of the Big Bar camp.

**RIGHT:** DFO's fish transport tanks were moved to the Spius Creek hatchery.

On September 28, during the final week of demobilization, representatives from Public Services and Procurement Canada, Province of British Columbia, DFO and First Nations conducted an onsite review with prime contractor, Peter Kiewit Sons ULC (Kiewit). Equipment hauling from Big Bar is now complete with most materiel moved to Lillooet and then onward to final destinations.

On September 27, the reclamation of the camp was completed, which included the removal of gravel, adding topsoil and seeding the area. Archaeological monitoring was ongoing while this work was underway.

**UPDATE CONTINUES ON PAGE 3**

### 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	
<b>TOTAL as of October 2, 2021</b>	<b>1,165</b>	<b>19</b>	<b>36</b>	<b>1,906,230</b>

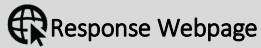


# BIG BAR LANDSLIDE UPDATE

OCTOBER 4, 2021



Page 3



## RELEASE STRATEGIES FOR THE 2021 BIG BAR ENHANCEMENT PROGRAM

### Chinook

For the first time the Big Bar enhancement team is exploring a two-stage release for Chinook juveniles, starting with those reared from eggs collected in 2021. The objective is to assess survival rates based on adult Chinook returns in future years.

The first stage involves rearing and releasing a portion of the juveniles as fed fry into their natal streams in late spring or early summer 2022, as was done with the 2020 brood year releases. Timing of all releases is dependent on river flow conditions. These fry, fed until they are an appropriate size for transport, will then follow their natural life cycle, spending a year in freshwater first before migrating towards the ocean in spring 2023 as yearling smolts.

The second stage entails rearing the other portion of fry for a further year and then releasing them into their natal streams as yearling smolts in April 2023. These fry will be initially selected by a number of factors, including the female parents' disease screening results. These fish will join their juvenile smolt cousins previously released as fry and begin migrating soon after towards the ocean.

Similar enhancement operations with interior Chinook stocks have concluded that releasing yearling smolts increases survival rates and boosts the number of adult salmon returning to spawn. Holding these fish in hatcheries for an additional year helps to reduce the high fry mortality rates that occur in freshwater streams and rivers. Larger numbers of smolts will then survive and migrate to the ocean.

Monitoring is a key component of this work. As such, the Big Bar and SEP teams will use both parental-based tagging and coded wire tagging to monitor the results of these release strategies and their impact on future adult returns.

### Early Stuart Sockeye

The strategy for the 2021 Early Stuart sockeye juveniles will follow the same approach undertaken in 2020. The 300,000 eggs currently being incubated at the Shuswap River and Takla Nation hatcheries will be released as fed fry into their natal watershed in late spring or early summer 2022. The other 800,000 eggs currently being incubated at the Inch Creek Hatchery will be divided into two releases – as fed fry in early summer and as parr in early fall 2022.

In spring 2023, the juveniles will make the 1,200-kilometre journey to the ocean as one-year old smolts. After two or three years in the Pacific, they will return to the Fraser River and migrate back to the Takla–Trembleur watershed.

