



## **Emergency Salmon Task Force** **Situation Report - August 28, 2024 with Aug 30<sup>th</sup> update**

*A major landslide occurred on the Chilcotin River the night of July 30, 2024, which continues to dramatically impact this year's returning sockeye and Chinook populations. In response to the slide, TNG rapidly formed a technical tripartite Emergency Salmon Task Force to assess the impacts on Tsilhqot'in-bound salmon populations. See more details about the Task force below under 'Background'.*

*The task force is sharing regular situation reports to share key developments and milestones. All situation reports and landslide updates are posted on the TNG website at [www.tsilhqotin.ca/our-territory/fisheries/communications](http://www.tsilhqotin.ca/our-territory/fisheries/communications) and on the TNG Facebook page at [www.facebook.com/Tsilhqotin](http://www.facebook.com/Tsilhqotin). For questions please email [tngsalmontaskforce@tsilhqotin.ca](mailto:tngsalmontaskforce@tsilhqotin.ca).*

### **August 30<sup>th</sup> update on Sockeye and Chinook passage past the slide**

On August 28<sup>th</sup>, we observed a significant increase in sockeye passage at the Hanceville SONAR (59 fish in 24 hours), further supporting our assessment that Chilko sockeye migration has been delayed, but that they can now migrate upstream past the slide. Also, on August 27<sup>th</sup> the Fraser Panel revised upwards the in-season run-size estimate for Chilko sockeye, reflecting a late bump in abundance past Mission. These late fish will likely experience more favorable migration conditions through the Fraser and Chilcotin Rivers. Provided the environmental conditions continue to improve, we remain optimistic that passage rates for Chilko sockeye will continue to increase in the coming days.

Low numbers of Chinook have also been observed passing the Hanceville SONAR regularly since August 9<sup>th</sup>, with a slight uptick in the past four days. These observations, combined with observations from overflights at Chilcotin, Chilko, Taseko, and Elkin indicate that Chinook have been affected, but that their status is not critical at this time.

### **New – First clear evidence of Chilko sockeye successfully passing through slide area**

SONAR observations and helicopter overflights conducted in the past 72 hours indicate limited movement of sockeye into the Chilcotin River and past the slide. The SONAR counted 26 Sockeye sized targets past Hanceville between August 25 and 26 and the overflight conducted on August 26 observed small groups of fish holding in shallow margins downstream of the slide.

These observations are positive news –

- While these initial numbers are very low, this does indicate that natural passage is possible under these very difficult conditions.
- With drier and cooler environmental conditions expected in the coming weeks, there is hope that larger numbers of sockeye will soon be able to migrate through the slide area to their spawning grounds. Expected dry weather will reduce risks of increased turbidity and expected cooler air temperatures will further reduce stress on sockeye in the Fraser River.





- The majority of the Chilko sockeye run is thought to be still downstream of the slide, holding in the mid-Fraser – waiting for appropriate conditions to be able to pass.
- We have observed that Chilko sockeye can withstand substantial delay – in 2019 Chilko sockeye were delayed by 2-3 weeks due to the Big Bar landslide and were still able to return to spawning grounds.
- We caution that the conditions that these fish are experiencing are severe and have likely caused significant enroute mortality for Chilko Sockeye. Assessment of effects from the slide and other stressors (including Fraser River water temperature) are ongoing.
- While the “front” of the Chilko sockeye run has been highly exposed to slide impacts and high water temperatures in the Fraser, the later “tail” end of the run is expected to be less impacted and in healthier condition. There have been recent observations of much healthier sockeye in the mid River compared to previous weeks – another positive sign that Chilko sockeye may be able to pass successfully as environmental conditions change.
- Overall – there is reason to be optimistic that Chilko sockeye passage past the slide area will improve in coming days.

The task force continues to proactively evaluate potential interventions to mitigate lack of passage in the future, if conditions worsen. Currently, there is still a sufficient window of time for sockeye to pass naturally. We are carefully evaluating the risks of further intervention to ensure that we avoid causing harm to fish that are already highly stressed.

### **Mitigation actions to support vulnerable, earlier-timed salmon populations**

The Task Force has identified emergency enhancement as a priority mitigation measure for the Elkin Creek Chinook population, a small, vulnerable and earlier-timed population that is at high risk to have been severely impacted by the slide. Planning and preparation are now underway. This added program is specifically in response to the slide.

The Task Force is also assessing the need for an expanded emergency enhancement effort on Taseko Sockeye, a small stock of high conservation concern that was expected to have been highly impacted by the slide. TNG

and DFO conduct annual emergency enhancement on this stock and will be dedicating additional technical planning and preparation to conduct brood collection this year.

The Task Force will continue to evaluate additional mitigation options based on what we are learning about migration in the field.

For additional details on current monitoring activities and purpose, please see the previous Task Force Situation Report (Aug 20, 2024): <https://tsilhqotin.ca/wp-content/uploads/2024/08/August-20-2024-Task-Force-Situation-Report.pdf>

### **Photos from the field**

Please see the following pages for a series of Task Force photos from the field.



# Emergency Salmon Task Force Landslide Photos (Aug 2024)

## Beaumont Creek - approx. 1.5km upstream of slide - reduced turbidity (mudiness of water)



Aug 15



Aug 23 - turbidity visibly reduced

## Flooded area - backwater lake formed by the slide - reduced water levels



Looking downstream - Aug 15



Aug 23 - water level visibly reduced; flooded area decreased from approx. 10km immediately after the slide to approx. 2.5km

## Flooded area - backwater lake formed by the slide - reduced flow levels (water quantity/speed)



Looking upstream - Aug 14



Aug 20 - flow levels visibly reduced



## Visible difference in turbidity at the Chilcotin/Fraser confluence (comparing Chilcotin vs Fraser River)



Aug 14 - higher turbidity visible in the Chilcotin River (left) which appears brown, vs the Fraser River (right) which appears green



A closer photo from Aug 26 - difference in turbidity still clearly visible

## LiDAR flight (highly accurate 3D mapping)



Photo of slide area looking south (Aug 14-15)

## Turbidity monitoring stations



Photo of station installed on the Chilcotin River near Farwell Bridge (Aug 14)

## SONAR installation - monitoring salmon migration and slide passage



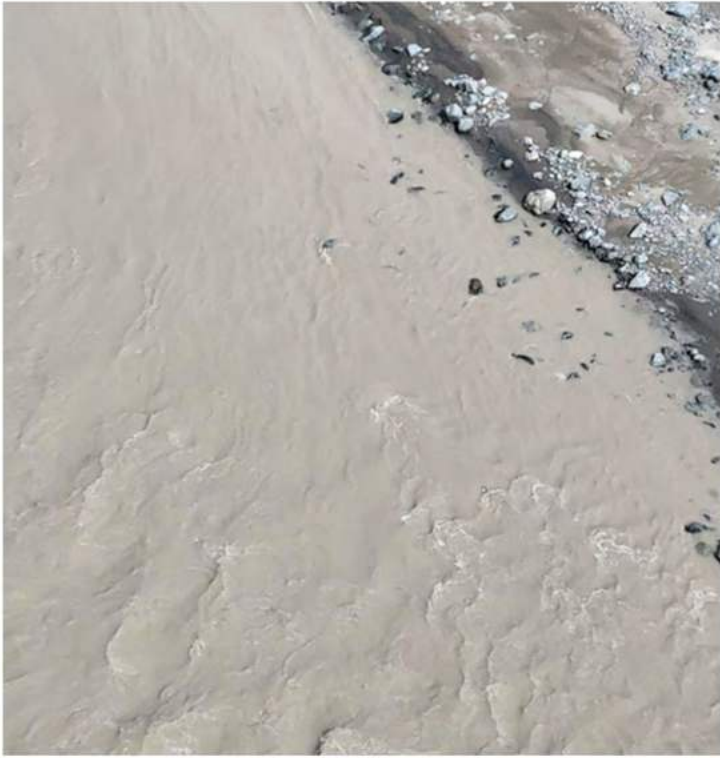
TNG Fisheries crew worked with technical partners from EcoFish Research Ltd. to install a new fish passage SONAR upstream of the slide at Hanceville on (Aug 8)



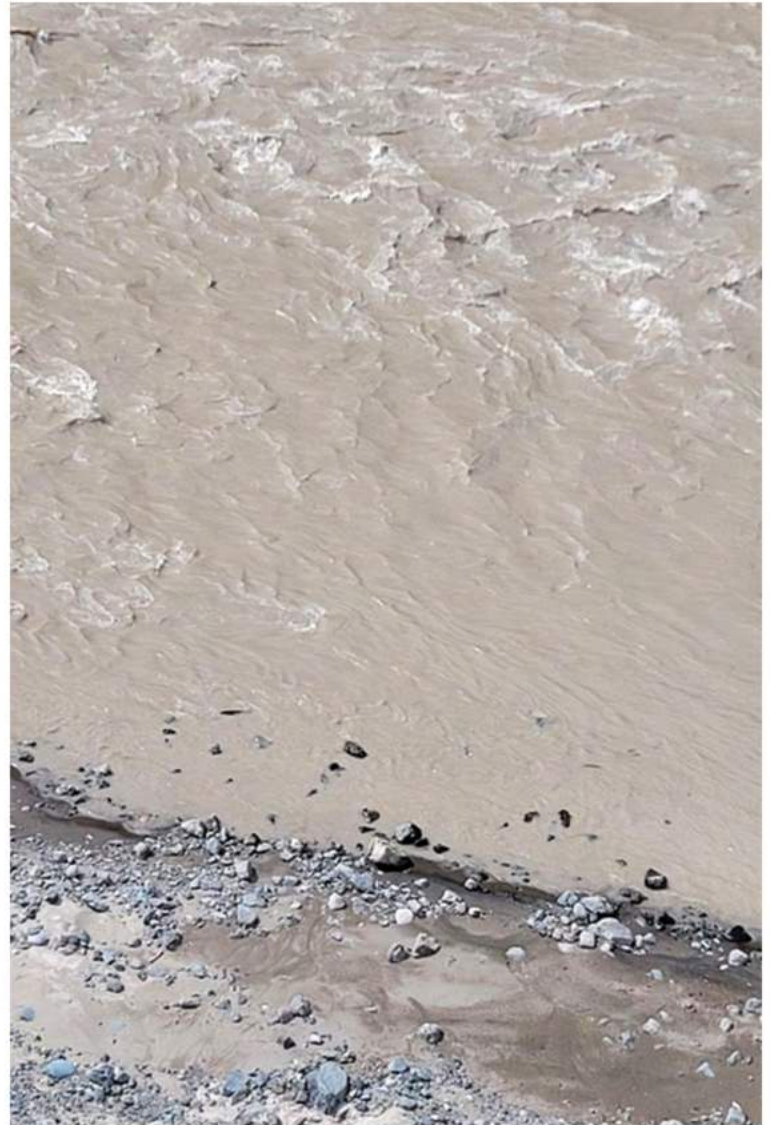
SONAR installed on the Fraser River at Churn Creek Aug 24-25 to monitor salmon migration in the Fraser between Big Bar and the Chilcotin River



**First visual confirmation of sockeye milling in the Chilcotin River upstream of the slide (Aug 26)**



Small school of sockeye visible approx. 500m upstream of slide



Small school of sockeye visible approx. 1 km upstream of slide



Left/above: No fish visible yet in cleaner water upstream of slide at the fish passage SONAR site (Hanceville)