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Emergency Salmon Task Force

Situation Report - August 28, 2024

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 Tŝilhqot'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 and on the TNG Facebook page at www.facebook.com/Tsilhqotin. For questions please email tngsalmontaskforce@tsilhqotin.ca.

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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.

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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 addition 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

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Background – TNG Salmon Emergency Task Force:

A major landslide occurred on the Tŝilhqox (Chilcotin River) the night of July 30. Increased sediment, debris, and flows to the Chilcotin and Fraser Rivers continue to dramatically impact this year's returning sockeye and Chinook populations and their ability to successfully pass through the landslide area to their spawning grounds.

In response to the slide, TNG rapidly formed a tripartite Salmon Emergency Task Force to assess the impacts on Tŝilhqot'in-bound salmon populations. The task force has a technical focus and includes experts from the TNG Fisheries Department, Fisheries and Oceans Canada (DFO), the Province of BC, the Upper Fraser Fisheries Conservation Alliance (UFFCA), and several external technical experts. Members were selected based on their high level of expertise and experience as members of the Big Bar landslide response process, which began in 2019.

All parties have expressed their strong commitment to working collaboratively on a coordinated slide response. Members are committing to short- and longer-term roles to address both the immediate and long-term impacts of the slide on salmon populations.

- *The task force continues to enhance communications, coordination and collaboration. This includes a broader engagement approach with other First Nations communities.*
- *The task force is conducting a thorough investigation of the slide and its impacts on salmon and habitat, and is working to answer key questions, advance technical priorities, and explore potential mitigation/intervention options where needed/feasible.*

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

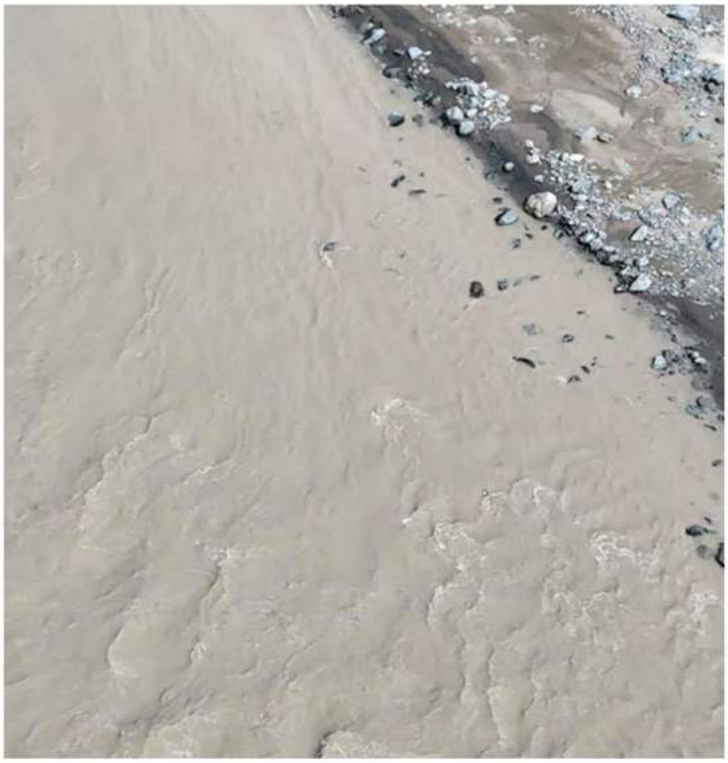
Photo of station installed on the Chilcotin River near Farwell Bridge (Aug 14)

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)