



Emergency Salmon Task Force Situation Report – November 14, 2024

A major landslide occurred on the Chilcotin River the night of July 30, 2024, which dramatically impacted 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.

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.

November 8th Slope Failure at Landslide and Chilcotin River Blockage

On November 8, 2024 unconsolidated material at the 2024 Chilcotin slide site released from the left bank and blocked the Chilcotin River for approximately 3 hours (from approximately 6:00pm until the river breached around 9:00pm). Turbidity (level of cloudiness from particles in water) in the Chilcotin River downstream of the slide peaked at approximately 5000 NTU at Farwell Canyon and 4480 NTU at the Chilcotin River junction. The event was also observed at turbidity and hydrology stations in the Fraser River, downstream of the Chilcotin River confluence. Flows appear to have restored downstream of the slide, and turbidity has remained elevated, but is declining daily. Turbidity on November 12 was approximately 500 NTU, compared to 70 NTU on November 8, prior to the event (see Fig.1, below). This is the 3rd significant slope failure and full river blockage at the slide site since the initial slide on July 31.

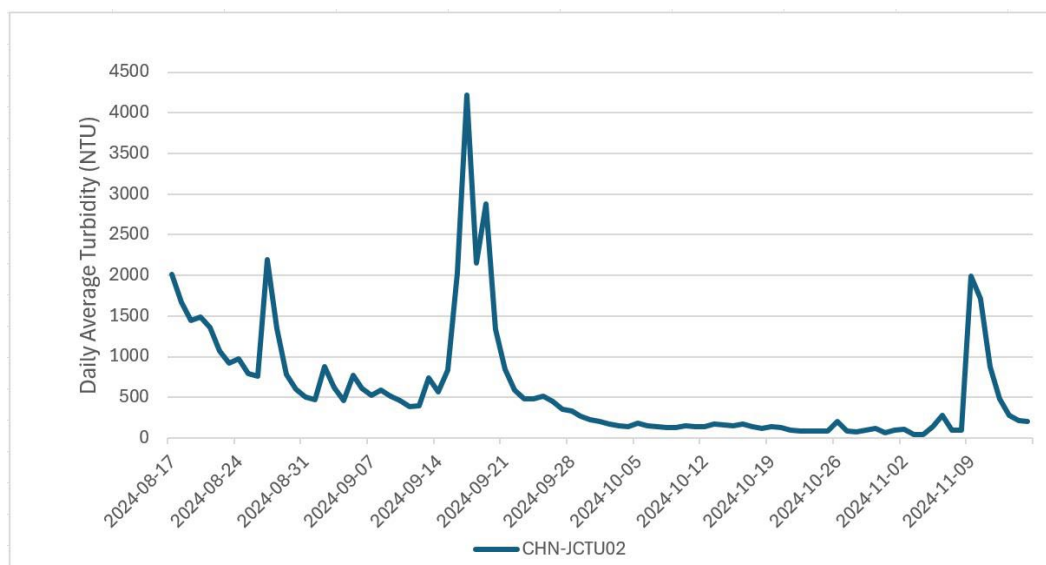


Figure 1: Daily average turbidity in Chilcotin River at junction with Fraser River from Aug 19 to Nov 13, 2024





In addition to this latest failure, two other slope failures occurred at the slide site the week of September 16th resulting in full river blockages and water quality effects extending downstream into the Fraser River. The slide site is still unstable and there is significant material that could still be mobilized or result in future blockages. It remains evident that the 2024 Chilcotin slide remains unstable and continues to affect fish and fish habitat in the Chilcotin River. This latest event emphasizes the need for ongoing research, analysis and risk assessment to help understand and interpret current impacts and future risks to salmon at all relevant life history stages (not limited to migration) and resident fish.

2024 Coho and Steelhead Passage

Interior Fraser Coho (IFC) enters the Chilcotin Watershed from late September through October, with normal spawn timing in the first half of November.

- Chilko system: TNG-DFO aerial enumeration to date of the Chilko system confirms that IFC timing and distribution throughout the Chilko system is typical, and there is no evidence of unusual spawn behaviour. A final flight in mid-November will contribute to the final spawner return estimate and distribution assessment.
- Little Chilcotin: The TNG-DFO sonar in the Little Chilcotin system has been operating over the entire coho migration period. Data will be analyzed post-season to assess total spawner return estimate and timing and will inform consideration of slide impacts.
- Information to date shows no red flags regarding significant impacts to IFC migration from the Chilcotin landslide (related to turbidity or other factors).

Chilcotin River Steelhead (CRS) are an extreme conservation concern. CRS typically enter the Chilcotin System early to mid October and move throughout the Chilcotin watershed until their spawning period from May to early June the following year. Stock assessment information for CRS is highly limited. Recent TNG fieldwork has confirmed the presence of adult CRS in the Chilcotin mainstem above landslide area, providing limited evidence that steelhead have been able to pass the landslide area.

TNG will be conducting additional field work in spring 2025 that will provide additional data on adult steelhead presence/absence in the Chilcotin Watershed, and TNG conducts CRS aerial enumeration in mid May to early June.

Given the months-long period that adult steelhead spend in the Chilcotin watershed, water quality and flow impacts from the initial slide and ongoing sloughing may have specific impacts on this population that are distinct from salmon species.





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Update on Current and Planned Monitoring/Analysis

Environmental monitoring and impact and risk assessments are ongoing. Turbidity and hydrometric stations will remain installed through the winter, though opportunities to service the gauges will be limited due to weather and access conditions. Stations will be inspected and refitted as needed prior to freshet 2025.

Assessments from the 2024 salmon migration season are planned or underway. DFO is leading an assessment to quantify effects of the slide on migrating salmon and is planning a geomorphic assessment to evaluate existing and anticipated changes to the river channel. TNG is processing the sonar files from Hanceville and other sonar programs to help calibrate escapement estimates and is summarizing the results of the TSS/Turbidity monitoring programs to date. 2025 monitoring programs are currently being planned and scoped by TNG.

Update on BC Assessments and Linkages with Ongoing Impact and Risk Assessments

BC has completed geotechnical assessments of the slide site and Farwell Canyon and have completed an assessment of debris transport for materials originating from the slide. While the focus of these studies was primarily on public safety, the TNG Emergency Salmon Task Force is evaluating the results of these studies to confirm they can support ongoing aquatic and geomorphic assessments.

