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TNG-led Emergency Salmon Task Force Weekly Data Report July 01 – 07 2025

1. INTRODUCTION

A major landslide occurred on the Chilcotin River on July 30, 2024, that dramatically and immediately impacted sockeye and Chinook populations returning to the Chilcotin Watershed to spawn. In response to the slide, the Tŝilhqot'in National Government (TNG) rapidly formed a technical tripartite Emergency Salmon Task Force, comprised of BC, DFO and TNG's indigenous technical partner, the Upper Fraser Fisheries Conservation Alliance (UFFCA), to assess the impacts on returning salmon, and prepare and implement mitigation measures to reduce risks and impacts for the 2024 salmon season. Post-season analysis has shown that the landslide had significantly negative impacts on both sockeye and Chinook populations, and the risks and impacts to salmon are anticipated to be significant and ongoing for years. TNG and the Task Force have initiated refined and expanded monitoring in 2025 to monitor the full suite of returning salmon stocks and associated environmental conditions related to the landslide – critical information to inform both in-season response and recovery planning.

The following weekly report prepared by TNG with support from Ecofish, summarizes 2025 monitoring data for environmental conditions and fish passage from May 1 to July 8, 2025 (start date varies with program). This summary includes:

- Salmon passage upstream of the slide site (Hanceville) and concurrent turbidity and flow conditions downstream of the slide site (Farwell Canyon);
- River conditions in the Chilcotin River upstream and downstream of the slide site (turbidity and discharge) and the Fraser River upstream and downstream of the Chilcotin confluence (turbidity); and
- Farwell Canyon tension crack monitoring.

Key observations from this week include:

- Continued elevated turbidity in the Chilcotin River downstream of the slide site (Farwell Canyon) compared to upstream of the slide site (Hanceville), as indicated by turbidity monitoring, site photos and satellite imagery (Section 3.1);
- Continued elevated turbidity in the Fraser River downstream of the Chilcotin River confluence (Gang Ranch), compared to upstream of the Chilcotin River confluence (Sheep Creek) as indicated by turbidity monitoring and satellite imagery (Section 3.2); and
- Salmon passage confirmed upstream of the slide site this week through sonar monitoring (Hanceville) (Section 2.1).

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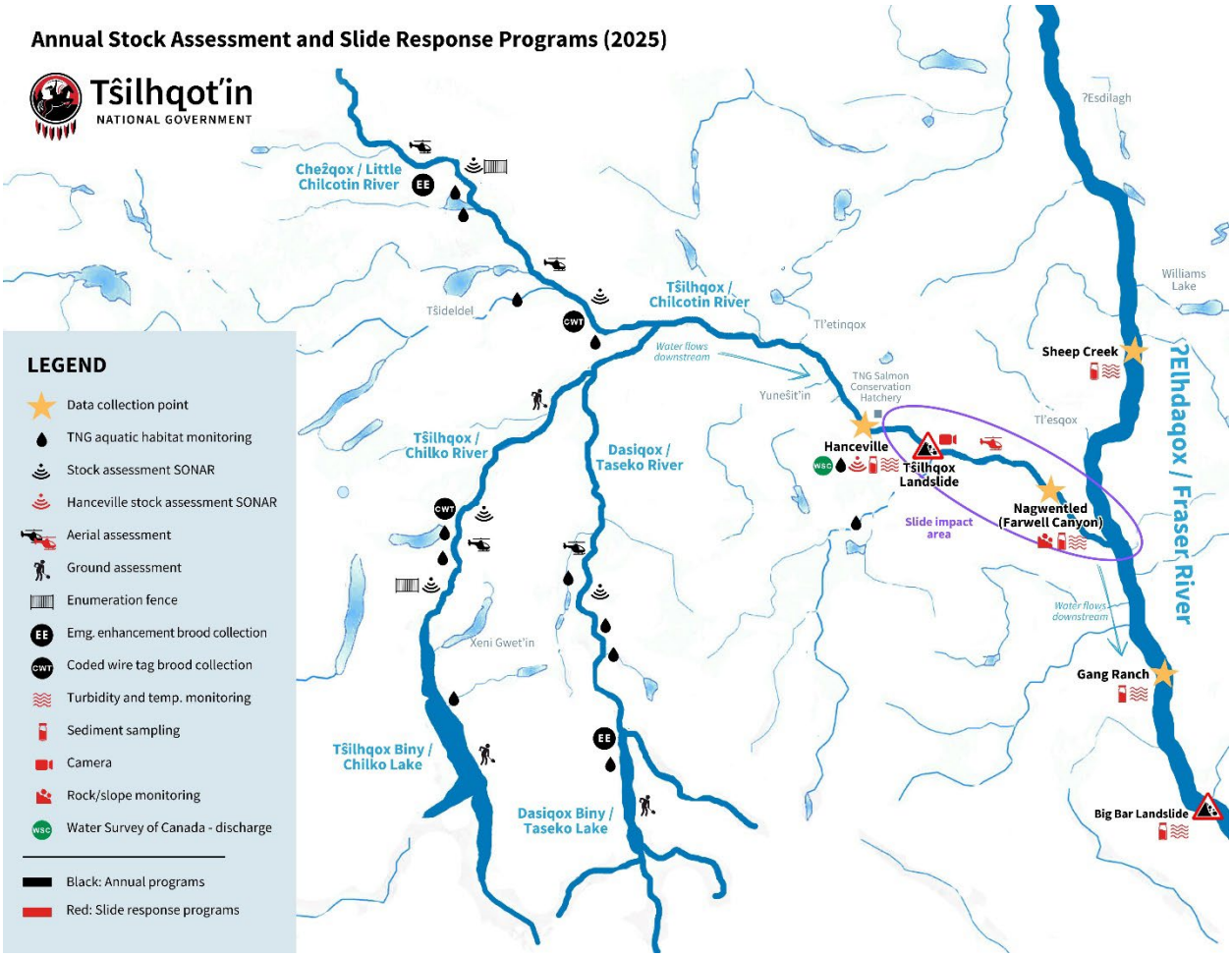
Figure 1 TNG Annual Stock Assessment and Slide Response Programs (2025).



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2. FISH PASSAGE

2.1. Hanceville Sonar Update

Daily salmon passage with turbidity and discharge is presented in Figure 3, noting that Olson et al. (2024) estimates that salmon passing downstream of the slide site (Farwell Canyon) arrive at the sonar station upstream of the slide site (Hanceville, Figure 2) roughly one to three days later.

Summary of Salmon Counts – not expanded

A total of 49 salmon[1] were counted during Week #2 (Figure 3) between July 01 to 07 2025. This includes 2 presumed Chinook salmon (>80 cm in length), that were observed from 2025-07-06 to 2025-07-07, as well as 32 presumed Sockeye Salmon (50 to 64 cm in length) and 15 mixed salmon" (65 to 79 cm in length). Presumed Sockeye Salmon observations occurred from 2025-07-01 to 2025-07-and peak counts occurred on 2025-07-02 (n = 13). The 15 mixed salmon" (fish of intermediate size to Sockeye and Chinook) were observed from 2025-07-01 to 2025-07-07.

Since sonar enumeration commenced on June 24, 2025, a total of 50 presumed Sockeye Salmon, 7 presumed Chinook Salmon and 20 "mixed salmon" (between 65 and 79 cm in length) have been counted moving upstream past the sonar station at Hanceville (Figure 4).

These numbers are not expanded, and are from a 20 minute count per hour.

Field Summary of Sonar Operation

River left sonar has been running steady with only small interruptions in recording during servicing and downloads. River right sonar has encountered three outages caused by interruptions in recording which we suspect is due to computer/program crashes.

We have observed an increase in river discharge peaking on July 03 and moderate decreases since. As such, sonar and weir positioning have remained the same since installation with only minor adjustments to pitch, roll and angle of sonar following lens cleanings. Water visibility has modestly increased at the Hanceville sonar site throughout the past week.

[1] Presumed Sockeye (50 to 64 cm). presumed Chinook (80+ cm), and "mixed salmon (65 to 79 cm), as defined by the Department of Fisheries and Oceans (DFO).

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Figure 2 Looking downstream at the left and right bank Hanceville Bridge sonar sites on July 04, 2025**.**

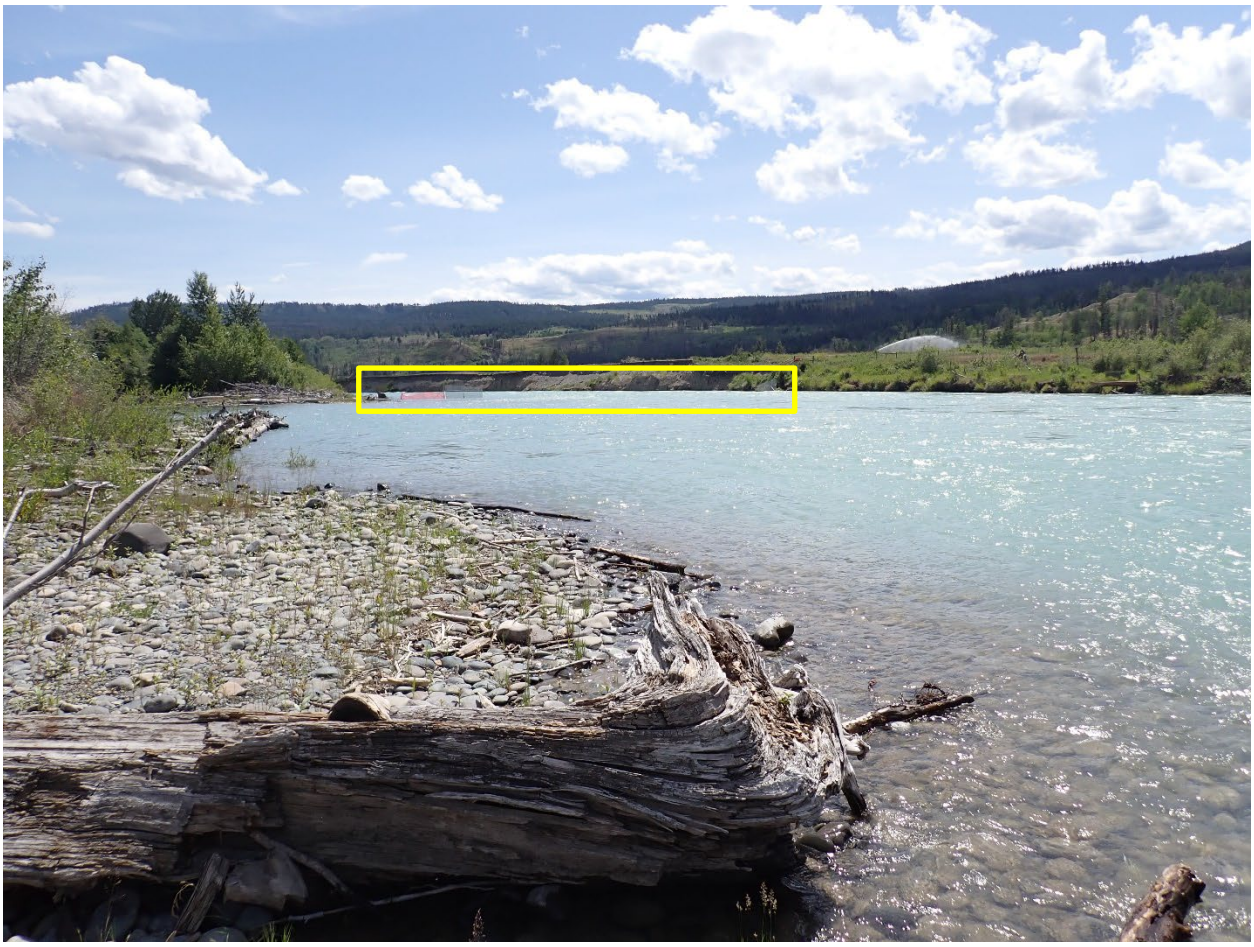

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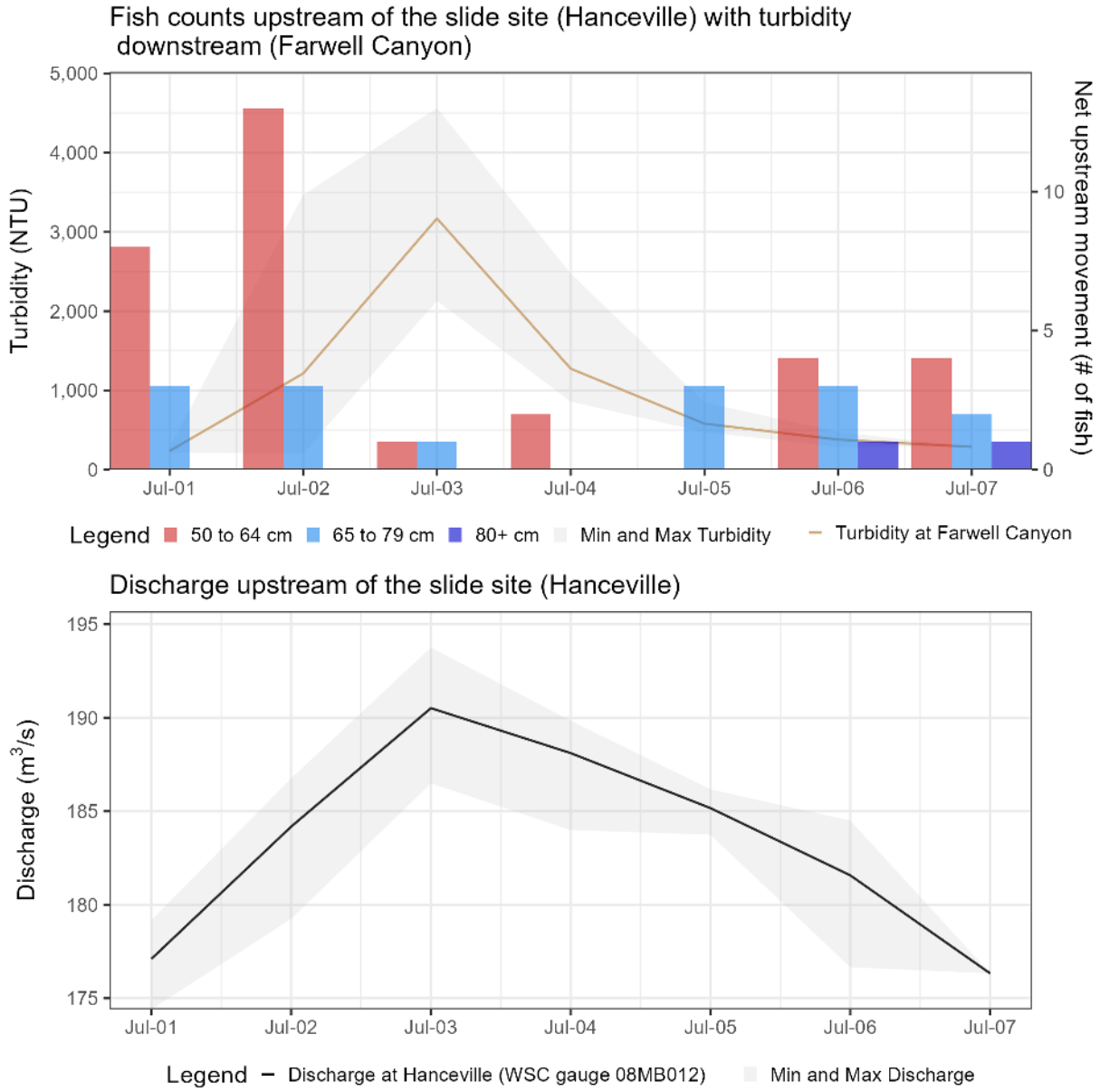
Figure 3. Net daily movement of salmon[2] past the Hanceville sonar upstream of the slide site (20 minute count per hour – data not expanded), with turbidity measured downstream of the slide site (Farwell Canyon) and discharge upstream of the slide site (Hanceville) from July 01 to July 07, 2025.



[2] Presumed Sockeye (50 to 64 cm). presumed Chinook (80+ cm), and "mixed salmon (65 to 79 cm), as defined by the Department of Fisheries and Oceans (DFO).

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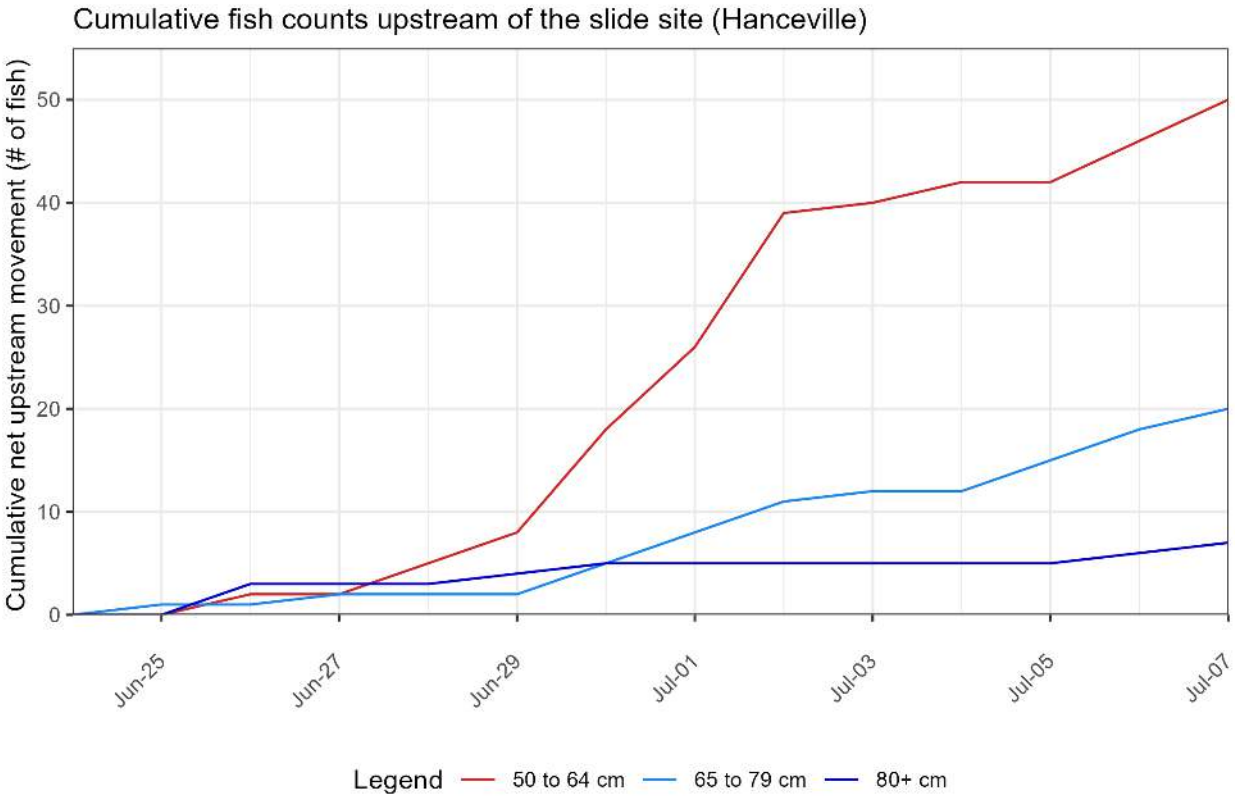
Figure 4 Cumulative daily counts of salmon[3] movement (20 minute count per hour –data not expanded) past the Hanceville sonar upstream of the slide site from June 24, 2025 to July 07, 2025.



Disclaimer

The data presented should be used to infer relative abundance of salmon species as they are sourced from a subset of sonar data and are not expanded[4]. The plots presented in this summary should be considered provisional until Ecofish Research Ltd. (Ecofish) perform standard QA/QC procedures, respectively. Data are subject to change post-season.

[3] Presumed Sockeye (50 to 64 cm). presumed Chinook (80+ cm), and "mixed salmon (65 to 79 cm), as defined by the Department of Fisheries and Oceans (DFO).
[4] Sonar data was reviewed every 20 min per hour of data collection, as per DFO standards.

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3. RIVER CONDITIONS UPDATE

3.1. Chilcotin River Turbidity and Flow

Discharge in the Chilcotin River upstream of the slide site (Hanceville) ranged from 144 m^3/s to 191 m^3/s (mean = 183 m^3/s) (Figure 6). Turbidity ranged from 15 NTU to 23 NTU at Hanceville, with an overall mean of 19 NTU. Downstream of the slide site (Farwell Canyon) turbidity was higher, ranging from 207 NTU to 4561 NTU, with an overall mean of 1015 NTU. The differences in turbidity upstream and downstream of the Farwell Canyon slide site can be seen by differences in river colour in recent field photos (Figure 5) and recent satellite imagery (Figure 8). During the same period, there was a large sloughing event that occurred along the right bank of the landslide deposit on July 02, 2025 (Section 4).

Figure 5 Water quality conditions upstream of the slide impact area (left, Hanceville) and downstream of the slide impact area (right, Farwell Canyon) captured on July 01, 2025**.**

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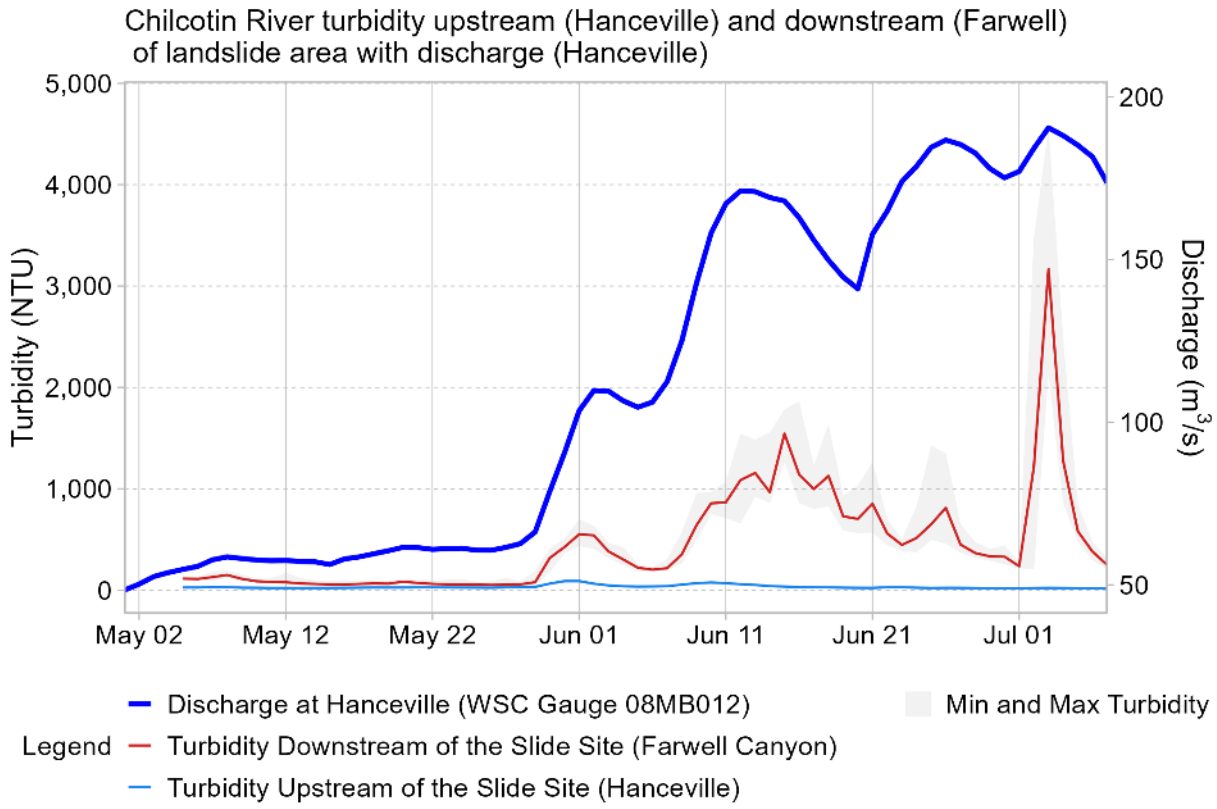
Figure 6. Turbidity and discharge measured in the Chilcotin River upstream of the slide site (Hanceville) and downstream of the slide site (Farwell Canyon) from May 01, 2025, to July 08, 2025.



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3.1.1. Recent Bank Movement at the Landslide Area

The camera station was not operational between June 11 to July 03, 2025. On July 04, the camera was operating and captured a new photo (Figure 7). The figure below shows the difference between June 10 and July 04, indicating a slope failure within this time period. Further discussions with the Task Force and ongoing monitoring indicated this event likely occurred around July 02, 2025. During this same period, a sloughing event occurred along the right bank of the landslide deposit, and increases in turbidity were observed, as highlighted in Sections 3.1 and 3.2.

Figure 7 Recent bank movement at the landslide area. Photo on the left captured June 10, 2025 and photo on the right captured July 04, 2025.

3.2. Fraser River Turbidity and Flow

In the Fraser River, discharge ranged from 2030 m^3/s to 2252 m^3/s (mean = 2188 m^3/s) Upstream of the Chilcotin-Fraser confluence (Sheep Creek) turbidity ranged from 36 NTU to 65 NTU, with an overall mean of 49 NTU. Turbidity downstream of the confluence (Gang Ranch) ranged from 73 NTU to 379 NTU (mean = 139 NTU) (Figure 8). The differences in turbidity upstream and downstream of the confluence of the Chilcotin and Fraser River can be seen by differences in river colour in the recent satellite imagery from the junction (Figure 10).

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Figure 8 Turbidity in the Fraser upstream of the Chilcotin confluence (Sheep Creek) and downstream of the confluence (Gang Ranch) from May 01, 2025 to July 08, 2025.

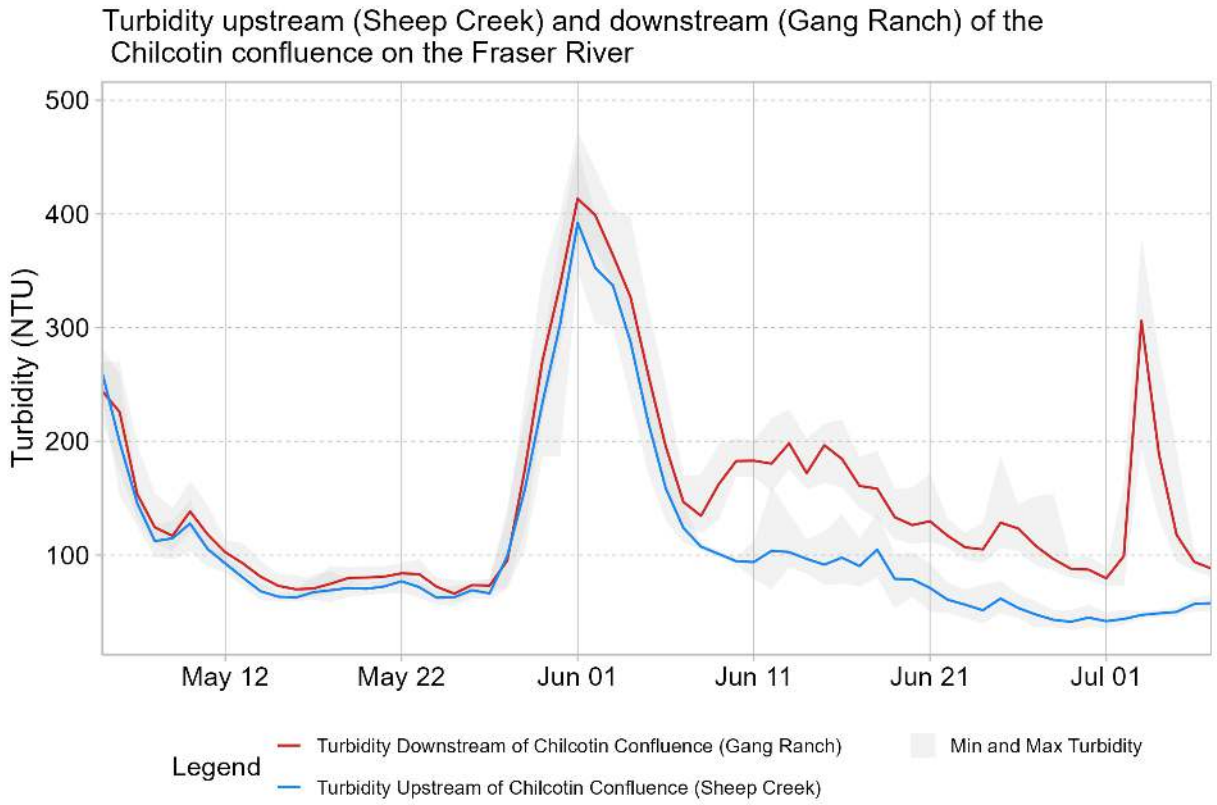

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Figure 9 Satellite image of Chilcotin River upstream (left) and downstream (right) of the Farwell Canyon slide site on July 03, 2025 (Copernicus 2025).

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Figure 10 Satellite image of the Chilcotin River at confluence with Fraser River on July 03, 2025 (Copernicus 2025).

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4. FARWELL CANYON TENSION CRACK MONITORING

There is a very high risk of rockfall at Farwell Canyon due to destabilization from the breakout flood that occurred when the upstream impoundment (lake) created by the 2024 landslide, breached. Assessments to-date indicate that rockfall risk poses a high risk to salmon passage at this location. TNG is conducting tension crack monitoring at Farwell canyon (with BGC Engineering) to provide early notification of notable slope movement to support mitigation efforts. BGC Engineering's summary of observations for this reporting period:

- No significant change to the rock slope was noted in the field since the previous visit (June 25, 2025)
- High river flows with a lot of sediment have been noted since June 13, 2025.
- An overview photo (Figure 11) of the site is attached from July 02, 2025.

Figure 11 Overview photo of the Farwell Canyon slope tension crack that resulted from 2024 breakout flood, taken on July 02, 2025.

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