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TNG-led Emergency Salmon Task Force Weekly Data Report Aug 05-11, 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 continued monitoring in 2025 (Figure 1) using refined and expanded methods that permit monitoring of 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 fish passage and environmental conditions (river conditions update) from May 01 to Aug 11, 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); and
- 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 River confluence (turbidity).

Key observations from this week include:

- Salmon passage continues past the slide and passage rates (number of fish per day) have increased substantially for salmon 50 to 64 cm in length, peaking at 16,212 on August 11, 2025 (Section 2.1). A cumulative total of 52,778 salmon have been counted since the start of the program on June 25, 2025, with 42,318 salmon counted during Week #7 (August 05 – August 11, 2025). Sockeye Salmon are being caught at the Hanceville dip netting platform (10 Sockeye in 3 hours) with body lengths falling within our 50 to 64 cm salmon size bin.
- Daily mean turbidity in the Chilcotin River downstream of the slide site (Farwell Canyon) dropped below 100 NTU on August 10, 2025, the lowest daily mean measured at the station since late May 2025. Turbidity in Farwell Canyon is now ~70 NTU higher than upstream of the slide site (Hanceville) (Section 3.1).
- Turbidity in the Fraser River downstream of the Chilcotin River confluence (Gang Ranch) is ~10 NTU higher than upstream of the Chilcotin River confluence (Sheep Creek) as indicated by turbidity monitoring (Section 3.2). Both Fraser River turbidity stations were serviced on August 08, 2025, and are operational again.

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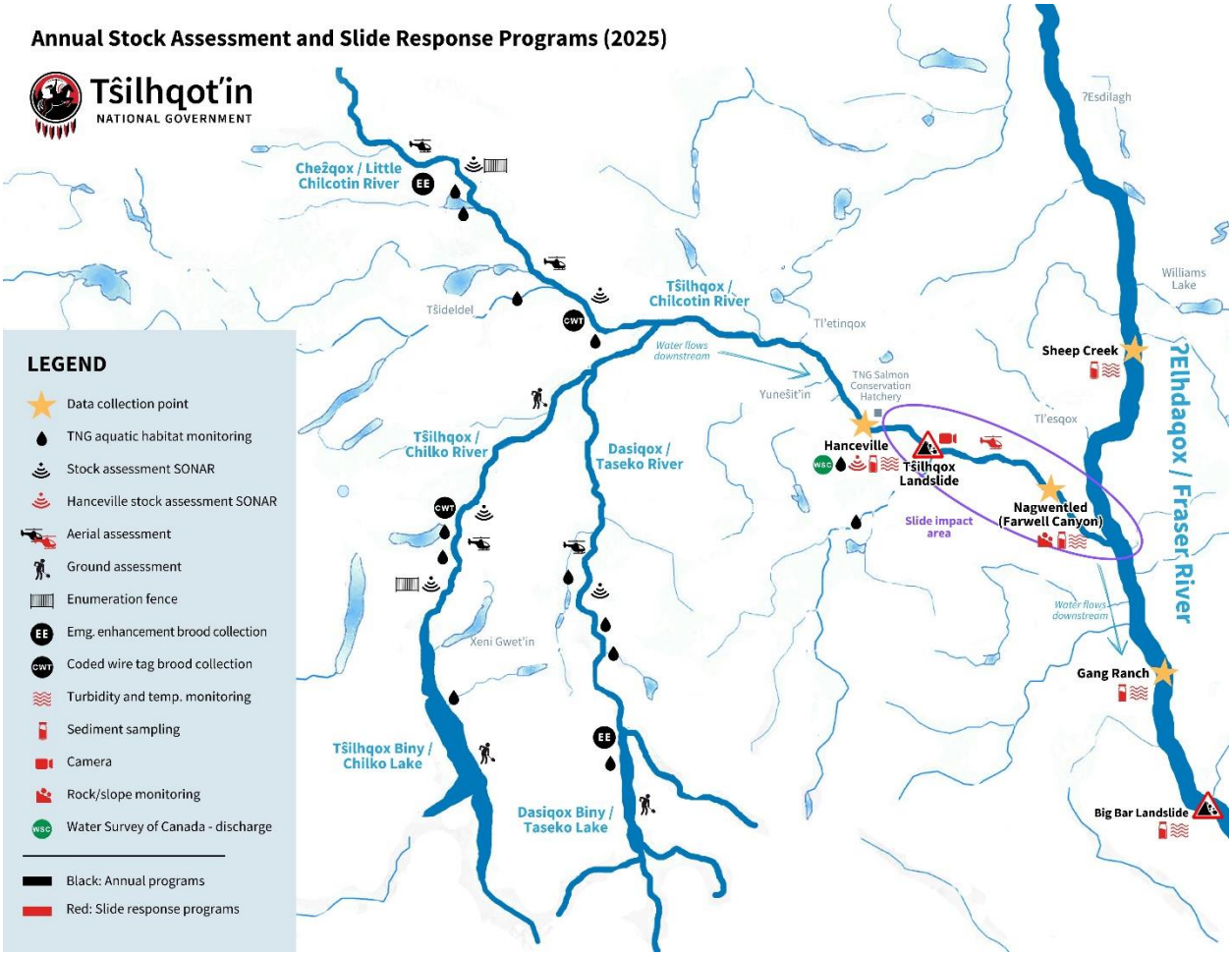
Figure 1 TNG Annual Stock Assessment and Slide Response Programs (2025).



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) estimate that salmon passing downstream of the slide site (Farwell Canyon) arrive at the sonar station upstream of the slide site (Hanceville) roughly one to three days later.

Summary of Salmon Counts

For sonar data, twenty minutes of every hour have been counted and data have been expanded to the full hour. Infilling of data will occur during post-season analysis. A total of 42,318 salmon were counted during Week #7 (Figure 3). This includes 939 presumed Chinook Salmon (>80 cm in length), that were observed from August

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06 to August 11, 2025 with peak weekly counts (n = 228) occurring on August 10, 2025, as well as 36,075 salmon between 50 to 64 cm in length and 5,304 salmon between 65 to 79 cm in length. 50 to 64 cm salmon observations occurred from August 06 to August 11, 2025 and peak weekly counts occurred on August 11, 2025 (n = 16,212). 65 to 79 cm salmon were observed from August 06 to August 11, 2025 and peak weekly counts occurred on August 10, 2025 (n = 1,875).

Since sonar enumeration commenced on June 25, 2025, a total of 3,625 salmon >80 cm, 9,788 salmon between 65 to 79 cm in length, and 39,365 salmon between 50 and 64 cm in length have been counted moving upstream past the sonar station at Hanceville (Figure 4).

Field Summary of Sonar Operation

Chilcotin River flows at Hanceville have continued on a general downward trend in Week #7, following a slight increase during the previous week. Adjustments to the fence and sonar positioning may be required soon if flows continue to decrease. Sonar operations on both banks ran smoothly this week, with a single 12-hour outage on August 05, 2025 due to sleep settings on a newly installed computer at the river-left bank sonar station.

Increasing file review effort this week has left little time for species and size confirmation efforts. However, on August 11, 2025, local fishers were dip netting at the Hanceville platform while crews were on site and were willing to share information from their catch. Ten Sockeye Salmon ranging from 51 to 58 cm were captured at the Hanceville dip net platform in 3 hours of effort. (Figure 2).

Figure 2. Hanceville river-right sonar station, captured on August 10, 2025 (left). Local fisher dip netting Sockeye Salmon ~50 m upstream of the Hanceville river-right sonar station, captured on August 11, 2025 (right).

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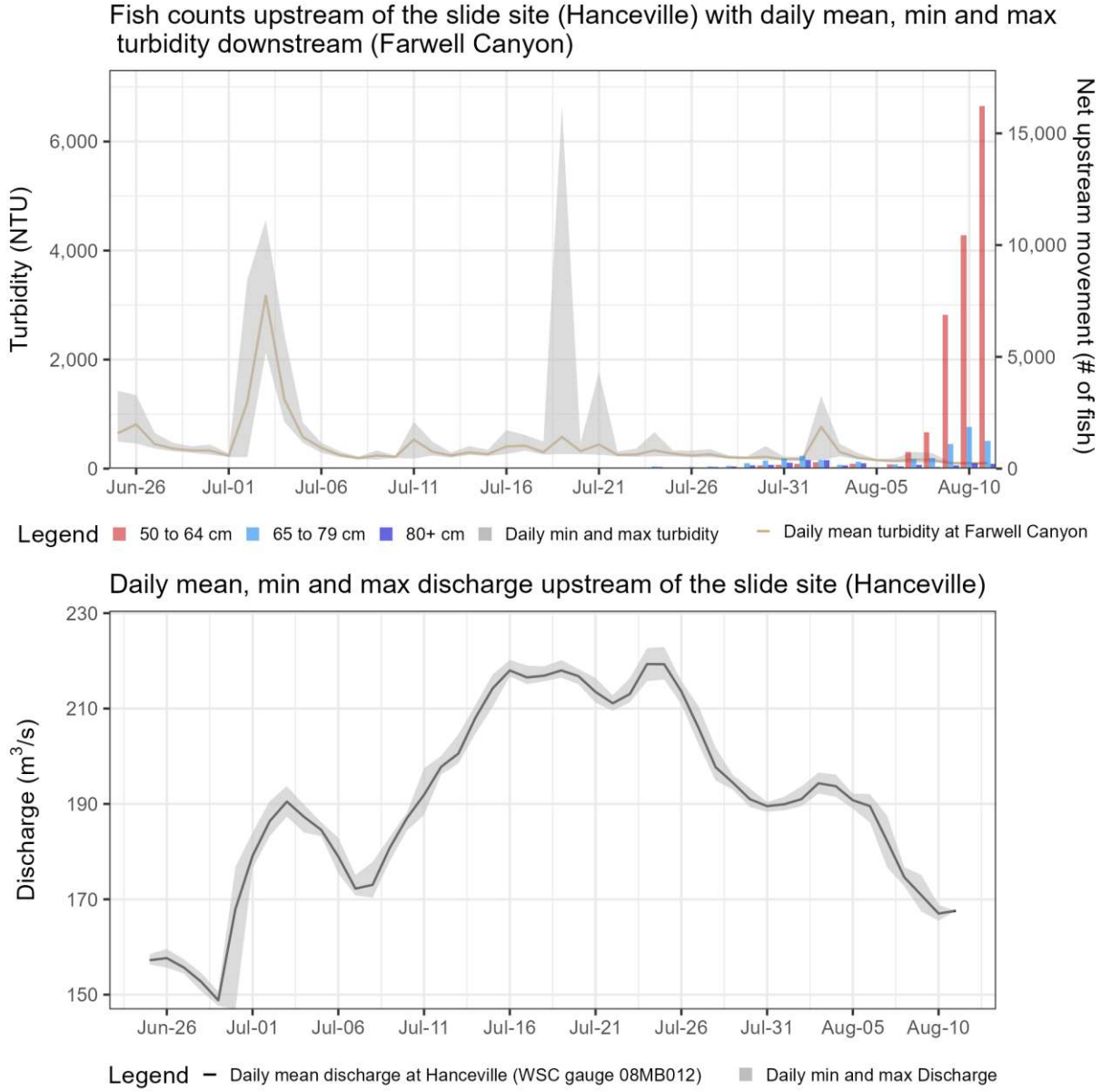
Figure 3. Expanded[1] net daily movement of salmon[2] past the Hanceville sonar upstream of the slide site, with turbidity measured downstream of the slide site (Farwell Canyon) and discharge upstream of the slide site (Hanceville) from June 25 to Aug 11, 2025.



[1] One twenty-minute file was reviewed per hour of sonar operation (as per DFO standards). To estimate total fish passage per hour, the twenty-minute counts were expanded by a factor of three to expand to the full hour. Infilling will be completed in post-season analysis.

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

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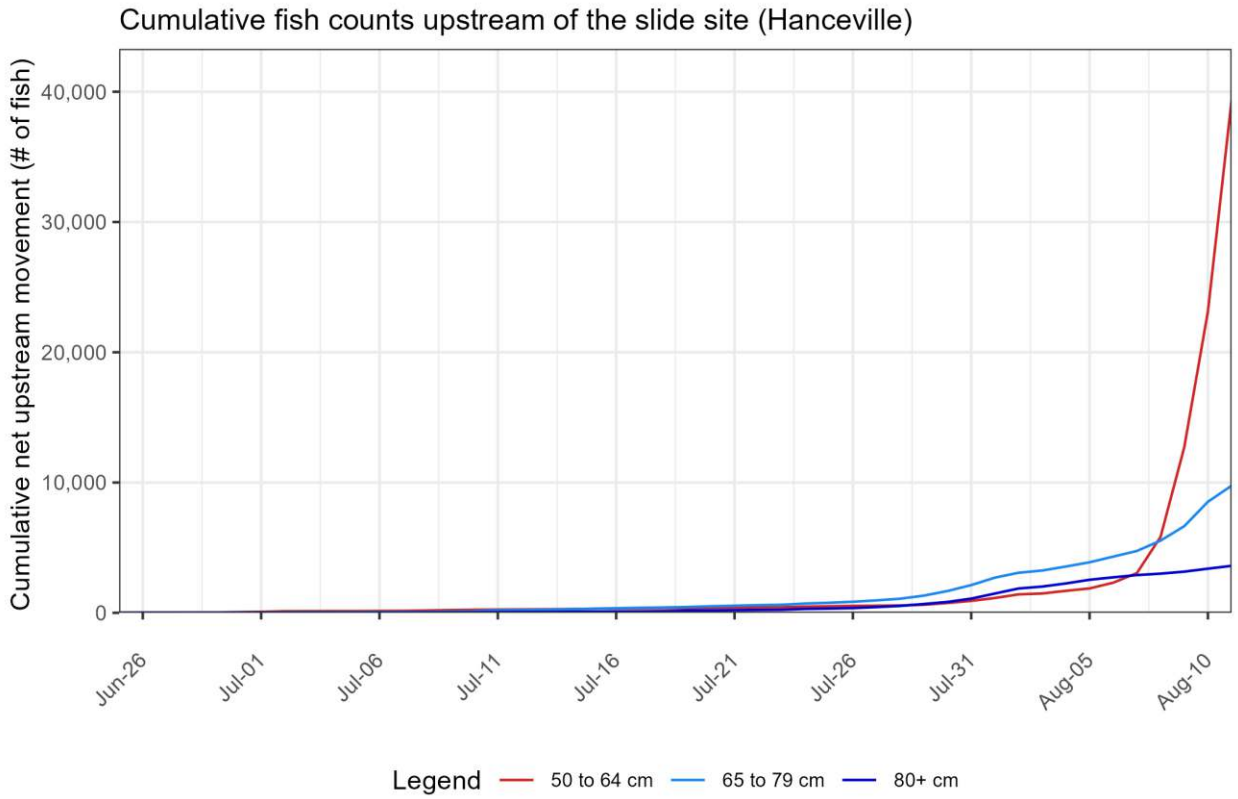
Figure 4. **Expanded[3] cumulative daily counts of salmon[4] movement past the Hanceville sonar upstream of the slide site from June 24, 2025, to Aug 11, 2025.**



[3] One twenty-minute file was reviewed per hour of sonar operation (as per DFO standards). To estimate total fish passage per hour, the twenty-minute counts were expanded by a factor of three to expand to the full hour. Infilling will be completed in post-season analysis.

[4] Mixed salmon separated by size (50 to 64 cm) and (65 to 79 cm), and presumed Chinook (80+ cm), as defined by the Department of Fisheries and Oceans (DFO).

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3. RIVER CONDITIONS UPDATE

3.1. Chilcotin River Turbidity and Flow

During the week of August 05 to August 11, 2025, discharge in the Chilcotin River upstream of the slide site (Hanceville) ranged from 162 m^3/s to 191 m^3/s (mean = 177 m^3/s) (Figure 5). Turbidity ranged from 29 NTU to 50 NTU at Hanceville, with an overall mean of 32 NTU. Downstream of the slide site (Farwell Canyon) turbidity was higher, ranging from 89 NTU to 306 NTU, with an overall mean of 132 NTU. Daily mean turbidity downstream of the slide site dropped below 100 NTU (as of August 10, 2025) for the first time since May 29, 2025. There is less visible difference in turbidity upstream and downstream of the Farwell Canyon slide site this week as seen by river colour in recent satellite imagery (Figure 6). A ground-level view of the slide site is presented in Figure 7.

Figure 5. Turbidity and discharge measured in the Chilcotin River upstream of the slide site (Hanceville) and turbidity measured downstream of the slide site (Farwell Canyon) from May 01 to Aug 11, 2025.

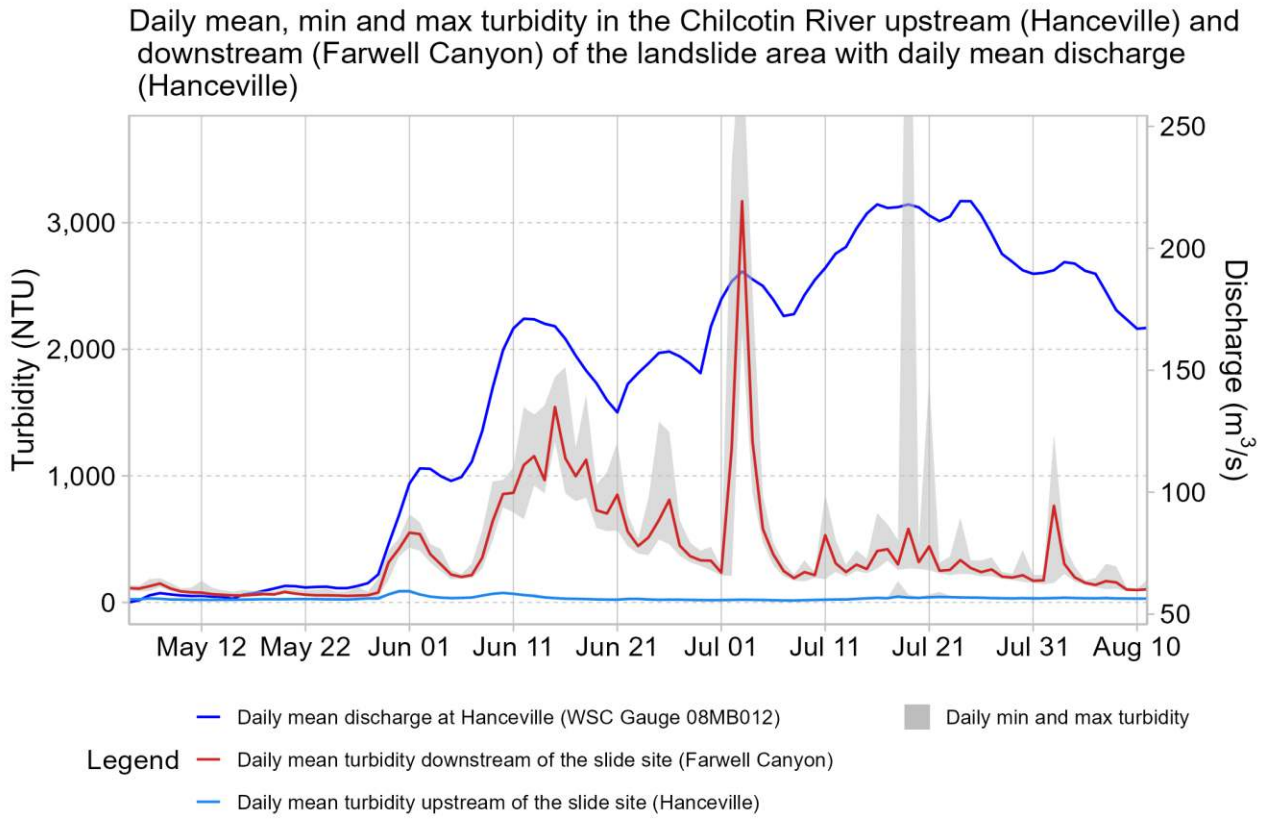

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Figure 6. **Satellite image of Chilcotin River upstream (left) and downstream (right) of the Farwell Canyon slide site on August 05, 2025 (Copernicus 2025).**

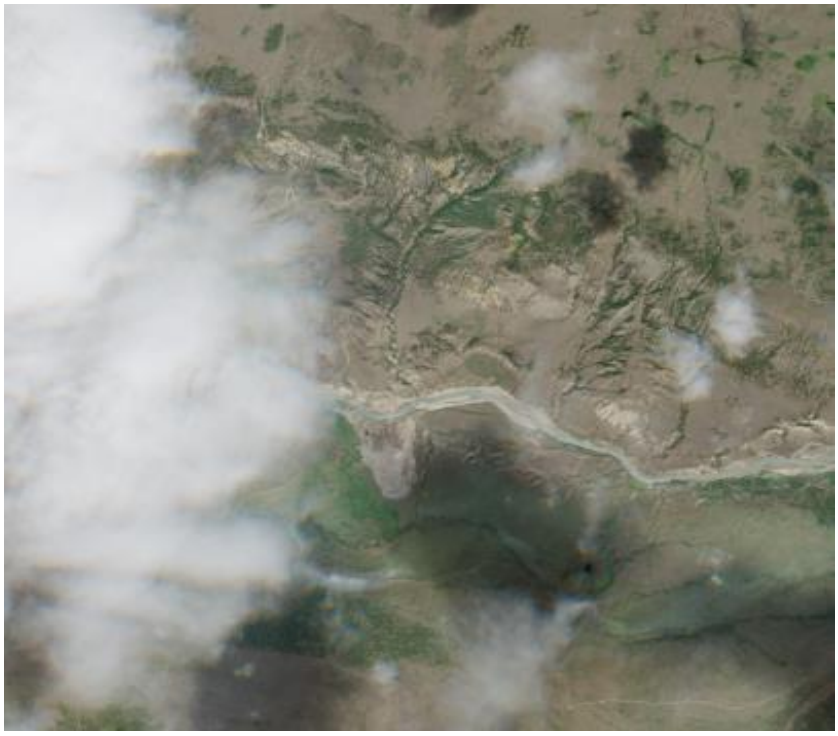

Figure 7. **Looking downstream at the Chilcotin River slide site from the Northwest Hydraulics Consultants (NHC) remote camera installation on August 12, 2025.**

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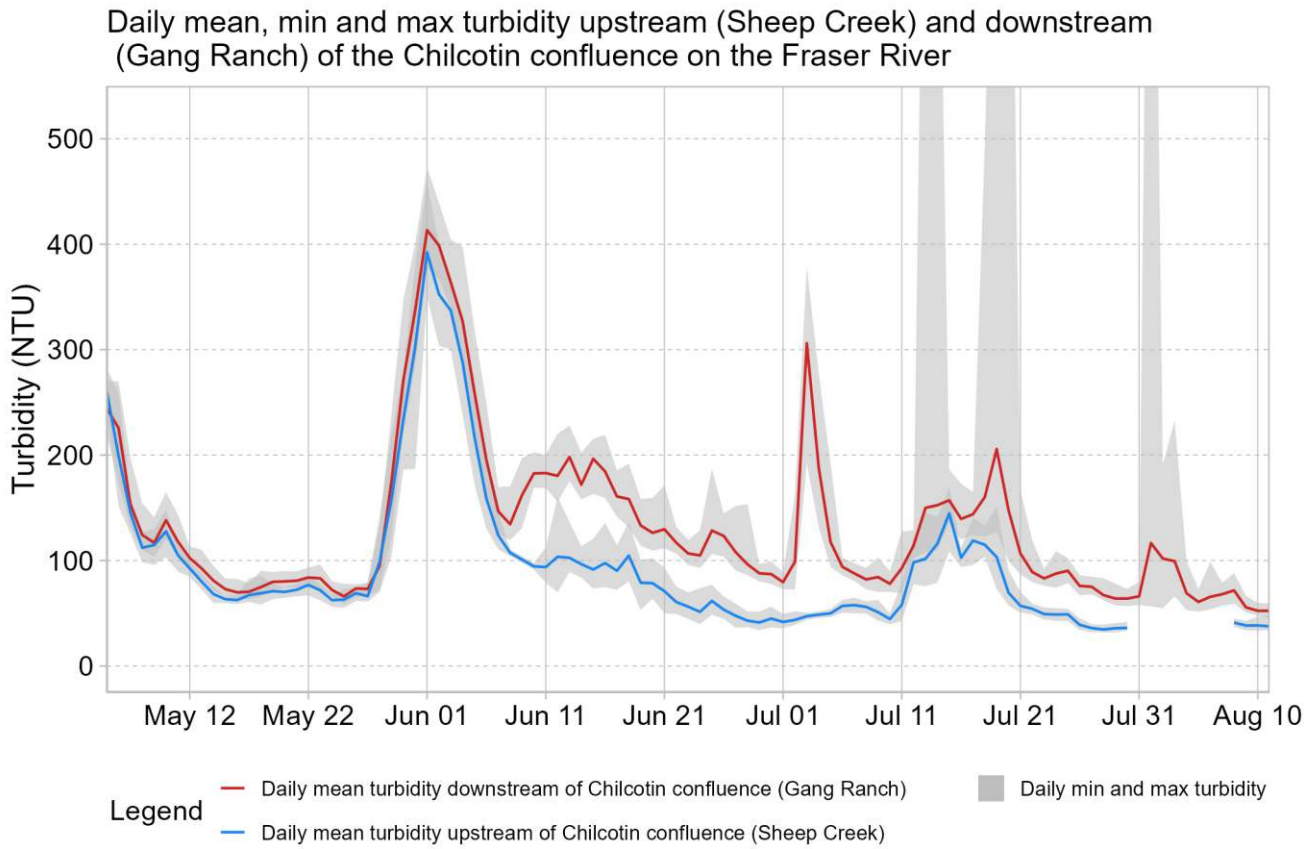
3.2. Fraser River Turbidity and Flow

During the week of August 05 to August 11, 2025, turbidity upstream of the Chilcotin-Fraser confluence (Sheep Creek) ranged from 34 NTU to 48 NTU, with an overall mean of 39 NTU (Figure 8). Turbidity downstream of the confluence (Gang Ranch) ranged from 45 NTU to 99 NTU (mean = 61 NTU). No satellite imagery was available from the confluence of the Chilcotin and Fraser rivers this week due to heavy cloud cover.

Both Fraser River turbidity stations were serviced on August 08, 2025, and are functioning normally. Turbidity data at Gang Ranch from July 29 to August 08, 2025, has been estimated from data collected by NHC at Big Bar. No suitable data was available to fill the time series upstream of the Chilcotin-Fraser confluence.

Figure 8. Turbidity in the Fraser upstream of the Chilcotin confluence (Sheep Creek) and downstream of the confluence (Gang Ranch) from May 01 to Aug 11, 2025.



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Disclaimer:

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