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TNG-led Emergency Salmon Task Force Weekly Data Report July 22 – 28 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 1 to July 28, 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 for salmon above 80 cm and from 65 to 79 cm in length (Section 2.1). Total daily counts increased consistently across the week, with a total of 1,033 salmon observed across all size bins and a total cumulative count of 2,173 salmon since the start of the program on June 25. There was no detectable disruption of salmon migration upstream of the slide site following turbidity spikes on July 19 and 21.
- Turbidity downstream of the slide site (Farwell Canyon) has stabilized since last week, with a single spike above 500 NTU (to a maximum of 669 NTU) for a duration of 1.5 hours on July 22. This is in comparison to multiple spikes above 1,000 NTU (to a maximum of 6,647 NTU) for 3 to 12 hours during Week #4.
- 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 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).

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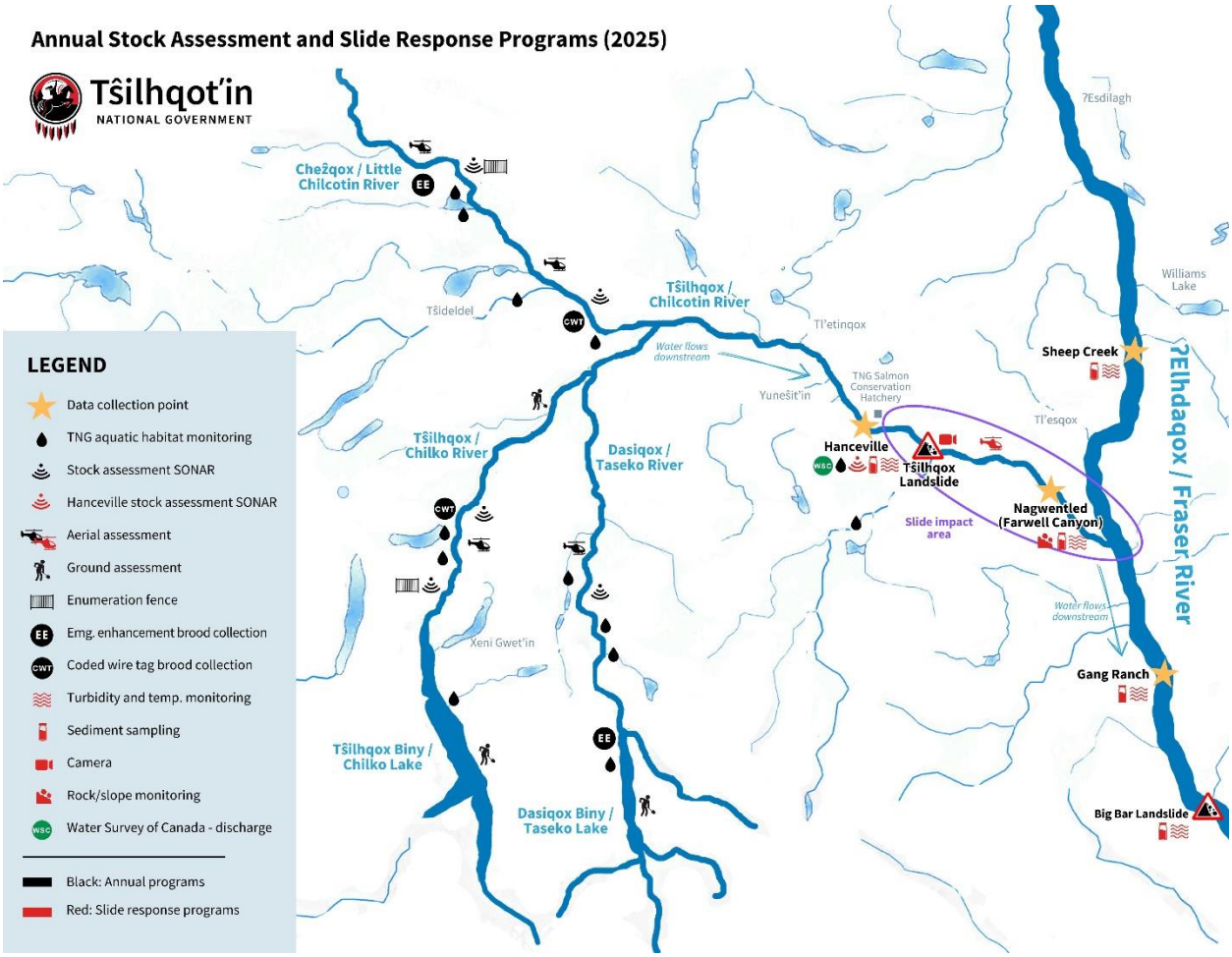
Figure 1 TNG Annual Stock Assessment and Slide Response Programs (2025).



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 1,033 salmon were counted during Week #5 (Figure 3). This includes 330 presumed Chinook Salmon (>80 cm in length), that were observed from July 22

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to July 28 with peak counts (n = 90) occurring on July 28, as well as 166 salmon between 50 to 64 cm in length and 537 salmon between 65 to 79 cm in length. 50 to 64 cm salmon observations occurred from July 22 to July 28 and peak counts occurred on July 24 (n = 45). 65 to 79 cm salmon were observed from July 22 to July 28, 2025. There were no detectable disruptions of salmon migration upstream of the slide site in Week #5 following turbidity spikes on July 19 and 21. During the past week, the total number of salmon counted per day has nearly tripled from 84 on July 22 to 231 on July 28. Most of this increase was driven by increasing abundance of salmon in the >80 cm and 65 to 79 cm size range.

Since sonar enumeration commenced on June 25, 2025, a total of 530 salmon >80 cm, 1,082 salmon between 65 to 79 cm in length, and 561 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 been declining rapidly as of July 25, 2025, although no adjustments to existing diversion fences have been needed this week. If flows continue to drop, both river-right and river-left fences will likely need to be shifted further into the stream channel. We anticipate dip netting for species and size validation in the coming days as salmon detections increase.

The laptop at river-left station has been slowing down substantially during daily data back-up, causing short data-outages and data transfer delays. A replacement laptop has been sourced and will be installed on July 30. The river-right station has had no issues this week following the replacement of a faulty hard drive last week.

Figure 2. **Hanceville sonar river-left fence maintenance by TNG Sr. Fisheries technician, Gerald William, with the river-right sonar visible in the background captured on July 28, 2025.**

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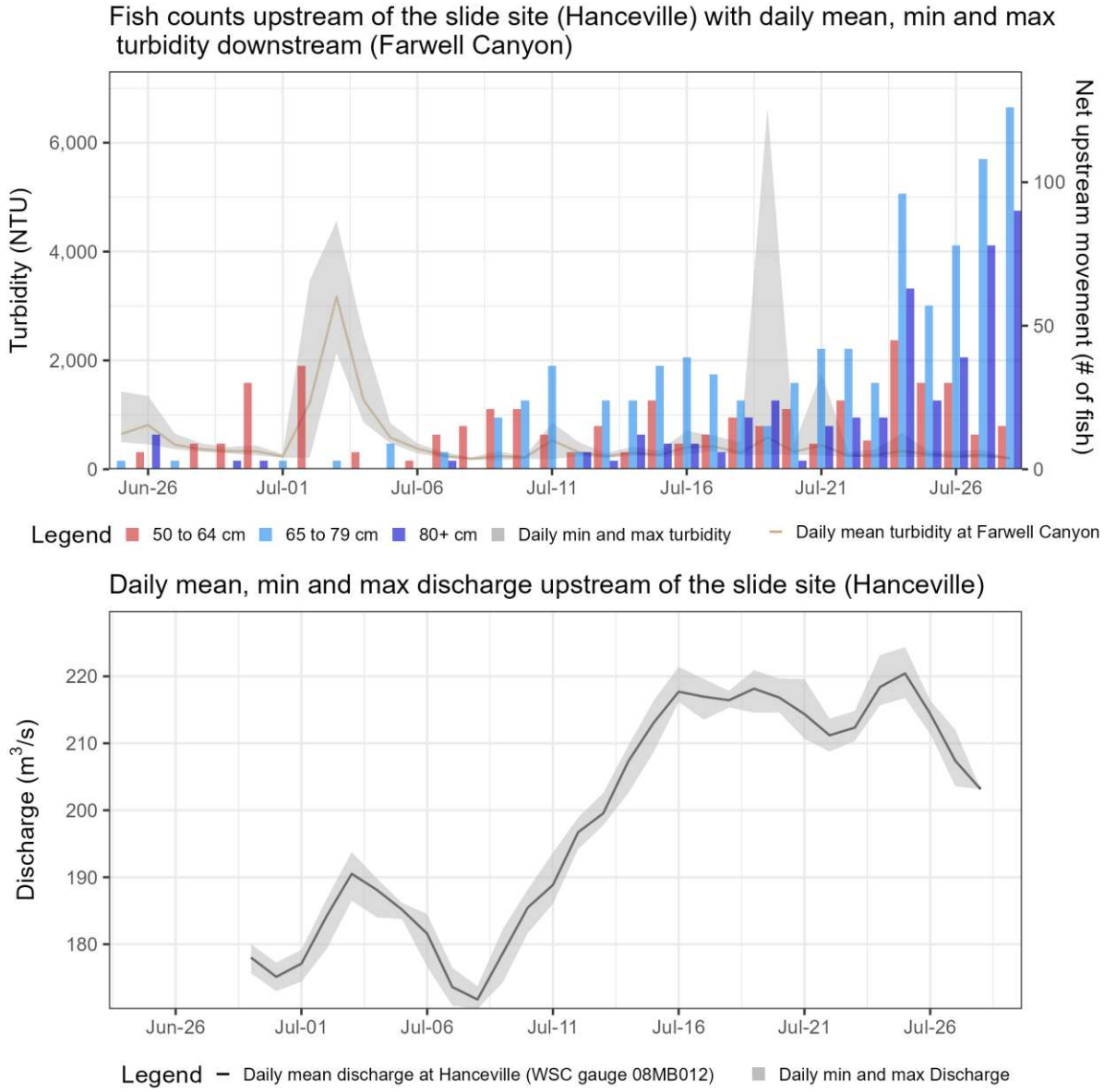
Figure 3. Expanded[1] net daily movement of salmon[2] past the Hanceville sonar upstream of the slide site, with turbidity measured downstream of the slide site (Farwell Canyon) and discharge upstream of the slide site (Hanceville) from June 25 to July 28, 2025.



[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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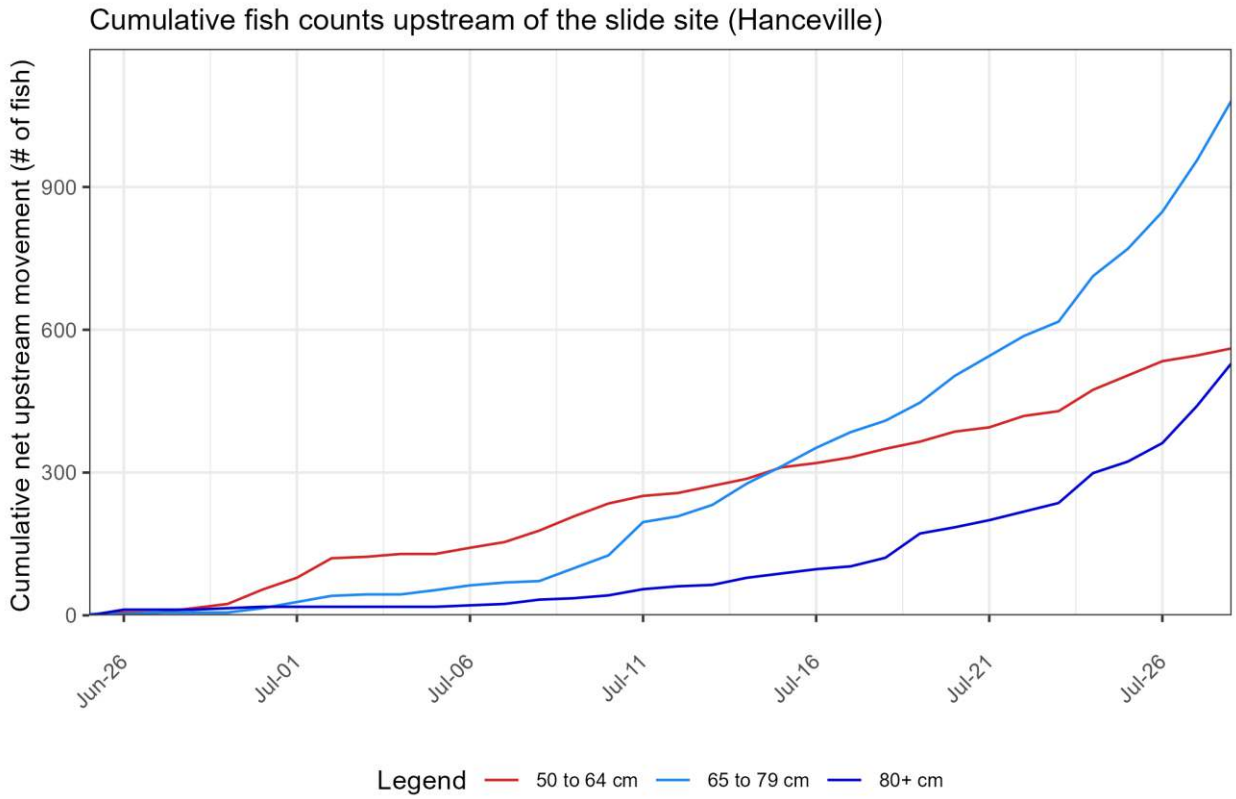
Figure 4. **Expanded[3] cumulative daily counts of salmon[4] movement past the Hanceville sonar upstream of the slide site from June 24, 2025 to July 28, 2025.**



[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 July 22 to July 28, 2025, discharge in the Chilcotin River upstream of the slide site (Hanceville) ranged from 193 m^3/s to 220 m^3/s (mean = 212 m^3/s) (Figure 5). Turbidity ranged from 32 NTU to 84 NTU at Hanceville, with an overall mean of 38 NTU. Downstream of the slide site (Farwell Canyon) turbidity was higher, ranging from 186 NTU to 669 NTU, with an overall mean of 260 NTU. Turbidity stabilized downstream of the slide site (Farwell Canyon) since the spikes observed last week, with a daily mean of 204 NTU on July 28 (down from a daily mean of 443 NTU on July 21). The differences in turbidity upstream and downstream of the Farwell Canyon slide site can be seen by differences in river colour in recent satellite imagery (Figure 6). Field crews in the area observed heavy localized rainfall events this week.

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 July 28, 2025.

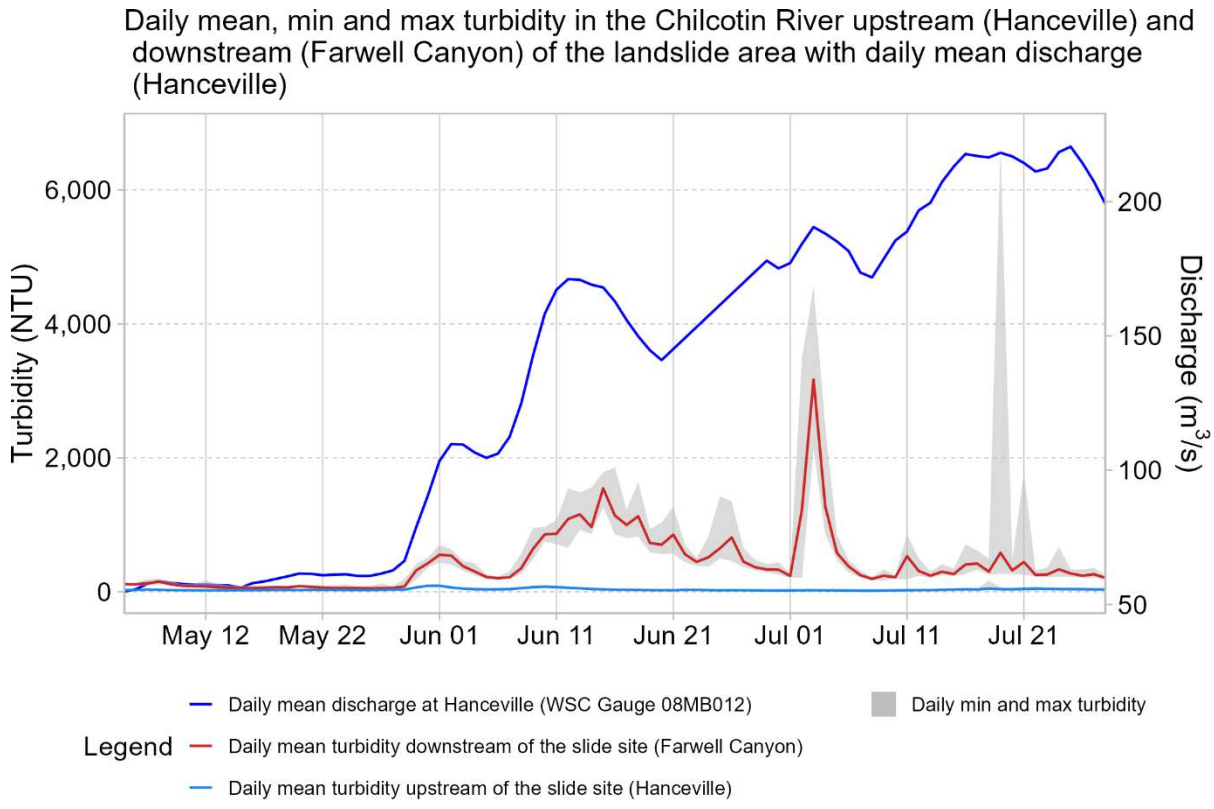

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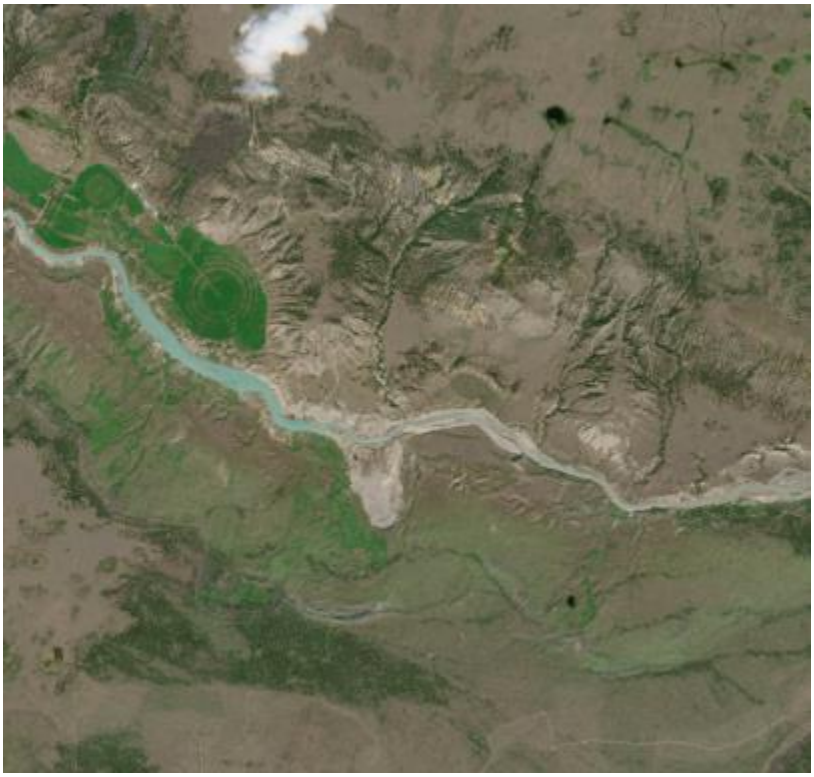
Figure 6. **Satellite image of Chilcotin River upstream (left) and downstream (right) of the Farwell Canyon slide site on July 28, 2025 (Copernicus 2025).**



3.2. Fraser River Turbidity and Flow

During the week of July 22 to July 28, 2025, turbidity upstream of the Chilcotin-Fraser confluence (Sheep Creek) ranged from 32 NTU to 59 NTU, with an overall mean of 44 NTU (Figure 7). Turbidity downstream of the confluence (Gang Ranch) ranged from 62 NTU to 119 NTU (mean = 81 NTU). No spikes in turbidity were observed in the Fraser River during this reporting period. The differences in turbidity upstream and downstream of the confluence of the Chilcotin and Fraser rivers can be seen by differences in river colour in the recent satellite imagery from the junction (Figure 8).

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Figure 7. **Turbidity in the Fraser upstream of the Chilcotin confluence (Sheep Creek) and downstream of the confluence (Gang Ranch) from May 01 to July 28, 2025.**

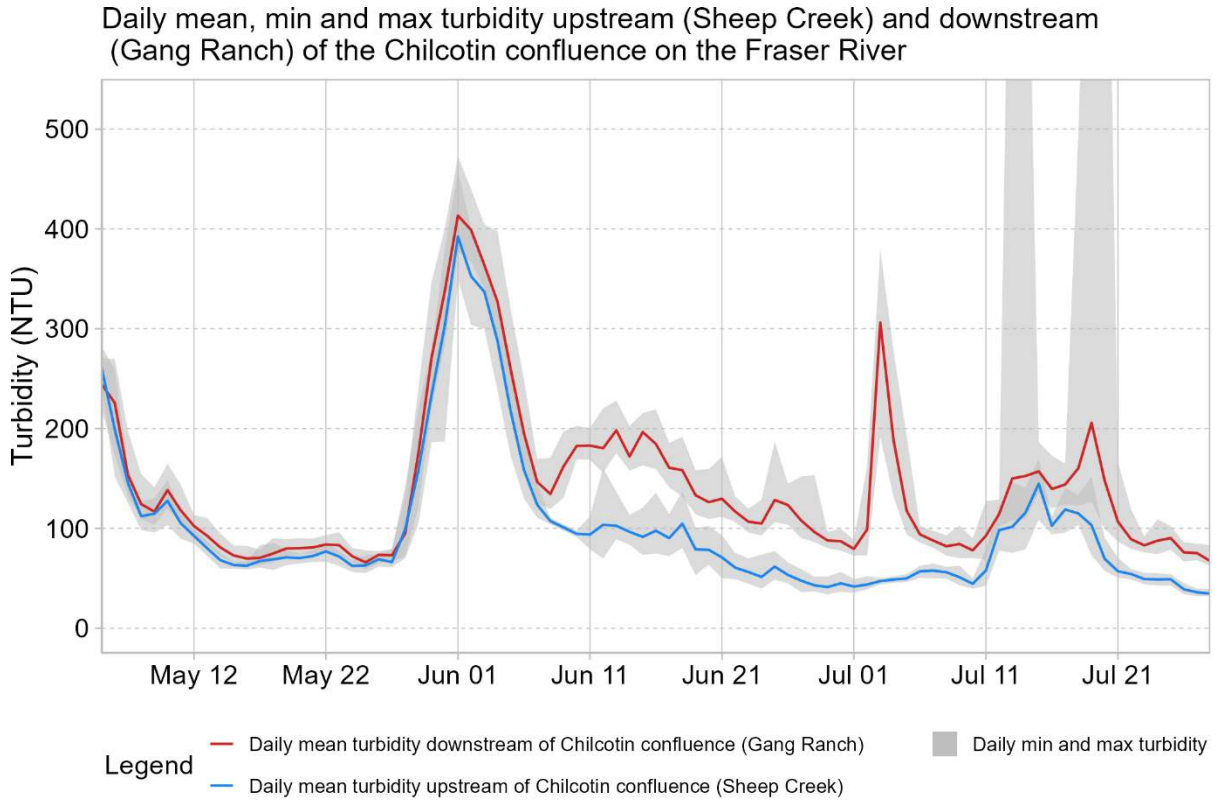

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Figure 8. **Satellite image of the Chilcotin River at confluence with Fraser River on July 28, 2025 (Copernicus 2025).**

Disclaimer:

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