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TNG-led Emergency Salmon Task Force Weekly Data Report Aug 12-18, 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 18, 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:

- A cumulative total of 186,631 salmon have been counted since the start of the program on June 25, 2025, with 135,210 salmon counted during Week #8 (August 12 to August 18, 2025). Salmon passage continues past the slide and passage rates (number of fish per day) increased for salmon 50 to 64 cm in length, peaking at 39,024 on August 18, 2025 (Section 2.1).
- Sonar file review methods were adjusted on August 14, 2025, to account for high salmon abundance (Section 2.1).
- Daily mean turbidity in the Chilcotin River downstream of the slide site (Farwell Canyon) increased on August 12, 2025, to a max of 484 NTU, but turbidity has remained below 100 NTU since August 17, 2025. As of August 18, 2025, daily mean turbidity in Farwell Canyon is ~50 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 are being serviced on August 19 and 20, 2025.

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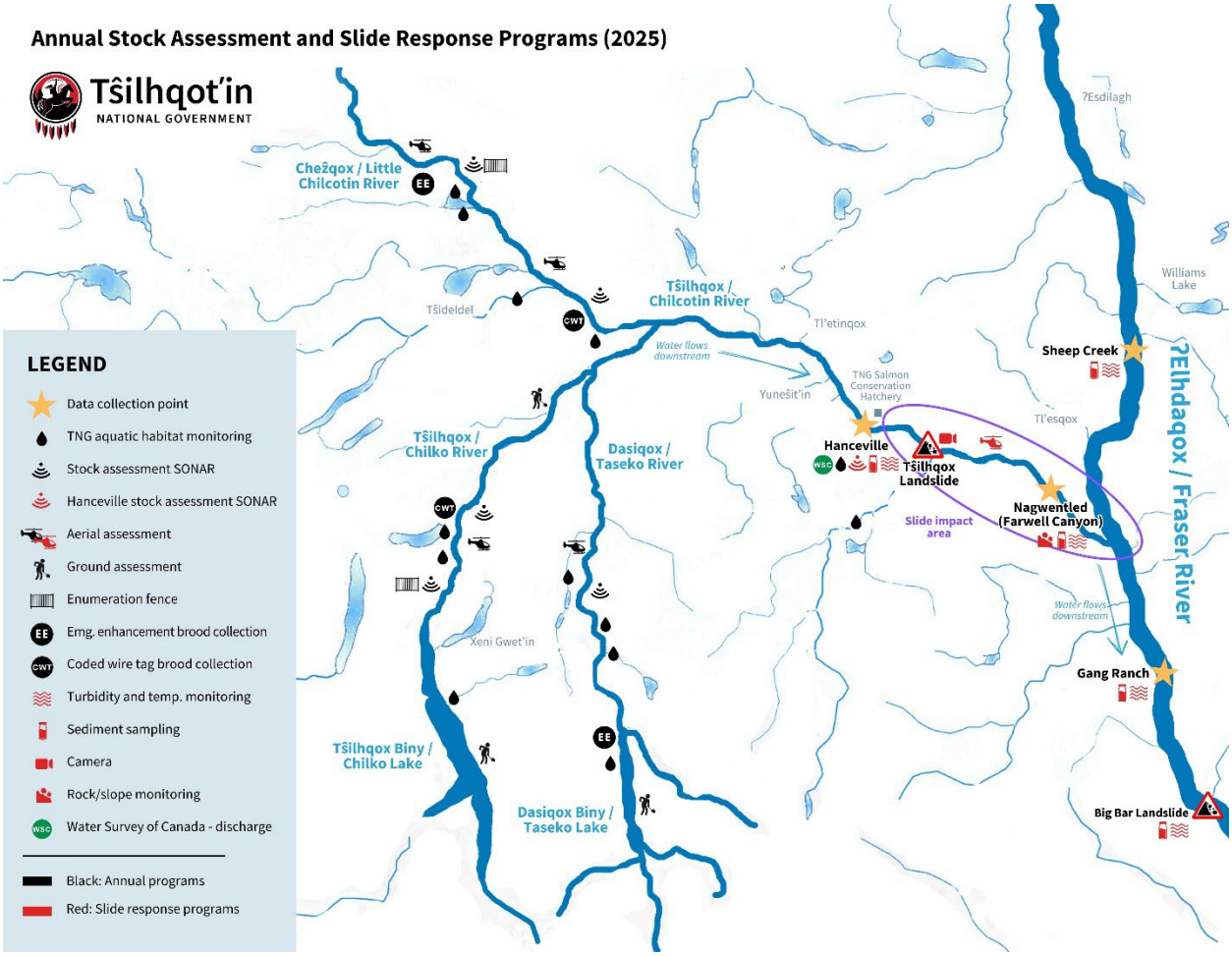
Figure 1. **TNG Annual Stock Assessment and Slide Response Programs (2025).**



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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) 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

A total of 149,982 salmon were counted during Week #8 (Figure 3). This includes 597 presumed Chinook Salmon (>80 cm in length), that were observed from August 12 to August 18, 2025, with peak weekly counts (n = 147) occurring on August 18, 2025, as well as 135,210 salmon between 50 to 64 cm in length and 14,175 salmon between 65 to 79 cm in length. 50 to 64 cm salmon observations occurred from August 12 to August 18, 2025, and peak weekly counts occurred on August 18, 2025 (n = 39,024). 65 to 79 cm salmon were observed from August 12 to August 18, 2025, and peak weekly counts occurred on August 16, 2025 (n = 6,051).

Since sonar enumeration commenced on June 25, 2025, a total of 4,410 salmon >80 cm, 25,576 salmon between 65 to 79 cm in length, and 186,631 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 remain variable, increasing again in week #8 following a period of decline during the previous week (Figure 3). Sonar operations ran smoothly this week with no outages on either bank apart from planned maintenance.

High salmon abundance was observed from the start of the week and greatly increased daily file review effort. As a result, a new file review protocol was implemented on August 14*th* that scales enumeration effort relative to abundance, while ensuring that we can continue to assess migration rates and detect any fish passage delays.

Migrating Sockeye Salmon were visible along the margins of both banks, and dipnet catches by local fishers on river-right bank have been solely Sockeye. On August 18, 2025, local fishers were dip netting at the Hanceville platform (~50 m upstream of the right-bank sonar station) while crews were on site and were willing to share information from their catch. Sixteen Sockeye Salmon ranging from 51.0 to 62.5 cm were captured in 2 hours of effort. (Figure 2).

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Figure 2. **TNG fisheries technician Gerald William conducting daily maintenance at the river. left bank Hanceville sonar station. Captured on August 19, 2025.**

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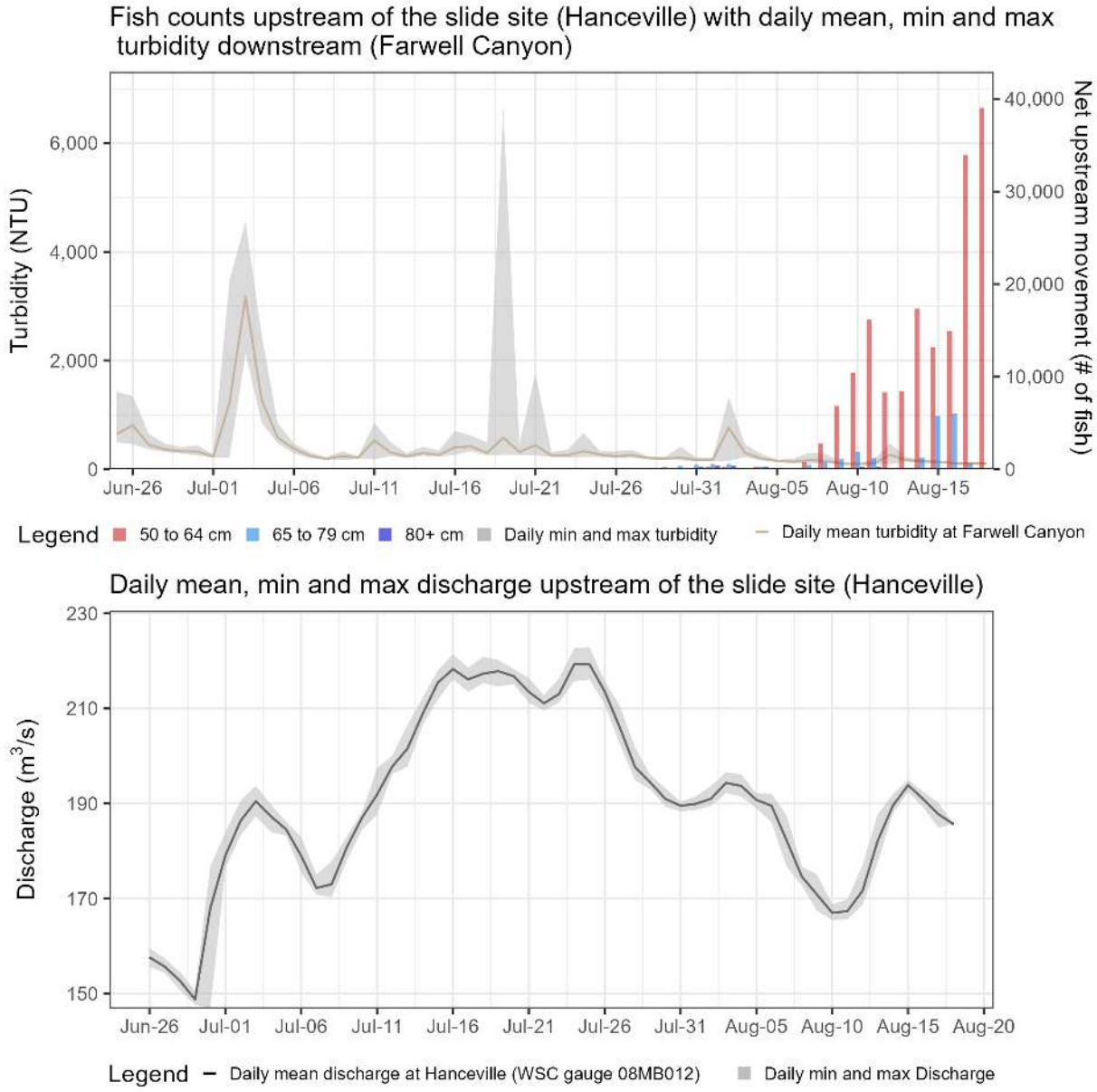
Figure 3. Expanded[1] net daily movement of salmon[2] past the Hanceville sonar upstream of the slide site, with turbidity measured downstream of the slide site (Farwell Canyon) and discharge upstream of the slide site (Hanceville) from June 25 to Aug 18, 2025.



[1] One sonar file was reviewed per hour of sonar operation, with the duration reviewed determined by abundance of fish the previous day at each station (Table 1). To estimate total fish passage per hour, the hourly counts were expanded by a factor of 60 divided by minutes reviewed to expand to the full hour. Infilling will be completed in post-season analysis.

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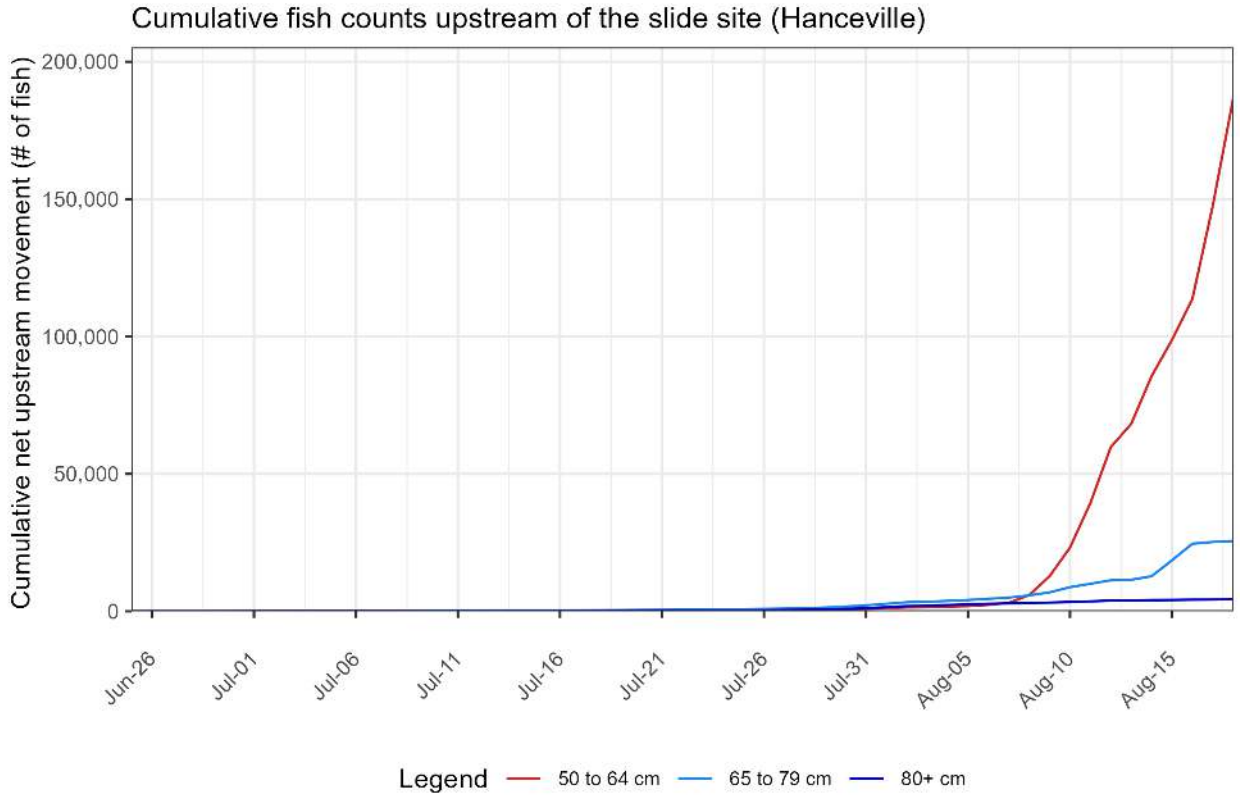
Figure 4. **Expanded[3] cumulative daily counts of salmon[4] movement past the Hanceville sonar upstream of the slide site from June 24, 2025, to Aug 18, 2025.**



[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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3. RIVER CONDITIONS UPDATE

3.1. Chilcotin River Turbidity and Flow

During the week of August 12 to August 18, 2025, discharge in the Chilcotin River upstream of the slide site (Hanceville) ranged from 167 m^3/s to 194 m^3/s (mean = 186 m^3/s) (Figure 5). Turbidity ranged from 31 NTU to 54 NTU at Hanceville, with an overall mean of 46 NTU. Downstream of the slide site (Farwell Canyon) turbidity was higher, ranging from 84 NTU to 484 NTU, with an overall mean of 148 NTU. Daily mean turbidity downstream of the slide site had a peak in turbidity of 484 NTU on August 12, 2025. As of August 17, mean daily turbidity has declined to below 100 NTU. Mean daily water temperatures recorded at Hanceville have remained below 18°C since August 4, 2025, and were below 16°C during week #8. 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). A ground-level view of the slide site is presented in Figure 6.

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 18, 2025.

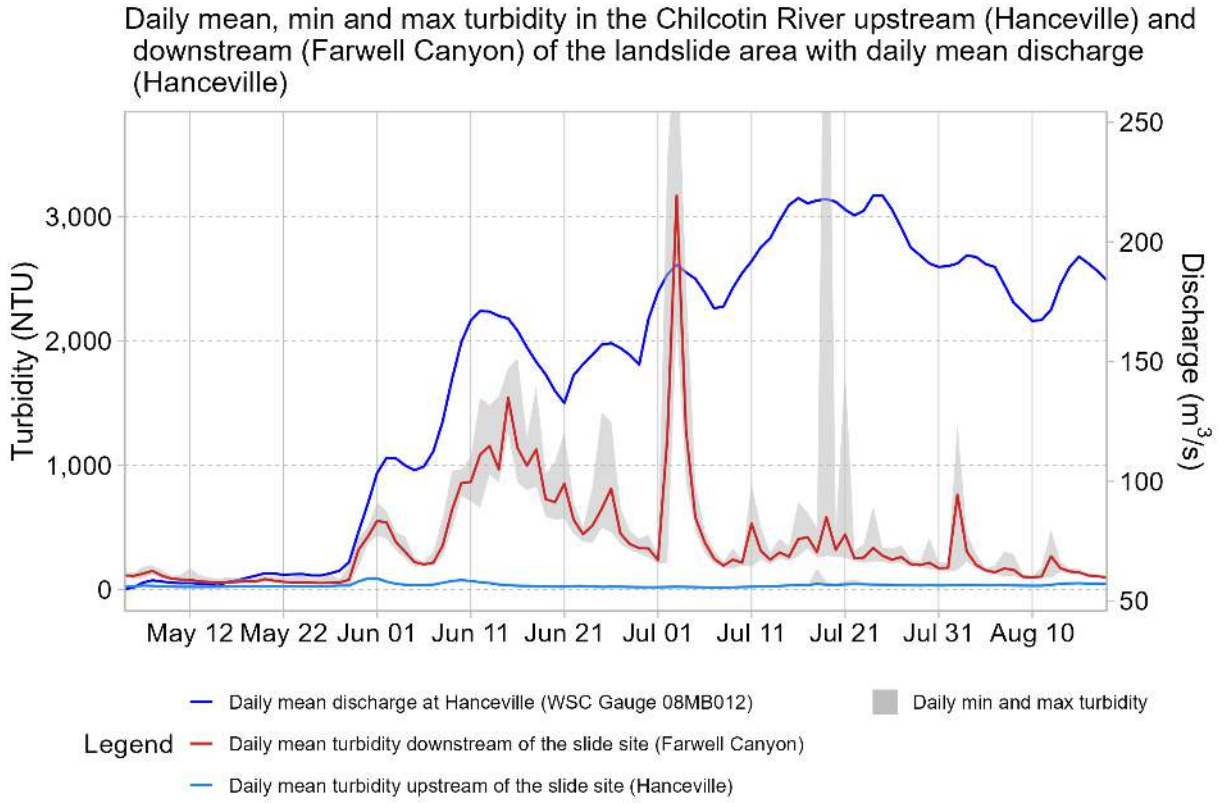

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Figure 6. **Satellite image of Chilcotin River upstream (left) and downstream (right) of the Farwell Canyon slide site on August 12, 2025 (Copernicus 2025). Most recent imagery, collected on August 17, 2025, was obstructed by cloud and is not presented.**

Figure 7. **Looking downstream at the Chilcotin River slide site from the Northwest Hydraulics Consultants (NHC) remote camera installation on August 16, 2025.**

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3.2. Fraser River Turbidity and Flow

During the week of August 12 to August 18, 2025, turbidity upstream of the Chilcotin-Fraser confluence (Sheep Creek) ranged from 29 NTU to 129 NTU, with an overall mean of 48 NTU (Figure 8). Turbidity downstream of the confluence (Gang Ranch) ranged from 45 NTU to 96 NTU (mean = 61 NTU). Fraser River turbidity stations have been impacted by declining water levels in recent days. Field crews are visiting the two stations on August 19 and 20, 2025, to perform sensor calibration and station maintenance. 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 9).

Turbidity data at Gang Ranch from July 29, 2025, 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 18, 2025.

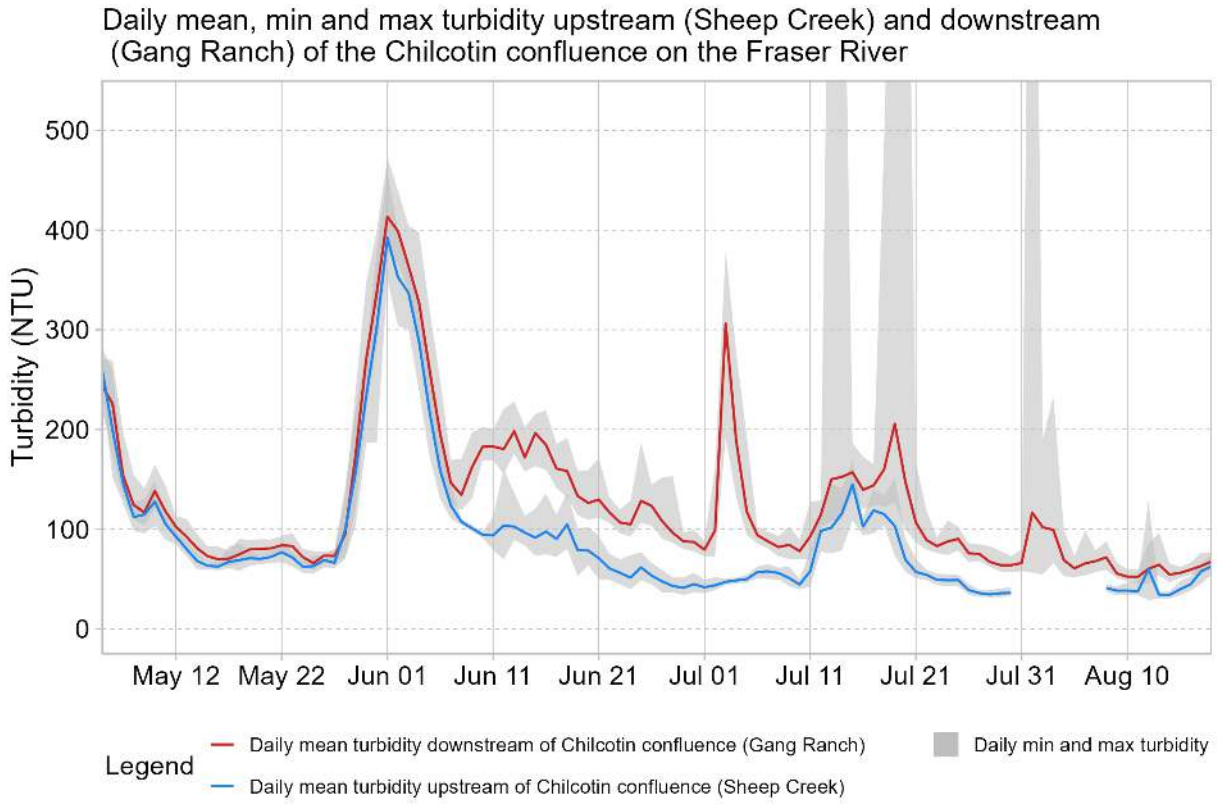

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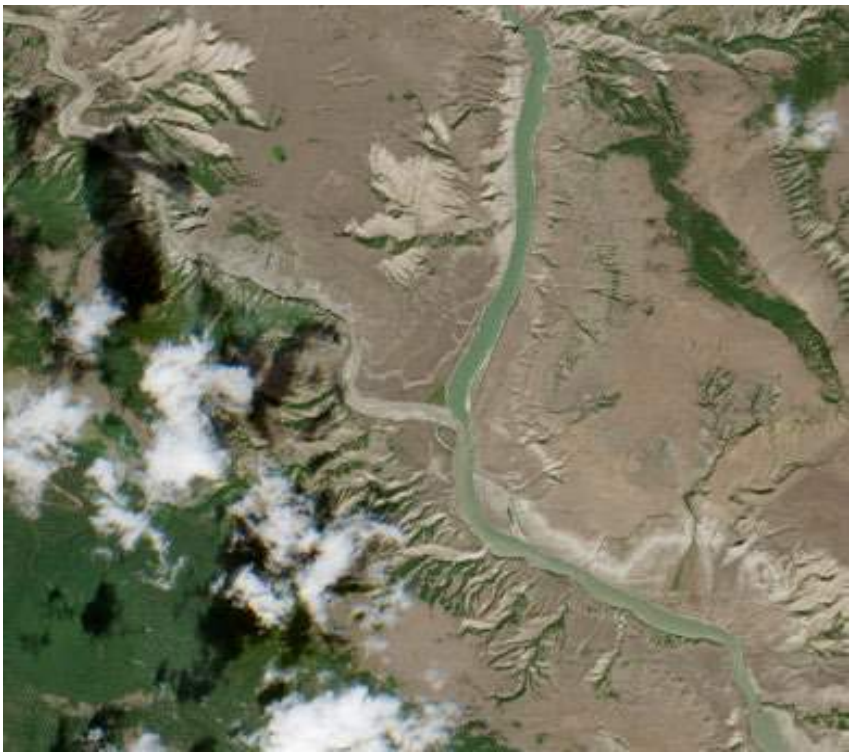
Figure 9. **Satellite image of the Chilcotin River at confluence with Fraser River on August 12, 2025 (Copernicus 2025). Most recent imagery, collected on August 17, 2025, was obstructed by cloud and is not presented.**



Disclaimer:

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