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TNG-led Emergency Salmon Task Force Weekly Data Report Aug 19-25, 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 August 25, 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 504,965 salmon have been counted since the start of the program on June 25, 2025, with 288,348 salmon counted during Week #9 (August 19 to 25, 2025). Salmon passage continues past the slide and passage rates (number of fish per day) continued to increase for salmon 50 to 64 cm in length, peaking at 61,332 on August 25, 2025 (Section 2.1).
- Sonar file review methods adjusted on August 14, 2025 (Week #8) to account for high salmon abundance continue to be implemented (Section 2.1).
- Daily mean turbidity in the Chilcotin River downstream of the slide site (Farwell Canyon) is ~20 NTU higher (as of August 25, 2025) than upstream of the slide site (Hanceville) and has remained below 100 NTU since August 17, 2025 (Section 3.1). Daily mean turbidity at both locations is now the lowest it has been since May 29, 2025.
- Turbidity in the Fraser River downstream of the Chilcotin River confluence (Gang Ranch) is ~10 NTU higher (as of August 25, 2025) than upstream of the Chilcotin River confluence (Sheep Creek) as indicated by turbidity monitoring (Section 3.2).

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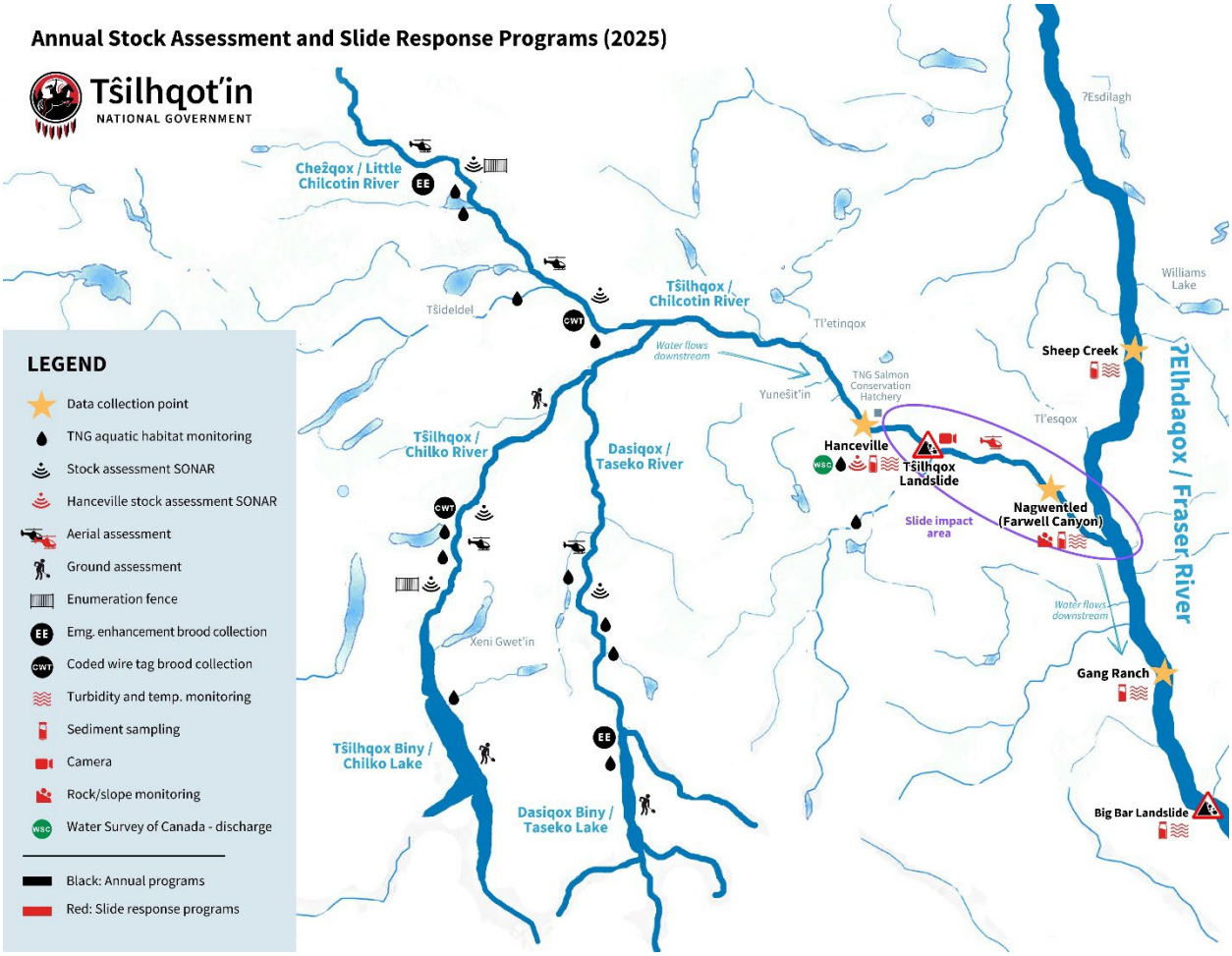
Figure 1. TNG Annual Stock Assessment and Slide Response Programs (2025).



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

A total of 288,348 salmon were counted during Week #9 (Figure 3). This includes 1,110 presumed Chinook Salmon (>80 cm in length), that were observed from August 19 to 25, 2025, with peak weekly counts (n = 282) occurring on August 21, 2025, as well as 286,182 salmon between 50 to 64 cm in length and 1,056 salmon between 65 to 79 cm in length. 50 to 64 cm salmon observations occurred from August 19 to 25, 2025,

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and peak weekly counts occurred on August 25, 2025 (n = 61,332). 65 to 79 cm salmon were observed from August 19 to 25, 2025, and peak weekly counts occurred on August 21, 2025 (n = 330).

Since sonar enumeration commenced on June 25, 2025, a total of 5,520 salmon >80 cm, 26,632 salmon between 65 to 79 cm in length, and 472,813 salmon between 50 and 64 cm in length have been counted moving upstream past the sonar station at Hanceville (Figure 4 and Figure 5).

Field Summary of Sonar Operation

Sonar operations ran smoothly in Week #9 with no unplanned outages on either bank (Figure 2). Chilcotin River flows at Hanceville dropped at the start of the week and have remained relatively stable in recent days (Figure 3).

The new file review protocol implemented on August 14*th* continues to be used as daily counts have exceeded 10,000 fish. This protocol scales enumeration effort relative to abundance, while ensuring that we can continue to assess migration rates and detect any fish passage delays.

During site visits, migrating Sockeye Salmon were visible along the margins of both riverbanks. No size validation of fish captured by dip net was completed due to high sonar file review workload resulting from high salmon abundance.

Figure 2. Daily site visit to river-left bank Hanceville sonar station, with the river-right station visible in the background. Captured on August 24, 2025.

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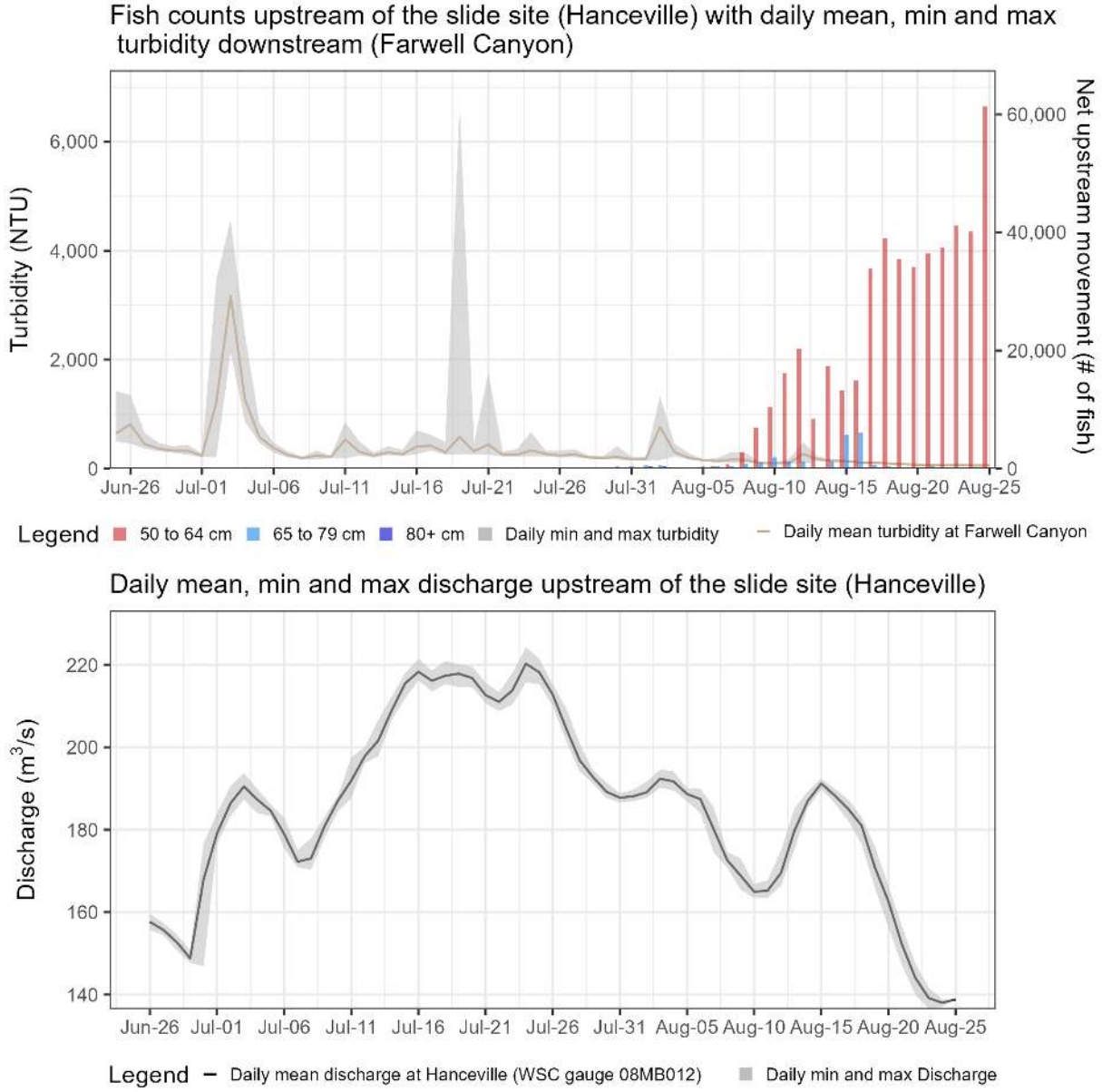
Figure 3. Expanded[1] net daily movement of salmon[2] past the Hanceville sonar upstream of the slide site, with turbidity measured downstream of the slide site (Farwell Canyon) and discharge upstream of the slide site (Hanceville) from June 25 to Aug 25, 2025.



[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. 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.

[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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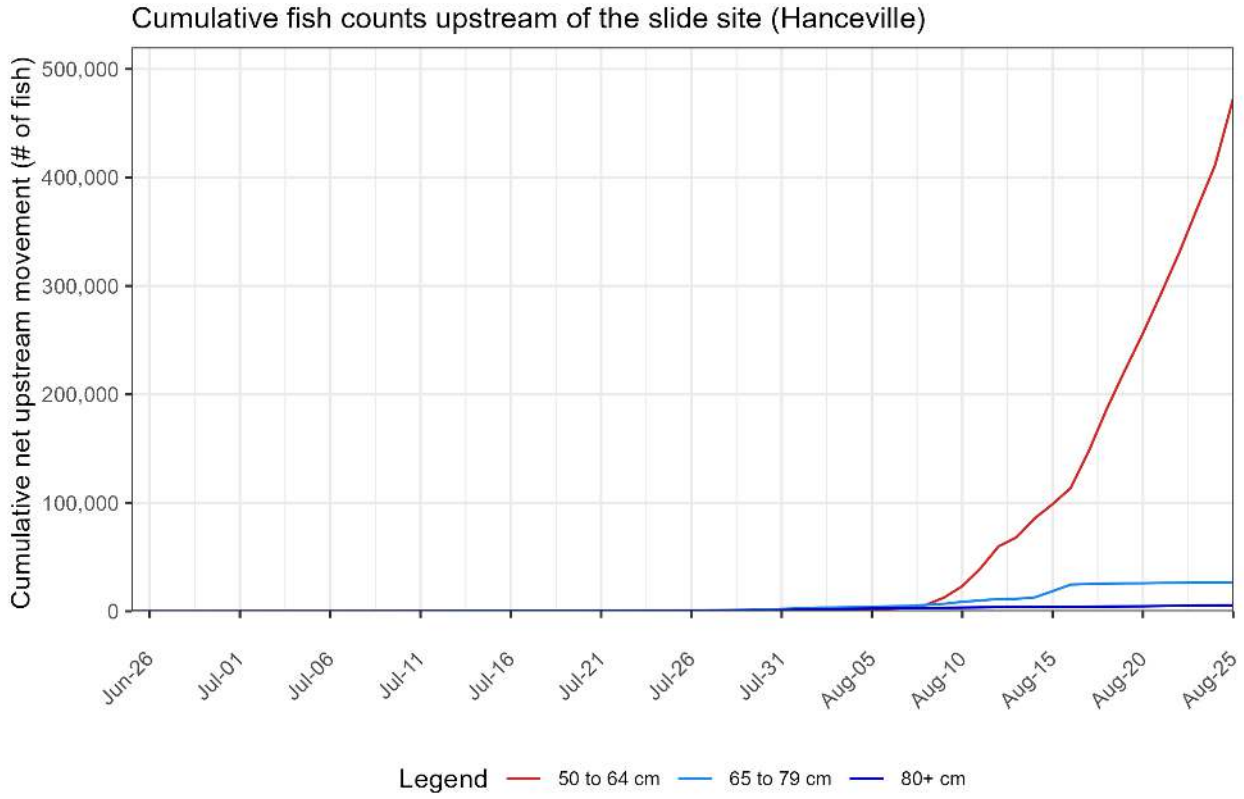
Figure 4. **Expanded[3] cumulative daily counts of salmon[4] movement past the Hanceville sonar upstream of the slide site from June 25, 2025, to Aug 25, 2025.**



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3. RIVER CONDITIONS UPDATE

3.1. Chilcotin River Turbidity and Flow

During the week of August 19 to 25, 2025, discharge in the Chilcotin River upstream of the slide site (Hanceville) ranged from 135 m^3/s to 171 m^3/s (mean = 149 m^3/s) (Figure 5). Turbidity ranged from 29 NTU to 44 NTU at Hanceville, with an overall mean of 34 NTU. Downstream of the slide site (Farwell Canyon) turbidity was higher, ranging from 47 NTU to 100 NTU, with an overall mean of 65 NTU. Daily mean turbidity downstream of the slide site remained below 100 NTU for the entirety of Week #9. Mean daily water temperatures recorded at Hanceville are trending upwards but remained below 18°C throughout the week. No 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 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 25, 2025.

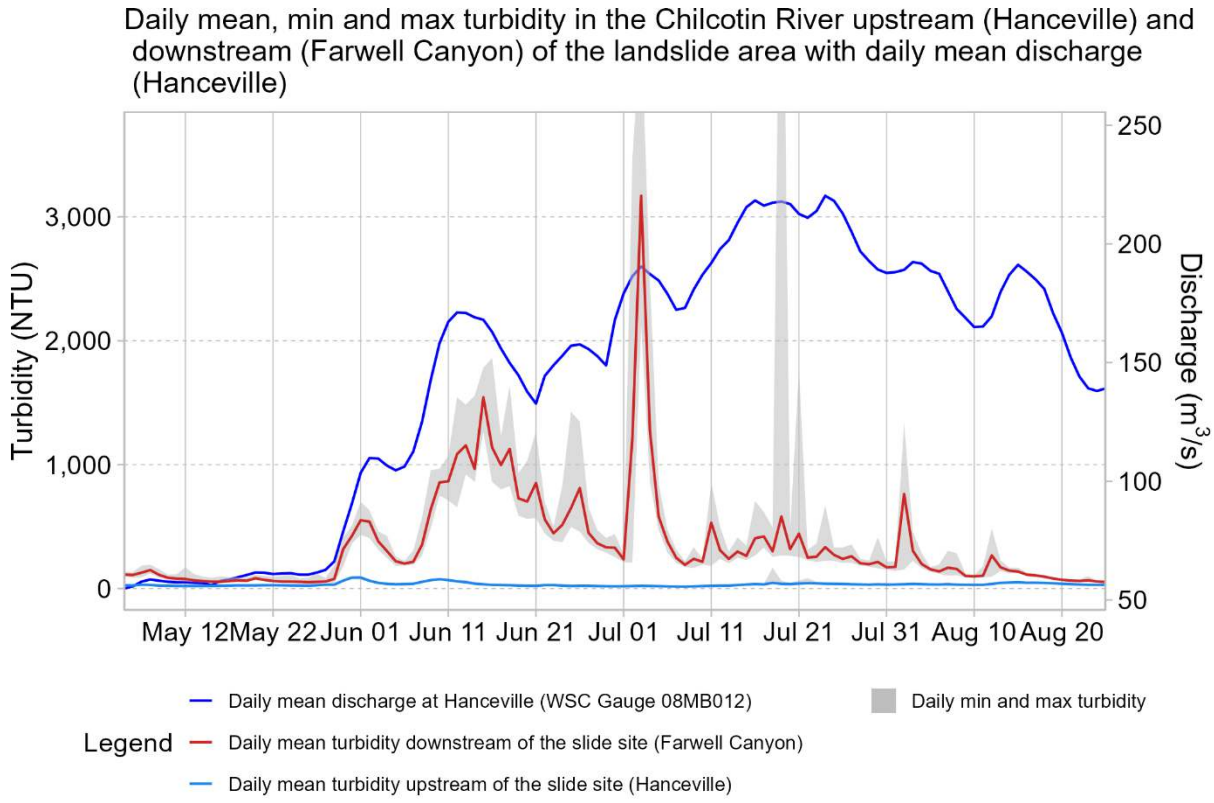

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Figure 6. **Satellite image of Chilcotin River upstream (left) and downstream (right) of the Farwell Canyon slide site on August 25, 2025 (Copernicus 2025).**

Figure 7. **Looking downstream at the Chilcotin River slide site from the Northwest Hydraulics Consultants (NHC) remote camera installation on August 26, 2025.**

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3.2. Fraser River Turbidity and Flow

During the week of August 19 to August 25, 2025, turbidity upstream of the Chilcotin-Fraser confluence (Sheep Creek) ranged from 39 NTU to 123 NTU, with an overall mean of 71 NTU (Figure 8). Turbidity downstream of the confluence (Gang Ranch) ranged from 50 NTU to 121 NTU (mean = 81 NTU). No difference in turbidity upstream and downstream of the confluence of the Chilcotin and Fraser rivers can be seen 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 25, 2025.

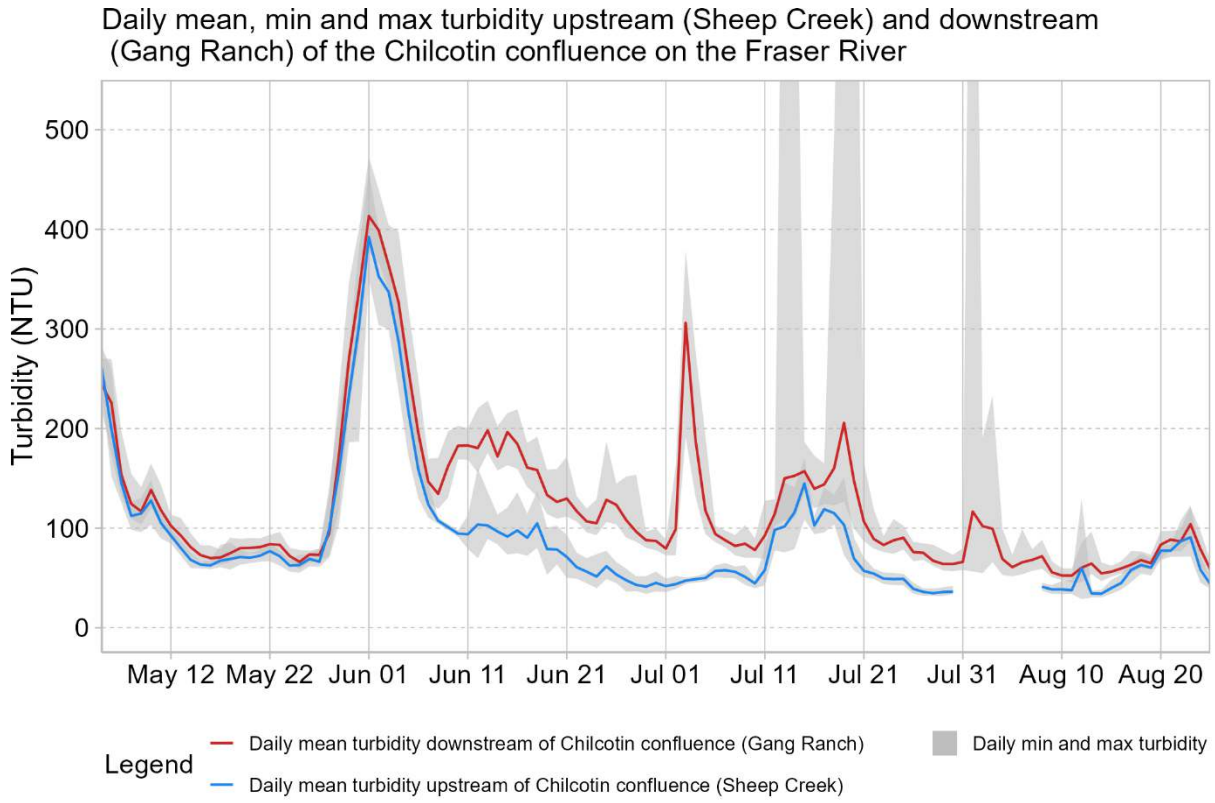

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Figure 9. **Satellite image of the Chilcotin River at confluence with Fraser River on August 25, 2025 (Copernicus 2025).**

Disclaimer:

The values and plots presented in this summary should be considered provisional until Ecofish Research Ltd. (Ecofish) and Water Survey of Canada (WSC) perform standard QA/QC procedures, respectively. Data are subject to change post-season. The material in this memorandum reflects the best judgement of Tŝilhqot'in National Government (TNG) in light of the information available at the time of preparation. Any use which a third party makes of this memorandum, or any reliance on or decisions made based on it, is the responsibility of such third parties. TNG and Ecofish accept no responsibility for damages, if any, suffered by any third party as a result of decisions or actions based on this memorandum. This memorandum is a controlled document. Any reproductions of this memorandum are uncontrolled and may not be the most recent revision.