Tŝilhqot'in
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TNG-led Emergency Salmon Task Force Weekly Data Report July 08 – 14 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 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 14, 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 River confluence (turbidity).

Key observations from this week include:

- Salmon passage continues past the slide and fish passage rates have increased week over week for all three size classes at Hanceville Sonar (Section 2.1).
- 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); and
- 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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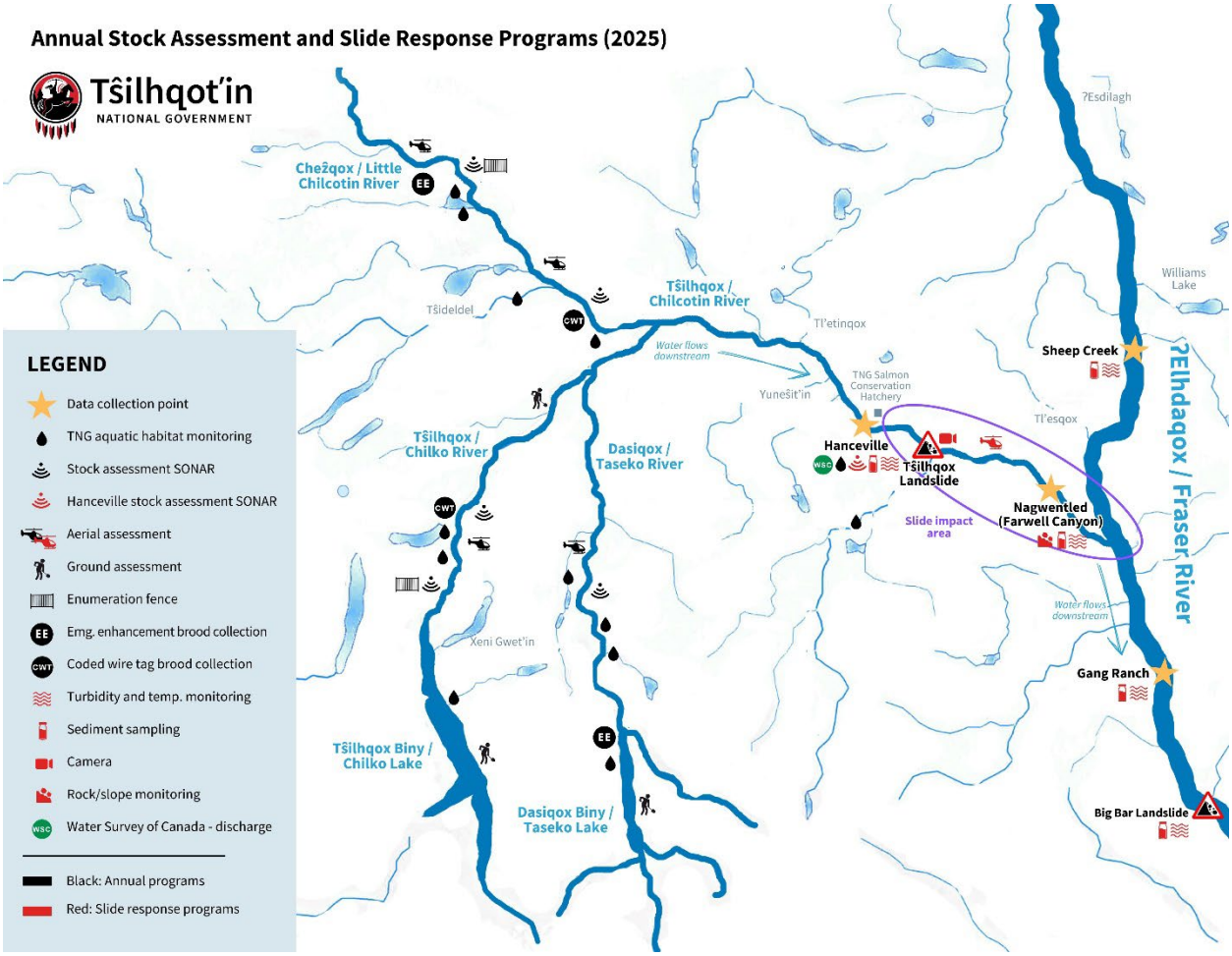
Figure 1 TNG Annual Stock Assessment and Slide Response Programs (2025).



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 249 salmon were counted during Week #3 (Figure 3). This includes 21 presumed Chinook Salmon (>80 cm in length), that were observed from July 12 to July 14 with peak counts (n = 12) occurring on July 14, as well as 96 salmon between 50 to 64 cm in length and 132 salmon between 65 to 79 cm in length. 50 to 64 cm fish observations occurred from July 08 to July 14 and

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peak counts occurred on July 09 and July 10 (n = 21). 65 to 79 cm fish observations were observed from July 09 to July 14, 2025.

Since sonar enumeration commenced on June 25, 2025, a total of 79 salmon > 80 cm, 287 salmon 65 to 79 cm, and 277 salmon 50 to 64 cm in length, have been counted moving upstream past the sonar station at Hanceville (Figure 4).

Field Summary of Sonar Operation

Given a series of rain events in the area, flows at Hanceville have been on an upward trend as of July 08, with turbidity increasing in kind.

There have been minor planned sonar outages on river left bank for routine maintenance activities, while on river-right the sonar has been pushed out of orientation twice by high flows and debris, resulting in outages. A small diversion fence was installed upstream on July 14 to shelter the unit (Figure 2), which has been effective to date to mitigate outages. With more rain in the forecast later in the week, the crew has staged materials to fence the river-left side-channel to ensure all fish pass within the ensonified area and will continue to monitor conditions. We anticipate dip netting for species and size validation will occur in the coming days as salmon abundance increases. We will re-evaluate size bin and species relationships as more empirical data are collected.

Figure 2. Looking downstream at the right bank Hanceville Bridge sonar site on July 14, 2025.

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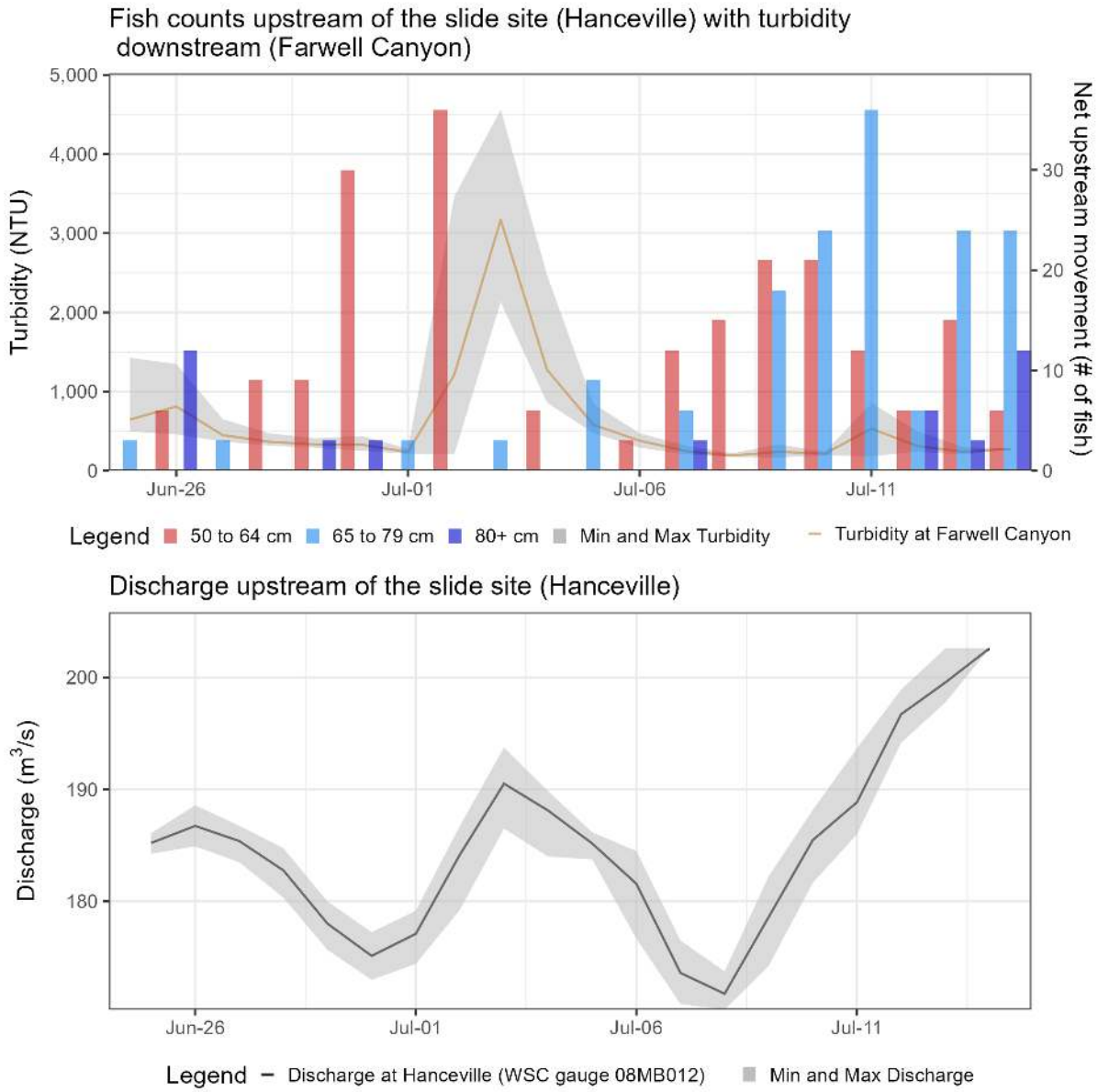
Figure 3. Expanded[1] net daily movement of salmon[2] past the Hanceville sonar upstream of the slide site (20-minute count per hour –data expanded to the full hour), with turbidity measured downstream of the slide site (Farwell Canyon) and discharge upstream of the slide site (Hanceville) from June 25 to July 14, 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), presumed Chinook (80+ cm), as defined by the Department of Fisheries and Oceans (DFO).

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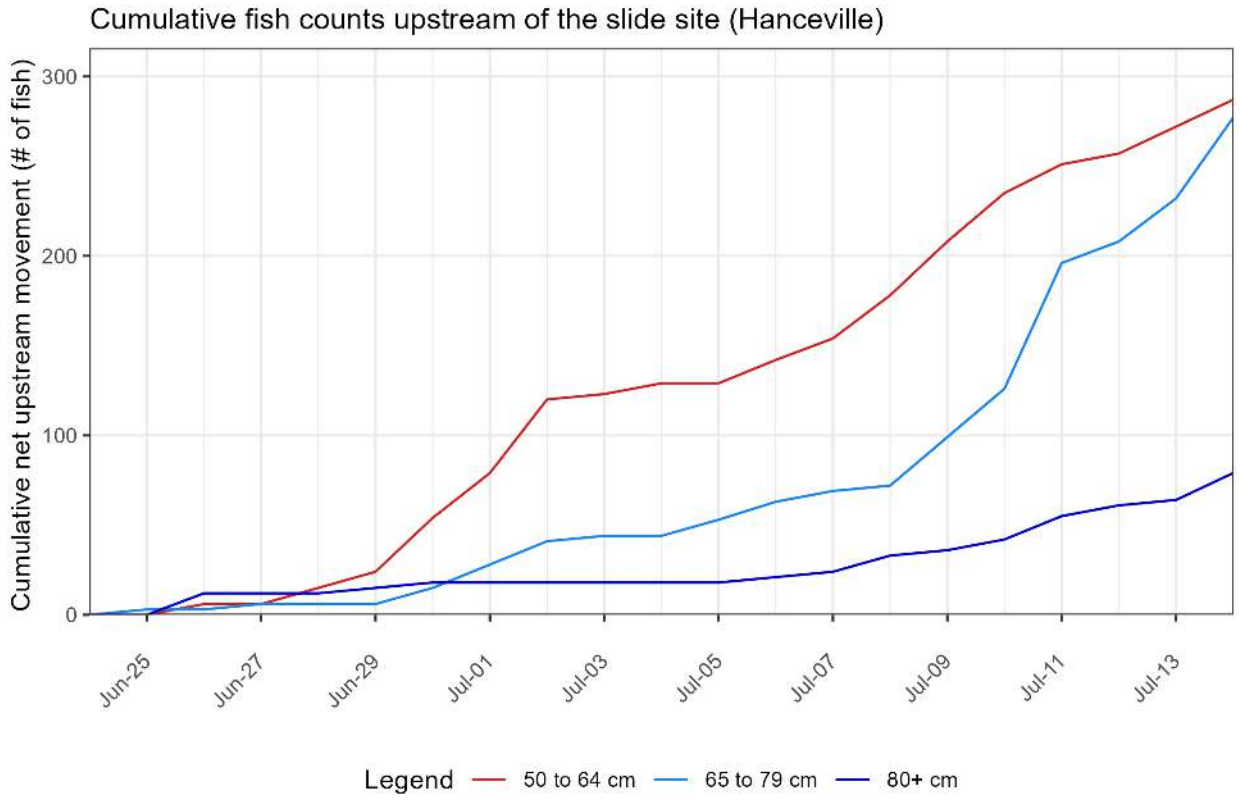
Figure 4. Expanded[3] cumulative daily counts of salmon[4] movement past the Hanceville sonar upstream of the slide site from June 24, 2025 to July 14, 2025.



[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). 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 08 to July 15, discharge in the Chilcotin River upstream of the slide site (Hanceville) ranged from 168 m^3/s to 207 m^3/s (mean = 190 m^3/s) (Figure 5). Turbidity ranged from 15 NTU to 37 NTU at Hanceville, with an overall mean of 22 NTU. Downstream of the slide site (Farwell Canyon) turbidity was higher, ranging from 166 NTU to 857 NTU, with an overall mean of 290. The differences in turbidity upstream and downstream of the Farwell Canyon slide site can be seen by differences in river colour recent satellite imagery (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, 2025, to July 15, 2025.

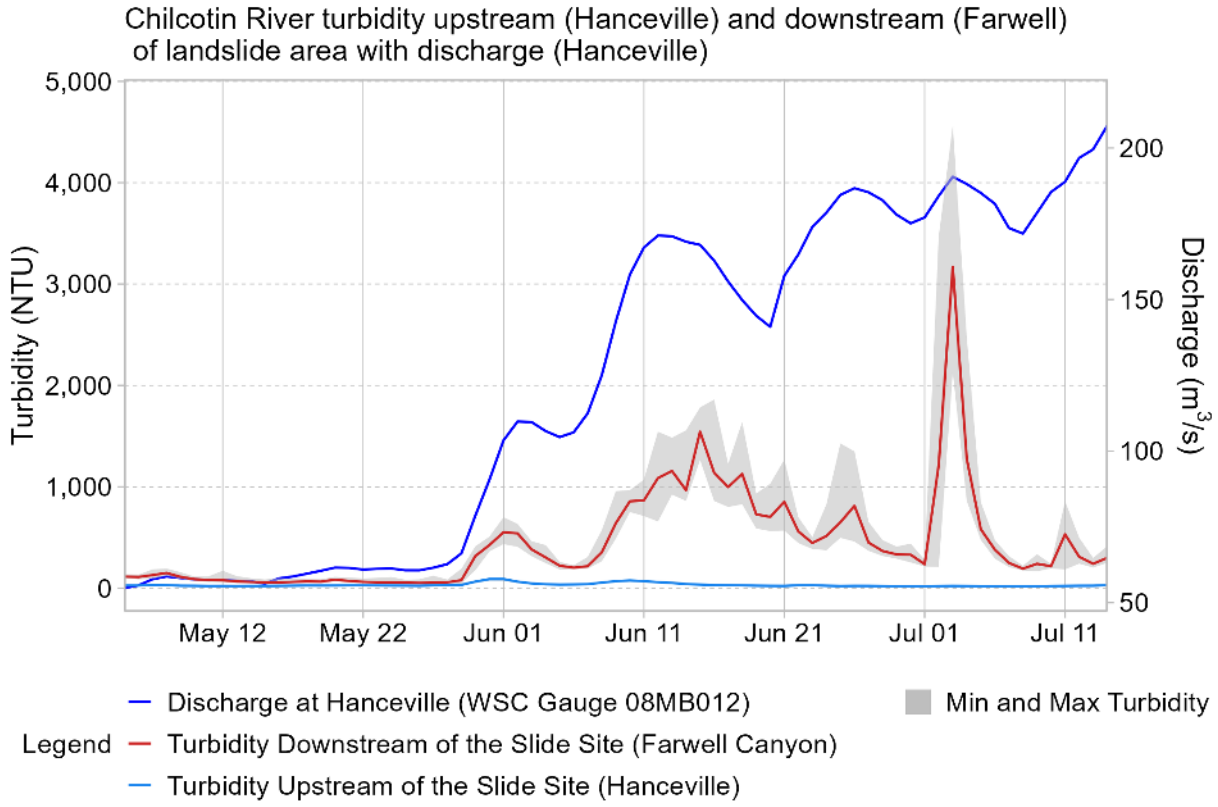

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Figure 6. **Satellite image of Chilcotin River upstream (left) and downstream (right) of the Farwell Canyon slide site on July 03, 2025 (Copernicus 2025). Heavy cloud cover this week did not allow for more recent imagery.**

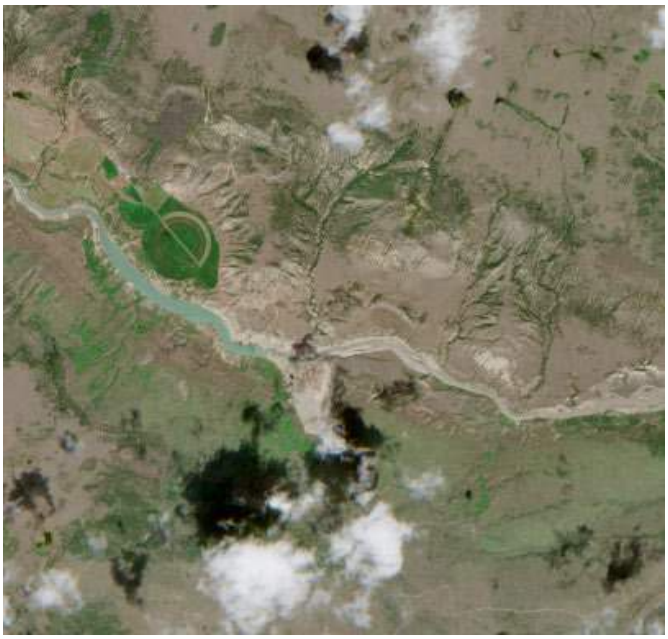

Figure 7. **Satellite image of the Chilcotin River at confluence with Fraser River on July 11, 2025 (Copernicus 2025).**

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3.2. Fraser River Turbidity and Flow

During the week of July 08 to July 15, upstream of the Chilcotin-Fraser confluence (Sheep Creek) turbidity ranged from 39 NTU to 333 NTU, with an overall mean of 76 NTU (Figure 8). Turbidity downstream of the confluence (Gang Ranch) ranged from 69 NTU to 956 NTU (mean = 108 NTU). 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 7).

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 15, 2025.