

APPENDIX A

Community Engagement Summary

Appendix A: Community Engagement Summary

February 12, 2025 – Draft 2021 Flood Inundation Maps

Michele Culhane, Water Stewardship Advisor with the GNWT Environment and Climate Change (ECC), Water Monitoring and Stewardship Division, travelled to Fort Good Hope (Rádéyíłı Kóé) to engage with Indigenous governments and organizations. She had three meetings plus a community open house on February 12, 2025.

1) Meeting with K’ahsho Got’ine Guardians

Feb 12, 2025 - 9:00 to 10:30 a.m.

- Reviewed large draft 2021 flood inundation maps and printed cabin photos; several cabins identified by owner and approximate location.
- Water on May 25, 2021, rose and receded gradually; peak estimated around 5:30 p.m.
- No one recognized “Willow Lake/Willow Island” in the area; noted the official Willow Lake is near Tulita.
- Shared photos and videos with timestamps; some cabin locations clarified.
- Later confirmation: CKLB news drone footage was taken between 7:30–8:30 a.m. on May 26, 2021.

2) Meeting with Ft Good Hope Métis Nation Local #54 Land Corporation

Feb 12, 2025 - 11:00 a.m. to 12:00 p.m.

- Reviewed printed flood map presentation slides and draft 2021 flood inundation maps
- Land Corporation has 42 beneficiaries; many live outside the community; several board members absent.
- Bridge was temporarily closed due to flood and erosion concerns; supplies carried across on foot during the 2021 flood.
- Trees near Rabbit Skin River picnic area damaged or knocked down; river known to jam at the ramparts and downstream.
- One house condemned after the flood; an elder relocated; other homes repaired.
- Erosion identified as a major ongoing concern.

3) Meeting with K’ahsho Got’ine Community Council (Fort Good Hope Dene Band) and the Yamoga Land Corporation (WSP staff and other GNWT staff attended virtually)

Feb 12, 2025 - 3:00 to 5:00 p.m.

- Presented flood-mapping overview, draft 2021 flood inundation maps, and discussion questions.
- 1976 flood confirmed; ice-jam impacts include erosion and tree damage.
- No specific input on tree scars, stranded ice, or rapid water-level changes; water in 2021 rose and receded slowly.
- Community monitors breakup annually; community has a trigger for emergency response if the water reaches a specific level at the gauge. Photos and videos of the 2021 flood were shared.

- Past events noted: fast water rise in 2005; historically thicker ice; reduced snow in recent years; 2021 ice estimated at 6–8 feet, but now, with low water, the ice is rotten.
- Ice at fish camp (approximately 16 km downstream, approximately where the river opens up) reportedly moves under jams.
- For a possible 1836 flood, suggested checking the Roman Catholic Church or Prince of Wales Museum archives; 1831 flood confirmed but a 1836 flood was not confirmed.
- Councilor noted 1961 flood reached his home (also flooded in 2021).
- Guardians confirmed water reached 1 foot below the bridge in 2021; bridge did not flood.

Other comments raised by councilors:

- The community was prepared for the 2021 flood. For homes in the flood zone, fuel tanks were emptied ahead of the flood and large items were moved uphill.
- Some sewage tanks were damaged during the flood, and some have not been fully repaired.
- A question was raised about compensation; it was noted that the federal Disaster Financial Assistance Arrangements (DFAA) have been updated (effective April 1, 2025) and there may be funding to help communities prepare in advance of a disaster.
- 13 houses were damaged in 2021, some were remediated and one was condemned.
- Questions were raised about mitigation options for log homes; these are difficult to elevate, and no known examples from other communities were identified.
- It was suggested GNWT ECC reach out to a pilot who lives in the community and likely has aerial photos from the flood. Michele contacted her following the meeting and confirmed the overhead photo of the community dated May 25, 2021 was taken at 9:19pm.

4) Community Open-House

Feb 12, 2025 - 5:30 to 9:00 p.m.

- Draft 2021 flood inundation maps and related photos were available for residents to look at and comment on at the community hall.
- An Elder confirmed the 1976 flood as the largest; water entered the old town valley from Jackfish Creek and spilled into the Mackenzie River but caused little damage because no homes were located there. Breakup happened earlier than usual.
- Another Elder had a quick look at the maps and said the inundation extent looked accurate for 2021.
- Three Elders described the 1976 flood as really fast and powerful, with water levels increasing fast, but the 2021 flood waters rose gradually and decreased gradually.
- An Elder asked about the purpose of the flood maps and Michele explained the relevance of such maps. There was general discussion about the community already being prepared for flooding and knowing the valley (old town) is at risk of flooding. This isn't new to the community. Concerns raised were more focused on low water impacting barge resupplies, erosion, cost of living, and substance abuse/drug dealers.

February 23, 2026 – Draft Flood Hazard Maps

1) Meeting (virtual) with K’ahsho Got’ine Community Council (Fort Good Hope Dene Band)

The Yamoga Land Corporation, Ft Good Hope Métis Nation Local #54 Land Corporation and K’ahsho Got’ine Foundation were also invited to participate, and all were represented at the meeting.

Michele Culhane, Water Stewardship Advisor with the GNWT Environment and Climate Change, Water Monitoring and Stewardship Division, presented an overview of the flood mapping project to date, including the draft flood hazard maps.

GNWT and WSP staff had planned to travel to Fort Good Hope to present and share the maps in person during a community planning workshop on February 24. Unfortunately, the workshop was postponed, and the presentation was delivered virtually on February 23 to ensure community and Indigenous government representatives had an opportunity to share comments and ask questions ahead of the flood mapping contract with WSP ending in March. Copies of the maps and the presentation were sent to Chief and Council ahead of the meeting.

GNWT and WSP staff responded to questions and comments on flood mapping and related topics. Questions and comments included:

- Confirmation from GNWT that data on water depth would be provided along with the flood hazard maps.
- Following presentation of the 100-year and 200-year flood hazard maps, an observation that floods seem to occur every 20 years was noted. GNWT clarified that a 20-year flood means there’s a 5% chance of it happening in any year, not every 20 years.
- Questions/comments were shared about the potential impacts of the Site C dam and Bennett Dam in British Columbia on Mackenzie River water levels, specifically in 2021. GNWT noted 2021 had higher than usual snow and rain which led to a greater ice jam potential throughout the territory and added that other communities located on rivers with no potential influences from dams also flooded. GNWT also mentioned ice jam floods can also happen when water levels are low.
- Observations and questions about water levels dropping in the winter were shared. GNWT noted it is normal for water levels to drop in the winter since there is no rain and snow is being stored. Rivers continue to be fed by groundwater and there can be water pooling and freezing above the ice.

APPENDIX B

Selected Photos from the River Bathymetry Survey



Figure 1: Jackfish Creek Bridge Opening Facing Northeast



Figure 2: Jackfish Creek Bridge Facing East



Figure 3: Mackenzie River at the Ramparts Right Downstream Bank at A3 Facing Upstream (South)



Figure 4: Mackenzie River at the Ramparts Left Downstream Bank at A3 Facing Downstream (Northeast)



**Figure 5: Mackenzie River at Fort Good Hope Right Downstream Bank at B4 Facing Upstream (South)
July 5, 2025**



**Figure 6: Mackenzie River at Fort Good Hope Left Downstream Bank on Manitou Island at B4 Facing East
July 5, 2025**



Figure 7: Mouth of Rabbit Skin River facing West



Figure 8: Mackenzie River downstream of Rabbit Skin River at Mid-channel Island at C4 (An Ice-Jam Head Location)

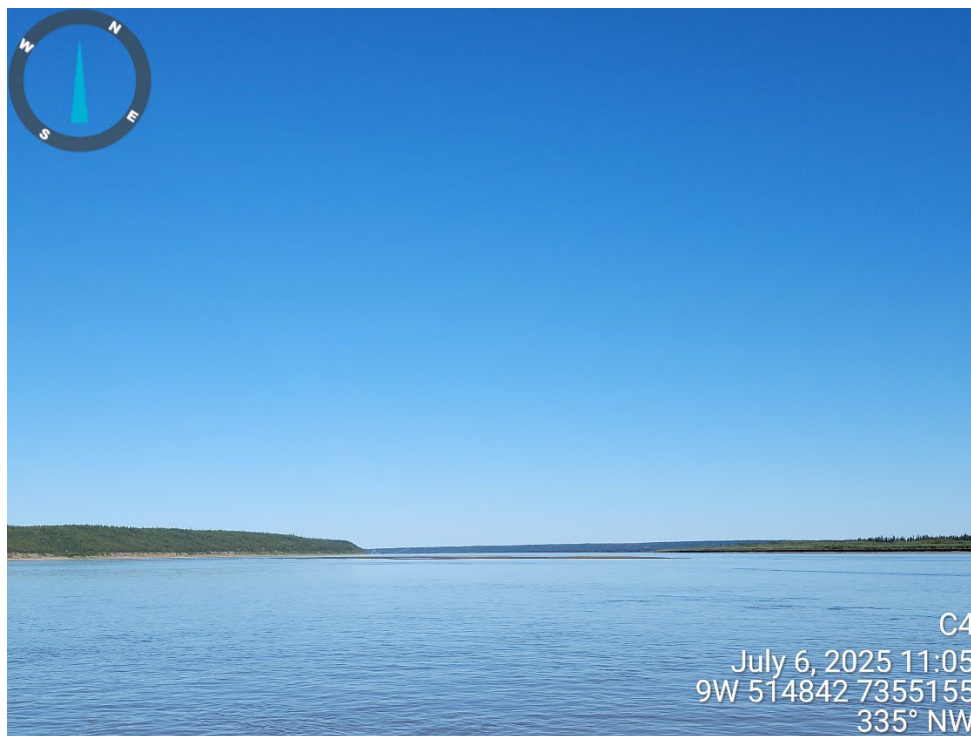


Figure 9: Mackenzie River downstream of Rabbit Skin River facing downstream at C4 – Shallow Bar



Figure 10: Mackenzie River facing downstream at D4 (An Ice-Jam Toe Location)



Figure 11: Mackenzie River Ice Scars on Trees near B8

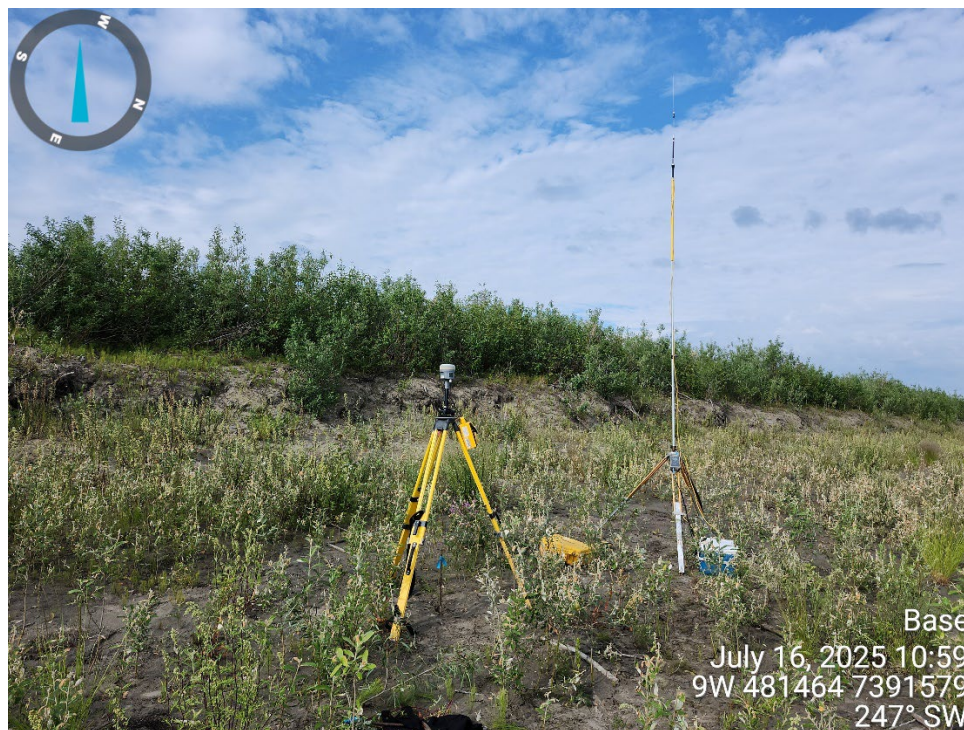
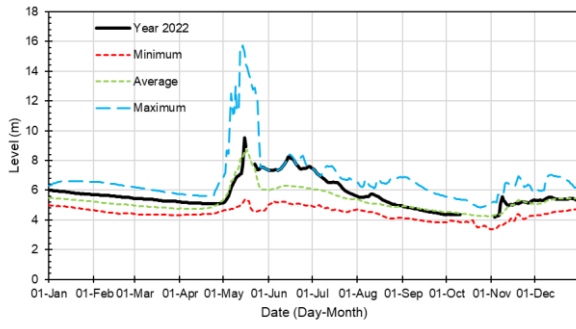


Figure 12: Base Station and Antenna

APPENDIX C

Norman Wells Ice Break-up Water Level Analysis

2022



2023

