NWT Water Monitoring Spring Break-Up Report

May 25, 2026 at 12:15

Surveillance des eaux aux TNO Rapport sur la débâcle printanière

25 mai 2026 à 12:15

NWT break-up reports will be published routinely as break-up unfolds. These reports will focus on regions with active snowmelt and ice break-up. The geographic focus of the report will shift as conditions change. Additional information about basin conditions can be found in the 2026 Spring Water Outlook, available here. If you have any photos or information about break-up in your community, feel free to reach out to us: nwtwaters@gov.nt.ca.

Current Status:

- **At Aklavik:** water levels on the Peel Channel upstream of the community have remained stable since the afternoon of May 23.
    - As of 11:00 MT on May 25, the water level was 14.4m. Levels have held steady at approximately this level since the afternoon of May 23 when ice passed the community. For context, past flood events have occurred when water levels were above 15.5m.
    - Satellite imagery captured on May 24 indicate rubble ice is jammed roughly 8 km downstream of Aklavik at the confluence of the Peel channel with Nikoluk Channel. A 3 km long jam has developed on the Aklavik Channel approximately 4 km upstream of the confluence with the Peel Channel.
    - Residents of Aklavik should remain vigilant as water levels can change rapidly when ice is moving through other channels in the delta.
- **Middle Channel:** Water levels are rising underneath intact ice on the Middle Channel, as measured north of Horseshoe Bend, and along Napoiak Channel above Shallow Bay.
    - Satellite imagery shows rubble ice has consolidated in the Turtle, where the Mackenzie River splits around the Mackenzie Islands, and remains jammed in the northern half of the Turtle, stretching for ~18 km.
    - While some ice has shifted to create open water sections up to Horseshoe Bend, the ice further downstream of the bend remains predominantly intact.
- **East Channel:** Satellite imagery shows rubble ice is jammed roughly 5 km downstream of its confluence with the Mackenzie River, for approximately 17 km.
    - Note: the water level gauge on the East Channel at Inuvik is currently experiencing technical issues.
- **Peel River:** Break-up is complete with only a small section of residual rubble ice remaining at the mouth.
- **Weather:** Cloudy conditions and average to below average temperatures over the delta this coming week might act to slow river ice degradation.

Nous publierons régulièrement des rapports sur la débâcle aux TNO au fur et à mesure de l'évolution de la situation. Ces rapports se concentreront sur les régions où la fonte des neiges et la débâcle sont en cours. Nous changerons de région géographique en fonction de l'évolution de la situation. Vous trouverez des informations complémentaires sur l'état du bassin dans l'Aperçu des eaux printanières 2026, disponible ici. Si vous avez des photos ou des renseignements en lien avec la débâcle dans votre collectivité, n'hésitez pas à communiquer avec nous à l'adresse suivante: nwtwaters@gov.nt.ca.

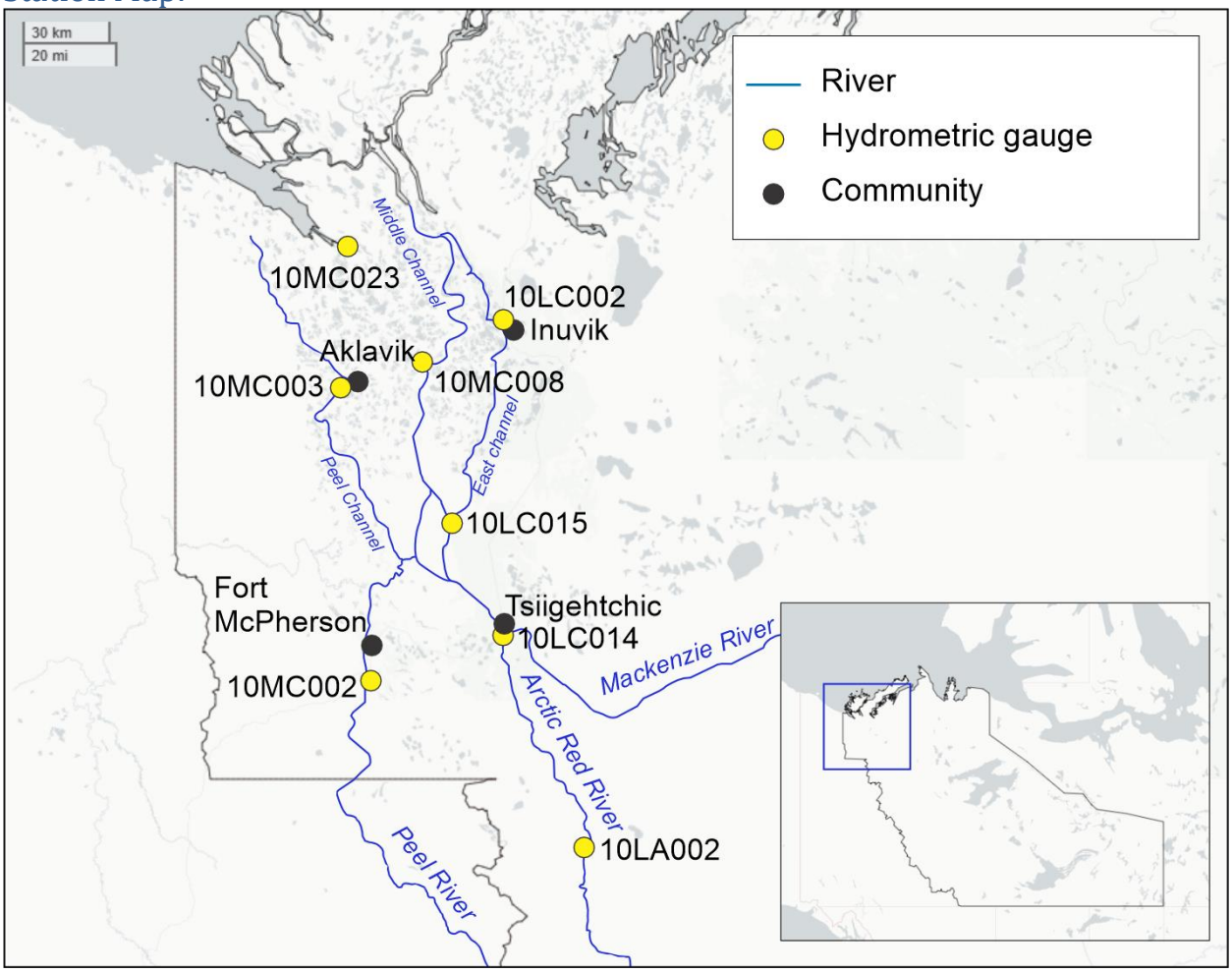
Situation actuelle

- **À la hauteur d'Aklavik :** Le niveau d'eau sur le chenal Peel, en amont de la collectivité, est stable depuis le 23 mai, en après-midi.
    - À 11 h (heure des Rocheuses) le 25 mai, le niveau d'eau était de 14,4 m. Il est resté à peu près stable à ce niveau depuis le 23 mai en après-midi, lorsque la glace s'est déplacée de l'autre côté de la collectivité. Pour mettre les choses en perspective, des inondations ont précédemment eu lieu lorsque les niveaux d'eau dépassaient 15,5 m.
    - Les images satellites prises le 24 mai montrent que des fragments de glace se sont accumulés à environ 8 km en aval d'Aklavik, au confluent du chenal Peel et du chenal Nikoluk. Un embâcle de 3 km de long s'est formé sur le chenal Aklavik, à environ 4 km en amont de la confluence avec le chenal Peel.
    - Les résidents d'Aklavik doivent rester vigilants, les niveaux d'eau pouvant changer rapidement à mesure que la glace se déplace dans les chenaux du delta.
- **Chenal Middle :** Sur le chenal Middle, le niveau d'eau augmente sous la glace intacte (mesures effectuées au nord du coude Horseshoe et le long du chenal Napoiak, en amont de baie Shallow).
    - Les images satellites montrent que des fragments de glace se sont accumulés dans le secteur « Turtle » (là où le fleuve Mackenzie se divise autour des îles Mackenzie) et qu'ils restent coincés dans la partie nord de ce secteur, sur une longueur d'environ 18 km.
    - Si une partie de la glace s'est déplacée, laissant apparaître des zones d'eau libre jusqu'au coude Horseshoe, la glace en aval de ce coude reste quant à elle pratiquement intacte.
- **Chenal Est :** Les images satellites montrent que des fragments de glace se sont accumulés à environ 5 km en aval de son confluent avec le fleuve Mackenzie, sur une distance d'environ 17 km.
    - Remarque : On signale que le capteur mesurant le niveau de l'eau du chenal Est à la hauteur d'Inuvik connaît des problèmes techniques.
- **Rivière Peel :** La débâcle est terminée; il ne reste que des fragments de glace résiduels à l'embouchure de la rivière.
- **Météo :** Le temps nuageux et les températures moyennes à inférieures à la moyenne prévues dans le delta cette semaine pourraient ralentir la fonte de la glace sur le fleuve.

Contents

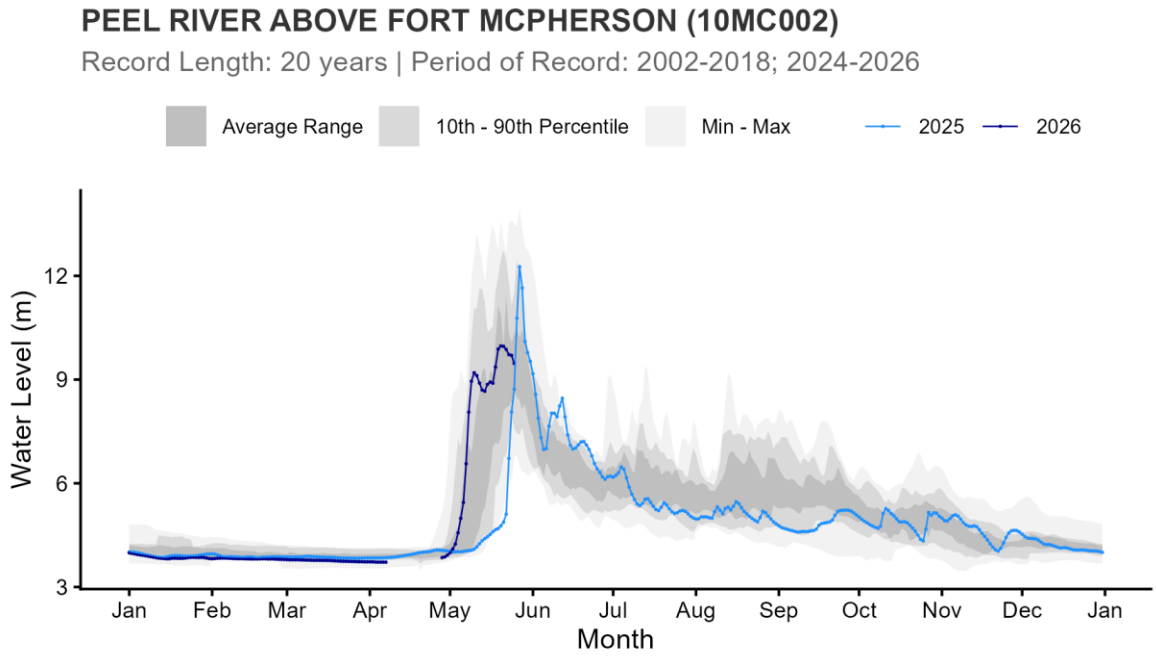
Hydrometric Data:

Station Map:



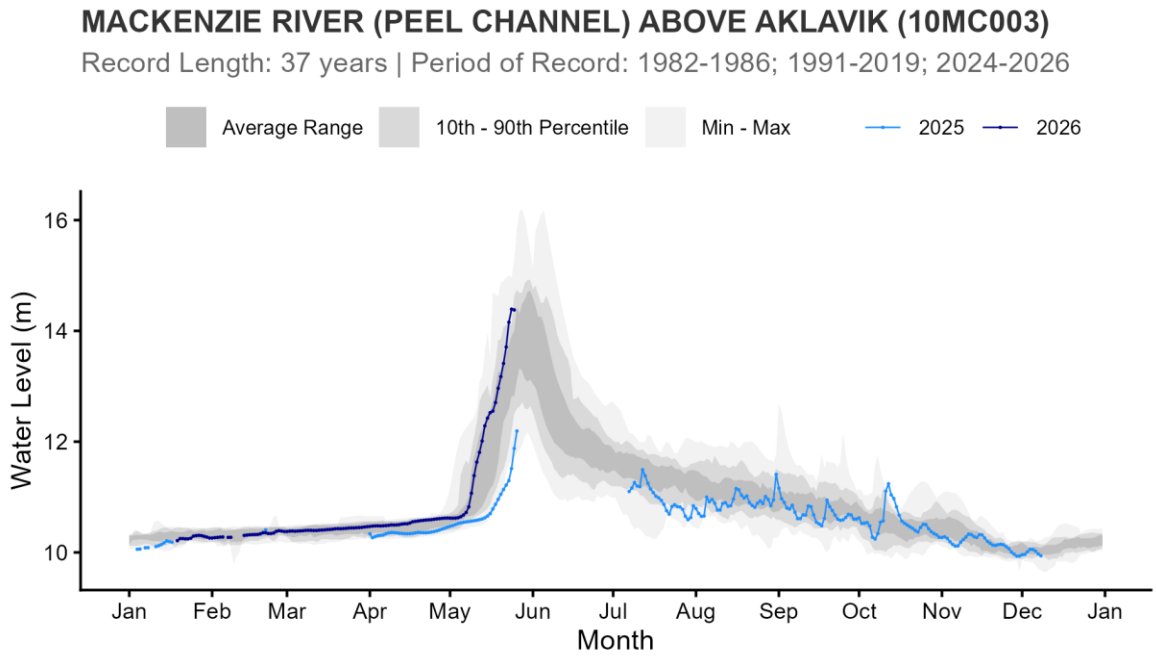
Above – Map of Hydrometric Stations and nearby communities for the plots included in this section.

Peel River above Fort McPherson [10MC002]



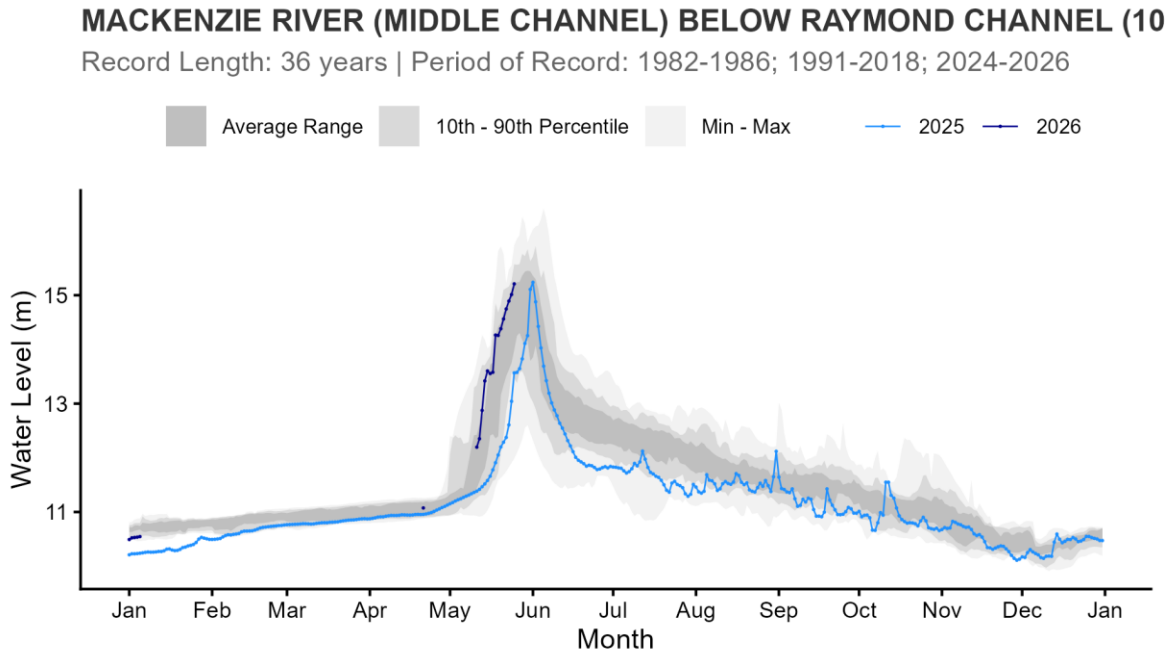
Above - Water level data for Peel River above Fort Mcpherson [10MC002]. Daily average levels for the previous year also are shown here.

Mackenzie River (Peel Channel) above Aklavik [10MC003]



Above - Water level data for Mackenzie River (Peel Channel) above Aklavik [10MC003]. Daily average levels for the previous year also are shown here.

Mackenzie River (Middle Channel) below Raymond Channel [10MC008]



Above - Water level data for Mackenzie River (Middle Channel) below Raymond Channel [10MC008]. Daily average levels for the previous year also are shown here.

Mackenzie River (East Channel) at Inuvik [10LC002]*

** Note – there seems to be a technical issue at this gauge as of 16:55 on 24 May 2026*

Gauge photos:

Peel River above Fort McPherson [10MC002]

Above – Peel River above Fort McPherson [10MC002] hydrometric gauge photo from May 25 at 13:00 MT. Photo courtesy of Water Survey of Canada and GNWT.

Mackenzie River (Peel Channel) above Aklavik [10MC003]

Above – Mackenzie River above Aklavik [10MC003] hydrometric gauge photo from May 25 at 09:00 MT. Photo courtesy of Water Survey of Canada and GNWT.

Drone photos:

Above – Four drone photos of the Peel Channel at Aklavik, from the morning of May 25. Courtesy of Northern Studies 11 students at Moose Kerr School.

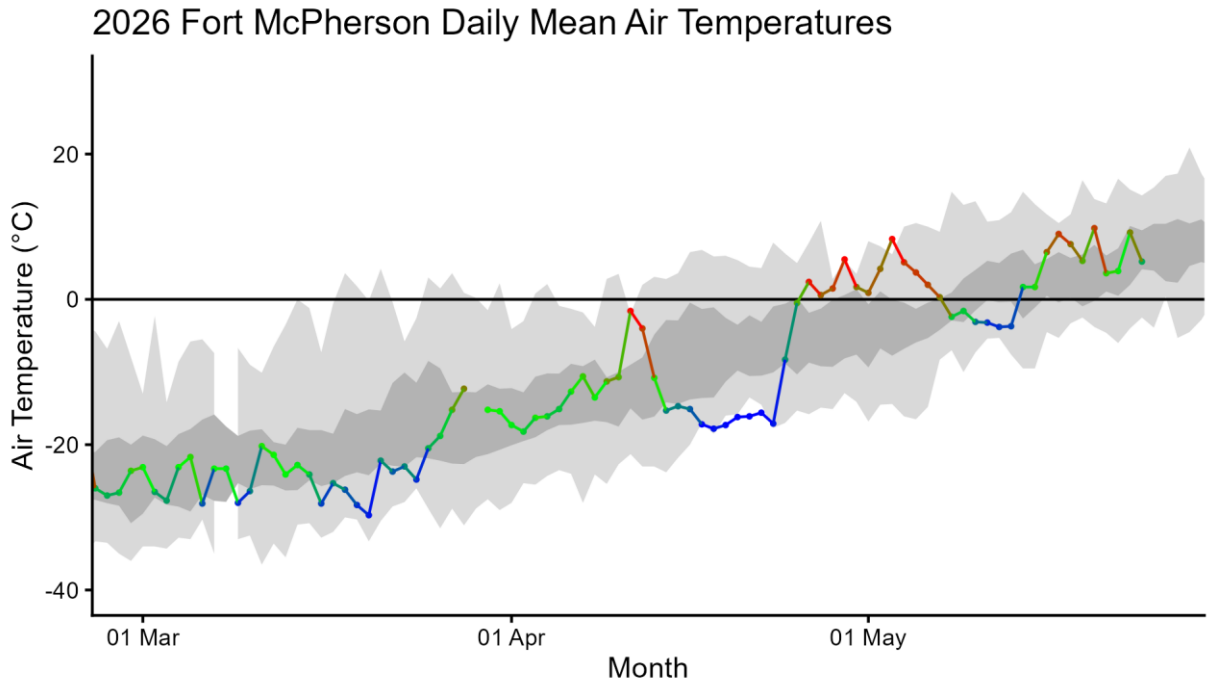
Weather Data:

Weather information informs how snow and ice will melt and provides information about how this spring is unfolding relative to previous springs. Warmer than normal conditions early in the spring allow for additional energy to melt the snowpack and soften river ice. Rain-on-snow events can cause rapid melt of snowpacks and facilitate quick delivery of snowmelt water to rivers. Locations included here cover basin areas that feed into NWT rivers that are currently undergoing break-up.

The first set of figures show how temperatures have been relative to average (dark grey band) this spring, while the second set is Environment and Climate Change Canada (ECCC) weather forecast data for the next seven days.

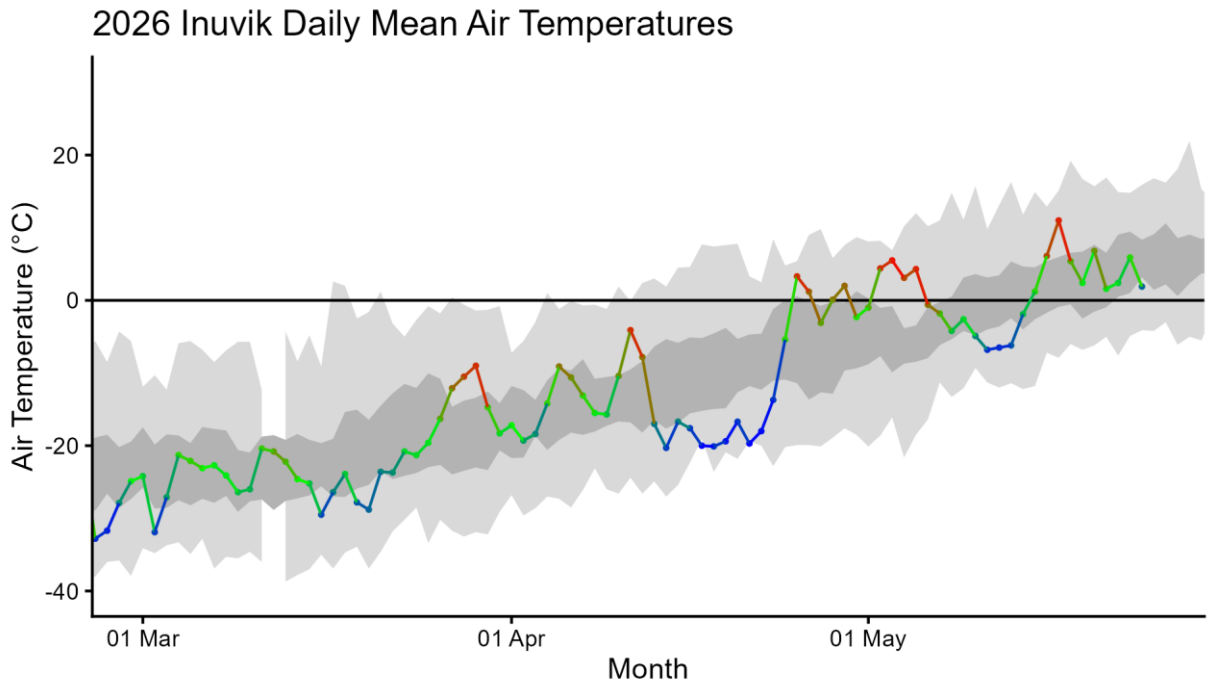
- The lower Mackenzie River basin (Beaufort Delta Region): temperatures over the last four days have been average. No significant precipitation has been recorded.

Fort McPherson Air Temperature



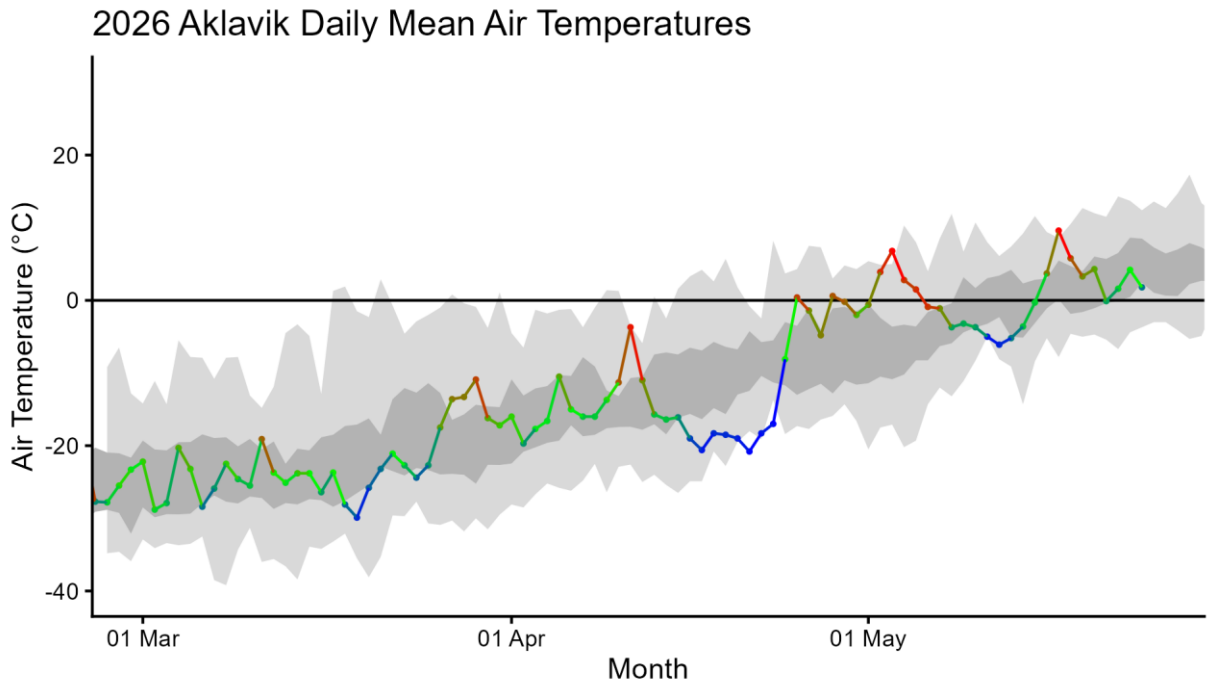
Above - Daily mean air temperature for Fort McPherson. Shaded areas represent the historical range (1991-2025).

Inuvik Air Temperature



Above - Daily mean air temperature for Inuvik. Shaded areas represent the historical range (1991-2025).

Aklavik Air Temperature

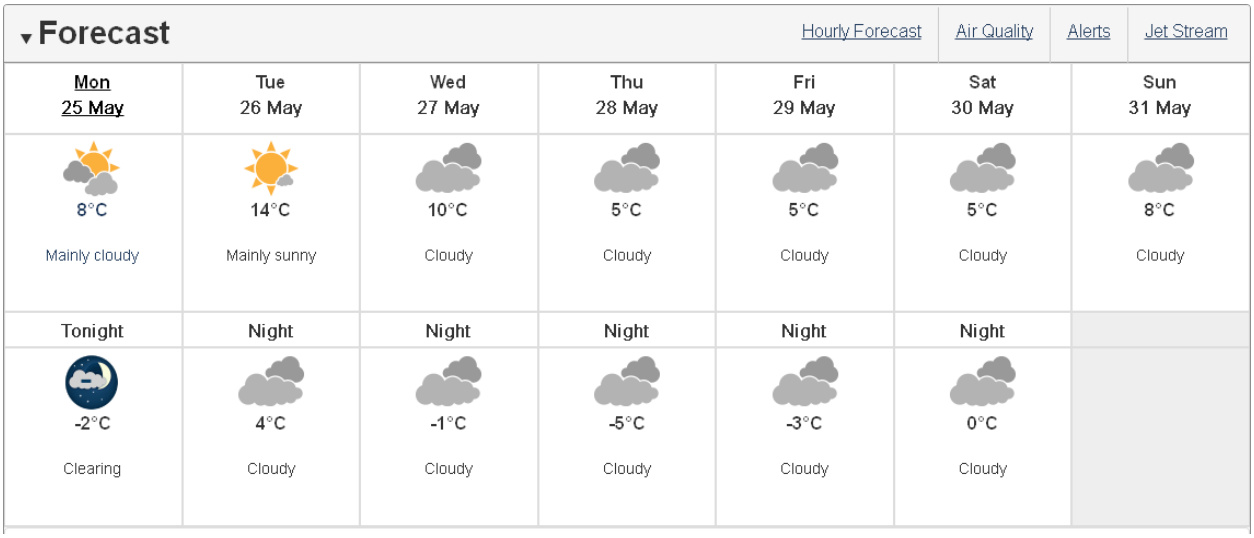


Above - Daily mean air temperature for Aklavik. Shaded areas represent the historical range (1991-2025).

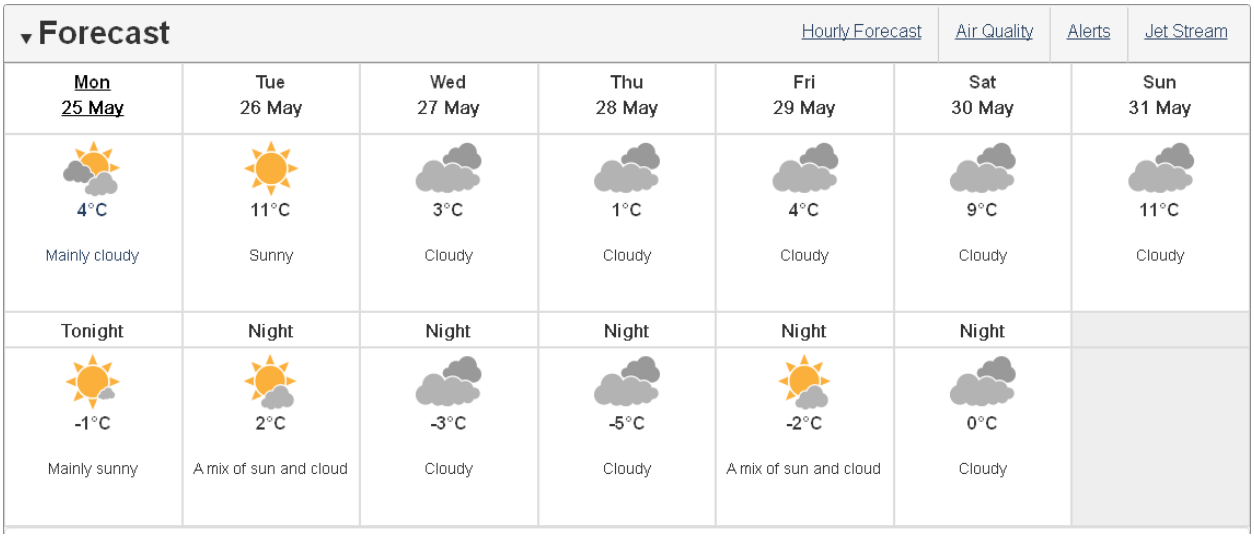
Weather Forecasts:

- Lower Mackenzie River basin (Beaufort Delta Region): forecasted temperatures over the week from May 25-31 are average to below average, and conditions are expected to be cloudy. Light rain is anticipated over the delta on Wednesday, which is not anticipated to affect water levels. It is unclear how the combination of cool, cloudy conditions and light rain will affect ice conditions, but generally, degradation may be slowed.

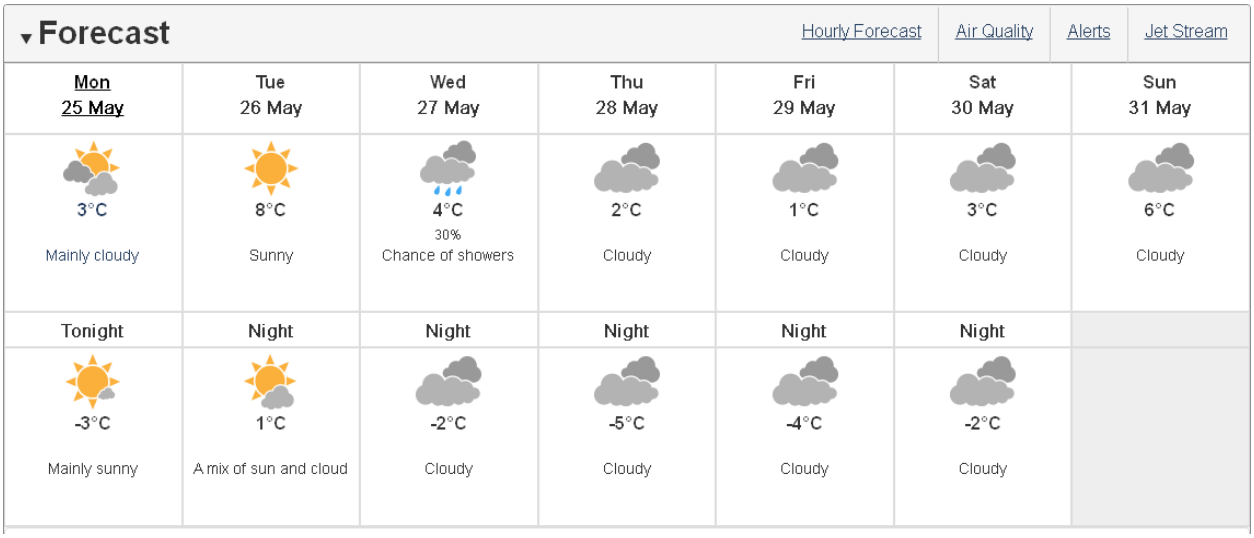
Fort McPherson seven-day weather forecast:



Inuvik seven-day weather forecast:



Aklavik seven-day weather forecast:



Forecast

Hourly Forecast | Air Quality | Alerts | Jet Stream

Mon 25 May	Tue 26 May	Wed 27 May	Thu 28 May	Fri 29 May	Sat 30 May	Sun 31 May
3°C	8°C	4°C	2°C	1°C	3°C	6°C
Mainly cloudy	Sunny	30% Chance of showers	Cloudy	Cloudy	Cloudy	Cloudy
Tonight	Night	Night	Night	Night	Night	
-3°C	1°C	-2°C	-5°C	-4°C	-2°C	
Mainly sunny	A mix of sun and cloud	Cloudy	Cloudy	Cloudy	Cloudy	

Factors to Watch:

It is important to note that much of the water contributing to NWT rivers originates from outside of the NWT, which is why we also rely on information from the Yukon, British Columbia, Alberta and Saskatchewan.

The potential and severity of flooding will depend in large part on the weather over the upcoming weeks and how this interacts with existing ice conditions, water levels and snowpack amounts.

The primary factors that influence water levels in the spring are:

- Ice jams (can result in out-of-bank flows, even if there are below normal flows)
- Rate of melt of ice and snow:
    - Gradual vs quick melt
    - Rain on snow or ice events (rain brings a lot of energy to help melt happen more quickly)
- Current water levels
- How wet the ground was in the fall
- Snowpack

Spring Break-up on NWT Rivers: Mechanical vs Thermal

In any given year, spring flooding can occur in a number of NWT communities, including Hay River, Jean Marie River, Fort Simpson, Fort Liard, Tulita, Fort Good Hope, Fort McPherson and Aklavik. Spring flooding is caused by ice jam-induced flooding and can occur irrespective of existing water levels. However, if existing water levels are high, the impact of an ice jam flood can be much worse.

Ice jams typically occur on north-flowing rivers where warm weather and snowmelt cause ice to break-up on the southern reaches of a river. As this ice flows north (downstream), it meets a more solid ice cover, hits the ground, or gets stuck in a river bend. When this happens, the pieces of floating ice jam can form a dam, which causes water levels to rise rapidly. This is called a **mechanical break-up**, whereby the ice downstream is broken up by the force of ice moving into it.

If there is warm and sunny weather throughout early spring, the ice may thermally erode and weaken. This provides less of a resisting force for ice and water moving down the river and will have less of a chance of causing water levels to rise behind an ice jam. This is called a **thermal break-up**.

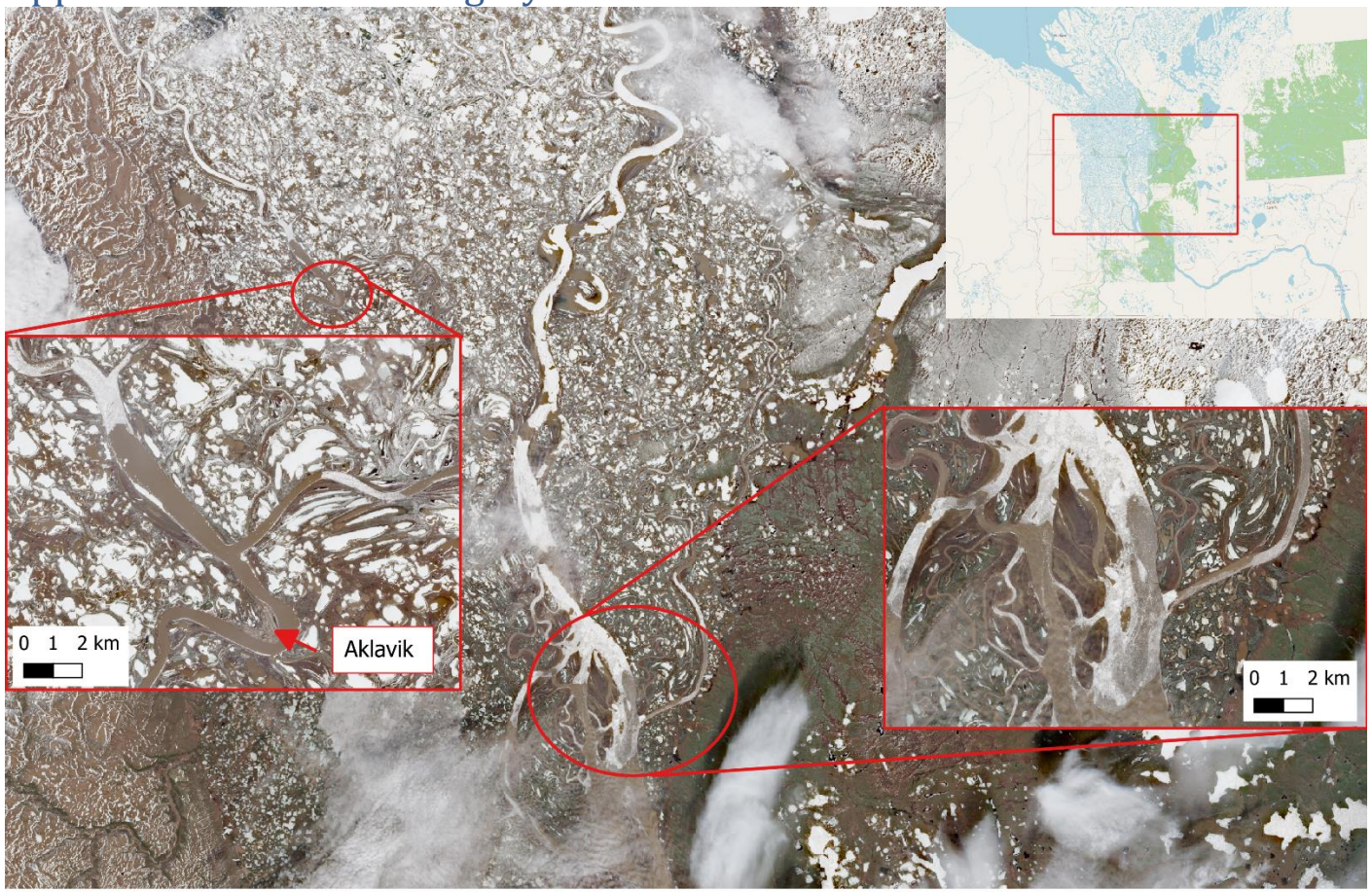
The causes of mechanical and thermal break-ups are usually dependent on the weather during early spring. Warm weather, sunshine, and rain on snow events are usually a good way to bring extra energy into the system to help melt the ice. Warm temperatures in the upstream part of a basin could also cause a rapid snowmelt and move water to the river very quickly. This could lead to ice-jam conditions downstream if the ice has not yet received

enough energy to degrade. Another important factor is the thickness of the ice. Thicker ice takes longer to melt and can increase the chances of ice jams. If an ice jam occurs, the location of the ice jam is also very important. Each river reach has different locations that are prone to ice jams. The location of the ice jam can be an important factor as to whether or not a community floods. Furthermore, ice will jam and then move again at multiple locations along a river as break-up progresses downstream. The timing and location of each jam can also influence if a community will flood.

Technical Note:

- The figures in this report plot water levels. The values on the y-axis are (in most cases) relative to an arbitrary datum. This means that the values on each gauge can be compared to different years but should not be used to compare water levels from one location to the next.
- For example, the Hay River near the border gauge (07OB008) records a level of about 288 m. The Hay River near Hay River gauge (07OB001) usually records a level of about 4 m. This **does not mean** that the water level at the Hay River at the border site is 284 m higher than the water level at the Hay River near Hay River site

Appendix A: River Ice Imagery



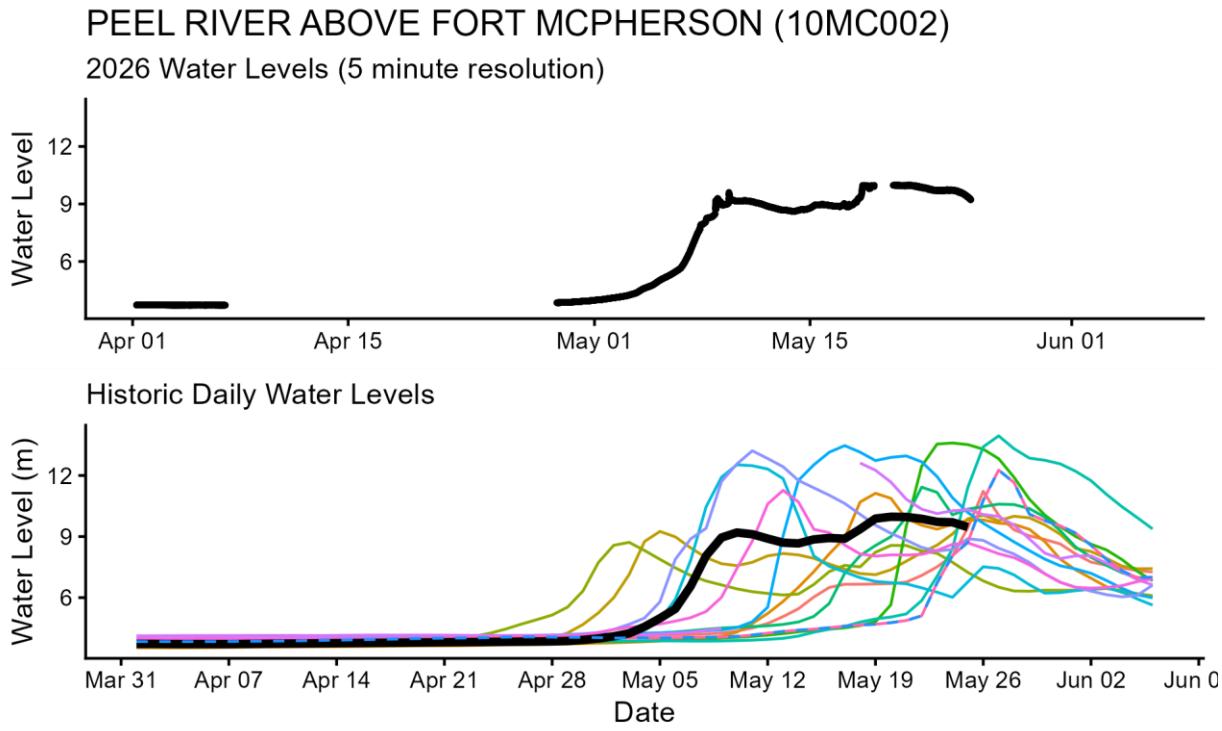
Optical satellite imagery shows river ice conditions on the Mackenzie River (Middle Channel), Peel Channel near Aklavik, and East Channel.
Image: Copernicus Sentinel-2 acquired on May 24, 2026 at 14:50 MDT.

Above - optical satellite imagery acquired on May 24 at 14:50 MT by Copernicus Sentinel-2 shows river ice conditions in the Mackenzie Delta.

No imagery is available for May 25 as of this report's publication.

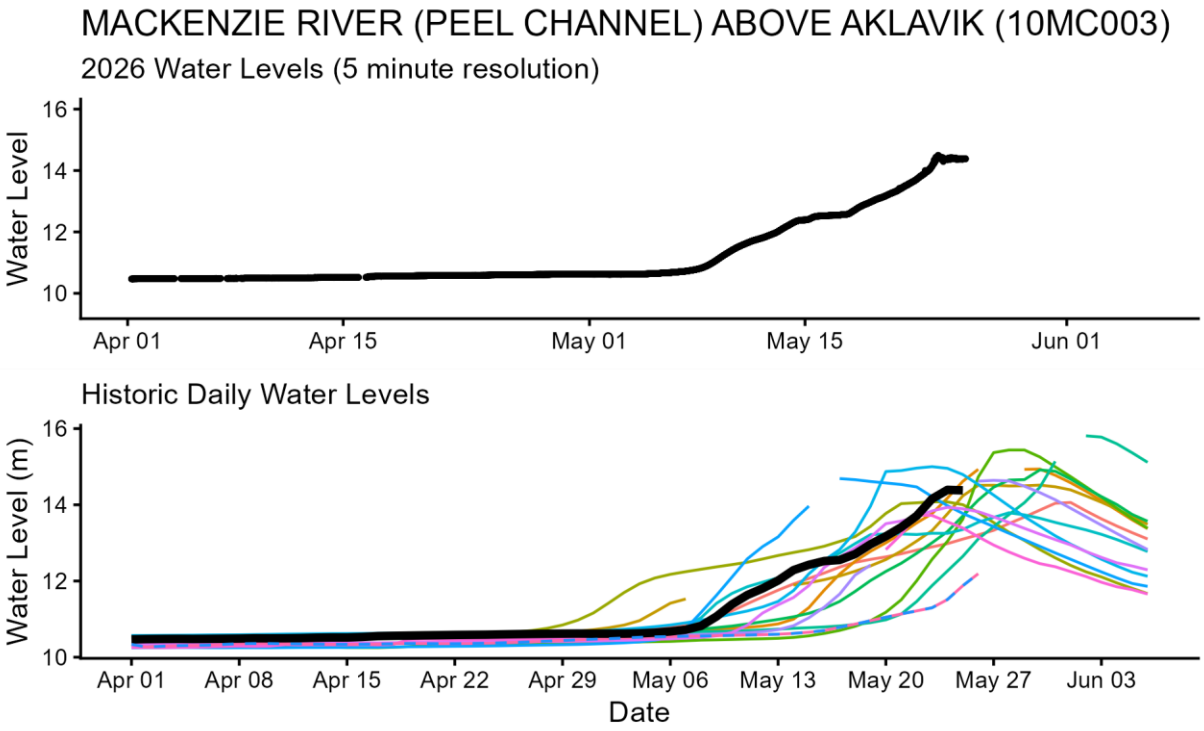
Appendix B: High resolution and historic water level plots

Peel River above Fort McPherson (10MC002)



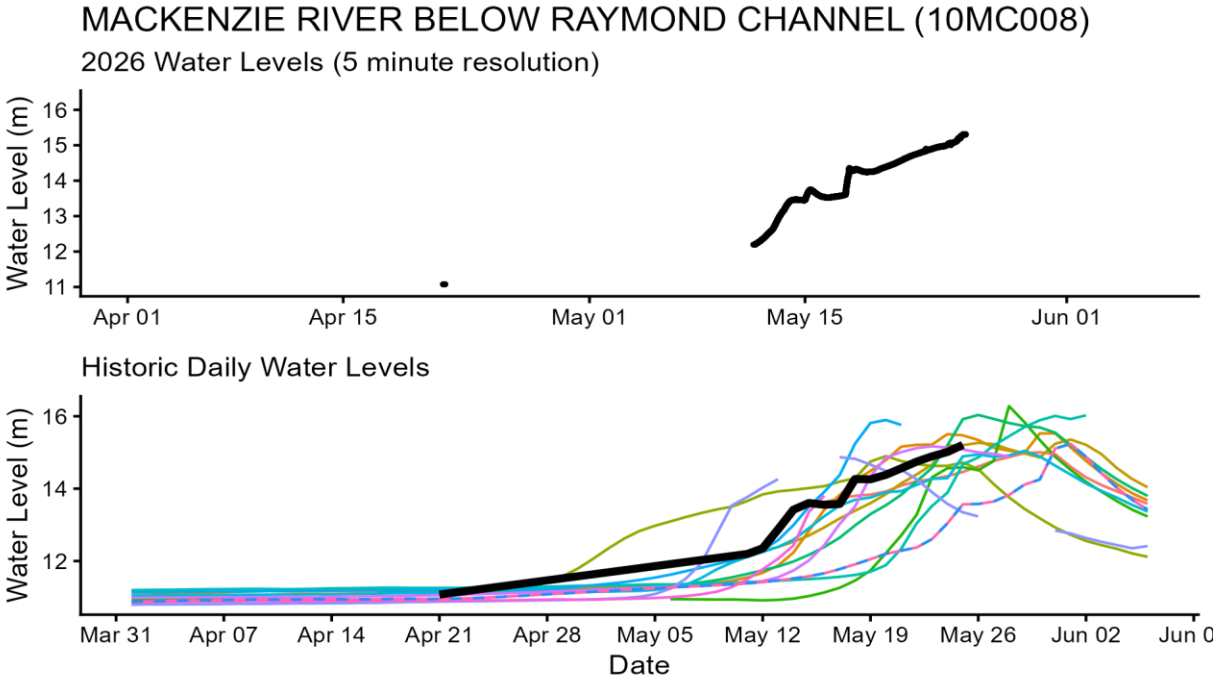
Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years.

Mackenzie River (Peel Channel) above Aklavik (10MC003)



Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years.

Mackenzie River (Middle Channel) below Raymond Channel (10MC008)

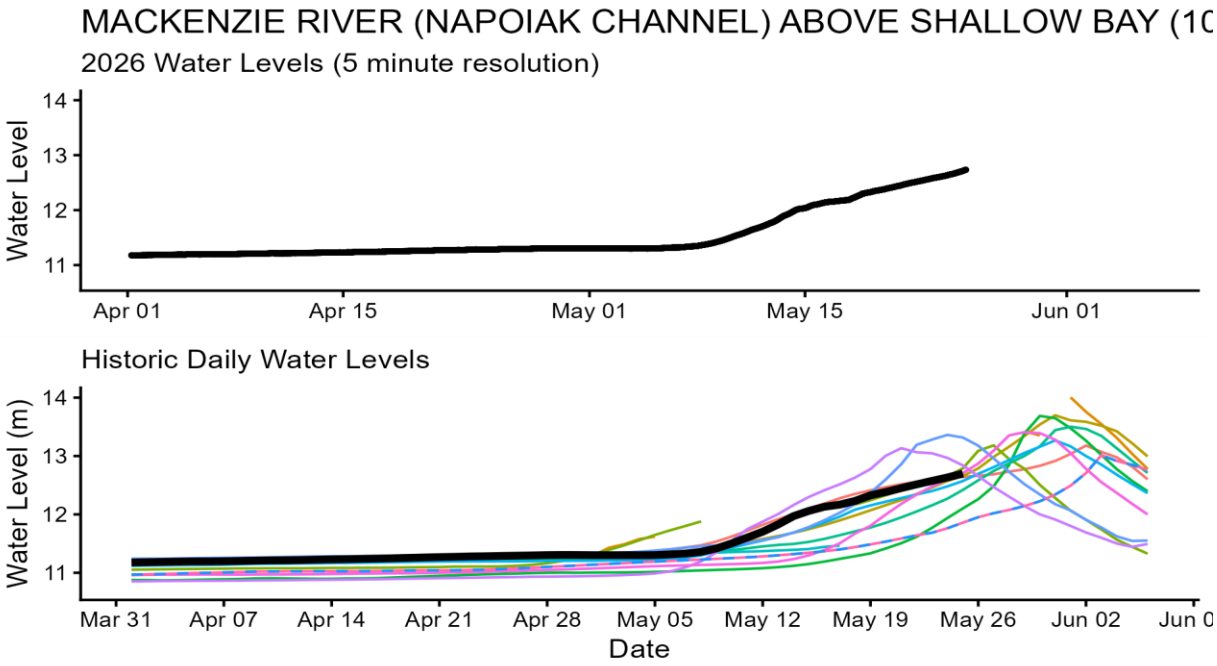


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years.

Mackenzie River (East Channel) at Inuvik (10LC002)*

**Note – there seems to be a technical issue at this gauge as of 16:55 on 24 May 2026*

Mackenzie River (Napoiak Channel) above Shallow Bay (10MC023)



Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years.