



NWT Water Monitoring Spring Break-Up Report

May 13, 2026 at 13:00

Rapport sur la débâcle printanière aux TNO

13 mai 2026 à 13 h



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:

- Break-up is nearly complete along the Mackenzie River.
 - The ice front is currently between Fort Good Hope and Tsiigehtchic, as of satellite imagery acquired yesterday.
 - Water level measured on the Mackenzie River at Tsiigehtchic is rising under relatively intact ice.
- While the Peel River break-up is nearly complete, break-up is about to start in the Beaufort Delta.
 - According to satellite imagery acquired last night at 8:30 pm, river ice is intact downstream of the east channel confluence.
 - Water levels are rising underneath intact ice in the Beaufort Delta.

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

- La débâcle est presque terminée sur le fleuve Mackenzie.
 - Le front glaciaire se situe actuellement entre Fort Good Hope et Tsiigehtchic, selon les images satellites obtenues hier.
 - Le niveau d'eau mesuré sur le fleuve Mackenzie à la hauteur de Tsiigehtchic monte sous la glace relativement intacte.
- La fonte des glaces sur la rivière Peel est presque terminée, mais elle est sur le point de commencer dans le Beaufort-Delta :
 - Selon les images satellites obtenues hier soir à 20 h 30, la glace est intacte en aval du confluent du chenal Est.
 - Le niveau d'eau monte sous la glace intacte dans le Beaufort-Delta.

Contents

Current Status:	2
Mackenzie River	5
Current Status:	5
Station Map:.....	5
Hydrometric Data:	6
Mackenzie River at Norman Wells [10KA001]	6
Mackenzie River at Arctic Red River [10LC014]	6
Gauge photos:	7
Mackenzie River at Norman Wells [10KA001]	7
Mackenzie River at Fort Good Hope [10LD001]	8
Peel River & Beaufort Delta	9
Current Status:	9
Station Map:.....	9
Hydrometric Data:	10
Mackenzie River at Arctic Red River [10LC014]	10
Peel River above Fort McPherson [10MC002].....	10
Mackenzie River (East Channel) at Inuvik [10LC002]	11
Mackenzie River (Peel Channel) above Aklavik [10MC003].....	11
Mackenzie River (Middle Channel) below Raymond Channel [10MC008]	12
Gauge photos:	13
Peel River above Fort McPherson [10MC002]	13
Mackenzie River (Peel Channel) above Aklavik [10MC003].....	14
Weather Data:	15
Norman Wells Air Temperature	15
Fort McPherson Air Temperature.....	16
Inuvik Air Temperature	16
Aklavik Air Temperature.....	17
Weather Forecasts:	18
Factors to Watch:	21
Spring Break up on NWT Rivers: Mechanical vs Thermal.....	21
Technical Note:.....	22
Appendix A: River Ice Imagery.....	24
Appendix B: High resolution and historic water level plots.....	28
Mackenzie River At Norman Wells (10KA001)	28
Arctic Red River Near The Mouth (10LA002).....	29

Mackenzie River (East Channel) At Inuvik (10LC002).....	30
Mackenzie River At Arctic Red River (10LC014).....	31
Mackenzie River (Peel Channel) Above Aklavik (10MC003).....	32
Mackenzie River (Middle Channel) Below Raymond Channel (10MC008)	33
Mackenzie River (Napiak Channel) Above Shallow Bay (10MC023)	34
Peel River Above Fort Mcpherson (10MC002).....	35

Mackenzie River

Current Status:

- Break-up is nearly complete along the Mackenzie River.
 - The ice front is currently between Fort Good Hope and Tsiigehtchic, as of satellite imagery acquired yesterday.
 - Small amounts of rubble ice remain on the Mackenzie River between Tulita and Fort Good Hope.
 - There are sections of intact ice and open water between the mouth of the Tree River (70 km upstream of Tsiigehtchic) and Tsiigehtchic.
- Water level measured on the Mackenzie River at Norman Wells peaked at 9.7 m on May 11 at midnight and has since receded by approximately 2.5 m.
 - This level of 9.7 m corresponds to an average freshet peak.
- Water level measured on the Mackenzie River at Tsiigehtchic is rising under relatively intact ice.
- Average to slightly above average temperatures forecasted for the week of May 13-19 should result in continued break-up along the Mackenzie River.

Station Map:

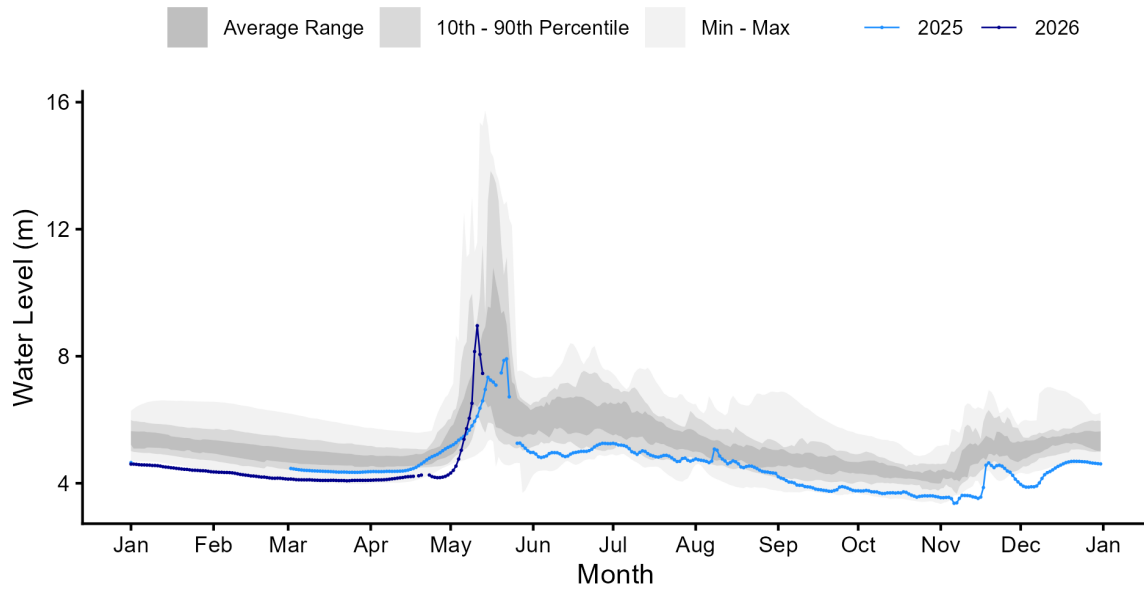


Above: Map of Hydrometric Stations and nearby communities for the plots included in this section.

Hydrometric Data:

Mackenzie River at Norman Wells [10KA001]

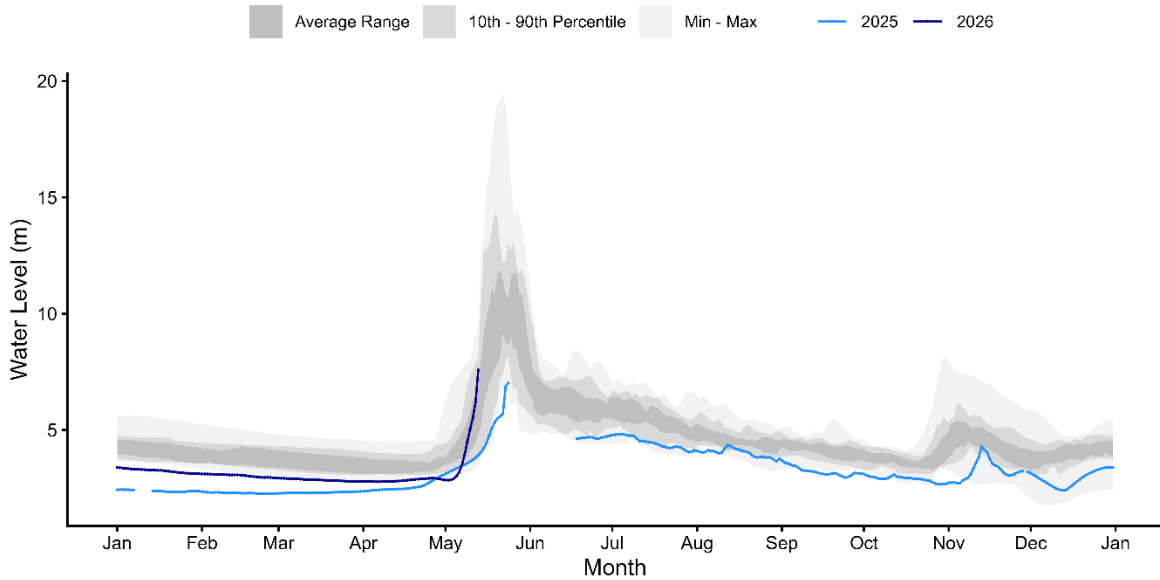
MACKENZIE RIVER AT NORMAN WELLS (10KA001)



Above - Water level data for Mackenzie River at Norman Wells [10KA001]. Daily average levels for the previous year also are shown here.

Mackenzie River at Arctic Red River [10LC014]

MACKENZIE RIVER AT ARCTIC RED RIVER (10LC014)

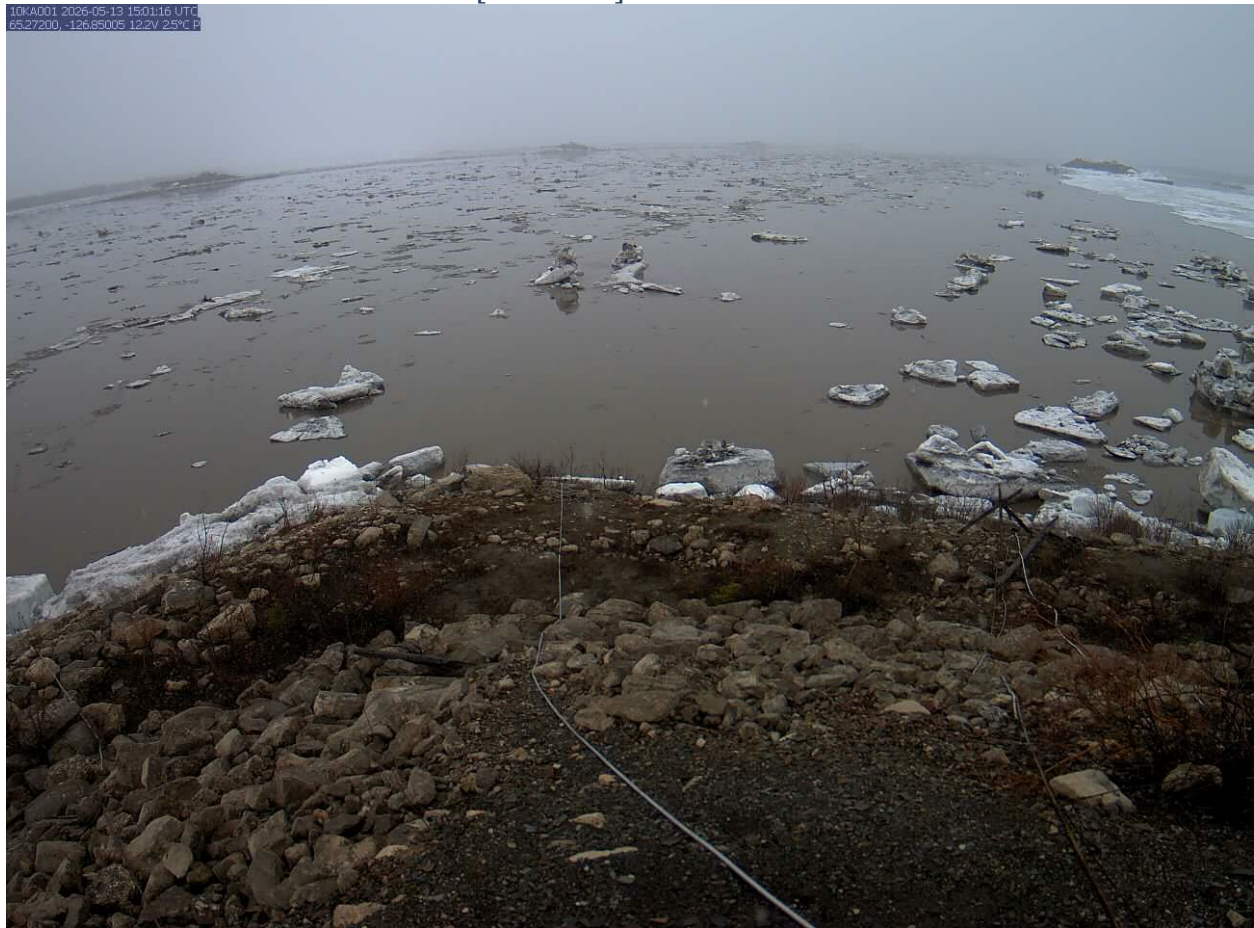


Above - Water level data for Mackenzie River at Arctic Red River [10LC014]. Daily average levels for the previous year also are shown here.

Gauge photos:

Mackenzie River at Norman Wells [10KA001]

10KA001 2024-05-13 19:01:16 UTC
65.27200, -126.85005 12.2V 25°C P



Above – Mackenzie River at Norman Wells [10KA001] hydrometric gauge photo from May 13 at 09:00. Photo courtesy of Water Survey of Canada and GNWT.

Mackenzie River at Fort Good Hope [10LD001]

10LD001_2026-05-13_15:01:23 UTC
66.25150, -128.64578 12.9V 3.0°C P



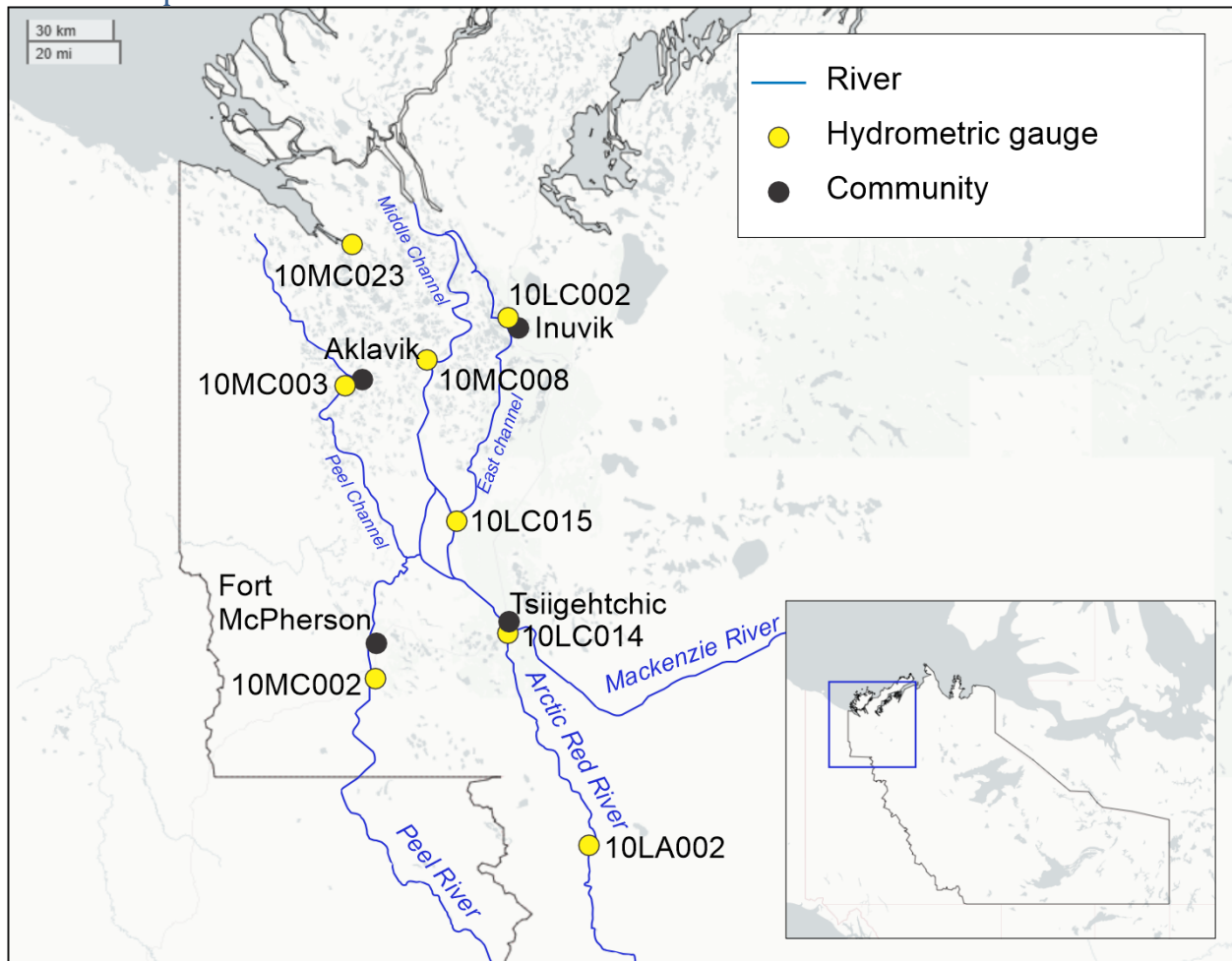
Above – Mackenzie River at Fort Good Hope [10LD001] hydrometric gauge photo from May 13 at 09:00. Photo courtesy of Water Survey of Canada and GNWT.

Peel River & Beaufort Delta

Current Status:

- While the Peel River break-up is nearly complete, break-up is about to start in the Beaufort Delta.
- Water levels are rising underneath intact ice in the Beaufort Delta.
 - According to satellite imagery acquired last night at 8:30 pm, river ice is intact downstream of the east channel confluence.
- Water level measured on the Peel River appears to have peaked on May 9th, and has since decreased by 1 m.
 - Satellite imagery acquired on May 12 for the Peel River shows that the ice degradation and break-up has been limited over the last couple of days.
- Average to slightly above average temperatures forecasted for the week of May 13 - 19 should result in continued break-up and ice movement along the Peel River and should initiate break-up in the delta.

Station Map:

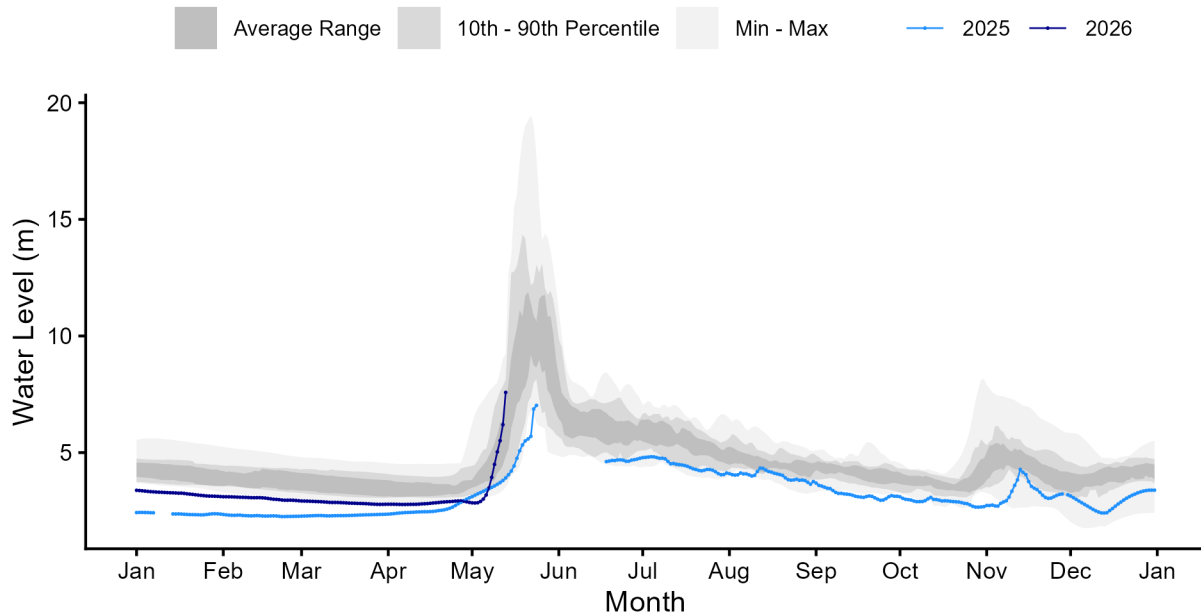


Above: Map of Hydrometric Stations and nearby communities for the plots included in this section.

Hydrometric Data:

Mackenzie River at Arctic Red River [10LC014]

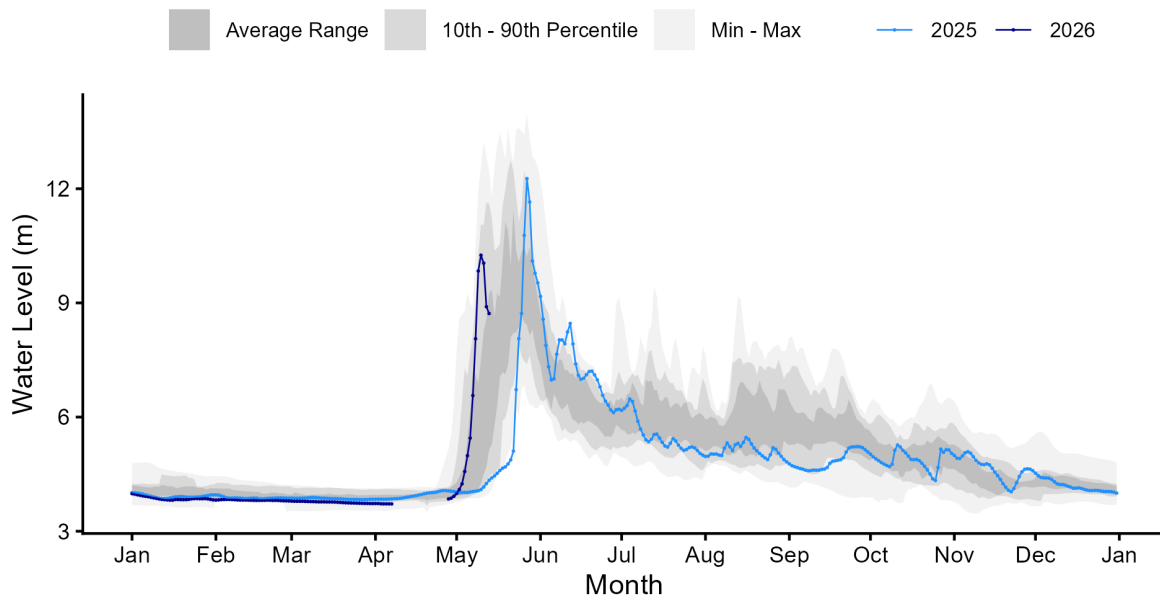
MACKENZIE RIVER AT ARCTIC RED RIVER (10LC014)



Above - Water level data for Mackenzie River at Arctic Red River [10LC014]. Daily average levels for the previous year also are shown here.

Peel River above Fort Mcpherson [10MC002]

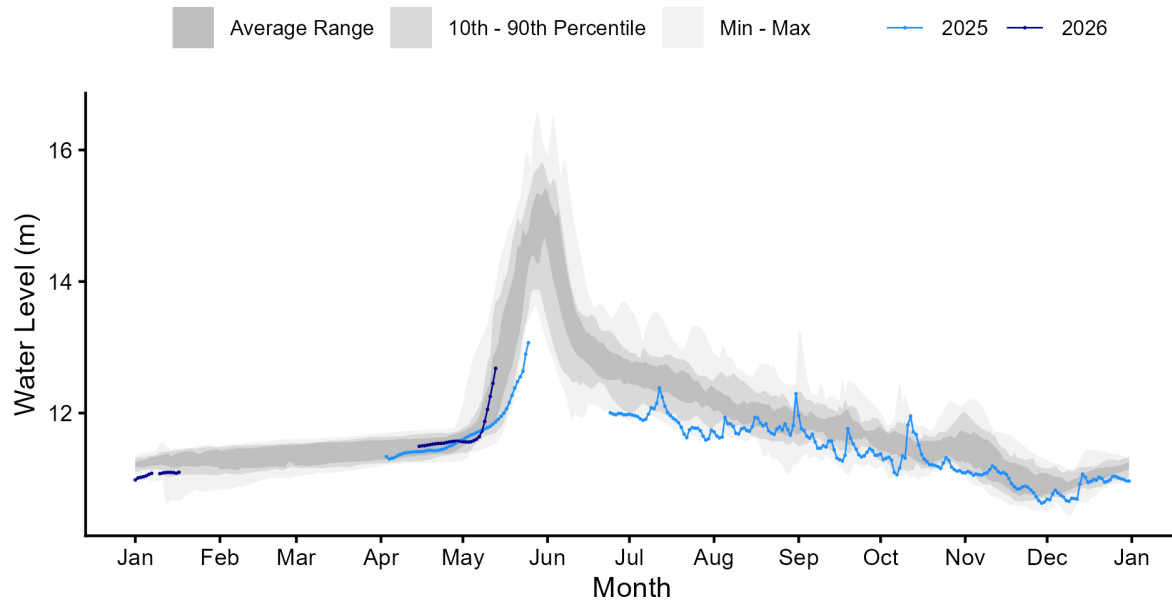
PEEL RIVER ABOVE FORT MCPHERSON (10MC002)



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

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

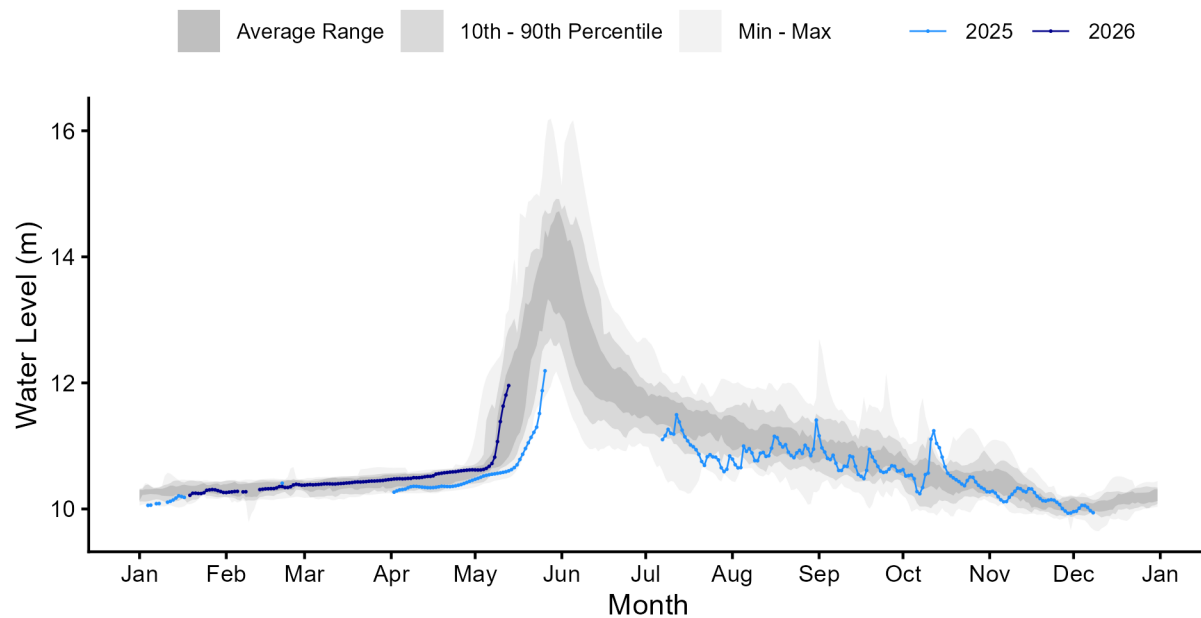
MACKENZIE RIVER (EAST CHANNEL) AT INUVIK (10LC002)



Above - Water level data for Mackenzie River (East Channel) at Inuvik [10LC002]. Daily average levels for the previous year also are shown here.

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

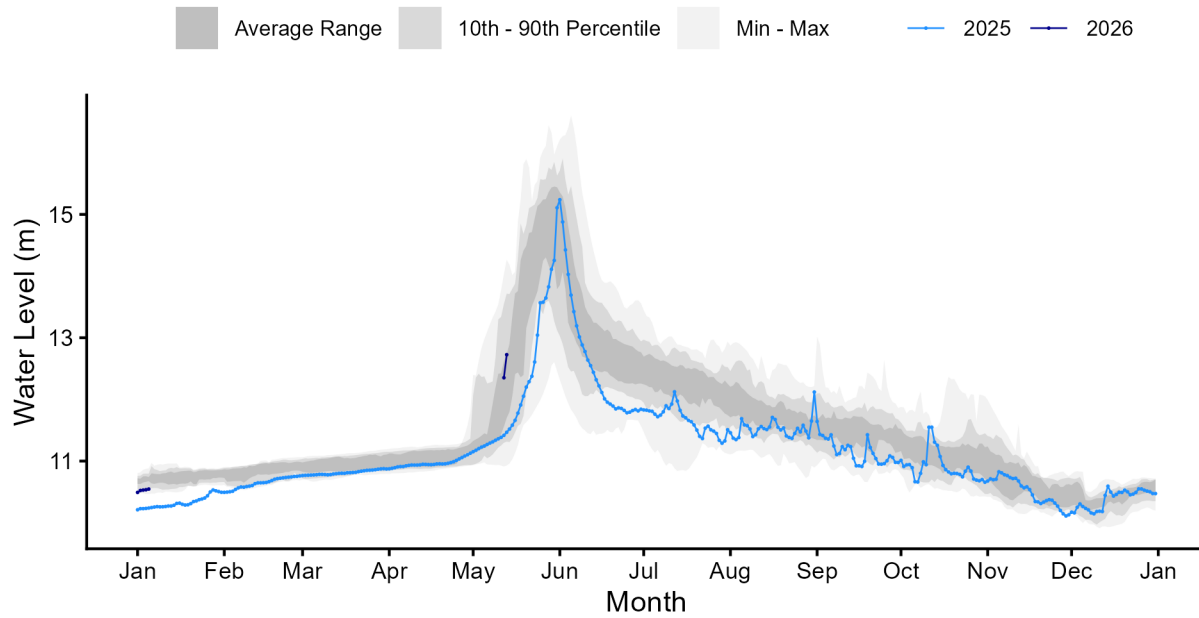
MACKENZIE RIVER (PEEL CHANNEL) ABOVE AKLAVIK (10MC003)



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]

MACKENZIE RIVER (MIDDLE CHANNEL) BELOW RAYMOND CHANNEL



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

Gauge photos:

Peel River above Fort McPherson [10MC002]



Above – Peel River above Fort McPherson [10MC002] hydrometric gauge photo from May 13 at 09:00. Photo courtesy of Water Survey of Canada and GNWT.

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

10MC003 2026-05-13 15:01:16 UTC
68.20367, -135.11478 13.0V -3.0°C P



Above – Mackenzie River above Aklavik [10MC003] hydrometric gauge photo from May 13 at 09:00. Photo courtesy of Water Survey of Canada and GNWT.

Weather Data:

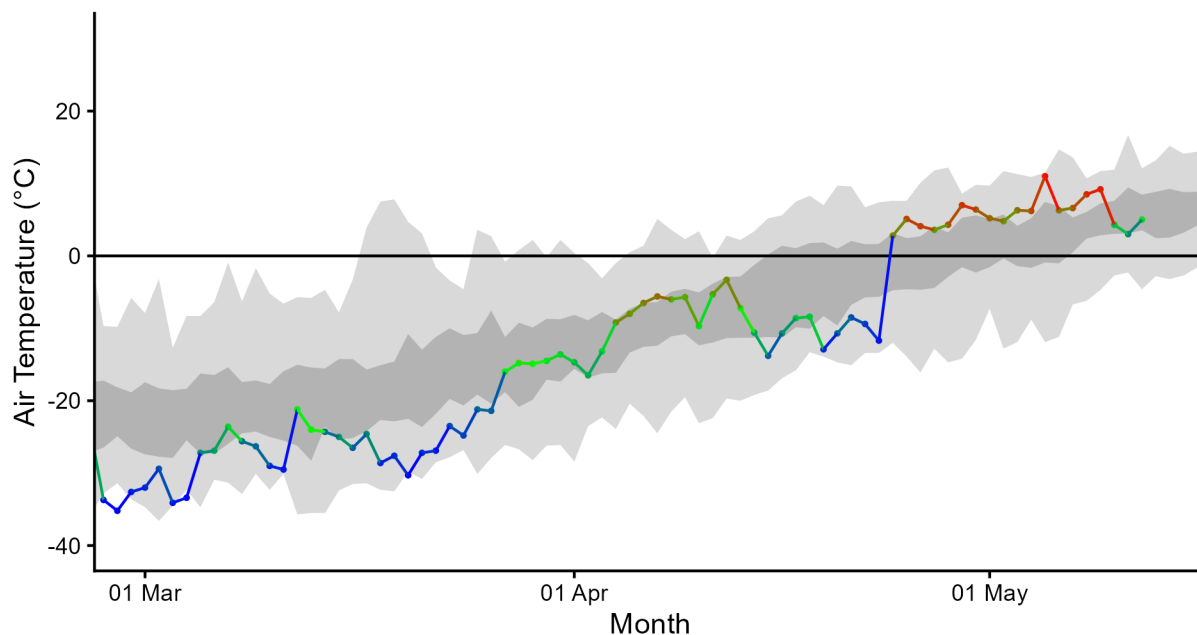
Weather information informs how snow and ice will melt and provides information about how this spring is unfolding relative to previous springs. Warmer than normal conditions early in the spring allow for additional energy to melt the snowpack and soften river ice. Rain-on-snow events can cause rapid 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.

- In the upper Mackenzie River basin (Dehcho Region), temperatures since the last break-up report on May 11 were above average. No significant precipitation has been observed since May 11.
- In the central Mackenzie River basin (Sahtu Region), temperatures since the last break-up report on May 11 were average. No significant precipitation has been observed since May 11.
- In the Peel, Arctic Red River, and lower Mackenzie River basins (Beaufort Delta Region), temperatures since the last break-up report on May 11 were average to slightly below average. No significant precipitation was observed since May 11.

Norman Wells Air Temperature

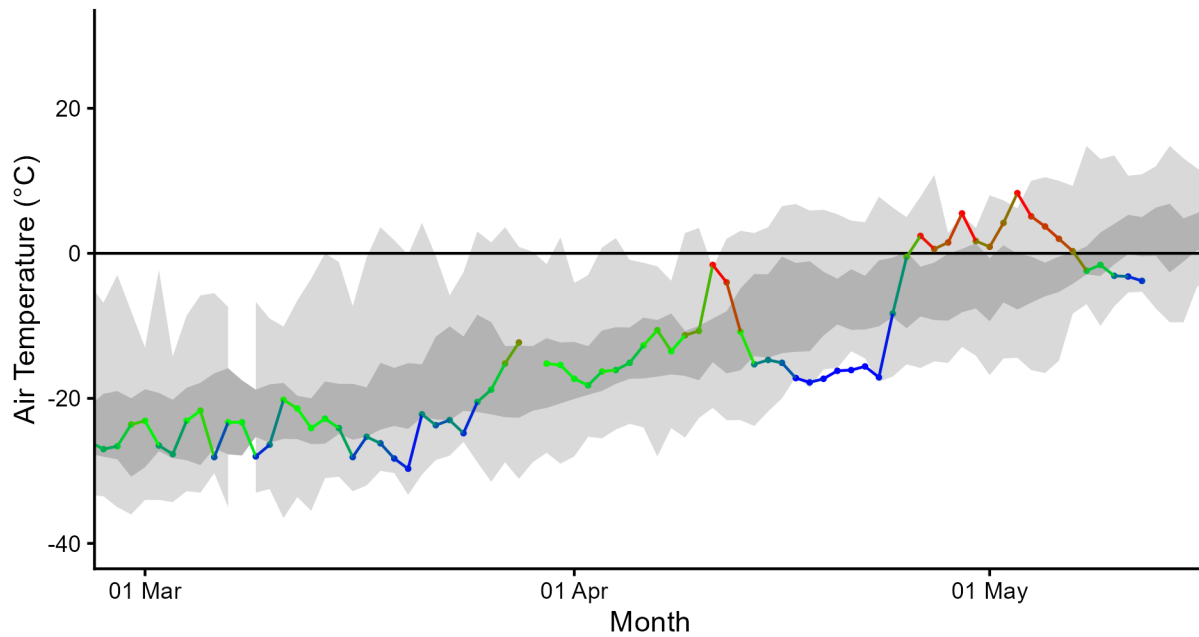
2026 Norman Wells Daily Mean Air Temperatures



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

Fort McPherson Air Temperature

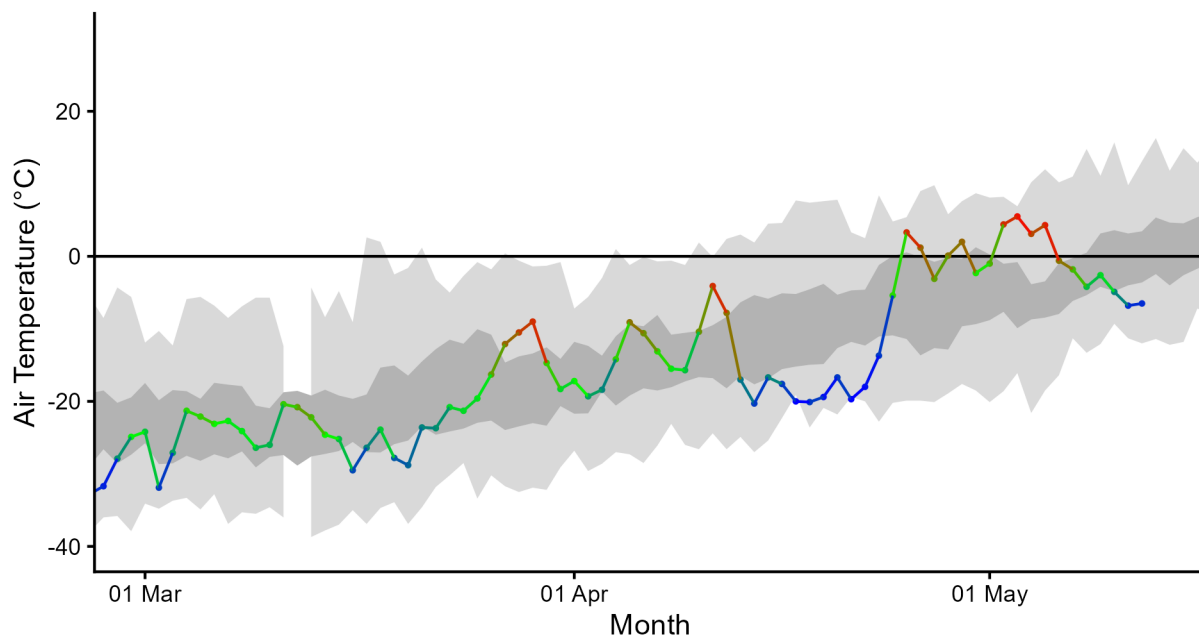
2026 Fort McPherson Daily Mean Air Temperatures



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

Inuvik Air Temperature

2026 Inuvik Daily Mean Air Temperatures

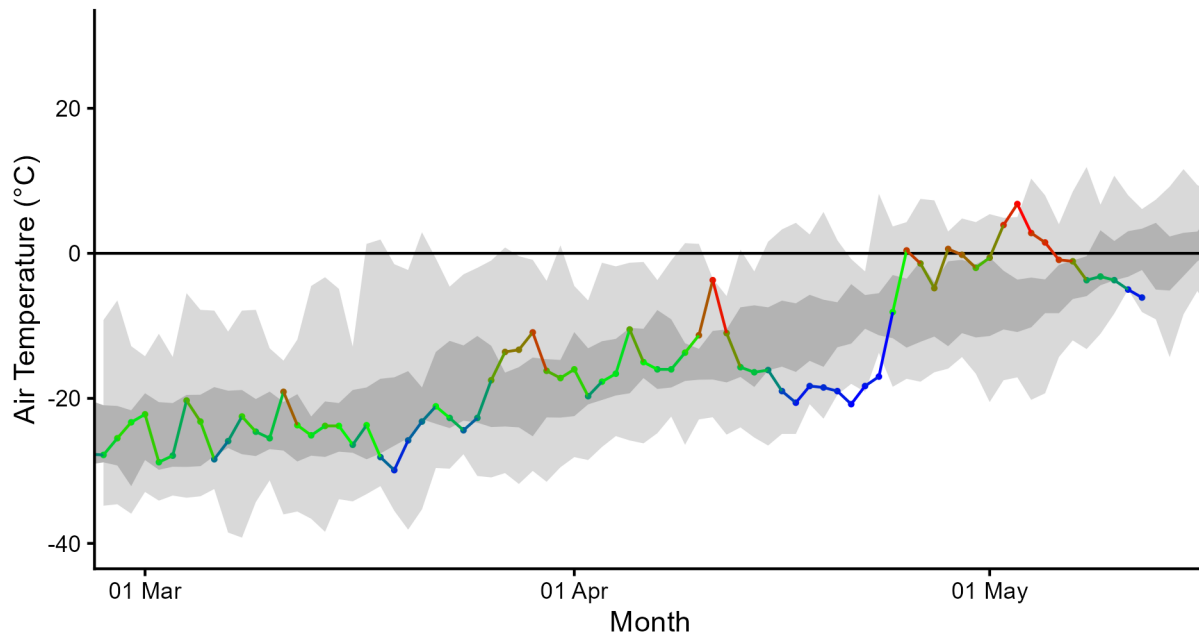


Above - Daily mean air temperature for Inuvik. Shaded areas represent the historical range (1991-2025).

Temperature data for Fort Good Hope is currently unavailable.

Aklavik Air Temperature

2026 Aklavik Daily Mean Air Temperatures















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














Weather Forecasts:

- In the upper Mackenzie River basin (Dehcho Region), forecasted temperatures for the week of May 13-19 are average. There is approximately 10mm of precipitation forecast on Wednesday and Thursday for parts of the Mackenzie Mountains west of Fort Simpson, with minimal anticipated impact on water levels.
- In the central Mackenzie River basin (Sahtu Region), forecasted temperatures for the week of May 13-19 are average to slightly above average. There is approximately 10mm of precipitation forecast on Wednesday and Thursday between Norman Wells, Deline, and Wrigley, with minimal anticipated impact on water levels.
- In the Peel, Arctic Red River, and lower Mackenzie River basins (Beaufort Delta Region), forecasted temperature for the week of May 13-19 are average to slightly above average. There is no significant forecasted precipitation throughout the forecast period.














Norman Wells seven-day weather forecast:

▼ Forecast							Hourly Forecast	Air Quality	Alerts	Jet Stream
Wed 13 May	Thu 14 May	Fri 15 May	Sat 16 May	Sun 17 May	Mon 18 May	Tue 19 May				
 4°C Periods of snow	 4°C Snow or rain	 9°C Cloudy	 14°C Sunny	 18°C Sunny	 17°C Sunny	 14°C A mix of sun and cloud				
Tonight	Night	Night	Night	Night	Night					
 0°C Snow	 0°C Cloudy	 0°C Cloudy periods	 4°C Clear	 5°C Clear	 5°C Cloudy periods					














Fort McPherson seven-day weather forecast:

▼ Forecast							Hourly Forecast	Air Quality	Alerts	Jet Stream
Wed 13 May	Thu 14 May	Fri 15 May	Sat 16 May	Sun 17 May	Mon 18 May	Tue 19 May				
 -1°C 60% Chance of flurries	 3°C 30% Chance of flurries	 4°C Cloudy	 9°C Cloudy	 10°C A mix of sun and cloud	 6°C A mix of sun and cloud	 7°C A mix of sun and cloud				
Tonight	Night	Night	Night	Night	Night					
 -5°C 60% Chance of flurries	 -4°C Cloudy	 -2°C Cloudy	 -1°C Cloudy periods	 -1°C Clear	 -2°C Cloudy periods					

Inuvik seven-day weather forecast:

▼ Forecast							Hourly Forecast	Air Quality	Alerts	Jet Stream
Wed 13 May	Thu 14 May	Fri 15 May	Sat 16 May	Sun 17 May	Mon 18 May	Tue 19 May				
 -1°C Clearing	 2°C Clearing	 4°C Sunny	 8°C Sunny	 11°C Sunny	 11°C A mix of sun and cloud	 10°C A mix of sun and cloud				
Tonight	Night	Night	Night	Night	Night					
 -7°C Partly cloudy	 -7°C Clear	 -2°C Clear	 0°C Clear	 2°C Clear	 -2°C Cloudy periods					

Aklavik seven-day weather forecast:

▼ Forecast							Hourly Forecast	Air Quality	Alerts	Jet Stream
Wed 13 May	Thu 14 May	Fri 15 May	Sat 16 May	Sun 17 May	Mon 18 May	Tue 19 May				
 -2°C 30% Chance of flurries	 2°C 30% Chance of flurries	 3°C Sunny	 7°C Sunny	 7°C Sunny	 4°C A mix of sun and cloud	 5°C A mix of sun and cloud				
Tonight	Night	Night	Night	Night	Night					
 -6°C 30% Chance of flurries	 -9°C Clear	 -3°C Clear	 -1°C Clear	 -2°C Clear	 -3°C Cloudy periods					

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

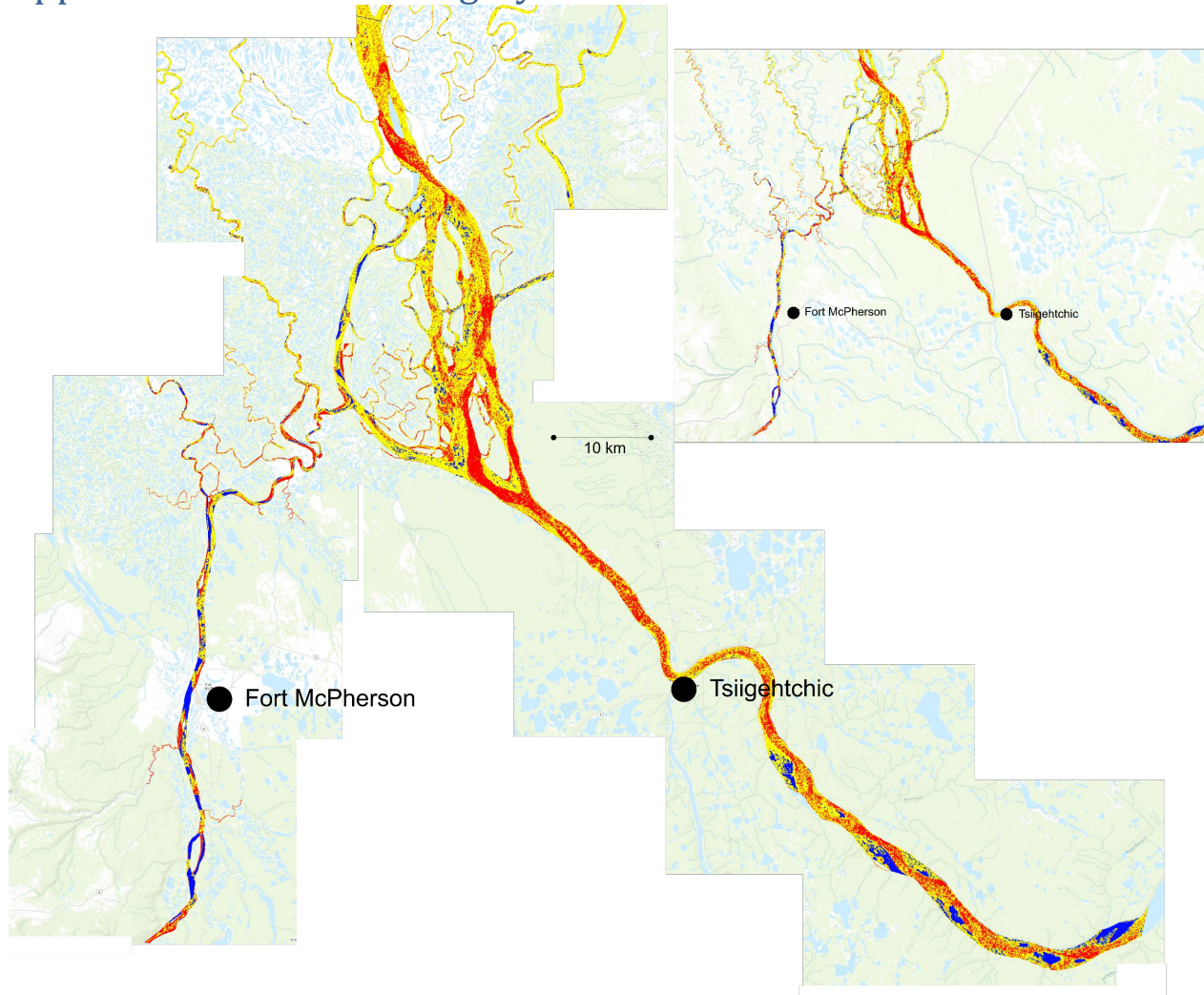
enough energy to degrade. Another important factor is the thickness of the ice. Thicker ice takes longer to melt and can increase the chances of ice jams. If an ice jam occurs, the location of the ice jam is also very important. Each river reach has different locations that are prone to ice jams. The 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:

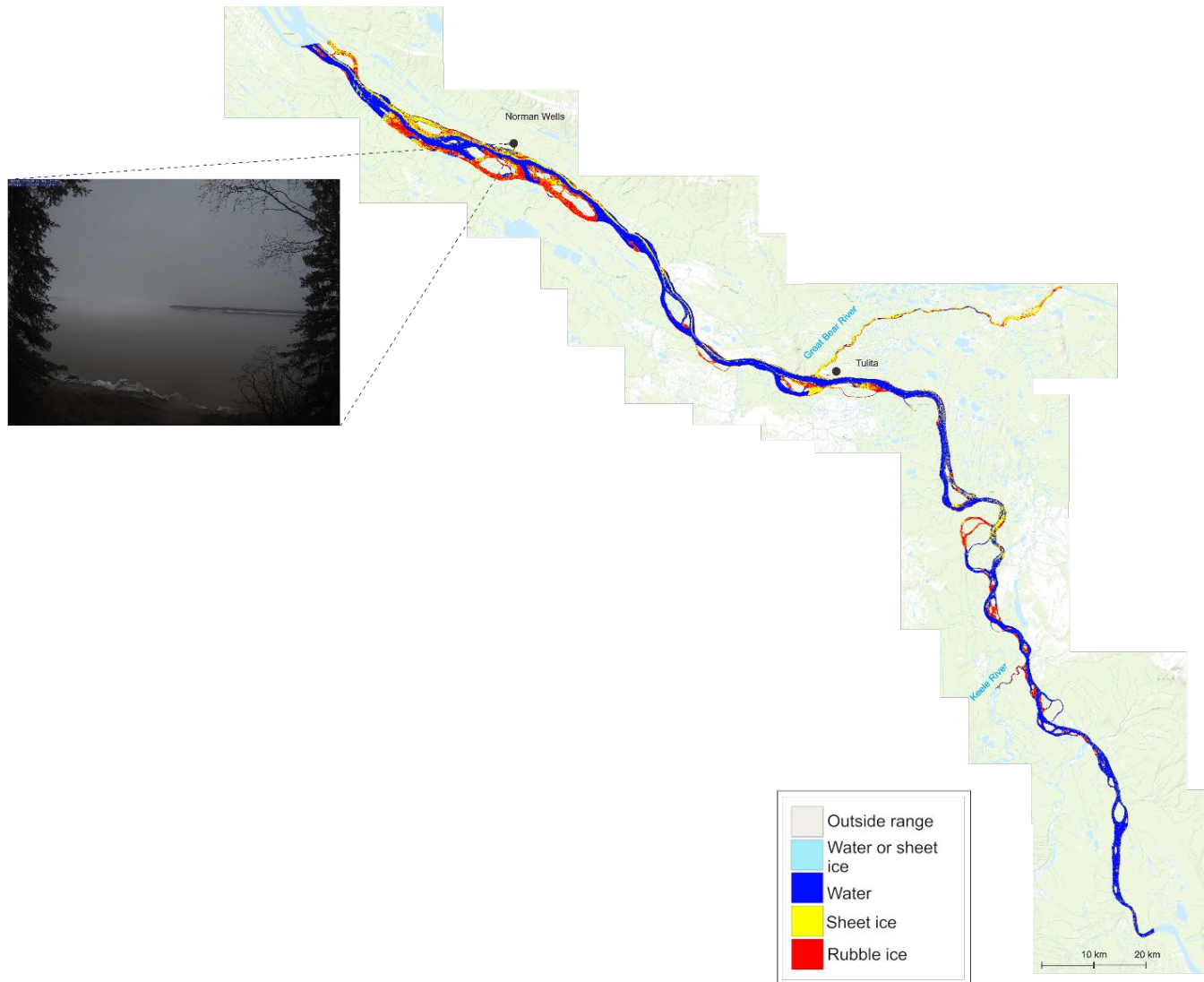
- The figures in this report plot water levels. The values on the y-axis are (in most cases) relative to an arbitrary datum. This means that the values on each gauge can be compared to different years but should not be used to compare water levels from one location to the next.

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.

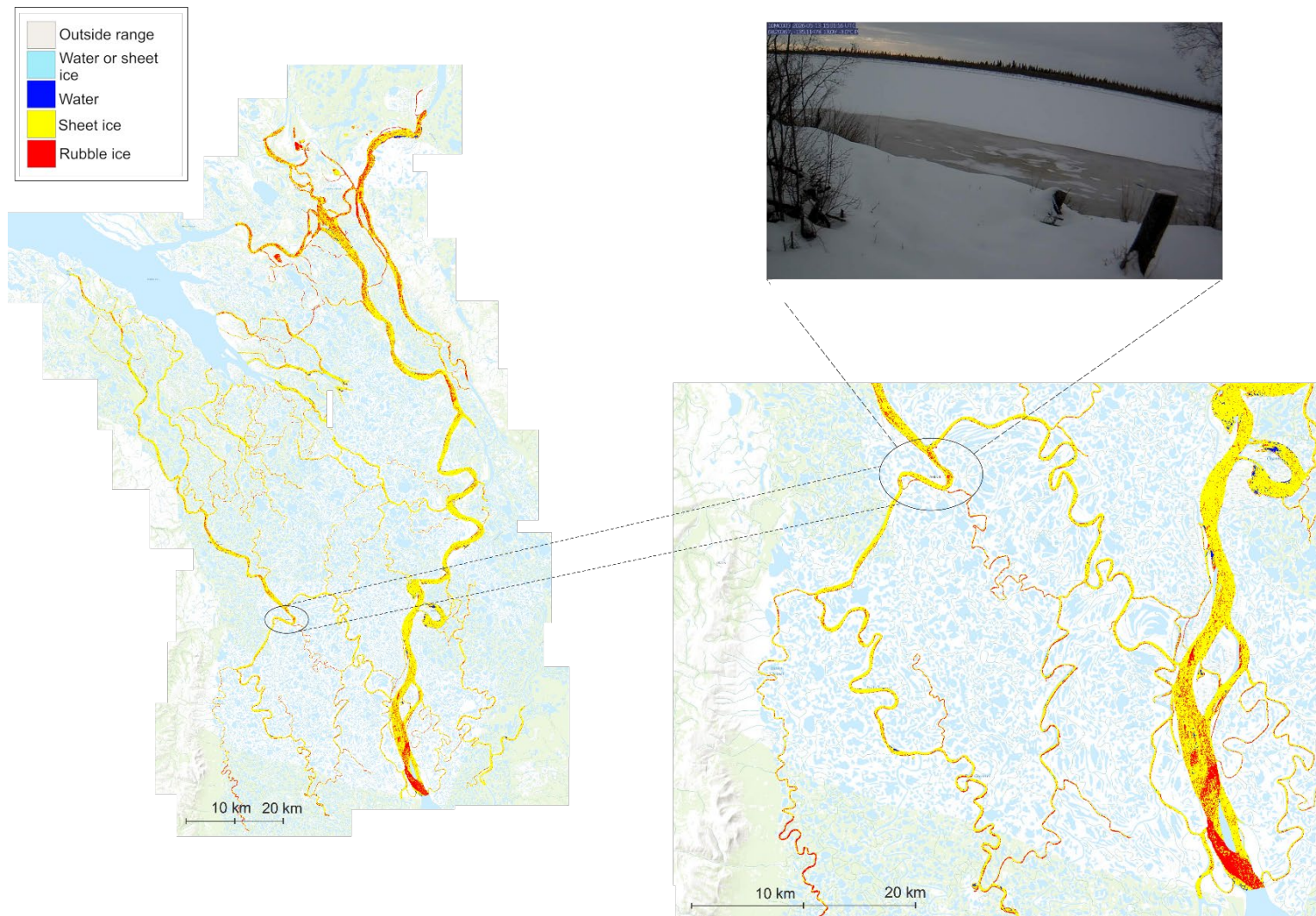
Appendix A: River Ice Imagery



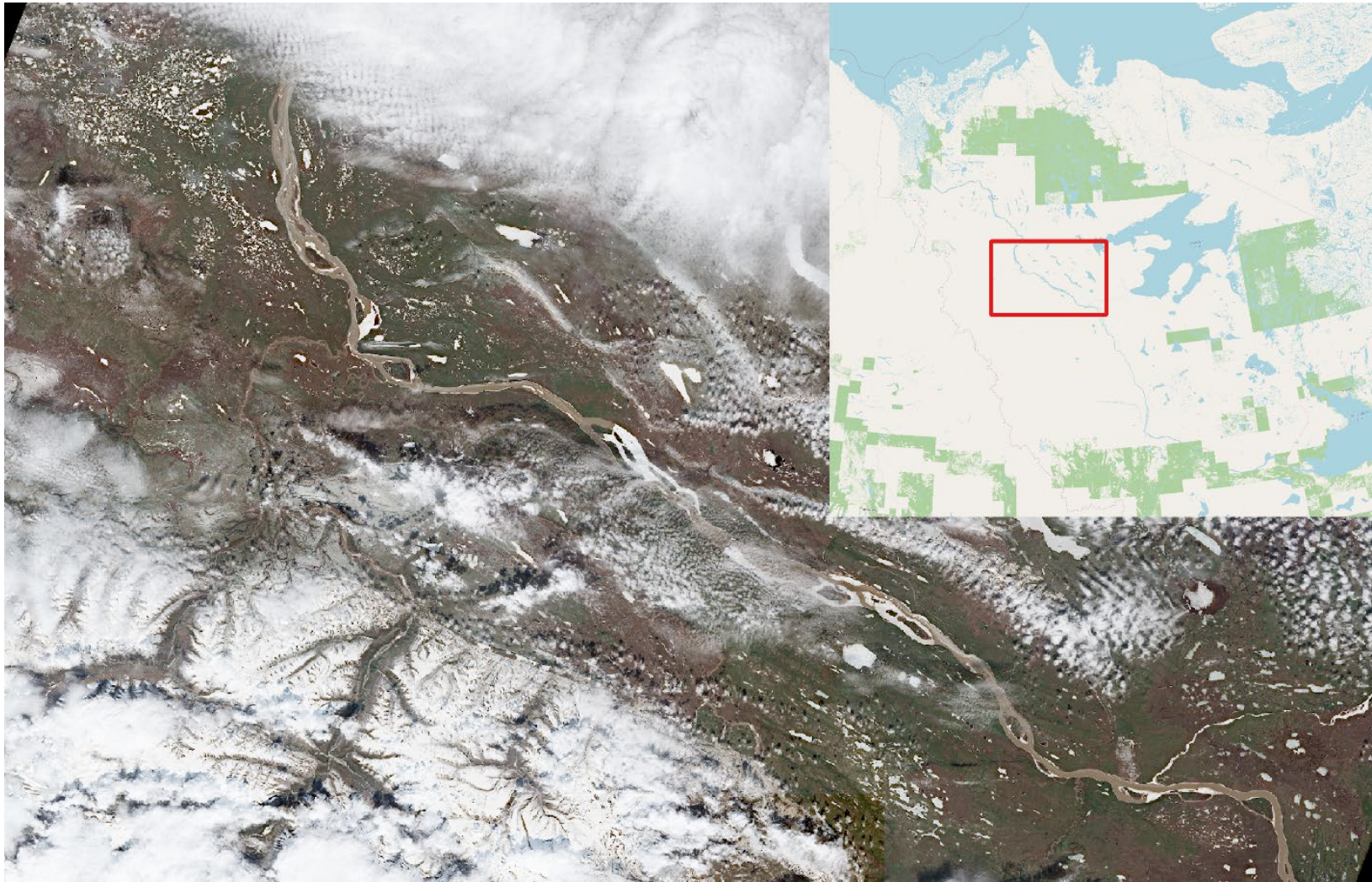
Above - Classified river ice imagery (30m resolution RCM image; captured on 12 May 2026 at 9:35 MDT) showing the Mackenzie River between Tree River and Tsiigehtchic, the Peel River, and portions of the Beaufort Delta. The classified river ice shows predominantly intact ice (yellow) and rubble ice (red), along with some open water sections upstream of Tsiigehtchic and along the Peel. The RCM image is courtesy of the federal government's Government Operations Centre. The river ice classification was completed using the IceBC algorithm.



Above - Classified river ice imagery (30m resolution RCM images; captured on 12 May 2026 at 19:30 and 20:02 MDT) covering the Mackenzie River (extending 160 km upstream of Tulita and 115 km downstream of Tulita) and a 55 km reach along the Great Bear River. The classified river ice shows predominantly open water (blue) along the Mackenzie River with some remaining rubble ice (red). The RCM image is courtesy of the federal government's Government Operations Centre. The river ice classification was completed using the IceBC algorithm.



Above - Classified river ice imagery (30m resolution RCM images; captured on May 12 at 20:35 MDT) covering the Mackenzie River Delta downstream of Horseshoe Bend. Classified image shows intact ice (yellow) near Aklavik and throughout the delta. The image is courtesy of the federal government's Government Operations Centre. The river ice classification was completed using the IceBC algorithm.



Optical satellite imagery of the Mackenzie River between Tulita and Fort Good Hope.
Image: Copernicus Sentinel-2
Image acquired: May 12, 2026 at 14:08 MDT.

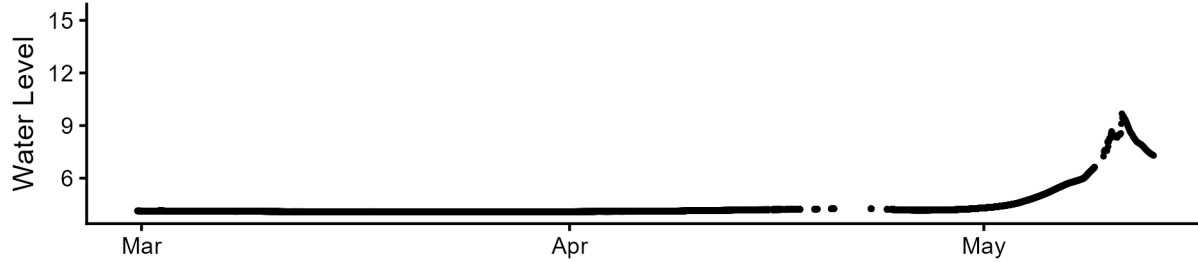
Above – optical satellite imagery acquired on May 12 at 14:08 MDT show river ice conditions on the Mackenzie River between Tulita and Fort Good Hope. The ice has largely passed with a few sections of ice cover remaining.

Appendix B: High resolution and historic water level plots

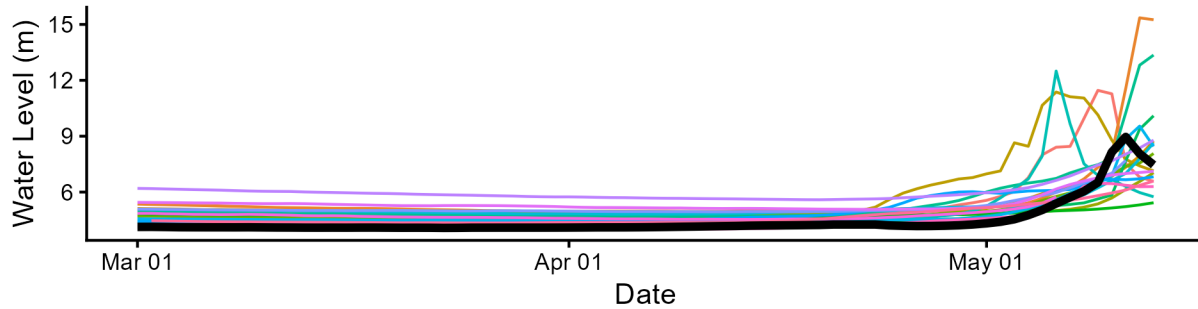
Mackenzie River At Norman Wells (10KA001)

MACKENZIE RIVER AT NORMAN WELLS (10KA001)

2026 Water Levels (5 minute resolution)



Historic Daily Water Levels

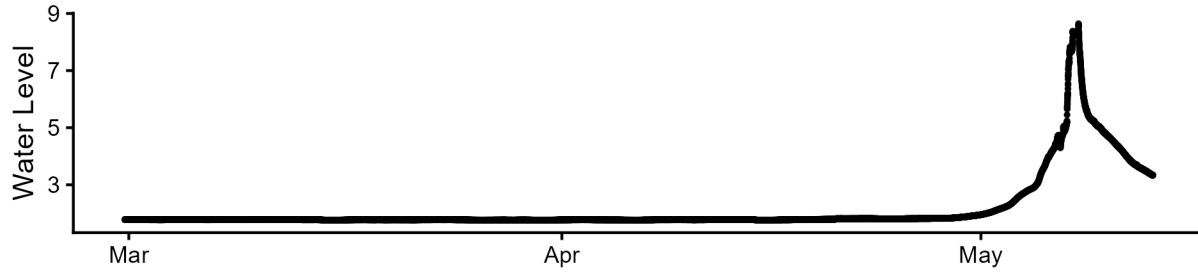


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years.

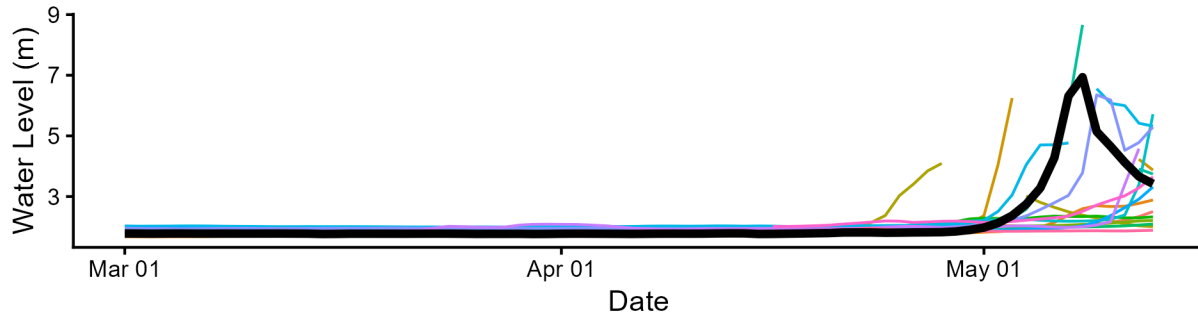
Arctic Red River Near The Mouth (10LA002)

ARCTIC RED RIVER NEAR THE MOUTH (10LA002)

2026 Water Levels (5 minute resolution)



Historic Daily Water Levels

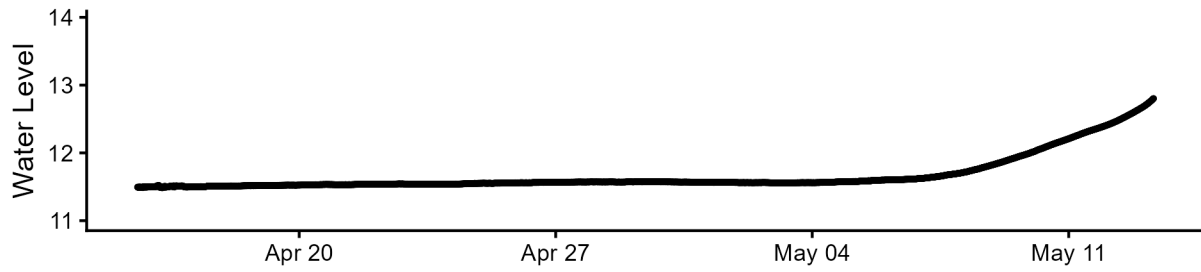


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years.

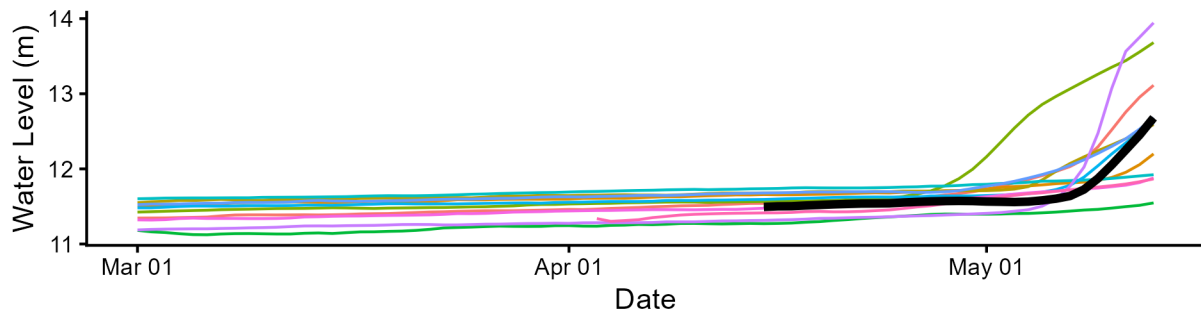
Mackenzie River (East Channel) At Inuvik (10LC002)

MACKENZIE RIVER (EAST CHANNEL) AT INUVIK (10LC002)

2026 Water Levels (5 minute resolution)



Historic Daily Water Levels

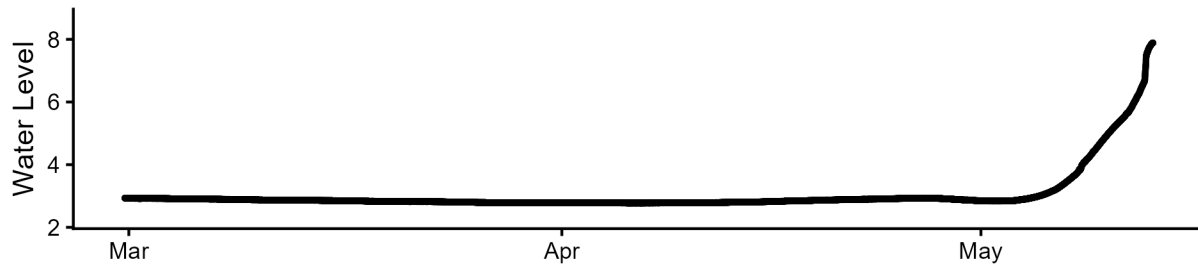


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years.

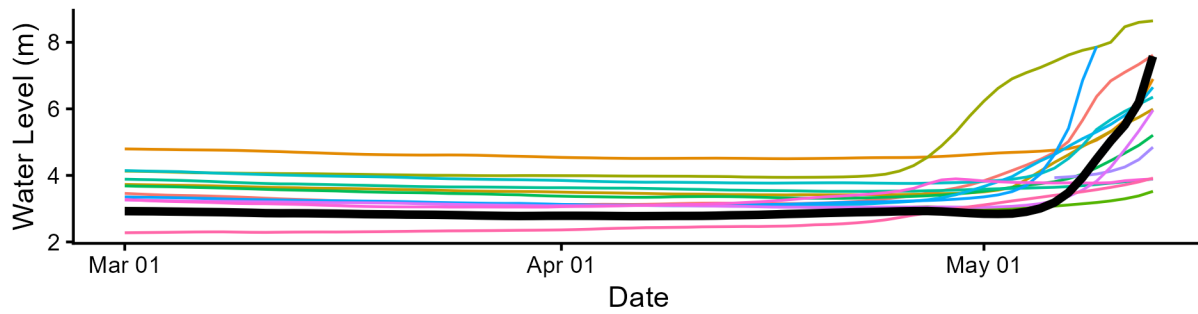
Mackenzie River At Arctic Red River (10LC014)

MACKENZIE RIVER AT ARCTIC RED RIVER (10LC014)

2026 Water Levels (5 minute resolution)



Historic Daily Water Levels

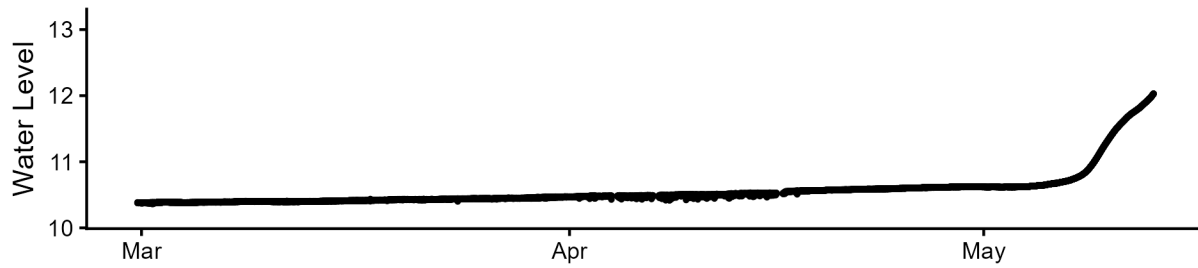


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years.

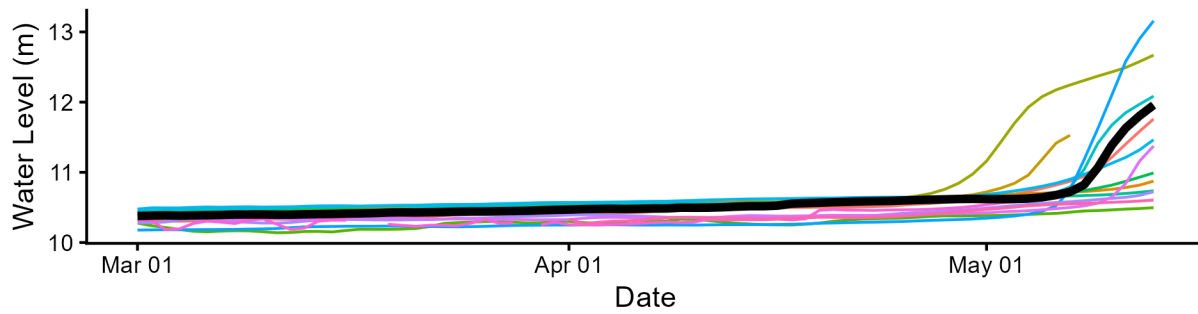
Mackenzie River (Peel Channel) Above Aklavik (10MC003)

MACKENZIE RIVER (PEEL CHANNEL) ABOVE AKLAVIK (10MC003)

2026 Water Levels (5 minute resolution)



Historic Daily Water Levels

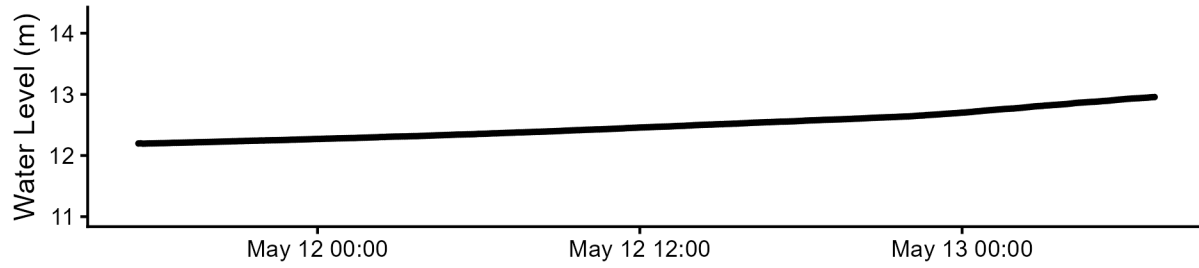


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years.

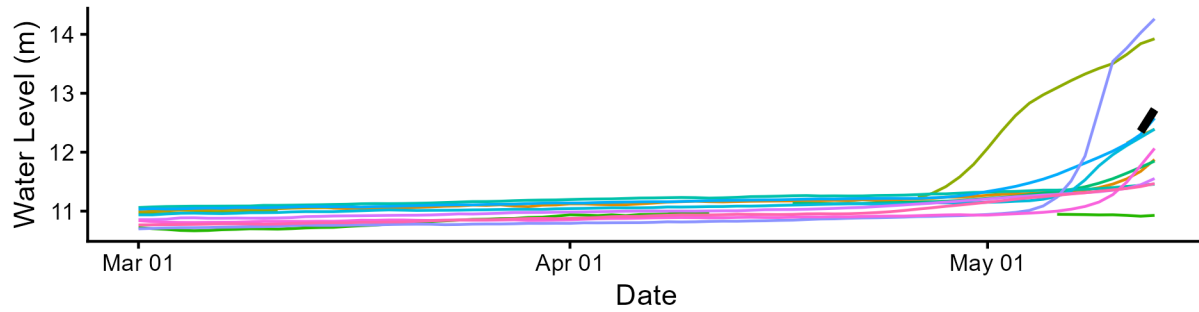
Mackenzie River (Middle Channel) Below Raymond Channel (10MC008)

MACKENZIE RIVER BELOW RAYMOND CHANNEL (10MC008)

2026 Water Levels (5 minute resolution)



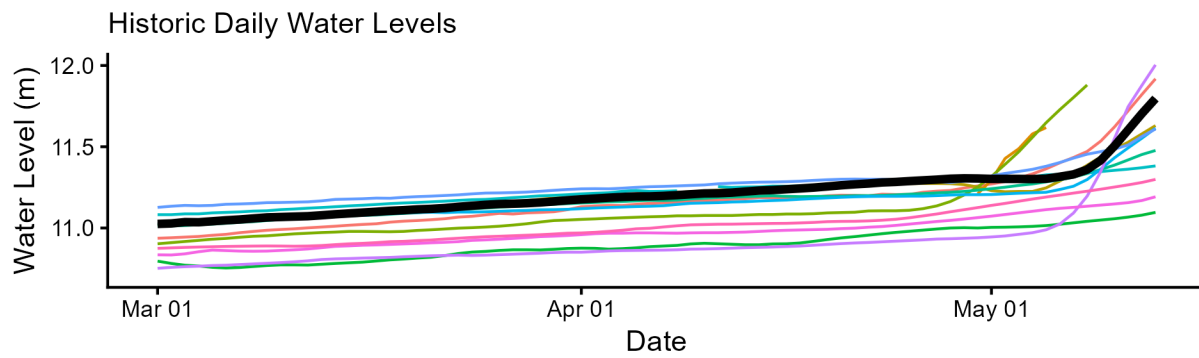
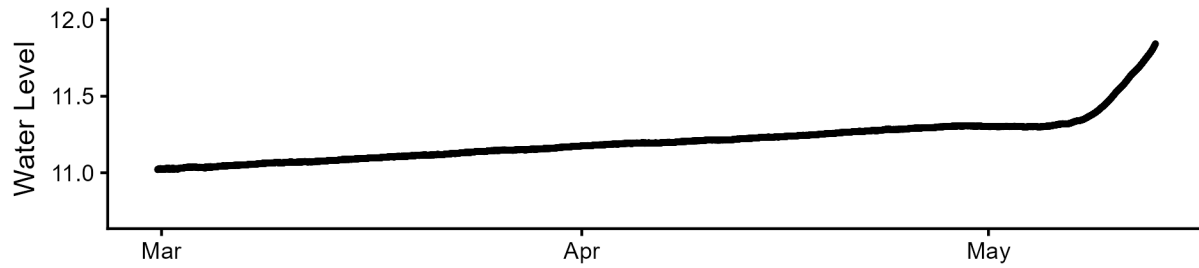
Historic Daily Water Levels



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 (Napoiaik Channel) Above Shallow Bay (10MC023)

MACKENZIE RIVER (NAPOIAK CHANNEL) ABOVE SHALLOW BAY (1
2026 Water Levels (5 minute resolution)

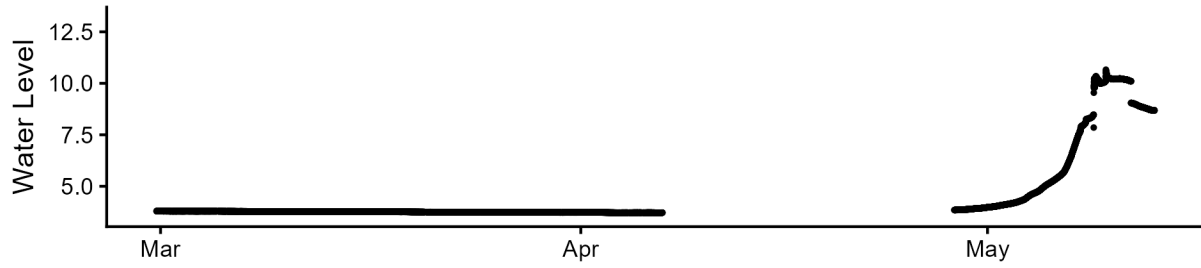


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years.

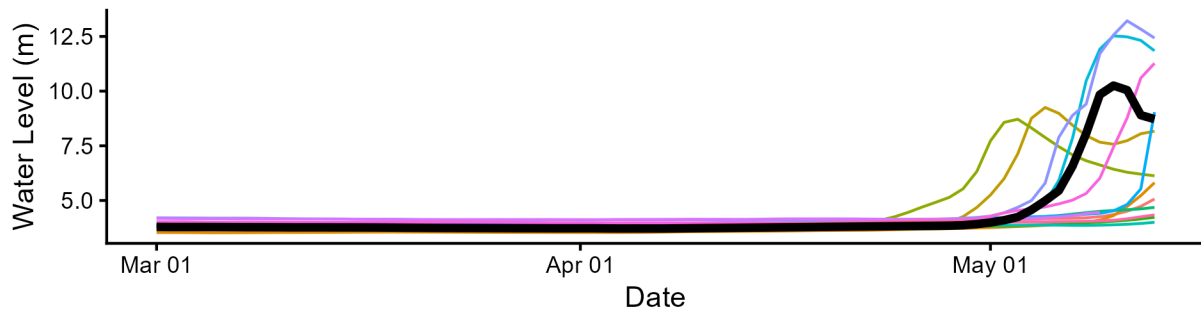
Peel River Above Fort Mcpherson (10MC002)

PEEL RIVER ABOVE FORT MCPHERSON (10MC002)

2026 Water Levels (5 minute resolution)



Historic Daily Water Levels



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.