



NWT Water Monitoring
Spring Break-Up Report
May 4, 2026 at 14:00

Surveillance des eaux aux TNO
Rapport sur la débâcle
printanière
4 mai 2026 à 14 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 ECC Snow Survey Bulletin and 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:

- River ice on the Liard River has broken up. Break-up occurred at Fort Liard on May 2, and advanced downstream. Rubble ice is now moving at the mouth of the Liard River. Levels at the mouth rose 1.3 m in the last 24 hours (within average range). The Fort Liard gauge was lost to ice on May 1.
- On the Hay River, ice is primarily melting in place and remains intact but weakening north of the border. The ice front is still south of the NWT border. Levels remain at record lows near the Town of Hay River, with the spring rise tracking 12 days later than last year.
- On the Mackenzie River, the ice remains intact downstream of Fort Simpson and upstream at Strong Point, and is degrading thermally. Sections of open water are visible at Mills Lake and near the Strong Point gauge.
- Above-average temperatures have been experienced over these regions since late April. Temperatures are expected to remain near or slightly above average this week with no significant precipitation.

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 le Bulletin sur les relevés nivométriques et l'Aperçu des eaux printanières du MECC, disponibles 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 s'est produite sur la rivière Liard le 2 mai, à la hauteur de Fort Liard, puis a progressé en aval. Des fragments de glace se déplacent maintenant à l'embouchure de la rivière Liard. Le niveau de l'eau à l'embouchure a augmenté de 1,3 m au cours des 24 dernières heures (ce qui reste dans la fourchette moyenne). La jauge de Fort Liard a été emportée par la glace le 1^{er} mai.
- Sur la rivière Hay, la glace fond principalement sur place et reste intacte, mais sa structure s'affaiblit au nord de la frontière. Le front glaciaire se trouve toujours au

sud de la frontière des TNO. Les niveaux d'eau restent à des niveaux historiquement bas près de la ville de Hay River, la crue printanière ayant 12 jours de retard par rapport à l'année dernière.

- Sur le fleuve Mackenzie, la glace reste intacte en aval de Fort Simpson et en amont de Strong Point, et se dégrade sous l'effet de la chaleur. Des zones d'eau libre sont visibles à la hauteur du lac Mills et près de la jauge de Strong Point.
- Ces régions connaissent des températures supérieures à la moyenne depuis fin avril. Les températures devraient rester proches de la moyenne ou légèrement supérieures à celle-ci cette semaine, sans précipitations significatives.

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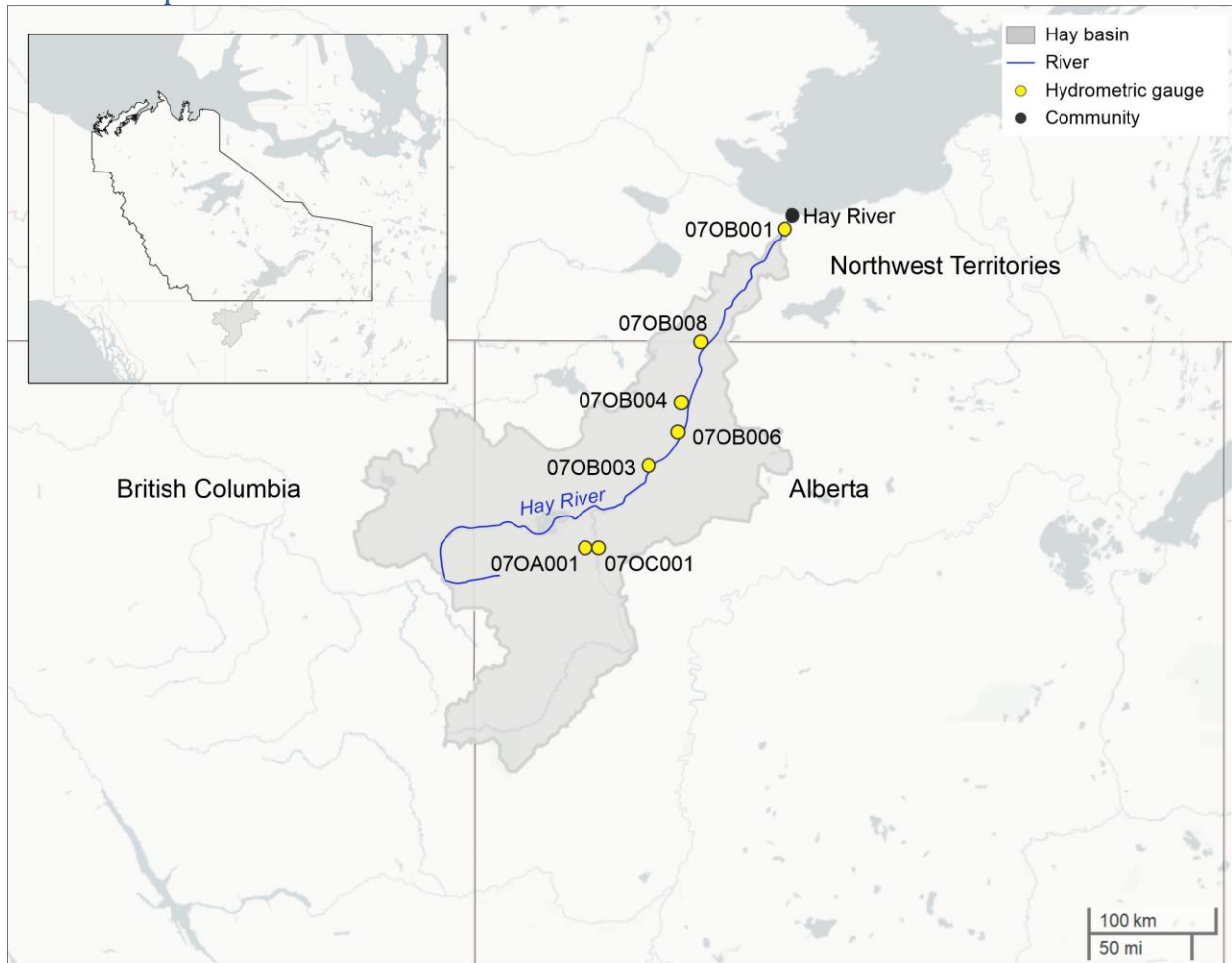
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Hay River

Current Status:

- Ice continues to degrade thermally along the Hay River (ice is primarily melting in place).
 - River ice along the mainstem of the Hay River north of the border is still intact but weakening.
 - The ice front is still south of border
- Water levels are rising gradually on the Hay River at the border, but remain well below average for this time of year. Levels on the Hay River near the Town of Hay River are at a record low for this time of year.
- In the Hay River Basin, spring temperatures were cooler than average through most of March and April, then warmed to slightly above average conditions during the week of April 26-May 3. Temperatures are forecasted to remain near or slightly above average over the coming week with no significant precipitation events affecting water levels.
- Refer to the [Town of Hay River website](#) for the most up-to-date information, as well as webcam images of current conditions.

Station Map:



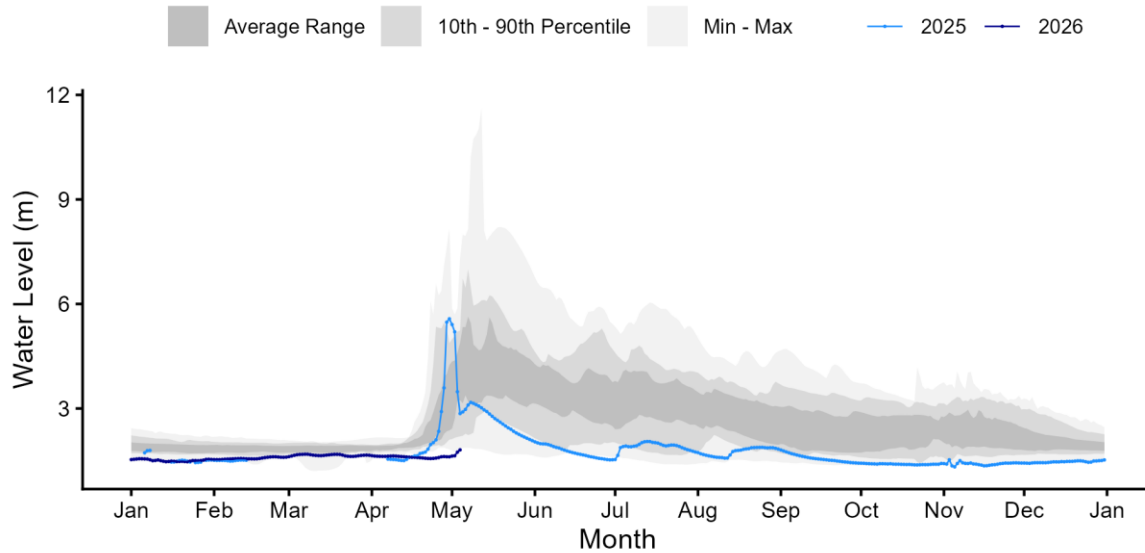
Above - Map of hydrometric stations in the Hay River basin. Some of these stations (and their station numbers) are shown in the water level plots below.

Hydrometric Data:

Hay River near Hay River [07OB001]

HAY RIVER NEAR HAY RIVER (07OB001)

Record Length: 25 years | Period of Record: 2002-2026

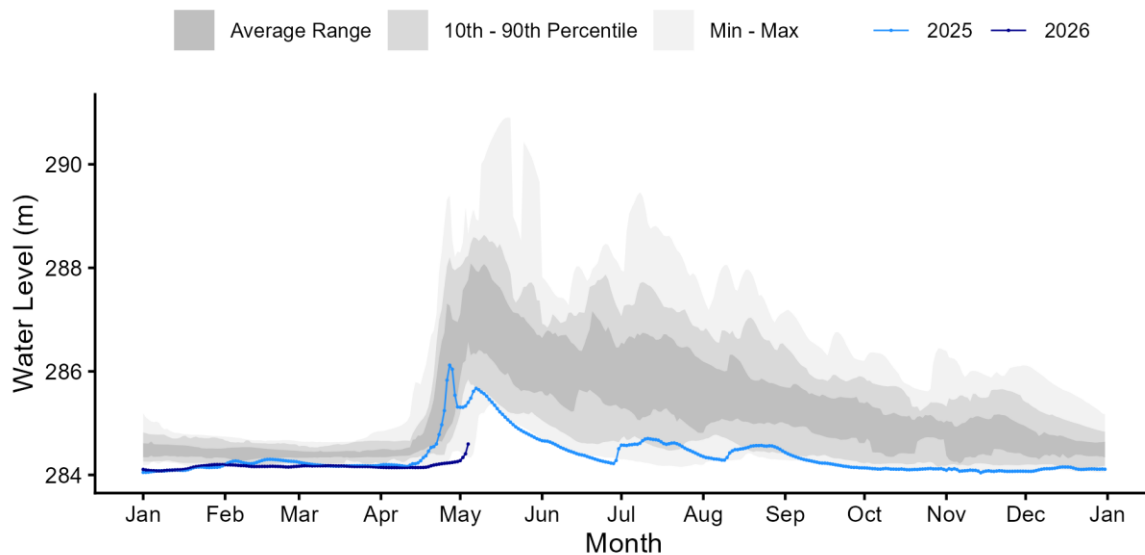


Above - Water level data for Hay River near Hay River [07OB001]. Daily average levels for the previous year also are shown here.

Hay River near Alta/Nwt Boundary [07OB008]

HAY RIVER NEAR ALTA/NWT BOUNDARY (07OB008)

Record Length: 36 years | Period of Record: 1986-1998; 2004-2026

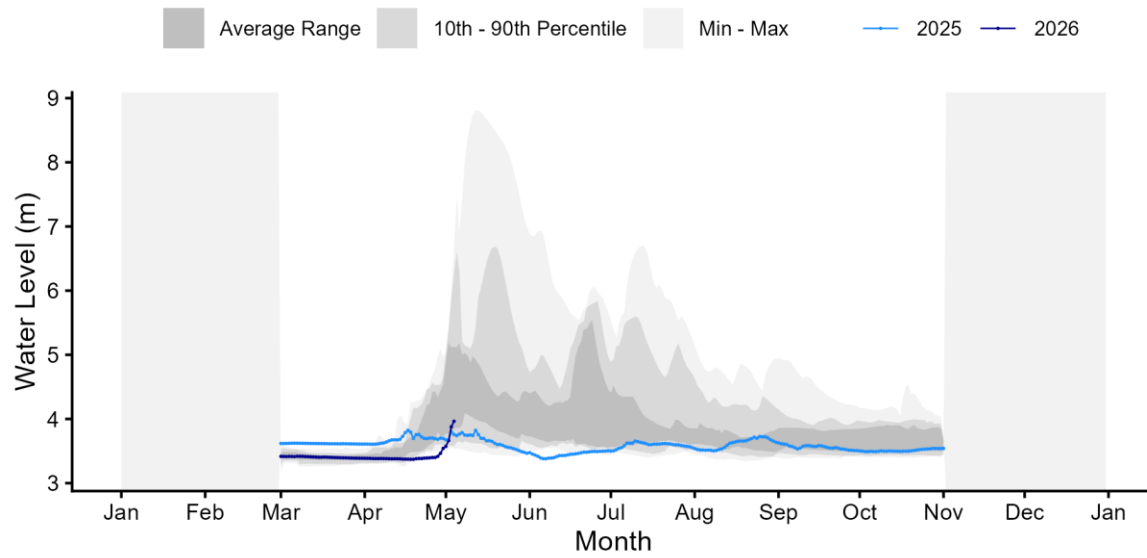


Above - Water level data for Hay River near Alta/Nwt Boundary [07OB008]. Daily average levels for the previous year also are shown here.

Steen River near Steen River [070B004]

STEEN RIVER NEAR STEEN RIVER (070B004)

Record Length: 15 years | Period of Record: 2012-2026



Above - Water level data for Steen River near Steen River [070B004]. Daily average levels for the previous year also are shown here.

Gauge photos:

Hay River near Hay River [070B001]



Above - Hay River near the Town of Hay River [070B001] hydrometric gauge photo from May 4 at 13:01. Photo courtesy of Water Survey of Canada and GNWT.

Hay River near Alta/Nwt Boundary [070B008]



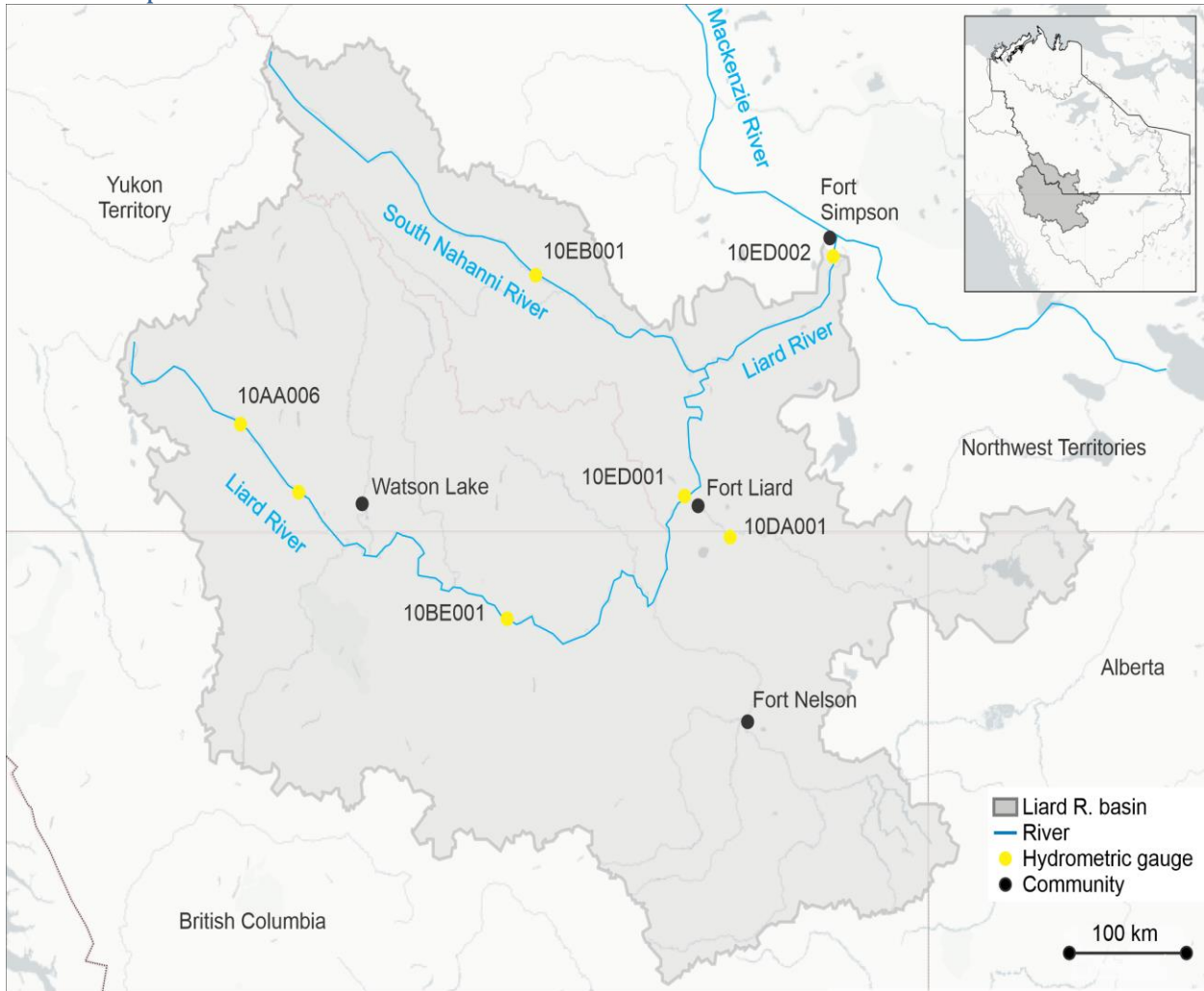
Above - Hay River near Alta/Nwt Boundary [070B008] hydrometric gauge photo from May 4 at 13:01. Photo courtesy of Water Survey of Canada and GNWT.

Liard River

Current Status:

- Over the past 2-3 days, the ice break-up on the Liard River has advanced significantly within the NWT.
 - At Fort Liard, the river ice broke up by the morning of May 2. As of May 4 at 14:00, ice is flowing past the community and shore ice is along the banks. From local reports, both the Liard and Petitot Rivers are flowing well at Fort Liard. Localized jamming reported near the Muskeg River confluence on May 2 has cleared.
 - Local reports indicate the Liard River broke between Nahanni Butte and Fort Simpson on May 3, with localized jamming interspersed with open water sections.
 - Break-up progressed downstream, reaching the mouth of the Liard River on the morning of May 4. Rubble ice is moving into the mouth of the Liard River into intact Mackenzie River ice.
- Water levels:
 - Water levels on the Liard River at the mouth rose gradually over the weekend and have risen 1.3 m in the past 24 hrs. The water level is still within the average range for this time of year.
 - The gauge at Fort Liard was taken out by ice on May 1 (Friday evening) and is no longer transmitting data. The water level has remained relatively stable over May 2-4 (as seen in gauge photos and from local reports).
 - The water level recorded at the operational gauge on the Liard River at Lower Crossing (~300 km upstream of Fort Liard, in BC) is slowly decreasing. Optical imagery show long stretches of open water upstream of Fort Liard, with some ice sections.
 - The South Nahanni River gauge near the Liard River confluence is no longer transmitting data, but the gauge above Virginia Falls is still operational.
- In the Liard River Basin, spring temperatures were below average in March and warmed to average conditions during April. During the week of April 26-May 3, the basin warmed rapidly relative to historical conditions, particularly in the southeast of the basin near Fort Nelson, B.C. The rapid rate of warming is expected to slow with temperatures remaining above average this week.

Station Map:



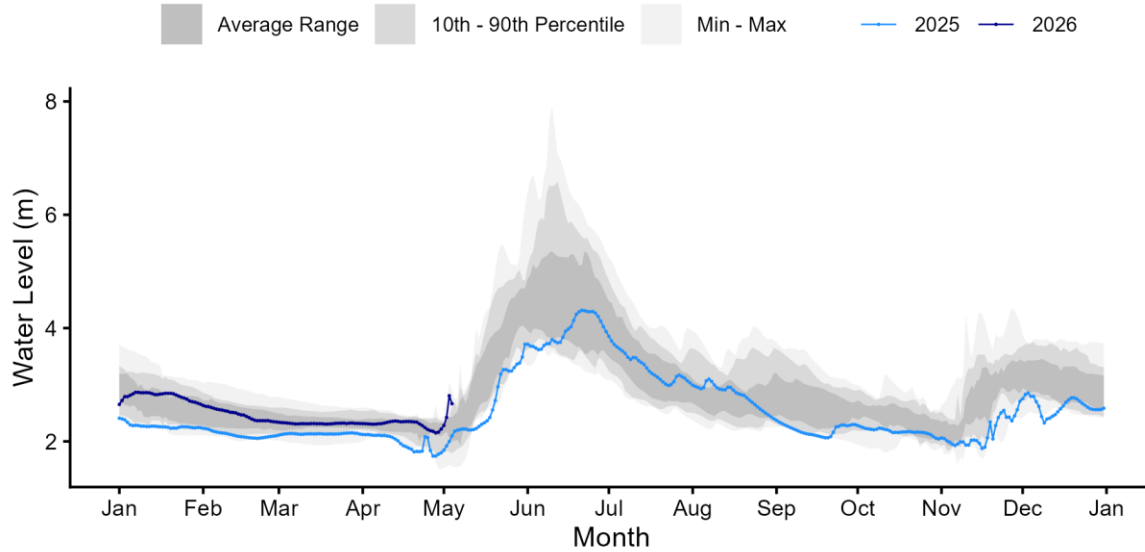
Above: Map of hydrometric stations in the Liard River basin. Some of these stations (and their station numbers) are shown in the water level plots below.

Hydrometric Data:

Liard River at Upper Crossing [10AA001]

LIARD RIVER AT UPPER CROSSING (10AA001)

Record Length: 16 years | Period of Record: 2011-2026

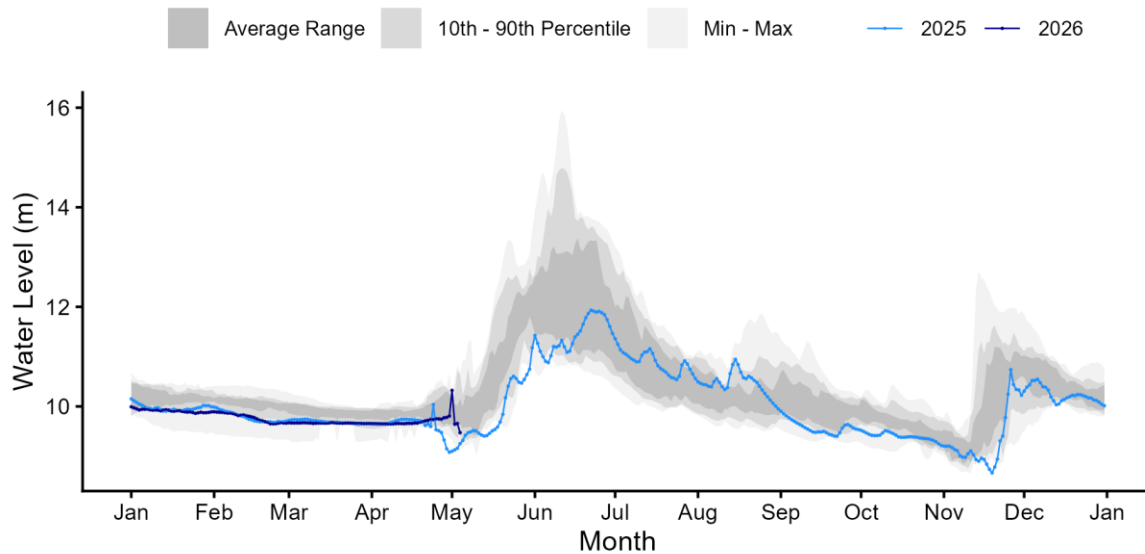


Above - Water level data for Liard River at Upper Crossing [10AA001]. Daily average levels for the previous year also are shown here.

Liard River at Lower Crossing [10BE001]

LIARD RIVER AT LOWER CROSSING (10BE001)

Record Length: 16 years | Period of Record: 2011-2026

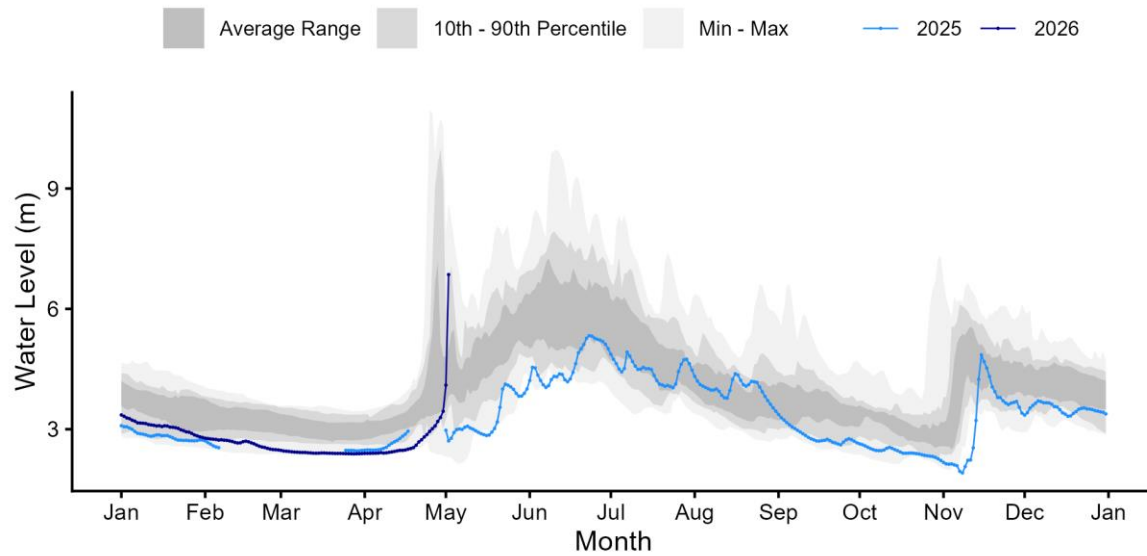


Above - Water level data for Liard River at Lower Crossing [10BE001]. Daily average levels for the previous year also are shown here.

Liard River at Fort Liard [10ED001]

LIARD RIVER AT FORT LIARD (10ED001)

Record Length: 25 years | Period of Record: 2002-2026

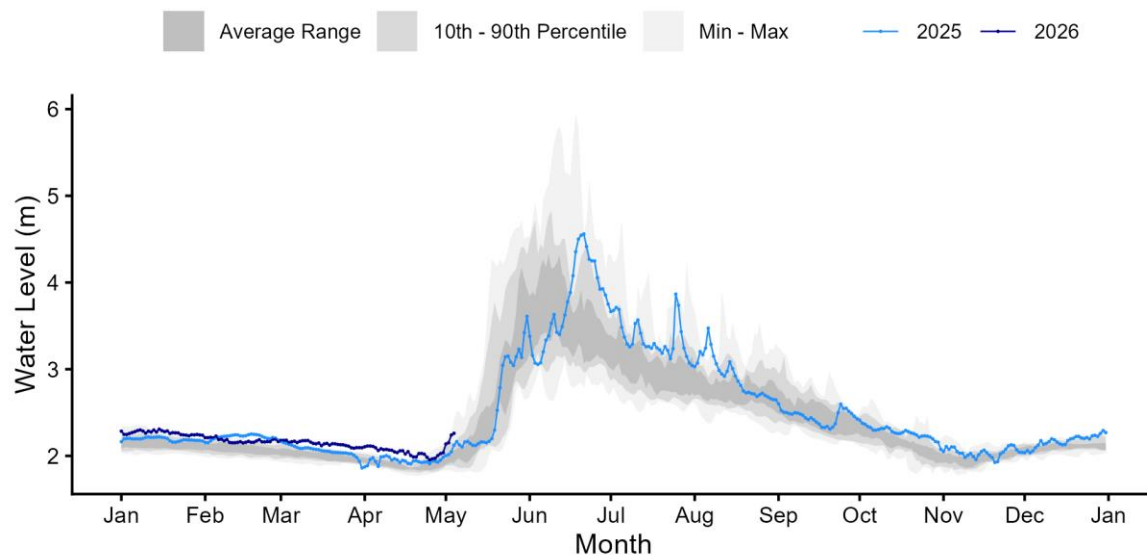


Above - Water level data for Liard River at Fort Liard [10ED001]. Daily average levels for the previous year also are shown here. Note - this sensor was affected by ice on May 1 and is no longer transmitting data. The sharp rise in water level on May 1 should be interpreted with caution.

South Nahanni River above Virginia Falls [10EB001]

SOUTH NAHANNI RIVER ABOVE VIRGINIA FALLS (10EB001)

Record Length: 21 years | Period of Record: 2002-2019; 2024-2026

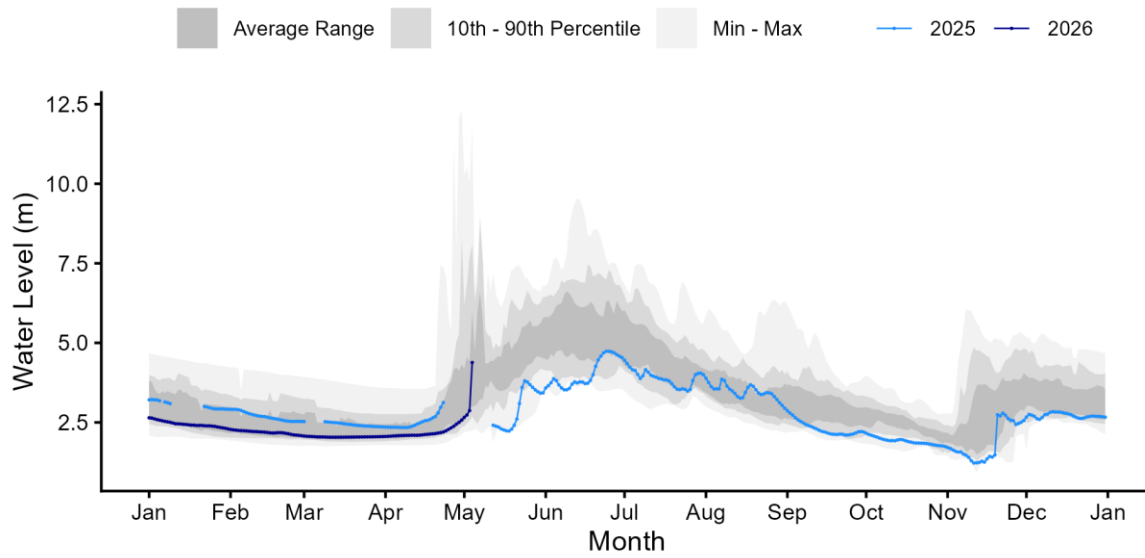


Above - Water level data for South Nahanni River above Virginia Falls [10EB001]. Daily average levels for the previous year also are shown here.

Liard River near the Mouth [10ED002]

LIARD RIVER NEAR THE MOUTH (10ED002)

Record Length: 25 years | Period of Record: 2002-2026



Above - Water level data for Liard River near the Mouth [10ED002]. Daily average levels for the previous year also are shown here.

Gauge photos:

Liard River at Fort Liard [10ED001]

10ED001_FortLiard 2026-05-04 20:01:14 UTC
60.24140, -123.47551 13.7V 26.0°C P



Above - Liard River at Fort Liard [10ED001] hydrometric gauge photo from May 4 at 14:01. Photo courtesy of Water Survey of Canada and GNWT.

Liard River Near the Mouth [10ED002]

10ED002_LiardMouth 2026-05-04 19:01:14 UTC
61.74267, -121.22792 12.4V 19.5°C P



Above - Liard River near the mouth [10ED002] hydrometric gauge photo from May 4 at 13:01. Photo courtesy of Water Survey of Canada and GNWT.

Confluence of Mackenzie and Liard Rivers



Above – A photo from Fort Simpson, taken on May 4 at 11:00 MDT, looking upstream on the Mackenzie River, with the Liard River ice coming in on the right side. Photo courtesy of Laurie Nadia.

Mackenzie River

Current Status:

- River ice:
 - River ice on the Mackenzie River downstream of Fort Simpson is still intact.
 - Further upstream of Fort Simpson, the ice is still intact (weak but in place) with small sections of open water (confirmed from gauge photos and old optical satellite imagery on May 2 and May 3).
 - There are some open water sections at Mills Lake, just downstream of Great Slave Lake outlet (as seen on RCM satellite imagery).
- Water Levels:
 - While water levels on the Mackenzie River are rising gradually under the ice, they generally remain well below historical averages.
 - Great Slave Lake levels have remained relatively stable, rising only ~1 cm in the last three days.
 - The water level rose 10 cm at Fort Providence in the last three days and is now considered average for this time of year.
- Above average weather has been experienced in Fort Simpson since April 28. Temperatures are forecasted to remain above average for the upper Mackenzie area.

Station Map:



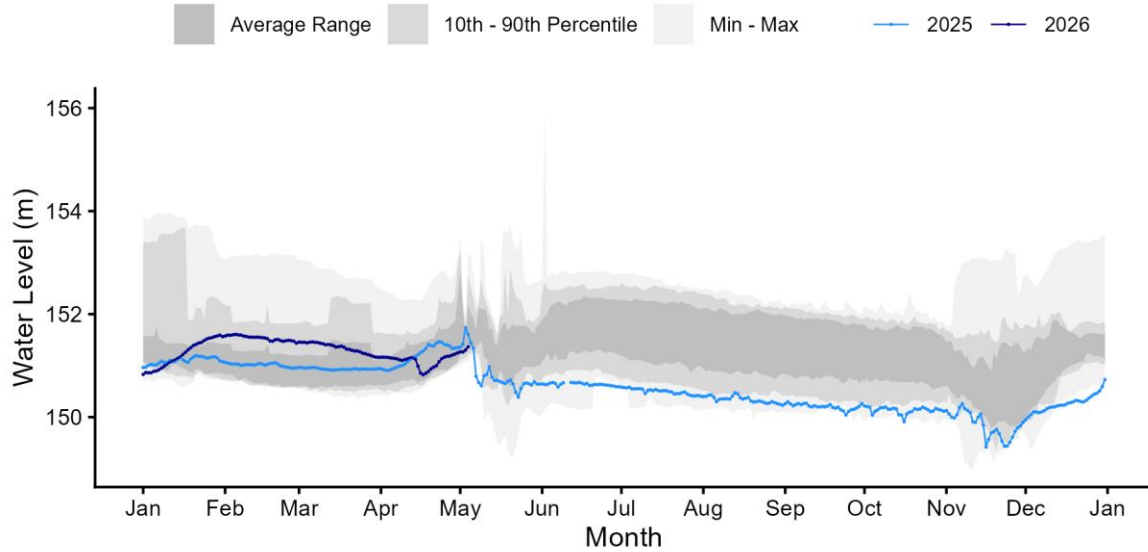
Above: Map of hydrometric on the Mackenzie River. Some of these stations (and their station numbers) are shown in the water level plots below.

Hydrometric Data:

Mackenzie River near Fort Providence [10FB001]

MACKENZIE RIVER NEAR FORT PROVIDENCE (10FB001)

Record Length: 36 years | Period of Record: 1979-1995; 1998; 2007-2012; 2015-2026

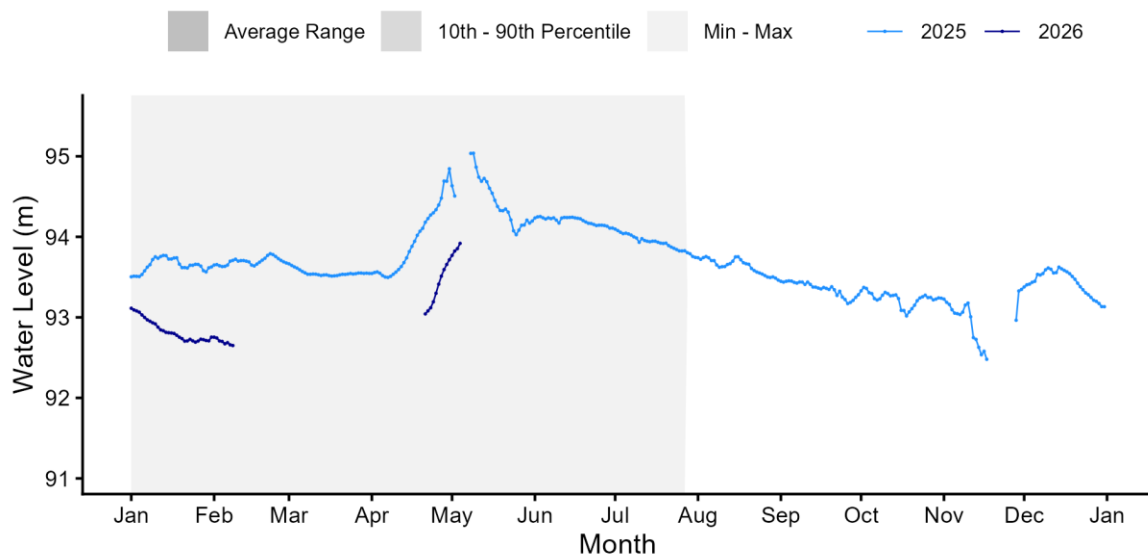


Above - Water level data for Mackenzie River near Fort Providence [10FB001]. Daily average levels for the previous year also are shown here.

Mackenzie River at Jean Marie River [10FB007]

MACKENZIE RIVER AT JEAN MARIE RIVER (10FB007)

Record Length: 3 years | Period of Record: 2024-2026

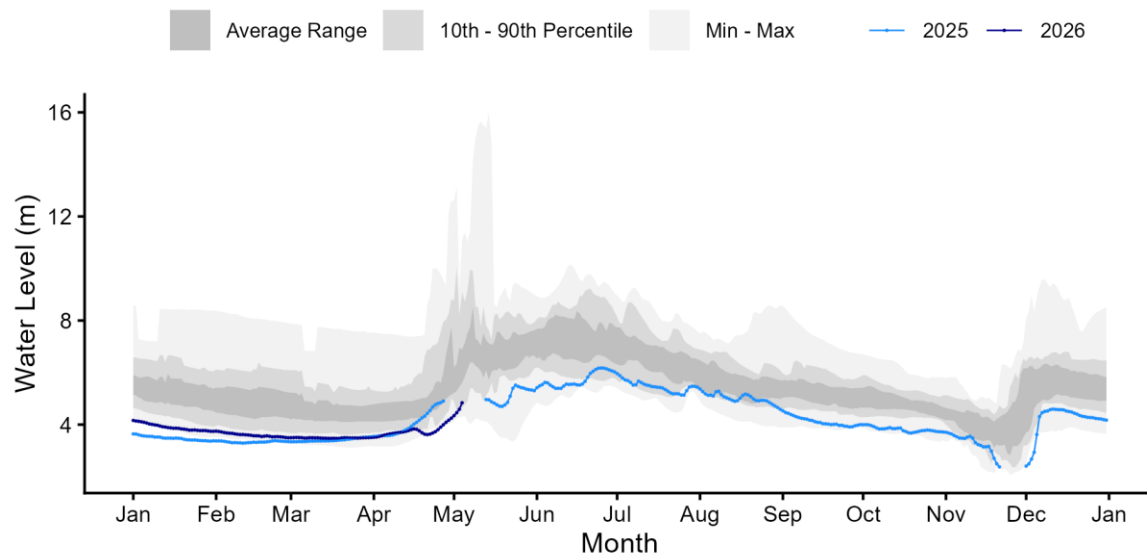


Above - Water level data for Mackenzie River at Jean Marie River [10FB007]. Daily average levels for the previous year also are shown here.

Mackenzie River at Fort Simpson [10GC001]

MACKENZIE RIVER AT FORT SIMPSON (10GC001)

Record Length: 26 years | Period of Record: 2001-2026



Above - Water level data for Mackenzie River at Fort Simpson [10GC001]. Daily average levels for the previous year also are shown here.

Gauge photos:

Mackenzie River at Strong Point [10FB006]

10FB006_MackStrongPoint 2026-05-04 19:01:17 UTC
61.81649, -120.79194 14.1V 19.0°C P



Above – Mackenzie River at Strong Point [10FB006] hydrometric gauge photo from May 4 at 13:01. Photo courtesy of Water Survey of Canada and GNWT.

Mackenzie River at Fort Simpson [10GC001]

10GC001_MackSimpson 2026-05-04 19:01:14 UTC
61.86799, -121.35835 14.3V 27.5°C P



Above – Mackenzie River at Fort Simpson [10GC001] hydrometric gauge photo from May 4 at 13:01. Photo courtesy of Water Survey of Canada and GNWT. Note – gauge photos are automatically edited for privacy.

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. Forecast data is also shown on the historical plot as a dashed line, to indicate how forecasted conditions are relative to normal.

In the **Hay River Basin**, spring temperatures were cooler than average through most of March and April, then warmed to slightly above average conditions during the week of April 26-May 3.

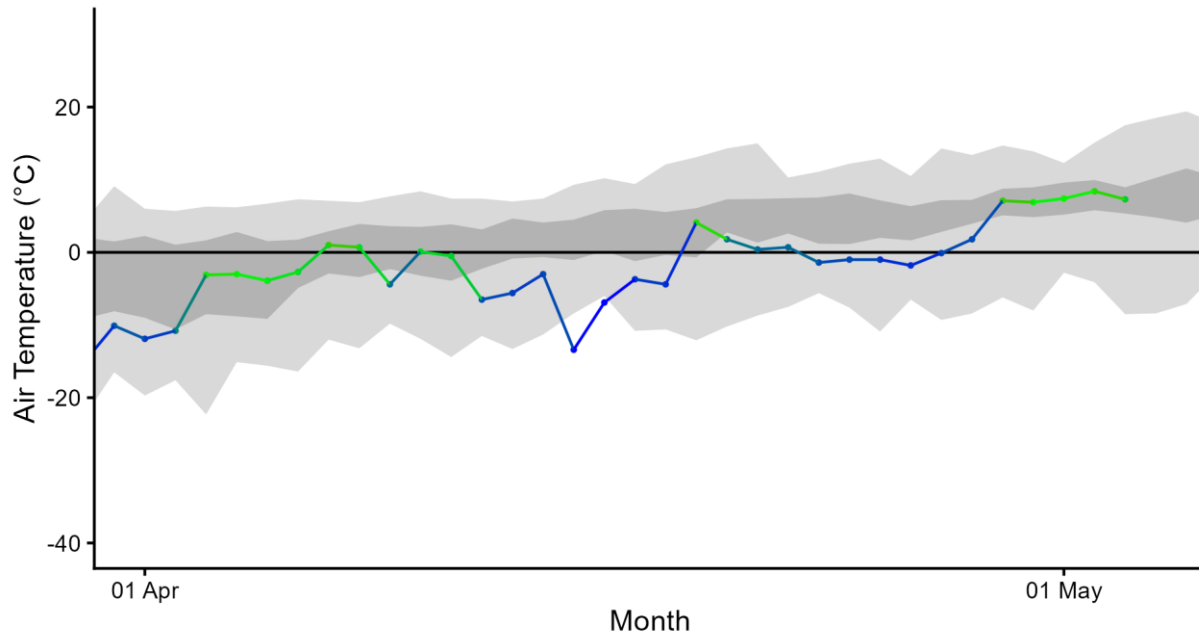
In the **Liard River Basin**, spring temperatures were below average in March and warmed to average conditions during the month of April. During the week of April 26-May 3, the basin warmed rapidly relative to historical conditions, particularly in the southeast of the basin near Fort Nelson, B.C.

Along the Mackenzie River in the **Dehcho Region at Fort Simpson**, spring temperatures were mixed, starting off cool in early March, becoming slightly above average in early April, remaining below average for the second half of April, and warming rapidly over the week of April 26 - May 3 to above average conditions.

In the **Sahtu Region at Norman Wells**, spring temperatures were also mixed, starting cool, becoming slightly above average by early April, and finishing cool for the second half of April. Temperatures increased unusually rapidly over the week of April 26 - May 3, to above average conditions.

High Level Air Temperature

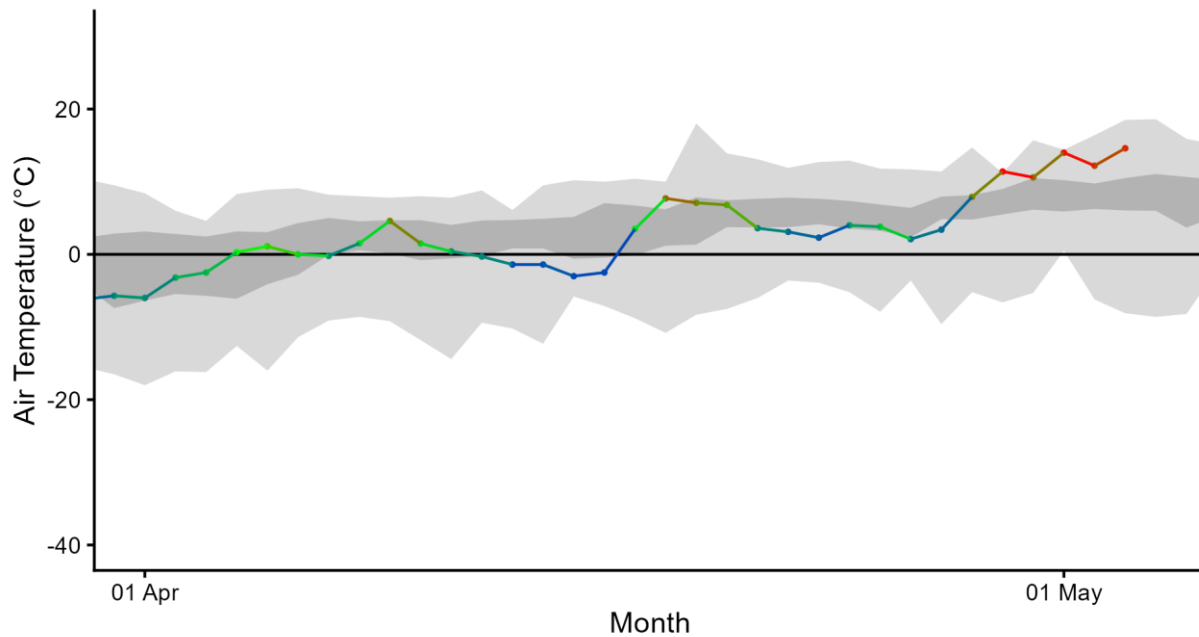
2026 High Level Daily Mean Air Temperatures



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

Fort Nelson Air Temperature

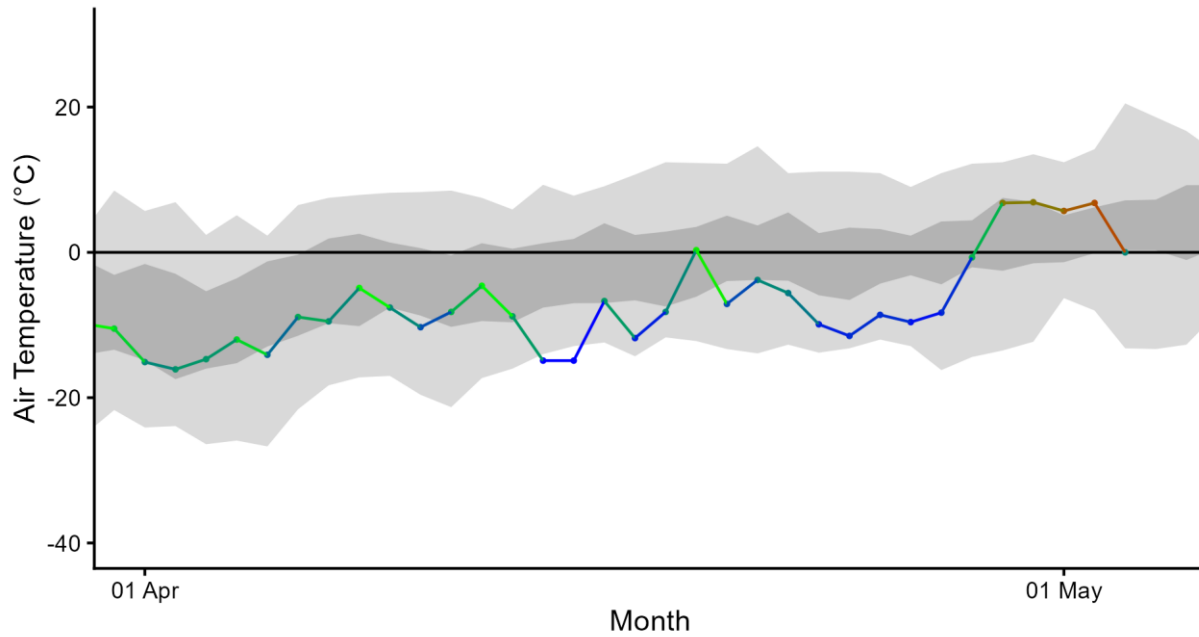
2026 Fort Nelson Daily Mean Air Temperatures



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

Hay River Air Temperature

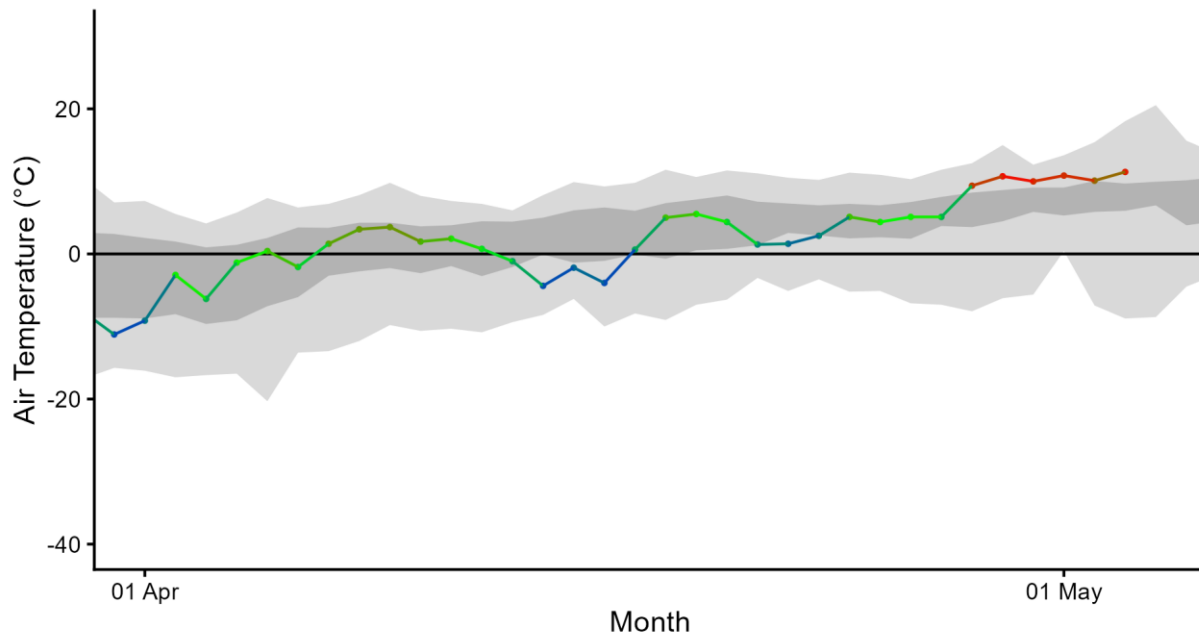
2026 Hay River Daily Mean Air Temperatures



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

Fort Liard Air Temperature

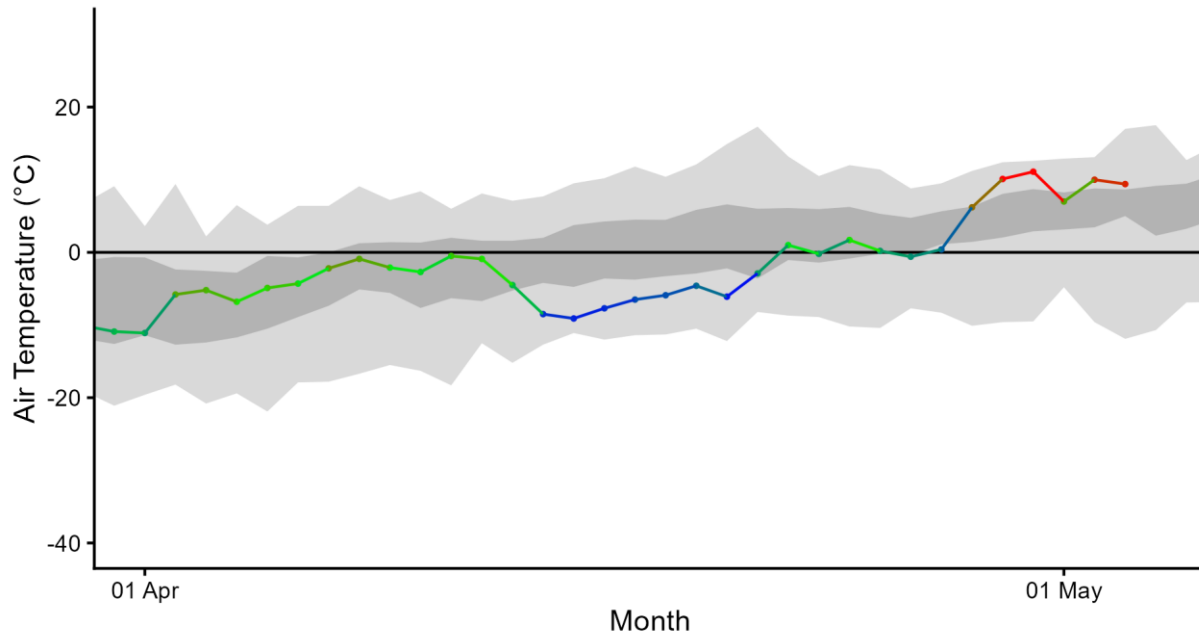
2026 Fort Liard Daily Mean Air Temperatures



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

Fort Simpson Air Temperature

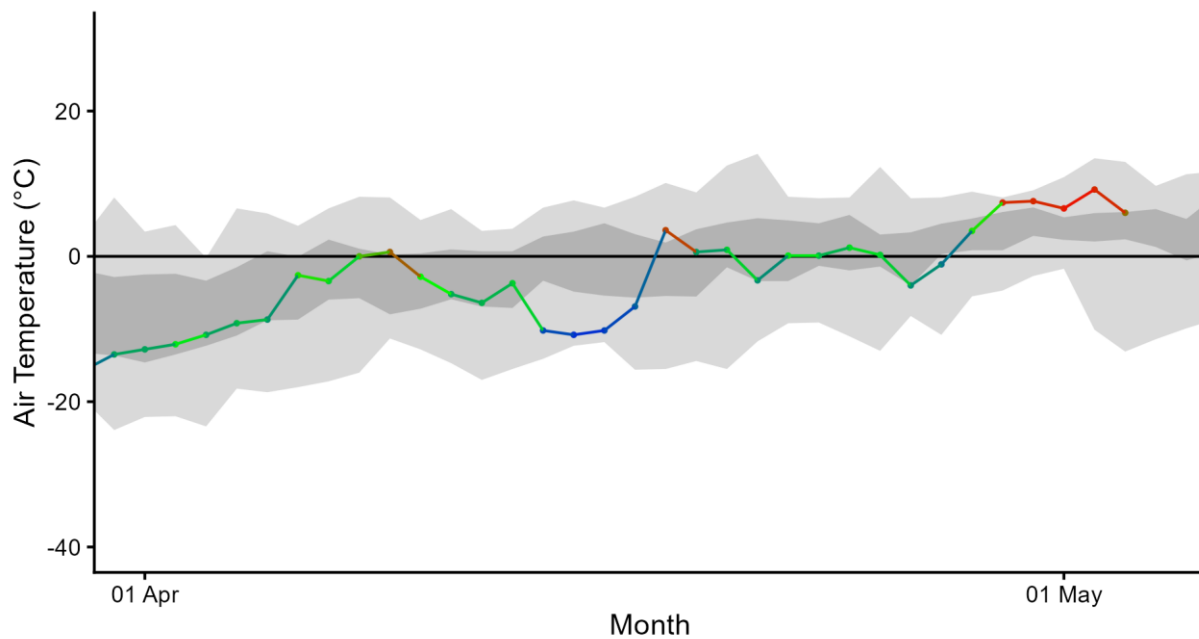
2026 Fort Simpson Daily Mean Air Temperatures



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

Sambaa K'e Air Temperature

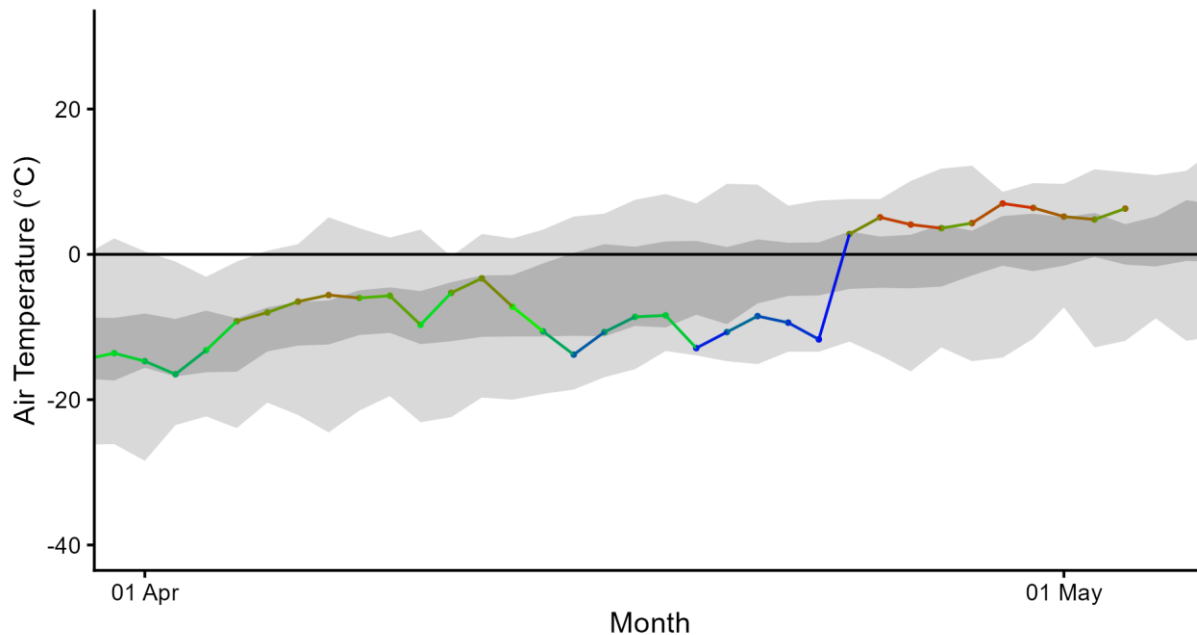
2026 Sambaa Ke Daily Mean Air Temperatures



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

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).

Weather Forecasts:

In the **Hay River Basin**, the forecast indicates temperatures near to slightly above average conditions during the week of May 4-10, with overnight lows around 0°C, and daytime highs around 10°C in Hay River, and highs between 15°C-20°C in High Level. Scattered showers are possible throughout the basin over the coming week, but totals appear low and are not expected to significantly impact water levels.














In the **Liard River Basin**, the forecast indicates a retreat from recent rapid warming. Temperatures throughout the forecast period are expected to be slightly above average, with daytime highs around 20°C expected in Fort Liard and Fort Nelson, B.C. Warming is expected to be less rapid than last week, particularly in the southeast of the basin near Fort Nelson. There is no precipitation expected in the basin for the next few days.

In the **Dehcho Region at Fort Simpson**, the forecast indicates continued above average temperatures. Temperatures in the forecast period of May 4-10 are in the mid to high teens and overnight lows generally above 0°C. Some precipitation may occur between Fort Providence and Fort Simpson in the second half of the week, with minimal anticipated impact on Mackenzie River water levels.














In the **Sahtu Region at Norman Wells**, the forecast indicates continued above average temperatures, with daytime highs near 20°C in next couple of days, cooling slightly later in

the week to the low teens. Some precipitation may occur in the second half of the week, with minimal anticipated impact on Mackenzie River water levels.














High Level seven-day weather forecast:

▼ Forecast							Hourly Forecast	Air Quality	Alerts	Jet Stream
Mon 4 May	Tue 5 May	Wed 6 May	Thu 7 May	Fri 8 May	Sat 9 May	Sun 10 May				
 11°C 30% Chance of showers	 15°C Mainly sunny	 16°C A mix of sun and cloud	 18°C Sunny	 16°C Sunny	 17°C A mix of sun and cloud	 19°C A mix of sun and cloud				
Tonight	Night	Night	Night	Night	Night					
 -5°C A few clouds	 4°C Cloudy periods	 1°C Clear	 4°C Clear	 2°C Cloudy periods	 3°C Cloudy periods					














Fort Nelson seven-day weather forecast:

▼ Forecast							Hourly Forecast	Air Quality	Alerts	Jet Stream
Mon 4 May	Tue 5 May	Wed 6 May	Thu 7 May	Fri 8 May	Sat 9 May	Sun 10 May				
 19°C A mix of sun and cloud	 21°C Mainly sunny	 20°C A mix of sun and cloud	 20°C Sunny	 17°C A mix of sun and cloud	 17°C 60% Chance of showers	 19°C A mix of sun and cloud				
Tonight	Night	Night	Night	Night	Night					
 3°C A few clouds	 8°C Cloudy periods	 4°C Clear	 4°C Clear	 5°C Cloudy	 5°C Cloudy periods					














Hay River seven-day weather forecast:

▼ Forecast							Hourly Forecast	Air Quality	Alerts	Jet Stream
Mon 4 May	Tue 5 May	Wed 6 May	Thu 7 May	Fri 8 May	Sat 9 May	Sun 10 May				
 6°C A mix of sun and cloud	 9°C Sunny	 11°C Cloudy	 12°C Sunny	 4°C 30% Chance of showers	 7°C A mix of sun and cloud	 13°C A mix of sun and cloud				
Tonight	Night	Night	Night	Night	Night					
 -5°C Clearing	 4°C Cloudy periods	 1°C Cloudy periods	 1°C Clear	 -2°C Cloudy periods	 2°C Cloudy periods					














Fort Liard seven-day weather forecast:

▼ Forecast							Hourly Forecast	Air Quality	Alerts	Jet Stream
Mon 4 May	Tue 5 May	Wed 6 May	Thu 7 May	Fri 8 May	Sat 9 May	Sun 10 May				
 18°C Sunny	 21°C Mainly sunny	 19°C Sunny	 18°C Sunny	 18°C Sunny	 14°C A mix of sun and cloud	 17°C A mix of sun and cloud				
Tonight	Night	Night	Night	Night	Night					
 2°C Clear	 9°C Cloudy periods	 4°C Clear	 3°C Clear	 3°C Cloudy periods	 3°C Cloudy periods					














Fort Nelson seven-day weather forecast:

▼ Forecast							Hourly Forecast	Air Quality	Alerts	Jet Stream
Mon 4 May	Tue 5 May	Wed 6 May	Thu 7 May	Fri 8 May	Sat 9 May	Sun 10 May				
 19°C A mix of sun and cloud	 21°C Mainly sunny	 20°C A mix of sun and cloud	 20°C Sunny	 17°C A mix of sun and cloud	 17°C 60% Chance of showers	 19°C A mix of sun and cloud				
Tonight	Night	Night	Night	Night	Night					
 3°C A few clouds	 8°C Cloudy periods	 4°C Clear	 4°C Clear	 5°C Cloudy	 5°C Cloudy periods					














Fort Simpson seven-day weather forecast:

▼ Forecast							Hourly Forecast	Air Quality	Alerts	Jet Stream
Mon 4 May	Tue 5 May	Wed 6 May	Thu 7 May	Fri 8 May	Sat 9 May	Sun 10 May				
 16°C A mix of sun and cloud	 18°C Mainly sunny	 19°C Sunny	 18°C A mix of sun and cloud	 14°C Cloudy	 14°C A mix of sun and cloud	 17°C A mix of sun and cloud				
Tonight	Night	Night	Night	Night	Night					
 5°C A few clouds	 8°C Cloudy	 6°C Cloudy periods	 2°C 60% Chance of showers	 2°C Cloudy periods	 3°C Cloudy periods					

Sambaa Ke seven-day weather forecast:

▼ Forecast							Hourly Forecast	Air Quality	Alerts	Jet Stream
Mon 4 May	Tue 5 May	Wed 6 May	Thu 7 May	Fri 8 May	Sat 9 May	Sun 10 May				
 18°C Sunny	 21°C Mainly sunny	 19°C Sunny	 18°C Sunny	 18°C Sunny	 14°C A mix of sun and cloud	 17°C A mix of sun and cloud				
Tonight	Night	Night	Night	Night	Night					
 2°C Clear	 9°C Cloudy periods	 4°C Clear	 3°C Clear	 3°C Cloudy periods	 3°C Cloudy periods					

Norman Wells seven-day weather forecast:

▼ Forecast							Hourly Forecast	Air Quality	Alerts	Jet Stream
Mon 4 May	Tue 5 May	Wed 6 May	Thu 7 May	Fri 8 May	Sat 9 May	Sun 10 May				
 16°C A mix of sun and cloud	 20°C Mainly sunny	 15°C Cloudy	 8°C Rain	 12°C A mix of sun and cloud	 10°C A mix of sun and cloud	 12°C A mix of sun and cloud				
Tonight	Night	Night	Night	Night	Night					
 3°C A few clouds	 7°C Cloudy periods	 4°C Cloudy	 1°C 60% Chance of showers	 1°C Cloudy periods	 2°C 30% Chance of showers					

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

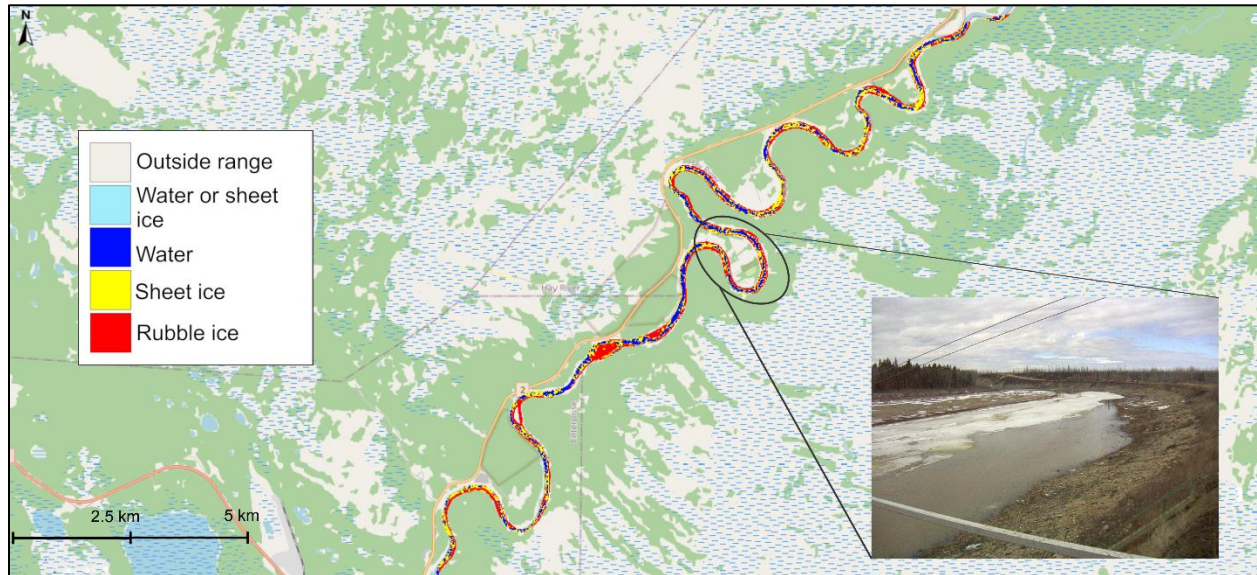
enough energy to degrade. Another important factor is the thickness of the ice. Thicker ice takes longer to melt and can increase the chances of ice jams. If an ice jam occurs, the location of the ice jam is also very important. Each river reach has different locations that are prone to ice jams. The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

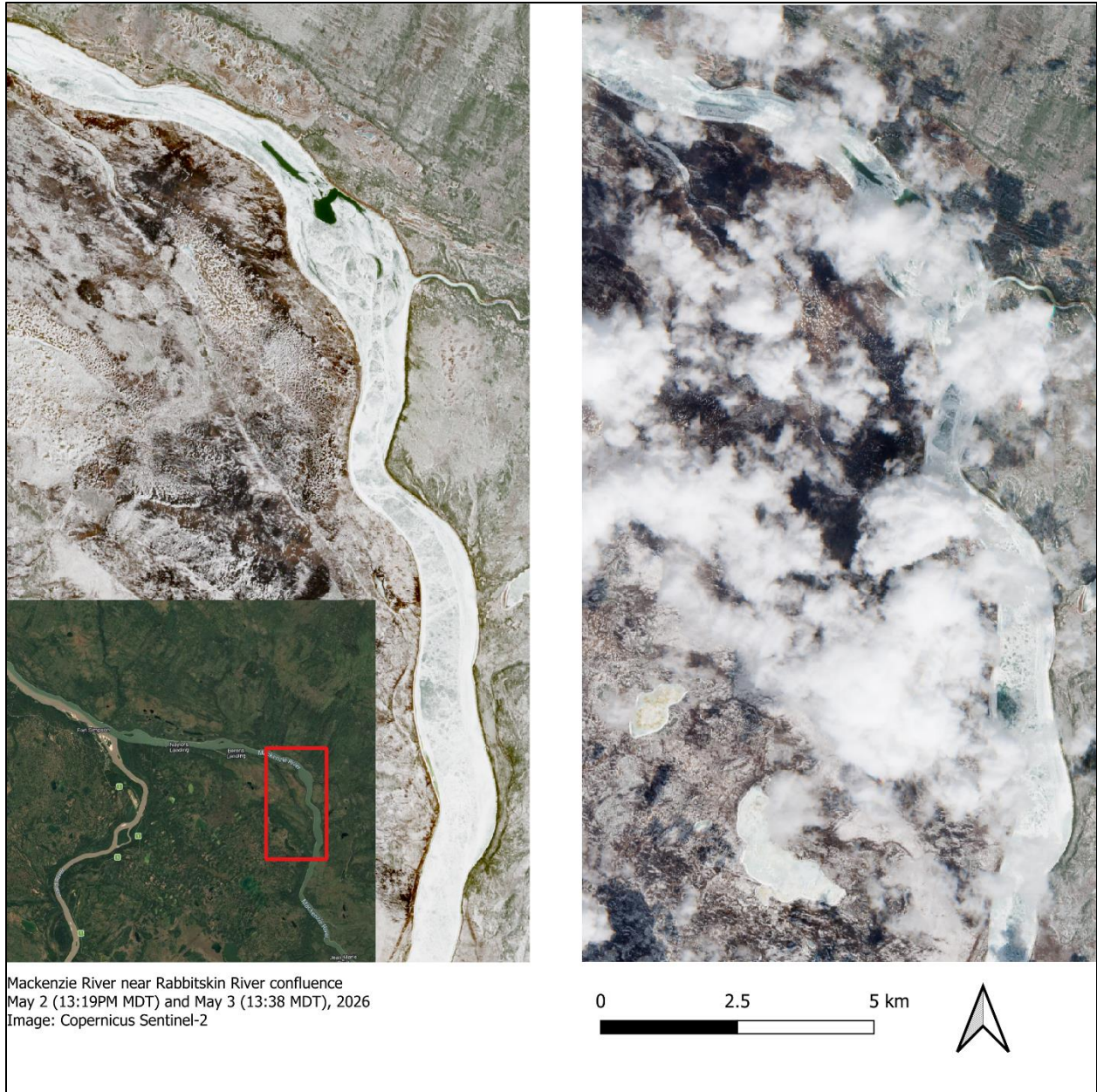
- The figures in this report plot water levels. The values on the y-axis are (in most cases) relative to an arbitrary datum. This means that the values on each gauge can be compared to different years but should not be used to compare water levels from one location to the next.

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.

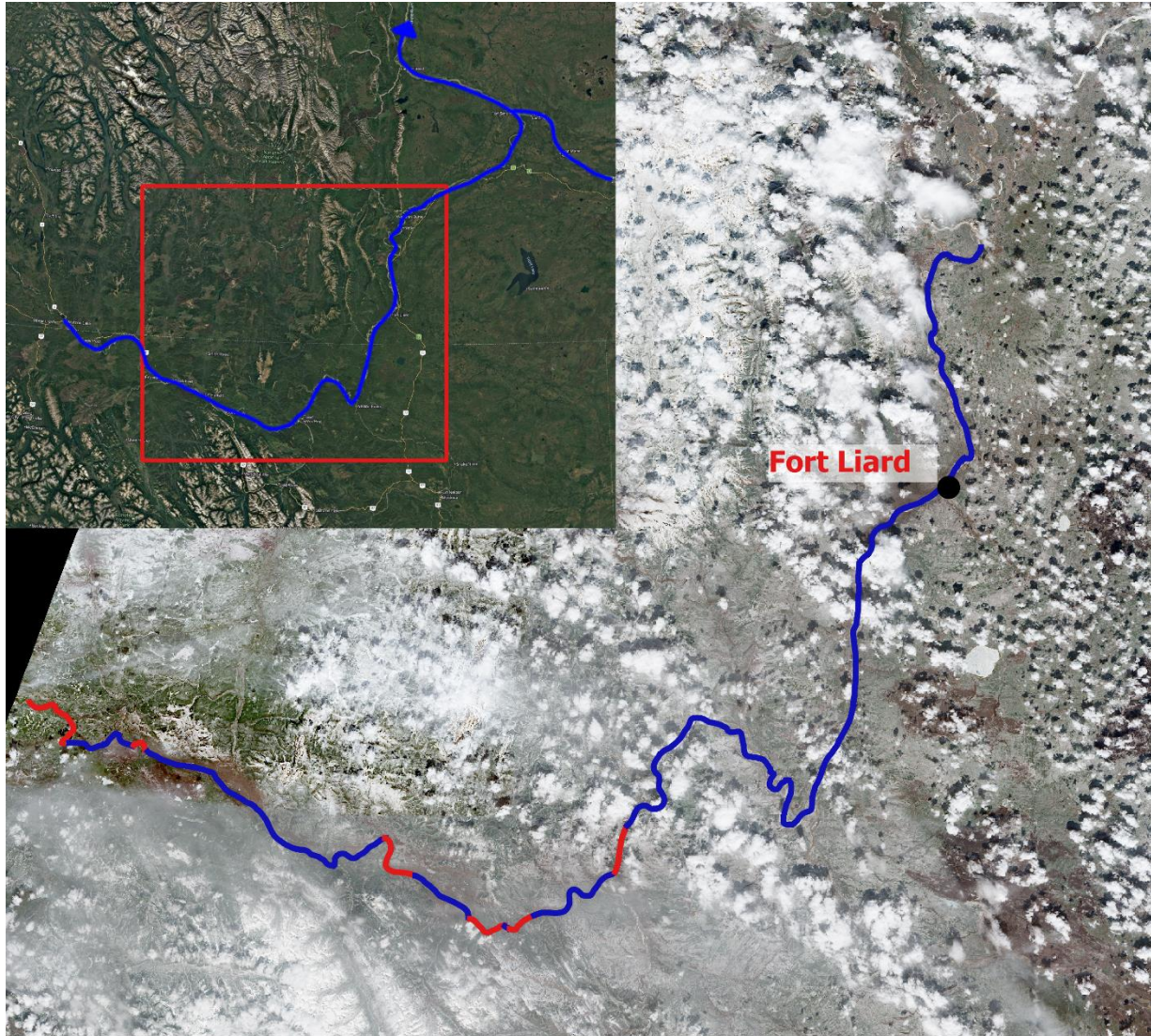
Appendix A: River Ice Imagery



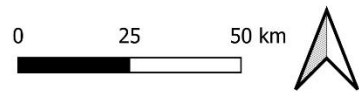
Above – Classified River ice image of the Hay River roughly 5 km downstream of Enterprise for a stretch of ~35 km. The image shows predominantly open water sections (dark blue) with sections of deteriorating ice shown as rubble (red) indicating a general thermal breakup and confirmed with ground images at Paradise valley. The RCM satellite image was acquired on May 3, 2026 at 19:21 MDT, and is courtesy of the federal government’s Government Operations Centre. The river ice classification was completed using IceBC algorithm. The ground camera image is courtesy of the Town of Hay River and was captured on May 4 at 10:30 MDT.



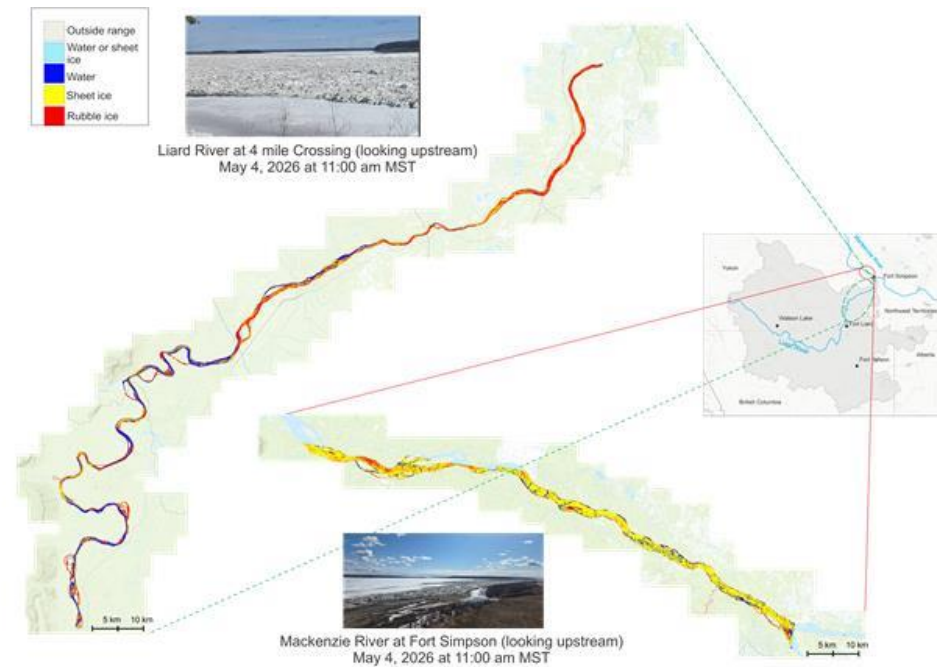
Above - Optical satellite images show conditions on the Mackenzie River near Rabbitskin River confluence (approximately 35km upstream of Fort Simpson) on May 2, 2026 (13:19 MDT, left image) and May 3, 2026 (13:38 MDT, right image). A local open water section is visible downstream of Rabbitskin River on both days. While cloud cover on May 3 limits visibility, there appears to be further thermal deterioration of the ice along left bank upstream of the confluence.



Ice conditions classified from optical imagery.
 As of image acquisition time on May 3, 2026 at 13:38
 MDT.
 Image: Copernicus Sentinel-2



Above – an optical image classified by ice conditions, where red indicates ice and blue indicates open water. While it is difficult to distinguish an ice run from an ice jam using only optical imagery, there appears to be one ice jam approximately 8km long just downstream of the Toad River confluence, with several shorter jams between Trout River and Toad River. Further upstream, there is a section of ice approximately 14km long, just downstream of Trout River (and the Liard West Corridor Provincial Park and Water Survey of Canada “Liard River at Lower Crossing” hydrometric gauge). Image acquired May 3, 2026 at 1:38PM.



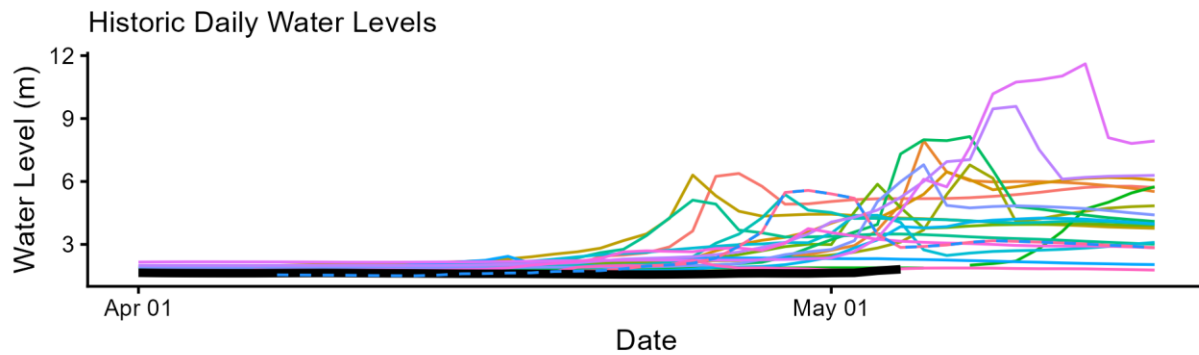
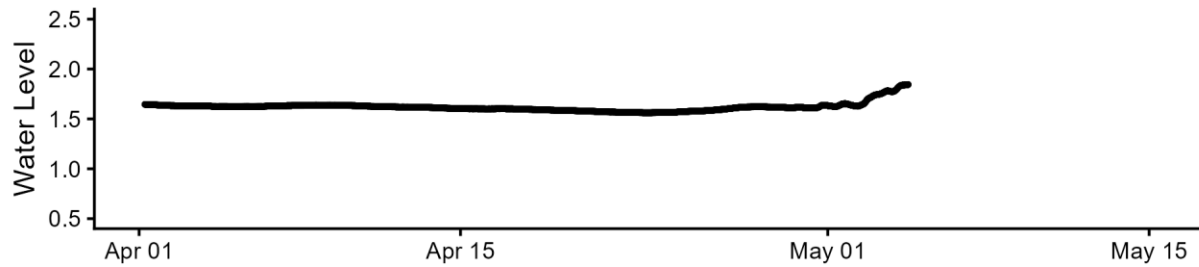
Above – Classified River ice image of the Liard River upstream of confluence with Mackenzie (~ 200 km) and Mackenzie River downstream of Fort Simpson (~70 km). The image shows predominantly rubble ice on the Liard River (red) upstream of Fort Simpson and sections of open water near the confluence with the South Nahanni River. The image along the Mackenzie River shows predominantly intact ice (yellow). The RCM satellite image was acquired on May 4, 2026 at 08:29 MDT for both river stretches, and is courtesy of the federal government’s Government Operations Centre. The river ice classification was completed using IceBC algorithm. The ground camera images are courtesy of Laurie Nadia in Fort Simpson and were captured at 11:00 MDT (are added for validation).

Appendix B: High resolution and historic water level plots

Hay River Near Hay River (070B001)

HAY RIVER NEAR HAY RIVER (070B001)

2026 Water Levels (5 minute resolution)

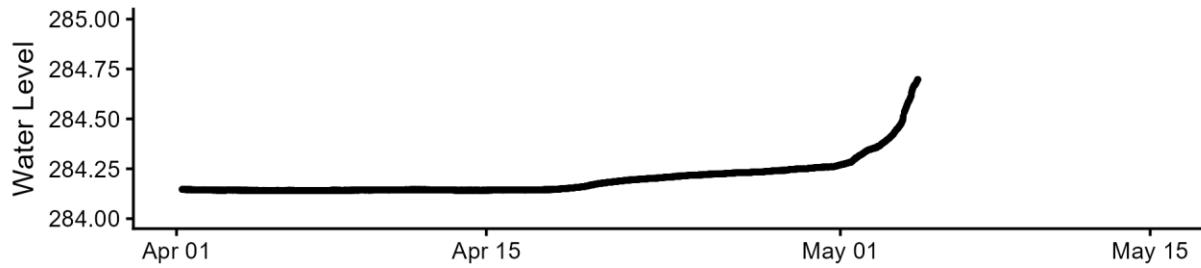


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years (2026 levels: thick black; 2025 levels: dashed blue).

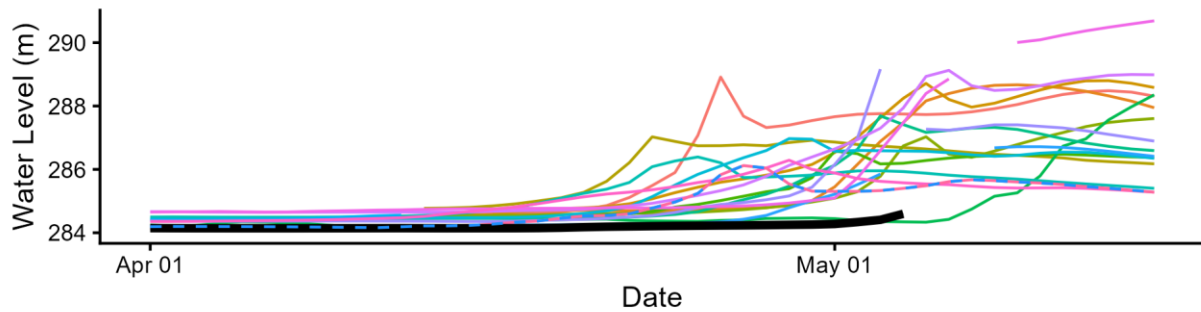
Hay River Near Alta/Nwt Boundary (070B008)

HAY RIVER NEAR ALTA/NWT BOUNDARY (070B008)

2026 Water Levels (5 minute resolution)



Historic Daily Water Levels

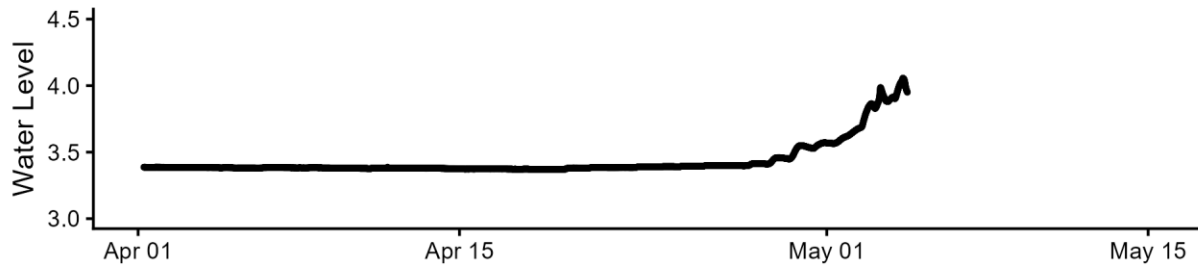


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years (2026 levels: thick black; 2025 levels: dashed blue).

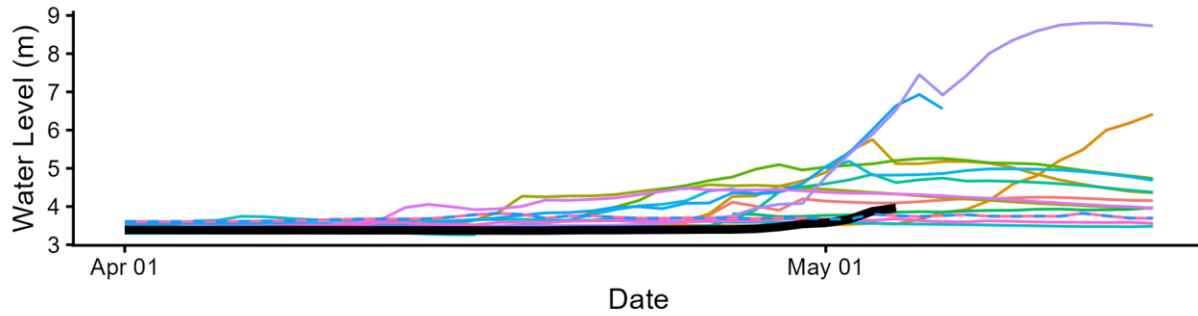
Steen River Near Steen River (070B004)

STEEN RIVER NEAR STEEN RIVER (070B004)

2026 Water Levels (5 minute resolution)



Historic Daily Water Levels

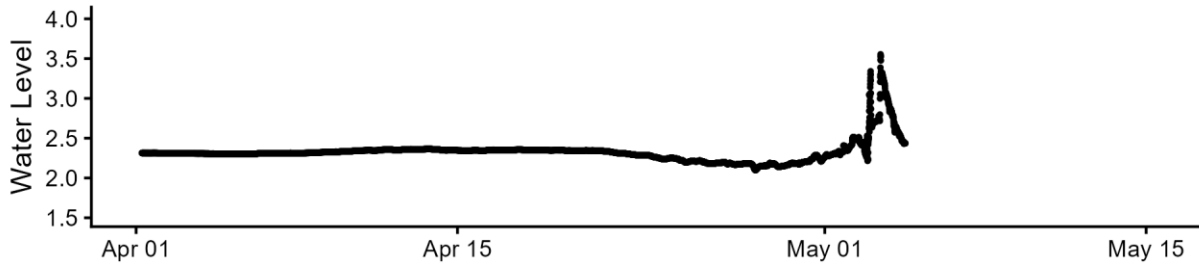


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years (2026 levels: thick black; 2025 levels: dashed blue).

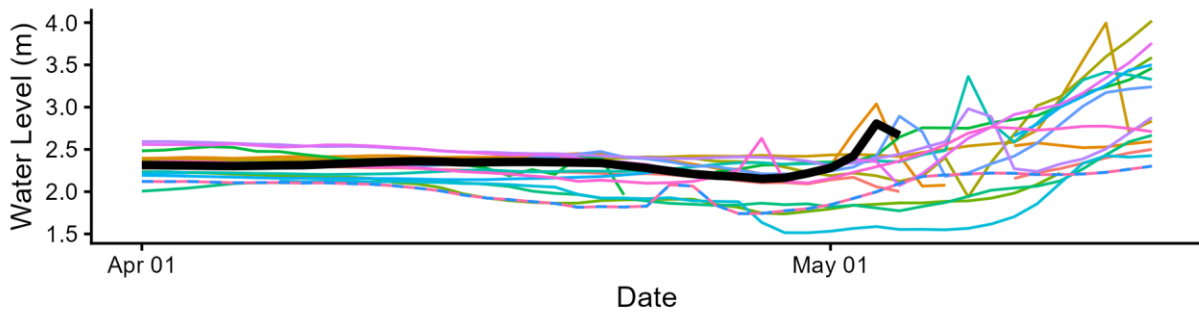
Liard River At Upper Crossing (10AA001)

LIARD RIVER AT UPPER CROSSING (10AA001)

2026 Water Levels (5 minute resolution)



Historic Daily Water Levels

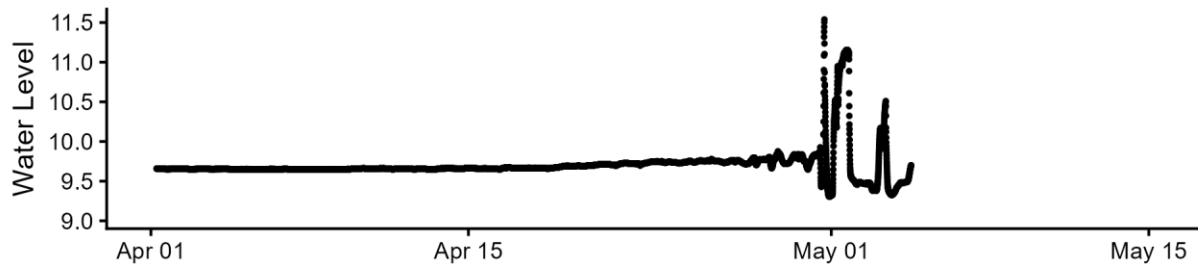


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years (2026 levels: thick black; 2025 levels: dashed blue).

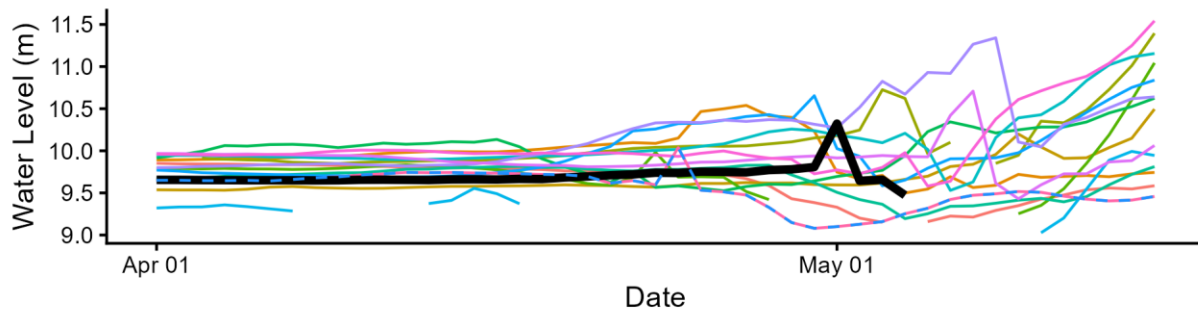
Liard River At Lower Crossing (10BE001)

LIARD RIVER AT LOWER CROSSING (10BE001)

2026 Water Levels (5 minute resolution)



Historic Daily Water Levels

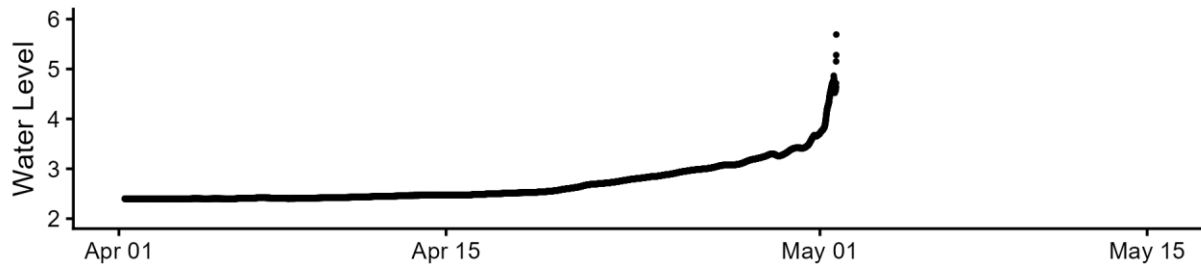


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years (2026 levels: thick black; 2025 levels: dashed blue).

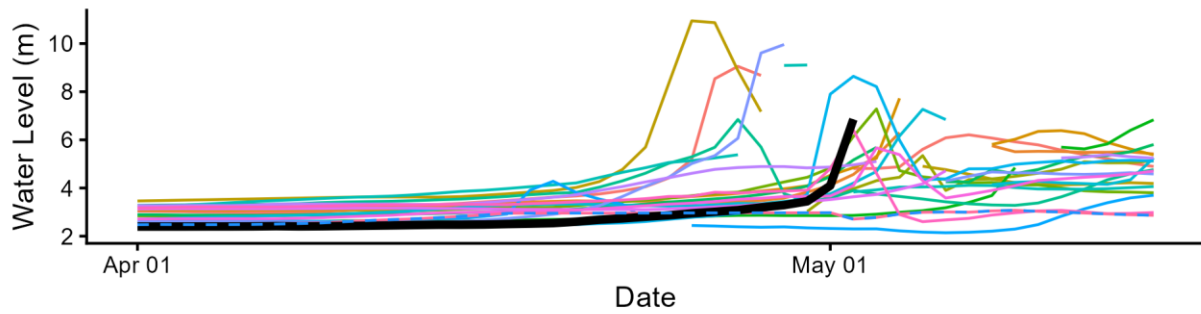
Liard River At Fort Liard (10ED001)

LIARD RIVER AT FORT LIARD (10ED001)

2026 Water Levels (5 minute resolution)



Historic Daily Water Levels

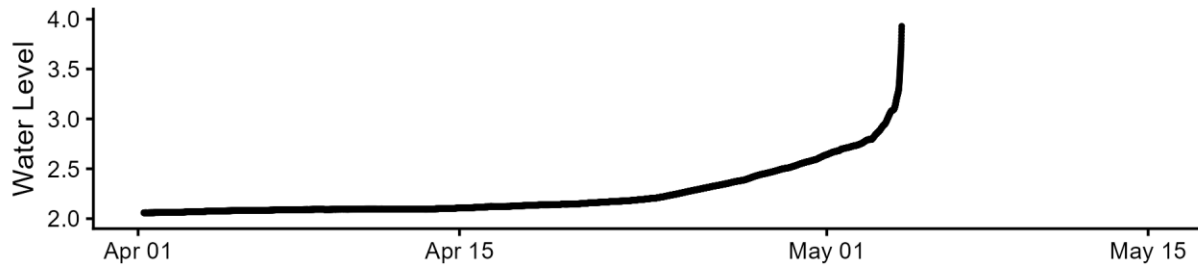


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years (2026 levels: thick black; 2025 levels: dashed blue).

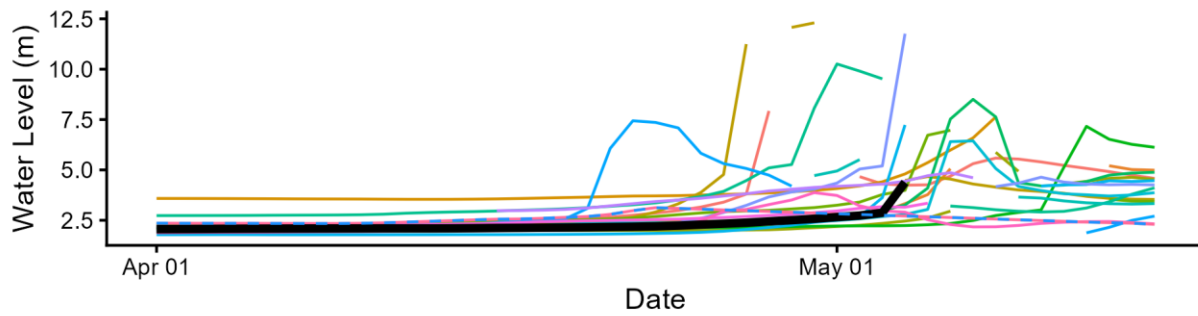
Liard River Near The Mouth (10ED002)

LIARD RIVER NEAR THE MOUTH (10ED002)

2026 Water Levels (5 minute resolution)



Historic Daily Water Levels

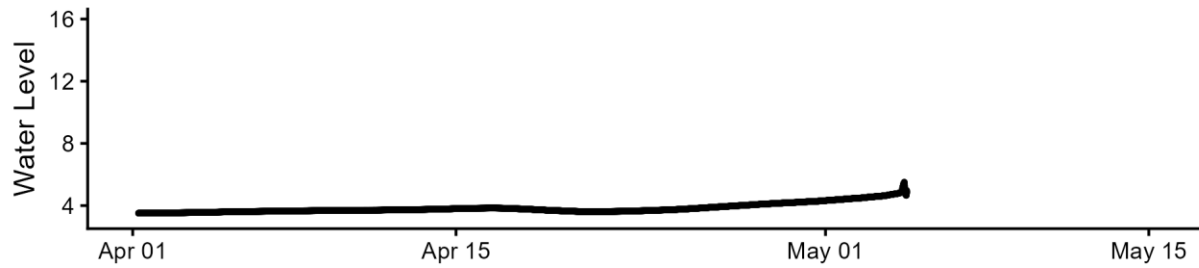


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years (2026 levels: thick black; 2025 levels: dashed blue).

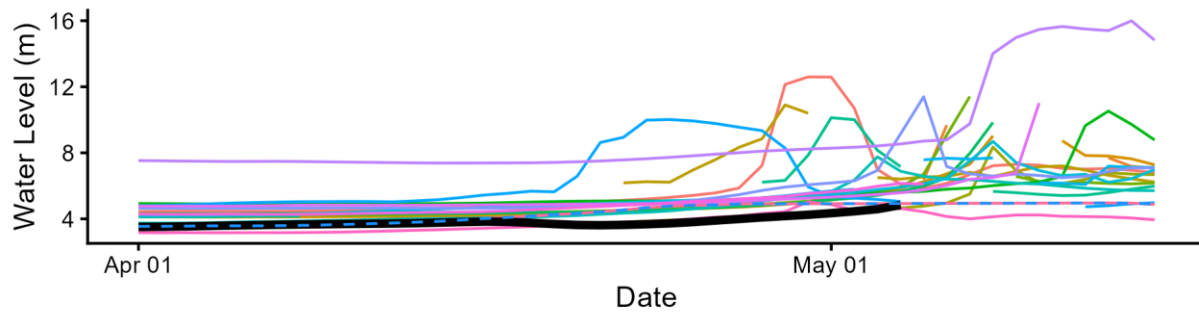
Mackenzie River At Fort Simpson (10GC001)

MACKENZIE RIVER AT FORT SIMPSON (10GC001)

2026 Water Levels (5 minute resolution)



Historic Daily Water Levels

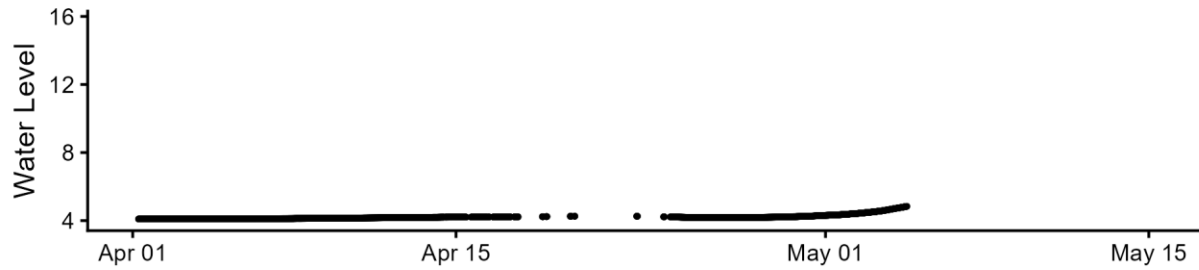


Above - The upper graph in the figure presents real time water level data at 5-minute resolution. The lower graph shows daily average levels relative to the previous 20 years (2026 levels: thick black; 2025 levels: dashed blue).

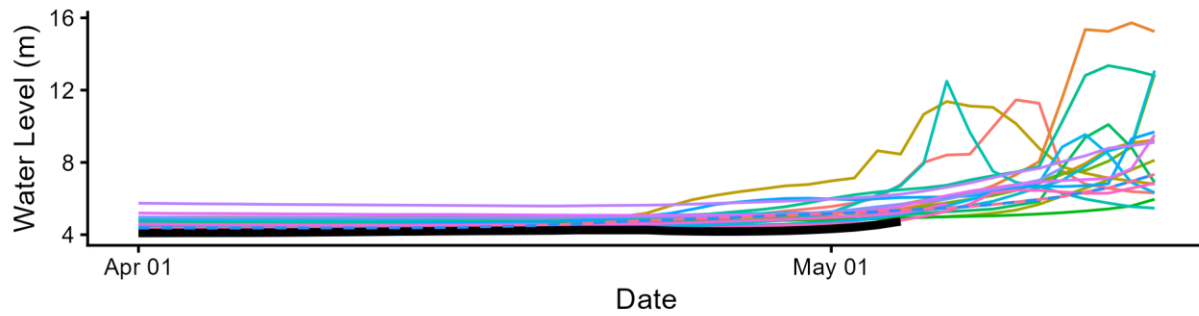
Mackenzie River At Norman Wells (10KA001)

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 (2026 levels: thick black; 2025 levels: dashed blue).