Government of
Northwest Territories

2024 NWT Spring Water Outlook

Water Monitoring and Stewardship Division
Environment and Climate Change (ECC)
April 18, 2024

Contents

Overview

This report is an outlook for anticipated 2024 spring water levels in the Northwest Territories (NWT). This report will provide data on snowpack, current water levels, and river ice conditions (inferred from winter air temperatures). These indicators provide an estimate of spring flow rates. Actual flow rates and water levels in the spring are dependent on weather conditions, which determine how quickly the snowpack melts, how river ice deteriorates, and where ice jams may occur.

As the melt season progresses, the Department of Environment and Climate Change (ECC) will provide regular reports on current water level and river ice conditions, and how break up is progressing. This situational awareness relies on information from various sources including near real-time water level and flow data (always provisional), near real-time photographs of water levels and ice from cameras at water level gauge sites, near real-time interpreted satellite imagery of ice conditions, forecasted weather conditions, and reports from community flood watch programs.

Current water levels:
Overall, as the spring melt season begins, water levels across the territory as of April 17, 2024, are generally well below average, with some exceptions. The summer and fall of 2023 were much warmer and drier than normal across the NWT. This has contributed to water levels decreasing to record low values in some rivers and generally low water levels across the territory at freeze-up. One exception is the Peel River, where flow rates and water levels are above average.

Snowpack:
Snowpack across the territory in the winter of 2023-24 was variable. The snowfall generally increased with latitude, with below average values in the south (South Slave and Dehcho) to near-record high in the north (Peel and Beaufort Delta). The North Slave, Tłı̨chǫ, and Sahtu regions received between average and above average snowfall.

These data are based on snow surveys conducted in late March by ECC. These surveys measure the volume of water that is produced when a snowpack melts – this is termed the snow water equivalent (SWE). SWE varies based on the depth of snow and its density. Spring weather conditions will determine the timing of snowmelt, which is important because a quick, sudden snowmelt will cause a larger rise in water levels than would a prolonged snowmelt season.

River ice:
Winter air temperatures in 2023-24 in the NWT were warmer than average, which, in part, impacts the thickness of river ice. Ice jams during break up typically form on north-flowing rivers, where warm weather and snowmelt cause ice to break up earlier on the southern reaches of a river. As this ice flows north (downstream), it may meet a more solid ice cover. When this happens, sheets of floating ice run into the solid ice and can form a dam (an 'ice jam'), which may cause water levels to rise rapidly behind it. The occurrence of ice jams is primarily dependent on weather conditions just prior to and during break up (e.g., how much and how quickly snowmelt water reaches river systems, and how the ice breaks up). Over-winter conditions, such as snowfall, winter air temperatures and ice thickness, can play a role in their occurrence as well.

Flood risk:
It is difficult to predict in advance how break up will occur and if/where ice jams will form, as these factors are highly dependent on spring weather conditions. Ice-jam flooding can happen in any year regardless of pre-existing water levels and snowpack. The potential severity of flooding, if an ice jam occurs, is higher when water levels are already high and snowpacks are large. ECC recommends that residents in communities that are susceptible to flooding follow the advice from Municipal and Community Affairs (MACA) to ensure that they are prepared for possible flooding every year.

Outlook by region

North Slave and Tłı̨chǫ Regions

ECC snow surveys show that the snowpack in both the Yellowknife River basin and Snare River basin were above average at 123% of normal (where 100% of normal = average), and 110% of normal, respectively, as of early April 2024 (Table A1). The snowpack at other North Slave and Tłı̨chǫ sites was also above average at 122% of normal.

In general, water levels on lakes and rivers in the North Slave region have dropped over the last two warm and dry summers of 2022 and 2023. An above average snowpack will increase soil moisture levels and may help a recovery of water levels on local lakes and rivers if there is substantial rainfall this summer. The above-average snowpack in the North Slave will not have a strong impact on water levels on Great Slave Lake (see Great Slave Lake section below for more information).

Provisional flows on rivers (e.g. Cameron and Yellowknife) and water levels on lakes (e.g. Prosperous and Prelude) close to Yellowknife are currently well below average or the lowest on record. Flows on rivers draining into the East Arm of Great Slave Lake (e.g. Lockhart, Hoarfrost) are well below average or the lowest on record. Flows on rivers north of Yellowknife (e.g. Snare, Coppermine) are well below average or the lowest on record. In the Tłı̨chǫ region, flows on the La Martre River are slightly below average, while flows on the Camsell River are below average.

There are no communities in the North Slave that are on MACA's list of communities that are susceptible to flooding.

Great Slave Lake and Slave River Basin

The water level on Great Slave Lake has dropped substantially over the past two years and is at a record low value for this time of year (see Appendix B-1). The water level on Great Slave Lake was the highest on record from 2020 to 2022. The variability in water level on Great Slave Lake over the past five years has not been previously experienced during the 89-year monitoring record.

In the NWT portion of the Slave River basin, and adjacent sites in the South Slave region, ECC snow surveys found that snowpack was below average at 88% of normal.

The majority of the water (~75-80%) in Great Slave Lake comes from the Slave River basin, which includes large areas of northern British Columbia, Alberta, and Saskatchewan. ECC uses snow data acquired from neighbouring jurisdictions to estimate snowpack in our shared basins. These data show that snowpack across the Slave River basin ranged from extremely low to well below average this winter. This means that Great Slave Lake will not receive a large snowmelt input this spring and increases to water levels will be dependent on spring and summer rainfall.

Flow rates on the Slave River have been well below average since the summer of 2022. Flow rates on the Peace River and Athabasca River have also been below average. Water levels on Lake Athabasca are well below average and have dropped substantially since levels were at or near the highest on record in 2021.

There are no communities in the Slave River basin that are on MACA's list of communities that are susceptible to flooding.

Taltson River Basin

Snow surveys show that snowpack in the Taltson and Tazin River Basins was approximately average at 94% of normal. Flows on the Taltson and Tazin rivers are currently below average and have dropped substantially since extreme record high flows in 2020 and 2021. Water levels on Tazin Lake are about below average.

There are no communities in the Taltson River basin that are on MACA's list of communities that are susceptible to flooding.

Hay River Basin

Snow surveys show that the snowpack in the Hay River basin is well below average this year at 61% of normal. This includes snow surveys conducted in Alberta and British Columbia, as most (94%) of the land that feeds into the Hay River is in those jurisdictions. Snow survey locations are sparse in Hay River catchment.

The Town of Hay River is included in MACA's list of communities that are susceptible to flooding. Hay River, Kátł'odeeche First Nation, West Point First Nation, and Paradise Gardens all experienced severe flooding in 2022 when record-high water levels on the Hay River were combined with an average snowpack, a delayed spring melt, and a large precipitation event that occurred over the entire basin during breakup.

Water levels on the Hay River are currently the lowest on record. Warm weather in early April has helped to initiate early snowmelt in the basin. The combination of low water levels, low snowpack and early season warm temperatures suggests that spring flows will be much lower than normal. There is always a possibility that anomalous spring weather conditions can cause high water levels and out of bank flows.

Dehcho Region

The Liard River basin is comprised of large areas in the southeastern Yukon and northeastern British Columbia. Government of Yukon snowpack SWE data for April 1st indicates that the snowpack in the upper Liard basin is average at 98% of normal. Further downstream, snow surveys by the Government of British Columbia show that SWE values are well below-average at 52% of normal.

ECC snow survey data in the lower Liard basin in the NWT show below-average SWE values at 88% of normal. ECC snow surveys in the remainder of the Dehcho region (outside the Liard River basin) indicate that snowpack in the region is below-average at 79% of normal.

Flows on the Liard River over winter have been below-average and have been that way since summer 2023. Flows on the Mackenzie River at Fort Simpson are currently the lowest on record. Other smaller gauged rivers in the Dehcho (e.g. Petitot, Trout, Jean Marie) all have extremely low flow rates and are at or near the lowest flows on record.

In the Dehcho, MACA's list of communities that are susceptible to flooding include Fort Liard, Jean Marie River, and Fort Simpson.

In Fort Liard, flooding has previously occurred when ice jams form on the Liard River downstream of the community, or when ice from the Petitot River jams on solid ice on the Liard River, causing water to back up. A lower-than-normal snowpack in the region and lower-than-normal water levels on the Liard River and Petitot River suggest that flows will be lower than normal in spring. There is always a possibility that anomalous spring weather conditions can cause high water levels and out of bank flows.

In Jean Marie River, significant flooding occurred in 2021 when existing high water levels on the Mackenzie River were combined with a higher-than-normal snowpack and a delayed spring melt. This occurred when the Mackenzie River broke downstream of the community and backed up water levels at Jean Marie River. Lower-than-normal water levels on the Mackenzie River, combined with a lower-than-normal snowpack suggest that spring flows will be lower than normal. There is always a possibility that anomalous spring weather conditions can cause high water levels and out of bank flows.

In Fort Simpson, significant flooding occurred in 2021 when high existing water levels on the Liard River and the Mackenzie River were combined with a higher-than-normal snowpack and a delayed spring melt. At Fort Simpson, the Liard River typically breaks up before the Mackenzie River, which causes Liard River ice to jam downstream of the community. Lower-than-normal water levels on the Liard River, combined with a lower-than-normal snowpack in the Liard River basin suggest that spring flows will be lower than normal. There is always a possibility that anomalous spring weather conditions can cause high water levels and out of bank flows.

Sahtu Region

In the Sahtu region, ECC snow surveys found that snowpack SWE values are about average at 105% of normal. Great Bear Lake is currently at a record low for this time of year and Great Bear River is also very low. Smaller gauged rivers in the Sahtu (e.g. Hare Indian, Loon) are about average. Here, MACA's list of communities at risk of flooding include Tulita and Fort Good Hope.

In Tulita, flooding has previously occurred when ice on Great Bear River jams on the Mackenzie River and brings backwater into the community. Spring flows are likely to be lower than average on both the Great Bear River and the Mackenzie River. There is always a possibility that anomalous spring weather conditions can cause high water levels and out of bank flows.

In Fort Good Hope, significant flooding occurred in 2021 when an ice jam downstream of the community caused water to back up along Jackfish Creek and create out of bank flows. This was caused by record high water levels on the Mackenzie River, higher-than-normal snowpack, and a delayed melt. Low water levels on the Mackenzie River at Fort Good Hope and a low snowpack throughout much of the Mackenzie River basin suggest that spring flows will be lower than normal. There is always a possibility that anomalous spring weather conditions can cause high water levels and out of bank flows.

Gwich'in and Inuvialuit Regions

ECC and Government of Yukon snow survey data for the Peel River basin show that the snowpack is extremely high at 157% of normal. ECC snow surveys in the Inuvik region show that snowpack is also extremely high at 158% of normal.

Fort McPherson is identified on MACA's list of communities that are susceptible to flooding. Flooding occurred last year (2023) in Fort McPherson when an ice jam formed downstream of the community and caused out of bank flows on the Peel River. The flooding was caused by a combination of high existing water levels, high snowpack, and a delayed snowmelt which caused the snow to melt rapidly while the ice cover was still relatively thick.

Water levels on the Peel River are currently above average. **The well above-average snowpack combined with above-average water levels suggests that higher-than-average flows and water levels can be expected during spring freshet**. The likelihood of out of bank flows will depend on spring weather conditions, including how quickly the snow melts and how river ice degrades.

Aklavik is identified on MACA's list of communities that are susceptible to flooding. Water levels on the Mackenzie River at Tsiigehtchic and throughout the Mackenzie Delta are the lowest on record for this time of year. The water level at break up in the Mackenzie Delta will be dependent on spring weather conditions and how the ice breaks up and moves through the delta.

Factors to Watch

The potential and severity of freshet flooding will depend in large part on the weather over the upcoming weeks and how quickly the snow and ice melt. The following variables are the primary factors that influence water levels and if there will be flooding:

- Rate of snow melt
  - Slow and steady onset of warm weather allows a progressive snowmelt and slow delivery of meltwater to the river network
  - Sudden extreme warm weather can cause a rapid snowmelt which can cause rapid increases in water levels
  - Rain on snow events can cause rapid snowmelt and can lead to rapid increases in water levels
- Rate of ice melt/break up
  - Gradually warming weather across an entire basin allows ice to slowly degrade and melt (thermal break up)
  - Very warm weather in upstream areas can cause rapid snow melt and local ice break up. If this ice flows downstream into a solid ice cover, the force of the ice can cause downstream ice to break up and can lead to ice jams
- Spring precipitation events
  - Rainfall events during breakup have the potential to bring significant amounts of additional water to a basin and can be impactful if they occur simultaneously with ice-jams
- Current water levels in lakes and rivers, and moisture in wetlands and soil
- Snowpack volumes (snow water equivalent - SWE)
- Temperatures over the winter
- Where ice jams form (primary cause of spring flooding in the NWT)
  - Can result in the back-up of large amounts of water and can cause flooding (even when water levels are low)

Water level and flow data are part of the NWT Hydrometric Monitoring Network, funded by ECC and Environment and Climate Change Canada (ECCC), and operated by the Water Survey of Canada. Data can be seen and/or downloaded at:
https://wateroffice.ec.gc.ca/search/searchRealTime_e.html.

Water level and flow data are presented in Appendix B below. Flow data from smaller rivers are presented using a log scale on the y-axis to allow a better visualization of how current flows compare to historical data.

Please be reminded that all real-time data are provisional.

Appendix A: Snow survey data for Spring 2024

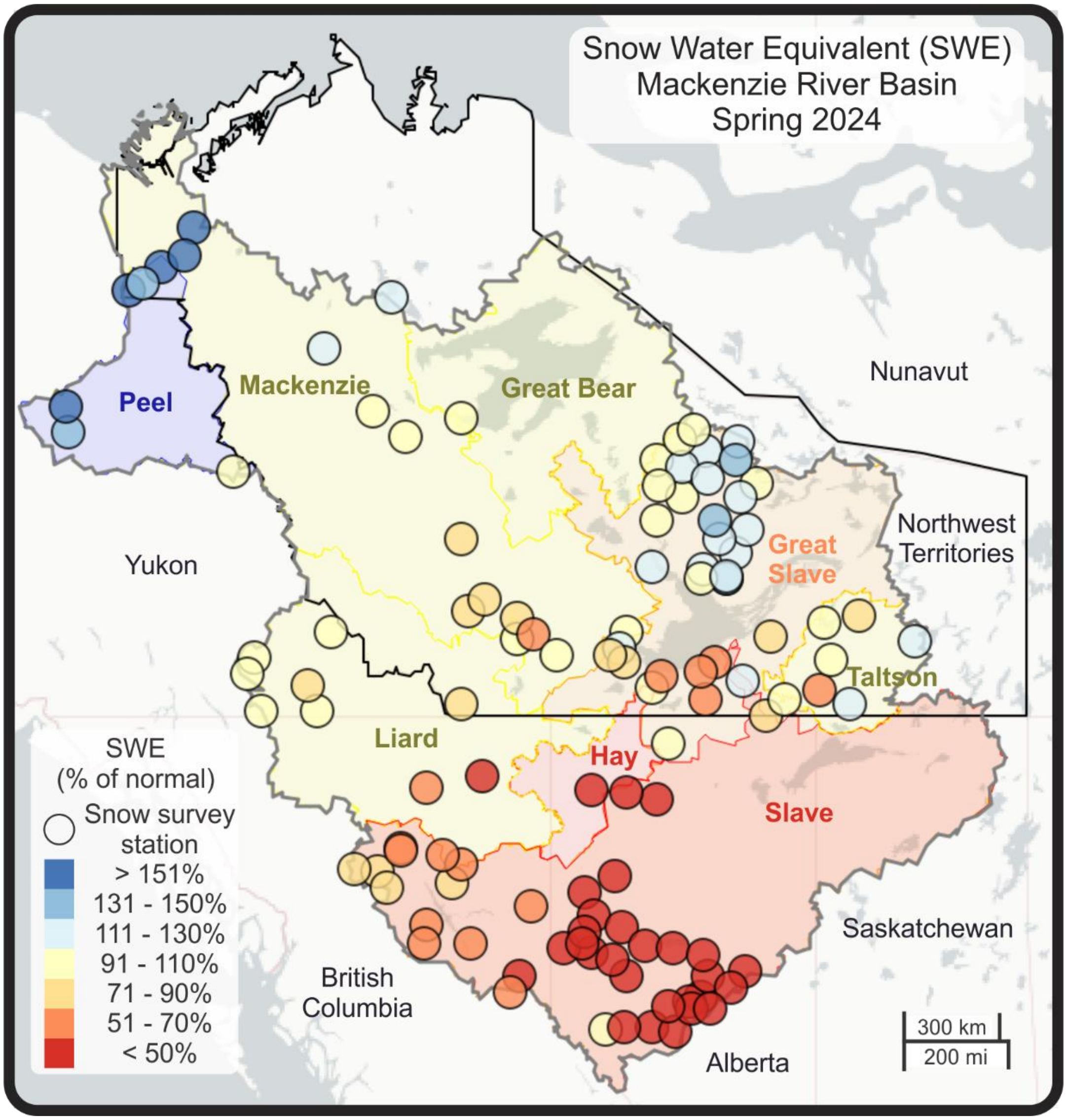


Figure A-1: Map of snow water equivalent (SWE) distribution in the Mackenzie River basin. Data from this map were compiled from ECC snow surveys (NWT) as well as snow survey data from neighbouring jurisdictions (Governments of Yukon, British Columbia, and Alberta).

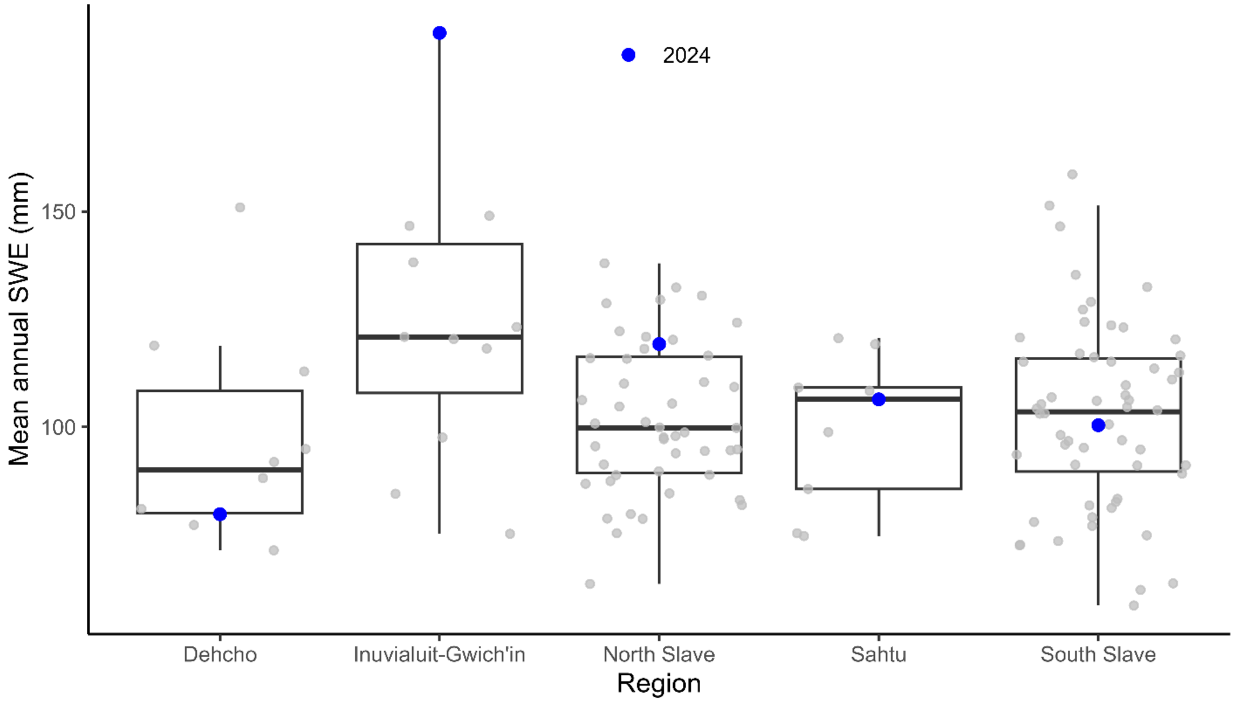


Figure A-2: Regional mean annual SWE (mm), where points are individual years. Regional means were calculated when at least 3 sites were measured within a given region. Data for this plot were compiled using ECC snow surveys.

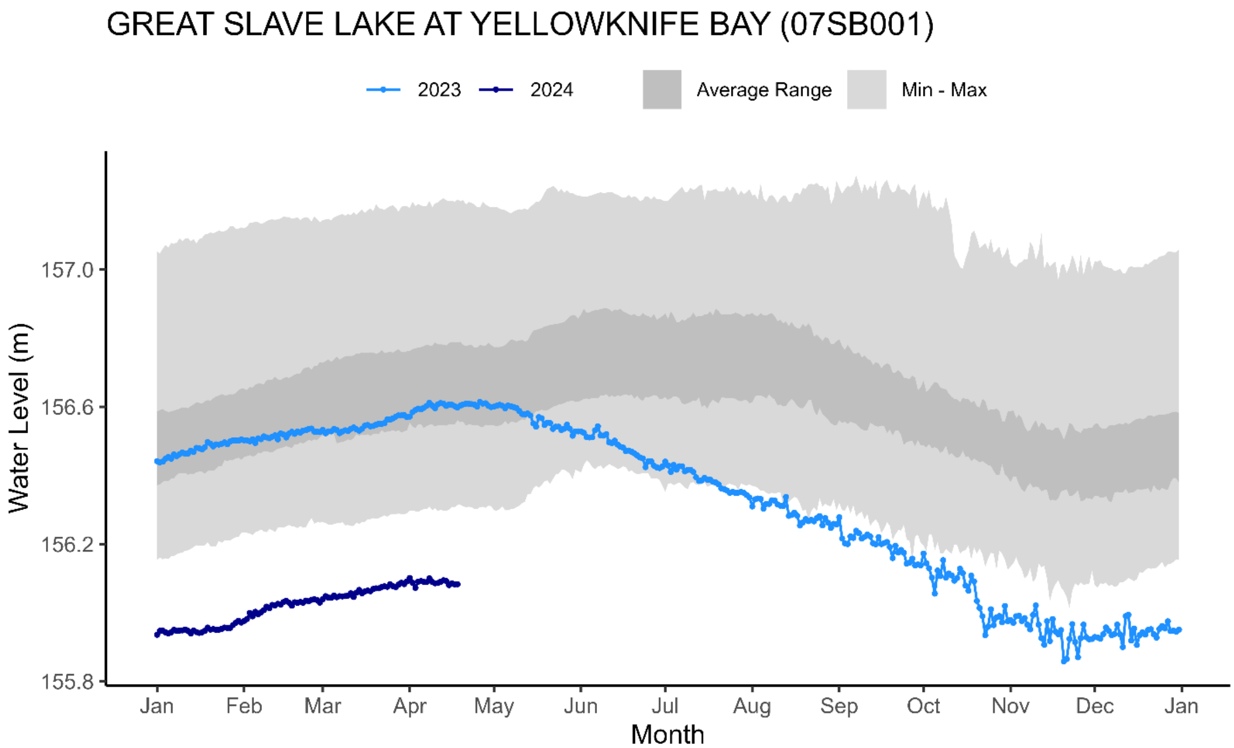
Table A-1: Detailed ECC snow survey data by location. Full dataset available upon request. [f] = Forestry site.

Site	Long	Lat	Length of Record (years)	Entire record Mean SWE (mm) *italics: <20 years*	Current Mean Depth (cm)	Current Mean SWE (mm)	Rank of Current SWE	2024 % Normal (%)
Yellowknife River Basin								
Allan Lake	-113.05	62.95	36	85.4	53.9	100.0	8	117.2
Bluefish Hydro	-114.25	62.68	29	81.8	59.8	105.0	3	128.3
Denis Lake	-112.62	63.37	37	109.0	72.2	133.5	7	122.4
Ingraham Trail km 64 NW	-113.38	62.50	42	84.3	55.7	107.0	5	126.9
Jolly Lake	-112.21	64.12	12	*125.8*	56.2	133.0	4	105.7
Little Latham Lake	-113.63	63.20	37	96.9	60.4	120.0	5	123.8
Nardin Lake	-113.85	63.51	37	105.2	70.3	142.5	3	135.4
Sharples Lake	-112.82	63.90	37	106.9	67.6	128.5	7	120.2
	MEANS				**62.0**	**121.2**		**122.5**
Snare River Basin								
Big Lake	-112.93	64.80	27	119.5	52.6	137.0	6	114.7
Big Spruce Lake	-116.00	63.50	46	102.4	57.3	112.0	16	109.4
Castor Lake	-115.99	64.52	47	112.2	53.9	103.0	28	91.8
Christison Lake	-114.17	64.65	30	112.6	63.1	142.0	4	126.1
Ghost Lake	-115.07	63.88	47	104.4	57.5	112.0	17	107.3
Indin Lake	-115.03	64.38	46	109.6	63.9	126.0	11	115.0
Mattberry Lake	-115.96	64.09	47	96.9	55.6	99.0	18	101.7
Mesa Lake	-115.14	64.85	47	123.7	59.8	128.0	18	103.5
Snare Lake	-114.04	64.20	46	110.7	62.2	122.5	17	110.6
White Wolf Lake	-114.60	65.00	46	130.4	50.5	124.5	16	95.5
Winter Lake	-113.03	64.50	46	82.3	53.0	114.0	5	138.5
	MEANS				**57.2**	**120.0**		**110.4**
Other North Slave Region								
Ingraham Trail km 64 SE	-113.39	62.51	26	79.0	60.2	110.0	3	139.2
Mosquito Creek	-116.16	62.70	25	102.1	64.8	124.0	3	121.4
Pocket Lake	-114.37	62.51	26	77.8	40.5	78.3	5	100.7
Tibbitt Lake	-113.34	62.56	25	84.3	47.2	107.5	4	127.5
	MEANS				**53.2**	**105.0**		**122.2**

South Slave Region								
Boundary Lake	-115.55	59.48	31	157.4	69.1	168.0	13	106.7
Crown Fire[f]	-117.15	61.58	7	*88.6*	52.7	96.0	2	108.4
Enterprise[f]	-116.15	60.56	7	111.8	56.4	117.0	2	104.7
Fort Providence[f]	-117.46	61.26	10	*101.2*	61.5	113.0	3	111.7
Fort Smith	-111.86	60.00	41	89.5	48.9	72.0	32	80.4
Hay River[f]	-115.84	60.77	10	*102.6*	37.1	52.0	10	50.7
Hook Lake	-112.78	60.67	33	97.6	50.5	118.0	8	120.9
Kakisa River	-117.27	61.00	43	105.4	51.5	95.0	28	90.2
Kimble Tower[f]	-117.73	61.14	10	*111.2*	54.7	95.0	9	85.4
Little Buffalo Tower	-113.79	61.00	42	119.4	49.6	78.0	33	65.3
Nyarling River	-114.17	60.33	41	105.3	45.1	65.0	37	61.7
Pine Point	-114.38	60.85	42	137.2	44.4	93.0	38	67.8
Swede Creek	-116.57	60.27	42	93.7				
Thubun Lake	-111.75	61.50	38	91.4	39.9	77.0	25	84.3
	MEANS				**50.9**	**95.3**		**87.6**
Taltson River Basin								
Alcantara Lake	-108.28	60.90	51	103.0				
Dunvegan Lake	-107.28	60.17	53	113.5				
Dymond Lake	-106.28	61.38	53	118.2	61.8	131.0	16	110.8
Gray Lake	-108.35	61.85	56	106.8	47.5	82.0	42	76.8
Halliday Lake	-109.03	61.38	53	103.0				
Hill Island Lake	-109.90	60.50	53	97.0	37.1	52.0	12	50.7
Nonacho Lake	-109.67	61.72	54	104.9	54.8	115.0	18	109.7
Piers Lake	-111.17	60.32	39	105.3	56.3	104.0	17	98.7
Powder Lake[f]	-109.41	61.04	9	111.6	58.0	111.0	4	99.5
Thekulthili Lake	-110.23	60.97	51	89.1				
Tortuous Lake	-111.70	60.75	51	85.3				
Whirlwind Lake	-108.68	60.25	52	100.0	56.7	113.0	16	113.0
	MEANS				**53.2**	**101.1**		**94.2**
Dehcho Region								
Checkpoint	-121.25	61.45	29	105.1	49.2	103.0	13	98.0
Fort Liard[f]	-123.40	60.23	10	*91.8*	45.2	78.0	8	85.0
Fort Simpson	-121.33	61.80	29	97.3	42.8	75.0	22	77.1
Jean Marie River[f]	-120.65	61.52	10	*96.9*	37.4	59.0	10	60.9
Nahanni Butte[f]	-123.11	61.95	10	*108.8*	53.3	87.0	9	80.0
Ndulee Crossing[f]	-122.53	62.15	10	*93.9*	46.9	80.0	9	85.2
Trout Lake[f]	-119.81	61.14	10	*96.0*	50.2	92.0	6	95.8
Wrigley[f]	-123.41	63.20	10	*88.1*	46.5	64.0	9	72.7
	MEANS				**46.4**	**79.8**		**81.8**

Sahtu Region								
Colville Lake	-126.06	67.02	9	*92.2*	64.2	117.0	2	126.9
Deline	-123.43	65.19	8	*101.1*	58.8	96.0	5	94.9
Fort Good Hope	-128.61	66.27	8	*112.0*	72.1	134.0	3	119.6
Norman Wells	-126.76	65.28	9	*95.9*	49.3	90.0	6	93.8
Tulita	-125.53	64.90	8	*103.9*	50.3	95.0	5	91.4
	MEANS				**58.9**	**106.4**		**105.3**
Inuvik/Gwich'in Regions								
Caribou Creek	-133.48	68.05	39	121.3	91.1	187.0	1	154.2
Fort McPherson	-134.74	67.47	11	*125.1*	93.9	199.0	1	159.1
James Creek	-136.00	67.14	9	*86.5*	63.2	142.0	1	164.3
Midway Lake	-135.44	67.23	9	*154.6*	101.0	224.0	1	144.9
Rengleng River	-133.83	67.63	39	128.3	95.8	206.7	2	161.1
	MEANS				**89.0**	**191.7**		**156.7**

Appendix B: Provisional water level and flow plots (as of April 17, 2024)



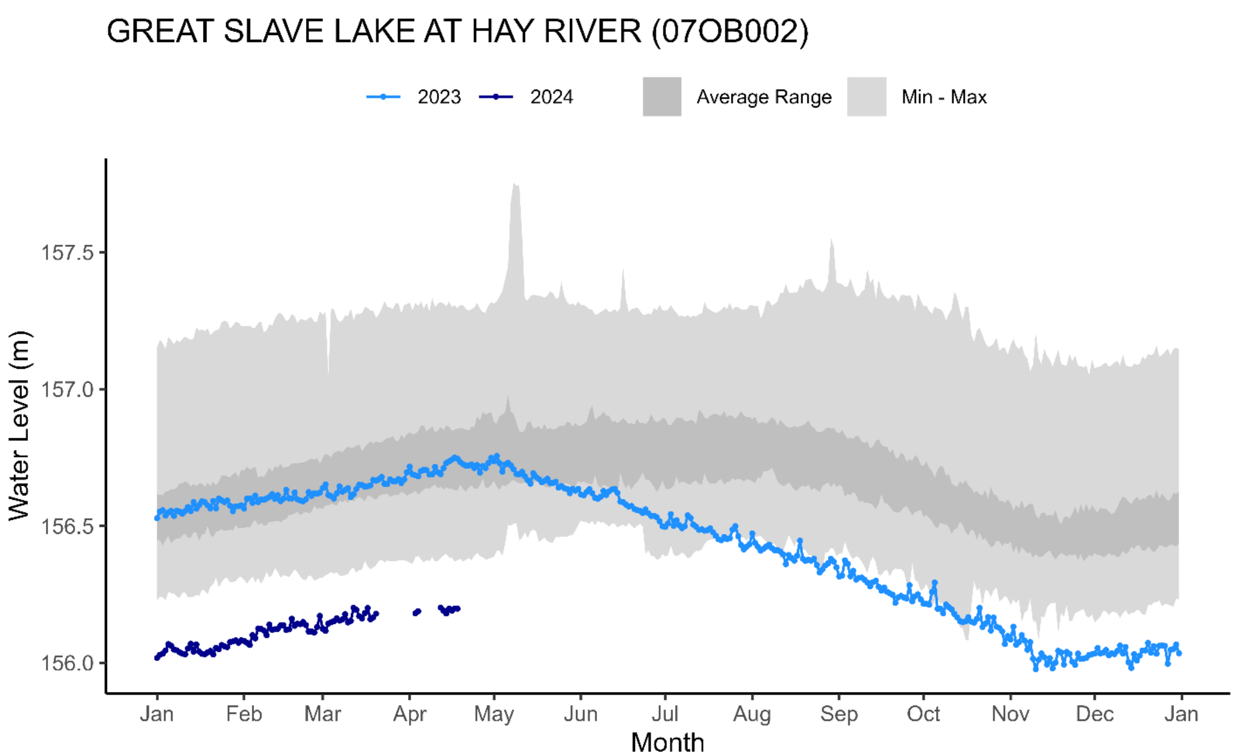


Figure B-1: Water levels (m) on Great Slave Lake for 2023 and 2024, relative to the historic average range (defined as the interquartile range) and historic maximum and minimums at: a) Yellowknife Bay; and b) Hay River.

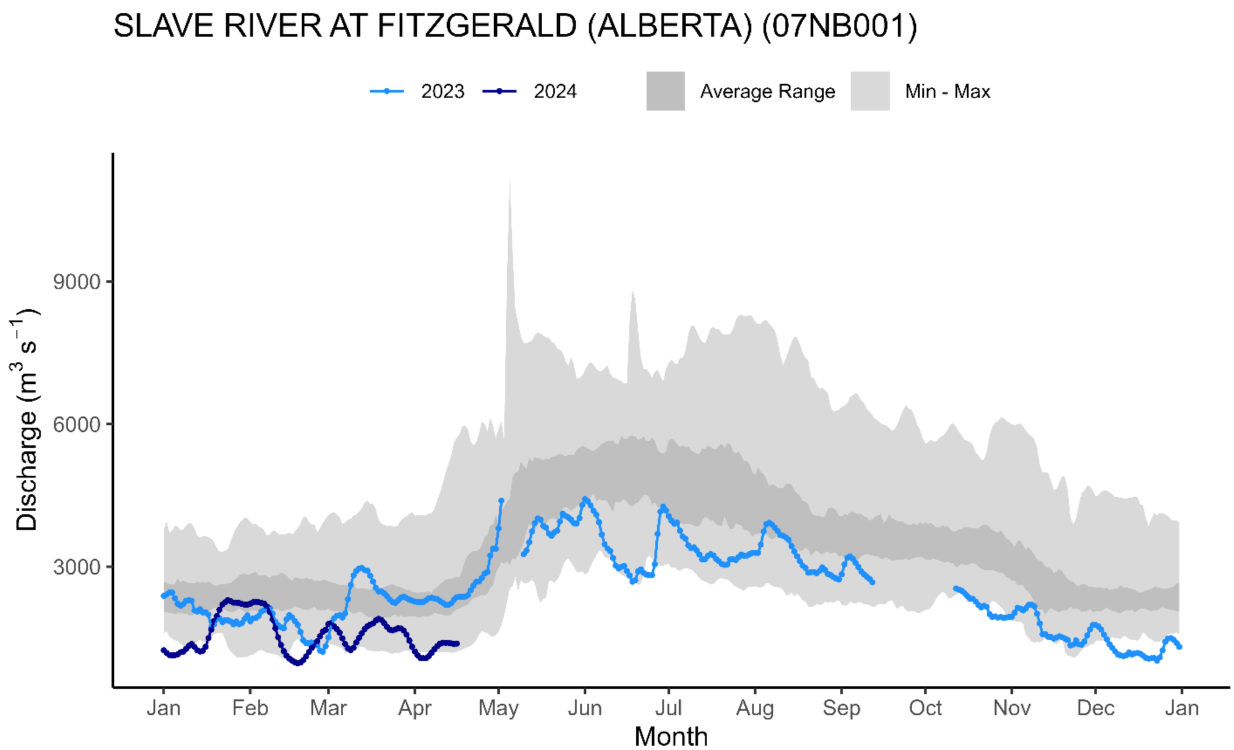


Figure B-2: Flow (m^3 s^{-1}) on the Slave River at Fitzgerald for 2023 and 2024, relative to the historic average range (defined as the interquartile range) and historic maximum and minimums.

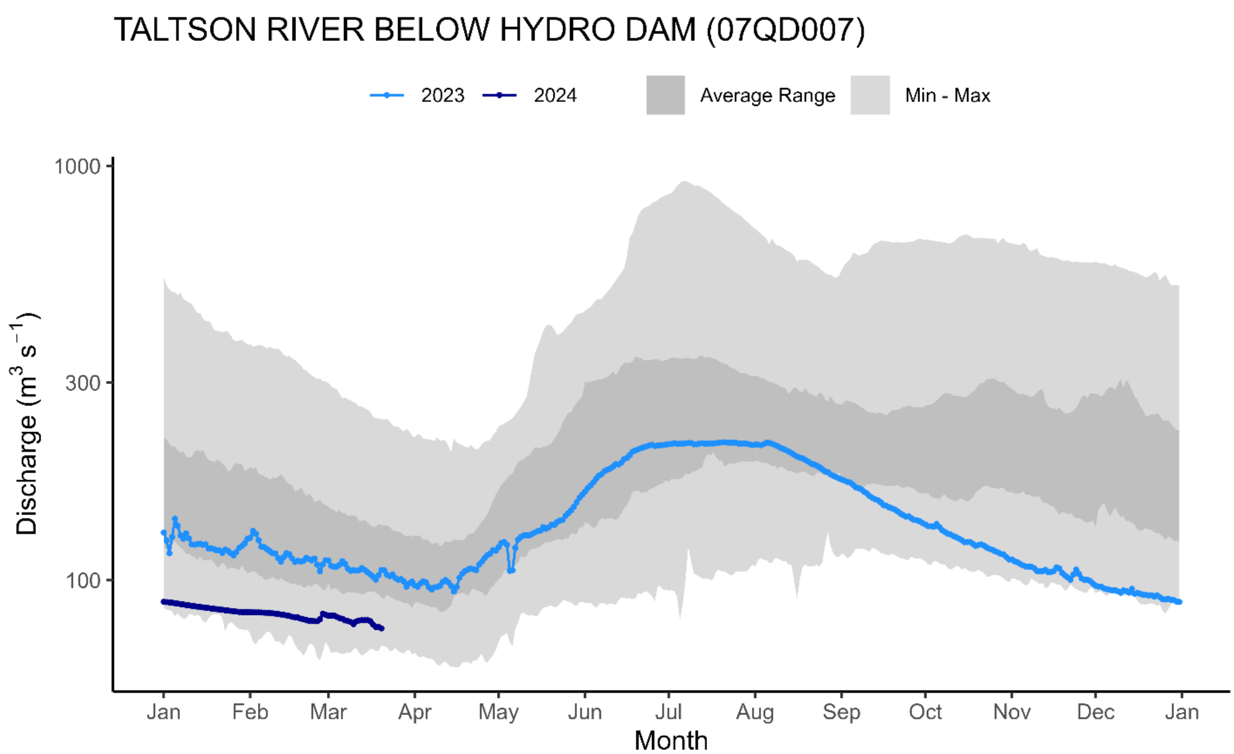


Figure B-3: Flow (m^3 s^{-1}) on the Taltson River for 2023 and 2024, relative to the historic average range (defined as the interquartile range) and historic maximum and minimums. Note: values are presented using a log scale on the y-axis.

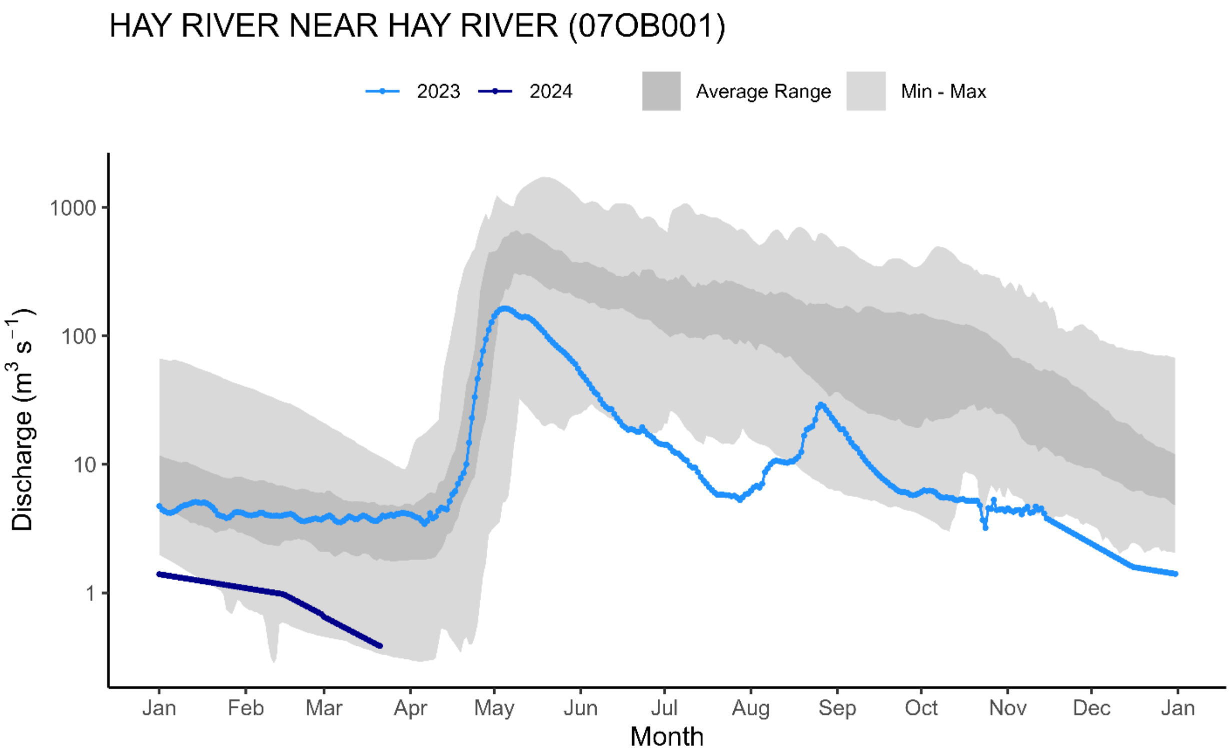


Figure B-4: Flow (m^3 s^{-1}) on the Hay River near Hay River for 2023 and 2024, relative to the historic average range (defined as the interquartile range) and historic maximum and minimums. Note: values are presented using a log scale on the y-axis.

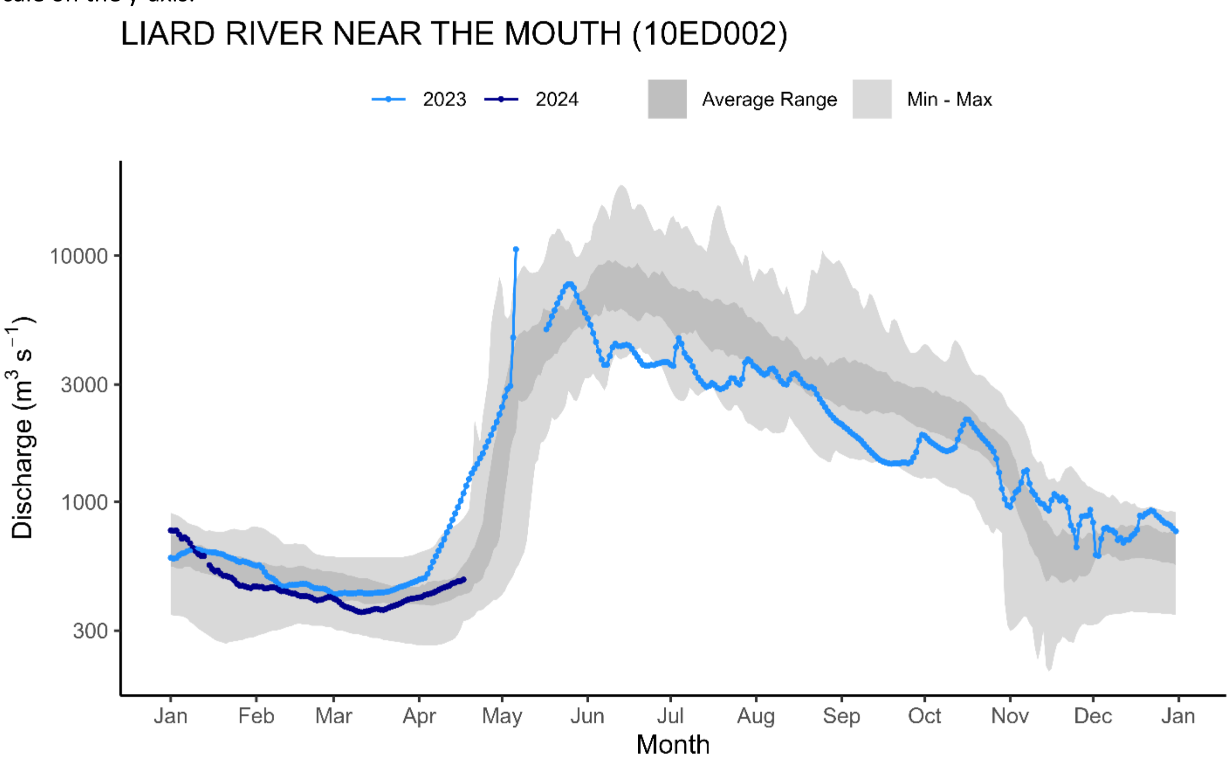


Figure B-5: Flow (m^3 s^{-1}) on the Liard River near the mouth for 2023 and 2024, relative to the historic average range (defined as the interquartile range) and historic maximum and minimums. Note: values are presented using a log scale on the y-axis.

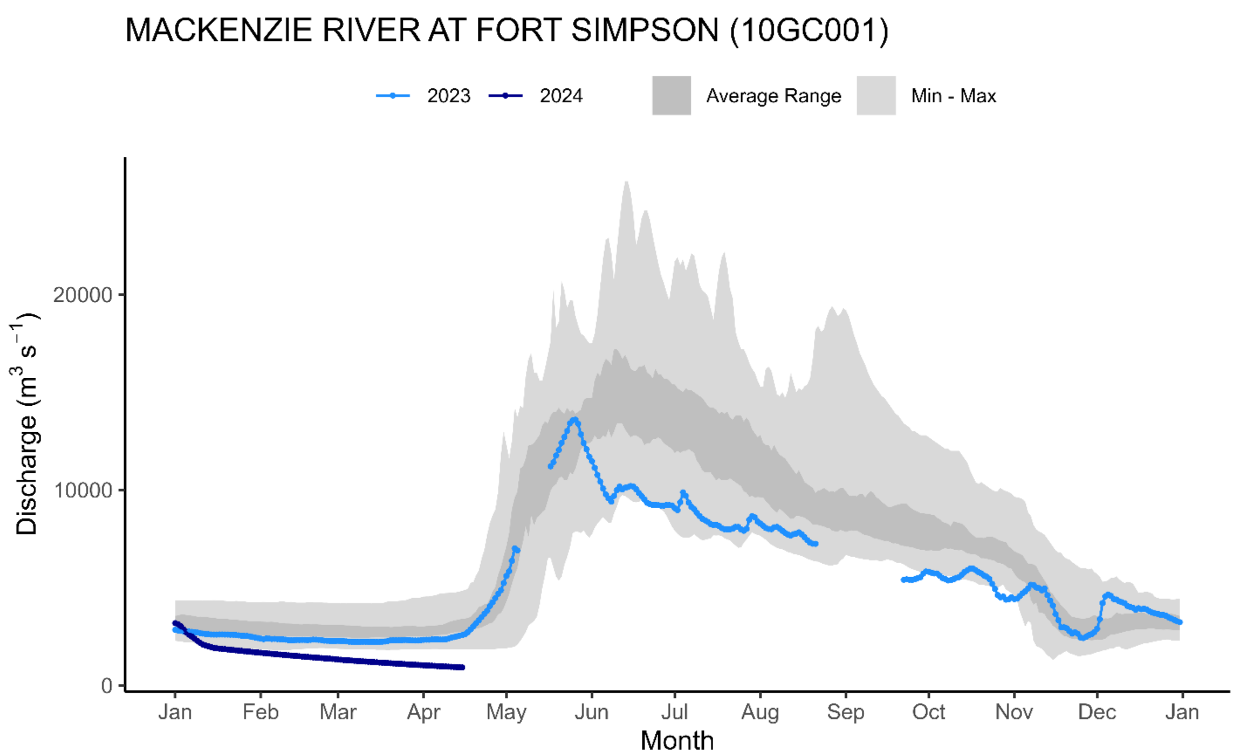


Figure B-6: Flow ($m^3 s^{-1}$) on the Mackenzie River at Fort Simpson for 2023 and 2024, relative to the historic average range (defined as the interquartile range) and historic maximum and minimums.

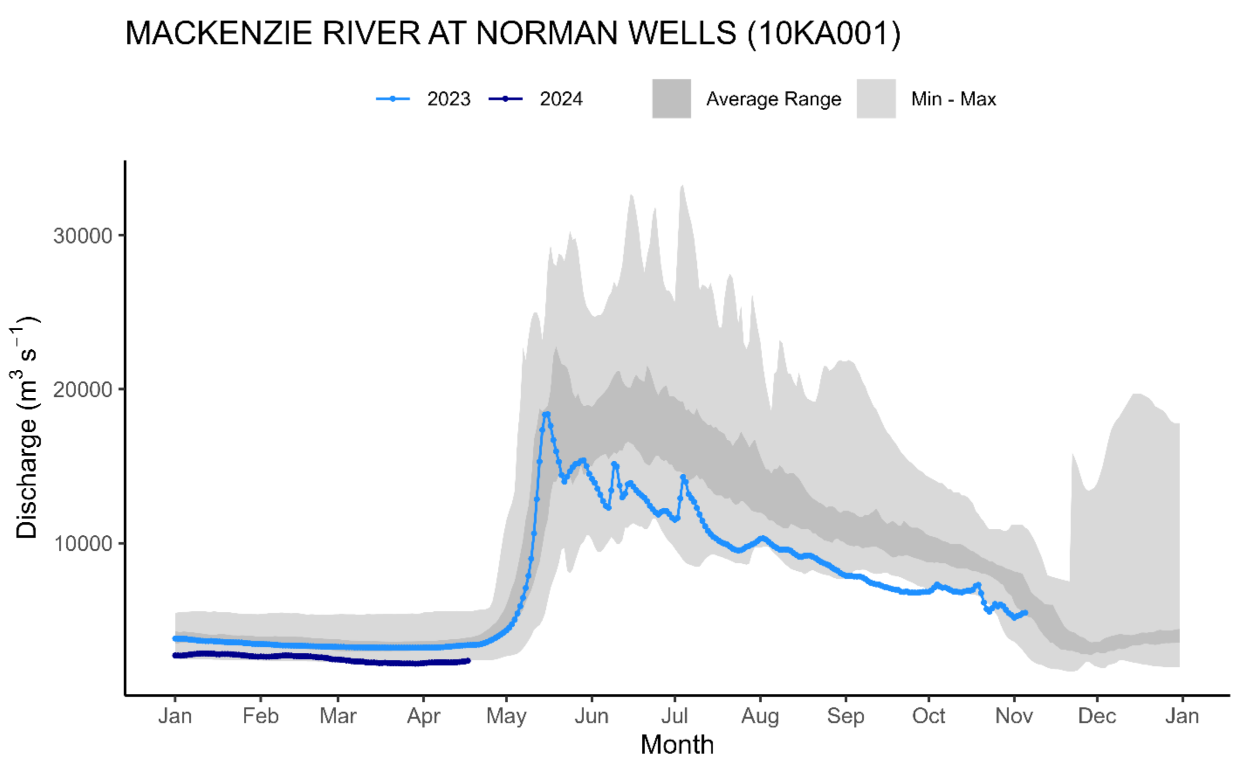


Figure B-7: Flow ($m^3 s^{-1}$) on the Mackenzie River at Norman Wells for 2023 and 2024, relative to the historic average range (defined as the interquartile range) and historic maximum and minimums.

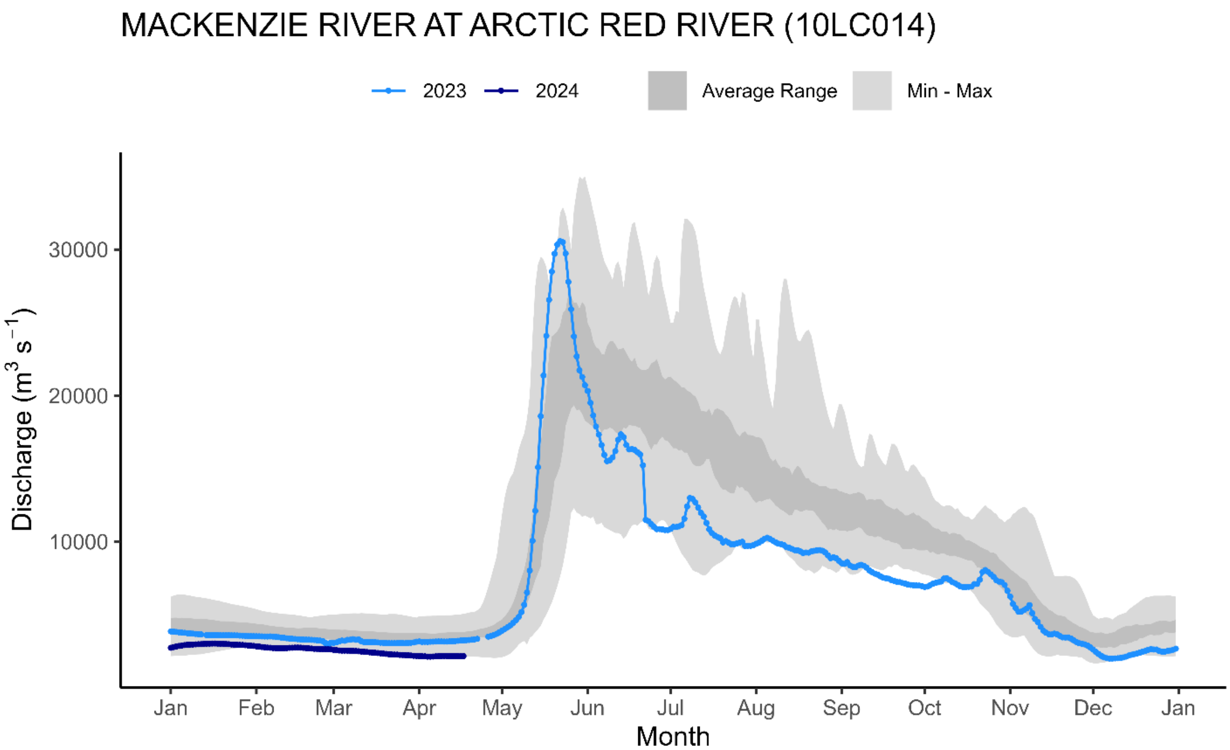


Figure B-8: Flow ($m^3 s^{-1}$) on the Mackenzie River at Tsiigehtchic (Arctic Red River) for 2023 and 2024, relative to the historic average range (defined as the interquartile range) and historic maximum and minimums.

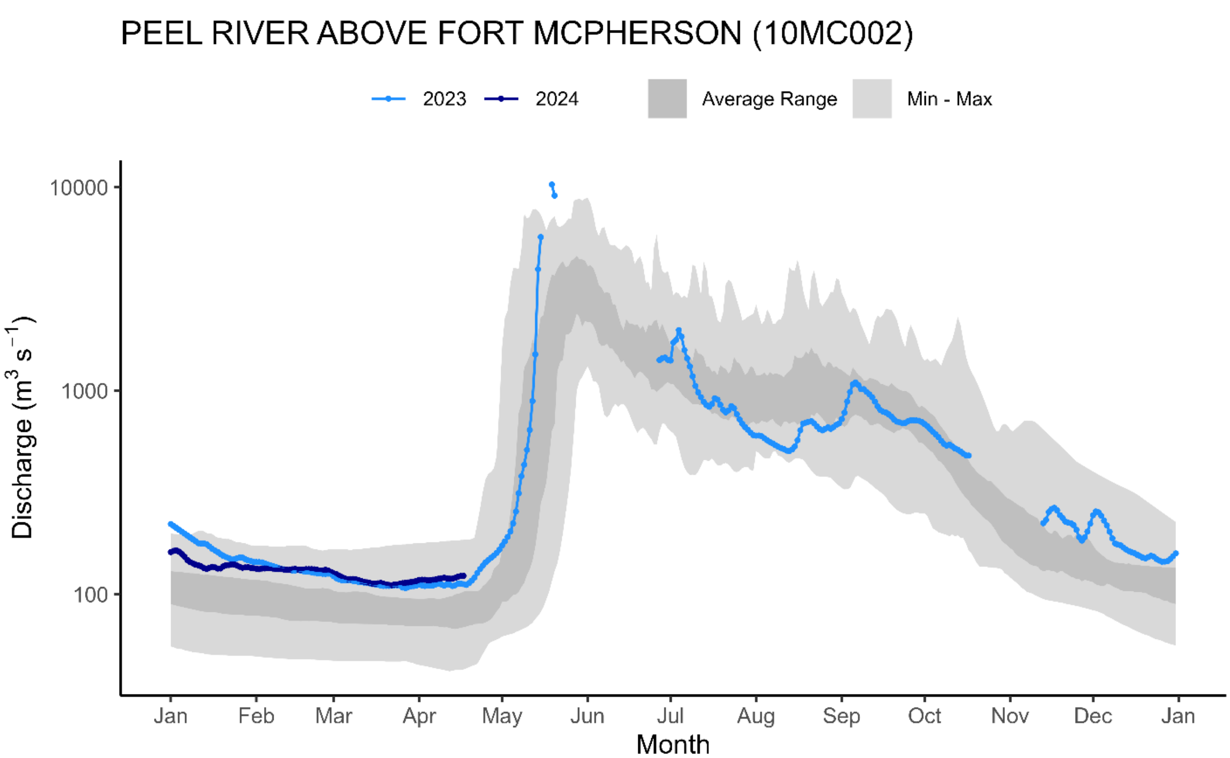


Figure B-9: Flow ($m^3 s^{-1}$) on the Peel River above Fort McPherson for 2023 and 2024, relative to the historic average range (defined as the interquartile range) and historic maximum and minimums. Note: values are presented using a log scale on the y-axis.

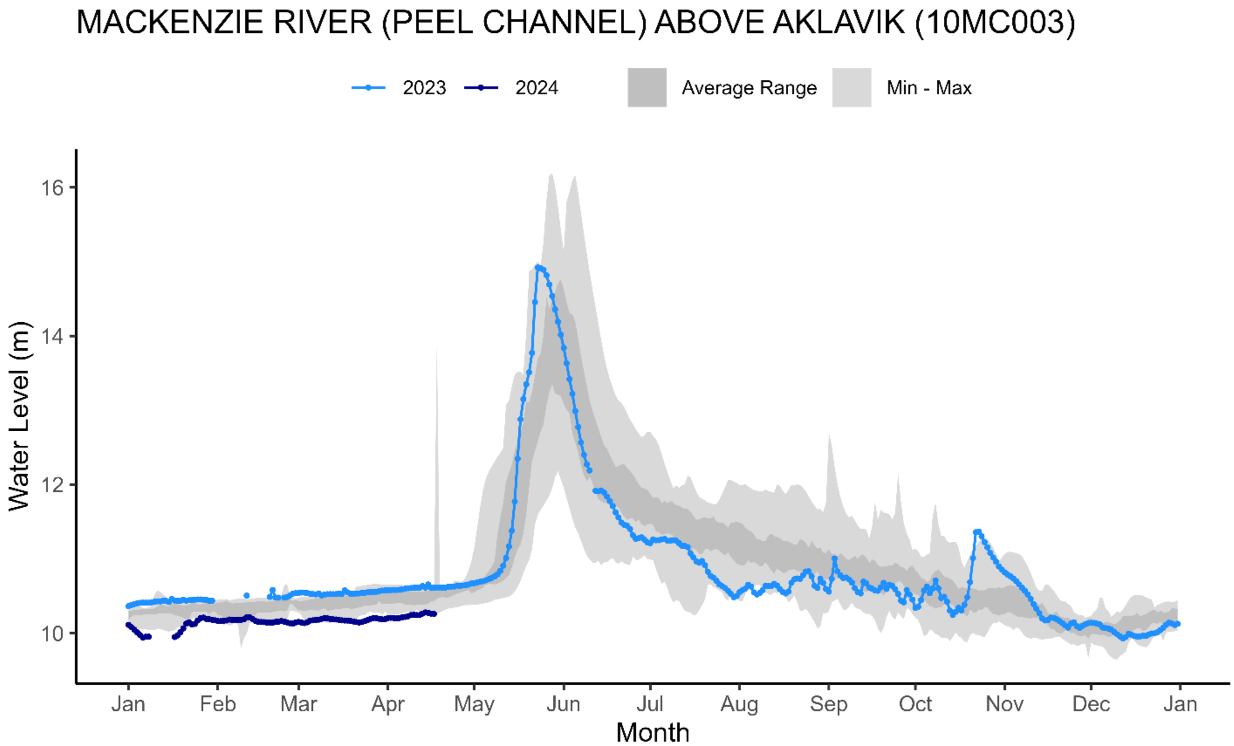
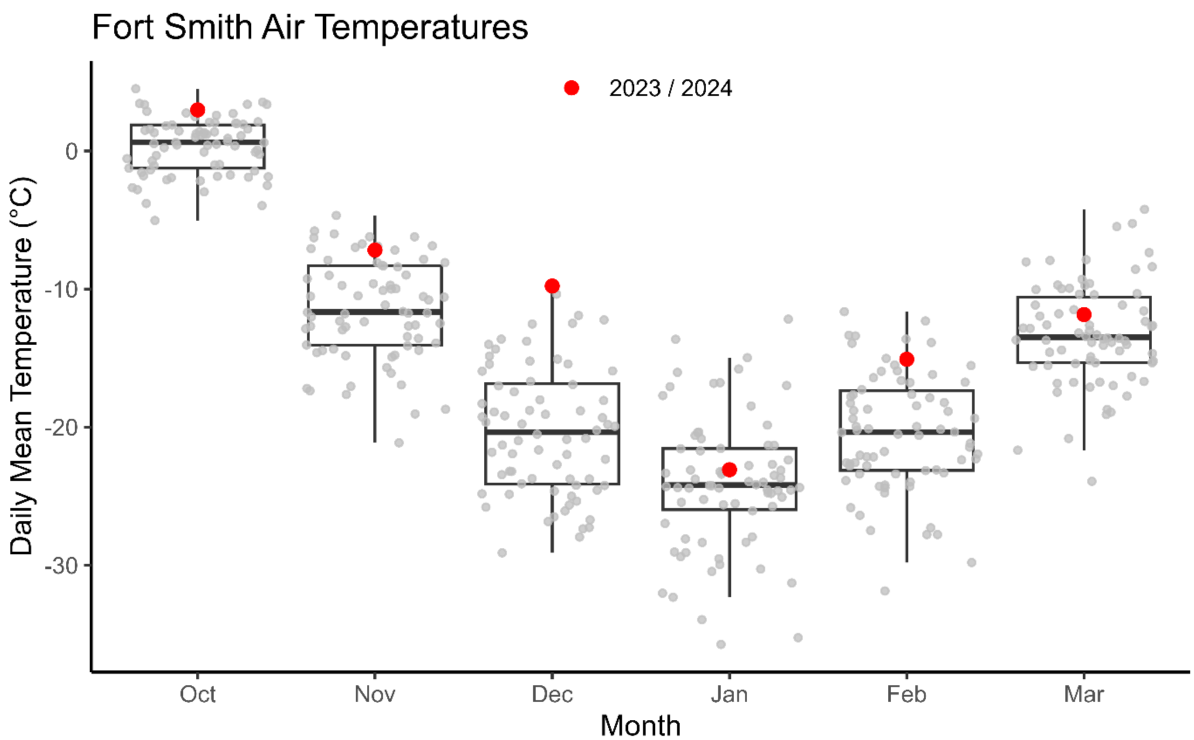
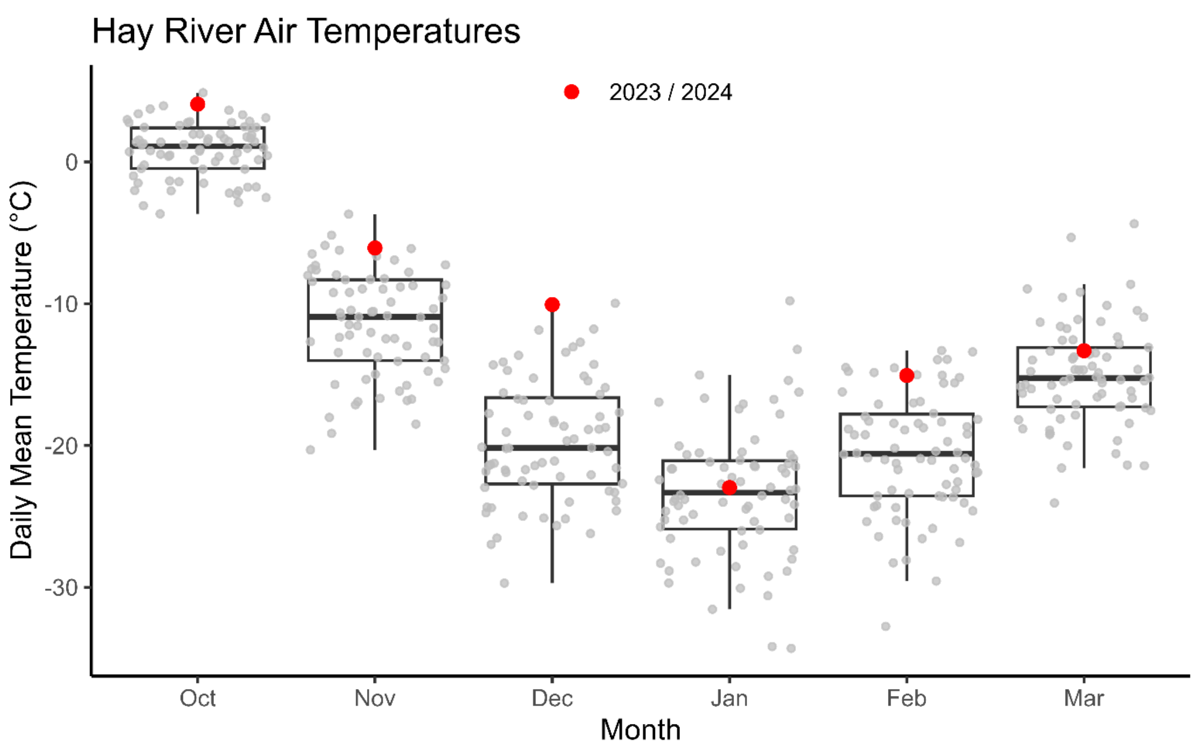
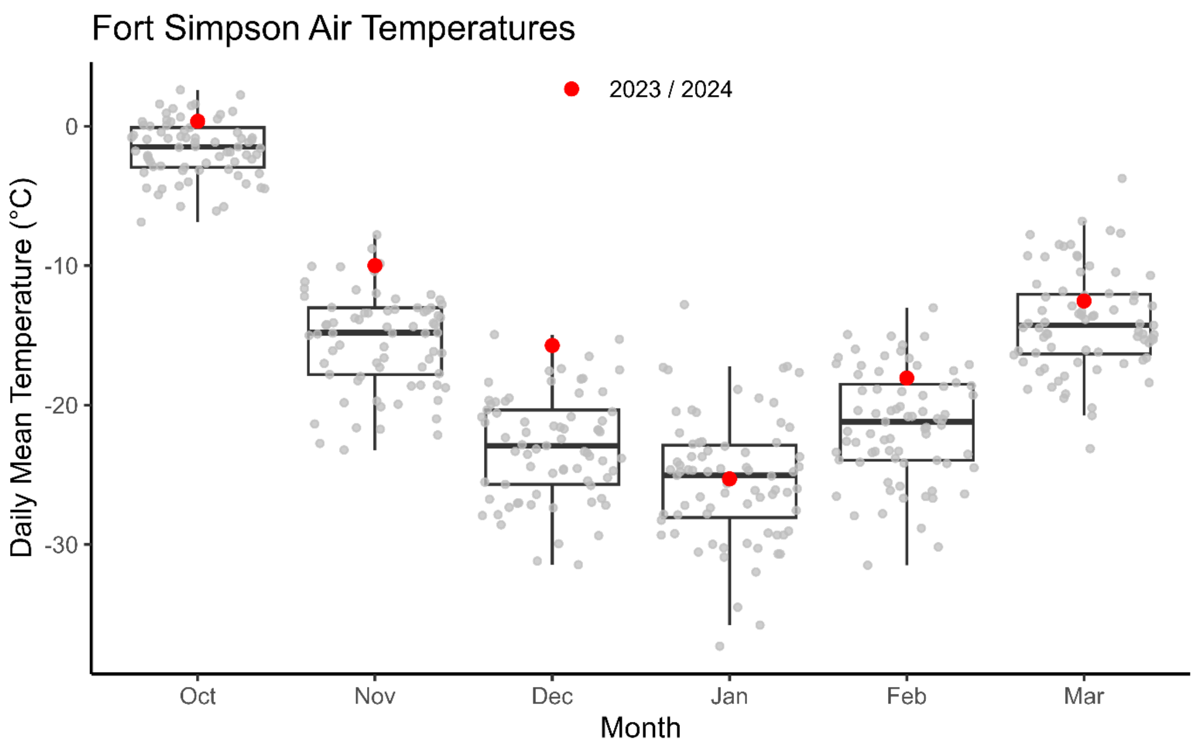


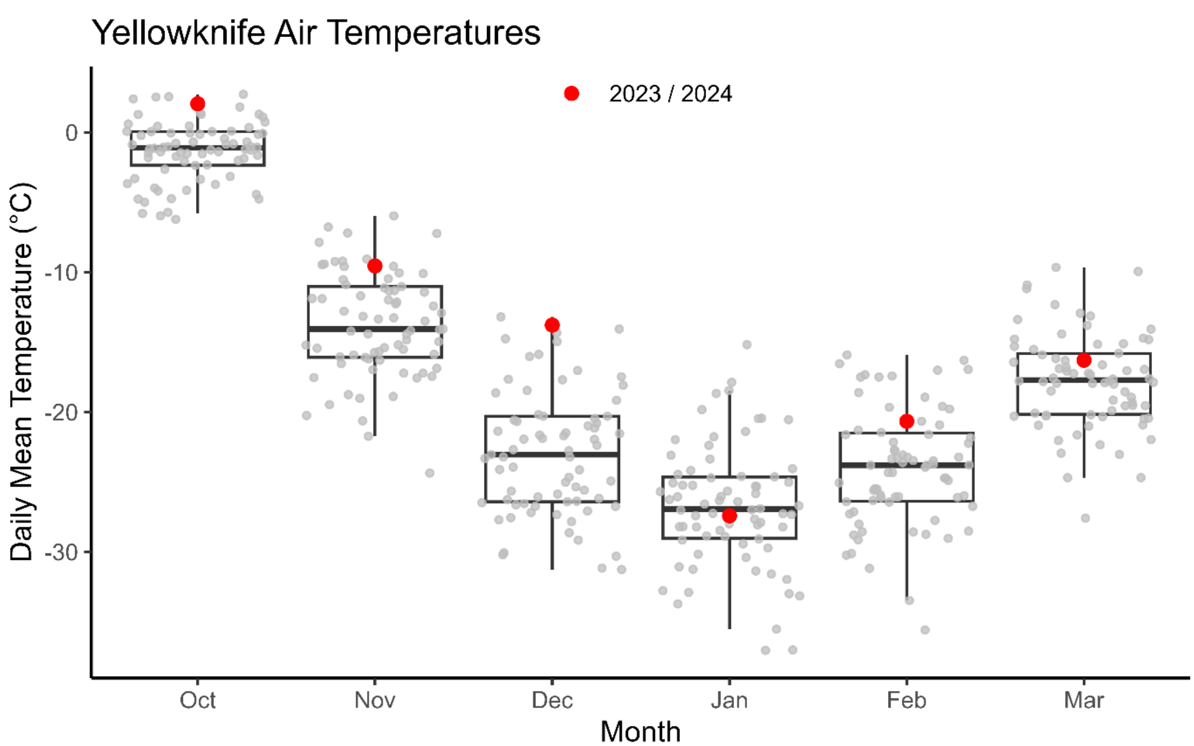
Figure B-10: Water levels (m) on the Mackenzie River (Peel Channel) above Aklavik for 2023 and 2024, relative to the historic average range (defined as the interquartile range) and historic maximum and minimums.

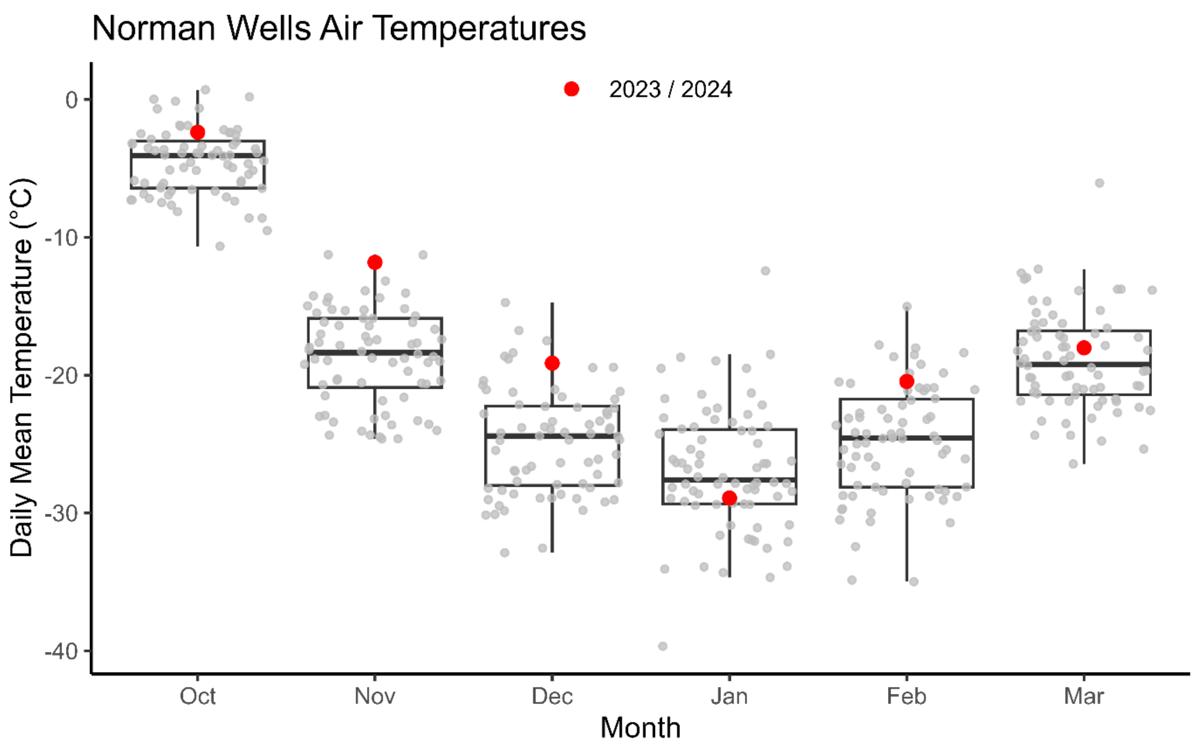
Appendix C: Climate data for the winter of 2023/24 for select NWT communities






Fort Simpson Air Temperatures
2023 / 2024
Daily Mean Temperature (°C)
0
-10
-20
-30
Oct
Nov
Dec
Jan
Feb
Mar
Month


Yellowknife Air Temperatures
2023 / 2024
Daily Mean Temperature (°C)
0
-10
-20
-30
Oct
Nov
Dec
Jan
Feb
Mar
Month



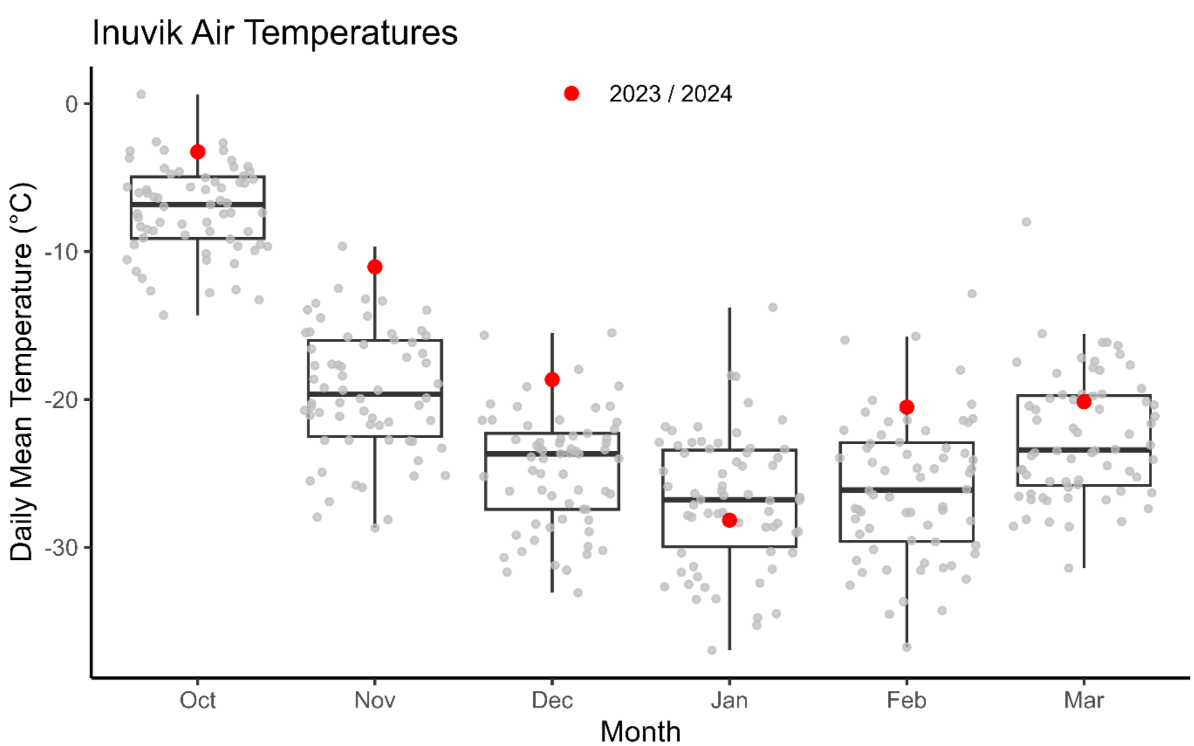


Figure C-1 to C-6: Mean monthly air temperatures (°C) for the winter of 2023/24 in Fort Smith, Hay River, Fort Simpson, Yellowknife, Norman Wells and Inuvik. Data were collected at automatic climate stations operated by Environment and Climate Change Canada. Light grey dots represent values from previous years on record (1950 - 2023), when available. The thick horizontal black line is the median value, while the other horizontal lines represent the interquartile range.

Appendix D: Other resources

Data from other jurisdictions can be found at the following links:

- **Yukon:** https://yukon.ca/en/snow-surveys-and-water-supply-forecasts
- **British Columbia:** https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/drought-flooding-dikes-dams/river-forecast-centre/snow-survey-water-supply-bulletin
- **Alberta:** https://rivers.alberta.ca/#
- **Saskatchewan:** https://www.wsask.ca/lakes-rivers/provincial/