YUKON SNOW SURVEY BULLETIN & WATER SUPPLY FORECAST

April 1, 2024

Prepared and issued by:
Water Resources Branch
Department of Environment

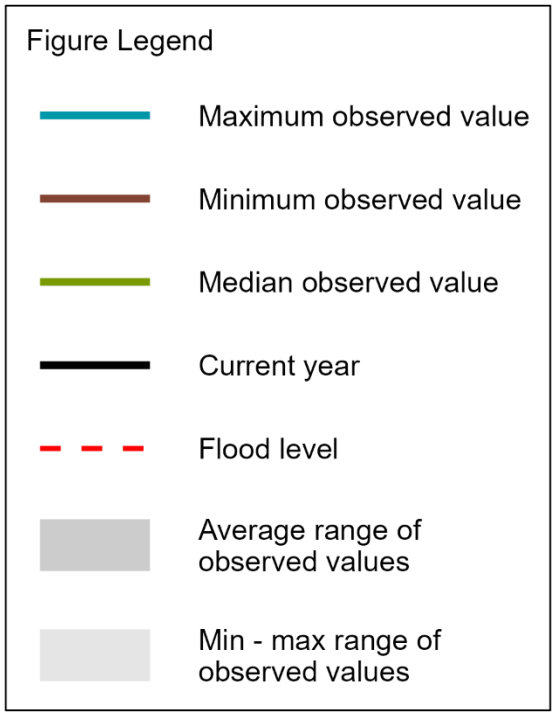
Yukon

PREFACE

The Department of Environment's Water Resources Branch issues the Yukon Snow Survey Bulletin and Water Supply Forecast three times annually – early March, April and May. The bulletin provides a summary of winter meteorological and streamflow conditions for the Yukon, as well as current snow depth and snow water equivalent observations for 57 locations. This information is used to evaluate the potential for spring flooding caused by both breakup ice jams and large spring snowmelt (freshet) flows. It is important to note that other processes such as summer rain and glacier melt can significantly influence maximum annual water levels in specific Yukon basins.

Weather conditions for the Yukon are presented in two maps, one showing temperature anomalies (deviation from climate normals), and another showing precipitation anomalies. Territory-wide snowpack data are presented in a third map showing Snow Water Equivalent (SWE) as a percent of historical median for each station, as well as the basin averaged estimated SWE for 11 watersheds (or river basins). Where available, complementary meteorological and hydrological data are presented for each basin through a series of plots, detailed below. Not all basins contain the instrumentation to support all five figure types.

- **Figure A:** Daily Snow Water Equivalent (SWE) data starting in September at one specific location in the watershed, showing an overview of winter snowpack evolution.
- **Figure B:** Current, basin-averaged, estimated Snow Water Equivalent (SWE) from snow survey data, compared with historical data, serving as an indicator of potential runoff volumes in the spring (acknowledging that snow sublimation, evapotranspiration, rain and glacier melt also significantly affect runoff).
- **Figure C:** Monthly winter precipitation (rain and/or snow) compared with historical data, complementing the information presented in Figure B.
- **Figure D:** Cumulative degree-days of freezing (CDDF, sum of negative daily temperatures) compared with historical data, functioning as an indicator of winter coldness and overall river ice thickness; variables that influence river ice breakup scenarios in the spring.
- **Figure E:** Current, estimated daily discharge or measured water level, compared with historical data, representing an overview of the watershed hydrological conditions. The flood level refers to the lowest elevation at which flood impacts are estimated to occur.



For information about the bulletin, snowpack conditions, or streamflow projections please contact waterlevels@yukon.ca

Water Resources Branch, Department of Environment
(867) 667-3171, toll free (in Yukon, NWT, Nunavut): 1-800-661-0408, ext. 3171
Fax: 867-667-3195 | Email: waterresources@yukon.ca

This bulletin, as well as earlier editions, are available online at:
Yukon.ca/snow-survey

ISSN 1705-883X

Reference to this report should be made in the following form:
Yukon Snow Survey Bulletin and Water Supply Forecast, April 1, 2024

ACKNOWLEDGEMENTS

The Yukon Snow Survey Bulletin forms part of the Yukon Snow Survey Program administered by the Water Resources Branch, Department of Environment, Government of Yukon. The Water Resources Branch (WRB) strives for water stewardship in the Yukon and is committed to responsible and collaborative monitoring to inform the management and protection of waters.

We are grateful to monitor snow and water across the territories of all fourteen Yukon First Nations and to work in partnership with many First Nations in different aspects of our work. Though the findings expressed in this report are based primarily on field observations and relevant scientific data, we acknowledge the deep and longstanding connection to, and knowledge of, snow and water held by Yukon First Nations.

Gathering snow measurements and data from across our vast territory requires working together with a number of partners. We'd like to recognize the following agencies/individuals for their significant contributions to the snow survey bulletin:

- *Data Collection Officer, Natural Resources Conservation Service, United States Department of Agriculture*
- *Meteorologist, Wildland Fire Management, Yukon Department of Community Services, Whitehorse*
- *Officer in Charge, Water Survey of Canada, Whitehorse*
- *Water Management Engineer, Yukon Energy Corporation*
- *Research Technologists, McMaster University*

Agencies cooperating with Environment Yukon in the Snow Survey Program are:

- *B.C. Ministry of Environment, Water Stewardship Division*
- *Parks Canada, Kluane National Park and Reserve*
- *Yukon Department of Highways and Public Works*
- *Yukon Department of Energy Mines and Resources, Compliance Monitoring and Inspections Branch*
- *Yukon Department of Environment, Client, Business and Technology Solutions*
- *Vuntut Gwitchin First Nation*

DISCLAIMER AND LIMITATION OF LIABILITY

The User understands and acknowledges that the use of the data is solely at their own risk. The User is solely responsible for confirming the accuracy, availability, suitability, reliability, usability, completeness or timeliness of the data.

The User accepts the data “as is” and acknowledges that the Government of Yukon makes no warranties or representations (express or implied) with respect to the accuracy, availability, suitability, reliability, usability, completeness or timeliness of the data, including, without limitation, implied warranties for merchantability, fitness for a particular purpose, and non-infringement.

In consideration of access to the data, the User also agrees that in no event will the Government of Yukon be liable (in tort or contract) or responsible whatsoever to the User or any other legal entity for the accuracy, availability, suitability, reliability, usability, completeness or timeliness of the data, including, without limitation, any loss of revenue or profit, or for direct, indirect, special, incidental, or consequential damages arising from or related to the data.

YUKON TERRITORY WEATHER AND SNOWPACK CONDITIONS

The Yukon experienced another warm wet fall in 2023. The warmer than average weather continued until January switched things around and brought colder than average temperatures overall. Temperatures remained low in February but big swings in temperatures were enough to bring temperatures close to average. March brought warmer than average temperatures to much of the south and central Yukon while staying close to normal in the north.

Taking late fall and winter as a whole, the entire territory was 1-4 degrees warmer than long-term normals, which itself has been a relatively normal occurrence over the past decade. More notably, precipitation ranged from 90%-120% of normal in southern and central regions, and from 120%-150% of normal in Dawson, Old Crow and the northern Dempster. Residents of Old Crow have reported challenging travel due to the deep snowpack and the snow survey results agree.

October

The long summer of 2023 continued to be felt into mid-October with warm temperatures dominating the territory for the first half of the month, and greater than normal precipitation, falling mostly as rain, keeping northern and much of central Yukon wetter than normal for the month. A blast of Arctic air swept down from the north in late October, bringing a sudden end to the warm temperatures and ushering in a short period of wintery weather.

November

Warmth returned for November, with most communities recording temperatures 3-5 degrees above long-term normals. A series of small, short-lived storms brought snowfall to all points of the territory and made the Yukon one of the few places in western Canada to receive normal November precipitation.

December

Warm air reigned once again except in the far north, with all but Old Crow and northern sections of the Dempster Highway registering temperatures up to 7 degrees higher than usual for December, brought on primarily by a strong and persistent jet stream pushing relatively warm air from the Pacific into central and southern Yukon. A similar pattern persisted with snowfall, where Old Crow and Eagle Plains areas recorded double the normal snowfall amounts for the month. Dawson City was likewise a winter wonderland with 200% of normal snowfall.

January

In a month of contrasts, the far north and much of the central Yukon experienced a relatively rare colder-than-normal month as persistent arctic air entrenched itself over the territory. The latter part of the month brought the most significant of the season's mid-winter warm spells with much of the south enjoying, or cursing, above-freezing temperatures and sunny skies. Precipitation, including some rainfall in southern Yukon, was close to normal with the exception of Teslin and Watson Lake, which both recorded near 170% of normal precipitation as several storms snuck along the BC-Yukon border.

February

February brought a little bit of everything with arctic air and warmer Pacific air in a see-saw battle. Temperatures across the territory were within 1-2 degrees of long-term climate normals while snowfall was rare in most areas, coming in at 30-50% of normal amounts except along some portions of the Dempster where another month of 200% of normal was recorded.

March

The Yukon's March weather was driven by both cold arctic air as well as warm pacific air as the jet stream flip-flopped throughout the month. Cold air notwithstanding, most of the territory, with the exception of Old Crow, came through with warmer than normal temperatures. Snowfall was likewise very close to normal, except slightly below normal in the southeast Yukon as most storms stalled along the coastal passes and brought little besides wind to inland areas.

Snowpack

The April 1 snow survey revealed that the snowpack in the southern Yukon is close to average and drops below average across the central part of the territory, before dramatically increasing from the Klondike northward.

Basin-averaged snowpack estimates range from a low of 78% of median in the Stewart River Basin to 166% in the Porcupine River Basin. The Stewart River Basin (78%), Central Yukon River Basin (Carmacks) (82%), Pelly River Basin (83%) and White River Basin (83%) are all below the historical median. The Alsek River Basin (96%), Liard River Basin (99%), Teslin River Basin (101%), and Upper Yukon River Basin (Southern Lakes) (109%) are all close to the long-term median. The Lower Yukon River Basin (Dawson/Klondike) (124%), Peel River Basin (140%), and Porcupine River Basin (166%) are all above the long-term median for this time of year, with the Porcupine River Basin setting a new record, both for the basin and in Old Crow.

YUKON TERRITORY FLOW CONDITIONS AND OUTLOOK

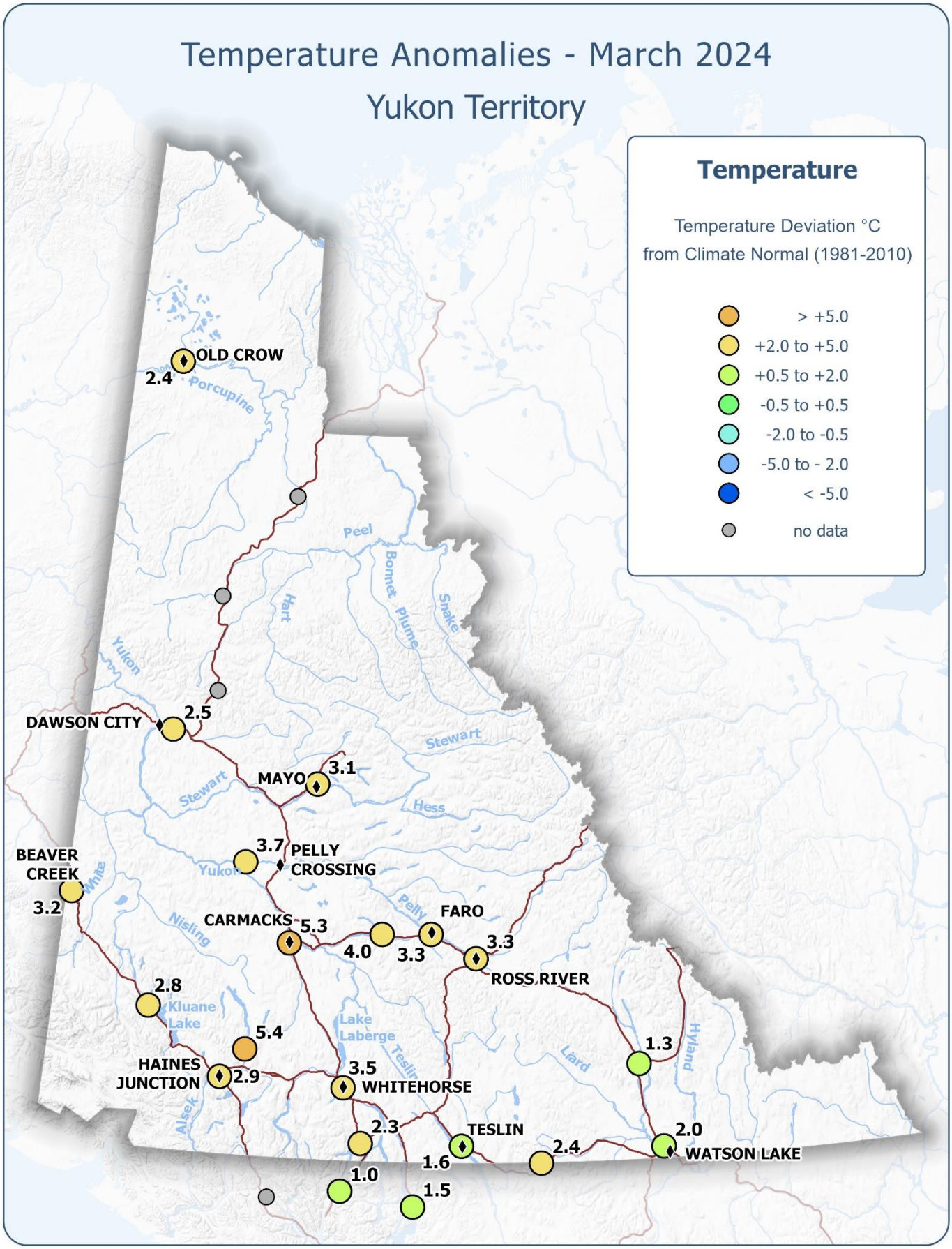
Winter discharge (or baseflow) is estimated based on a combination of periodic winter measurements as well as historic data and regional trends. While most sites have had recent measurements it should be noted that discharge estimates are provisional at all stations.

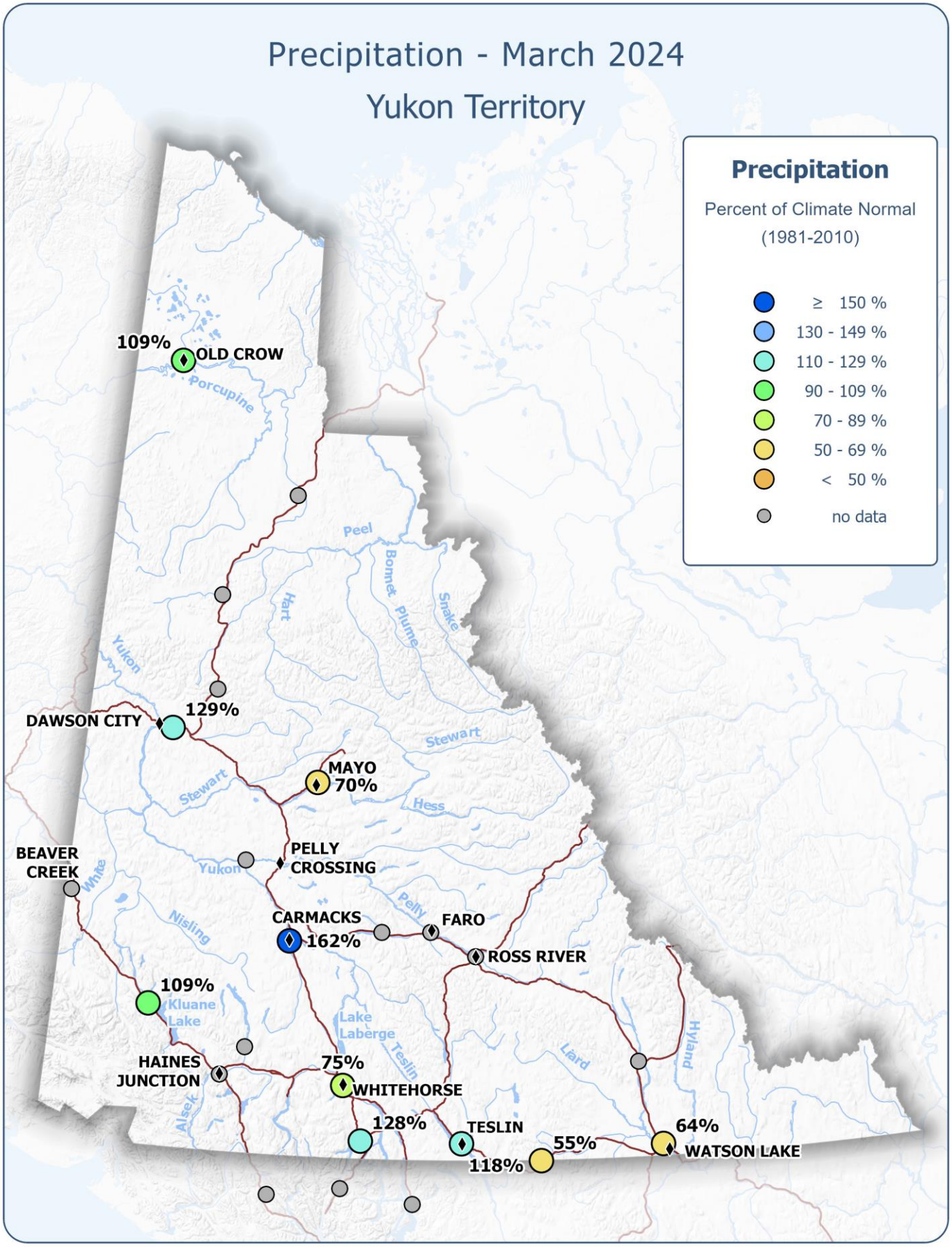
Discharge on most Yukon rivers is estimated to be at or above the upper end of the average range of flows for this time of year. Increased winter baseflows are a trend that is expected to continue as the climate warms. The Government of Yukon also monitors groundwater levels around the territory. In most observation wells, water levels remained high in the fall of 2023, though most wells were lower than at the same time in 2022, except for wells in the Klondike region which were higher.

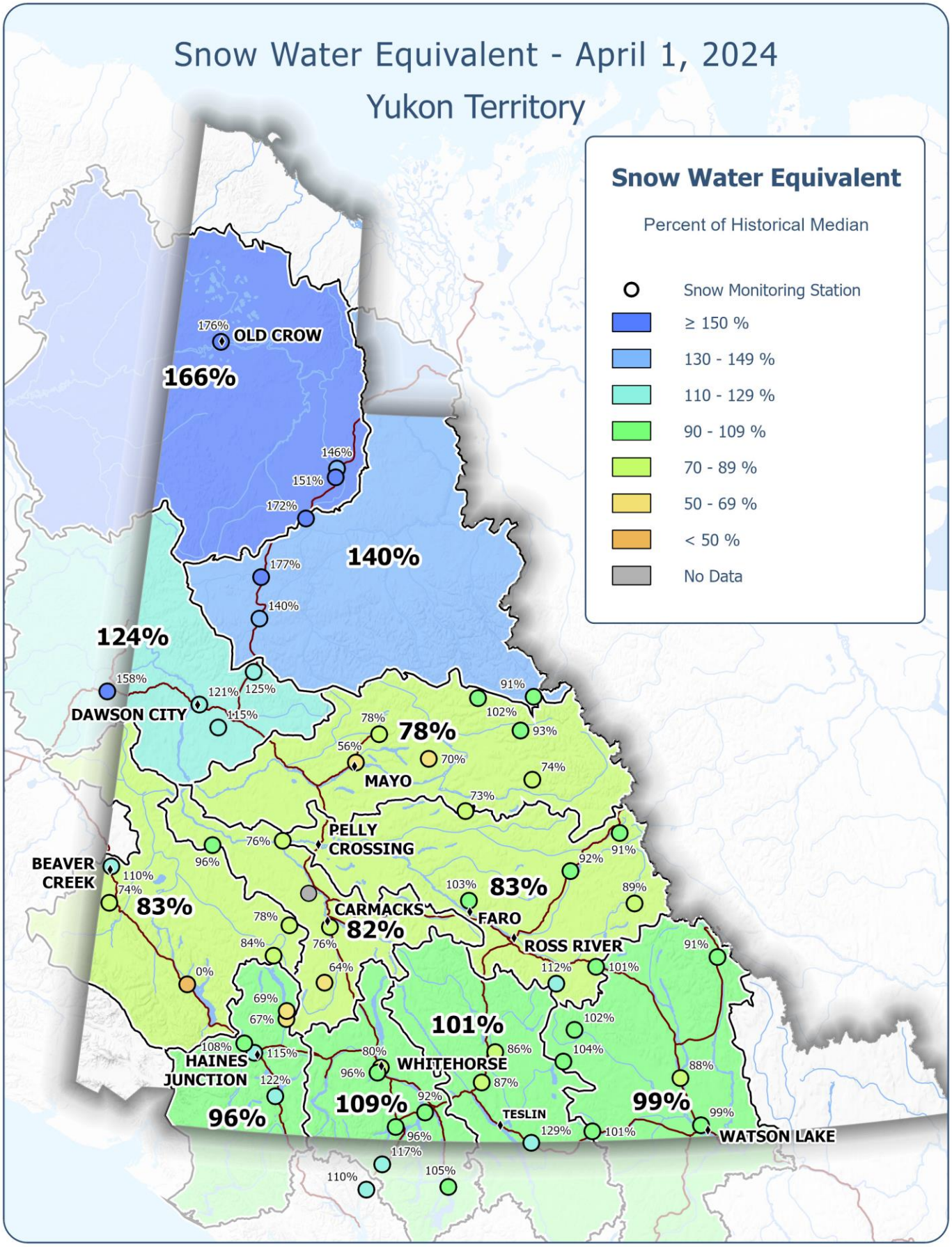
On Marsh Lake, water level is close to the long-term average as would be expected during the managed portion of the year. Lake Laberge shows a steady increase in water level over March, likely due to low elevation runoff inputs and/or displacement due to earlier than usual ice degradation.

Given a steady increase in air temperatures during the freshet period, most areas of the Yukon can expect flows to range around the long-term average. The notable exceptions are the Porcupine, Klondike and Peel River basins. The Porcupine River Basin has a record high snowpack which will lead to above average freshet flow volumes, but even before that, the extra water can lead to increased water levels associated with ice jams, depending on the timing of breakup and the strength of the ice. The same factors are at play in the Klondike, but the addition of a high freeze-up ice jam at the Klondike Highway bridge has increased the flood risk in that area specifically. The Peel River basin can also expect high freshet flows this spring which may have implications for communities in the Northwest Territories.

The timing and magnitude of peak spring freshet flows will depend on spring weather patterns. A sudden transition to warmer temperatures in April or early May could be conducive to ice jamming in some rivers. A delayed melt followed by a sustained rise in air temperature or significant rainfall could generate high runoff rates, resulting in high May and June peak flows in streams and rivers. Weather conditions over both the spring and summer will influence peak flows and lake levels in watersheds influenced by glacial melt.

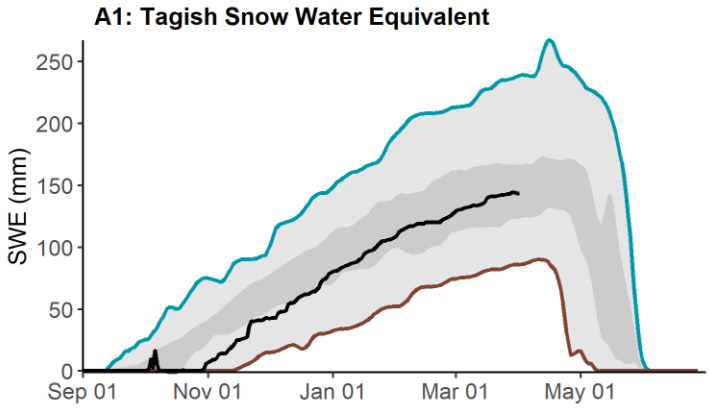

Temperature Anomalies - March 2024
Yukon Territory
Temperature
Temperature Deviation °C
from Climate Normal (1981-2010)
> +5.0
+2.0 to +5.0
+0.5 to +2.0
-0.5 to +0.5
-2.0 to -0.5
-5.0 to - 2.0
< -5.0
no data
OLD CROW
2.4
Porcupine
Peel
Bonnet Plume
Snake
Hart
Yukon
DAWSON CITY
2.5
Stewart
MAYO
3.1
Stewart
Hess
BEAVER CREEK
3.2
White
3.7
PELLY CROSSING
Yukon
Pelly
FARO
CARMACKS
5.3
4.0
3.3
3.3
ROSS RIVER
Nisling
2.8
Kluane Lake
5.4
Lake Laberge
Teslin
Liard
Hyland
1.3
HAINES JUNCTION
2.9
3.5
WHITEHORSE
Alsek
2.3
TESLIN
2.4
2.0
WATSON LAKE
1.6
1.0
1.5

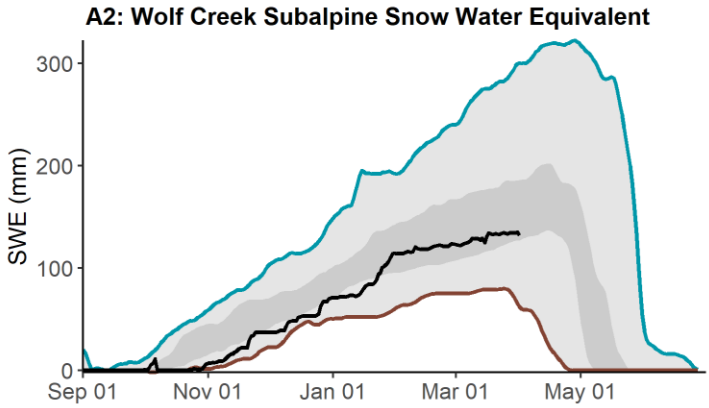

Precipitation - March 2024
Yukon Territory
Precipitation
Percent of Climate Normal
(1981-2010)
≥ 150 %
130 - 149 %
110 - 129 %
90 - 109 %
70 - 89 %
50 - 69 %
< 50 %
no data
109%
OLD CROW
Porcupine
Peel
Bonnet Plume
Snake
Hart
Yukon
129%
DAWSON CITY
Stewart
MAYO
70%
Hess
BEAVER CREEK
White
PELLY CROSSING
Nisling
Pelly
CARMACKS
162%
FARO
ROSS RIVER
109%
Kluane Lake
Lake Laberge
Teslin
Laird
Hyland
HAINES JUNCTION
75%
WHITEHORSE
Alsek
128%
TESLIN
64%
55%
WATSON LAKE
118%

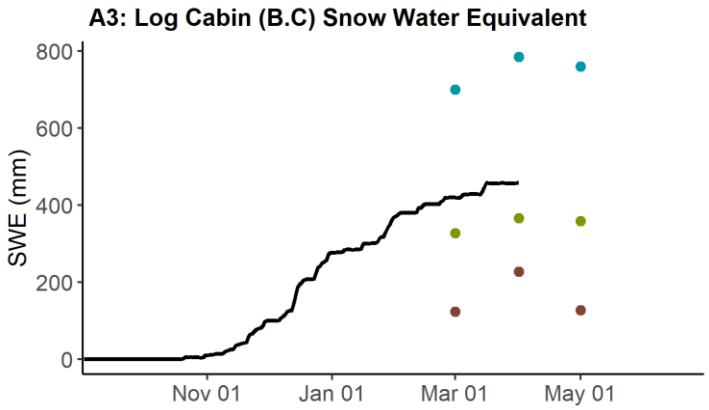

Snow Water Equivalent - April 1, 2024
Yukon Territory
Snow Water Equivalent
Percent of Historical Median
Snow Monitoring Station
≥ 150 %
130 - 149 %
110 - 129 %
90 - 109 %
70 - 89 %
50 - 69 %
< 50 %
No Data
OLD CROW
166%
140%
124%
DAWSON CITY
MAYO
78%
PELLY CROSSING
BEAVER CREEK
83%
CARMACKS
82%
FARO
83%
ROSS RIVER
101%
HAINES JUNCTION
96%
WHITEHORSE
109%
TESLIN
99%
WATSON LAKE

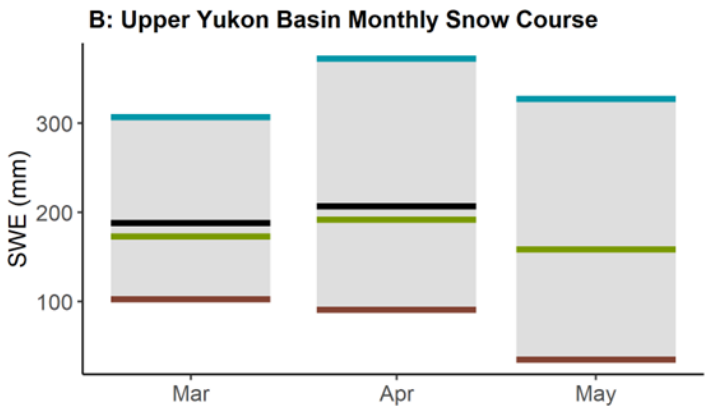
UPPER YUKON RIVER BASIN (SOUTHERN LAKES/WHITEHORSE)

The Upper Yukon River Basin snowpack is **close to average**. At Tagish Meteorological Station, Snow Water Equivalent (SWE) is estimated to be **93%** of the historical median (Figure A1), while at Wolf Creek Subalpine Meteorological Station, SWE is estimated to be **93%** of the historical median (Figure A2). Established in 2023, Log Cabin Meteorological Station registered SWE at **126%** of the historical median when compared with the manual snow survey record for that site (Figure A3). The Upper Yukon basin-averaged SWE is estimated to be **109%** of the historical median, with **207 mm** as of April 1 (Figure B).

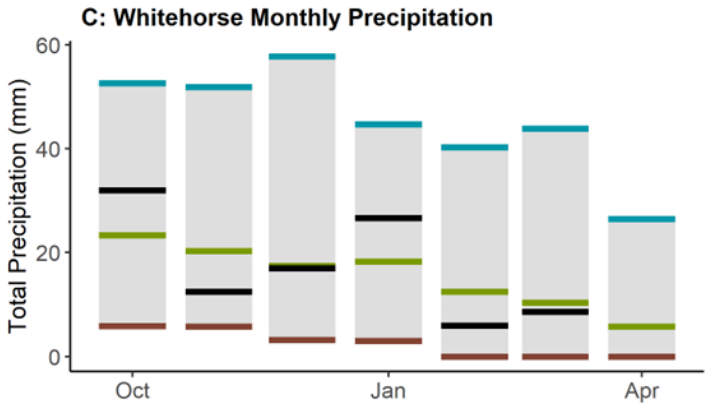


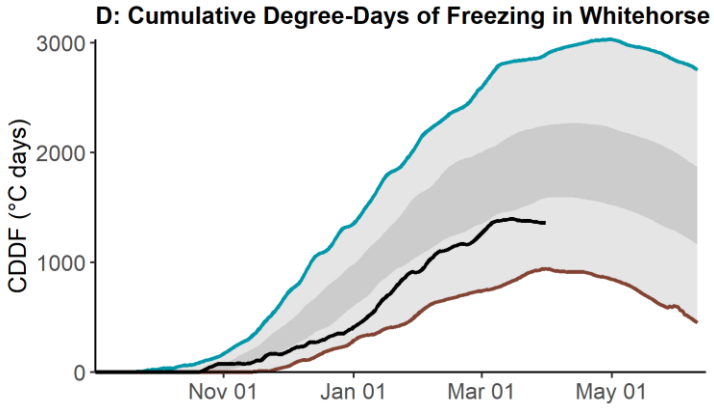




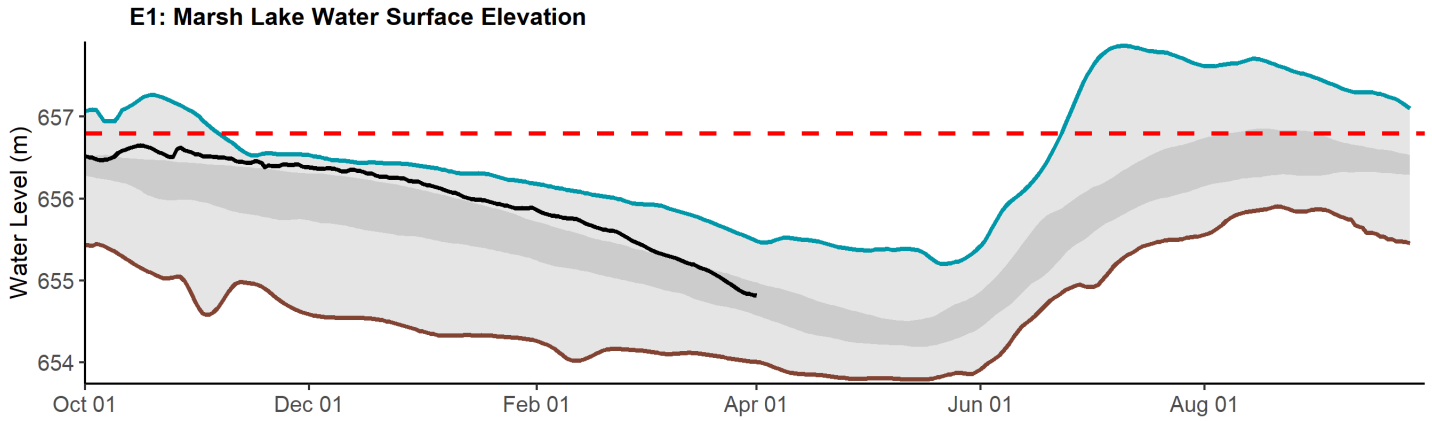


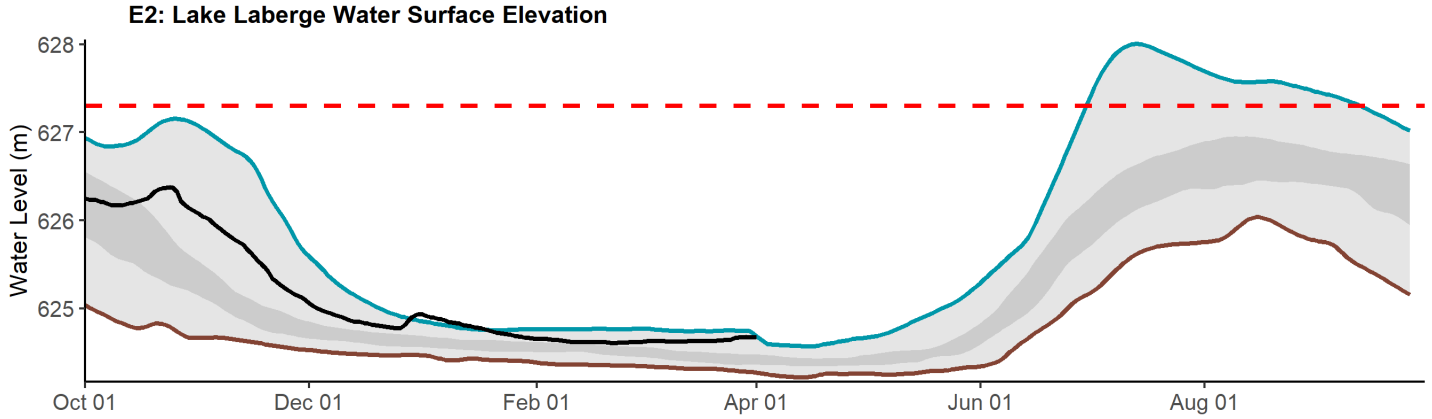
Whitehorse precipitation has been **close to normal** from October through March (Figure C). Cumulative winter precipitation was **94%** of historical median on April 1. Cumulative degree-days of freezing (CDDF) are **73%** of historical median, with **1360°C-Days** on April 1 (Figure D), which suggests thinner than normal ice cover on rivers and lakes of the region.





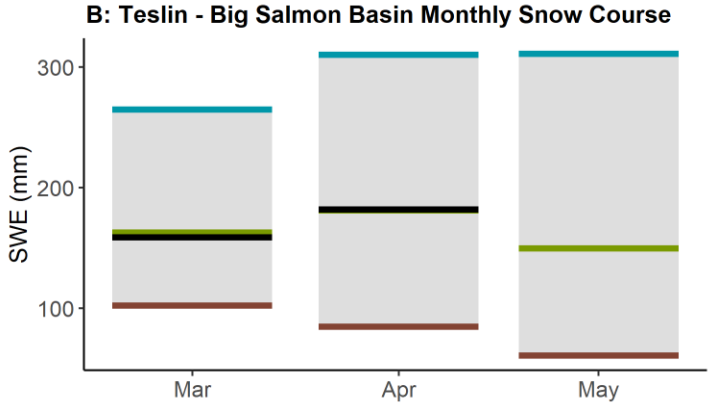
The measured water surface elevation (relative to sea level) on Marsh Lake is currently **close to average** (Figure E1). The current snow and groundwater conditions suggest that water levels will be **close to average** this summer. However, weather conditions over the spring and summer will determine the peak water level in Marsh Lake, which typically occurs in late summer in response to peak glacial runoff and large precipitation events. Lake Laberge level is currently **well above average** (Figure E2). Lake Laberge follows a similar summer pattern to the upper Southern Lakes and is expected to experience **close to average** water levels this summer. Anomalous weather patterns during spring freshet still have the potential to generate **above average** water levels on small to medium creeks and rivers.



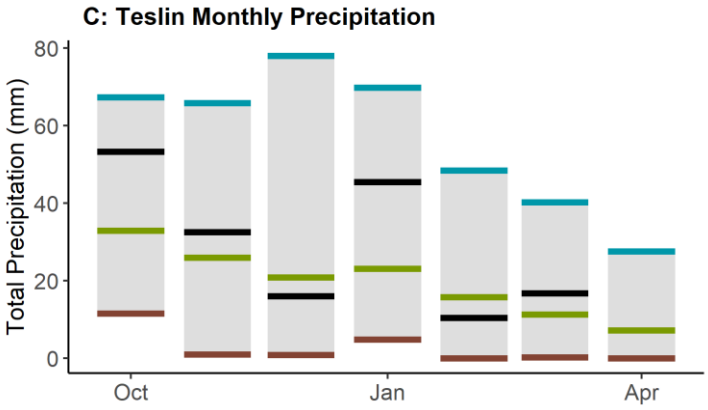


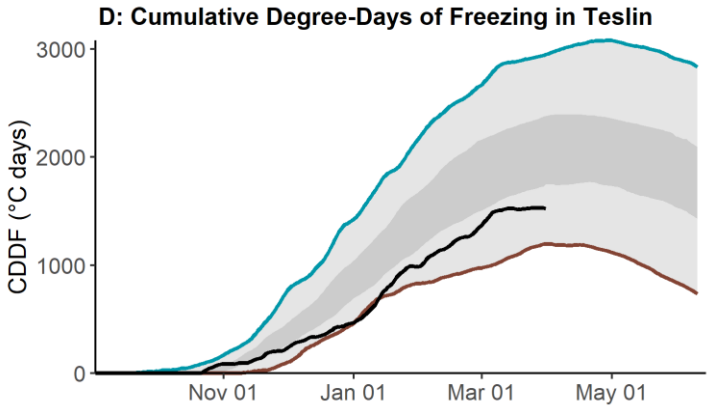
TESLIN RIVER BASIN

The Teslin River Basin snowpack is **close to average**. The basin-averaged Snow Water Equivalent (SWE) is estimated at **101%** of the historical median, with **182 mm** as of April 1 (Figure B).

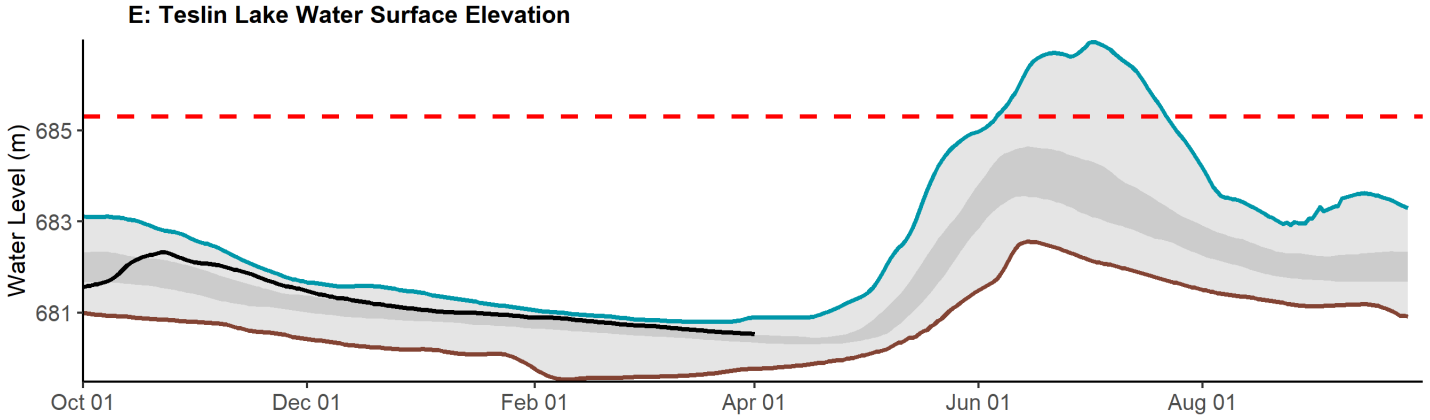


Teslin precipitation has been **above normal** from October through March (Figure C). Cumulative winter precipitation was **122%** of historical median on April 1. Cumulative degree-days of freezing (CDDF) are **75%** of historical median, with **1528°C-Days** on April 1 (Figure D), which suggests thinner than normal ice cover on rivers and lakes of the region.





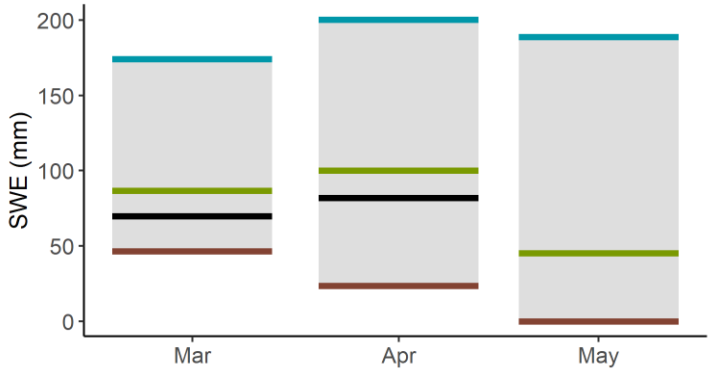
The measured water surface elevation (relative to sea level) in Teslin Lake is currently **above average** (Figure E). Teslin Lake typically peaks in late June and is predominantly snowmelt driven. The **average** snowpack and **slightly above average** water level suggest that summer water levels will be **close to average**. Anomalous weather patterns during spring freshet still have the potential to generate **above average** water levels on small to medium creeks and rivers.



CENTRAL YUKON RIVER BASIN (CARMACKS AREA)

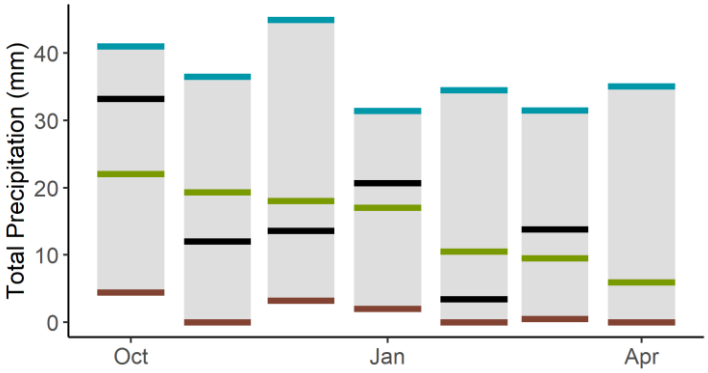
The Central Yukon River Basin snowpack is **below average**. The basin-averaged Snow Water Equivalent (SWE) is estimated to be **82%** of the historical median, with **82 mm** as of April 1 (Figure B).

B: Central Yukon Basin Monthly Snow Course

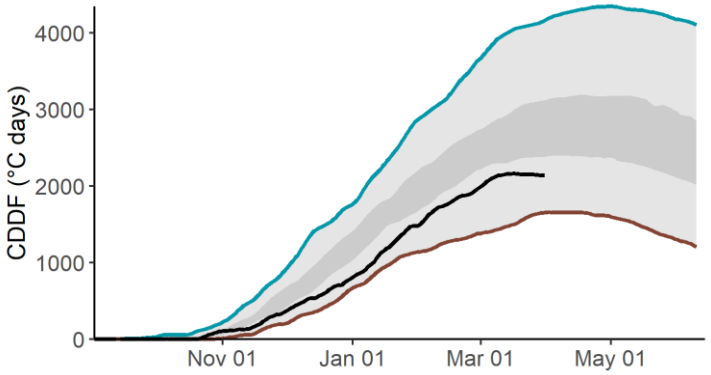


Carmacks precipitation has been **normal** from October through March (Figure C). Cumulative winter precipitation was **100%** of historical median on April 1. Cumulative degree-days of freezing (CDDF) are **79%** of historical median, with **2139°C-Days** on April 1 (Figure D), which suggests thinner than normal ice cover on rivers and lakes of the region.

C: Carmacks Monthly Precipitation

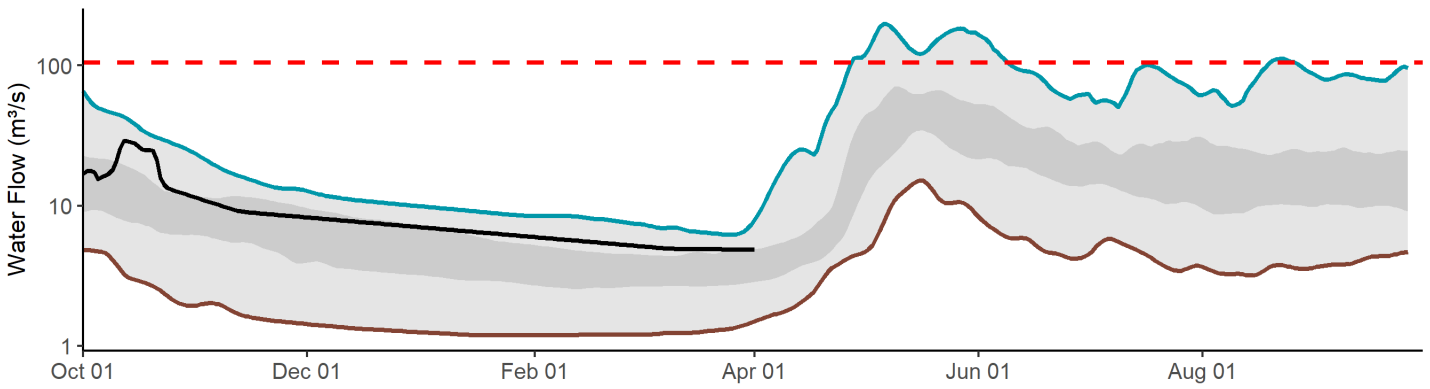


D: Cumulative Degree-Days of Freezing in Carmacks



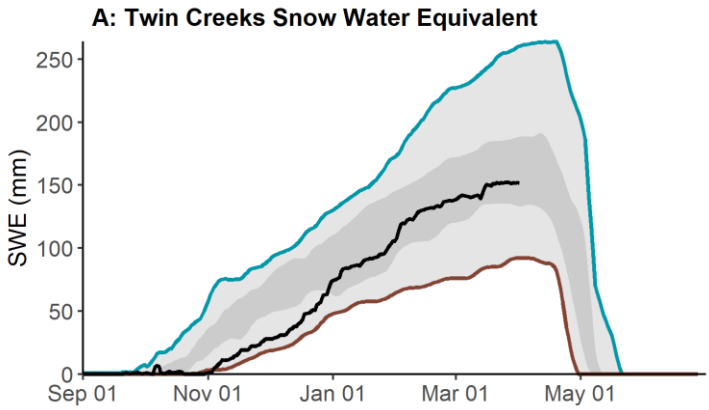
The estimated Nordenskiold River discharge is currently **well above average** (Figure E). The **below average** snowpack combined with **well above average** winter flows in the watershed suggests spring freshet flow volumes will be **slightly below average**. Anomalous weather patterns during spring freshet still have the potential to generate **above average** water levels on small to medium creeks and rivers. Prior to that, a sudden sustained rise in air temperature could be conducive to severe ice jamming.

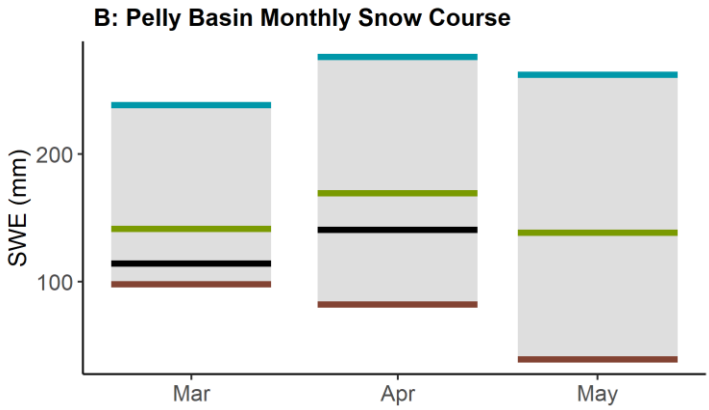
E: Nordenskiold River Discharge below Rowlinson Creek



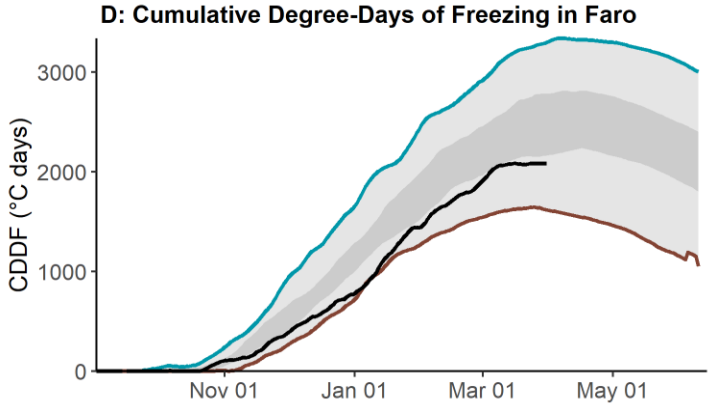
PELLY RIVER BASIN

The Pelly River Basin snowpack is **below average**. At Twin Creeks Meteorological Station, Snow Water Equivalent (SWE) is estimated to be **89%** of the historical median (Figure A). The Pelly River basin-averaged SWE is estimated to be **83%** of the historical median, with **141 mm** as of April 1 (Figure B).

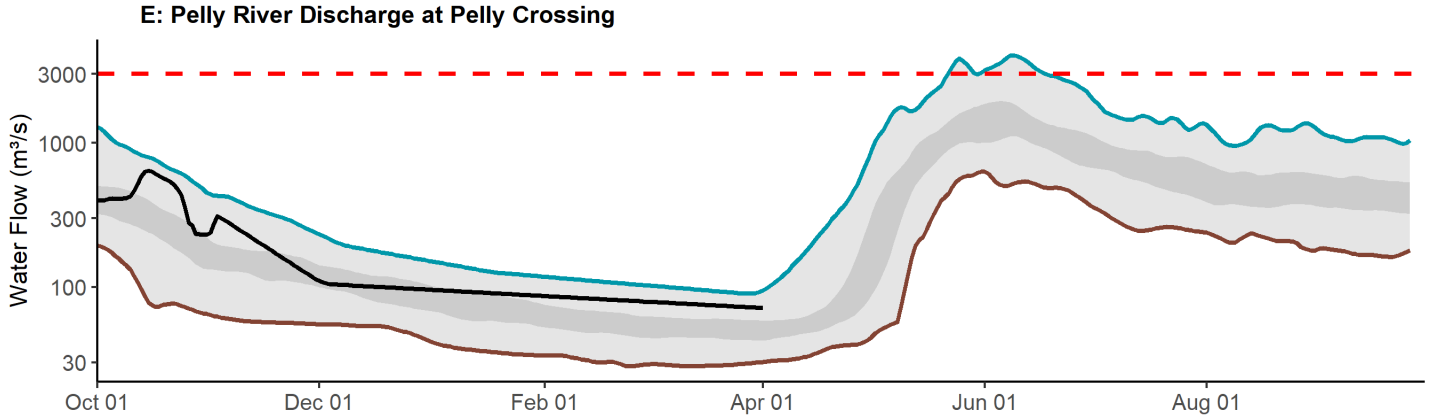




There are no precipitation data available at Faro, but the snowpack data suggests it has been **below climate normals**. Cumulative degree-days of freezing (CDDF) are **82%** of historical median, with **2080°C-Days** on April 1 (Figure D), which suggests thinner than normal ice cover on rivers and lakes of the region.

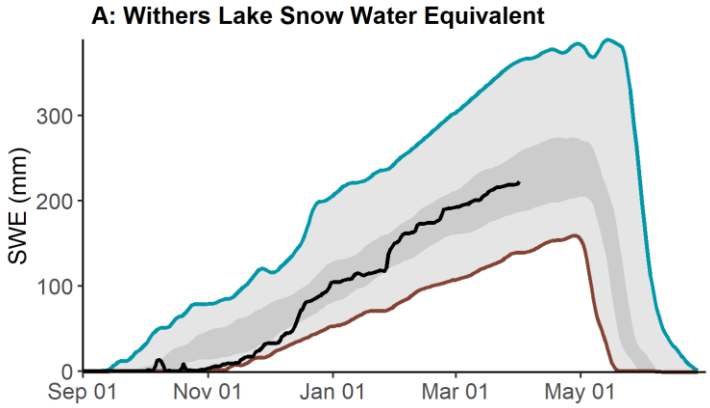


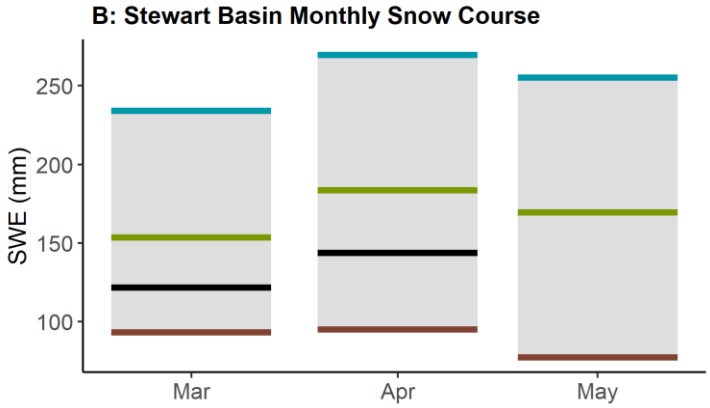
The estimated Pelly River discharge at Pelly Crossing is currently **well above average** (Figure E). The **below average** snowpack combined with **well above average** winter flows in the watershed suggests spring freshet flow volumes will be **slightly below average**. Anomalous weather patterns during spring freshet still have the potential to generate **above average** water levels on small to medium creeks and rivers. Prior to that, a sudden sustained rise in air temperature could be conducive to severe ice jamming.



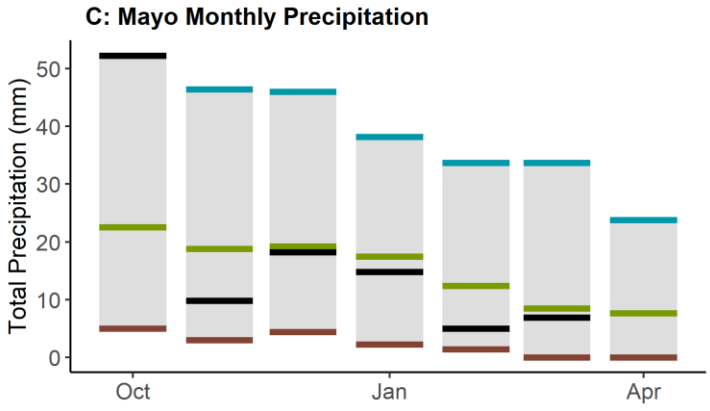
STEWART RIVER BASIN

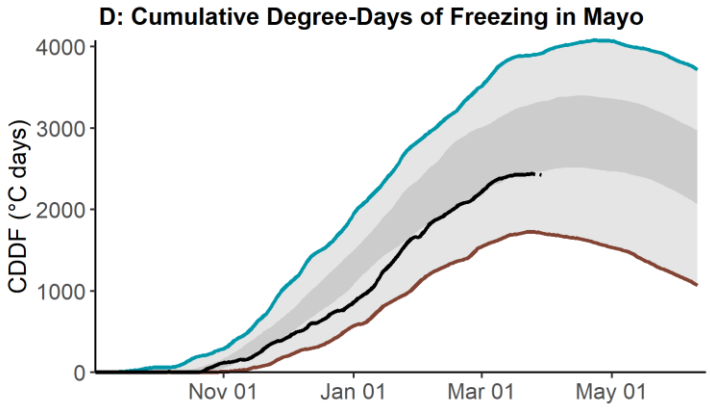
The Stewart River Basin snowpack is **below average**. At Withers Lake Meteorological Station, Snow Water Equivalent (SWE) is estimated to be **102%** of the historical median (Figure A). The Stewart River basin-averaged SWE is estimated to be **78%** of the historical median, with **144 mm** as of April 1 (Figure B).





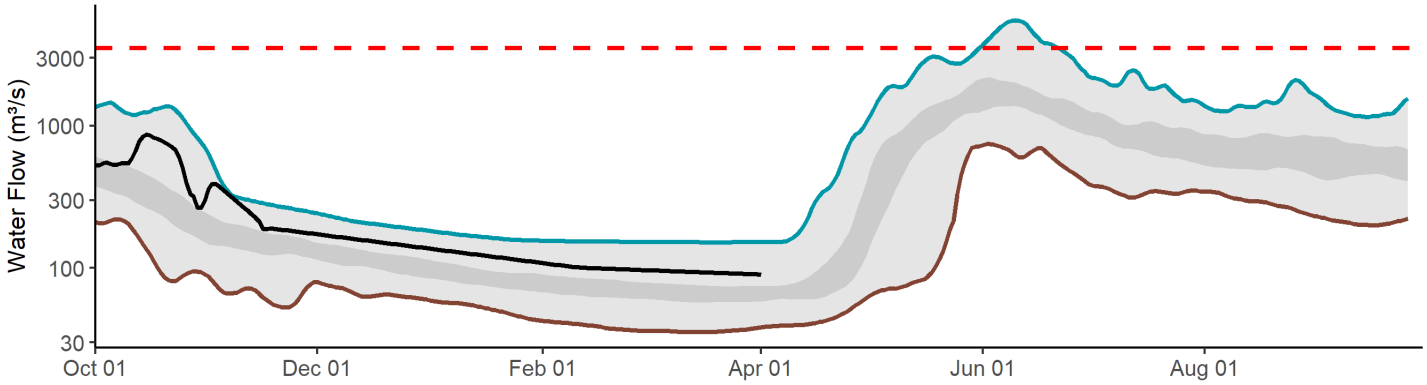
Mayo precipitation has been **close to normal** from October through March (Figure C). Cumulative winter precipitation was **97%** of historical median on April 1. Cumulative degree-days of freezing (CDDF) are **86%** of historical median, with **2424°C-Days** on April 1 (Figure D), which suggests thinner than normal ice cover on rivers and lakes of the region.





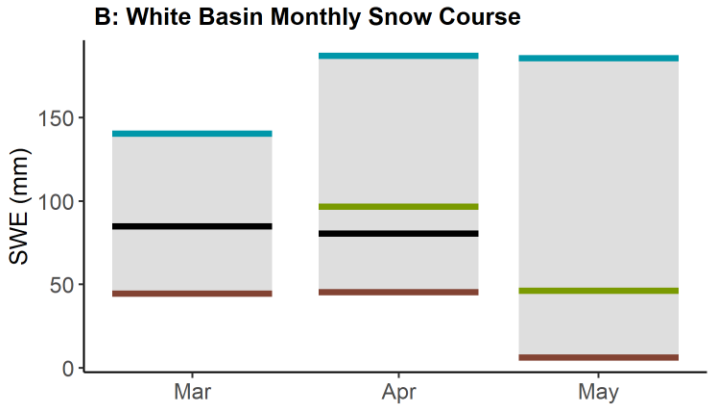
The estimated Stewart River discharge at the outlet is currently **well above average** (Figure E). The **below average** snowpack combined with **well above average** winter flows in the watershed suggests spring freshet flow volumes will be **slightly below average**. Anomalous weather patterns during spring freshet still have the potential to generate **above average** water levels on small to medium creeks and rivers. Prior to that, a sudden sustained rise in air temperature could be conducive to severe ice jamming.

E: Stewart River Discharge at Outlet

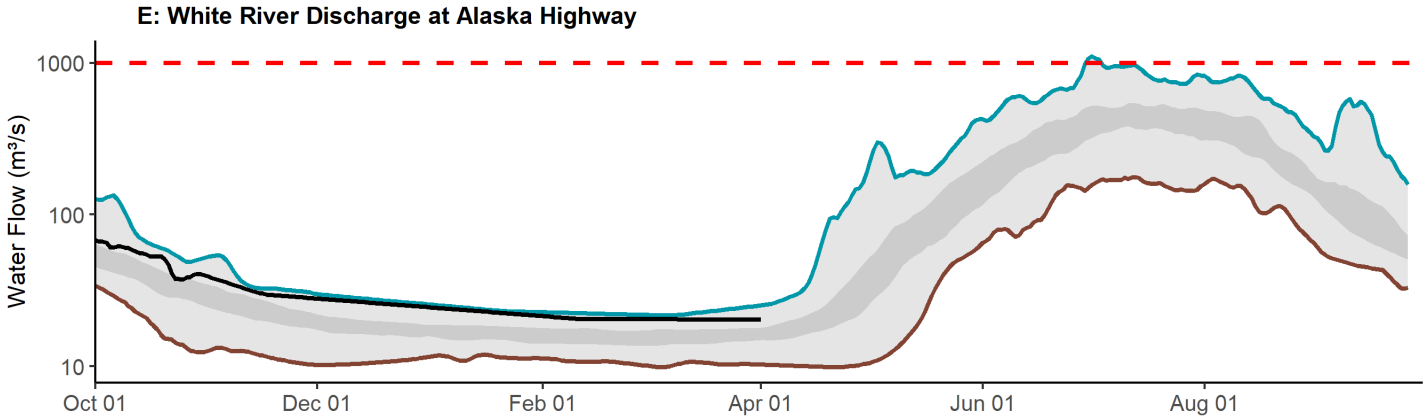


WHITE RIVER BASIN

The White River Basin snowpack is **below average**. The basin-averaged Snow Water Equivalent (SWE) is estimated to be **83%** of the historical median, with **81 mm** as of April 1 (Figure B).

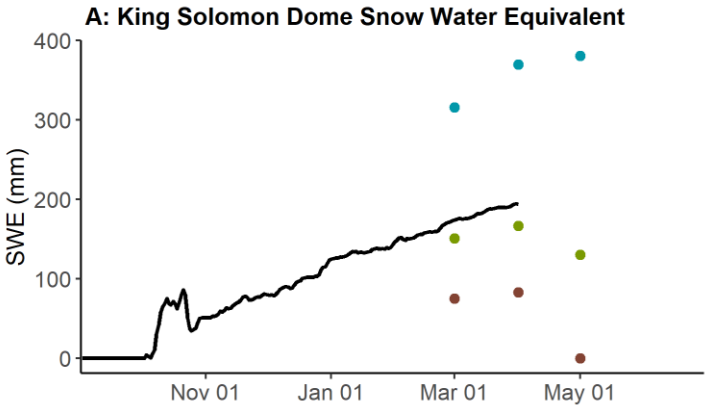


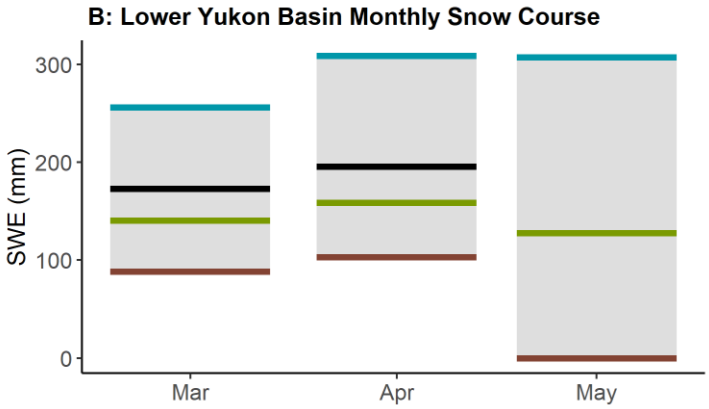
The estimated White River discharge at the Alaska Highway is currently **above average** (Figure E). In this watershed, high flows are dominated by mountain snowmelt and glacial melt that are largely influenced by summer temperatures and precipitation. The **below average** snowpack combined with **above average** winter flows suggests spring freshet flow volumes will be **slightly below average.** Warm and/or wet weather anomalies during the summer typically generate peak flows in this basin, including in rivers and streams crossing the Alaska Highway in the Kluane region.



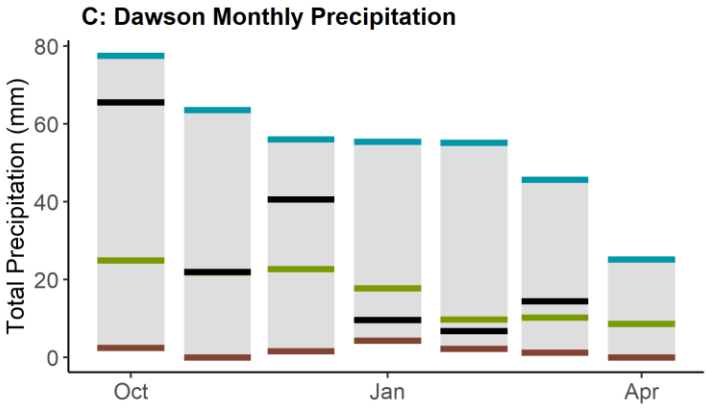
LOWER YUKON RIVER BASIN (DAWSON/KLONDIKE)

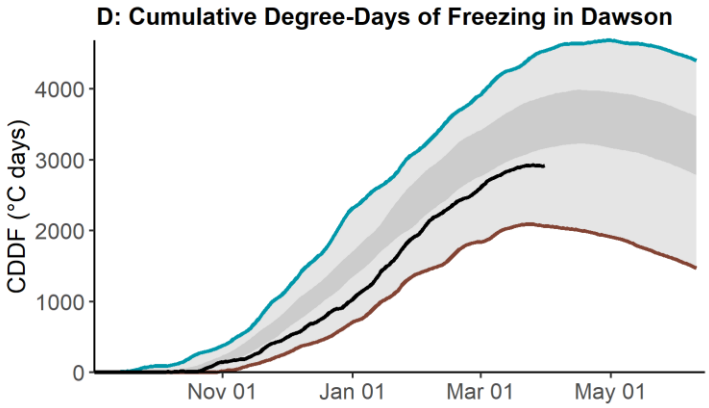
The Lower Yukon River Basin snowpack is **above average**. Established in 2022, King Solomon Dome Meteorological Station registered Snow Water Equivalent (SWE) at **117%** of the historical median when compared with the manual snow survey record for that site (Figure A). The Lower Yukon basin-averaged SWE is estimated to be **124%** of the historical median, with **195 mm** as of April 1 (Figure B).





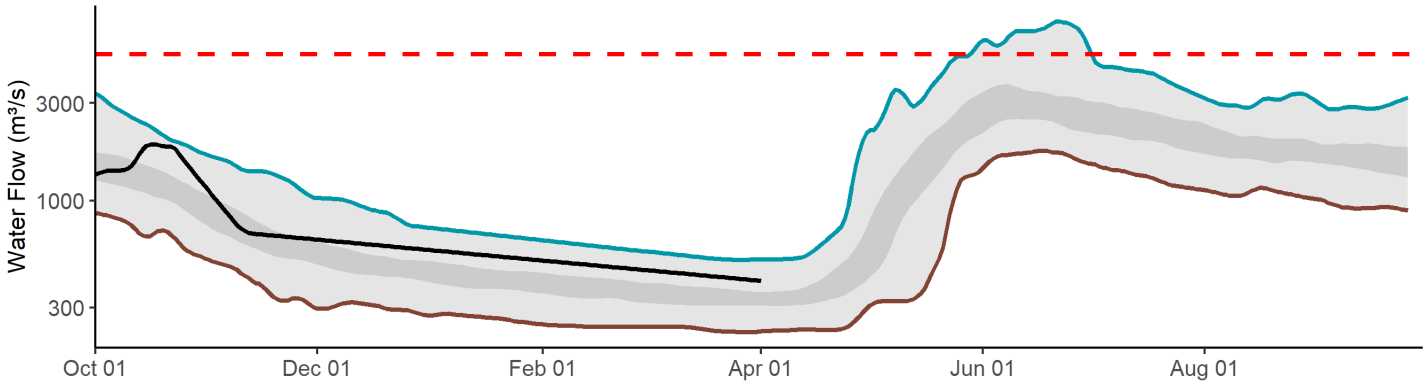
Precipitation at Dawson Airport has been **above normal** from October through March (Figure C). Cumulative winter precipitation was **129%** of historical median on April 1. Cumulative degree-days of freezing (CDDF) are **84%** of historical median, with **2911°C-Days** on April 1 (Figure D), which suggests thinner than normal ice cover on rivers and lakes of the region.



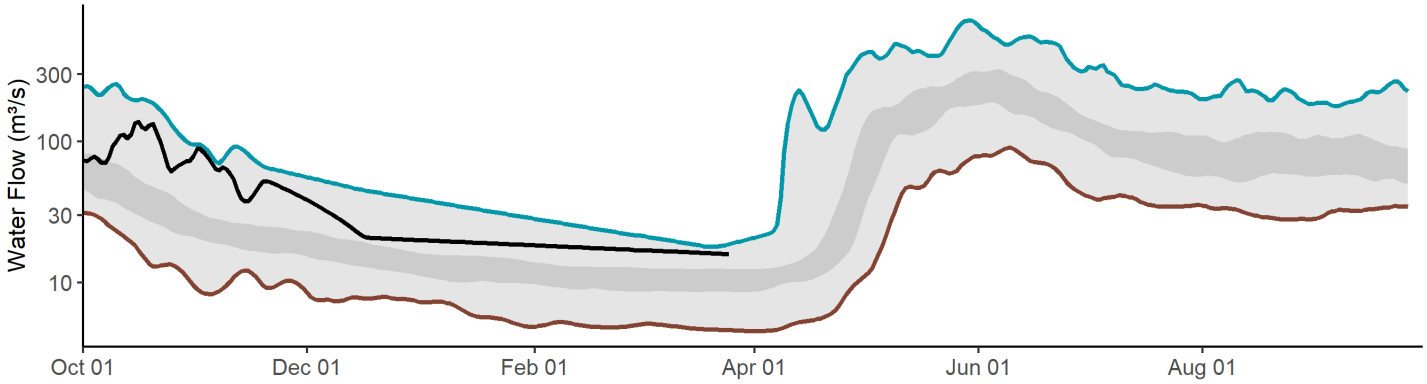


The estimated Yukon River discharge at the White River is currently **above average** (Figure E1), while the estimated Klondike River discharge above Bonanza Creek is currently **well above average** (Figure E2). On the Yukon River, the **close to average** upstream snowpack combined with **above average** winter flows suggests spring freshet flow volumes will be **close to average.** On the Klondike River, the **above average** snowpack combined with **well above average** winter flows suggests spring freshet flow volumes will be **above average** with a high potential for higher than normal spring freshet water levels, including for rivers and streams crossing the Klondike, Dempster and Top of the World Highways. Prior to that, a sudden sustained rise in air temperature could be conducive to severe ice jamming.

E1: Yukon River Discharge at White River

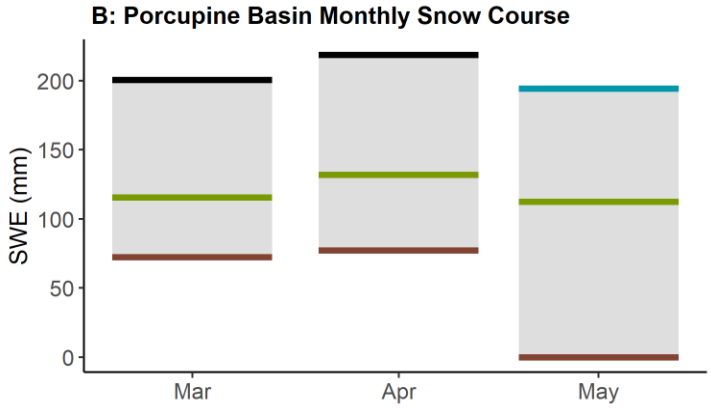


E2: Klondike River Discharge above Bonanza Creek

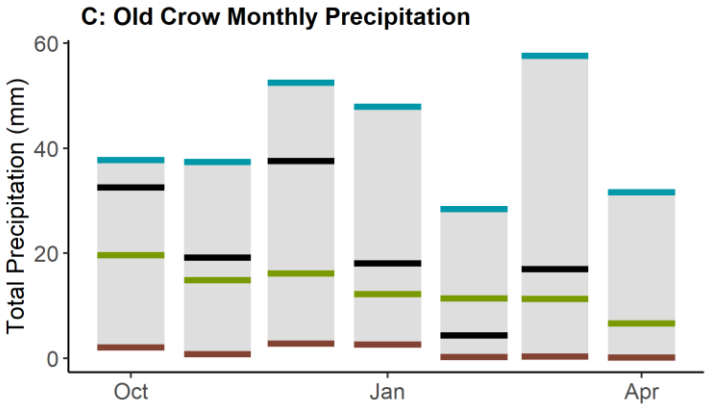


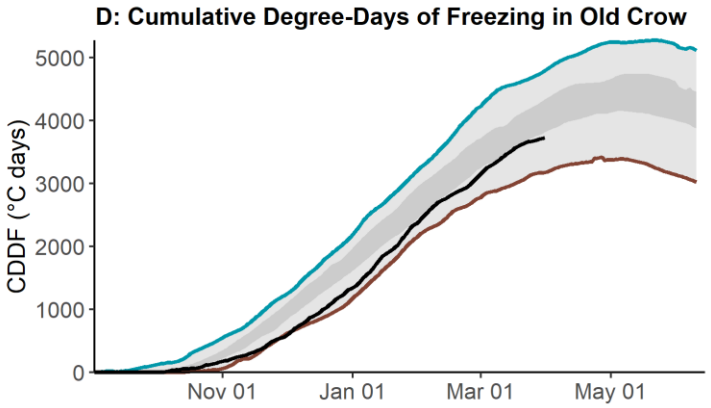
PORCUPINE RIVER BASIN

The Porcupine River Basin snowpack is **well above average**. The basin-averaged Snow Water Equivalent (SWE) is estimated to be **166%** of the historical median, with **219 mm** as of April 1 (Figure B). This is the **highest basin snowpack estimate on record** (record extends back to 1980).

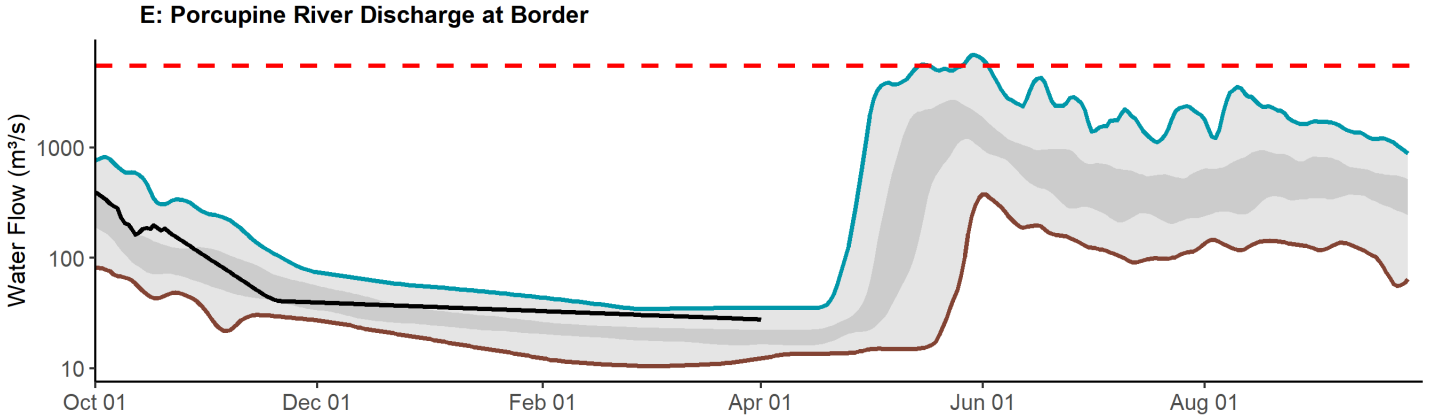


Precipitation at Old Crow Airport has been **well above normal** from October through March (Figure C). Cumulative winter precipitation was **151%** of historical median on April 1. Cumulative degree-days of freezing (CDDF) are **91%** of historical median, with **3732°C-Days** on April 1 (Figure D), which suggests close to normal ice thickness on rivers and lakes of the region.



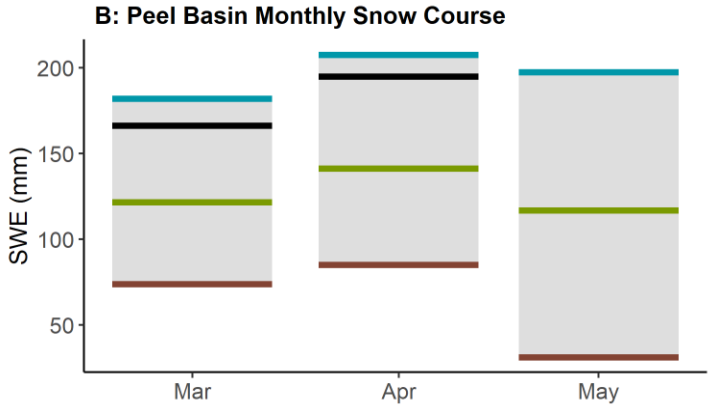


The estimated Porcupine River discharge is currently **well above average** (Figure E). The **well above average** snowpack in the watershed suggests spring freshet flow volumes will be **well above average** with associated high spring freshet water levels including rivers and streams crossing the Dempster Highway. Prior to that, a sudden sustained rise in air temperature could be conducive to severe ice jamming.

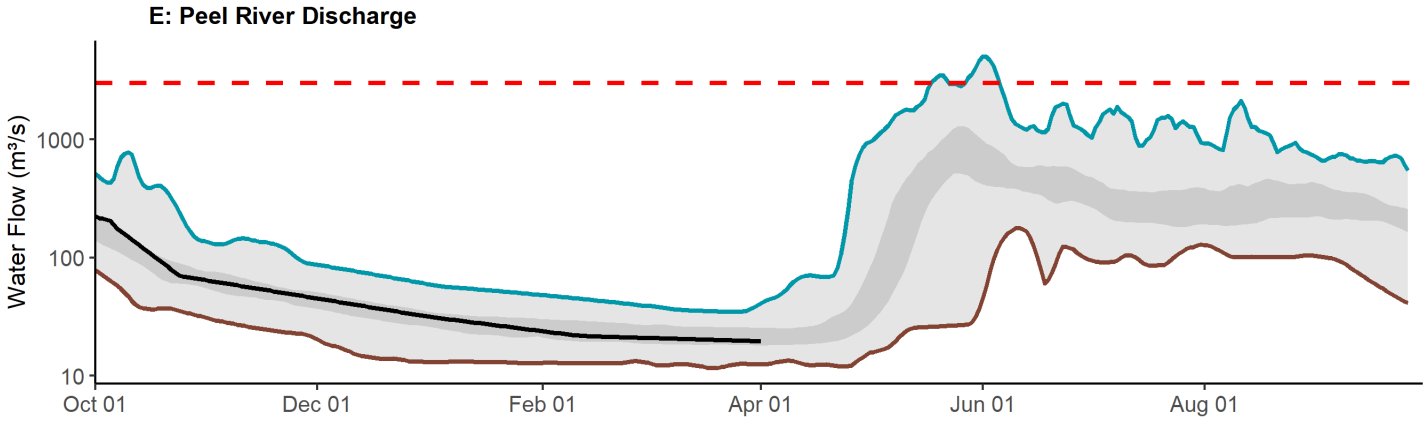


PEEL RIVER BASIN

The Peel River Basin snowpack is **well above average**. The basin-averaged Snow Water Equivalent (SWE) is estimated to be **140%** of the historical median, with **195 mm** as of April 1 (Figure B). This is considered a **significant snowpack** for the region.

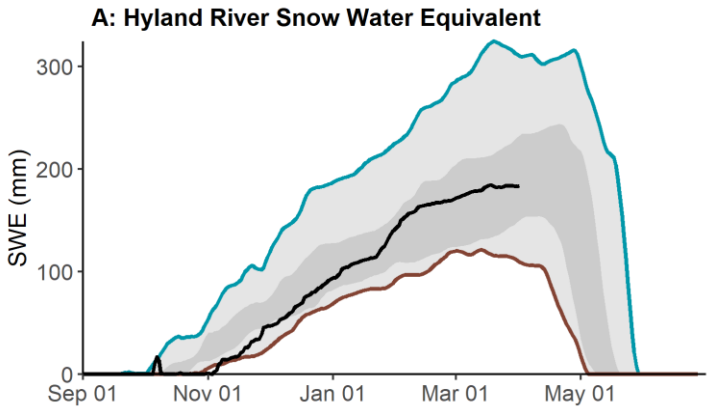


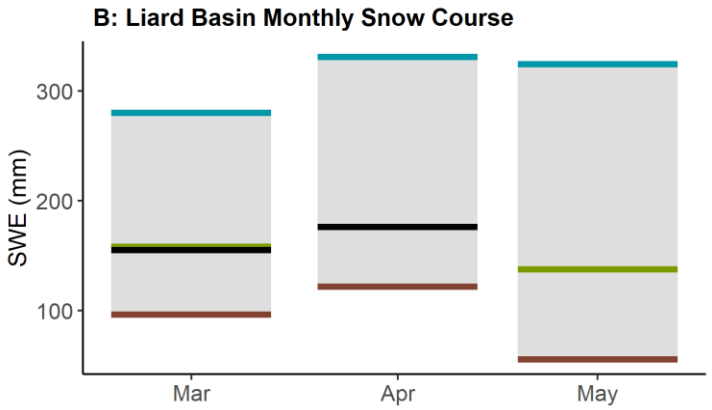
The estimated Peel River discharge is **close to average** (Figure E). The **well above average** snowpack suggests spring freshet flow volumes will be **well above average** with associated high spring freshet water levels, including rivers and streams crossing the Dempster Highway.



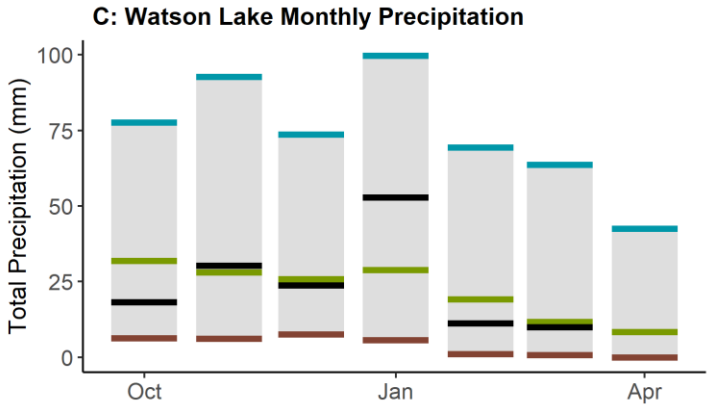
LIARD RIVER BASIN

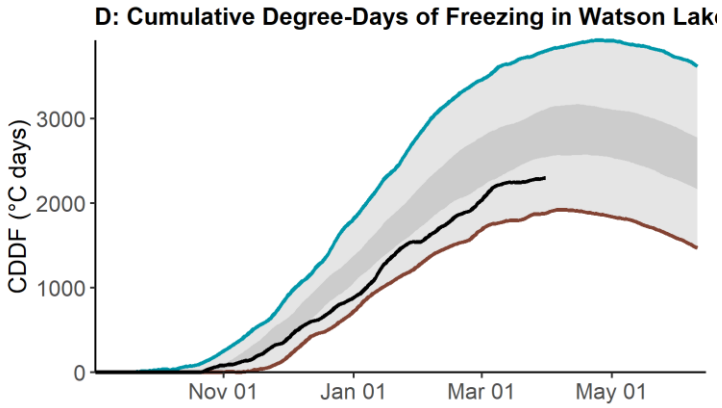
The Liard River Basin snowpack is **close to average**. At Hyland Meteorological Station, Snow Water Equivalent (SWE) is estimated to be **102%** of the historical median (Figure A). The Liard River basin-averaged SWE is estimated to be **99%** of the historical median, with **176 mm** as of April 1 (Figure B).





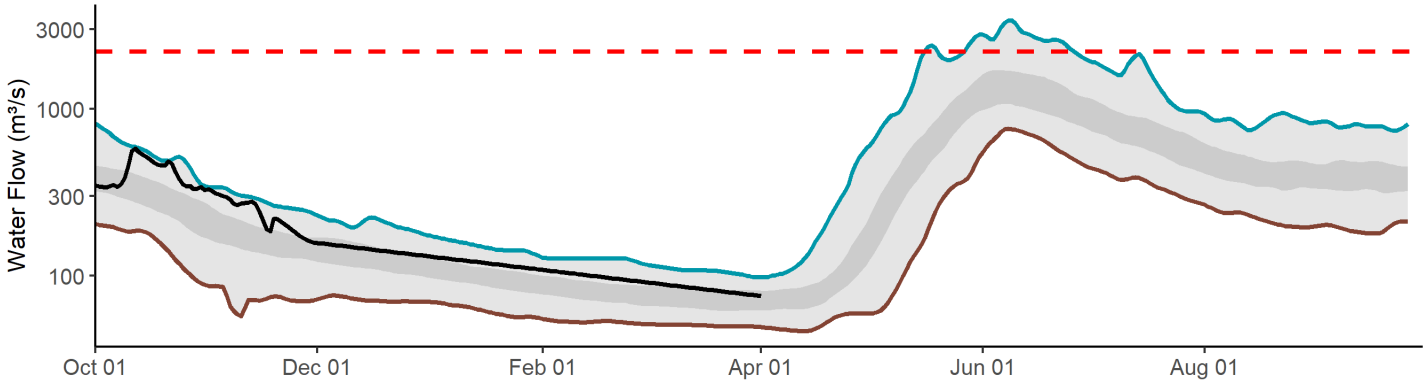
Precipitation at Watson Lake Airport has been **close to normal** from October through March (Figure C). Cumulative winter precipitation was 95**%** of historical median on April 1. Cumulative degree-days of freezing (CDDF) are **84%** of historical median, with **2298°C-Days** on April 1 (Figure D), which suggests thinner than normal ice cover on rivers and lakes of the region.





The estimated Liard River discharge at Upper Liard is currently **close to average** (Figure E). The **close to average** snowpack in the watershed combined with **close to average** winter flows suggests spring freshet flows and levels will be **close to average**. Anomalous weather patterns during spring freshet still have the potential to generate **above average** water levels on small to medium creeks and rivers including those crossing the Alaska and Robert Campbell highways.

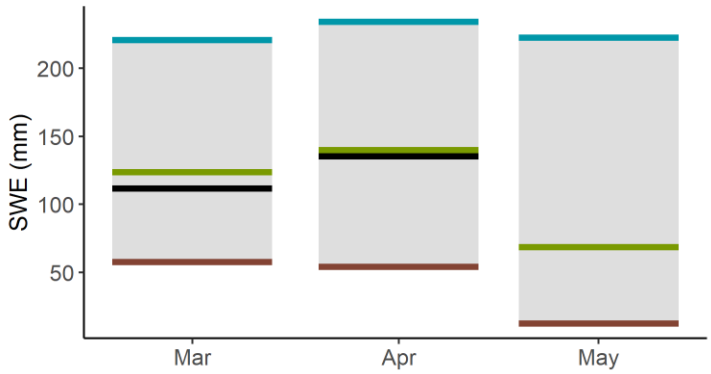
E: Liard River Discharge at Upper Liard



ALSEK RIVER BASIN

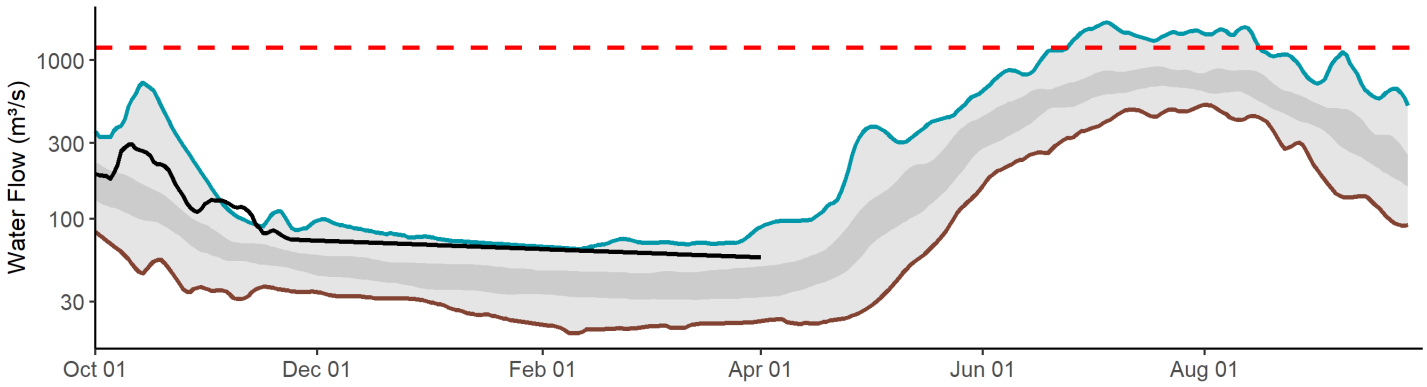
The Alsek River Basin snowpack is **close to average**. The basin-averaged Snow Water Equivalent (SWE) is estimated to be **96%** of the historical median, with **135 mm** as of April 1 (Figure B).

B: Alsek Basin Monthly Snow Course



The estimated Alsek River discharge is currently **well above average** (Figure E). High flows in this watershed are dominated by mountain snowmelt and glacial melt that are largely influenced by summer temperatures and precipitation. The snowpack in the St. Elias Range is likely to generate **close to average** freshet volumes. Weather conditions over the spring and summer will determine peak flows.

E: Alsek River Discharge above Bates



DRAINAGE BASIN AND SNOW COURSE

Name	Number	Elevation (m)	Date of Survey	Snow depth (cm)	Water content (SWE) (mm)	Last year SWE (mm)	Median historical SWE (mm)	Years of record
Upper Yukon River Basin								
Tagish	09AA-SC01	1080	2024-03-27	71	138	150	150	48
Montana Mountain	09AA-SC02	1020	2024-03-27	64	142	158	148	45
Log Cabin	09AA-SC03	884	2024-03-26	144	426	405	364	61
Atlin (B.C)	09AA-SC04	730	2024-03-26	42	113	93	108	59
Mt McIntyre B	09AB-SC01B	1097	2024-03-28	63	150	153	156	47
Whitehorse Airport	09AB-SC02	700	2024-03-27	34	82	125	102	58
Teslin Big Salmon River Basin								
Meadow Creek	09AD-SC01	1235	2024-03-26	92	242	270	277	47
Jordan Lake	09AD-SC02	930	2024-03-27	55	116	167	135	38
Morley Lake	09AE-SC01	824	2024-03-27	72	186	152	144	35
Central Yukon River Basin								
Mount Berdoe	09AH-SC01	1035	2024-03-28	59	78	183	102	47
Satasha Lake	09AH-SC03	1106	2024-03-28	39	63	113	98	38
Williams Creek	09AH-SC04	914	N.S.	-	-	134	99	29
Pelly River Basin								
Twin Creeks B	09BA-SC02B	900	2024-03-26	68	141	188	154	47
Hoole River	09BA-SC03	1036	2024-03-27	64	156	171	139	48
Burns Lake	09BA-SC04	1112	2024-03-27	85	208	262	234	39
Finlayson Airstrip	09BA-SC05	988	2024-03-27	47	103	145	102	38
Fuller Lake	09BB-SC03	1126	2024-03-26	81	177	164	194	38
Russell Lake	09BB-SC04	1060	2024-03-26	82	162	223	223	38
Rose Creek	09BC-SC01	1080	2024-03-28	52	117	133	114	31
Pelly Farm	09CD-SC03	472	2024-03-26	39	61	145	80	38
Stewart River Basin								
Plata Airstrip	09DA-SC01	830	2024-03-26	68	142	179	192	47
Withers Lake	09DB-SC01	975	2024-03-26	90	208	191	224	39
Rackla Lake	09DB-SC02	1040	2024-03-26	90	193	183	190	38
Mayo Airport A	09DC-SC01A	540	2024-03-26	32	52	120	102	52
Mayo Airport B	09DC-SC01B	540	2024-03-26	35	64	114	106	36
Edwards Lake	09DC-SC02	830	2024-03-26	61	114	163	163	38
Calumet	09DD-SC01	1310	2024-03-26	68	146	196	186	44
White River Basin								
Mount Nansen	09CA-SC01	1021	2024-03-28	38	62	113	80	49
MacIntosh	09CA-SC02	1160	2024-03-28	46	85	133	101	49
Burwash Airstrip	09CA-SC03	810	2024-03-26	0	0	86	46	46
Beaver Creek	09CB-SC01	655	2024-03-26	53	90	172	82	48
Chair Mountain	09CB-SC02	1067	2024-03-26	39	75	N.S.	101	32
Casino Creek	09CD-SC01	1065	2024-03-28	64	123	159	128	47

Code "E" - Estimate, Code "B" - Survey date is outside of valid sampling range, “N.S.” – No survey, “R” – New record.

Name	Number	Elevation (m)	Date of Survey	Snow depth (cm)	Water content (SWE) (mm)	Last year SWE (mm)	Median historical SWE (mm)	Years of record
Lower Yukon River Basin								
King Solomon Dome	09EA-SC01	1070	2024-03-28	85	191	220	166	48
Grizzly Creek	09EA-SC02	975	2024-03-27	92	215	211	172	49
Midnight Dome	09EB-SC01	855	2024-03-28	86	192	212	159	50
Boundary (Alaska)	09EC-SC02	1005	2024-04-02	86	201	183	127	52
Porcupine River Basin								
Riffs Ridge	09FA-SC01	650	2024-03-26	106	254 R	210	148	37
Eagle Plains	09FB-SC01	710	2024-03-26	104	250	189	166	41
Eagle River	09FB-SC02	340	2024-03-26	94	194	143	133	39
Old Crow	09FD-SC01	299	2024-03-26	85	208 R	169	118	42
Peel River Basin								
Blackstone River	10MA-SC01	920	2024-03-27	67	148	153	106	49
Ogilvie River	10MA-SC02	595	2024-03-26	77	188	154	106	47
Bonnet Plume Lake	10MB-SC01	1120	2024-03-26	80	152	174	167	38
Liard River Basin								
Watson Lake Airport	10AA-SC01	685	2024-03-27	57	126	112	127	60
Tintina Airstrip	10AA-SC02	1067	2024-03-27	83	207	255	202	47
Pine Lake Airstrip	10AA-SC03	995	2024-03-27	84	224	204	222	47
Ford Lake	10AA-SC04	1110	2024-03-27	83	195	199	188	38
Frances River	10AB-SC01	730	2024-03-27	67	138	173	157	50
Hyland River B	10AD-SC01B	880	2024-03-26	78	178	178	196	48
Alsek River Basin								
Canyon Lake	08AA-SC01	1160	2024-03-25	36	59 B	105	88	46
Alder Creek	08AA-SC02	768	2024-03-27	72	179	175	147	44
Aishihik Lake	08AA-SC03	945	2024-03-25	31	51 B	86	74	31
Haines Junction Farm	08AA-SC04	610	2024-03-28	43	105	105	91	24
Summit	08AB-SC03	1000	2024-03-28	112	290	270	268	42
Alaska Snow Courses								
Eaglecrest	08AK-SC01	305	2024-04-01	102	340	538	496	43
Moore Creek Bridge	08AK-SC02	700	2024-04-01	145	602	574	546	31

Code "E" - Estimate, Code "B" - Survey date is outside of valid sampling range, “N.S.” – No survey, “R” – New record.


Location of Water Resources Snow Courses
Snow Survey Site
Snow Water Equivalent Basins
0 50 100 200 Kilometers
09FD-SC01
OLD CROW
Porcupine
09FB-SC02
09FB-SC01
09FA-SC01
10MA-SC02
Peel
Bonnet
Plume
Hart
Snake
10MA-SC01
09DD-SC01
09DC-SC01B
09DC-SC01A
09DB-SC02
09EA-SC02
Yukon
09EC-SC02
09EB-SC01
09EA-SC01
DAWSON CITY
10MB-SC01
Stewart
09DB-SC01
09DC-SC02
MAYO
09DA-SC01
Hess
09CD-SC03
09CD-SC01
09CB-SC01
09BB-SC04
09BB-SC03
09BA-SC02B
09BA-SC02A
09BC-SC01
09BA-SC04
PELLY CROSSING
White
BEAVER CREEK
09AH-SC04
09CB-SC02
09CA-SC01
09AH-SC01
09CA-SC02
09AH-SC03
09CA-SC03
08AA-SC03
08AA-SC01
08AB-SC03
08AA-SC04
Nisling
CARMACKS
Pelly
FARO
ROSS RIVER
09BA-SC05
09BA-SC03
10AD-SC01B
10AD-SC01
Kluane Lake
Lake Laberge
Teslin
Liard
Hyland
10AA-SC02
09AD-SC02
10AA-SC04
10AB-SC01
HAINES JUNCTION
WHITEHORSE
Alsek
TESLIN
10AA-SC01
WATSON LAKE
08AA-SC02
09AB-SC02
09AB-SC01B
09AA-SC02
09AA-SC03
08AK-SC02
09AA-SC01
09AD-SC01
09AA-SC04
10AA-SC03
09AE-SC01
08AK-SC01