2024 Manitoba Basins Fall Conditions Report

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Hydrologic Forecast Centre

Date:

December 17, 2024

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EXECUTIVE SUMMARY

The 2024 Fall Conditions Report describes the hydrologic conditions of Manitoba basins at the time of freeze-up. Hydrologic conditions at the time of freeze-up and weather conditions in winter and spring are the main factors that affect the extent of the spring runoff potential. This report describes the current state of two hydrologic factors for which data is available at the time of reporting. The two known factors covered in this report are the soil moisture at the time of freeze-up and base flows in rivers and water levels on lakes prior to freeze-up. The report also contains long-term forecasted winter precipitation as a general indication of probable future weather and forecasted flows and levels throughout the winter for various rivers and lakes.

Summer and Fall Precipitation

There was a wide range of precipitation amounts observed throughout Manitoba basins in the summer and fall of 2024. Most basins received near normal to below normal precipitation between May and October. The wettest areas of southern Manitoba and the Red River basin in the northern United States received above normal to well above normal precipitation. Eastern Manitoba, southwestern Manitoba, and portions of western and central Manitoba (including the Parkland and the Interlake regions) received normal to below normal precipitation. While portions of northwestern Manitoba, including areas near The Pas, received below normal precipitation, northern and northeastern Manitoba received normal to above normal precipitation.

November to Early December Precipitation

Recorded precipitation from November 1 to December 9 was significantly higher than normal precipitation for nearly every basin in Manitoba, Saskatchewan and Ontario, and the Red and Souris river basins in the United States with some basins receiving the highest amount of precipitation on recent record, dating back to 1981.

Soil Moisture at Freeze-up

Soil moisture at the time of freeze-up is one of the major factors that affects spring runoff potential and flood risk. Soil moisture at freeze-up is generally near normal to below normal for most Manitoba basins, except for portions of the Red River basin in Manitoba and the United States, which have above normal to well above normal soil moisture, and portions of northwestern

Manitoba, which have well below normal soil moisture conditions at this time. Near normal to below normal soil moisture levels thus far indicate a potential for near normal to below normal spring runoff within these river basins; however, the extent of spring runoff is still largely dependent on future weather conditions, including the amount of winter and spring precipitation, as well as snow melt conditions.

River Flows and Lake Levels

Another factor that affects the spring runoff potential is the amount of water currently in the system, as represented by base flows in rivers and the water levels on lakes prior to freeze-up. Base flow is a portion of the stream flow that is not from surface runoff; it is water from the ground, flowing into the river channel over a period of time. Water levels on lakes indicate how much capacity the lakes have to receive spring runoff. Base flows and levels on most Manitoba rivers are near normal for this time of the year.

Lake Manitoba is within its operating range of 810.5 feet – 812.5 feet and tracking near the historic 20 per cent level for this time of the year (historic levels have exceeded the current level for 80 per cent of the time). Lake Winnipeg is within its operating range of 711 feet – 715 feet and is near the historic 30 per cent level. Lake St. Martin is within its operating range of 797.0 feet – 800.0 feet and near the historic median level. Dauphin Lake is just above its operating range of 853.0 feet – 854.8 feet and tracking 0.7 feet above normal for this time of year. Lake Winnipegosis and Whiteshell lakes are currently tracking near normal conditions for this time of the year. Inflow into Lake of the Prairies (Shellmouth Reservoir) is tracking near normal condition for this time of the year. The Shellmouth dam is being operated in consultation with the Shellmouth Reservoir Regulation Liaison Committee to drawdown the reservoir in preparation of spring runoff.

Long-term Precipitation Outlook

Winter precipitation is another factor that affects spring runoff potential. Although long-term weather forecasts are not reliable, they provide an indication of potential future precipitation amounts. Environment and Climate Change Canada's latest long-term precipitation forecast indicates a potential for above normal precipitation from December to February for most Manitoba basins. The National Weather Service Climate Prediction Center's outlook indicates a potential for equal chances of above normal, below normal or near normal precipitation for the Red and Souris river basins within the United States between December and March. Global weather

prediction centres indicate that a weak La Nina climate condition is expected to develop and persist through the winter. The effect of La Nina is variable across the globe; for Manitoba, it is generally characterized by below normal temperatures and above normal precipitation from December to March.

Forecasted Winter Flows and Levels

The Fall Conditions Report also contains forecasted flows and levels on major rivers and lakes for near normal winter weather conditions prior to the spring runoff. Flows and levels on the Assiniboine, Red, Waterhen, Fairford, and Dauphin rivers are forecasted to remain at near normal in the period prior to the spring runoff. Lake Manitoba is expected to remain near 811.4 feet throughout the winter. Lake Winnipeg is expected to be near 712.5 feet by the end of March. Lake Winnipegosis will remain near the current level of 830.4 feet throughout the winter and Lake St. Martin is expected to be near 799.0 feet before the spring runoff.

The Hydrologic Forecast Centre of Manitoba Transportation and Infrastructure works in collaboration with Environment and Climate Change Canada, the National Weather Service of United States, and flood forecasters in neighbouring jurisdictions to regularly monitor the winter precipitation patterns throughout Manitoba basins.

At this point in time, it is not practical or feasible to provide a reliable long-term flood forecast for spring 2025 as conditions could change significantly during the coming months. Basins with below normal to normal soil moisture conditions, base flow, and lake level conditions indicate a higher chance for below normal to near normal flows and levels in spring runoff. However, there is a possibility of receiving above normal spring runoff if heavy winter or spring precipitation is received and a fast snowmelt occurs. Conversely, the risk of spring flooding could decrease if less winter precipitation occurs, or if a gradual snowmelt rate or less precipitation were to occur in early spring.

Looking back at some of the most significant historic flood or drought events, each event is caused by a combination of unique circumstances. There is an inherent risk of over-estimating or under-estimating the extent of spring runoff if one considers the conditions and available precipitation four months in advance of the spring runoff. The Hydrologic Forecast Centre will continue to monitor watershed conditions closely and will release spring runoff outlooks through the winter as required.

BACKGROUND

The spring runoff potential is generally dependent on six major factors:

- Winter precipitation
- Soil moisture at freeze-up
- Effective spring rain (April rainfall)
- Melt rate
- Depth of frost; and
- Base-flow conditions

All of the above factors combine to determine the magnitude of spring runoff, which could range from a major flood event to an extremely low runoff event. The combination of these factors is generally unique for each specific year and for each specific watershed across the province. Generally, the soil moisture at freeze-up, winter precipitation, and base flow conditions are well known before spring melt and give a strong indication of the runoff potential.

SUMMER AND FALL PRECIPITATION

There was a wide range of precipitation amounts throughout Manitoba basins in the summer and fall of 2024. The wettest areas including portions of southern Manitoba, the eastern Souris River basin and the northwestern Red River basin in the United States received well above normal precipitation. The remainder of the Red and Souris basins received near normal to below normal precipitation. Southwestern, southeastern and portions of central and western Manitoba, including the Parkland and Interlake regions, received normal to below normal precipitation throughout the summer and fall of 2024. Portions of northwestern Manitoba, including areas near The Pas, received well below normal precipitation while northern and northeastern areas received normal to well above normal precipitation (Figure 1).

The wettest areas in southern Manitoba received more than 125 millimetres of precipitation above the historic normal over this time period. The driest areas in western and northwestern Manitoba received between 25 and 125 millimetres less than normal precipitation (Figure 2).

Compared with historic records, precipitation received in the wettest areas of southern Manitoba from May to October rank in the upper 95 per cent, or very wet, while the driest areas in western and northwestern Manitoba rank in the lower 20 per cent, or very dry condition (Figure 3).

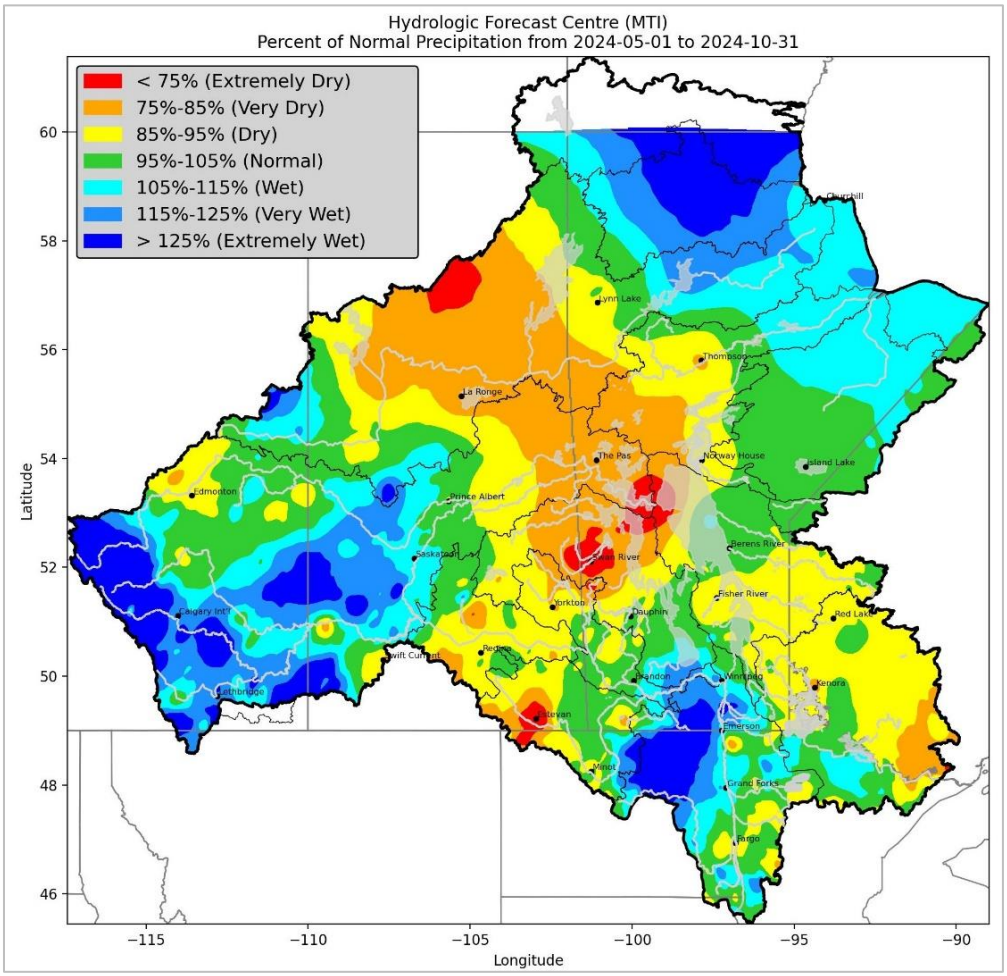

Figure 1. Percent of normal precipitation (%) from May 1 to Oct. 31, 2024.

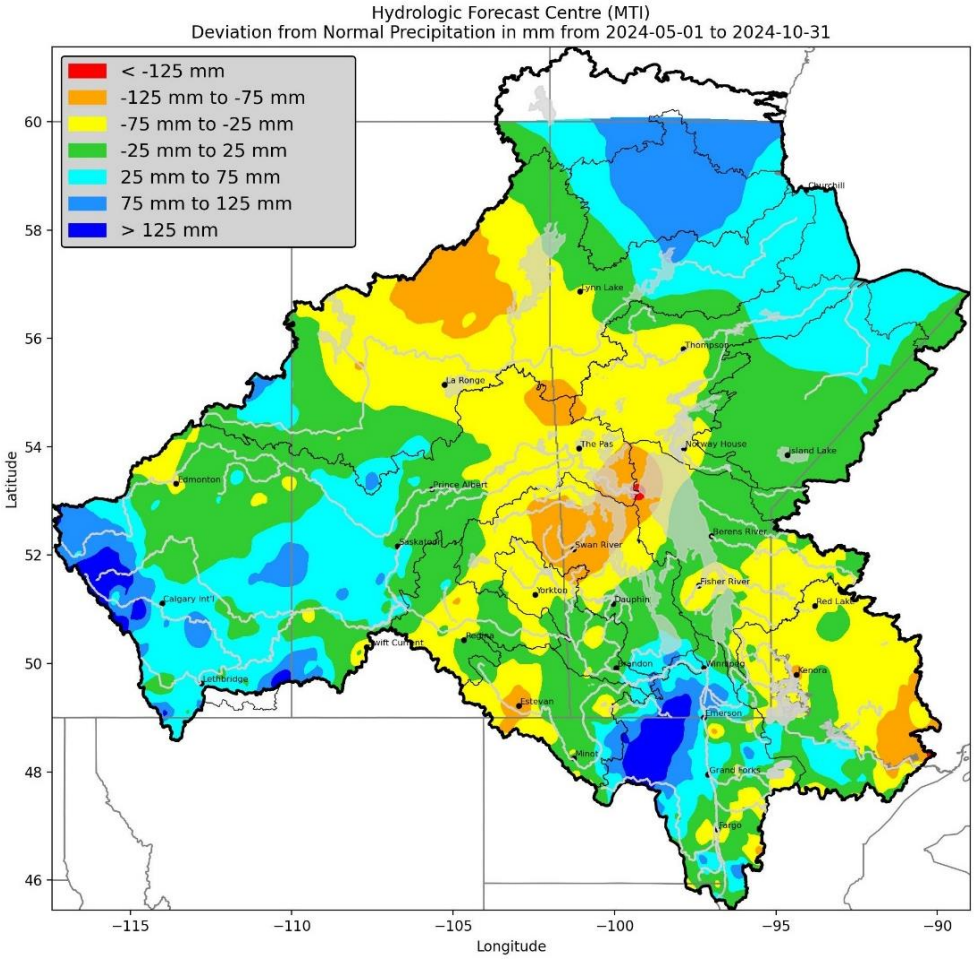

Figure 2. Deviation from normal precipitation (mm) from May 1 to Oct. 31, 2024.

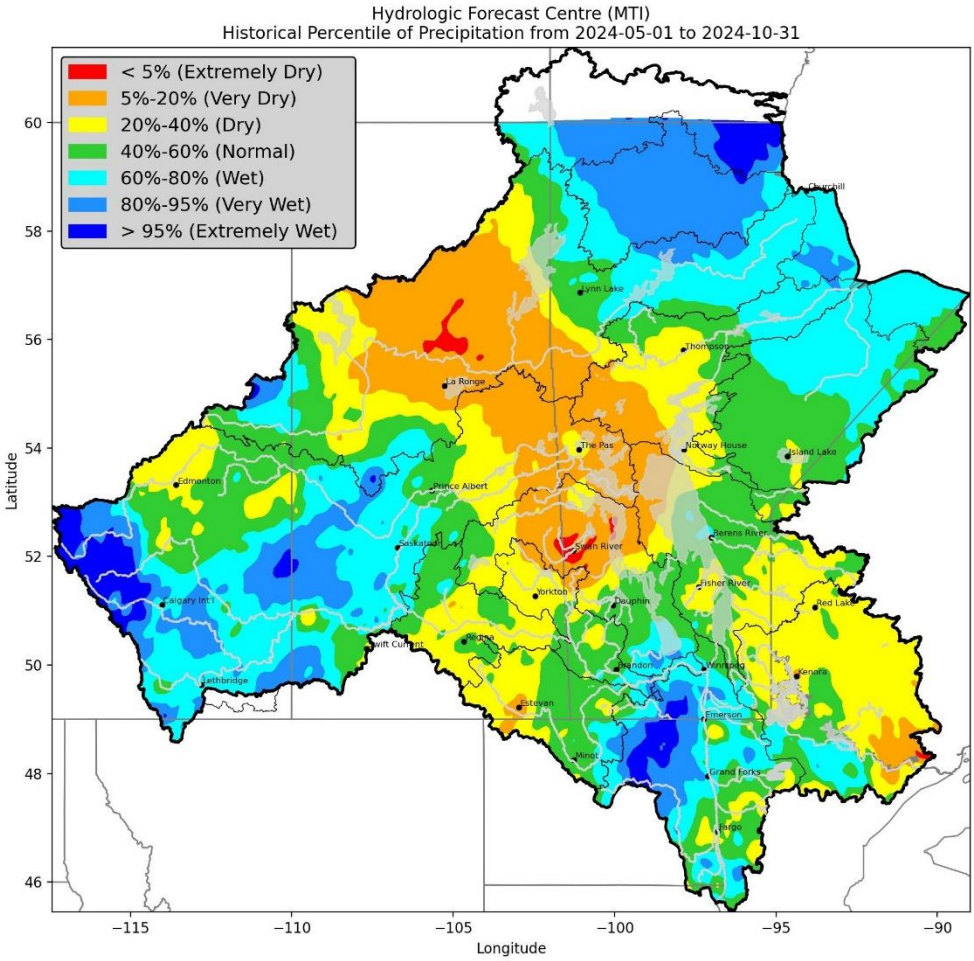

Figure 3. Percent ranking precipitation (%) from May 1 to Oct. 31, 2024.

NOVEMBER TO EARLY DECEMBER PRECIPITATION

Recorded precipitation between November 1 and December 9 was above normal to well above normal (more than 150 per cent of normal precipitation) for most basins in Manitoba, Saskatchewan, Ontario and the Red and Souris River basins in the United States (Figure 4) The deviation from normal ranged from 10 millimetres to more than 40 millimetres during this period (Figure 5). Compared with historic records, most basins rank over 80 per cent while there are many basins that rank in the upper 95 per cent (Figure 6). Some southern and central basins received the highest amount of precipitation on recent record, dating back to 1981.

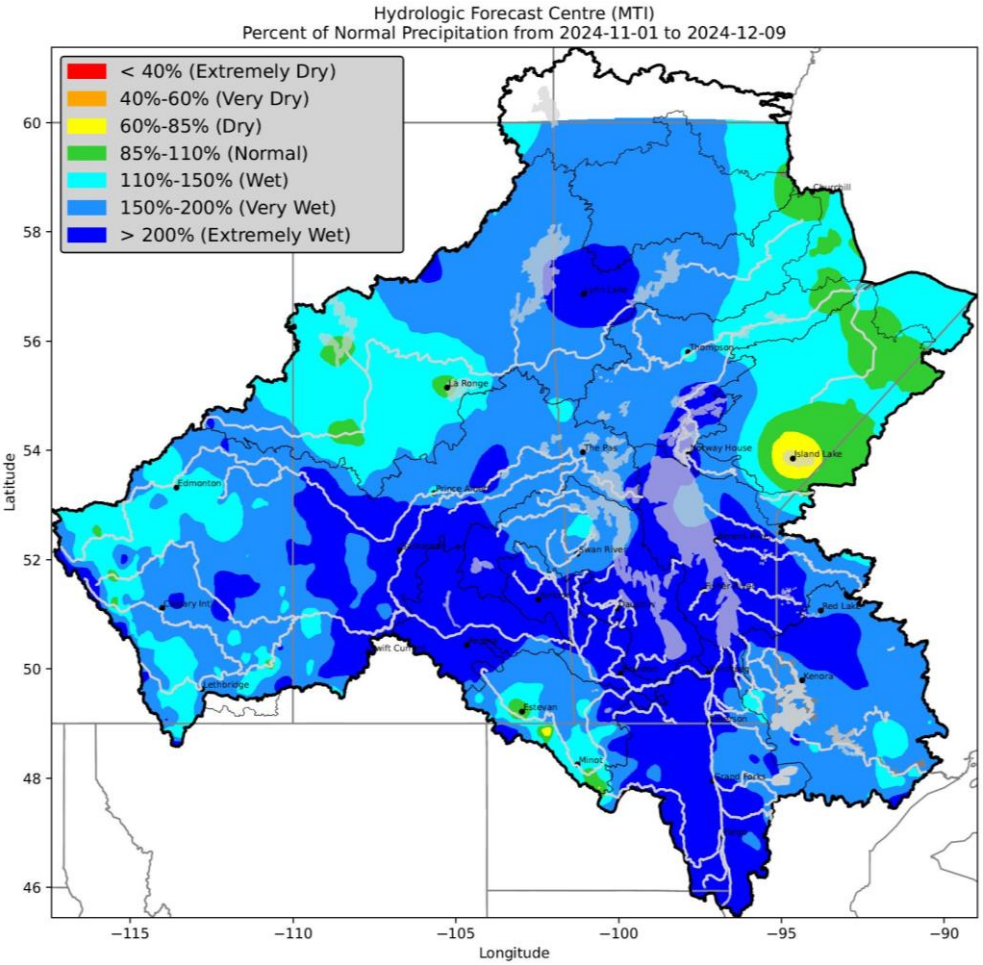

Figure 4. Percent of normal precipitation (%) for Nov. 1 to Dec. 9, 2024.

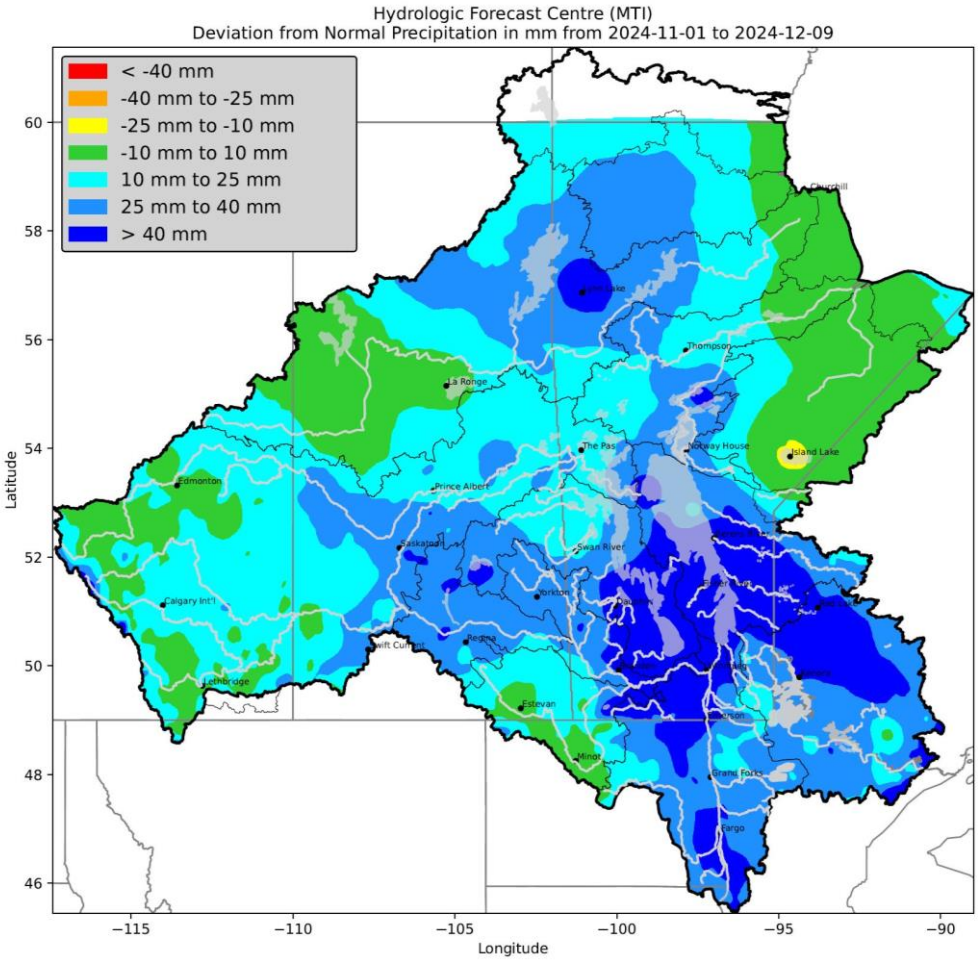

Figure 5. Deviation from normal precipitation (mm) from Nov. 1 to Dec. 9, 2024.

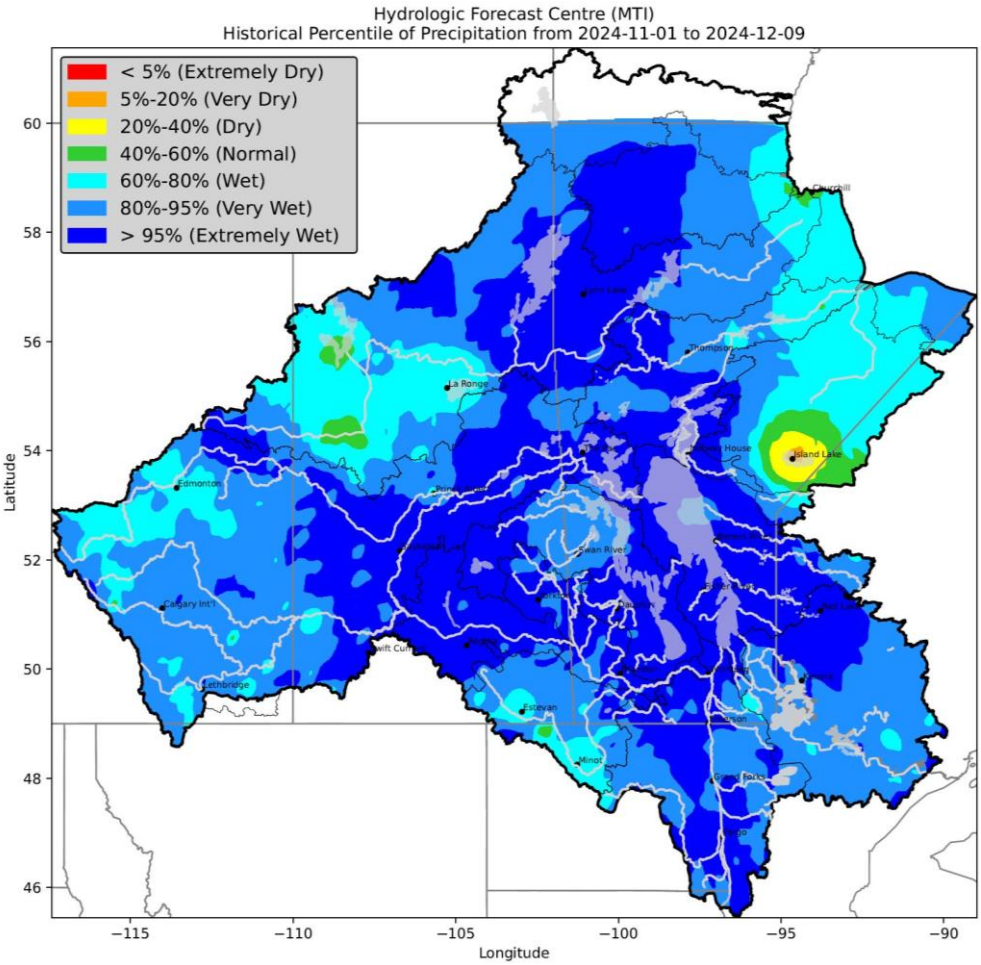

Figure 6. Percent ranking precipitation (%) from Nov. 1 to Dec. 9, 2024.

SOIL MOISTURE CONDITIONS

A number of different tools have been used to determine the soil moisture at freeze-up. The most common method, which has been used for years, is the Manitoba's MANAPI model, which is expressed by the API (Antecedent Precipitation Index) method. The MANAPI model indicates the degree of saturation in the soil. This method uses the recorded precipitation at a large number of meteorological stations throughout the various basins to calculate the amount of water from summer and fall rain that remains in the soil layer and has yet to contribute to runoff. Figure 7 shows the API map for the fall of 2024 expressed in percent of normal.

The API model results indicate that soil moisture was near normal to below normal for most Manitoba basins at the end of October. However, portions of the Red River basin in southern Manitoba and the United States show above normal to well above normal soil moisture. The API model indicates soil moisture is well below normal in portions of northwestern Manitoba, including areas near The Pas.

Manitoba Agriculture also collects soil moisture measurements in the top 120 centimetres of the soil through its automatic weather monitoring stations located at various places across the province. These measurements indicate the soil moisture throughout southern Manitoba, as of October 27, is generally optimal to wet with drier areas in the Interlake and western Manitoba (Figure 8).

Agriculture and Agri-Food Canada models soil moisture levels through the drought model. Results as of December 2 indicate that soil moisture is near normal to above normal in central and eastern Manitoba and below normal in portions of southwestern and western Manitoba (Figure 9).

The National Weather Service Climate Prediction Center, through its soil moisture monitoring and modelling works, indicates below normal soil moisture for the western portion of the Souris River basin in the United States, and above normal for the western portion and normal for eastern and southern portion of the Red River basin in the United States (Figure 10).

In summary, soil moisture in most Manitoba basins is near normal to below normal, with the exception of some localized areas in southern Manitoba and the United States portion of the Red

River basin, which have above normal soil moisture levels and some areas in northwestern Manitoba that have well below normal soil moisture levels.

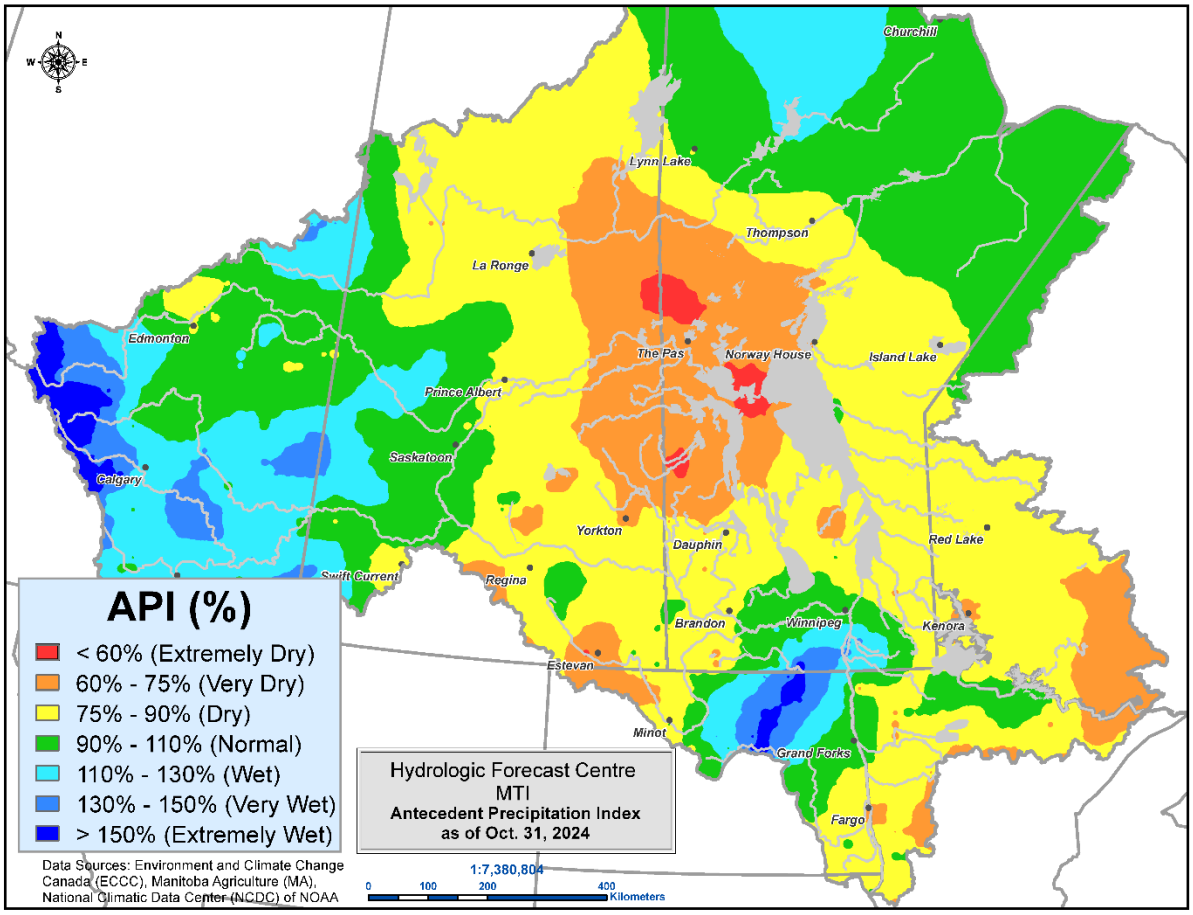

Figure 7. Antecedent Precipitation Index (API) (%) for 2024.

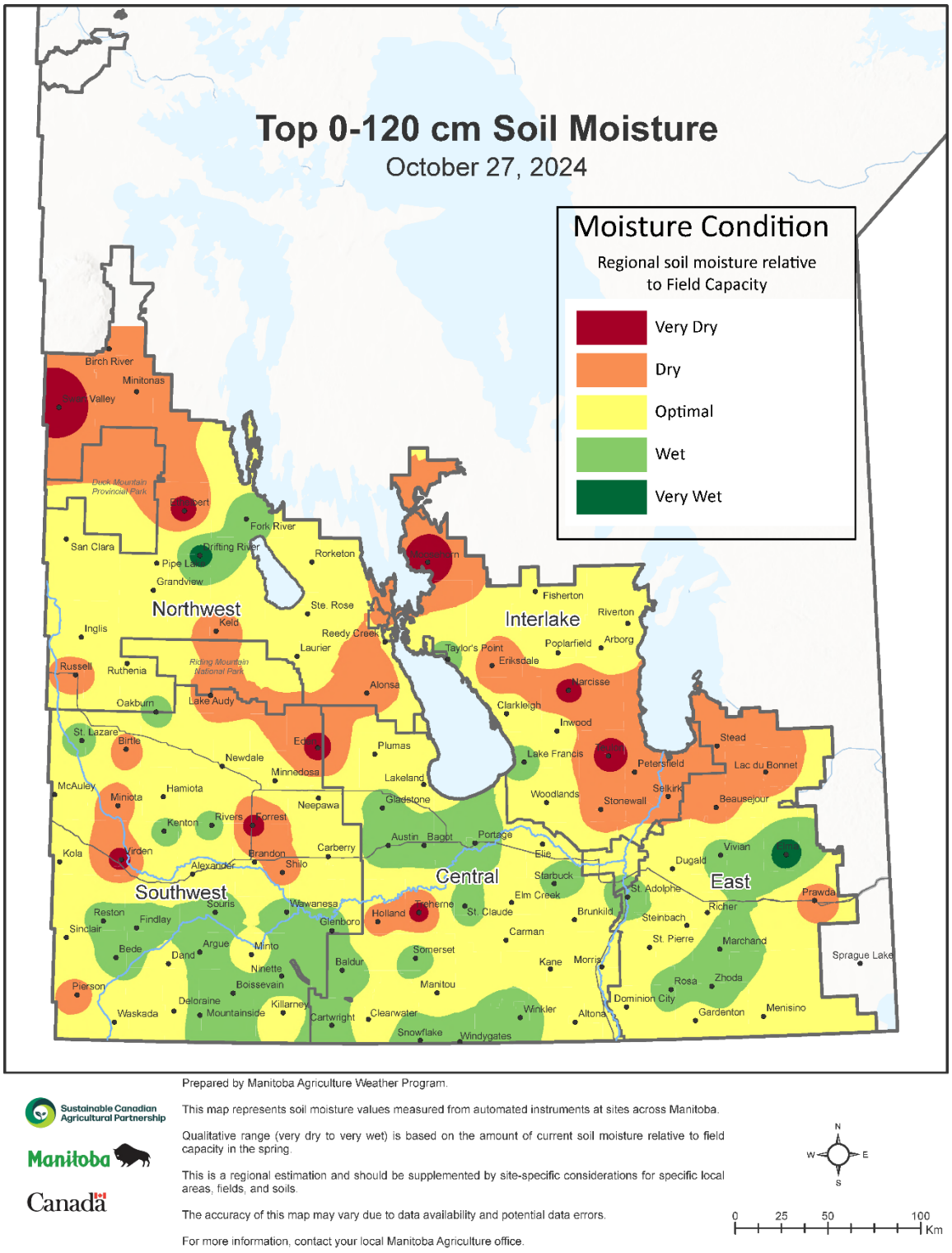

Figure 8. Soil moisture in top 0 to 120 cm based on field measurements as of October 27, 2024.

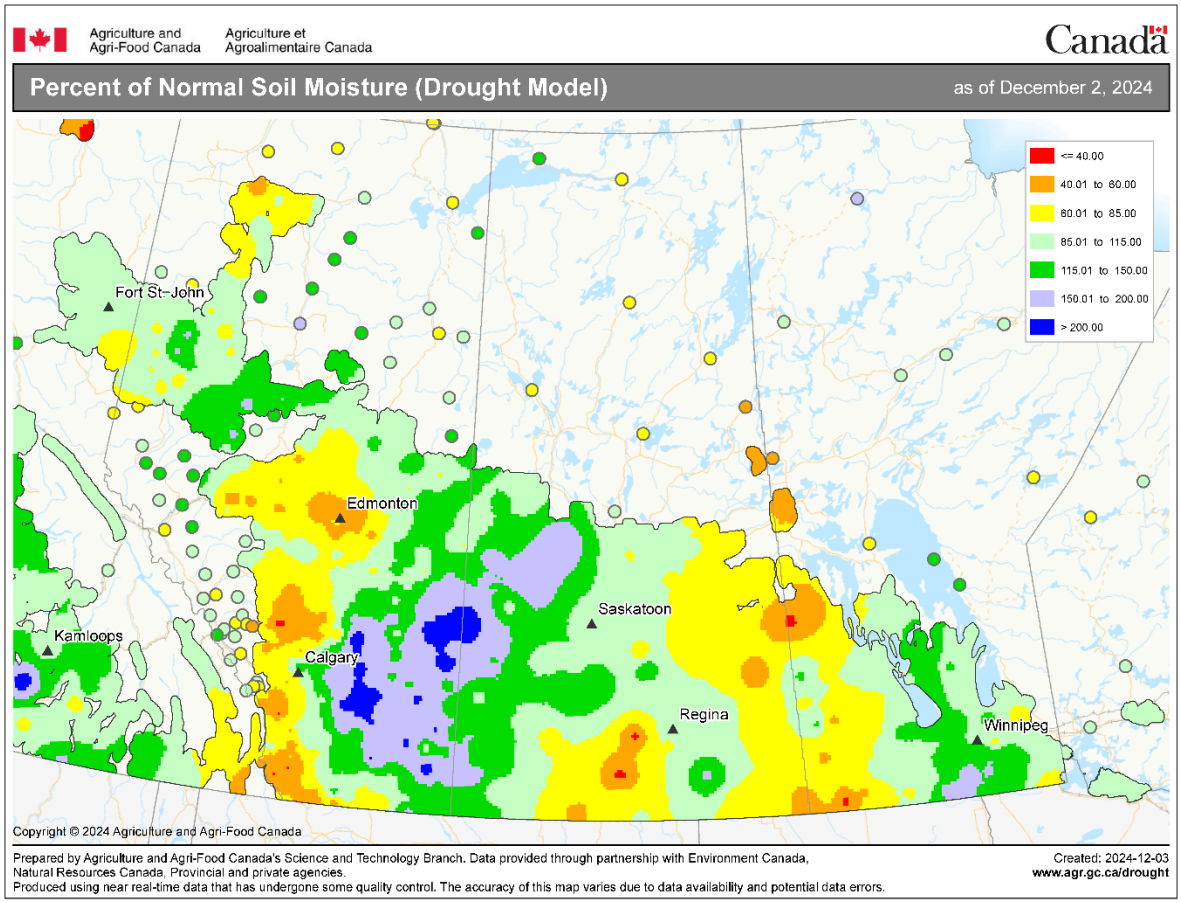

Figure 9. Percent of Normal Soil Moisture from Agriculture and Agri-Food Canada as of December 2, 2024.

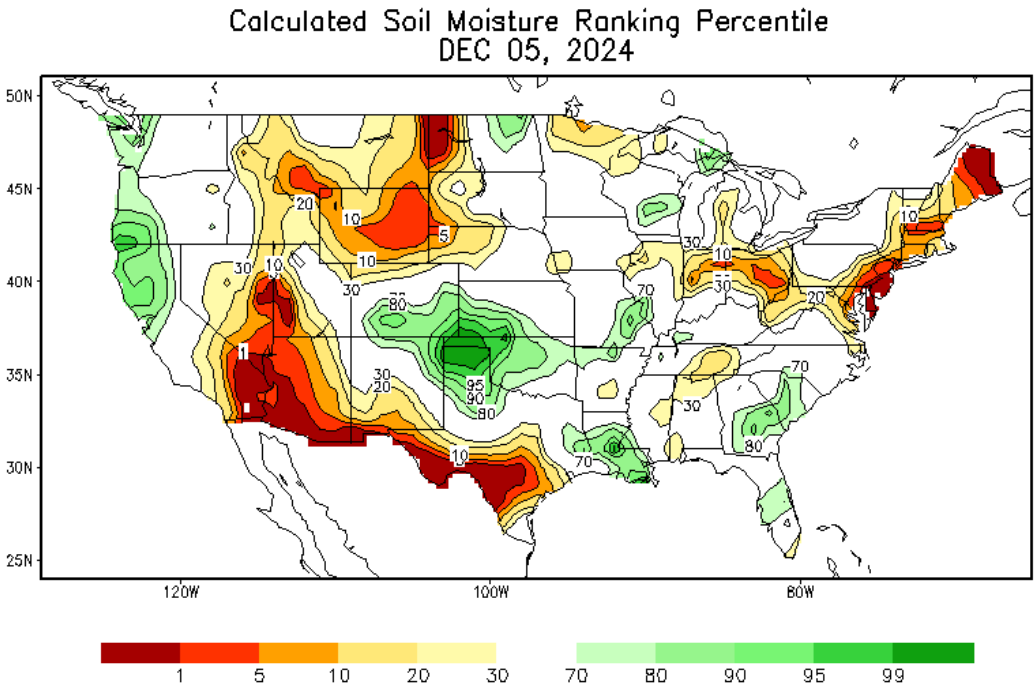

Figure 10. Calculated soil moisture ranking percentile as of December 5, 2024, from the National Weather Service.

RIVER BASE FLOWS AND LEVELS

Rivers

Base flow is a portion of the stream flow that is not from surface runoff; it is water from the ground flowing into the river channel over a period of time. Base flows and levels in most Manitoba rivers are near normal for this time of year. Hydrographs showing the measured or estimated flows on major Manitoba rivers as of December 5, 2024 are shown in figures 11 to 22. Figures 11 to 22 also indicate the current conditions and statistical lower decile, median, and upper decile flows or levels for major Manitoba Rivers. In most cases, near normal base flows indicate near normal ground saturations or near normal soil moisture content. Below normal base flows indicate below normal soil saturation level while above normal base flows indicate above normal soil saturation levels. Current flows for main rivers at selected locations are listed in Table 1. (Note: Some flow readings might be affected by ice).

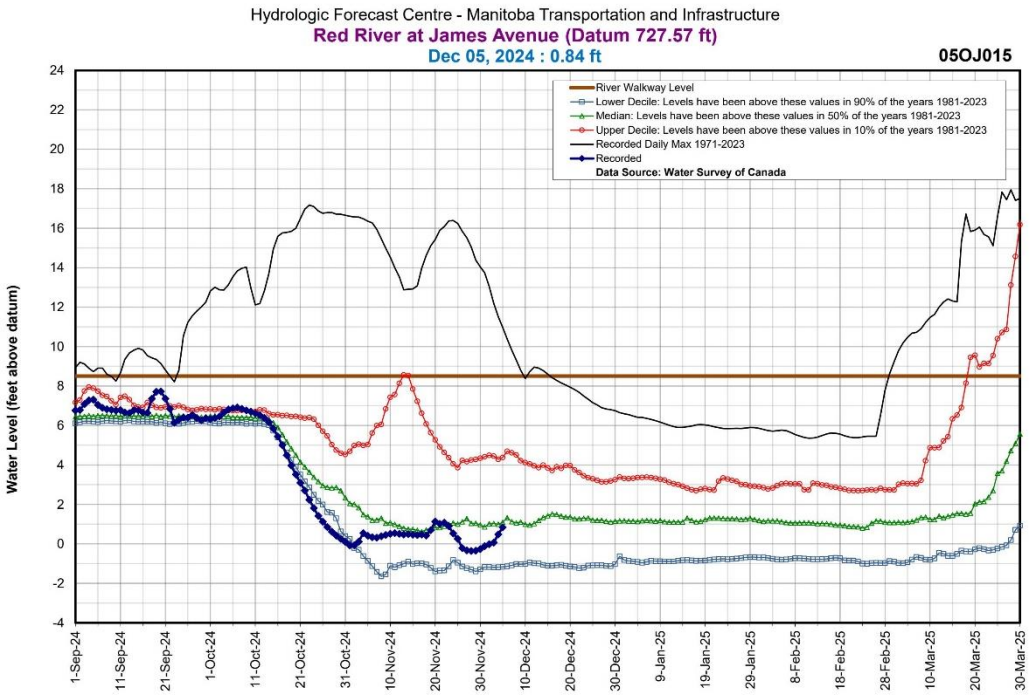

Figure 11. Red River water levels at James Avenue.

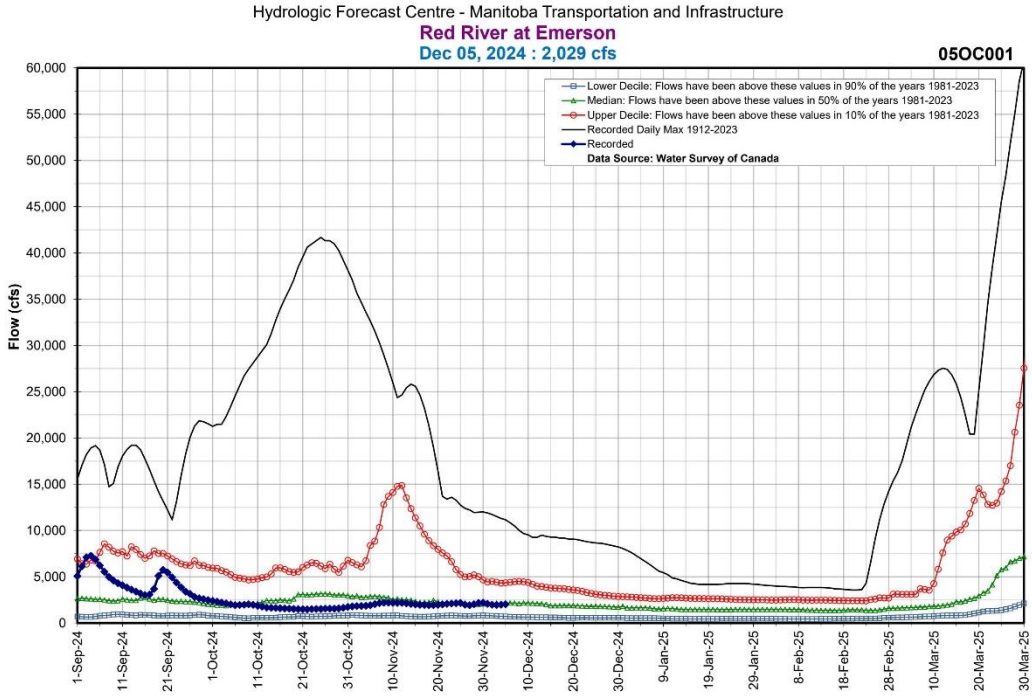

Figure 12. Red River flows near Emerson.

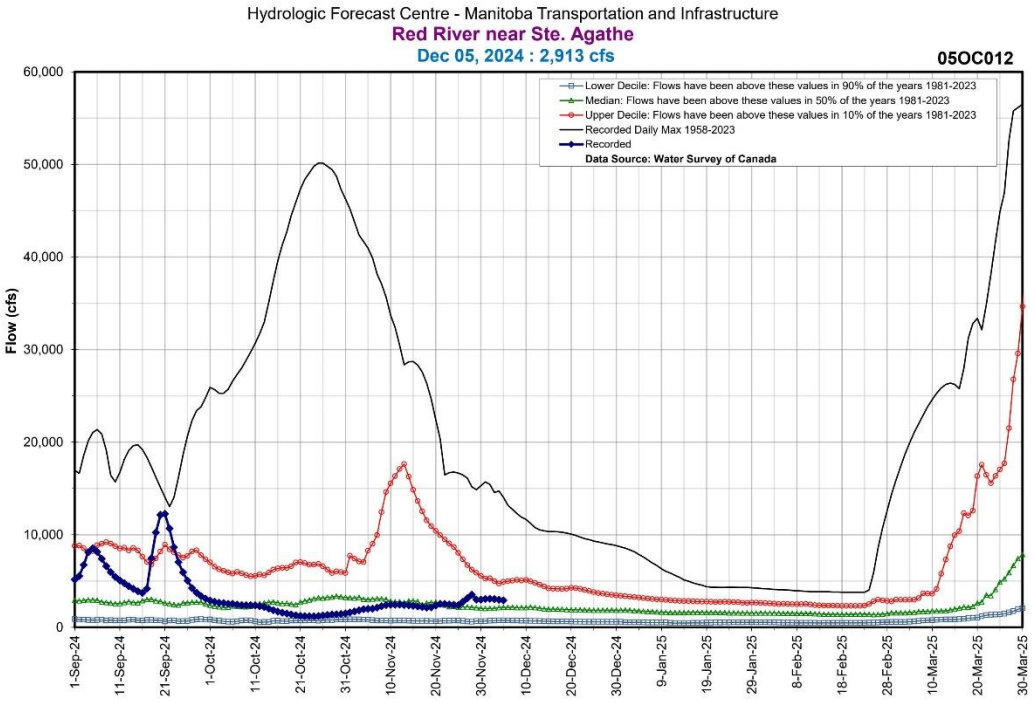

Figure 13. Red River flows near Ste. Agathe.

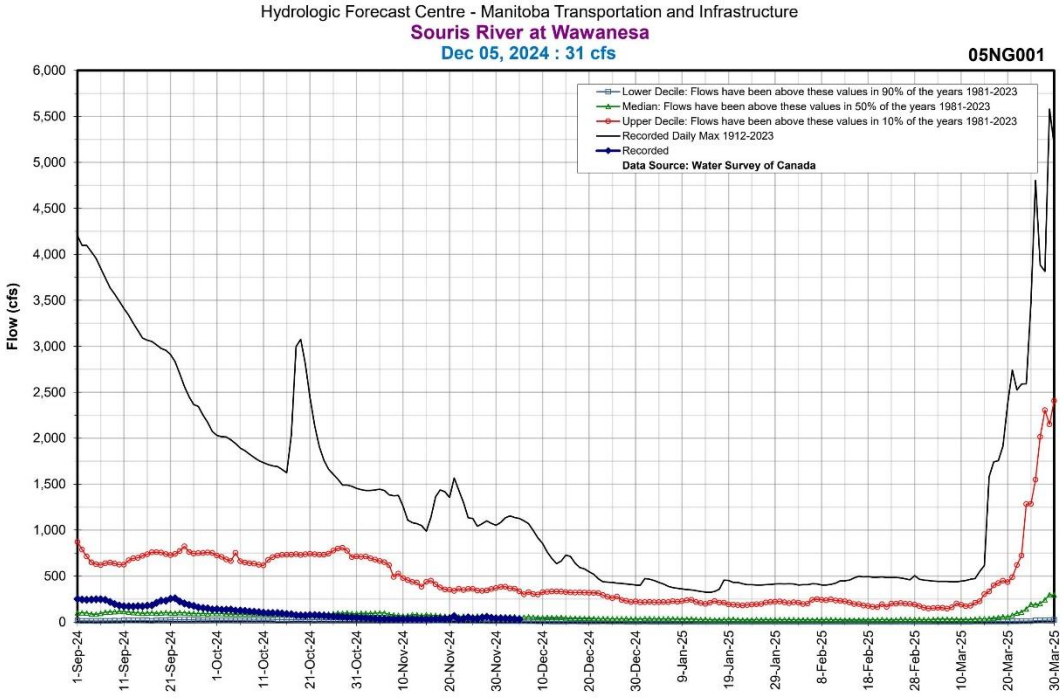

Figure 14. Souris River flows at Wawanesa.

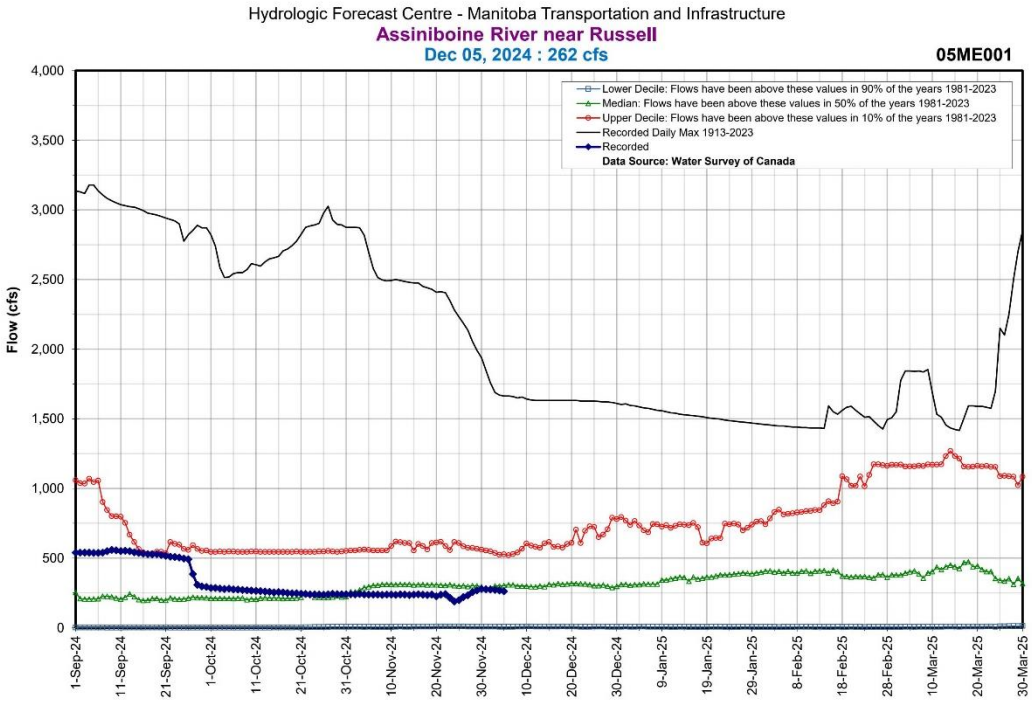

Figure 15. Assiniboine River flows near Russell.

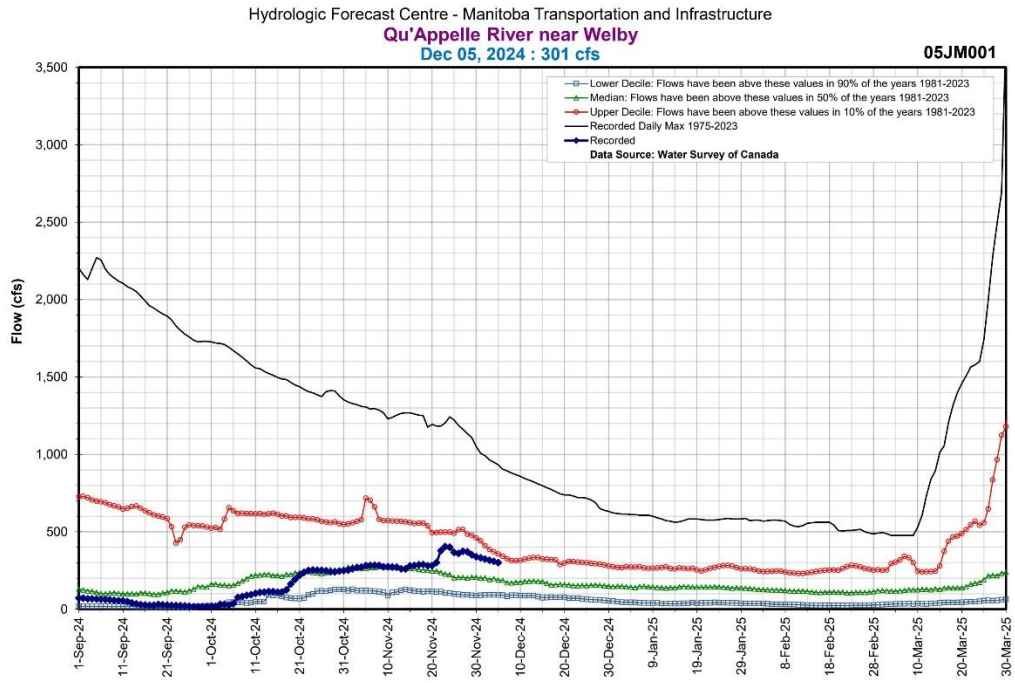

Figure 16. Qu'Appelle River flows near Welby.

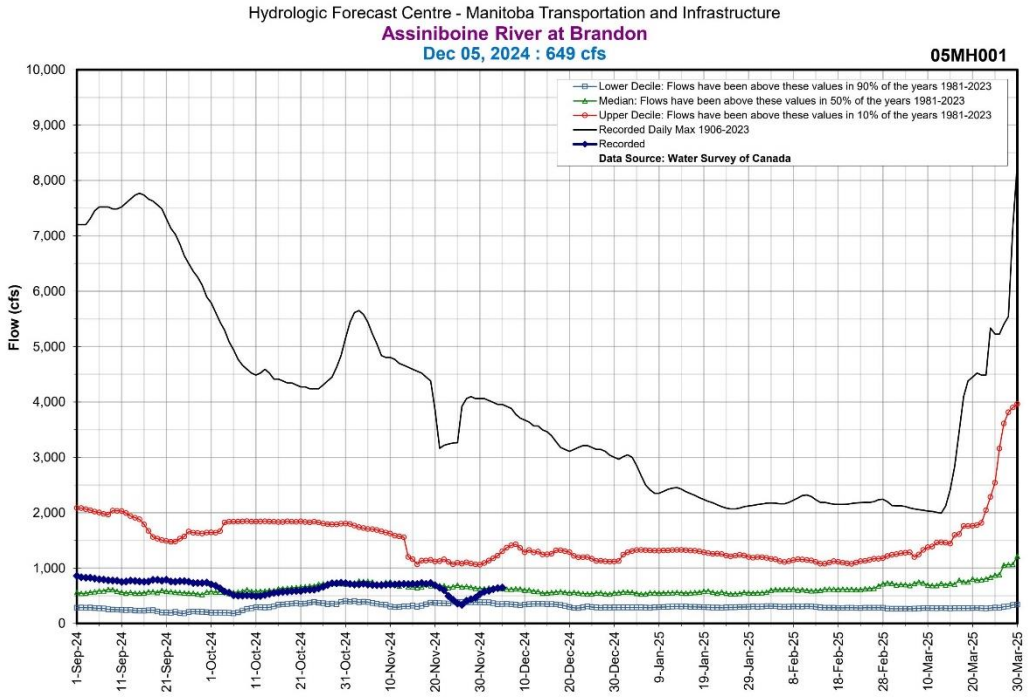

Figure 17. Assiniboine River flows at Brandon.

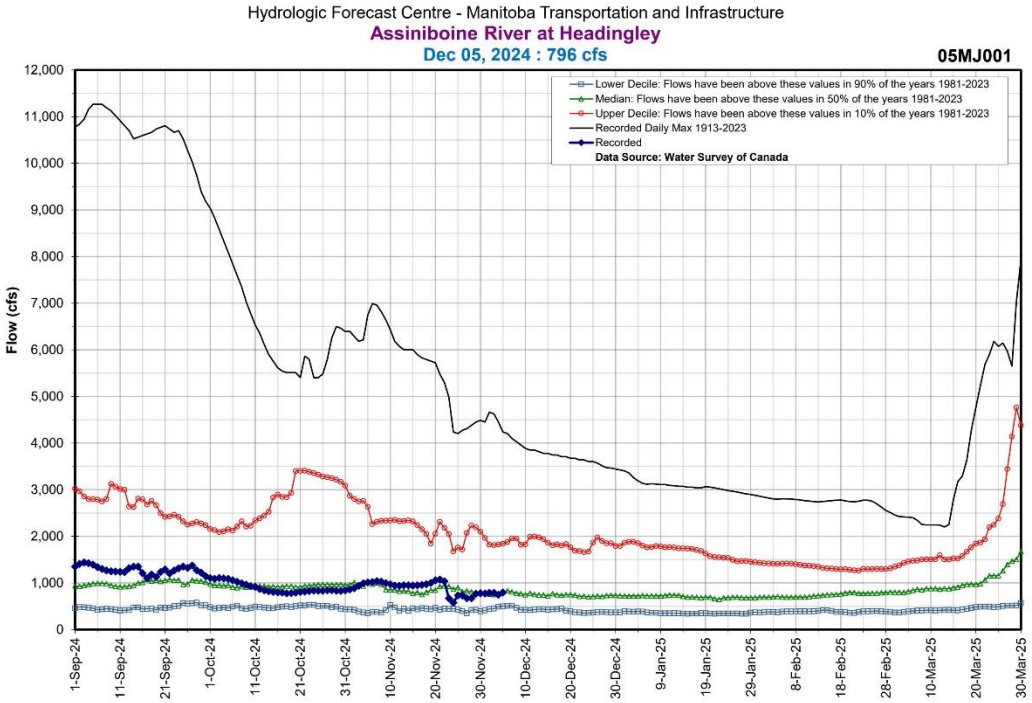

Figure 18. Assiniboine River flows at Headingley.

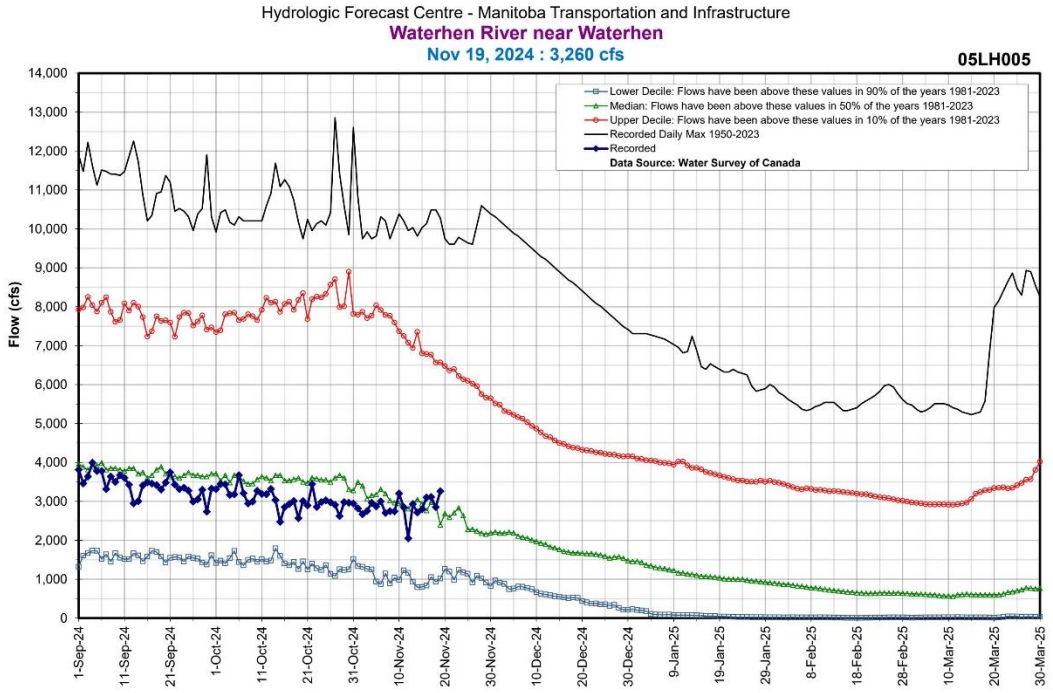

Figure 19. Waterhen River flows near Waterhen.

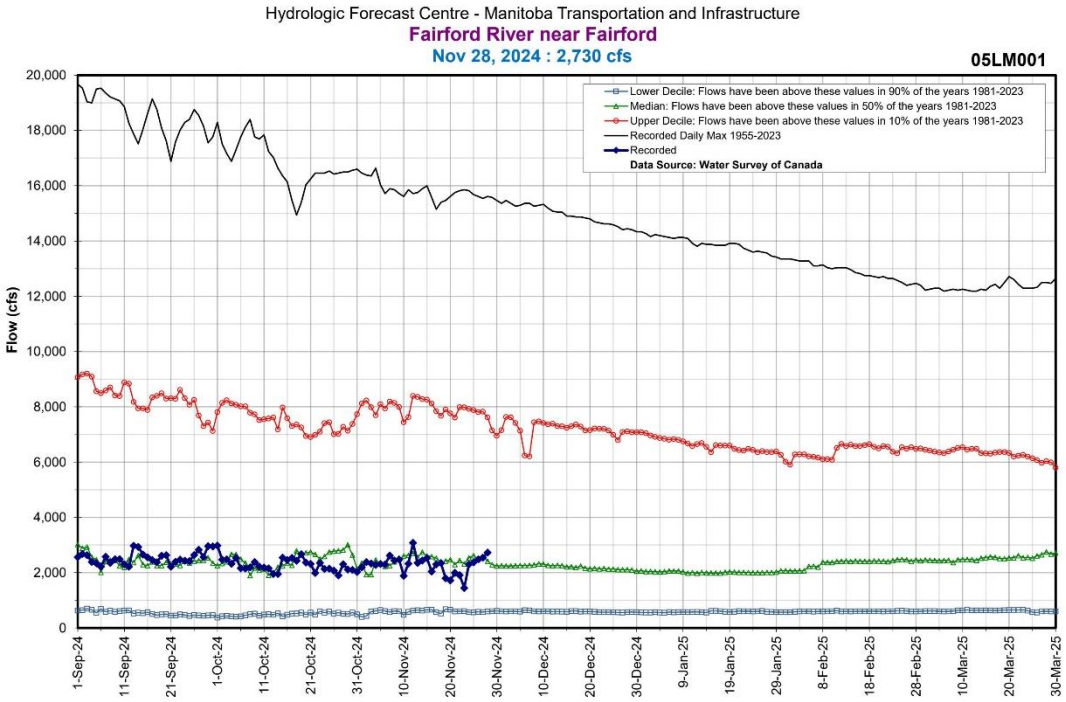

Figure 20. Fairford River flows near Fairford.

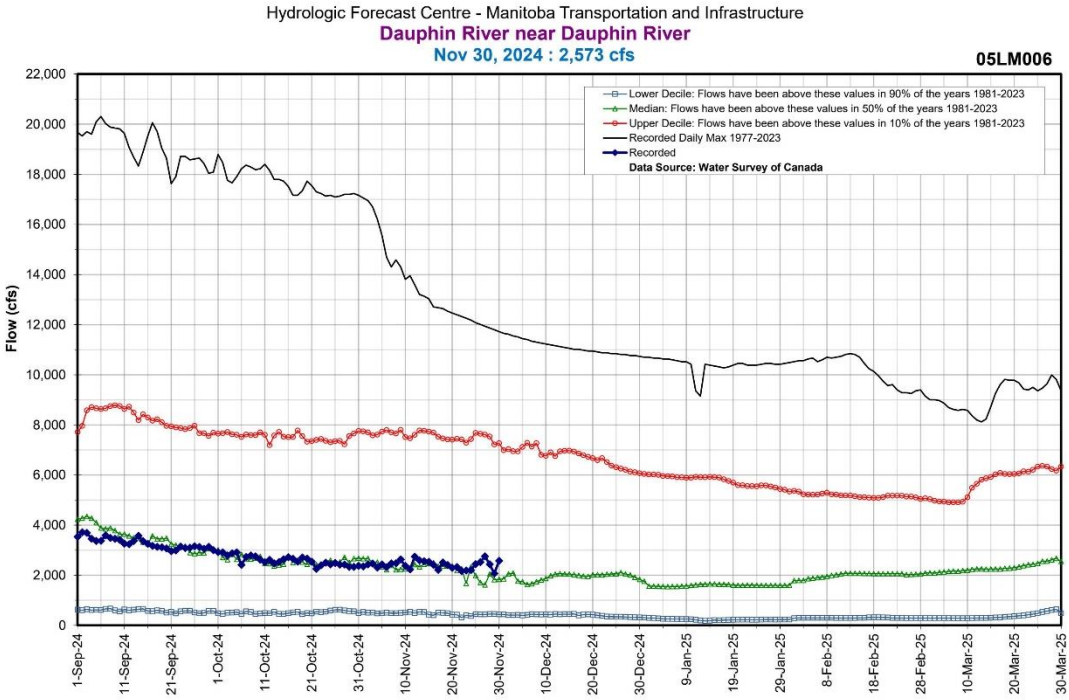

Figure 21. Dauphin River flows near Dauphin River.

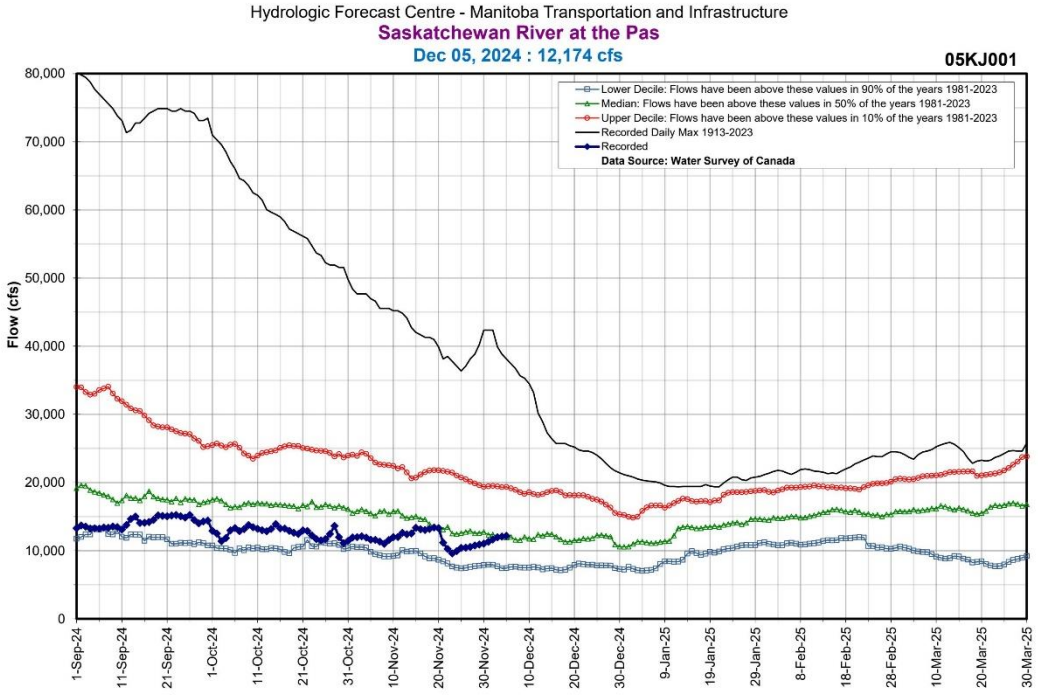

Figure 22. Saskatchewan River flows at The Pas.

Table 1. Flows for main rivers at selected locations as of December 5, 2024.

**Note – The Assiniboine River flows and levels are regulated by the operation of Shellmouth Dam.*

** Note – The Red River Level at James Avenue is measured in relative to the long term mean winter ice level at James Avenue, which is 727.57 feet geodetic or 0 ft James.*

River	Location	Most Recent Flow/Level (Dec 5)	Minimum Flow/Level	10th Percentile	Median Flow/Level	90th Percentile	Maximum Flow/Level	Last time Flow/Level was lower than the current value	Period of Record
Red River	Emerson	2,029 cfs	53 cfs (1934)	700 cfs	2,140 cfs	4,340 cfs	11,160 (2019)	1,550 cfs (2023)	111 years
	Ste. Agathe	2,913 cfs	200 cfs (1976)	740 cfs	2,160 cfs	4,900 cfs	14,060 cfs (2019)	2,910 cfs (2020)	63 years
	James Avenue (level)**	0.84 ft	-2.4 ft (1988)	-1.2 ft	1.1 ft	4.4 ft	11.0 ft (2019)	0.2 ft (2020)	53 years
	Selkirk	4,200 cfs	2,150 cfs (2017)	2,290 cfs	3,380 cfs	8,720 cfs	10,880 cfs (2016)	10,880 cfs (2016)	17 years
Assiniboine River	Russell	262 cfs	20 cfs (1968)	120 cfs	300 cfs	530 cfs	1,663 cfs (2010)	168 cfs (2022)	111 years
	Brandon	649 cfs	40 cfs (1937)	350 cfs	620 cfs	1,470 cfs	3,960 cfs (2010)	491 cfs (2022)	111 years
	Holland	852 cfs	205 cfs (1967)	400 cfs	820 cfs	1,460 cfs	4,450 cfs (2016)	766 cfs (2023)	63 years
	Headingley	796 cfs	120 cfs (1940)	500 cfs	810 cfs	1,840 cfs	4,240 cfs (2010)	703 cfs (2023)	111 years
Shellmouth Dam Release	Shellmouth	244 cfs	97 cfs (2001)	150 cfs	300 cfs	730 cfs	1,598 cfs (2010)	200 cfs (2022)	55 years
Souris River	Wawanesa	31 cfs	0 cfs (1938)	10 cfs	50 cfs	330 cfs	1,127 cfs (2014)	9 cfs (2021)	111 years
Qu'Appelle River	Welby	301 cfs	5 cfs (1988)	90 cfs	190 cfs	360 cfs	932 cfs (2010)	115 cfs (2023)	81 years
Fairford River (data for November 28)	Fairford	2,730 cfs	38 cfs (1964)	590 cfs	2,420 cfs	7,620 cfs	15,609 cfs (2011)	2,416 cfs (2023)	69 years
Waterhen River (data for November 19)	Waterhen	3,260 cfs	45 cfs (1963)	1,010 cfs	2,390 cfs	6,570 cfs	10,277 cfs (1954)	1,579 cfs (2023)	73 years
Dauphin River (data for November 30)	Dauphin	2,573 cfs	113 cfs (1963)	440 cfs	1,830 cfs	7,270 cfs	11,725 cfs (2011)	1,833 cfs (2023)	47 years
Saskatchewan River	The Pas	12,174 cfs	2,250 cfs (1929)	7,440 cfs	11,940 cfs	19,360 cfs	38,140 cfs (1954)	6,533 cfs (2023)	111 years
Fisher River (data for October 31)	Dallas	20 cfs	6 cfs (1990)	10 cfs	115 cfs	125 cfs	3,408 cfs (2010)	8 cfs (2020)	64 years
Winnipeg River	Lac du Bonnet (level)	836.5 ft	820.1 ft (1948)	836.2 ft	836.3 ft	836.5 ft	836.8 ft (1971)	836.3 ft (2021)	82 years

Lakes

Lake Manitoba is at 811.4 feet, which is within its operating range of 810.5 feet – 812.5 feet but tracking 0.3 feet below its long-term average level for this time of the year (Table 2). Lake Winnipeg is at 712.8 feet, which is within its operating range of 711.0 feet – 715.0 feet but tracking about 0.7 feet lower than its long-term average level for this time of the year. Lake St. Martin is at 798.0 feet, which is within its operating range of 797.0 feet – 800.0 feet and tracking near its long-term average level for this time of the year. Dauphin Lake is at 855.0 feet, which is just above its operating range of 853.0 feet – 854.8 feet and tracking 0.7 feet above its long-term average level for this time of the year. Lake Winnipegosis is currently at 830.4 feet and is tracking near its long-term average level for this time of the year. Water level hydrographs for these lakes are shown in figures 23 to 27. Whiteshell lakes are currently tracking near normal conditions for this time of the year. Inflow into Lake of the Prairies (Shellmouth Reservoir) is tracking near normal conditions for this time of the year.

Shellmouth Dam is being operated in consultation with the Shellmouth Reservoir Regulation Liaison Committee. The lake level as of December 5 was 1399.0 feet. The operating guidelines recommend that the lake level be drawn down between 1386 feet and 1400 feet prior to spring runoff depending on the forecasted spring runoff volume. Regular spring runoff forecasts will be issued and the lake level will be dropped to the appropriate level prior to the spring runoff in order to prevent downstream flooding while also storing sufficient water for water supply purposes and upstream reservoir users. Figure 28 shows the observed and forecasted lake levels, reservoir inflow, and reservoir outflow until January 19, 2025. The outflow and level forecasts were made for the median future inflow conditions. As conditions on the ground change, a revised inflow forecast will be issued and the outflow from the reservoir will be adjusted accordingly.

Figures 23 to 27 also indicate the current levels, and statistical lower decile, median, and upper decile levels for major Manitoba Lakes. Recorded lake levels, as of December 5, 2024, are given in Table 2.

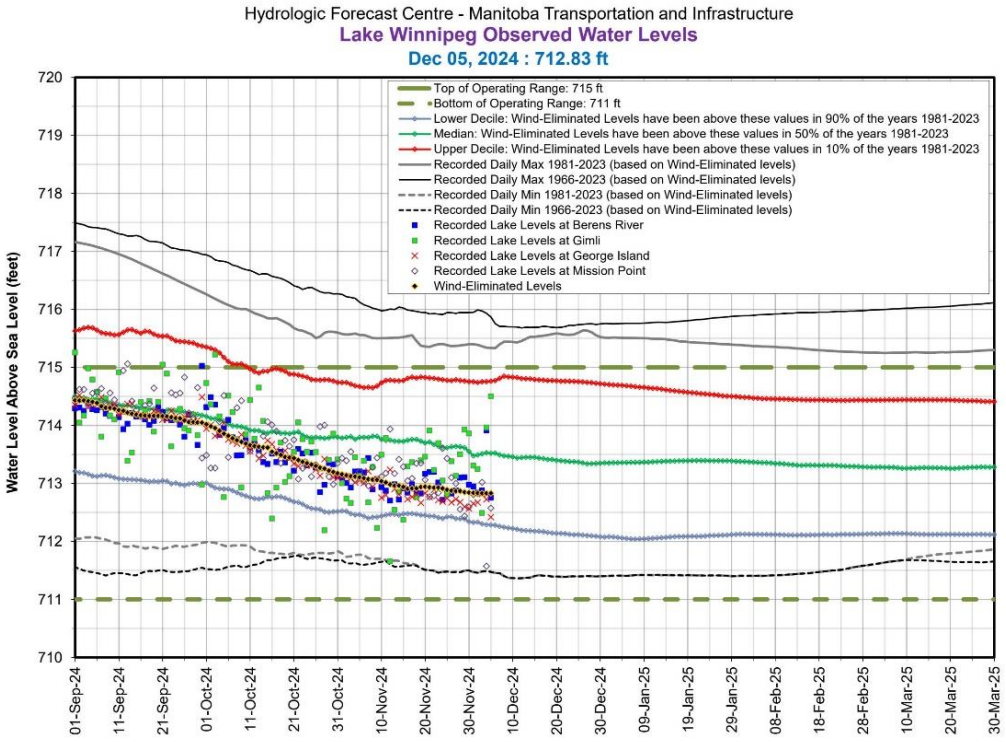

Figure 23. Lake Winnipeg water levels.

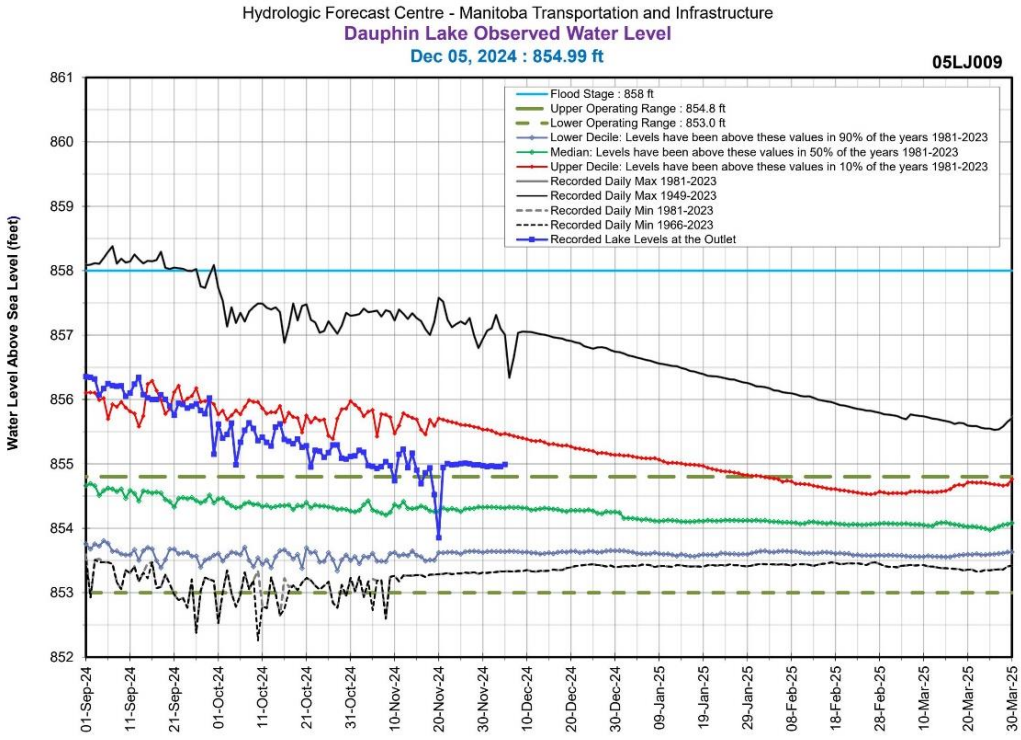

Figure 24. Dauphin Lake water levels.

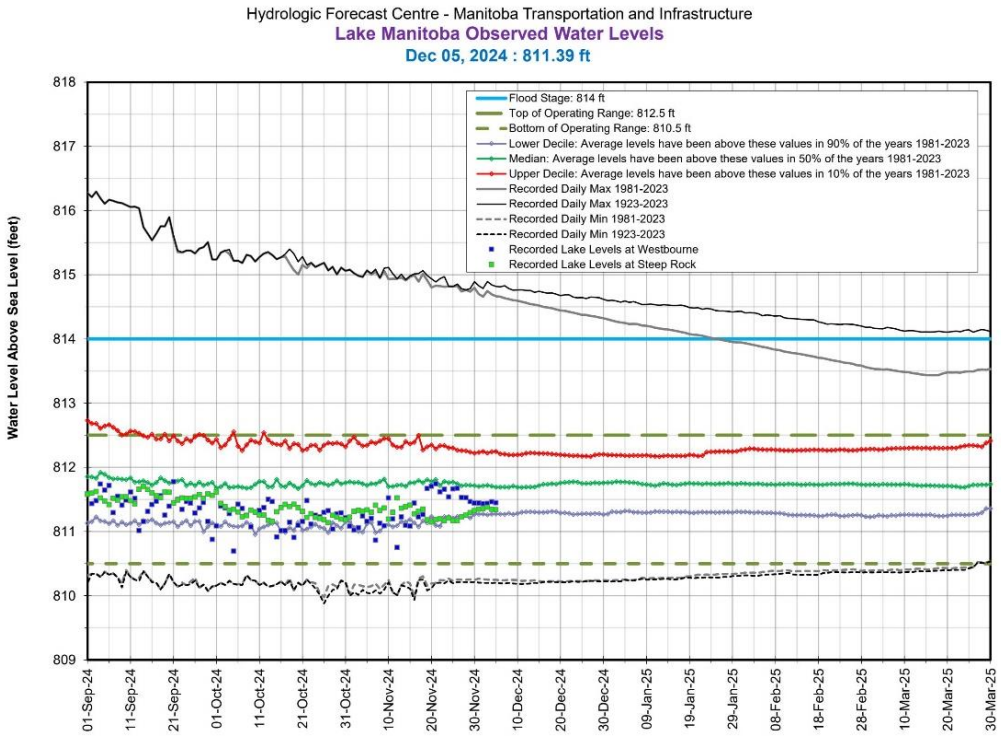

Figure 25. Lake Manitoba water levels.

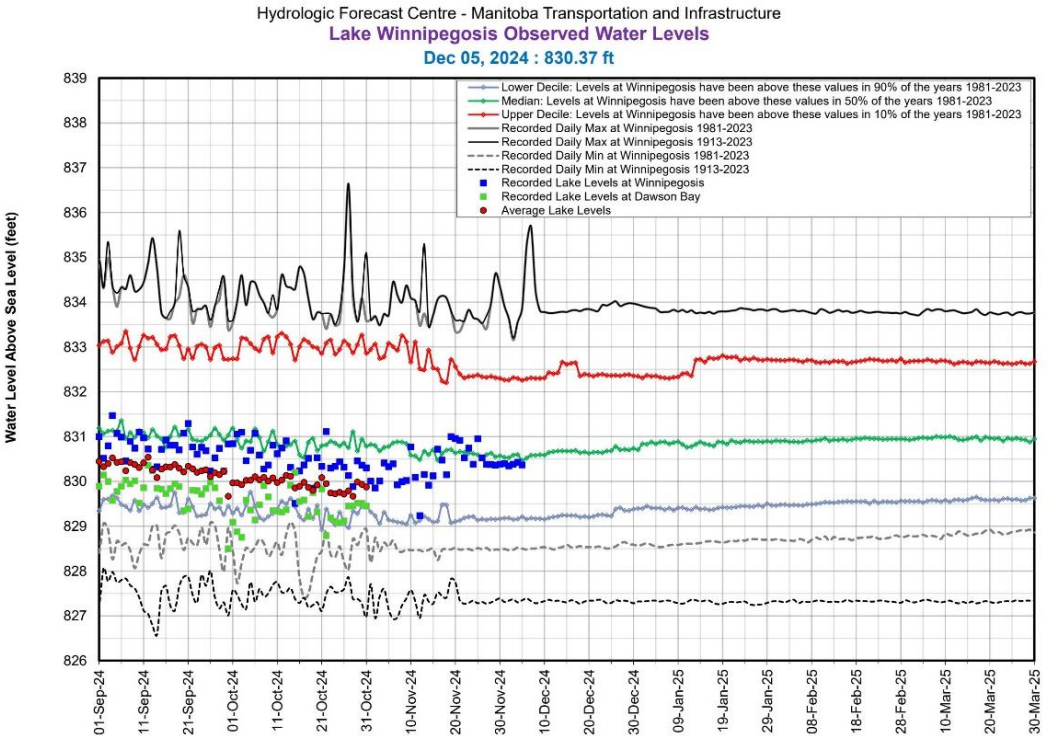

Figure 26. Lake Winnipegosis water levels.

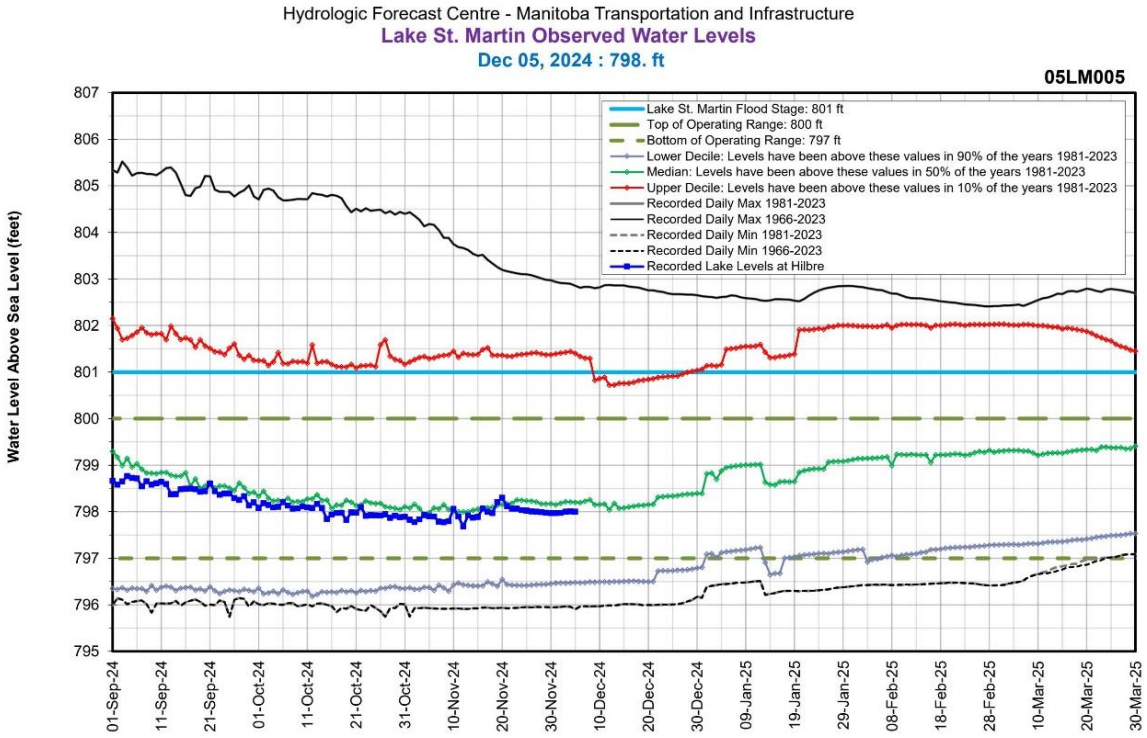

Figure 27. Lake St. Martin water levels.

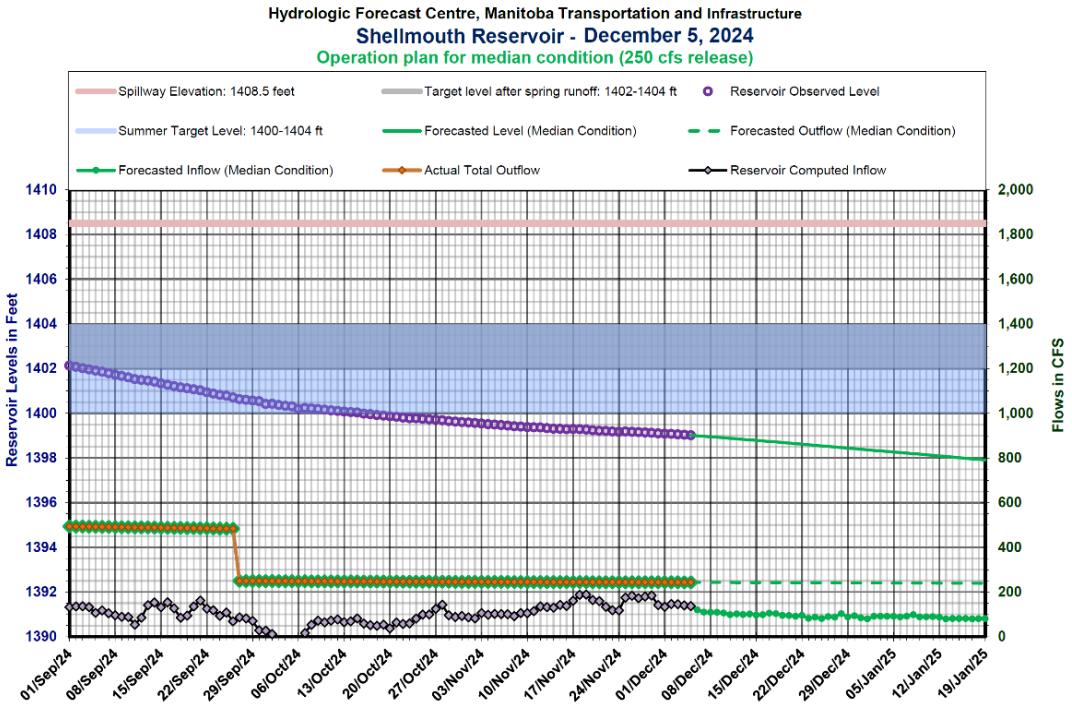

Figure 28. Lake of the Prairies (Shellmouth Reservoir) water levels and flows.

Table 2. Water levels for selected lakes as of December 5, 2024.

***Levels on these lakes are managed by operation of dam structures.*

Lakes	Current level, Dec. 5 (ft)	Change in level from last week (ft)	Operating range or long-term avg. (ft)	Normal level for Dec. 5 (ft)	Last time level was equal or higher than the current level	Historical comparison
Lake Manitoba*	811.4	0.0	810.5 - 812.5	811.7	812.1 (2022)	*Historic water level for this time of year is above the current level 80% of the time*
Lake Winnipeg*	712.8	0.0	711 - 715	713.5	714.5 (2022)	*Historic water level for this time of year is above the current level 70% of the time*
Lake St. Martin*	798.0	0.0	797 - 800	798.1	800.1 (2022)	*Historic water level for this time of year is above the current level 50% of the time*
Lake Winnipegosis	830.4	-0.1	831.0	830.5	830.9 (2022)	*Historic water level for this time of year is above the current level 55% of the time*
Dauphin Lake*	855.0	0.0	853.0 - 854.8	854.3	855.7 (2022)	*Historic water level for this time of year is above the current level 15% of the time*
Shellmouth Reservoir*	1399.0	-0.1	1386 - 1400	1399.9	1400.4 (2023)	*Historic water level for this time of year is above the current level 70% of the time*
Lake Wahtopanah near Rivers*	1534.4	0.1	1535.1	1535.1	1535.5 (2023)	*Historic water level for this time of year is above the current level 65% of the time*
Lake Minnewasta	1082.1	0.0	1079.6	1079.6	1082.3 (2019)	*Historic water level for this time of year is above the current level 10% of the time*

WINTER PRECIPITATION (LONG-TERM PRECIPITATION OUTLOOK)

Global weather prediction centres indicate a weak La Nina climate condition is expected to develop in December and persist through January to March 2025. The effect of La Nina is variable across the globe, but generally, for Manitoba, it is typically characterized by below normal temperatures and above normal precipitation from December to March.

Environment and Climate Change Canada issued a long-term precipitation outlook in November for the winter period (figures 29 and 30). The outlook indicates above normal precipitation from December to February for most Manitoba basins, with the exception of northern Manitoba basins, which are favoured to receive near normal precipitation. The United States National Weather Service Climate Prediction Center's outlook issued on November 21 forecasts equal chances of near normal, above normal or below normal precipitation for the United States portion of the Red and Souris river basins from December through March (figures 31 and 32).

Long range climate projections issued by Columbia Climate School International Research Institute (IRI), which predicts probabilistic seasonal climate indicates below normal precipitation

for most parts of Manitoba from December to February (Figure 33), and below normal precipitation for southern Manitoba from January to March (Figure 34).

Long-term precipitation forecasts provided by different agencies show varying predictions because of variations in forecasting models and assumptions. Experience indicates that long-term precipitation outlooks are more accurate for the first month of the forecast time frame and forecast modelling results start to become more uncertain further into the future. Generally, long-term weather forecasts are not as reliable as short-term forecasts.

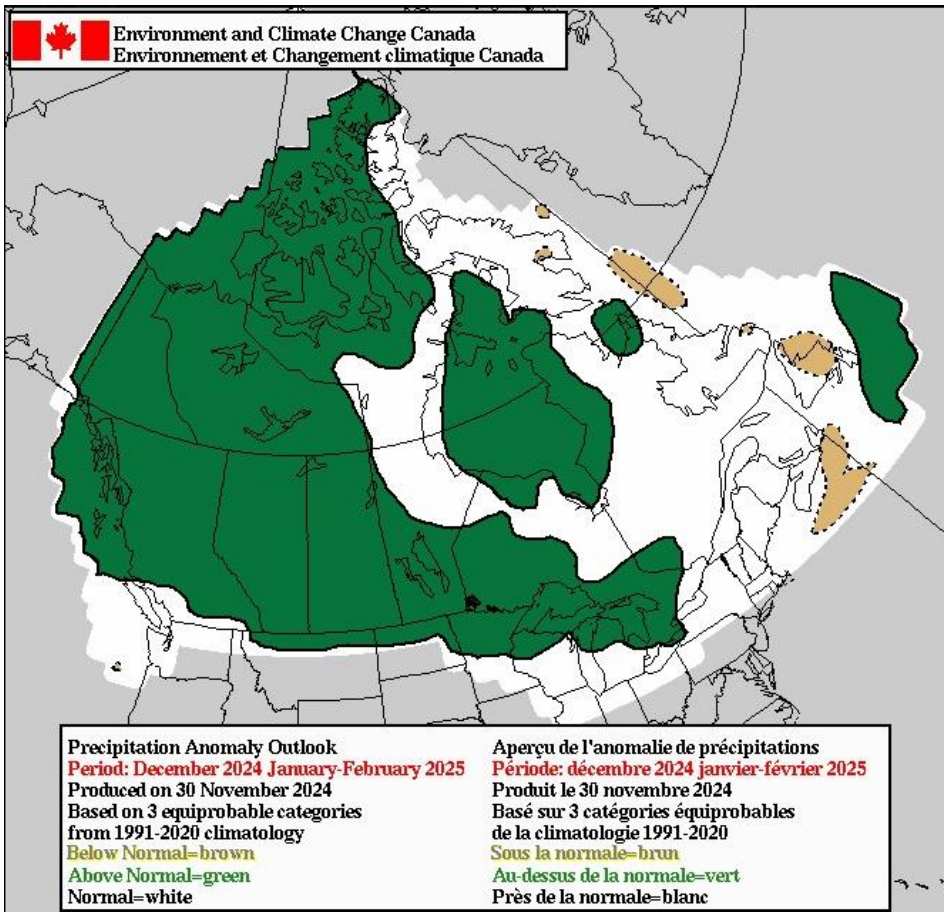

Figure 29. Environment and Climate Change Canada's Deterministic Precipitation Outlook (December to February).

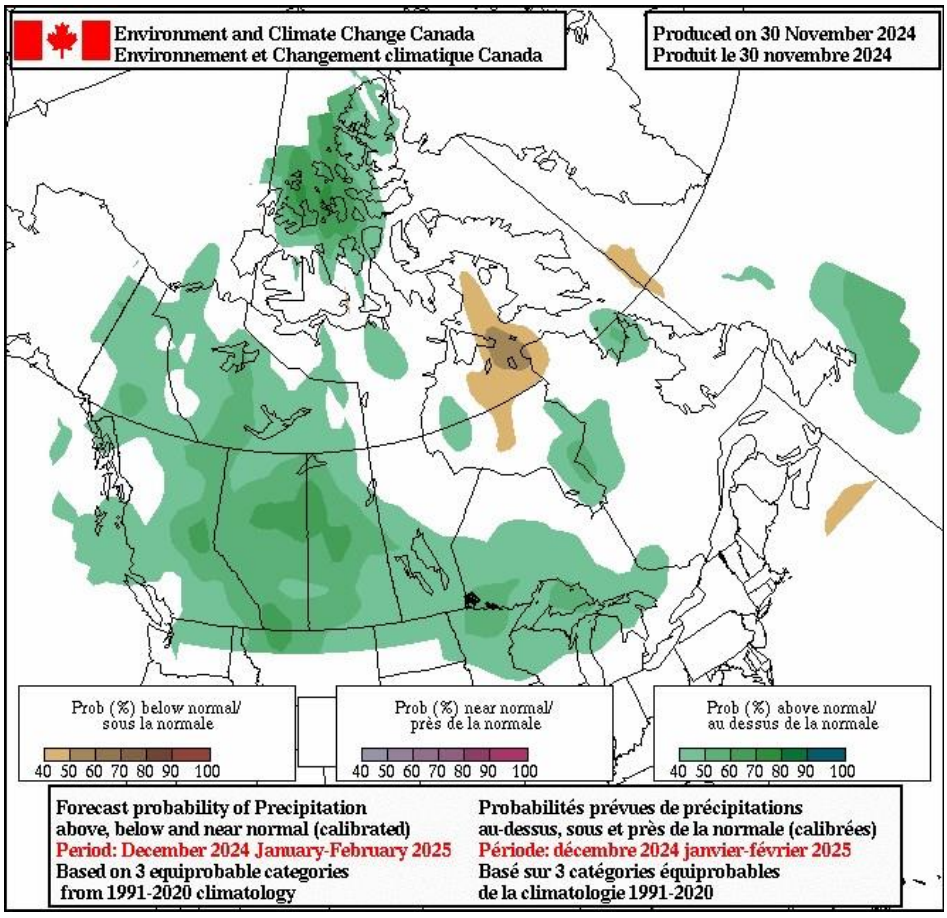

Figure 30. Environment and Climate Change Canada's Probabilistic Precipitation Outlook (December to February.

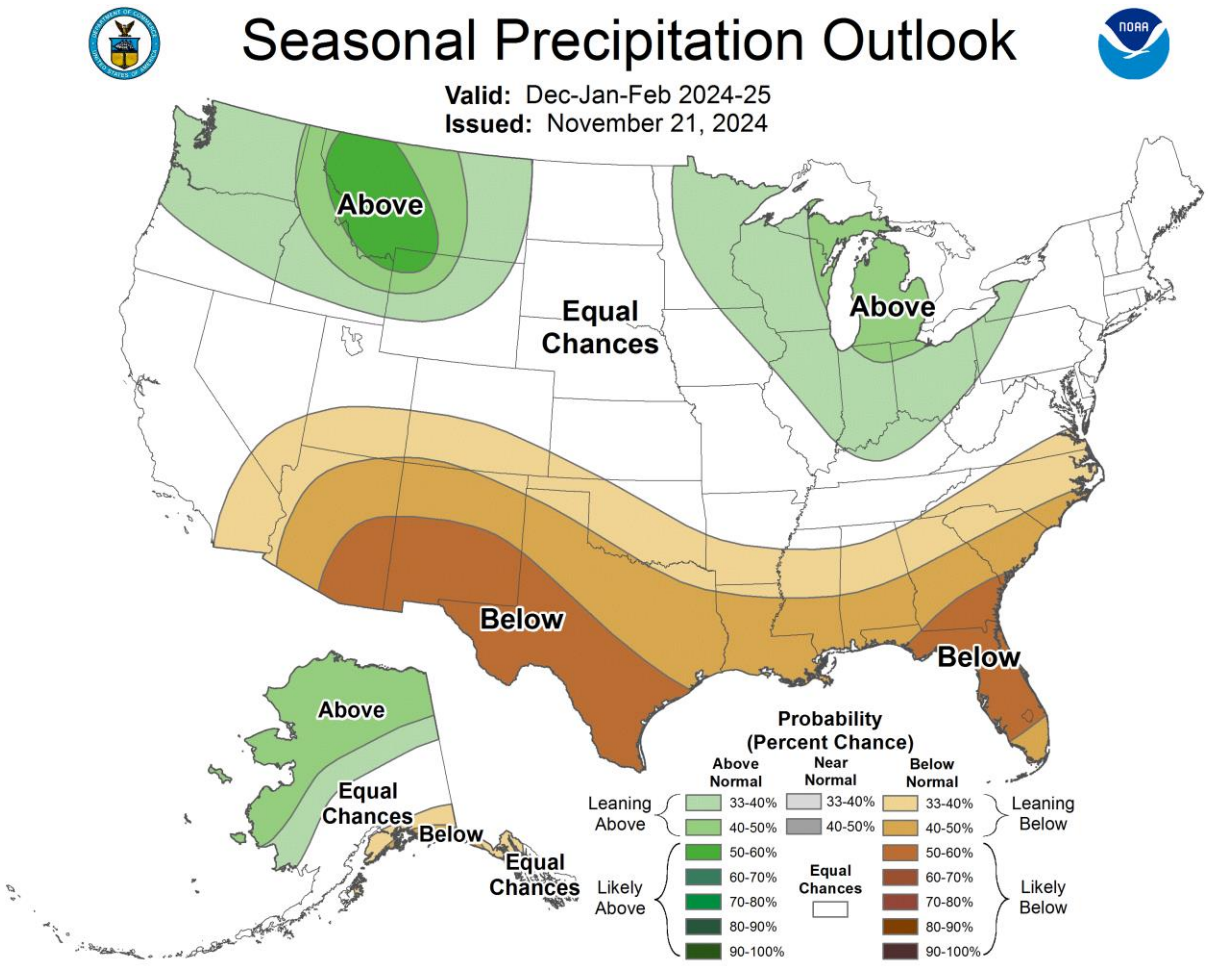

Figure 31. National Weather Services' precipitation outlook (December to February).

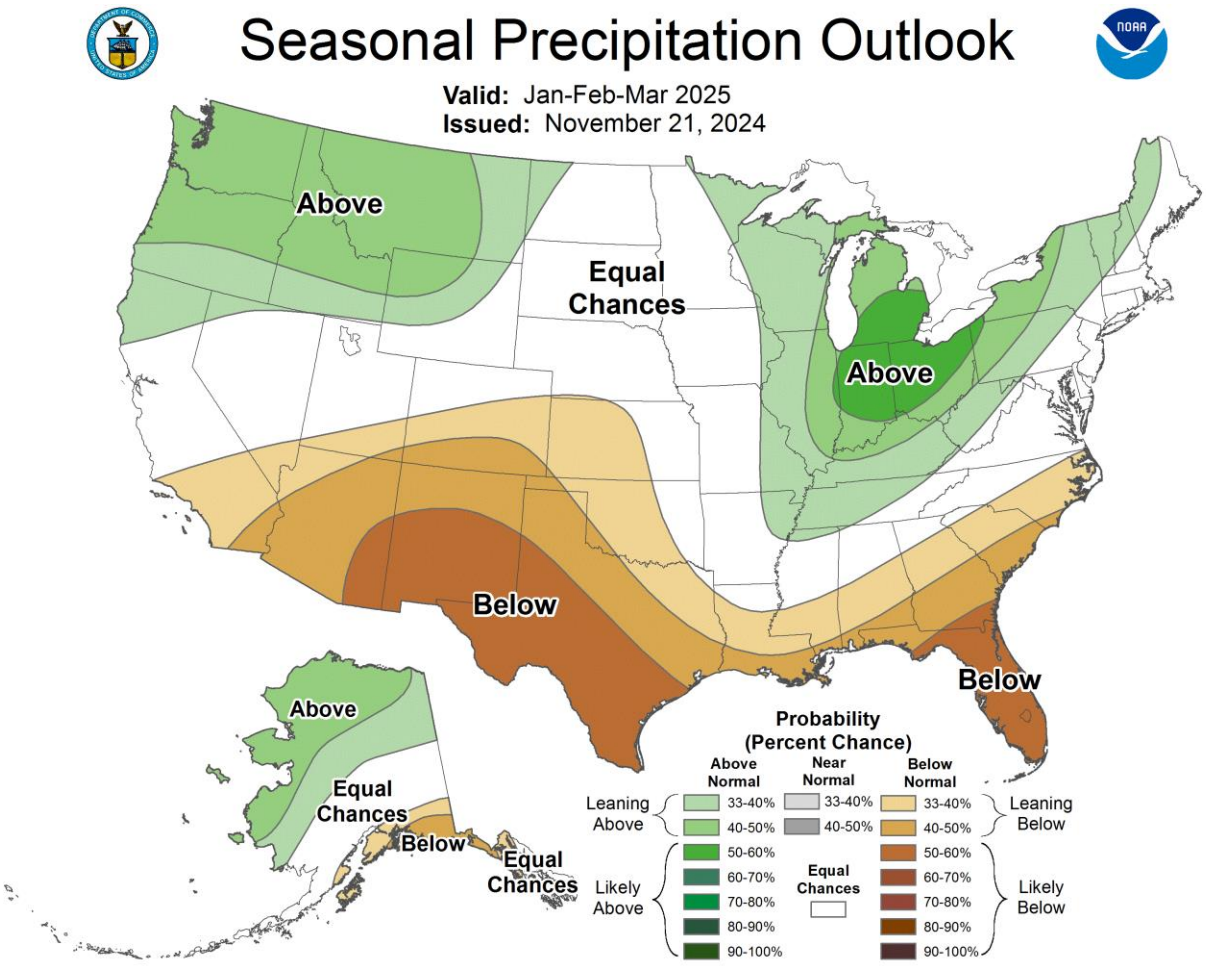

Figure 32. National Weather Services' precipitation outlook (January to March).

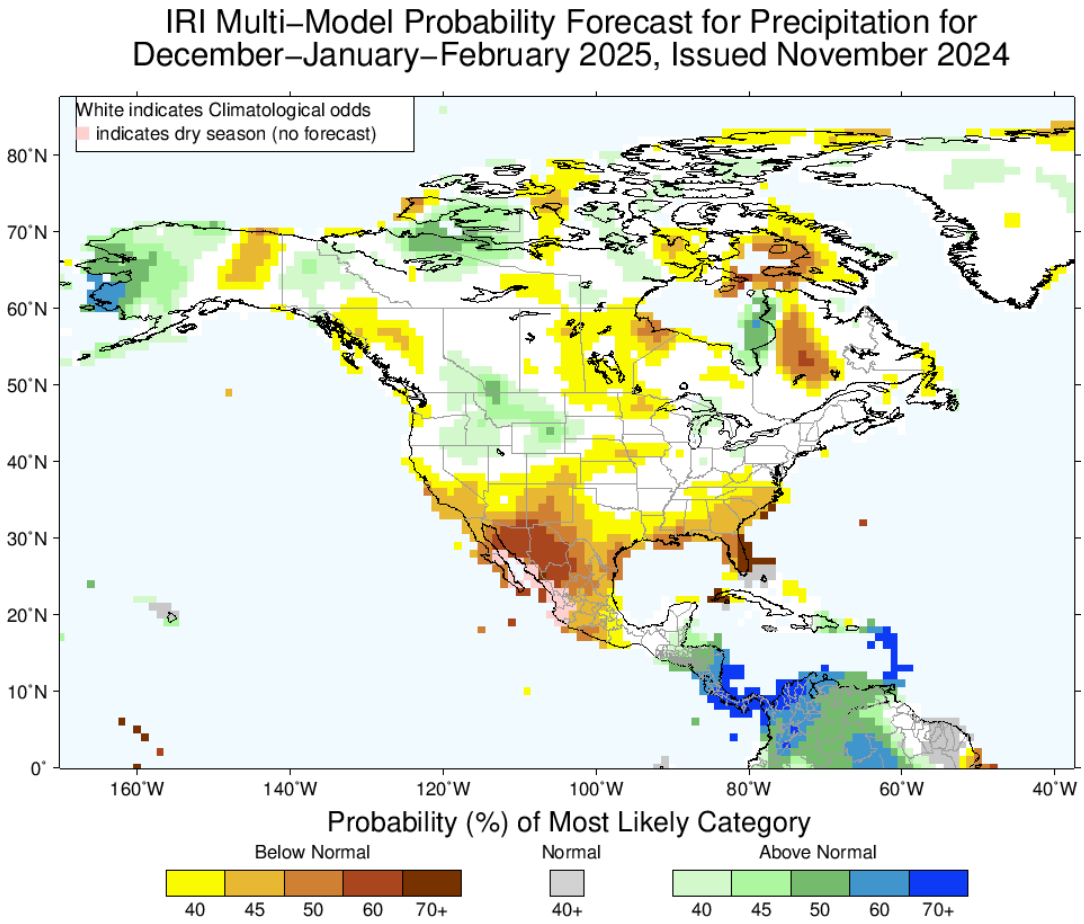

Figure 33. Columbia Climate School International Research Institute's Multi-Model Probabilistic Precipitation Outlook (December to February).

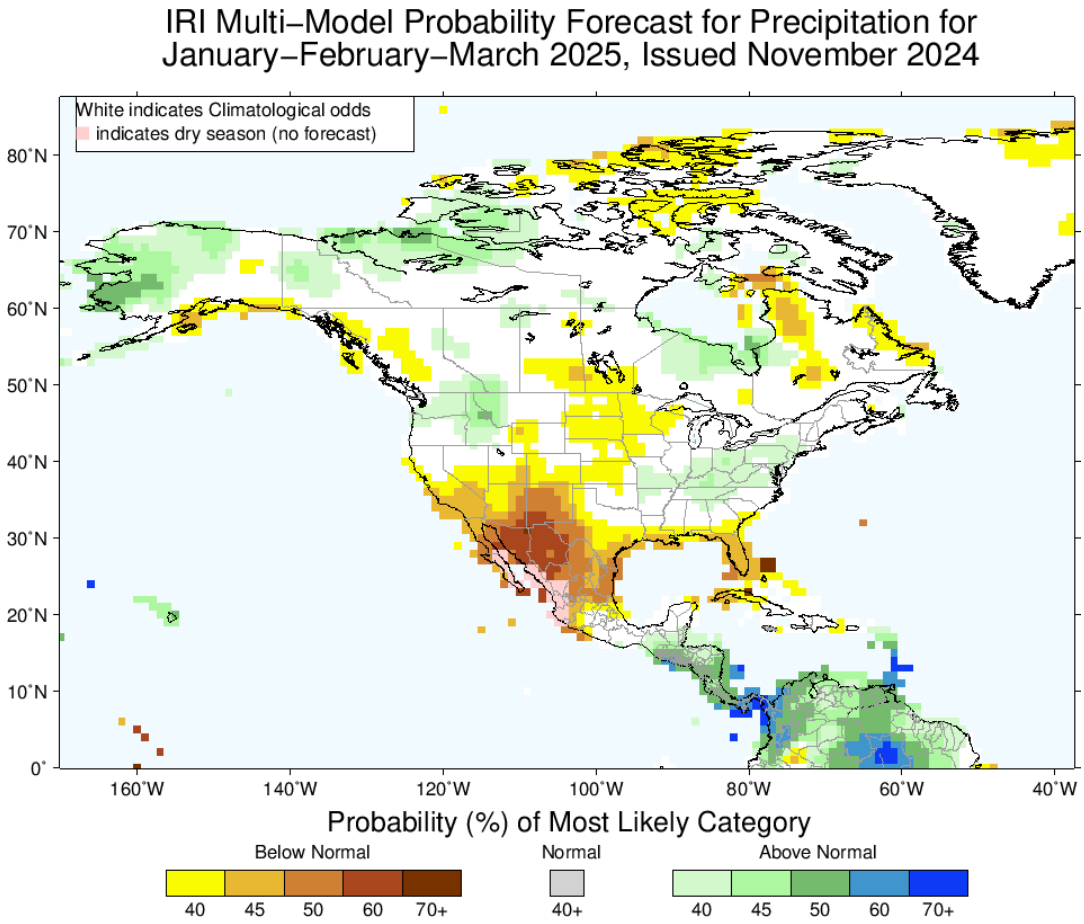

Figure 34. Columbia Climate School International Research Institute's Multi-Model Probabilistic Precipitation Outlook (January to March).

FORECASTED LAKE LEVELS AND RIVER FLOWS OVER THE WINTER PERIOD

Providing reliable forecasts of river flows through the winter, which are also called base flows, is extremely difficult due to frozen ground conditions and the effect of ice on flows and levels on rivers and lakes. Flows and levels in most Manitoba rivers, including the Assiniboine, Red, Waterhen, Fairford, and Dauphin rivers, are forecasted to remain at near normal conditions until spring runoff. Flows on the Assiniboine River are partly being controlled by the sustained release

of outflows from the Shellmouth Reservoir to drop the level in the reservoir in preparation for the spring runoff.

Lake Manitoba is expected to remain near 811.4 feet throughout the winter. Lake Winnipeg is expected to be near 712.5 feet by end of March, which will be near the historic lower quartile level for March 31. Lake Winnipegosis will remain near the current level of 830.4 feet throughout the winter and Lake St. Martin is expected to be near 799.0 feet before the spring runoff.

SUMMARY

The Hydrologic Forecast Centre will continue working collaboratively with Environment and Climate Change Canada, the National Weather Service and flood forecasters in neighbouring jurisdictions to monitor watershed conditions and winter precipitation patterns.

At this point in time, it is not practical or feasible to provide a reliable long-term flood forecast for spring 2025 as conditions could change significantly during the coming months. Basins with below normal to normal soil moisture conditions, base flow, and lake level conditions indicate a higher chance for below normal to near normal flows and levels in spring runoff. However, there is a possibility of receiving above normal spring runoff if heavy winter or spring precipitation is received and a fast snowmelt occurs. Conversely, the risk of spring flooding could decrease if less winter precipitation occurs, or if a gradual snowmelt rate or less precipitation were to occur in early spring.

Looking back at some of the most significant historic flood or drought events, each flood or drought event is caused by a combination of multiple unique circumstances. There is an inherent risk of over-estimating or under-estimating the extent of spring runoff if one considers the conditions and available precipitation four months in advance of the spring runoff. The Hydrologic Forecast Centre will continue to monitor watershed conditions closely and will release future outlooks in the winter and prior to spring run-off.

A detailed flood outlook will be published with updated information towards the end of February when further precipitation and other factors are available.