

Hydrologic Forecast Centre

Manitoba Transportation and Infrastructure

WINNIPEG, MANITOBA

MARCH FLOOD OUTLOOK

March 18, 2026



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Executive Summary

The March Flood Outlook Report prepared by the Hydrologic Forecast Centre (HFC) of Manitoba Transportation and Infrastructure indicates a low to moderate risk of significant spring flooding across most Manitoba basins, with the exception of the Fisher River basin in the Interlake region that has moderate to major flood risk. Water levels are expected to remain below dikes and community or individual flood protection levels at all locations where there are dikes and community or individual flood protection works. However, the risk of spring flooding could change depending on future weather conditions, including the amount of precipitation throughout the remainder of winter and spring, as well as the rate of snowmelt and thaw.

Soil moisture, snow accumulation, and river base flows are mostly within or below seasonal norms, with the exception of Fisher River basin which is above seasonal average snow accumulations. Frost depths are normal to shallower than normal across much of the province. Some major Manitoba lakes, including Lake Winnipeg and Lake Manitoba, are currently tracking well below normal for this time of the year. Inflows into most major lakes are expected to be below seasonal normals, reflecting generally drier than normal conditions across major contributing river basins. Water levels on most Manitoba lakes are within their operating ranges and are expected to remain within these ranges after the spring runoff; although Dauphin Lake may temporarily rise above its operating range while remaining below flood protection levels. Overall, the risk of significant spring flooding along Manitoba lakes is low.

Soil Moisture Conditions at Freeze-up:

Soil moisture at freeze-up is one of the major factors that affects spring runoff potential and flood risk. Soil moisture at freeze-up was generally near normal to below normal for most Manitoba

basins, except for parts of southern Manitoba and the United States portions of the Red River and Souris River basins, which have near normal to above normal soil moisture. Parts of northern and central Manitoba, including parts of the Interlake Region, have below normal soil moisture. 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 remaining winter and spring precipitation, as well as snowmelt conditions.

Winter Precipitation:

Precipitation from November to mid-March has ranged from near normal to below normal across much of Manitoba, with northeastern Manitoba experiencing particularly dry conditions. In contrast, the Saskatchewan portions of Manitoba river basins, including the Saskatchewan, Churchill and Qu'Appelle River basins, have predominantly seen precipitation amounts ranging from normal to well above normal during this period. The U.S. portions of the Red River and Souris River basins, as well as the Winnipeg River basin received precipitation ranging from normal to below normal.

Snow Water Equivalent (SWE):

Snow Water Equivalent (SWE) is the measure of the amount of water content in the snow. Field measurements conducted from March 9 to March 12, 2026 indicate that SWE across Manitoba watersheds range from 0 mm to 157 mm (0.0 to 6.2 inches). The highest SWE was observed in western Manitoba near the Riding Mountain National Park. The Shellmouth Reservoir basin recorded SWE values of 61 to 113 mm (2.4 to 4.4 inches), averaging about 80 mm (3.1 inches), while the Interlake region showed SWE values between 48 and 100 mm (1.9 to 3.9 inches). Snow accumulations are generally within the normal range, except for parts of southern Manitoba where snow accumulation remains below typical values for this time of year.

Soil Frost Depth:

Soil frost depth across most of Manitoba is generally normal to shallower than normal this winter. Frost depth is influenced by winter temperatures and the insulation effect of snow cover. Generally, when frost is deeper than normal, it takes longer to thaw, reducing the soil's ability to absorb water and leading to increased surface runoff. In contrast, shallower than normal frost depths allow the soil to absorb more meltwater, which can reduce overland flooding.

Future Weather:

The short-term weather forecast issued by Environment and Climate Change Canada indicates that there is a greater than 50% chance of receiving more than 25 mm of precipitation between March 17 and March 31, 2026 across much of central and northern Manitoba basins. The long-term precipitation outlook for April, May and June issued in March by the International Research Institute (IRI) at the Columbia Climate School, indicates equal chances of above normal, below normal or near normal precipitation for most Manitoba basins. Similarly, the U.S. Climate Prediction Center's February 19, 2026 outlook forecasts equal chances of above normal, below normal, or near normal precipitation for the U.S. portions of the Red River and Souris River basins from March to May. The IRI outlook also indicates a higher chance of above-normal temperatures for most of Manitoba during April, May and June.

Base Flows and Level Conditions:

Base flows and levels indicate the amount of water available in the system prior to the spring runoff. Higher base flows may indicate higher soil saturation levels and increased potential for spring runoff. As of March 14, 2026, base flows and levels vary from normal to above normal in southern Manitoba basins, near normal to below normal in central Manitoba basins, and below normal to well below normal in northern Manitoba basins.

Lake levels across Manitoba remain within their respective operating ranges heading into spring runoff. Lake Winnipeg and Lake Manitoba are well below normal for this time of year, tracking near the 15th and 10th percentiles, respectively. Lake St. Martin and Lake Winnipegosis are below normal for this time of year. Shellmouth Reservoir is being drawn down as part of routine winter drawdown operations. Dauphin Lake is currently near normal for this time of year. Inflows into most major lakes are expected to be below seasonal normals, reflecting generally drier than normal conditions across major contributing river basins.

Flood Outlook:

The March flood outlook, based on current basin conditions and future weather condition scenarios, indicates a low to moderate risk of significant flooding across most Manitoba basins. The risk of significant flooding is low to moderate for the Red River, as well as for the Assiniboine River and its tributaries, including the Souris and Qu'Appelle rivers. A moderate flood risk is also identified along the Saskatchewan River in northern Manitoba. The risk of significant flooding is

low for the Pembina, Rat and Roseau rivers and in the eastern region, including the Winnipeg River basin and Whiteshell Lakes area. Under normal and favourable future weather conditions, most rivers are expected to remain within their banks. However, some locations may exceed bankfull capacity under the unfavourable future weather scenario. As in most years, there remains a risk of ice jam induced flooding on several rivers, including the Saskatchewan, Carrot, Swan, Icelandic and Fisher rivers. The province's practice is to plan and prepare for the unfavourable future weather condition scenario, which represents a 1-in-10 probability of occurrence from now until the spring runoff.

The magnitude of the 2026 spring runoff will continue to depend heavily on weather conditions between now and the spring melt period. Runoff potential is influenced by additional late-winter snowfall, spring rainfall, frost depth at the time of melt, and the timing and rate of thaw. A rapid thaw combined with heavy spring rainfall could increase overland runoff, resulting in higher flows on tributaries and larger rivers. Conversely, a gradual melt under favourable conditions would reduce peak flows and overall flood risk.

Water Control Structures Operations:

The Red River Floodway is not expected to be operated under normal and favourable weather conditions. If unfavourable weather occurs and higher flows are experienced, the Floodway will be operated to reduce water levels within the City of Winnipeg. The Portage Diversion is expected to be operated under unfavourable weather conditions. Also, operation of the Portage Diversion may also be necessary to mitigate ice related water level rises on the lower Assiniboine River (from Portage to Winnipeg). The Shellmouth Reservoir is being operated in consultation with the Shellmouth Liaison Committee members in order to reduce the risk of flooding downstream on the Assiniboine River, while also providing sufficient storage for water supply and recreation.

Preparations:

The Manitoba government, local authorities and First Nations communities are continuing to prepare for spring flooding. Ice cutting and breaking along the Red River has been completed as of March 11, 2026, and operations are currently underway along the Icelandic River. Further preparations include reviewing existing emergency plans, information sharing, and preparation of resources used in flood response.

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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 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 1 shows the API map for the fall of 2025 expressed in percent of normal. The API model results indicate that soil moisture at freeze-up was near normal to below normal for most Manitoba basins, except for parts of southern Manitoba and the United States portions of the Red River and Souris River basins, which have near normal to above normal soil moisture.

The U.S. National Weather Service Climate Prediction Center also monitors soil moisture conditions and indicates normal to below normal soil moisture across the U.S. portions of the Red and Souris River basins (Figure 2).

In summary, soil moisture is near normal to below normal for most of Manitoba basins, with the exception of parts of southern Manitoba that have above normal soil moisture levels.

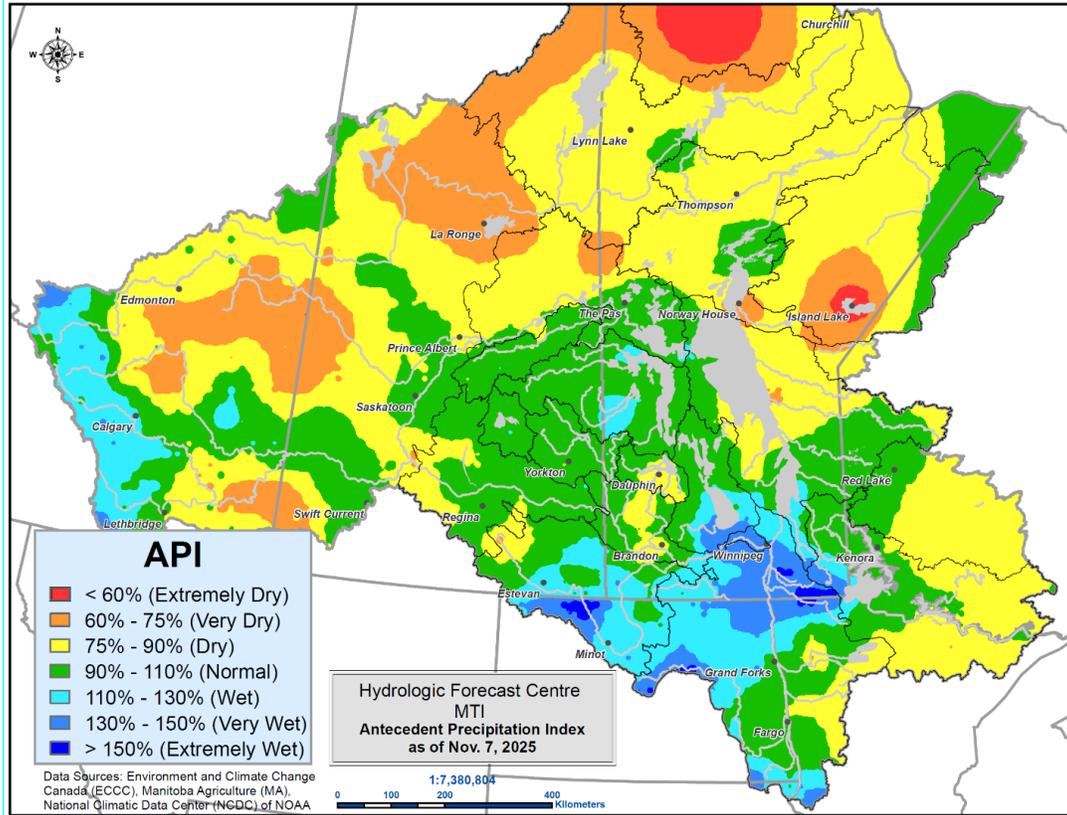


Figure 1 – Soil moisture expressed as Antecedent Precipitation Index (API) for the fall of 2025.

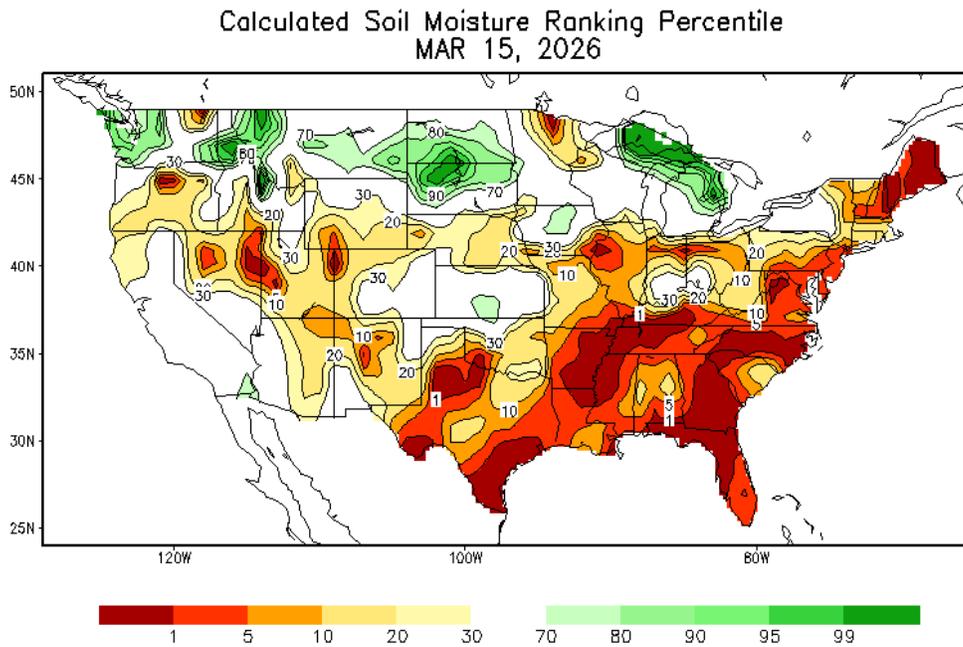


Figure 2 – Calculated soil moisture ranking percentile as of March 15, 2026, from the National Weather Service.

Winter Precipitation

Based on information collected from over 700 weather stations across Manitoba basins, from November to mid-March, precipitation across much of Manitoba ranged from normal to below normal, except in northeastern Manitoba, where precipitation was below normal to well below normal. Most of the U.S. portion of the Red River and Souris River basins, as well as the Winnipeg River basin received precipitation ranging from normal to below normal. During this period, the Saskatchewan portions of Manitoba watersheds, including the Saskatchewan, Churchill and Qu'Appelle river basins, received predominantly normal to well above normal precipitation (Figure 3). Information on snow water equivalent for Manitoba basins is presented in the next section (Snow Water Content).

The cumulative precipitation amounts across Manitoba, Saskatchewan, and the United States portions of the Red River and Souris River basins show significant spatial variation. As shown in Figure 4, most parts of Manitoba received between 55 mm and 115 mm (2.2 to 4.5 inches) of precipitation from November 1, 2025 to March 17, 2026. Most of the U.S. portion of the Red River basin received between 55 mm and 100 mm (2.2 to 3.9 inches) during this period. Localized areas in southwestern and northeastern Manitoba, along with some parts of the Red River basin in the U.S., received lower amounts ranging from 40 mm to 55 mm (1.6 to 2.2 inches). Over the same period, the Souris River basin received between 40 and 70 mm (1.6 to 2.8 inches) of precipitation, while northern Saskatchewan and the Winnipeg River basin in Ontario received higher totals ranging from 85 mm to more than 115 mm (3.3 to more than 4.5 inches).

Most parts of southern and central Manitoba have received precipitation between the 20th and 40th percentiles of historical values, indicating generally dry conditions. Northeastern Manitoba has experienced dry to extremely dry conditions over the winter, with precipitation below 20th percentile. In contrast, portions of northwestern Manitoba and much of Saskatchewan received precipitation between the 40th and 95th percentiles. Most parts of the Red and Souris River basins in the U.S. received precipitation ranging from the 20th to the 80th percentile (Figure 5).

As shown in Figure 6, recorded winter precipitation as of March 17, 2026, indicates that most areas of southern and northeastern Manitoba have received approximately 10 mm to 40 mm (0.4 to 1.6 inches) less precipitation than normal for this time of the year. In northwestern Manitoba precipitation ranged from about 10 mm (0.4 inches) less to 25 mm (1.0 inches) more than normal for this time of the year. Most areas of the Red River basin in the U.S. received between 25 mm

(1.0 inches) below normal and 10 mm (0.4 inches) above normal, while most parts of the Souris River basin in the U.S. received between 25 mm (1.0 inches) below normal and 10 mm (0.4 inches) above normal precipitation during this period. Across Saskatchewan, precipitation ranged between 25 mm (1.0 inches) below normal to 40 mm (1.6 inches) above normal for this time of year.

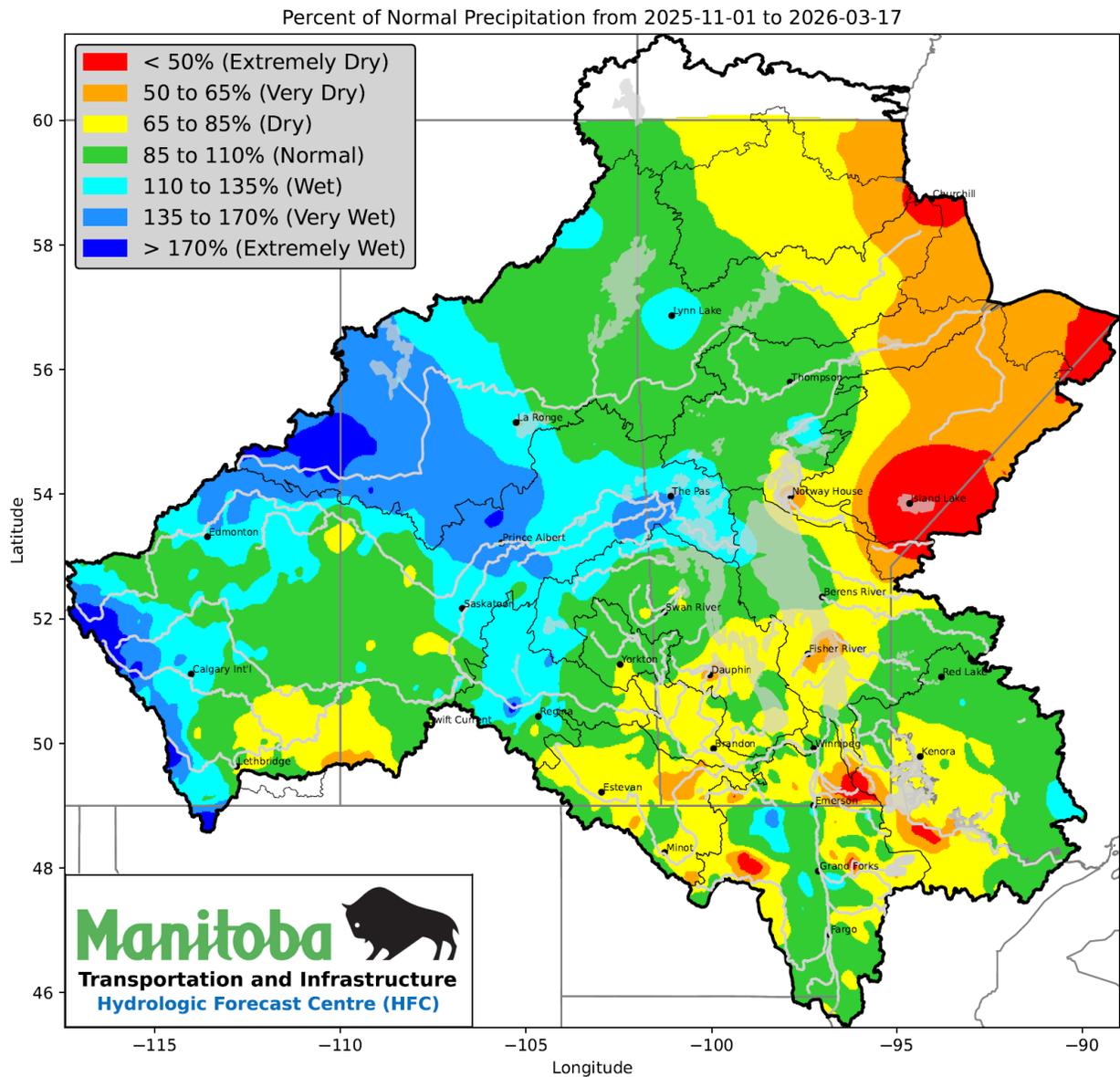


Figure 3 – Percent of normal precipitation from November 1, 2025 to March 17, 2026.

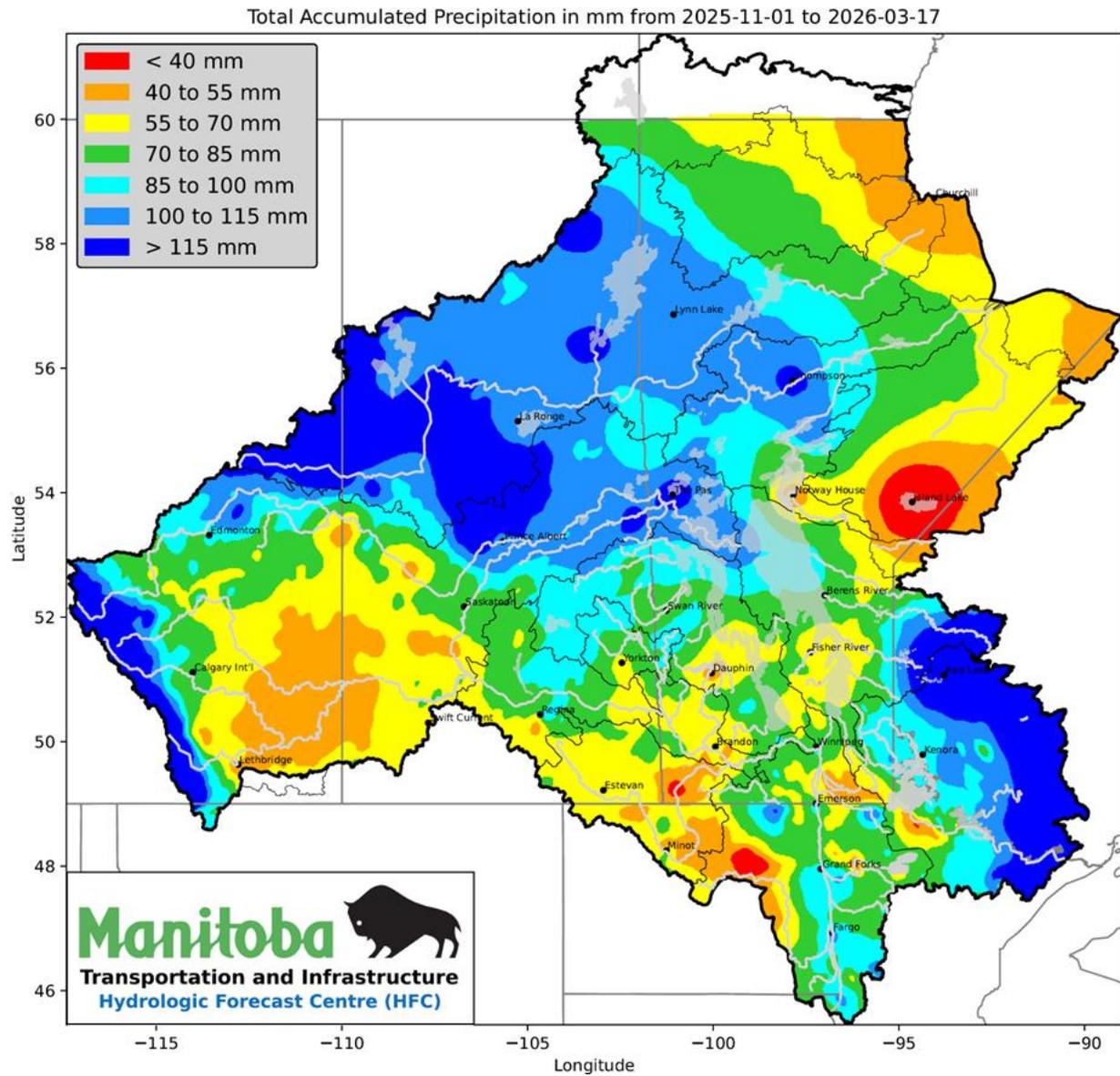


Figure 4 – Cumulative precipitation in mm from November 1, 2025 to March 17, 2026.

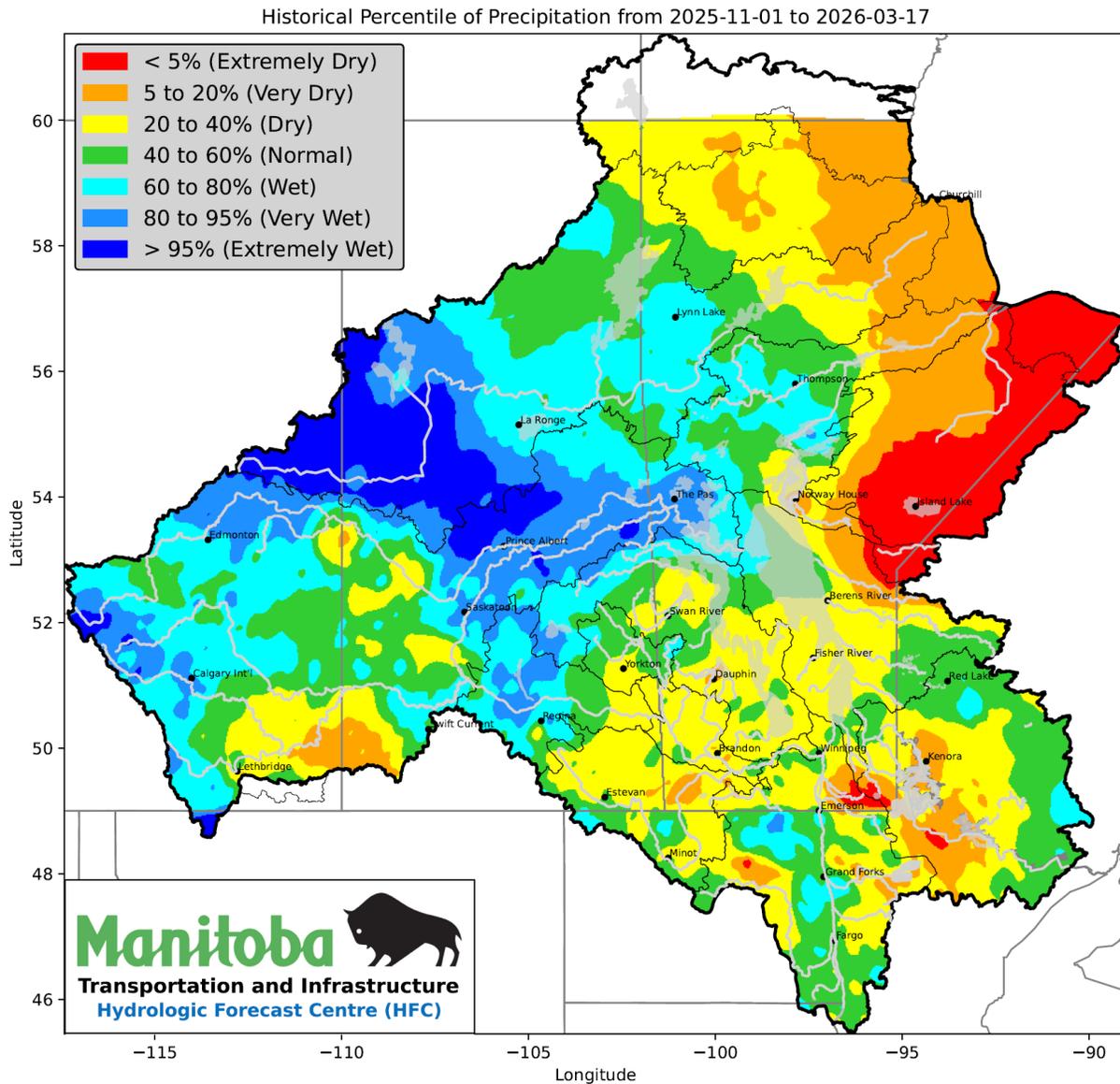


Figure 5 – Percent ranking of precipitation from November 1, 2025 to March 17, 2026, compared to historic record.

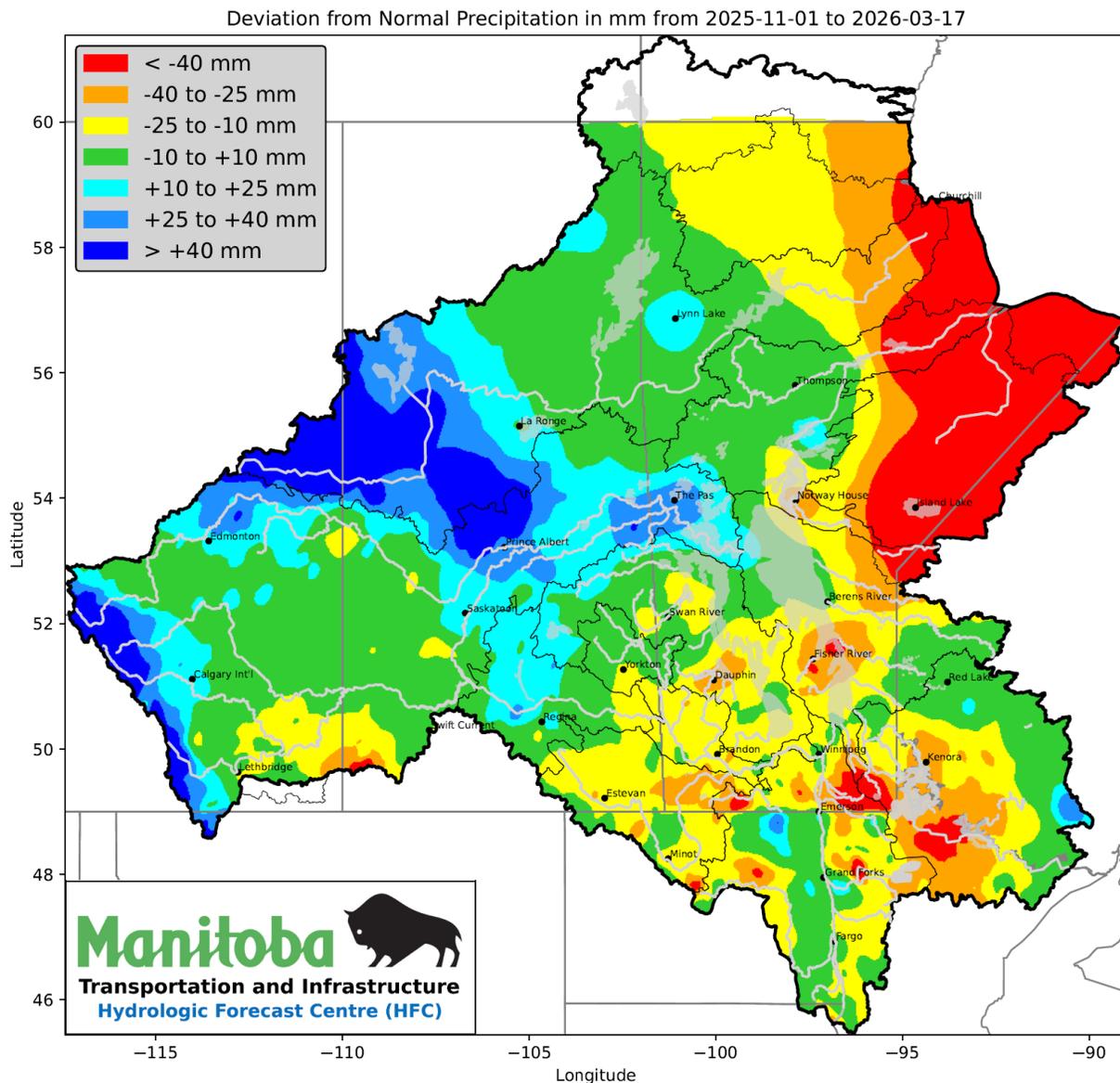


Figure 6 – Precipitation from November 1, 2025 to March 17, 2026, deviation from normal (mm).

Snow Water Content

Snow Water Equivalent (SWE) is the measure of the amount of water content in the snow. Snow water equivalent estimates obtained from March 9 to 12, 2026 field measurements indicate SWE measurements range from 0 mm to 157 mm (0.0 to 6.2 inches) across Manitoba watersheds. The highest snow water content of 157 mm (6.2 inches) is measured in western Manitoba near the Riding Mountain National Park. The Shellmouth Reservoir basin has SWE values in the range of

61 to 113 mm (2.4 to 4.4 inches), with an average value of approximately 80 mm (3.1 inches). The Interlake region, including the Fisher River basin, has SWE values in the order of 48 to 100 mm (1.9 to 3.9 inches), which is normal to above normal for this time of the year (Figure 7). Otherwise, snow accumulations are generally within the normal range, except for parts of southern Manitoba where snow accumulation remains below typical values for this time of the year.

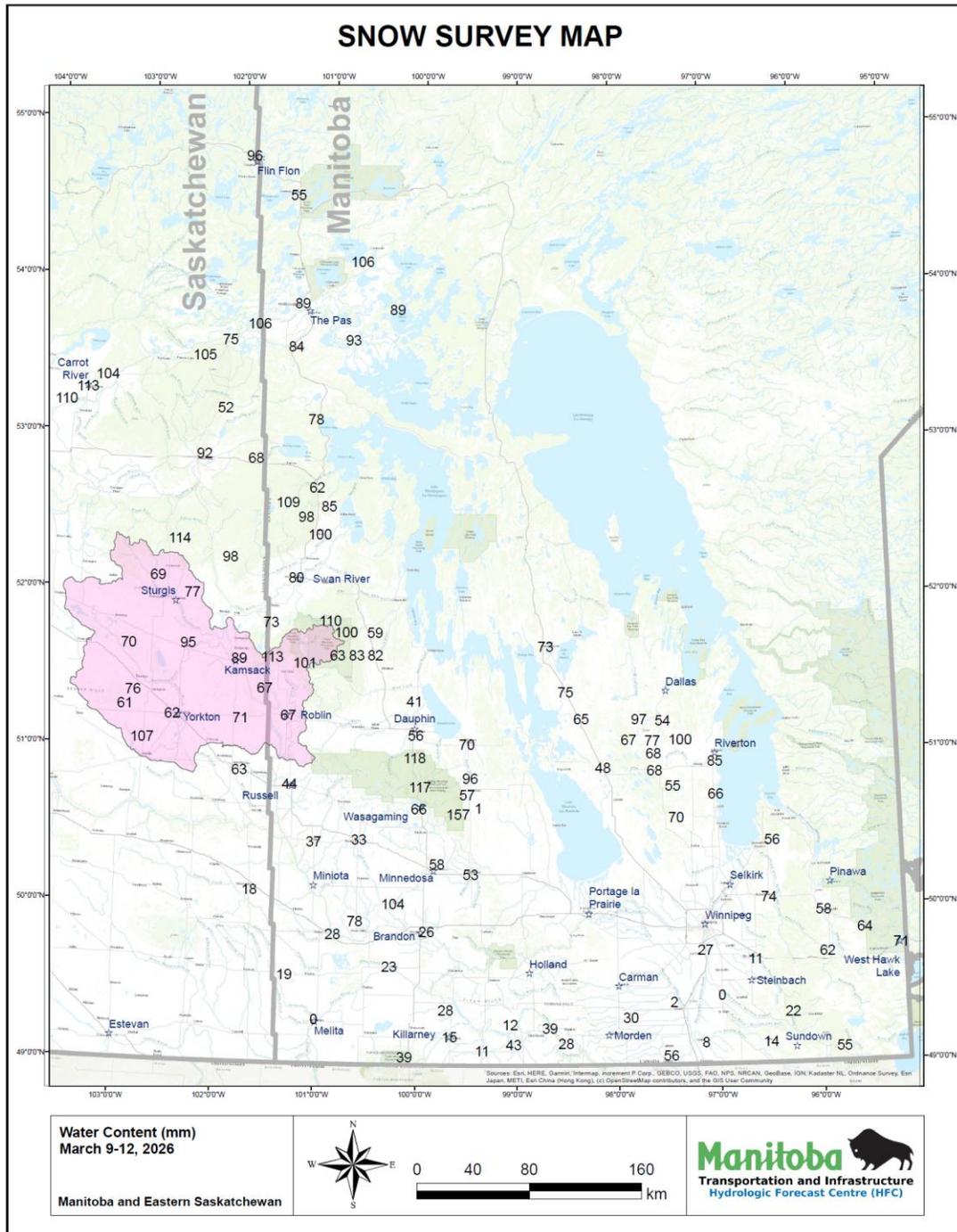


Figure 7 – Snow Water Equivalent (SWE) in mm from field measurements conducted in March 2026.

Soil Frost Depth

Soil frost depth is dependent on winter temperatures and the insulating effect of snow cover. While frost depth varies across watersheds, it is generally normal to shallower than normal

throughout most of Manitoba. Generally, deeper than normal frost depth takes longer to thaw which means the soil absorbs less water and contributes to increased surface runoff; whereas shallower than normal frost depth means the soil can absorb more melting surface water and can potentially decrease the amount of overland flooding. Figure 8 shows comparative frost-depth measurements from various locations across the province, with the black line representing 2026 conditions.

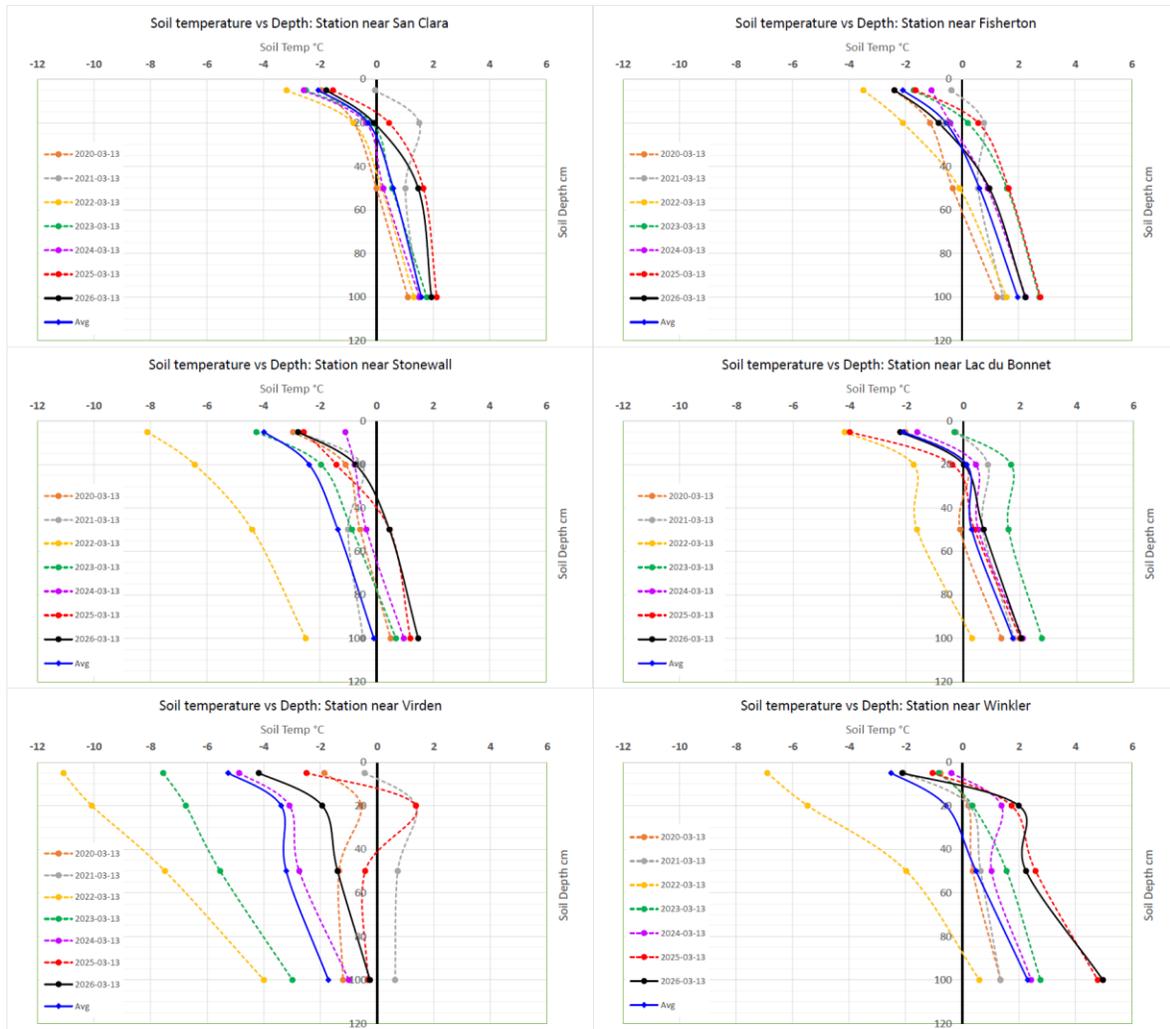


Figure 8 – Frost depth in centimeters at various locations across the province.

Future Weather Outlook

The short-term weather forecast by Environment and Climate Change Canada (ECCC) shows a greater than 50% chance of receiving more than 25 mm of precipitation by March 31, 2026 for much of central and northern Manitoba basins (Figure 9). Most parts of the province could receive 15 to 30 mm of precipitation between March 17 and March 31 (Figure 10). Generally, the normal precipitation for March in Manitoba basins ranges from 20 to 25 mm. The long-term precipitation outlook for April, May and June, issued in March by the International Research Institute (IRI) at the Columbia Climate School, indicates equal chances of above normal, below normal or near normal precipitation for most of Manitoba basins (Figure 11). The IRI outlook also indicates a higher chance of above-normal temperatures for most of Manitoba during April, May and June (Figure 12).

The United States National Weather Service Climate Prediction Center's outlook, issued on February 19, 2026, forecasts equal chances of above normal, below normal or near normal precipitation for the U.S. portions of the Red River and Souris River basins from March through May (Figure 13).

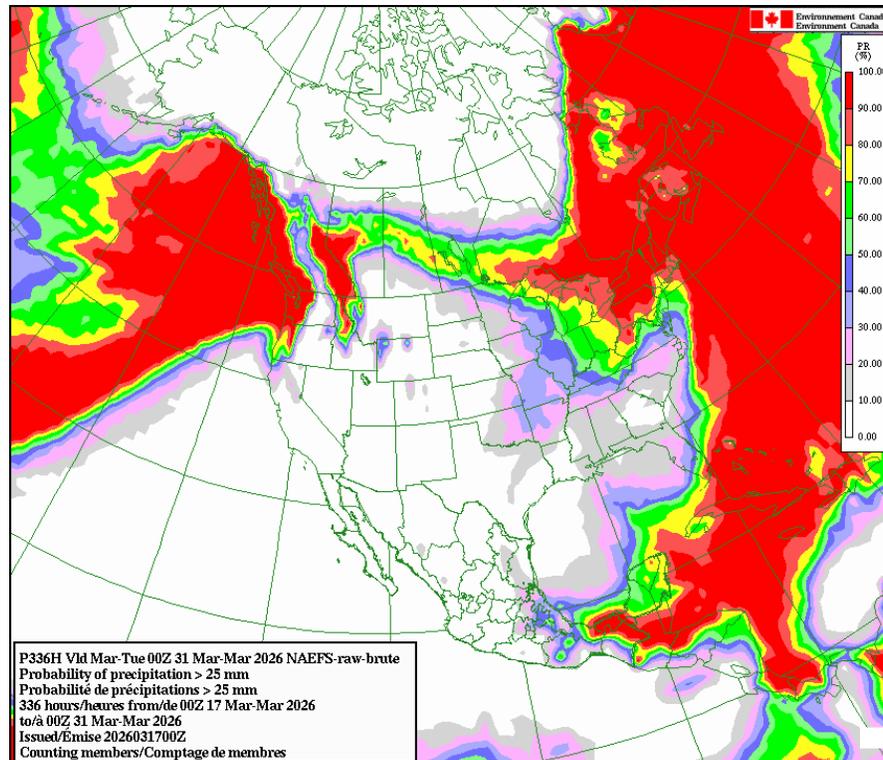


Figure 9 – Short-term precipitation forecast between March 17th and March 31st.

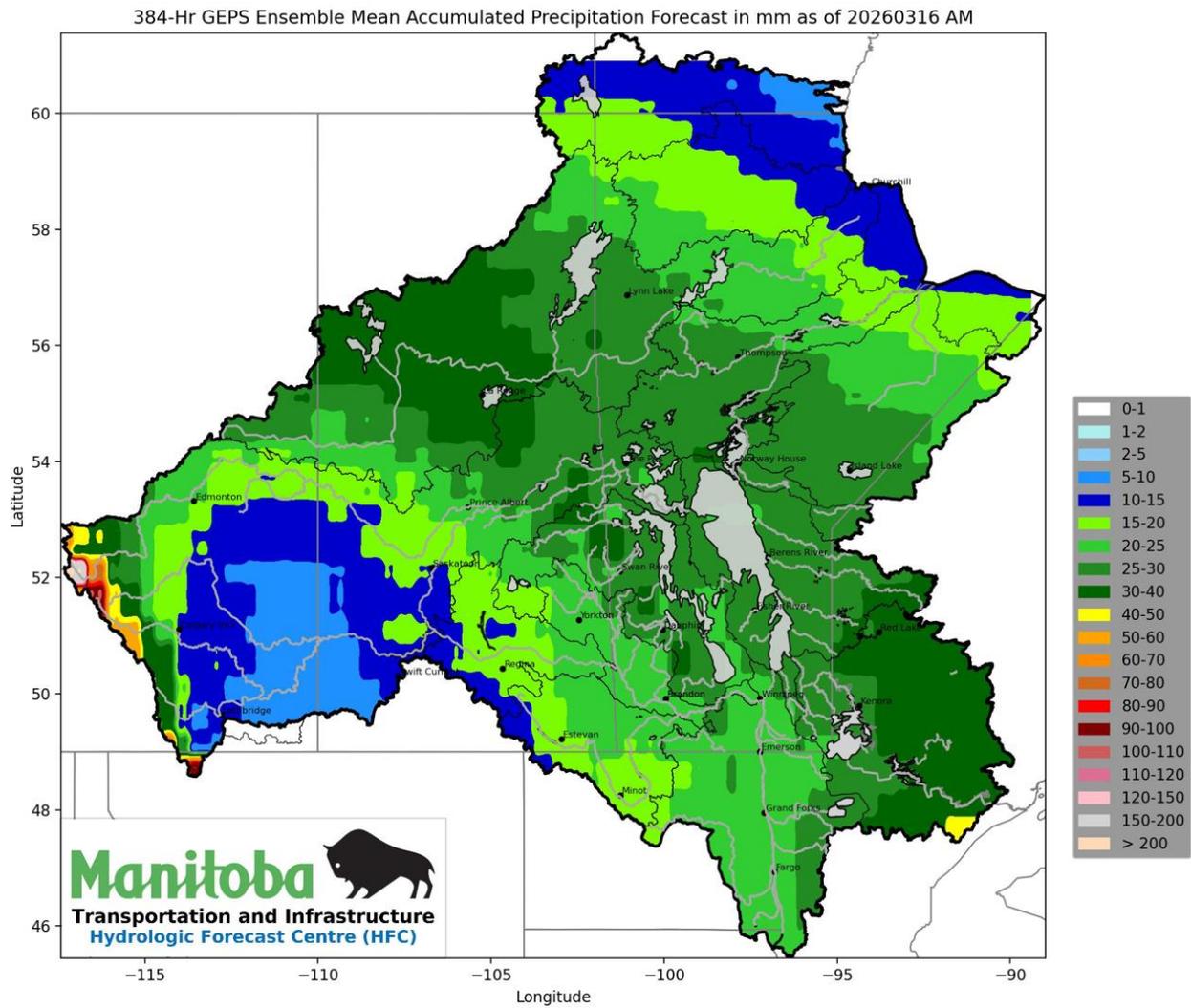


Figure 10 – Ensemble Mean Accumulated Precipitation from Environment and Climate Change Canada for the time period between March 17 and March 31, 2026.

IRI Multi-Model Probability Forecast for Precipitation for April-May-June 2026, Issued March 2026

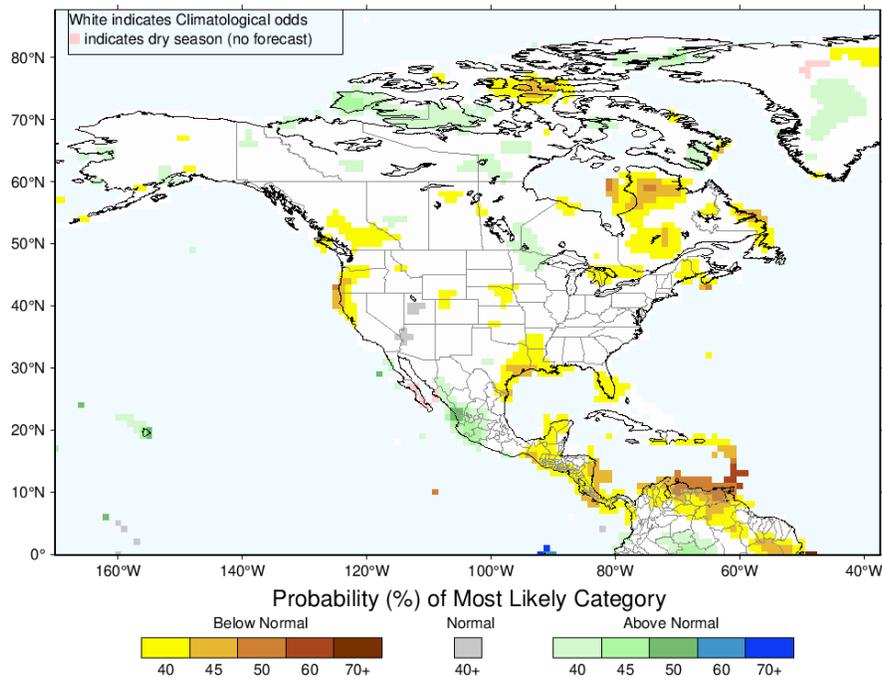


Figure 11 – IRI Multi-Model Probability Forecast for Precipitation for April-May-June 2026, issued March 15th, 2026.

IRI Multi-Model Probability Forecast for Temperature for April-May-June 2026, Issued March 2026

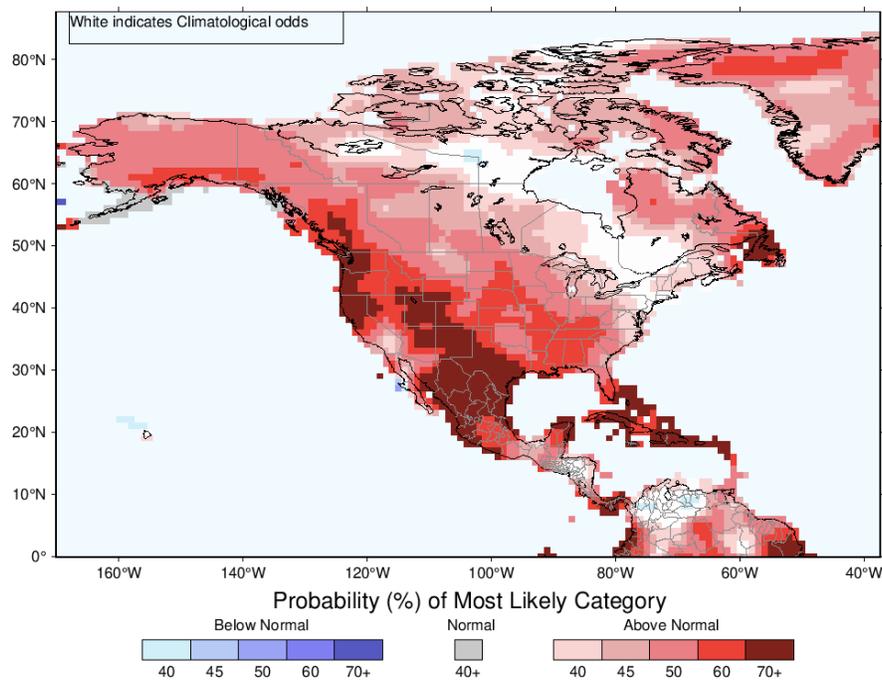


Figure 12 – IRI Multi-Model Probability Forecast for Temperature for April-May-June 2026, issued March 15th, 2026.

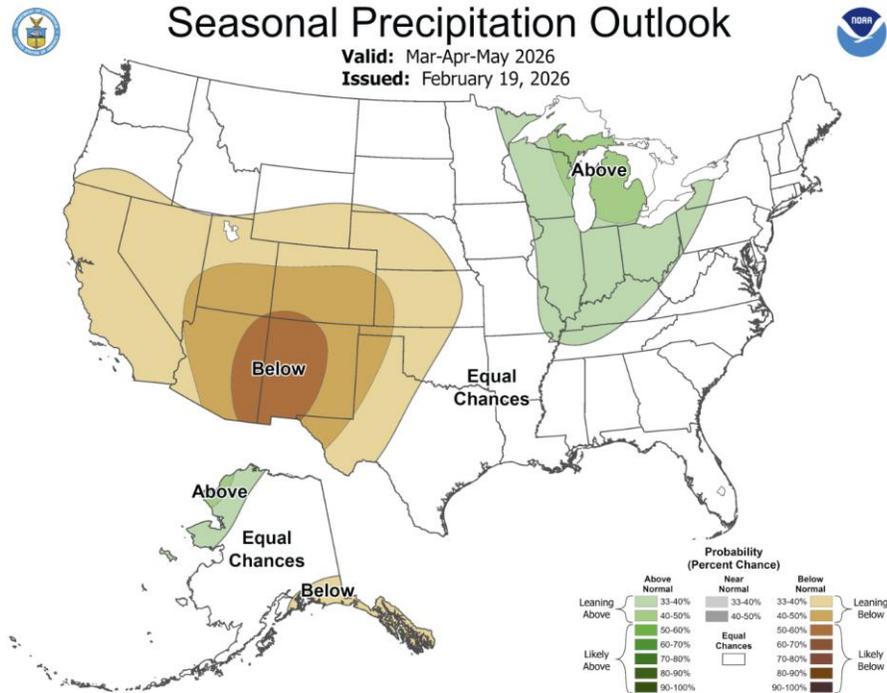


Figure 13 – National Weather Service Climate Prediction Center’s Precipitation Outlook for Mar-Apr-May 2026.

Base Flows and Level Conditions

Base flows and levels indicate the amount of water available in the system prior to the spring runoff. Higher base flows may indicate higher soil saturation levels and increased potential for spring runoff. As of March 14, 2026, base flows and levels vary from normal to above normal in southern Manitoba basins, near normal to below normal in central Manitoba basins, and below normal to well below normal in northern Manitoba basins.

Current river flow conditions:

- Red River: flows are above normal for this time of year at all locations upstream of the Floodway due to some early snowmelt in the southern part of the basin.
- Assiniboine River: flows are above normal for this time of year at all locations. This is partly due to the current release of approximately 1,230 cubic feet per second from the Shellmouth Dam as part of normal winter drawdown in the reservoir.
- Souris River is slightly above normal for this time of year, while Dauphin River and Fairford River are near normal.

- The following rivers are experiencing below normal flows for this time of year: Qu'Appelle River, Waterhen River, Saskatchewan River, Fisher River.
- The Churchill River and Winnipeg River are tracking well below normal for this time of the year.

Table 1 summarizes flows at main rivers at selected locations as of March 14, 2026.

Current lake water levels:

- Water levels for Lake Winnipeg (15th percentile) and Lake Manitoba (10th percentile) are well below normal for this time of year. Both lakes are within their respective operating ranges heading into spring runoff.
- Lake St. Martin, Lake Winnipegosis and Lake Wahtopanah are also below normal for this time of year.
- The Shellmouth Reservoir is below its historical normal water level for this time of year. The reservoir is being drawn down as part of regular winter operations.
- Dauphin Lake is tracking near normal water level for this time of year, while Lake Minnewasta is above normal.

Table 2 summarizes water levels at major lakes as of March 14, 2026.

Table 1: Flows for main rivers at selected locations as of March 14, 2026.

*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 relative to the long term mean winter ice level at James Avenue, which is 727.57 feet geodetic or 0 ft James.

River	Location	Flow as of Mar. 14, 2026	Flow Percentile	Minimum Flow/Level	10 th Percentile	50 th Percentile	90 th Percentile	Maximum Flow/Level	Last time flow was lower than today's value
Red River	Emerson	2,600 cfs	65%	1 cfs (1937)	820 cfs	2,250 cfs	8,710 cfs	26,800 cfs (1998)	1,930 cfs (2023)
	Ste. Agathe	2,670 cfs	70%	248 cfs (1977)	850 cfs	1,870 cfs	8,490 cfs	26,400 cfs (1998)	1,900 cfs (2023)
	James Avenue (level)**	2.2 ft	70%	-1.6 ft (1977)	-0.5 ft	1.4 ft	5.5 ft	12.4 ft (1998)	1.4 ft (2025)
	Selkirk	4,950 cfs (estimated)	60%	1,614 cfs (2014)	2,110 cfs	4,480 cfs	7,530 cfs	17,900 cfs (2017)	4,200 cfs (2023)
Assiniboine River	Russell	1,270 cfs (estimated)	90%	10 cfs (1963)	80 cfs	450 cfs	1,260 cfs	1,400 cfs (2007)	390 cfs (2025)
	Brandon	1,360 cfs (estimated)	90%	39 cfs (1940)	280 cfs	690 cfs	1,420 cfs	2,100 cfs (2016)	790 cfs (2025)
	Holland	1,820 cfs	90%	68 cfs (1963)	390 cfs	910 cfs	1,720 cfs	2,900 cfs (2016)	860 cfs (2025)
	Headingley	1,770 cfs (estimated)	90%	65 cfs (1963)	430 cfs	880 cfs	1,490 cfs	2,200 cfs (2016)	1,100 cfs (2025)
Shellmouth Dam	Outflow	1,230 cfs	90%	33 cfs (1969)	90 cfs	470 cfs	1,170 cfs	1,600 cfs (2011)	700 cfs (2025)
Souris River	Wawanesa	65 cfs	65%	0 cfs (1963)	10 cfs	40 cfs	220 cfs	600 cfs (1986)	40 cfs (2025)
Qu'Appelle River	Welby	105 cfs	35%	5 cfs (1946)	40 cfs	130 cfs	240 cfs	900 cfs (2016)	90 cfs (2025)
Fairford River	Fairford	1,290 cfs	40%	48 cfs (1965)	650 cfs	2,520 cfs	6,110 cfs	12,300 cfs (2012)	600 cfs (2022)
Waterhen River	Waterhen	160 cfs	30%	0 cfs (1965)	20 cfs	570 cfs	2,950 cfs	5,300 cfs (2017)	100 cfs (2024)
Dauphin River	Dauphin	1,700 cfs	40%	38 cfs (1977)	340 cfs	2,020 cfs	5,570 cfs	8,200 cfs (2012)	200 cfs (2022)
Fisher River	North of Dallas	5 cfs	15%	0 cfs (1963)	0 cfs	10 cfs	40 cfs	190 cfs (2000)	0 cfs (2003)
Saskatchewan River	The Pas	13,700 cfs	30%	2,260 cfs (1937)	8,880 cfs	16,000 cfs	21,540 cfs	25,600 cfs (1998)	8,600 cfs (2024)
Winnipeg River	Seven Sisters Dam	19,640 cfs	5%	15,998 cfs (1988)	21,500 cfs	32,680 cfs	43,620 cfs	52,600 cfs (1969)	19,500 cfs (2012)
Churchill River	Leaf Rapids	14,690 cfs	2%	13,949 cfs (1994)	20,670 cfs	26,910 cfs	35,670 cfs	46,600 cfs (2021)	13,900 cfs (1994)

Table 2: Lake levels and corresponding operation ranges as of March 14, 2026.

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

Lake	Level as of Mar. 14 (ft)	Change from last week (ft)	Level Percentile	Operating range (ft)	Normal level for Mar. 14 (ft)	Last time level was lower than today's value	Historical comparison
Lake Manitoba*	810.9	0.0	10%	810.5 - 812.5	811.7	810.5 (2022)	<i>Historic water level for this time of year is above the current level 90% of the time</i>
Lake Winnipeg*	712.2	0.0	15%	711 - 715	713.2	712.0 (2024)	<i>Historic water level for this time of year is above the current level 85% of the time</i>
Lake St. Martin*	798.4	0.1	30%	797 - 800	799.2	797.3 (2022)	<i>Historic water level for this time of year is above the current level 70% of the time</i>
Lake Winnipegosis	830.1	-0.4	25%	---	830.7	829.7 (2024)	<i>Historic water level for this time of year is above the current level 75% of the time</i>
Dauphin Lake*	854.2	0.0	65%	853.0 - 854.8	854.1	854.2 (2025)	<i>Historic water level for this time of year is above the current level 35% of the time</i>
Shellmouth Reservoir*	1390.7	-2.1	25%	1386 - 1400	1394.0	1389.5 (2025)	<i>Historic water level for this time of year is above the current level 75% of the time</i>
Lake Wahtopanah near Rivers*	1531.3	-0.3	15%	---	1534.0	1530.4 (1999)	<i>Historic water level for this time of year is above the current level 85% of the time</i>
Lake Minnewasta	1081.7	0.1	80%	---	1078.9	1077.7 (2024)	<i>Historic water level for this time of year is above the current level 20% of the time</i>

River Ice Conditions and Ice Jamming¹

The province has begun collecting ice thickness measurements on the Red River and Icelandic River, with data collection continuing throughout March. Normal ice thickness at this time of the year varies based on factors such as air temperature since freeze-up, the amount of flow in the river, and location along the river. Typically, normal ice thickness for this time of the year ranges from 46 cm (18 inches) to 76 cm (30 inches). Measurements taken on the Red River from Netley Creek to Selkirk Golf Course show an average ice thickness of approximately 58 cm (23 inches). On average, this year's ice is thinner than last year's at this time, when the average ice thickness was 69 cm (27 inches) (Figure 14).

Ice thickness measurements were also taken for the Icelandic River near Riverton where the average ice thickness was approximately 61 cm (24 inches). On average, this year's ice is thinner than last year at this time (Figure 15).

Spring weather influences the timing and rate of river ice deterioration and will play a significant role in determining ice strength at break-up. Ice cutting and breaking activities on the Red River were recently concluded and should help reduce the likelihood of ice jamming and associated flooding along the lower Red River.

Localized flooding can occur when and where ice jams develop, even with below average river flows. The chances of localized flooding due to snow and ice blockages in drains, ditches and small streams during the early part of the runoff period will depend on the nature of the spring breakup and rate of melt.

¹ See Appendix A for 'Ice Jam' definition

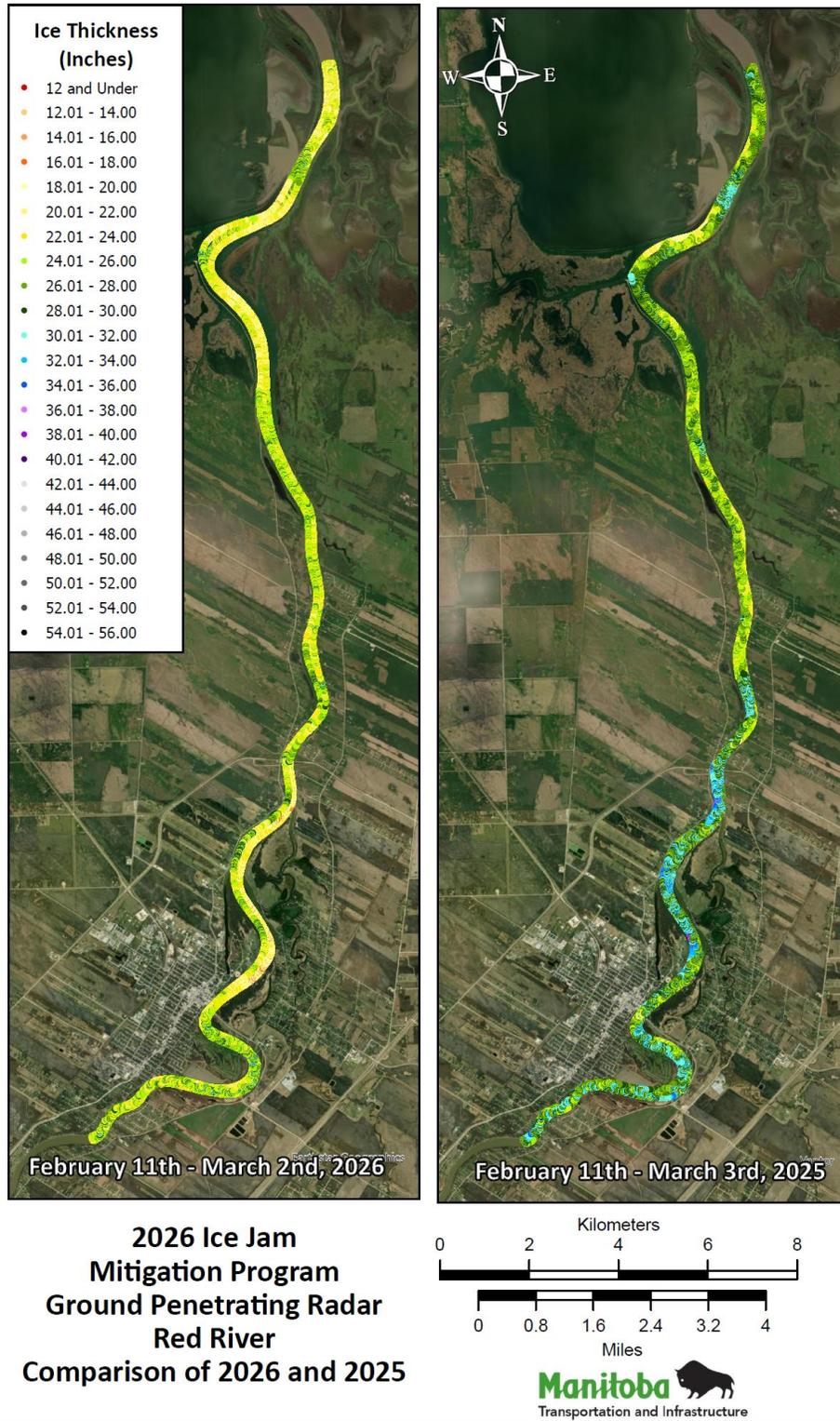


Figure 14 - Ice Thickness Measurements (inches) based on Ground Penetrating Radar: Red River (2026 vs. 2025).

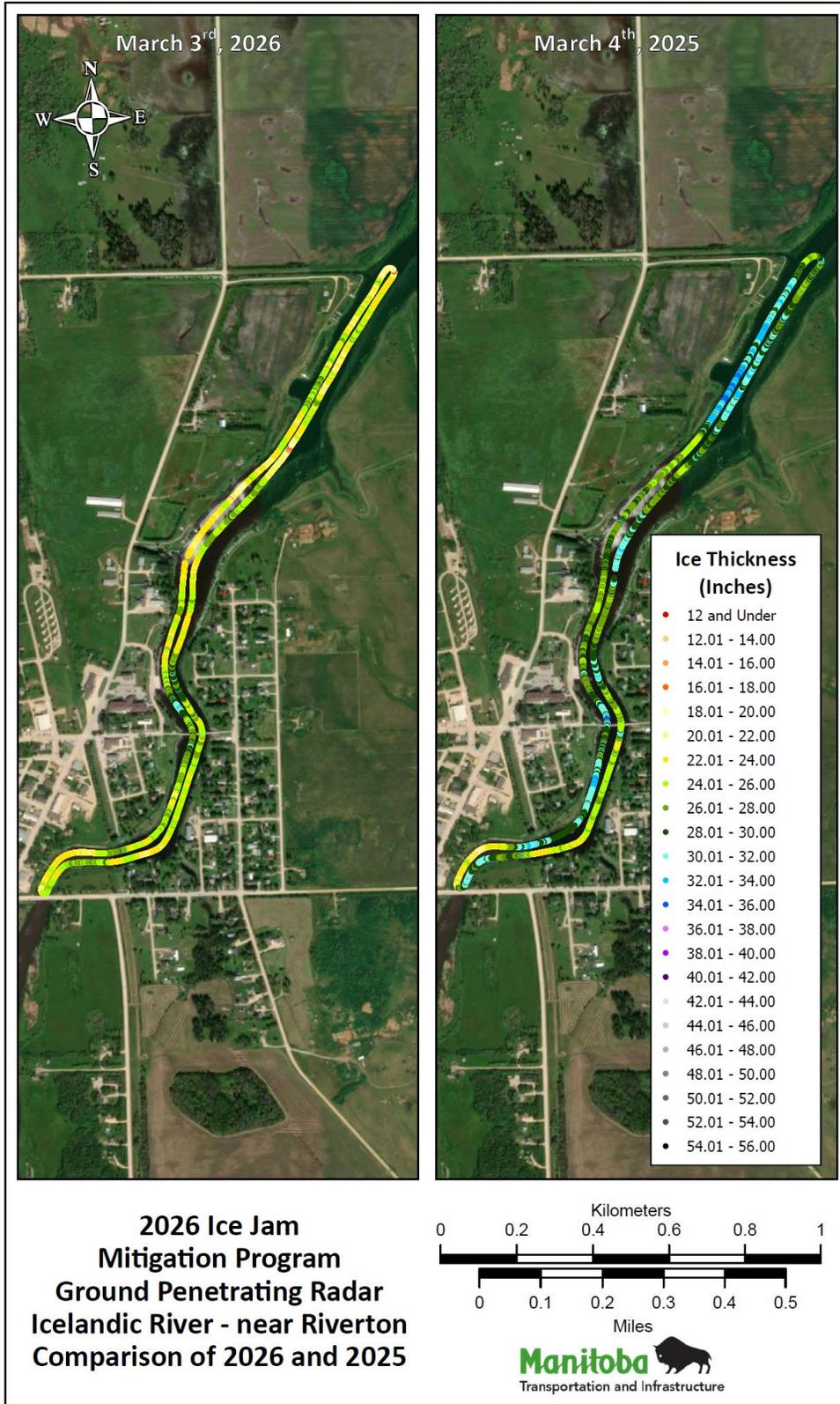


Figure 15 - Ice Thickness Measurements (inches) based on Ground Penetrating Radar: Icelandic River (2026 vs. 2025).

Flood Outlook²

The spring flood outlook provides estimates of peak river flows and levels and lake water levels that are based on current basin conditions and three possible future weather scenarios: favourable, normal, and unfavourable. These scenarios correspond to three probabilities of occurrence: lower decile, median, and upper decile, respectively. Provincial planning and preparedness activities are based on the unfavourable (upper decile) future weather conditions. Additional details are provided in Appendix A: Definitions.

The risk of spring flooding is defined by three categories: major spring flooding risk, moderate spring flooding risk, and low (minor) spring flooding risk. Major spring flooding risk is associated with the probability that forecasted flows and levels exceed the bankfull capacity and cause flooding for near normal future weather conditions. Moderate spring flooding risk is associated with the probability that forecasted flows and levels exceed bankfull capacity for the unfavourable future weather conditions but forecasted flows and levels are below the bankfull capacity for normal future weather conditions. Minor (low) spring flooding risk is associated with the probability that forecasted flows and levels will remain below the bankfull capacity even for the unfavourable future weather conditions.

A number of uncertainties exist with respect to the flood outlook. These include, but are not limited to, the following:

- future weather uncertainties (snowfall and spring rainfall);
- timing and speed of the snow melt;
- uncertainty in meteorological and hydrometric data collected to date;
- timing of the peak flows;
- frost depth at the time of spring melt; and
- hydrologic model prediction uncertainties.

² See Appendix A for 'Flood Outlook', 'Weather Scenarios', 'Favourable Weather', 'Normal Weather', and 'Unfavourable Weather' definitions

⁷ See Appendix A for 'Minor/Moderate/Major' Flood risk definitions

Red River and Its Tributaries

- The risk of significant spring flooding is low to moderate for the main stem of the Red River. Water levels may exceed the bankfull capacity at some locations with unfavourable future weather conditions, but should stay within the banks under normal and favourable weather conditions (Figure 16).
- The risk of significant flooding is low for the Red River tributaries, including Pembina River, Rat River and Roseau River.
- The flood protection level of the community dikes and the individual flood protection works within the Red River basin are higher than the predicted peak levels, even in the unfavourable weather scenario.

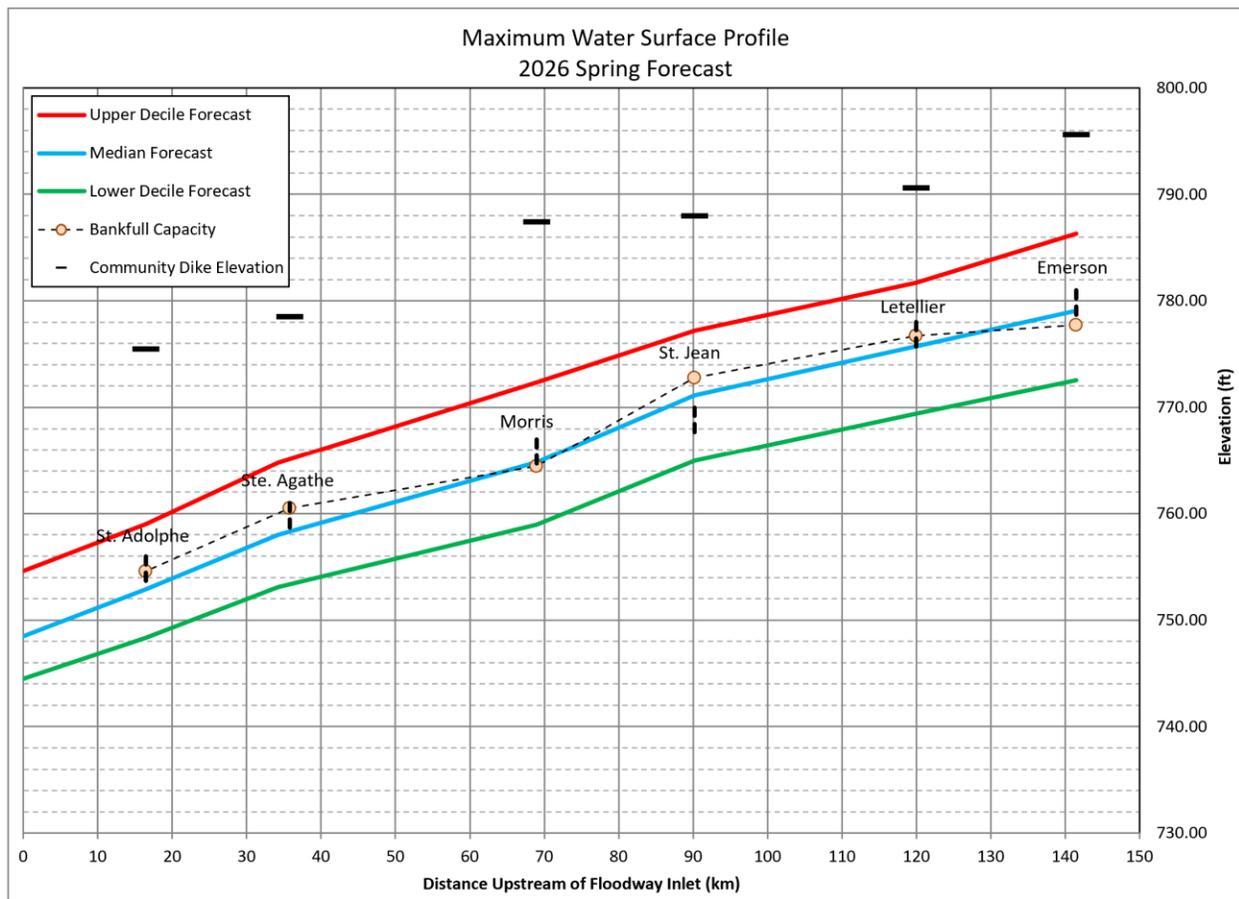


Figure 16 - Forecasted water levels in relation to flood stage and dike elevations in the Red River Valley

Forecasted peak flows in cubic feet per second (cfs) for the Red River at Emerson and Ste. Agathe are shown in Table 3. Forecasted peak flows for the Pembina, Roseau, and Rat Rivers are given in Table 4.

Table 3: Forecasted peak flows for the Red River at Emerson and Ste. Agathe.

Exceedance Probability	Forecasted Peak Flows (cfs)	
	Emerson	Ste. Agathe
Lower Decile	22,000	25,100
Median	34,200	38,000
Upper Decile	52,100	56,800

Table 4: Forecasted peak flows for the Pembina, Roseau, and Rat Rivers.

Exceedance Probability	Forecasted Peak Flows (cfs)		
	Pembina River	Roseau River	Rat River
	Neché	Dominion City	Otterburne
Lower Decile	2,800	1,500	300
Median	4,000	2,400	700
Upper Decile	6,600	3,300	1,200

Red River Floodway

- The Red River Floodway has been operated in 36 out of the 57 years since it was constructed for the purpose of providing flood protection to the City of Winnipeg.
- The Red River Floodway is not expected to be operated under normal or favourable weather conditions during the 2026 spring melt.
- The Red River Floodway is expected to be operated under unfavourable weather conditions to reduce levels within the City of Winnipeg.
- Open water peak estimated levels at James Avenue are:
 - Favourable weather: 4.0 m (13.0 ft)
 - Normal weather: 5.2 m (17.2 ft)
 - Unfavourable weather: 5.8 m (19.0 ft)

Assiniboine River and Its Tributaries

- The risk of significant flooding is low to moderate along the main stem of the Assiniboine, Souris, and Qu'Appelle Rivers.
- The risk of significant flooding is low for other Assiniboine River tributaries.
- The Assiniboine River and its tributaries are expected to remain within their banks for normal to favourable future weather scenarios.
- Some locations along the Assiniboine may exceed the bankfull capacity with unfavourable future weather.
- The flood protection level of the community dikes in the City of Brandon and in towns of Melita, Souris, Wawanesa, and St. Lazare are at elevations which are high enough to protect against expected spring water levels.

Table 5 summarizes forecasted peak flows for the Assiniboine River at selected locations.

Table 5: Forecasted peak flows for the Assiniboine River at Russell, Miniota, Brandon and Holland.

Exceedance Probability	Forecasted Peak Flows (cfs)			
	Russell	Miniota	Brandon	Holland
Lower Decile	500	2,500	4,000	5,800
Median	1,600	4,900	6,800	10,100
Upper Decile	3,800	9,900	12,600	19,000

Forecasted peak flows in cubic feet per second (cfs) for the Souris River at Melita, Souris and Wawanesa are shown in Table 6.

Table 6: Forecasted peak flows for the Souris River at Melita, Souris and Wawanesa.

Exceedance Probability	Forecasted Peak Flows (cfs)		
	Melita	Souris	Wawanesa
Lower Decile	900	1,000	1,100
Median	2,600	2,700	2,900
Upper Decile	4,900	5,500	6,200

Portage Diversion

- The Portage Diversion has been operated 42 out of the 56 years since it was constructed for the purpose of preventing ice jamming on the Assiniboine River east of Portage la Prairie and to provide flood protection for areas along the Assiniboine River downstream of Portage la Prairie, including the City of Winnipeg. Based on the runoff potential in the Assiniboine and Souris basins, the Portage Diversion is expected to be operated under unfavourable weather conditions. Under normal and favourable weather conditions, the Portage Diversion may be operated to reduce ice jam related levels downstream of the diversion.

Shellmouth Dam

- The forecasted inflow volumes into the Shellmouth Reservoir for favourable, normal and unfavourable conditions as of March 14 are 220 million cubic meters (179,000 acre-feet), 381 million cubic meters (310,000 acre-feet) and 701 million cubic meters (570,000 acre-feet), respectively.
- The Shellmouth Dam is being operated to provide storage capacity for reservoir inflows in order to reduce flooding downstream as well as to ensure a sufficient reservoir level for recreation and water supply. The reservoir level as of March 14, 2026 is 423.9 m (1390.7 ft).
- The Shellmouth Liaison Committee provides regular input into the dam operations to meet the target level of 427.33 m to 427.94 m (1402 ft to 1404 ft) after the spring runoff. The outflow from the reservoir as of March 14, 2026 is 34.8 cubic metres per second (1,230 cubic feet per second).

Interlake Region

- The risk of significant flooding for the Fisher River is moderate to major. Levels are projected to exceed bankfull capacities at some locations even under normal future weather conditions. The median peak flow forecast for Fisher River at Dallas is 2,900 cfs, with an estimated 75% chance that flows will exceed bankfull capacity and cause some flooding at this location. The upper-decile (unfavourable weather) forecast indicates peak flows near 4,200 cfs, which is comparable to levels experienced during the spring of 2014.

- The risk of significant flooding is moderate for the Icelandic River. Levels will remain below the bankfull levels for favourable and normal future weather conditions.
- As in most years, there is a risk of ice jam induced flooding for the Icelandic and Fisher Rivers.

Forecasted peak flows in cubic feet per second (cfs) for the Fisher River at Dallas and Icelandic River at Riverton are shown in Table 7.

Table 7: Forecasted peak flows for the Fisher River at Dallas and The Icelandic River at Riverton.

	Forecasted Peak Flows (cfs)	
	Fisher River	Icelandic River
Exceedance Probability	Dallas	Riverton
Lower Decile	1,600	600
Median	2,900	1,400
Upper Decile	4,200	3,400

Fairford River Water Control Structure

- The Fairford River Water Control Structure is set for normal discharge, which is between 50% and 60% of its full capacity. It will remain at this setting until the Lake Manitoba water level goes outside its desired range of 810.5 ft to 812.5 ft. The current discharge at the Fairford River Water Control Structure is 1,290 cfs, which is approximately 56% of full capacity.

Eastern Region

- The risk of significant spring flooding is low in the eastern region, including the Whiteshell Lakes area and the Winnipeg River basin.

Manitoba Lakes

- Inflows into most major lakes are expected to be below seasonal normals, reflecting generally drier than normal conditions across major contributing river basins.
- Currently, all major lakes are within their operating ranges. Most lakes are expected to be within their normal operating range after the spring runoff. The risk of spring flooding in most Manitoba lakes is low.

Lake Manitoba

- Lake Manitoba's current level is 247.15 m (810.9 ft).
- The current level is 0.24 m (0.8 ft) below the normal level for this time of year but within the operating range of 247.04 m to 247.65 m (810.5 ft to 812.5 ft).
- After spring runoff, the lake level is projected to reach 811.5 ft to 812.0 ft.

Lake Winnipeg

- Lake Winnipeg's current level is 217.08 m (712.2 ft).
- The current level is 0.30 m (1.0 ft) below normal for this time of year but within the operating range of 216.71 m to 217.93 m (711 ft to 715 ft).
- After spring runoff, the lake level is projected to reach 713.0 ft to 713.7 ft which is near the middle of the operating range.

Lake St. Martin

- Lake St. Martin is currently at 243.34 m (798.4 ft).
- The current level is 0.24 m (0.8 ft) below normal for this time of year.
- After spring runoff, the lake level is projected to reach 798.2 ft to 800.0 ft which is within the operating range.

Lake Winnipegosis

- Lake Winnipegosis is currently at 253.00 m (830.1 ft).
- The current level is 0.18 m (0.6 ft) below normal for this time of year.
- After spring runoff, the lake level is projected to reach 831.0 ft to 832.0 ft.

Dauphin Lake

- Dauphin Lake's current level is 260.35 m (854.2 ft).
- The current level is 0.03 m (0.1 ft) above normal for this time of year and is within the operating range of 260.00 m to 260.54 m (853.0 ft to 854.8 ft).
- The lake level may rise above the operating range after spring runoff but will remain below the flood protection level.

Northern Manitoba and The Pas Regions

- The risk of significant spring flooding is moderate along the Saskatchewan and Carrot Rivers.
- These levels depend greatly on the outflows and the regulation of Tobin Lake by Saskatchewan. Manitoba continually consults with Saskatchewan regarding operation of the dams located in Saskatchewan including the release of flows into Manitoba rivers.
- The risk of major flooding is low along the Swan River under normal, favourable and unfavourable future weather conditions.
- As in many other years, there is a risk of ice jam induced flooding along the Saskatchewan, Carrot and Swan Rivers.

Emergency Management Flood Preparations

- The Manitoba government, local authorities and emergency management partners are continuing to prepare for spring flooding. Manitoba Emergency Management Organization (EMO) continues to work with all local authorities and emergency management partners to provide guidance and support for preparedness and response activities in the upcoming hazard season. This includes:
 - review of existing emergency plans;
 - provide overall situational awareness by disseminating relevant up-to-date information;
 - provide education and training opportunities;
 - prepare resources for use in flood response;
 - host conference calls with local authorities and emergency management partners;
 - provide continuous coordination and collaboration with emergency management stakeholders;
 - work with Indigenous Services Canada (ISC) and Municipal and Northern Relations (MNR) on ISC and MNR-led preparedness activities for First Nations and Northern Affairs Communities; and
 - issue emergency alerts as required.
- The ice-jam mitigation program for the Red River north of Winnipeg has been successfully completed as of March 11, 2026.

Future Forecast Information

When the spring melt begins, operational forecasts will be issued daily. As in many previous years, the risk of flooding could change in any of the basins depending on weather conditions leading up to and during the spring melt.

Appendix A: Definitions

¹ Ice Jam:

- A blockage of ice on a river/stream which restricts flow, resulting in increased water levels upstream.
- Jams may occur due to changing river channel geometry, bends in the river channel, depth and thickness of ice, rate of water level rise, or a solid section of ice downstream.

² Flood Outlook:

- Estimated spring peak water levels and flows provided before spring water flow begins.
- Estimates are based on diverse information, such as soil moisture, winter precipitation, snowpack, topography, current water level, channel capacity, and future weather scenarios (precipitation, temperatures, etc.).
- Estimates are provided for three weather scenarios (favourable, normal, and unfavourable) which correspond to three different probabilities of occurrence (lower decile, median and upper decile).

³ Weather Scenarios:

- Used to account for future weather such as additional snow, melt rates and spring rainfall. These are determined by statistical analysis of the past 30 to 40 years of climate data.
- Three scenarios used:
 - Lower decile (favourable)
 - There is a 10% chance of the weather being 'favourable' or better. 90% of the time the weather will be worse than this 'favourable' condition.
 - Median (normal)
 - There is a 50% chance of the weather being 'normal' or better.
 - Upper decile (unfavourable)
 - There is a 10% chance of the weather being 'unfavourable' or worse. 90% of the time the weather will be better than this 'unfavourable' condition.
- The Province's practice is to plan/prepare to the upper decile (i.e., unfavourable) condition.

³ Favourable Weather:

- Characterized by little additional precipitation and a gradual snow melt.
- The lower decile weather condition.

³ Normal Weather:

- Characterized by normal rainfall and temperature.
- Typically used to describe historic climate conditions.
- The median weather condition.

³ Unfavourable Weather:

- Significant wide-spread precipitation with a rapid snowmelt.

- The upper decile weather condition.

⁵Flow/Discharge [expressed in cubic feet per second (cfs) or cubic metres per second (cms)]:

- The volume of water that passes a given location within a given period of time.

⁶ FPL – Flood Protection Level:

- Is the water level of the greater of the flood of record or the 1-in-200-yr flood, plus a freeboard allowance for a particular waterway (typically 2 ft) or water body (i.e., the freeboard is site specific).
- It is provided by the Hydrologic Forecasting and Water Management (HFWM) branch of Manitoba Transportation and Infrastructure on a site-specific and structure-specific basis.
- This is formally set by the Water Resources Administration Act for the Red River Designated Flood Areas.
- In non Designated Flood Areas, the province uses the determined FPLs. For other works or developments, the FPL is recommended by the province, but ultimately regulated by the local planning districts and/or municipalities.

⁷Definition for minor/moderate/major risk of flooding:

- Minor Risk of Flooding:
 - Forecasted flows and levels will remain below bankfull capacity even for the unfavourable future weather conditions.
- Moderate Risk of Flooding:
 - Forecasted flows and levels exceed bankfull capacity for the unfavourable future weather conditions but forecasted flows and levels are below bankfull capacity for normal or favourable future weather conditions.
- Major Risk of Flooding:
 - Forecasted flows and levels exceed bankfull capacity and cause flooding for near normal and unfavourable future weather conditions.

Operational Forecasts:

- Estimated future crest water level, flow and date of occurrence provided once active melt and river flow has begun.
- Estimates are modelled based on observed flow, existing conditions (including channel capacity, topography, and remaining snowpack) and normal future weather.
- Observed conditions are monitored throughout the flood and compared against the historic climate data used to generate the forecast.
- Forecasts are updated when weather conditions are outside the range of historical climate data used to generate the forecast.

- A range of forecasted values is provided further in advance of an upcoming forecasted crest because of unknowns in the basin conditions and river flows, and limitations in the modelling procedures.