Water Security Agency

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Water Supply Conditions and Outlook

Oct. 15, 2025

Prepared by: Flow Forecasting & Operations Planning - Water Security Agency

Overview

- Over the past month, most western and central areas of the province experienced dry conditions, while rain events brought near normal to above normal precipitation to east central areas, portions of the north and an area south of Moose Jaw.
- Soil moisture levels are near normal to above normal in southeast, east central and south central areas of the province, while soil moisture in southwest, west central and northern areas is below normal.
- Both the extent and severity of drought conditions worsened across west central and northern Saskatchewan due to warm-dry weather, while parts of eastern Saskatchewan experienced moderate improvements following localized heavy rainfall. Abnormally dry conditions developed in the southwest due to very low precipitation in September.
- Most major water supply reservoirs are at or near the normal levels for this time of year.
- The Lake Diefenbaker elevation is currently between median and lower quartile and has been slowly declining since the beginning of September. Due to a reduction in upstream diversions, inflows to Lake Diefenbaker are expected to increase slightly in the near term. Outflows have been 90 m^3/s since August and an increase in the Lake Diefenbaker outflow is expected later in the fall to support winter operations.
- Flows on the North Saskatchewan and Saskatchewan rivers were below normal through September and early October and are expected to remain below normal in the fall.
- In the Souris River Basin, the reservoirs are within their normal operating ranges. Rafferty Reservoir was drawn down to its February 1 target elevation at the end of July to accommodate scheduled construction work. A release from Grant Devine Dam has been ongoing since August 28 to meet apportionment obligations and ensure that the February 1 drawdown level is achieved. Currently, Grant Devine Lake is 0.31 m above the February 1 target drawdown elevation.
- Most lakes within the Qu'Appelle River Basin are within their normal fall operating ranges and are expected to remain so, while Buffalo Pound and Katepwa lakes remain slightly above their normal fall operating ranges.
- Significant rainfall on October 12 and 13 was concentrated in the upper and central portions of the Qu'Appelle River Watershed. As a result of this precipitation, Last Mountain, Buffalo Pound and Wascana lakes' levels rose by about ten centimetres.
- Flows in the Churchill Basin remain well below normal. The water levels in Reindeer Lake and Lac La Ronge remain below the middle of their operating ranges.
- Quill lakes elevations have been steady, and current levels are similar to last year at this time.
- Long-range forecasts predict near normal precipitation across most areas of Saskatchewan over the next three months. Temperatures are expected to be approximately normal across the province during this same time period.
- The Water Security Agency will continue to monitor and report on landscape conditions and water supply reservoirs to allow for a timely response to changing conditions. The agency continues to work internally and across government to support residents in times of drought or flooding.

Cover photo credit:
Fife Lake near Lisieux, Oct. 9, 2025
(Jenna Coates, Water Security Agency)

2025 Precipitation

Summary:

- Over the past month, most western and central areas of the province have continued to experience dry conditions, while rain events brought near normal to above normal precipitation to east central areas, areas south of Moose Jaw and portions of the north.
- Over the course of the growing season, southern portions of the grain belt have received near normal precipitation, while the north, northern areas of the grain belt and areas northeast of Regina have received less precipitation than normal.

Figure 1 displays the per cent of average precipitation received over the past month. Minimal precipitation was received throughout most areas of the province during the second half of September, except for an event on September 26, which brought up to 25 mm to an area reaching from Meadow Lake to east of Cree Lake. In October, an event on October 1 brought up to 25 mm to an area northeast of Stony Rapids. The most significant precipitation event thus far in October came on October 12 and 13, when a mix of snow and rain fell throughout most of the province. The highest accumulations of up to 55 mm were received in an area including Coronach, Regina, Wynyard and Hudson Bay.

Figure 2 shows the per cent of average precipitation received across the province during the 2025 growing season (April 1 to October 14). Most areas in the southern portion of the grain belt have received near normal precipitation, except for an area northwest of Maple Creek, which received below normal precipitation. Northern portions of the grain belt and areas north and east of Regina have received below normal precipitation overall. Most of the north has received below normal precipitation this growing season.

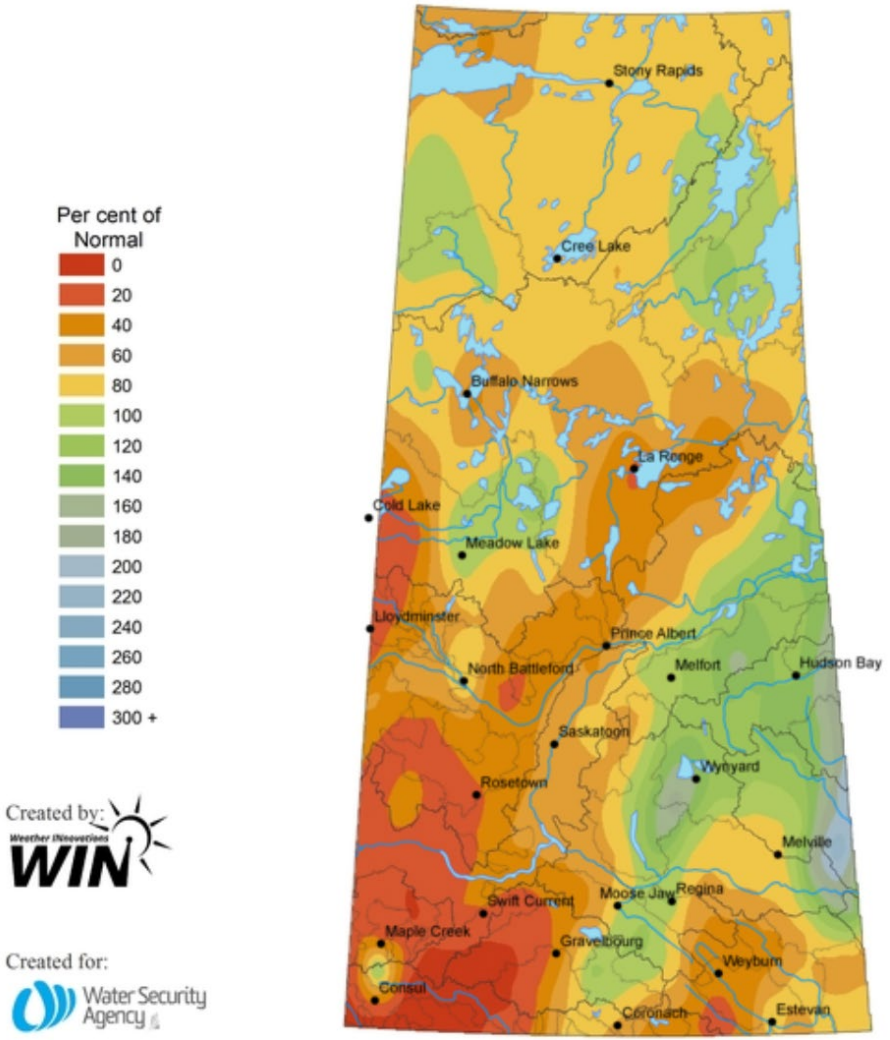


Figure 1: Per Cent of Normal Precipitation – Sept. 15 to Oct. 14, 2025

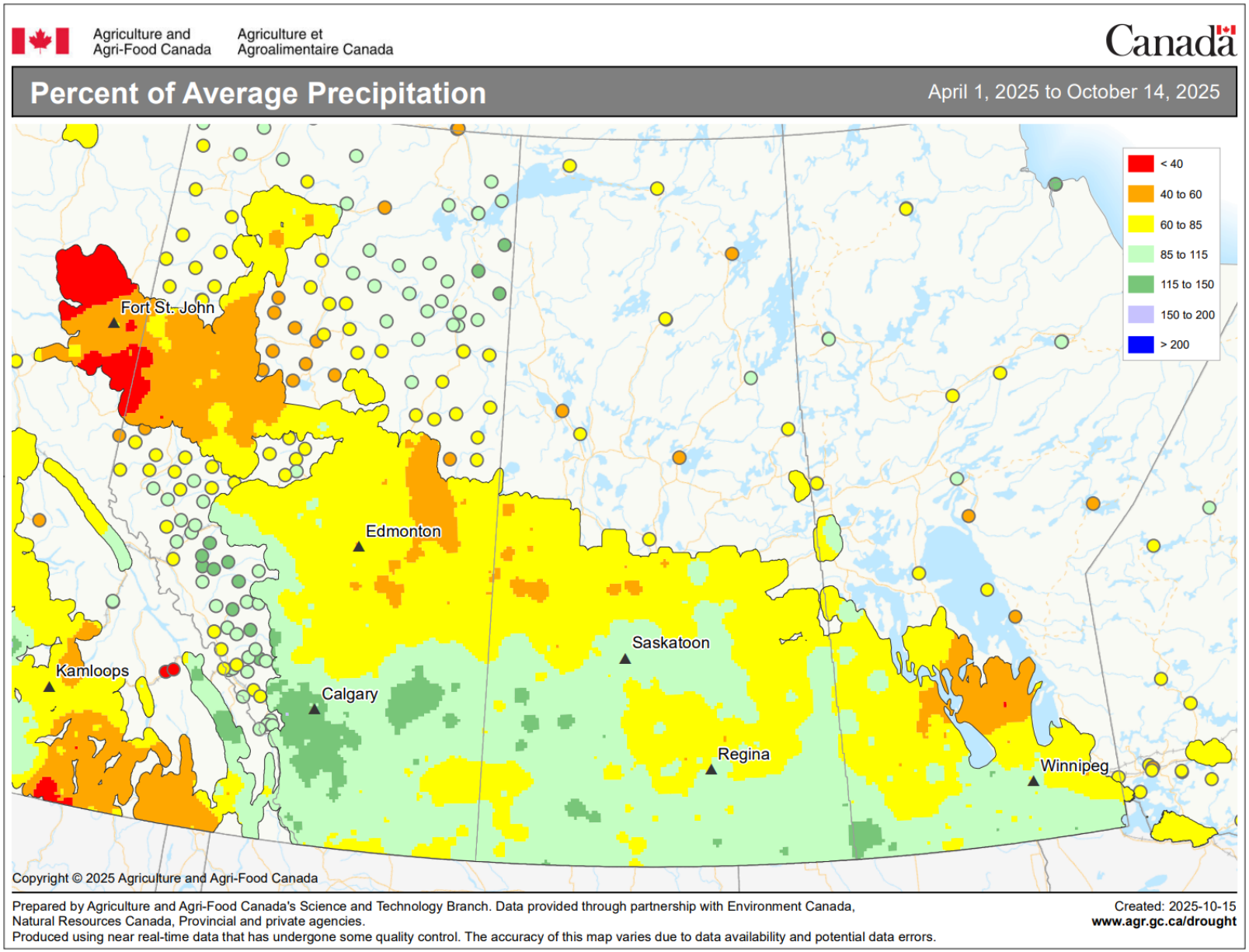


Figure 2: Per Cent of Average Precipitation – April 1 to Oct. 14, 2025
Map courtesy of Agriculture and Agri-Food Canada

Soil Moisture Conditions

Summary:

- Rain and snow received October 12 and 13 increased soil moisture to above-normal levels in east central areas.
- Continued warm and dry conditions over the past month have reduced soil moisture levels in the Southwest.
- Most of West Central and Northern Saskatchewan continues to be drier than normal.

Figure 3 shows a map of the per cent of normal soil moisture throughout Saskatchewan as of Oct. 13, 2025. This product produced by Agriculture and Agri-Food Canada computes the per cent of normal soil moisture as the modelled amount of plant available water (mm) in the root zone of the soil, divided by the average amount that has historically been available on that day. This value is intended to provide users with a representation of soil moisture conditions above or below normal as a percentage.

The map indicates that soil moisture has increased in east central Saskatchewan as a result of the October 12 and 13 precipitation event, changing east central soil moisture conditions from Normal to Above Normal classification. Warm and dry conditions in the southwest have led to a loss of the surplus soil moisture that existed there earlier, such that soil moisture is now generally below normal in the southwest. Soil moisture conditions continue to be above normal in the Souris River Basin and normal in south central areas. Below to well below normal soil moisture conditions persist in west central Saskatchewan and most areas of the north.

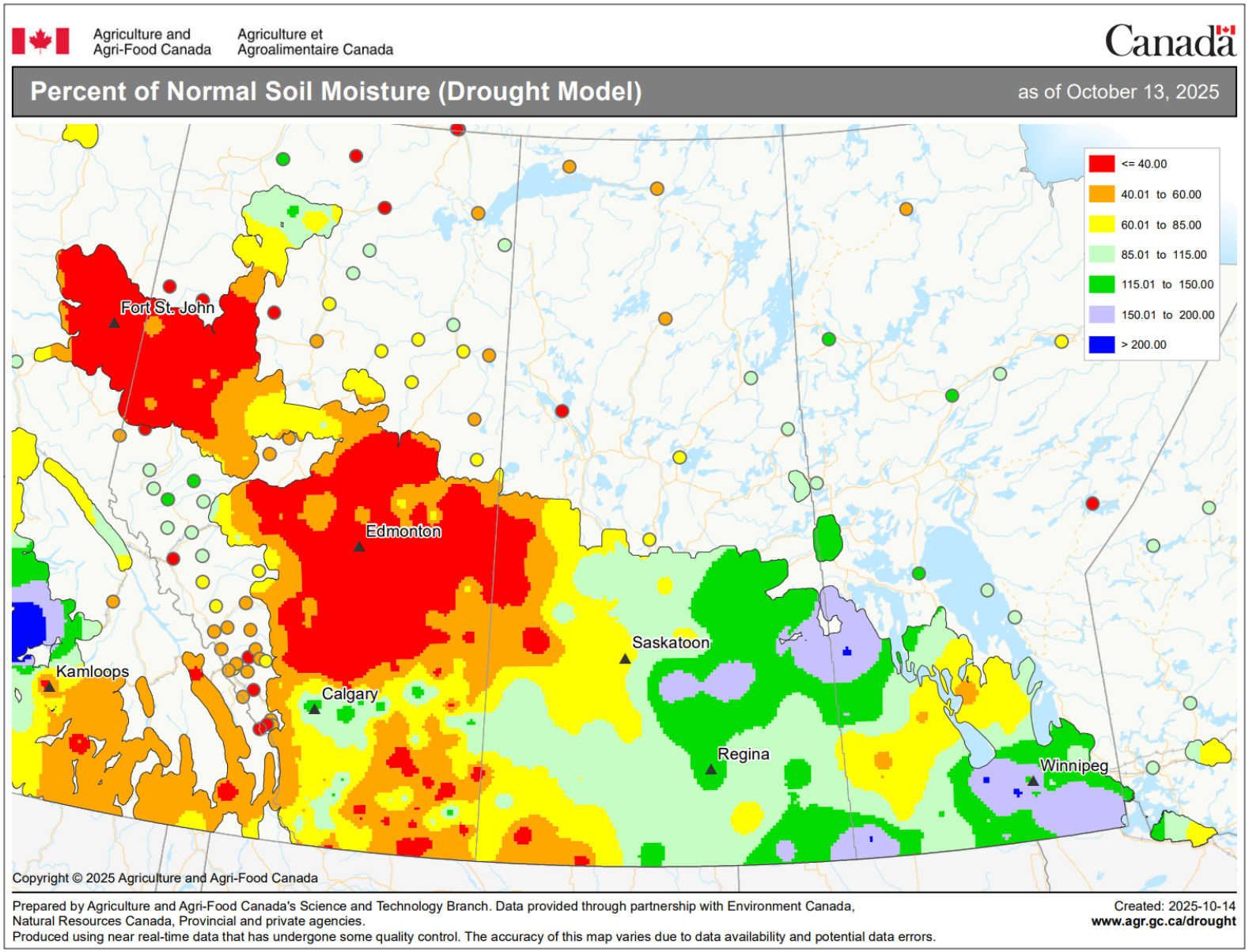


Figure 3: Per cent of Normal Soil Moisture (Drought Model)
Oct. 13, 2025
(Map courtesy of Agriculture and Agri-Food Canada)

Drought Risk

Summary:

- Drought conditions worsened across west central and northern Saskatchewan due to warm-dry weather conditions, while moderate improvements have occurred in the east following localized heavy rainfall in September.
- Moderate to extreme drought conditions continue in the north.

WSA uses two products to help identify areas at risk of drought. The first is the Canadian Drought Monitor map from Agriculture and Agri-Food Canada (Figure 4). This product defines drought conditions based on several data sources, including temperature and precipitation indicators. The categories in this product range from abnormally dry, which signifies conditions that historically occur about once every three years, to exceptional drought conditions, which historically only occur about once every 50 years. This product is not focused on hydrological drought (i.e., the stream flows and water supply); therefore, WSA developed the Hydrological Drought Map.

The Hydrological Drought Map is the second product used to help identify risk of drought in the province (Figure 5). This product is an indicator of the water supply conditions across the province. It uses monthly stream flow averages, monthly reservoir elevation averages and the six-month Standardized Precipitation-Evapotranspiration Index (SPEI) to define hydrological drought in the province. The categories of this product range from near normal and above to extreme and exceptional drought.

The latest Canadian Drought Monitor map, published on September 30 (Figure 4), shows a mixed pattern of drought changes across Saskatchewan. Most areas of the province, except for southeast Saskatchewan and an area around Meadow Lake, received less than 60 per cent of normal rainfall in September. This, combined with warmer than normal temperatures, led to a continuation of previous drought conditions and an increase in the severity of drought. In central Saskatchewan, there was a slight expansion of Severe Drought and the emergence of three pockets of Extreme Drought west of North Battleford, around Buffalo Narrows and near La Ronge. In contrast, areas east of Regina toward the Manitoba border saw moderate improvement, where localized storms delivered up to 200 per cent of normal precipitation and helped ease short-term dryness.

The Hydrological Drought Map for September 2025 is shown in Figure 5. Conditions remain driest across the Churchill River, Beaver River and Black Lake basins, where drought conditions are in the Extreme to Exceptional range. Moderate to Severe hydrological drought continues to affect the remaining areas of the north and much of central Saskatchewan, with the Carrot River watershed moving from mild to moderate hydrological drought. Mild hydrological drought developed in the Missouri River, Big Muddy and Old Wives Lake watersheds due to low precipitation accumulations in September, while conditions in the Souris River Basin returned to near normal.

The six-month SPEI map is shown in Figure 6. SPEI is a normalized drought index that uses climate data to identify areas where drought conditions exist. The SPEI values are a relative measure of surface water surplus (positive values) or deficit (negative values) in an area. The values take the current precipitation minus the potential evapotranspiration and compare it to the average value at a location. The result is normalized, so the higher the negative number, the drier the conditions are. This map shows that over the past six months, conditions have been drier than normal across northern portions of the grain belt, northern Saskatchewan and around Regina. The remaining southern regions of the province have experienced near normal conditions over the past six months.

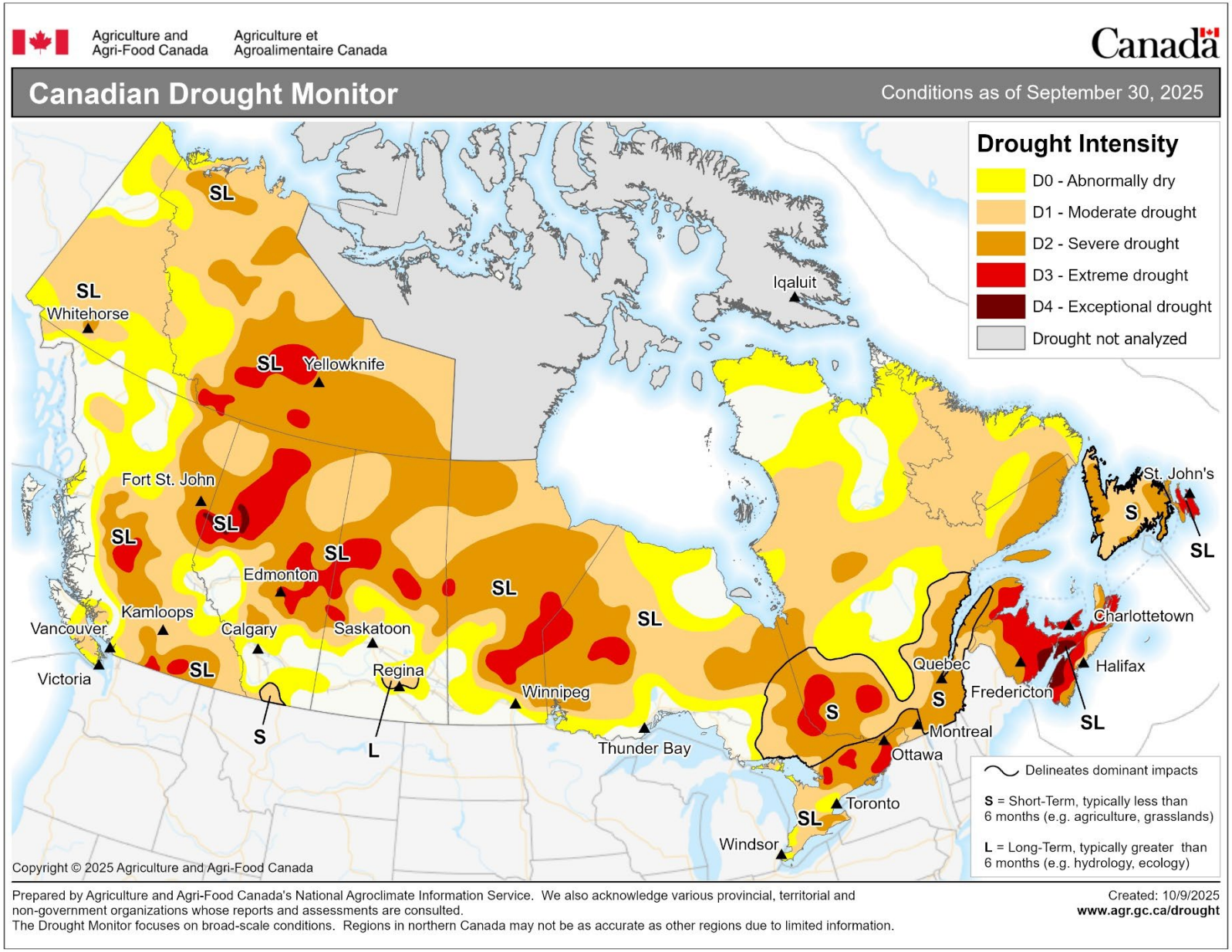


Figure 4: Canadian Drought Monitor – Sept. 30, 2025
(Map courtesy of Agriculture and Agri-Food Canada)

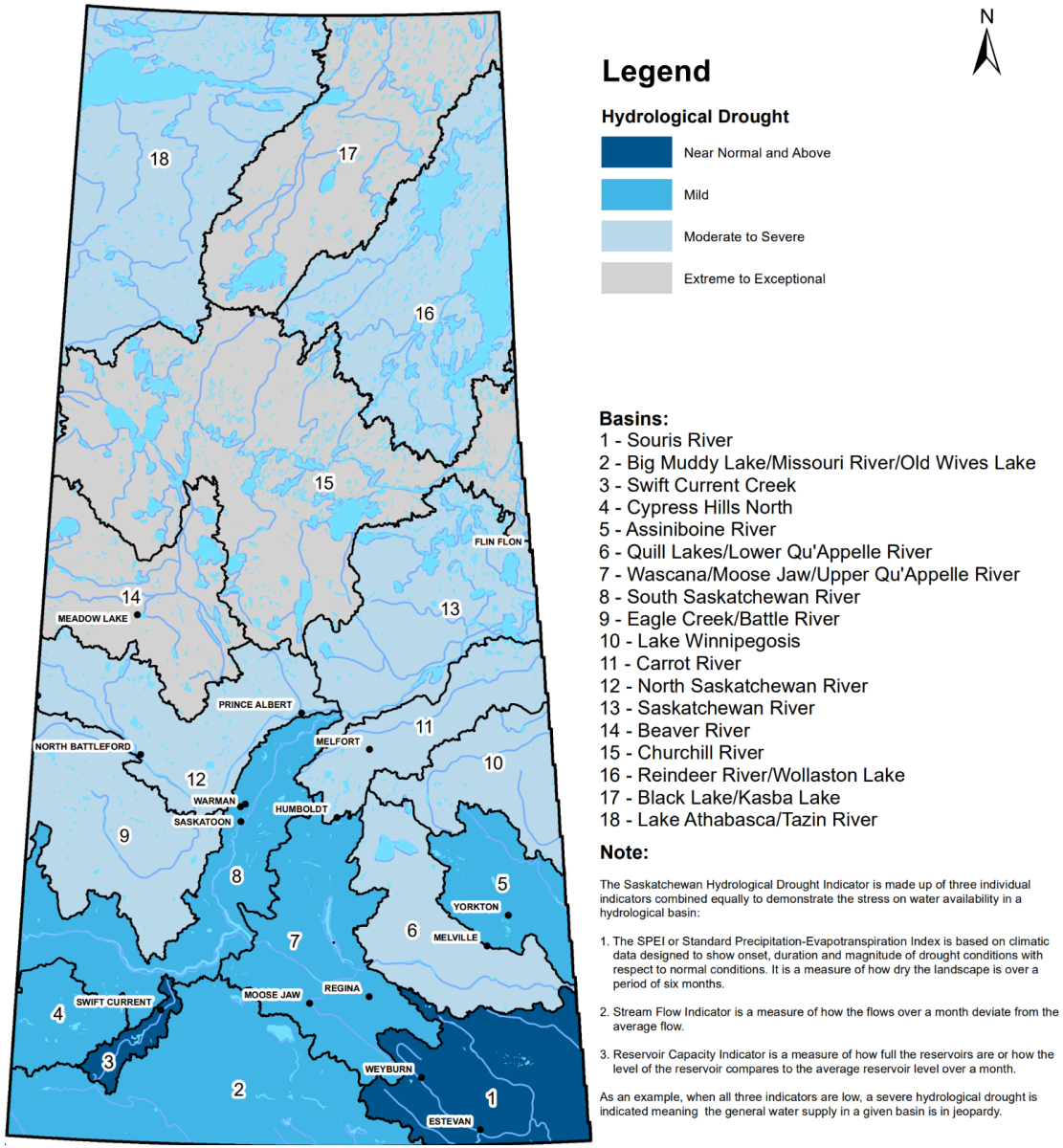


Figure 5: Hydrological Drought Map for September 2025

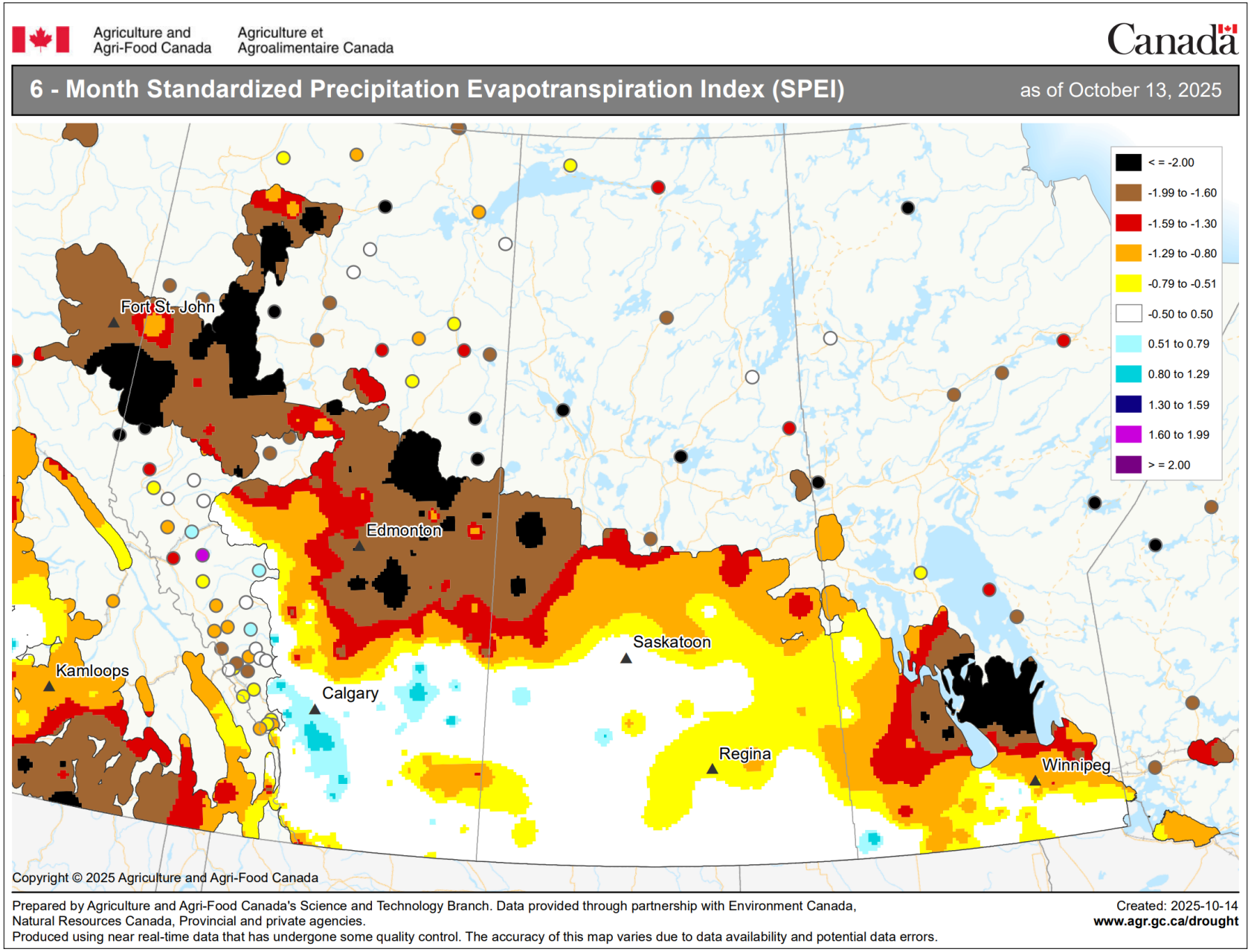


Figure 6: Six-Month Standardized Precipitation-Evapotranspiration Index (SPEI) for Oct. 13, 2025
(Map courtesy of Agriculture and Agri-Food Canada)

Water Supply Conditions

Summary:

- Most major reservoirs are at or above their normal operating ranges for this time of year.
- Inflow to Lake Diefenbaker was near lower quartile in mid-September and has been gradually declining throughout the past month. The inflow is currently well below normal. The elevation of Lake Diefenbaker was slightly below normal (median) in mid-September and, though it has been decreasing, it remains within the normal operating range.

Table 1 shows the conditions at the major water supply reservoirs across southern Saskatchewan. Figures 7 to 10 show the status of the various reservoirs compared to their historical averages as of October 15. Almost all reservoirs in the south are near or above their historical average levels for this time of year. The exception is McDougald Reservoir in the Southwest, which remains low due to high irrigation demands earlier in the season.

WSA is continuing to prioritize water retention efforts at Lake Diefenbaker. Due to the well below normal runoff from the mountains and significant diversions in southern Alberta in spring and early summer, Lake Diefenbaker's elevation was well below normal at the end of June. This trend shifted in mid-July when the Alberta portion of the basin received significant rainfall. The late July rainfall and early August rainfall resulted in a double peak inflow hydrograph that was well above normal for that time of year. Inflows receded quickly later in August and throughout September and early October and are now below the lower quartile. Despite the improvement earlier in the season, the lake remains below the median elevation for this time of year but within the normal operating range. No water supply issues are anticipated at Lake Diefenbaker.

Table 1: Conditions at Major Water Supply Reservoirs as of Oct. 15, 2025

Reservoir	Date of Observation	Elevation (m)	Full Supply Level (m)	Departure from Full Supply (m)	Current Storage (dam^3)	Current Per cent Full	Lower Quartile Elevation (m)	Median Elevation (m)	Upper Quartile Elevation (m)
Altawan	Oct. 8, 2025*	898.33	899.71	-1.44	4,780	69 %	896.02	897.43	898.19
Avonlea	Oct. 15, 2025	597.18	597.90	-0.72	7,380	83 %	596.80	597.19	597.66
Boundary	Oct. 15, 2025	560.29	560.83	-0.54	55,020	95 %	559.43	559.83	560.05
Buffalo Pound	Oct. 15, 2025	509.50	509.47	0.032	94,940	101 %	509.35	509.41	509.48
Cookson	Oct. 15, 2025	751.34	753.00	-1.66	29,630	72 %	751.10	751.55	752.06
Cypress	Oct. 15, 2025	974.61	975.97	-1.36	97,700	76 %	970.95	973.48	974.95
Diefenbaker	Oct. 15, 2025	555.13	556.87	-1.74	8,749,190	92 %	555.32	555.81	556.10
Downie	Oct. 8, 2025*	876.74	878.89	-2.15	7,230	59 %	N/A**	N/A**	N/A**
Eastend	Oct. 15, 2025	917.14	918.06	-0.92	960	46 %	916.74	916.97	917.52
Grant Devine	Oct. 15, 2025	561.32	562.00	-0.68	97,810	93 %	560.92	561.07	561.45
Highfield	Oct. 15, 2025	721.89	722.99	-1.10	9,650	64 %	721.20	721.36	721.59
Huff	Oct. 15, 2025	815.23	815.72	-0.49	2,440	71 %	814.12	814.84	815.25
Junction	Oct. 15, 2025	755.60	757.28	-1.68	6,620	51 %	753.95	754.76	755.55
Newton	Oct. 15, 2025	802.60	803.28	-0.68	7,970	70 %	801.56	802.04	802.96
Nickle	Oct. 15, 2025	562.60	563.00	-0.40	11,570	87 %	562.22	562.56	562.81
Rafferty	Oct. 15, 2025	549.27	550.50	-1.23	382,110	87 %	548.90	549.12	549.52
Reid/Duncairn	Oct. 15, 2025	806.50	807.72	-1.22	86,560	82 %	804.31	805.56	806.08
Thompson/Lafleche	Oct. 15, 2025	714.42	714.76	-0.34	34,230	92 %	713.94	714.19	714.21

*Latest available reading

**Insufficient historical data available to compute statistics

Central Saskatchewan Reservoir Levels

October 15, 2025

Water Security Agency

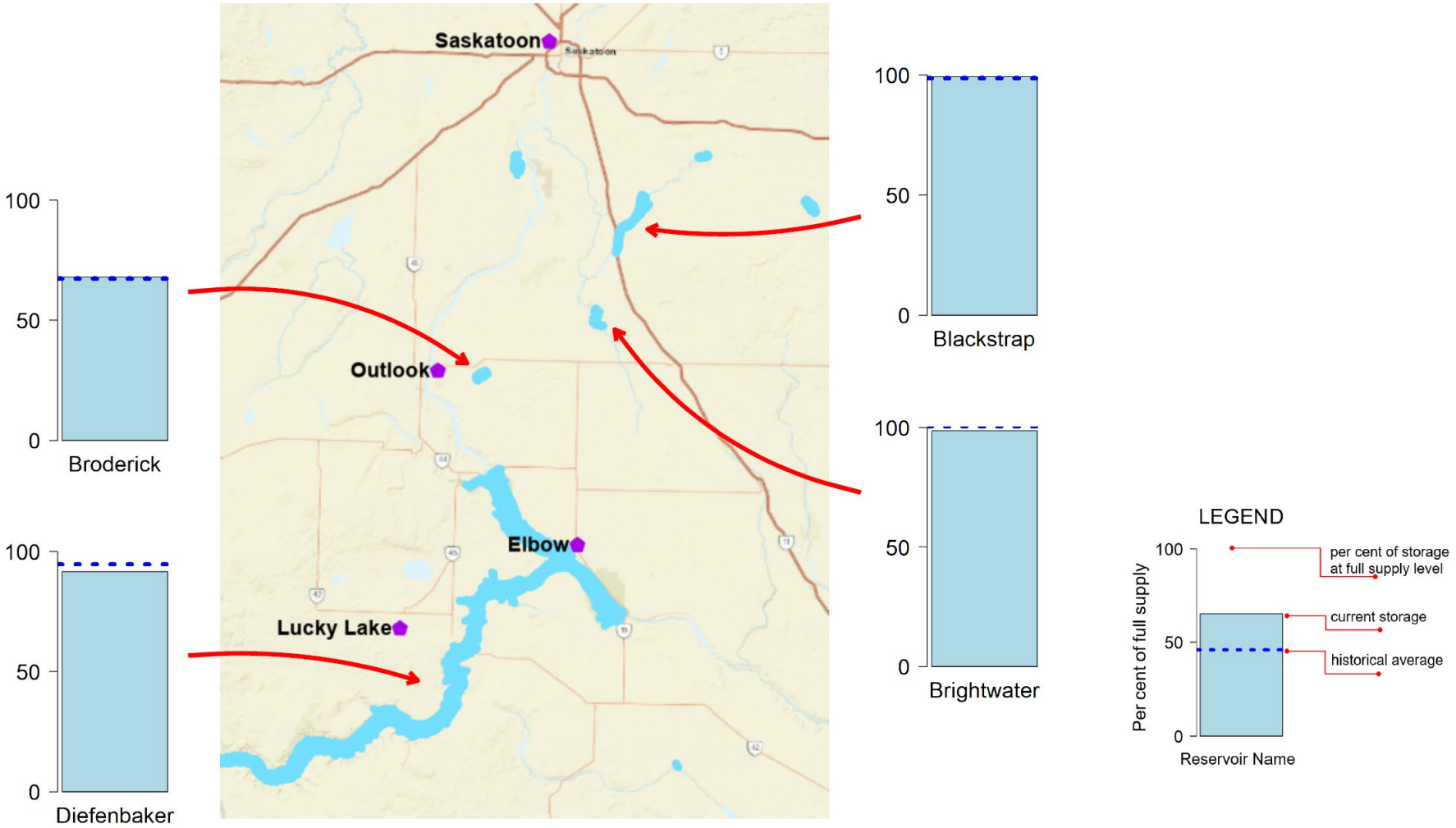
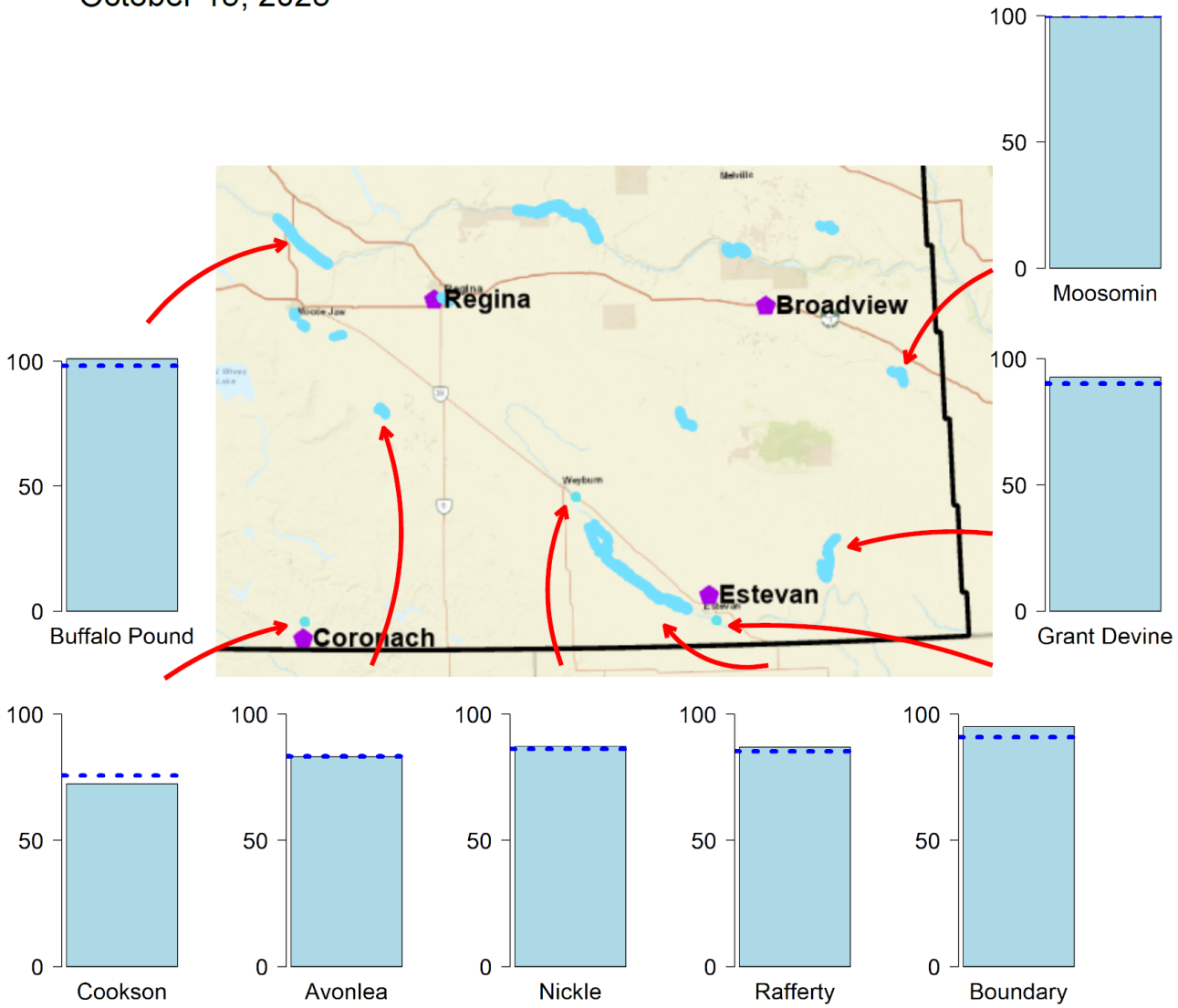


Figure 7: Reservoir Conditions in Central Saskatchewan as of Oct. 15, 2025

Southeastern Saskatchewan Reservoir Levels

October 15, 2025

Water Security Agency



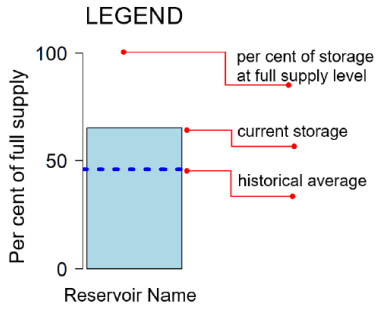


Figure 8: Reservoir Conditions in Southeastern Saskatchewan as of Oct. 15, 2025

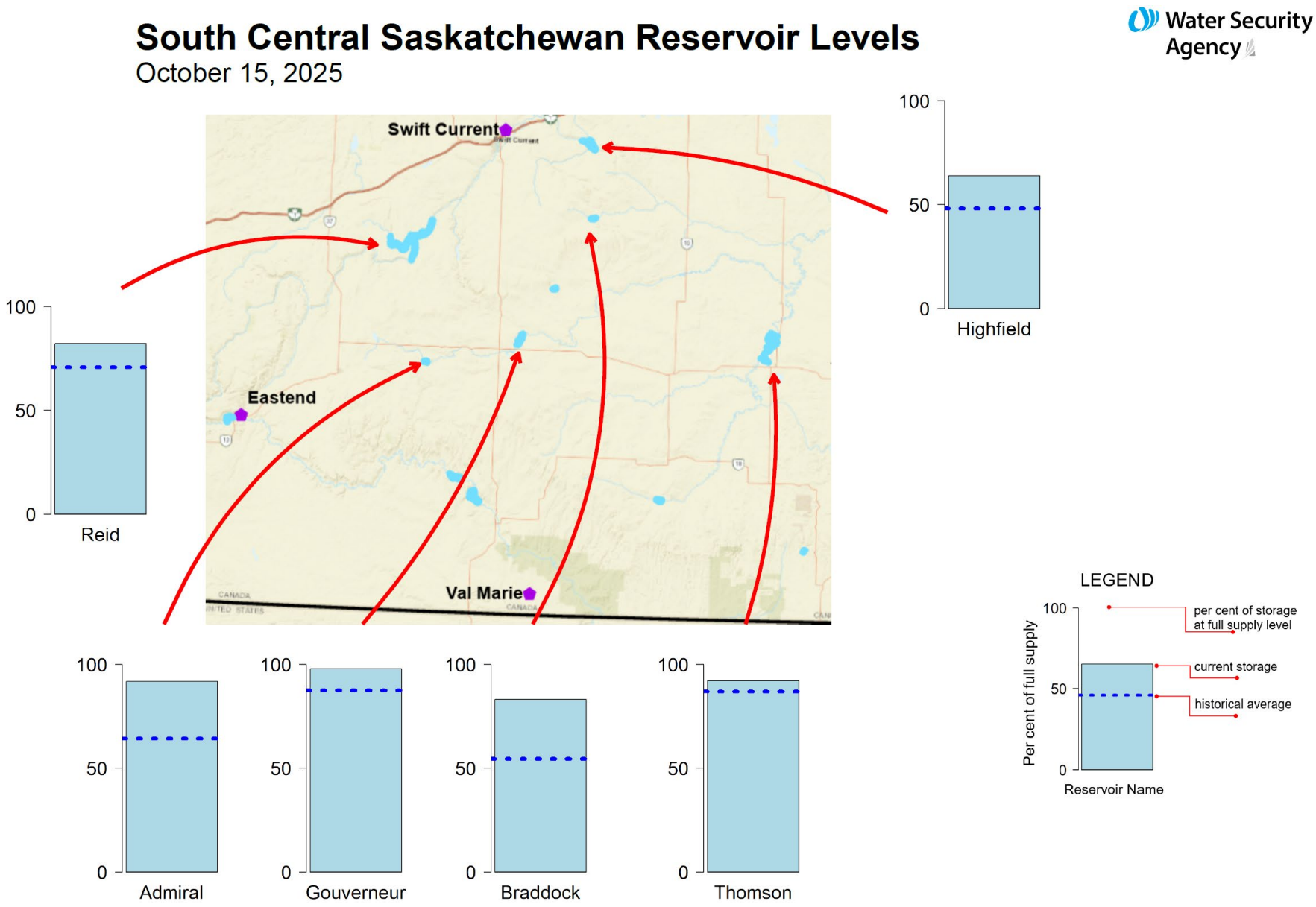


Figure 9: Reservoir Conditions in South Central Saskatchewan as of Oct. 15, 2025

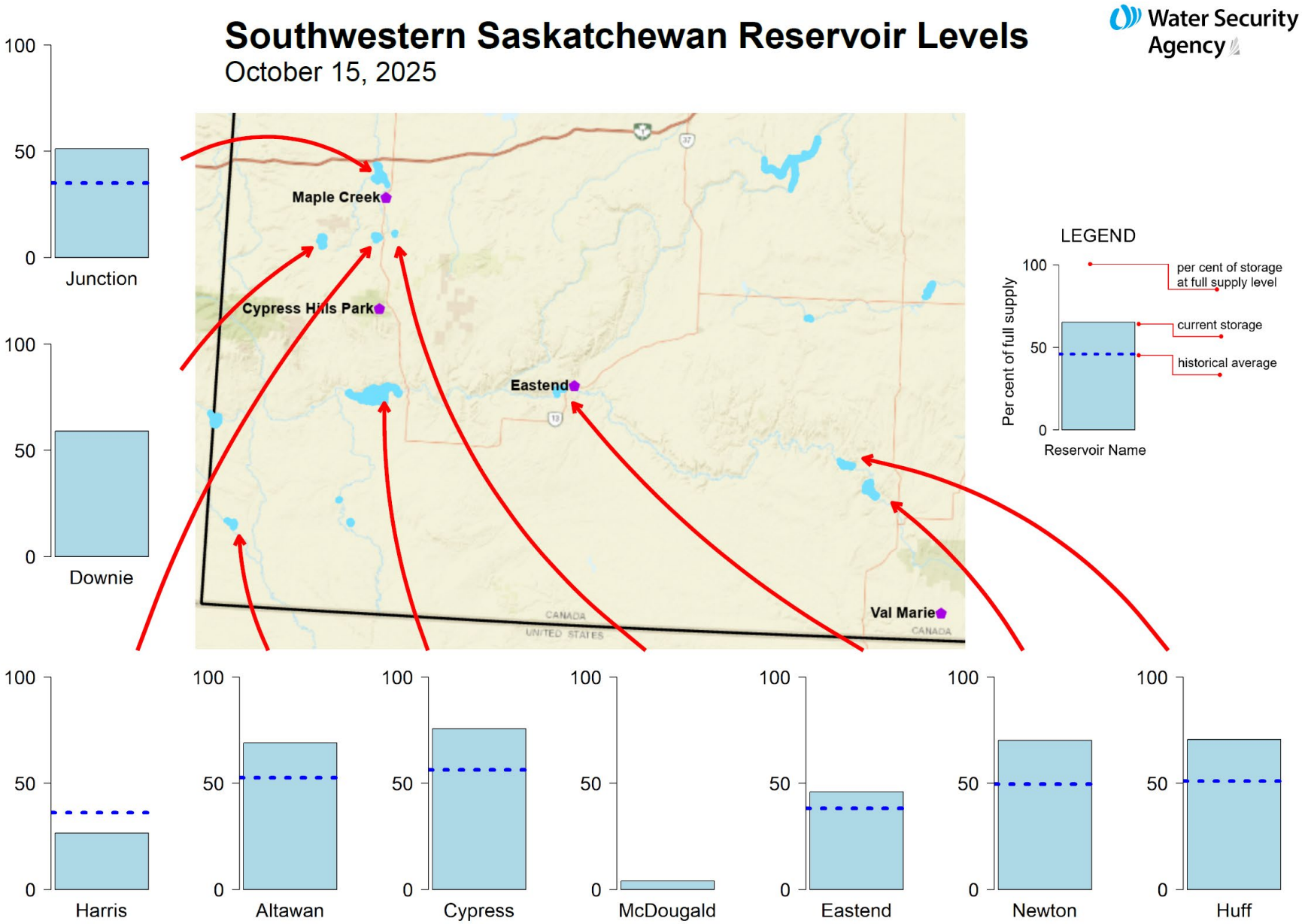


Figure 10: Reservoir Conditions in Southwestern Saskatchewan as of Oct. 15, 2025

*Insufficient historical data to create an average for Downie and McDougald.

Major River Systems

Summary:

- With hot and dry conditions, inflows into Lake Diefenbaker have dropped below normal but it is still within the normal range. Inflows have dropped below the lower end of the normal range.
- In the Souris River Basin, the reservoirs are within their normal operating ranges. A release from Grant Devine reservoir is ongoing to meet apportionment obligations and draw the reservoir down toward the Feb. 1 target elevation.
- Most lakes within the Qu'Appelle River Basin are within their normal fall operating ranges and are expected to remain so. Buffalo Pound and Katepwa lakes are slightly above their normal October operating ranges but are expected to decline to normal levels over the next month.
- Flows in the Churchill Basin remain below normal. Below normal water levels continue to be observed at Reindeer Lake and Lac La Ronge.
- Quill lakes' elevations have been steady following a moderate rainfall in mid-October, with current levels similar to the levels at this time last year.
- In the southwest, despite the below normal rainfall and the warm weather in September, most reservoirs remain at normal levels.

Qu'Appelle Basin

Most of the lakes in the Qu'Appelle system are at or near their normal fall operating ranges, except Buffalo Pound and Katepwa lakes that are slightly above their fall operating range. The Qu'Appelle River Dam release was gradually reduced to zero on October 10 and will remain at zero outflow until October 20 for inspection works. Buffalo Pound Lake is currently slightly above the top of its fall operating range, with water levels remaining stable since early May. Beginning in early August, outflows were increased to around 3.0 m^3/s to support downstream water supplies. The outflow will remain at this rate until it is reduced for winter, near the end of October. Last Mountain Lake is at 489.98 m, which is close to the top of the fall operating range.

The Craven Control Structure is releasing 2.7 m^3/s downstream to sustain downstream water demands.

Pasqua and Echo lakes are within the targeted operating range for October. Mission and Katepwa lakes are slightly above the operating range. With upstream release adjustments, these lakes are expected to stay within their operating ranges for the rest of the fall.

The Crooked Lake level is currently close to the bottom of the normal operating range. Water levels are expected to be within the normal fall and winter operating range once the remaining stoplogs are removed from the structure prior to freeze-up.

Round Lake is at 441.92 m and is within the normal operating range for October. Drawdown operations from upstream reservoirs are temporarily increasing the Round Lake level above the levels seen during the summer, as land control issues prevent operation of the Round Lake control structure.

In mid-September, the first of three fall operations to remove stoplogs at the Echo Lake structure ahead of freeze-up was completed. The second Echo Lake operation will occur in mid-October after the successful removal of all stoplogs from the Crooked Lake structure with a mobile crane. The final stoplog removal operation at Echo Lake is expected to take place at the end of October. These operations will lower lake levels at Echo and Crooked lakes while temporarily increasing downstream flows within the Qu'Appelle River and increasing levels at Katepwa and Round lakes.

The rainfall that was recorded October 12 and13 across the upper and central parts of the watershed brought up to 55 mm to an area including Raymore, Strasbourg and Wynyard. This resulted in lake level increases of 10 to 15 cm across Last Mountain, Buffalo Pound and Wascana lakes.

Table 2 shows the observed water levels for all the lakes in the Qu'Appelle system as of October 15. This table also includes the projected lake levels for November 15 and the normal October operating ranges for reference.

Table 2: Observed and Forecast Qu'Appelle Lake Levels

Lake	Observed Oct. 15, 2025 (m)	Projected Nov. 15, 2025 (m)	October Target Operating Range
Buffalo Pound	509.50	509.21	508.86 – 509.32
Last Mountain	489.98	489.90	489.36 - 490.00
Pasqua-Echo	478.67	478.24	478.54 - 478.84
Mission-Katepwa	478.29	478.10	477.77 – 478.08
Crooked	451.24	450.90	451.10 - 451.56
Round	441.92	441.90	441.66 - 442.11

Saskatchewan River Basin

Over the past month, limited precipitation was observed across the South Saskatchewan River Basin. With hot and dry conditions across the basin, inflows to Lake Diefenbaker have dropped and are currently below lower quartile. Inflows are expected to increase slightly due to reduced upstream diversions but remain below median throughout the fall.

Lake Diefenbaker is currently at 555.15 m, which is slightly below the seasonal median. Levels have remained stable since early September and are expected to gradually decline throughout the remainder of the month. Outflows from Lake Diefenbaker have been maintained at about 90 m^3/s since August. Similar outflows are expected through mid-November, with increases in the outflow expected when freeze-up is imminent to support winter operations. Higher outflows during the winter will draw the reservoir down to achieve the March target elevation, generating power and creating available reservoir storage for spring runoff.

On the North Saskatchewan River, flows have continued to decrease and are below normal for this time of year.

With below normal flows on the North Saskatchewan River and below normal releases from Gardiner Dam, flows on the Saskatchewan River have been below normal throughout September and October. Flows are expected to remain below normal. Cumberland Lake levels have been steady, remaining between the lower quartile and median for this time of year.

Historical statistics of observed and forecast reservoir inflows, elevations, and outflows for Lake Diefenbaker are shown in Figures 11 to 13.

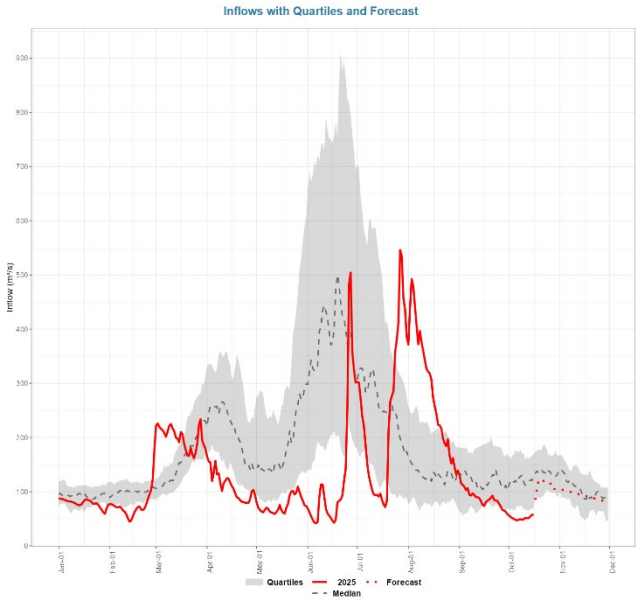


Figure 11: Lake Diefenbaker observed and forecast inflows

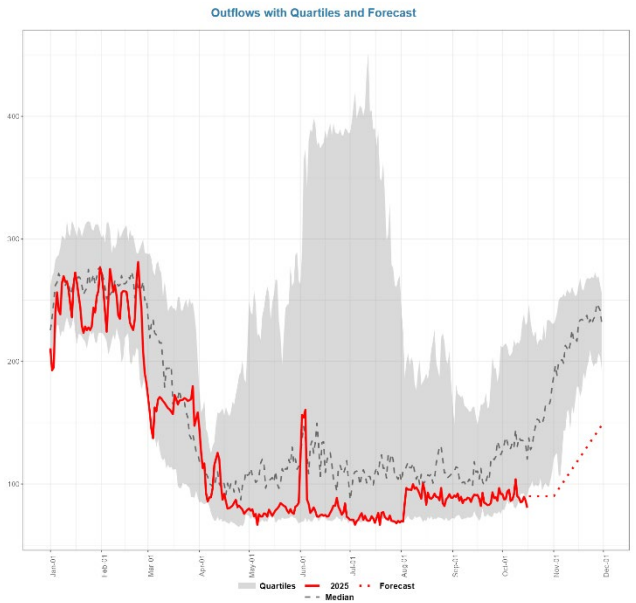


Figure 13: Lake Diefenbaker observed and forecast outflows

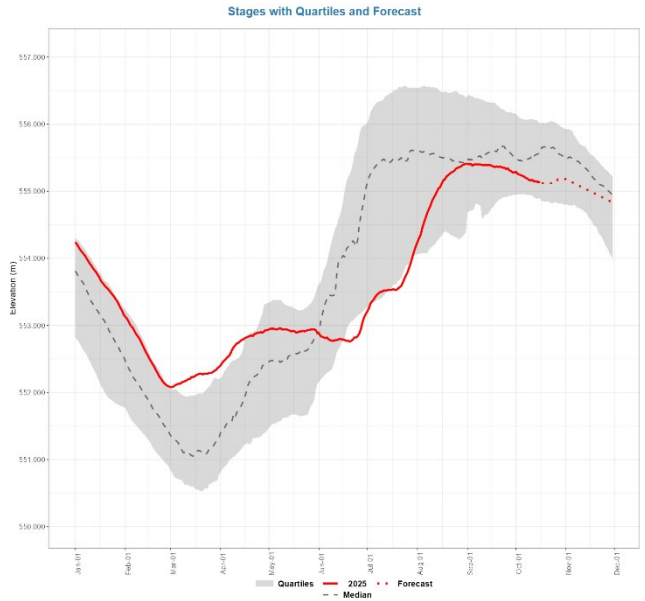


Figure 12: Lake Diefenbaker observed and forecast elevations

Souris Basin

The major reservoirs throughout the Souris Basin (Boundary, Rafferty and Grant Devine) are at slightly above normal levels for this time of year. Rafferty Reservoir was drawn down to a target elevation of 549.5 m by the end of July to accommodate a scheduled construction project. No further releases from Rafferty Reservoir are planned. No releases from Boundary Reservoir are anticipated. A release from Grant Devine Lake was initiated on August 28 and is ongoing to meet apportionment agreements and ensure the February 1 normal drawdown elevation target is reached. Currently, Grant Devine Lake is 0.31 m above the February 1 target drawdown elevation.

Quill Lakes

Over the past month, the basin received normal precipitation. This, combined with significant evaporative losses due to a warm spell in the last week of September, has stabilized the water levels in the Quill lakes. Currently, Big Quill Lake stands at an elevation of 519.54 m, while Little Quill Lake is at 519.49 m. These current elevations are similar to the levels observed at this time in 2024. Assuming normal net evaporation and normal precipitation going forward, the lakes are expected to continue to gradually decline throughout the year. The current level is 2.58 m below the spill point and 1.78 m below the historical high (2017).

Churchill Basin

Over the past month, the Churchill Basin generally received below normal precipitation accumulations. As such, flows throughout the basin continue to be below normal for this time of year. Water levels at Reindeer Lake continue to slowly increase and remain between the lower quartile and median for this time of year. Water levels at Lac La Ronge continue to slowly decrease and remain below the median of the desired operating range for the lake.

Southwest

Most reservoirs in the southwest region remain within their normal ranges, with no water supply shortages noted. The only exception is McDougald Reservoir, which is below normal elevation due to high irrigation demands earlier in the season.

Table 3 contains Oct. 15, 2025 water levels for a cross-section of Saskatchewan lakes.

Table 3: Lake/Reservoir Level Summary

Lake/Reservoir	Oct. 15, 2025 Level (m)	Normal Fall Level (m)	Recorded Historical Extreme	
			Level (m)	Year
Anglin	515.32	515.36	515.99**	2013
Big Quill	519.54	519.50	520.93**	2017
Boundary	560.29	559.83	561.15	1979
Buffalo Pound	509.50	509.41	511.45	1974
Candle	494.05	494.24	495.25	1973
Cookson	751.34	751.550	753.35	1979
Crooked	451.24	451.36	454.40**	2014
Echo and Pasqua	478.67	478.90	480.98	2011
Fishing	529.90	529.82	530.92	2011
Good Spirit	484.45*	484.60	485.68**	2010
Grant Devine	561.32	561.07	556.58**	2011
Jackfish	529.31	529.40	530.00	1985
Katepwa and Mission	478.28	478.30	479.58	2011
La Ronge	364.04	364.13	364.98**	2011
Last Mountain	489.98	489.98	492.09	1955
Moose Mountain	620.15	620.14	621.90	2011
Rafferty	549.27	550.12	554.05**	2011
Round	441.92	441.94***	445.70**	2014

*Measured on Sept. 5, 2025

**Occurred after spring runoff during summer precipitation event(s).

***With outlet structure operated. Without the outlet structure, the normal fall level is 441.7 m.

Long Range Forecasts

Summary:

- Over the next three months, most areas of the province are expected to receive near normal precipitation.
- The forecast is for temperatures to be near normal throughout the province over the next three months.

The three-month spatial anomalies maps for precipitation (Figure 14) and temperature (Figure 15) covering the November 1 to January 31 forecast period shows the expected long-range precipitation and temperature trends in relation to climate normals.

Most long-range precipitation forecasts predict near normal precipitation accumulation across the province for November, December and January. There is a lack of agreement among long-range temperature models, but overall, near normal temperatures are expected over the next three months with the potential for colder than normal temperatures in the northwest.

It is important to note that seasonal weather forecasts are statistically unreliable, and their skill is particularly poor for predicting precipitation. However, good agreement among various long-range products indicates a higher degree of confidence.

Ongoing Water Supply Outlook

Up to date flows and lake levels are available at [wsask.ca.](wsask.ca)

This is the final Water Supply Conditions and Outlook Report for 2025. The next report will be the Conditions at Freeze-Up report issued in November 2025.

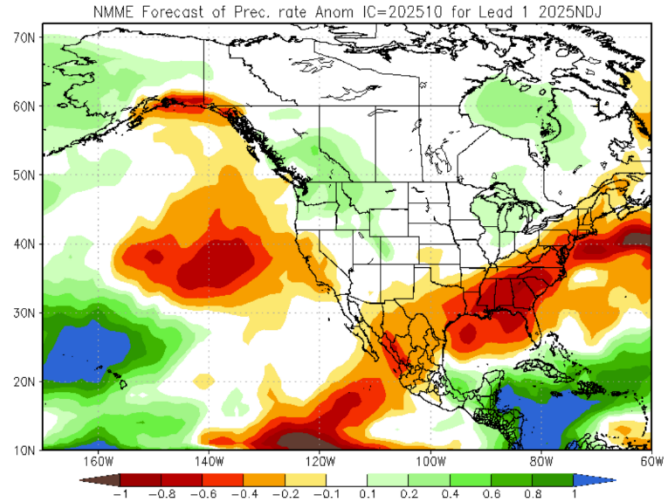


Figure 14: Multi Model Ensemble Precipitation Anomaly Forecast (Nov. 1, 2025 to Jan. 31, 2026) (Map Courtesy of the US National Weather Service)

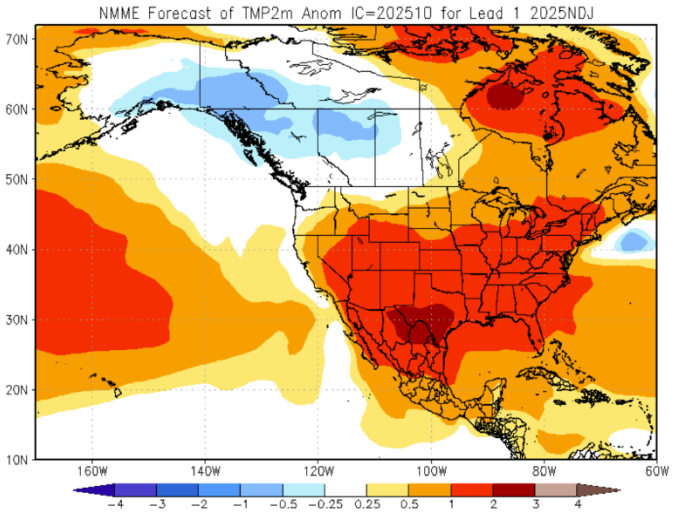


Figure 15: Multi Model Ensemble Temperature Anomaly Forecast (Nov. 1, 2025 to Jan. 31, 2026) (Map Courtesy of the US National Weather Service)