

PRAIRIES and HIGH PLAINS

Weather and Climate Highlights and Impacts, March to May 2025
Climate Outlook, July to September 2025



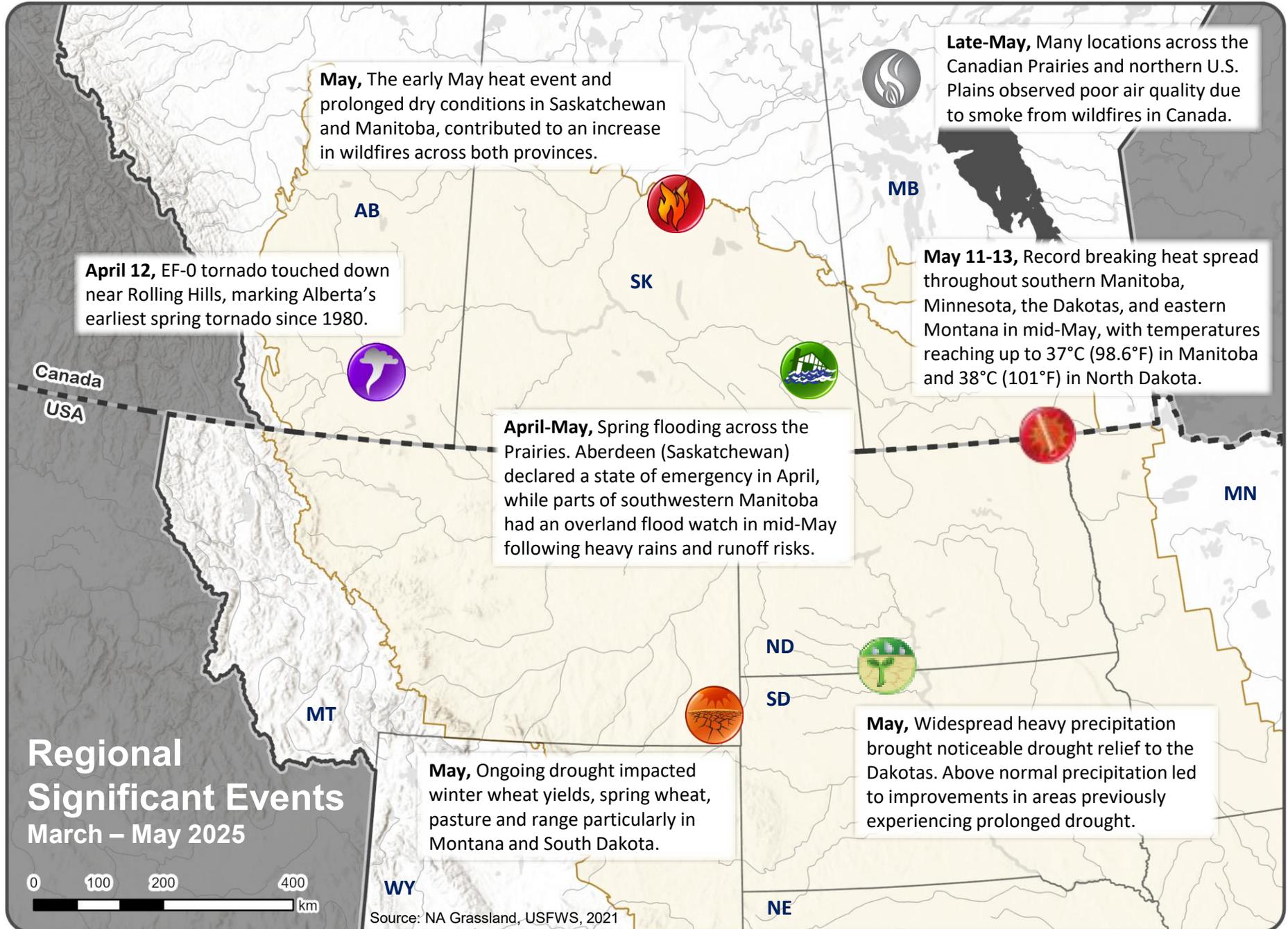
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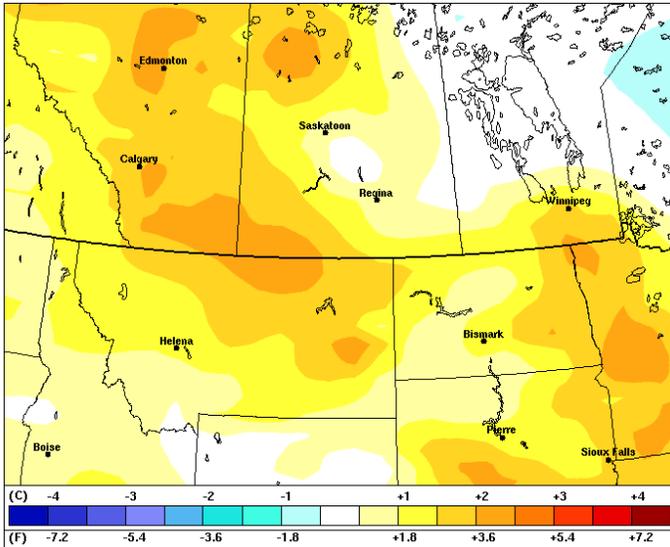
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Regional Climate Overview

March – May 2025

Departure from Normal Temperature (°C/°F)

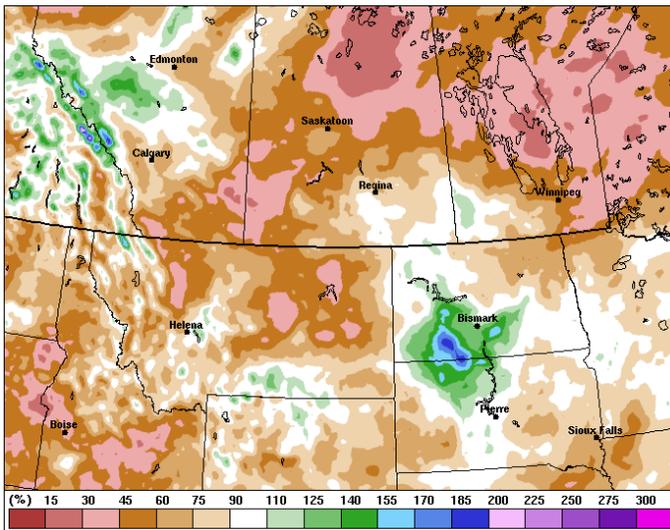


Source: ECCC Climate Archive and USHCN v 2.5
Reference period: 1991-2020

Temperature

Spring brought above normal temperatures across the Prairies and High Plains, especially in the western Canadian Prairies, and portions of Montana, the Dakotas and Minnesota. Overall, March started with early season warmth, particularly across the High Plains and southwestern Prairies, followed by a shift towards near normal temperatures in April. May remained warmer across the Canadian Prairies, while much of the High Plains remained near normal.

Percent of Normal Precipitation (%)

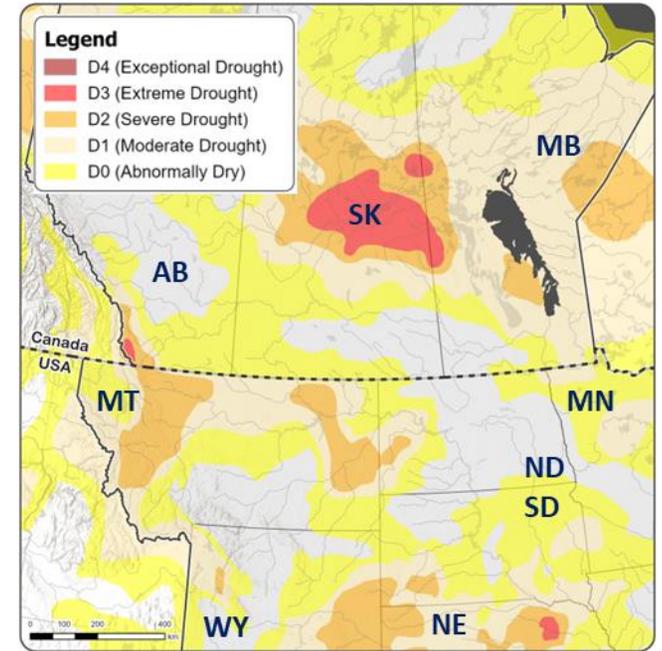


Source: Canadian Precipitation Analysis (CaPA)
Reference period: 1991-2020

Precipitation

The Prairies and High Plains saw drier than normal conditions overall, with the Canadian Prairies, particularly in Manitoba, Saskatchewan, southern Alberta, including much of Montana experiencing precipitation well below normal for the season. In contrast, the western Dakotas saw much wetter conditions, driven by April and May precipitation that provided much needed relief in this region. Much of the Alberta foothills also saw wetter than normal conditions, largely due to multiple snowstorms in March.

Drought Monitor



Source: North American Drought Monitor

Drought Conditions as of May 31, 2025

At the beginning of March, drought conditions were most severe across southern parts of the region, with Severe (D2) to Extreme Drought (D3) reported in Wyoming and southern South Dakota. As the season progressed, less than 45% of normal spring precipitation led to drought conditions shifting further northward and worsening across northern and eastern Montana and central parts of the Canadian Prairies. By the end of May, Severe (D2) to Extreme Drought (D3) emerged in central Saskatchewan and west-central Manitoba with concerns of rapid drying and growing wildfires. Improvements were seen at the end of May in North Dakota and South Dakota, due to timely spring rains.

Missouri River Basin Reduced Flows



Low flow on the Platte River due to drought conditions near Duncan, Nebraska, during May 18, 2025. The Platte River is a tributary of the Missouri River.

Photo Credit: United States Geological Survey

Location: High Plains

Missouri River Basin runoff for [May](#) above Sioux City was 3.4 million acre-feet (MAF), approximately 4.2 billion cubic meters (BCM), or 100% of average thanks to heavy rainfall that fell in parts of western and central North Dakota and South Dakota. Runoff across the Basin for [April](#) above Sioux City was 1.4 MAF (1.7 BCM), or 48% of average. The 2025 calendar year runoff forecast for the Missouri River Basin is 19.7 MAF (24.3 BCM), 77% of average. Despite the recent precipitation, this forecast is slightly lower than the previous month's outlook as persistent drought conditions have been prevalent. Several variables have played a large role in the below normal flow forecasts, the persistence of drought, and impacts across the Missouri River Basin.

Mountain snowpack peaked early and was below normal, while the plains snowpack remained much lower than normal for the winter season. Additionally, melt out has occurred more rapidly than normal in higher elevation snowpacks. The reduced snowpack lowered runoff volume into the river, and [the melt rate](#) further limited the ability to store that water, affecting the water availability later into the summer. Deep soil moisture deficits have persisted across the basin. While recent precipitation improved soil moisture, the dry conditions prevented runoff into the rivers. Spring precipitation has also been below normal across large parts of the river basin. Subsequent low flows driven by these variables could cause irrigation and river navigation issues, reduce hydroelectric generation, and increase wildfire potential.

Record Heat, Early Wildfires and Smoke



Smoke from the Lac du Bonnet Wildfire in Manitoba, May 14, 2025.

Photo Credit: Province of Manitoba

Location: Saskatchewan, Manitoba, North Dakota, and Minnesota

An extremely dry spring has led to explosive wildfire growth across the Canadian Prairies and northeastern U.S. Plains in May, particularly in Saskatchewan and Manitoba where many areas received less than 45% of their normal seasonal precipitation. This lack of spring precipitation and above average May temperatures contributed to the significant fire danger. In Canada, both [Manitoba](#) and [Saskatchewan](#) declared states of emergency due to wildfires and [evacuated tens of thousands](#) of residents as the wildfire quickly spread. Numerous structures have also been lost across all three provinces. Similar conditions occurred in parts of the U.S., particularly in North Dakota and [Minnesota](#), which also experienced an early start to their wildfire season. In early May, the [Turtle Mountain wildfire](#) burned large areas in North Dakota, which prompted several evacuations and caused property damage, however, coordinated firefighting efforts helped avoid substantial loss.

While wildfires are burning on both sides of the border, the intensity of the Canadian wildfires has already produced impacts on both sides of the border this season. [Smoke from the Canadian wildfires](#) drifted south into the northeastern U.S. Plains, worsening air quality and prompting public health warnings and concerns. Meanwhile in Canada, closer to the fires there are [significant air quality and health concerns](#). Looking forward, the [wildfire outlook](#) for both the United States and Canada indicates a stronger signal for an above average wildfire season.

Temperature and Precipitation Outlook

July – September 2025

Both the [American](#) and [Canadian](#) summer outlooks show an enhanced chance of above normal temperatures this summer across the entire domain of the Canadian Prairies and U.S. High Plains, with the greatest probability for above normal temperatures expected near the continental divide. The precipitation outlook indicates an increased probability of below normal precipitation over the High Plains, while on the Canadian Prairies side, the summer outlook shows an equal chance for above or below normal precipitation in southern Manitoba and Saskatchewan, with below normal through Alberta.

Additional Resources



Photo credit: Lee Schmelzer



Photo credit: Laura Edwards



Photo credit: Prov of Manitoba

Agricultural Resources
Agroclimate tools, maps

[U.S.](#)
[Canada](#)

Crop Progress

Weekly summary of conditions

[U.S.](#)
[Alberta](#)
[Saskatchewan](#)
[Manitoba](#)

Water Resources
Observations, conditions,
forecasts

[Missouri River Basin](#)
[North Central Basin](#)

[Alberta](#)
[Saskatchewan](#)
[Manitoba](#)

Wildfire Resources
Conditions, forecasts

[U.S.](#)
[Canada](#)
[North American Outlook](#)

Air Quality Conditions

[U.S.](#) / [Canada](#)
Conditions Maps
[Canada](#) / [U.S.](#)
[Forecast Maps](#)

PRAIRIES and HIGH PLAINS

Contacts and Partners

- **Environment and Climate Change Canada**
www.canada.ca/en/services/environment
- **Agriculture and Agri-Food Canada**
www.agr.gc.ca/drought
- **National Drought Mitigation Center**
<http://drought.unl.edu/>
- **NOAA NIDIS**
www.drought.gov
- **US State Climatologist**
<https://stateclimate.org/>
- **NOAA NCEI**
www.ncei.noaa.gov
- **USDA Climate Hubs**
www.climatehubs.usda.gov
- **NOAA NWS Climate Prediction Center**
www.cpc.ncep.noaa.gov
- **High Plains Regional Climate Center**
www.hprcc.unl.edu
- **NOAA NWS Missouri Basin River Forecast Center**
www.weather.gov/mbrfc
- **USDA Natural Resources Conservation Service**
www.nrcs.usda.gov



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