PRAIRIES and HIGH PLAINS

Weather and Climate Highlights and Impacts, March to August 2026
Climate Outlook, October to December 2026

Environment and Climate Change Canada | Environnement et Changement climatique Canada

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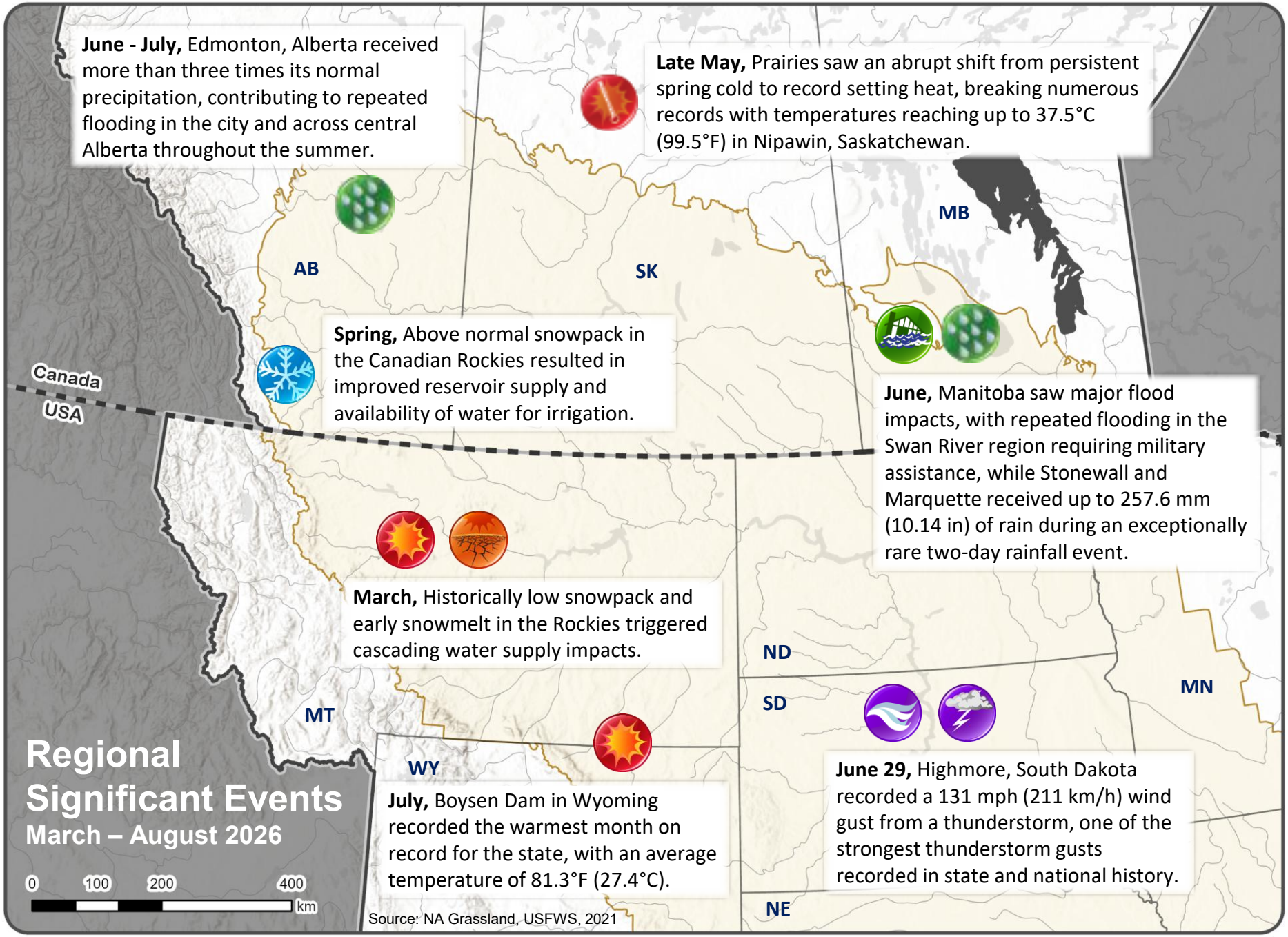
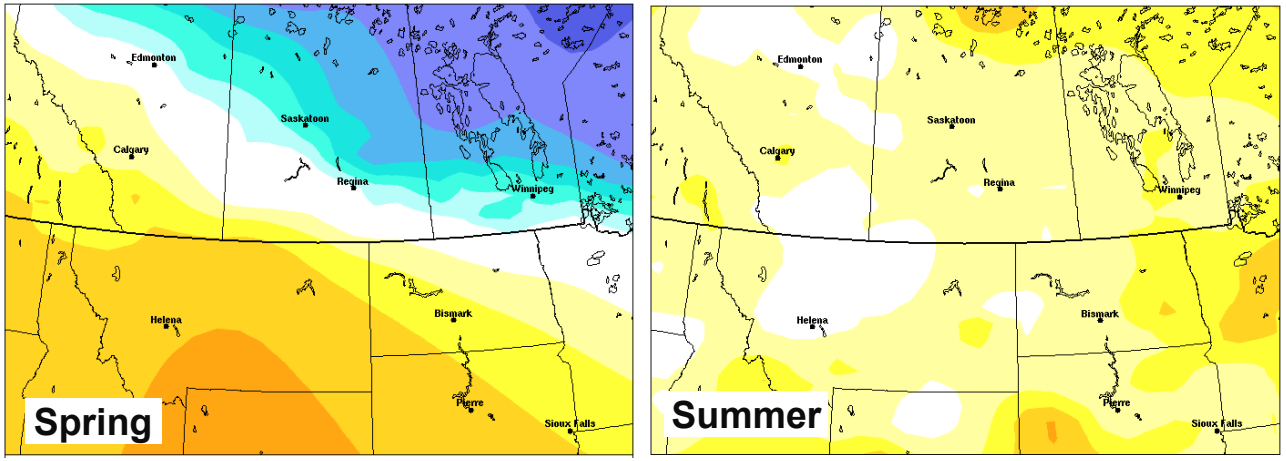


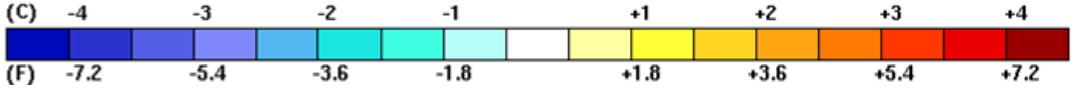
Regional Climate Overview

March – August 2026: Northern storms bring cool, wet weather to the Prairies, while heat and drought grip the northern High Plains

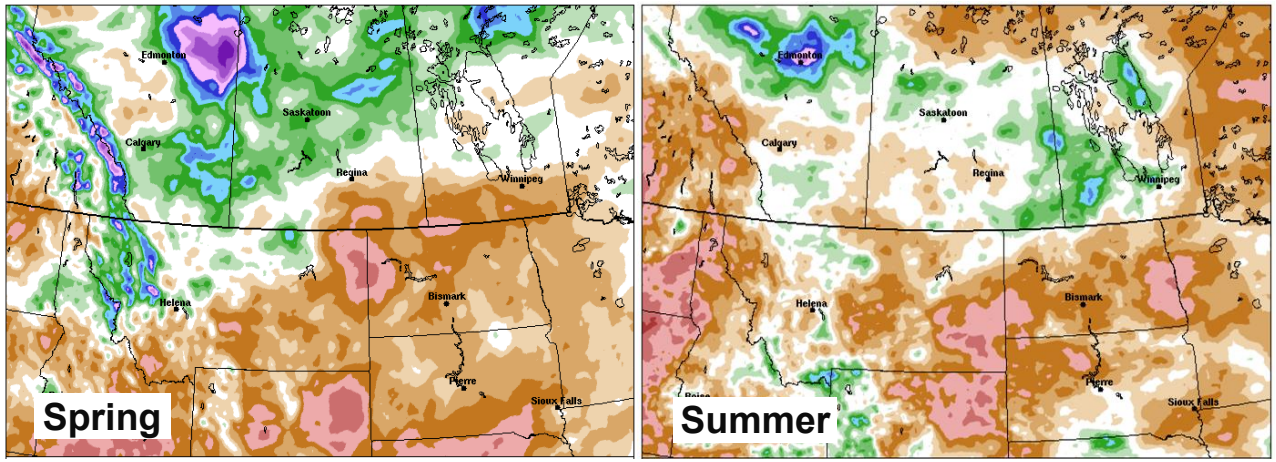
Temperature – Departure from Normal Temperature (°C/°F)



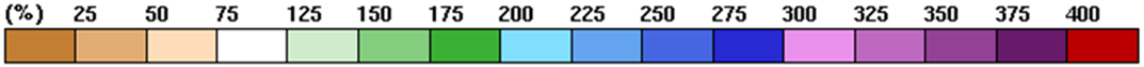
Source: ECCC Climate Archive and USHCN v 2.5 Reference period: 1991-2020



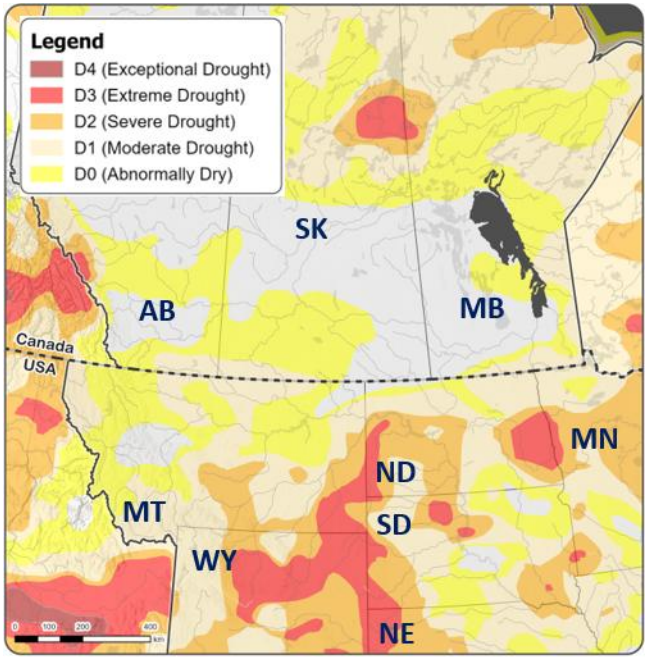
Precipitation – Percent of Normal Precipitation (%)



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



Drought Monitor



Source: North American Drought Monitor

Drought Conditions as of August 31, 2026

The year began with moderate to severe drought conditions throughout western and southern portions of the region. As winter progressed, the extent and severity of drought continued to increase. Through the spring, hot and dry conditions worsened drought conditions significantly. However, substantial spring rainfall improved soil moisture and water supplies through the Canadian Prairies, improving drought conditions. June 2026 was the first time since 2020 that the Canadian Prairie agricultural regions were drought-free. Conditions were less favorable in the High Plains. As the summer progressed, drought conditions persisted and worsened across the region, with southern areas experiencing the most severe drought impacts. As of August 31, drought conditions had developed across portions of the southern Prairies, however, the majority of drought conditions in the region remained south of the international border, driven by exceptionally hot and dry conditions in both the short and long term.

Regional Impacts
March – August 2026

Extreme events across the Region Create Significant Impacts

The Prairies and High Plains region had very different summer impacts resulting from differing antecedent spring situations this year. Stormy weather tracked to the north, keeping the Canadian Prairies cooler and wetter compared to the U.S. High Plains. Over the Prairies, the persistent below normal temperatures, snowstorms, and lingering frost extended winter conditions into early May, resulting in good snowpack conditions north of the border. This reduced drought conditions in Canada which was a reprieve not seen in several years for the Prairies.

It was a starkly different picture south of the border where low mountain snowpack, a summer of persistent dry weather, much above normal temperatures, and high evaporative demands contributed to deteriorating drought conditions across the U.S. northern High Plains. Official projections from the U.S. Army Corps of Engineers indicate annual runoff above Sioux City, Iowa, will reach only 60% of average, making 2026 the eleventh lowest runoff year on record. Reduced storage in major reservoirs such as Fort Peck, Garrison, and Oahe led to cuts in navigation flow support, reducing downstream water availability and hydropower capacity.

The mid-summer extreme heat devastated agriculture in the northern High Plains. Compounding the hydrological deficit, record-breaking temperatures and localized dry spells over July and August triggered rapid onset of drought across North Dakota and surrounding states. By early August, over half of North Dakota was in moderate-to-severe drought, negatively impacting crops. Ranchers and dryland farmers across Montana, Wyoming, and the Dakotas faced depleted stock ponds, reduced hay production, poor forage conditions, and early supplemental feeding. In response, drought relief measures were provided in affected areas of Montana, Wyoming, and the Dakotas, including disaster assistance, emergency grazing and haying programs, and financial support programs for producers.

While the improved drought situation in the Canadian Prairies was a welcome change, this year's late, cold spring delayed seeding and field operations. Also, the rapid flip from cold to warm in late May accelerated snowmelt, saturating grounds and causing flooding. Unfortunately, this was followed by successive heavy rainfall events in Edmonton (Alberta) and Swan River (Manitoba) in June and July, which had devastating flooding impacts. The excessive rainfall created challenges for producers, delaying fieldwork and damaging cropland, particularly in Manitoba. For example, flooding near Griswold submerged nearly 1,000 acres of farmland, including approximately 550 acres of corn. By July, severe weather caused localized crop losses across the Prairies, including significant hail damage in southern Alberta, prompting more than 4,000 crop insurance claims on over one million affected acres.

Cattle near a low stock pond in August, North Dakota
Photo Credit: Conditional Monitoring Observer Reports

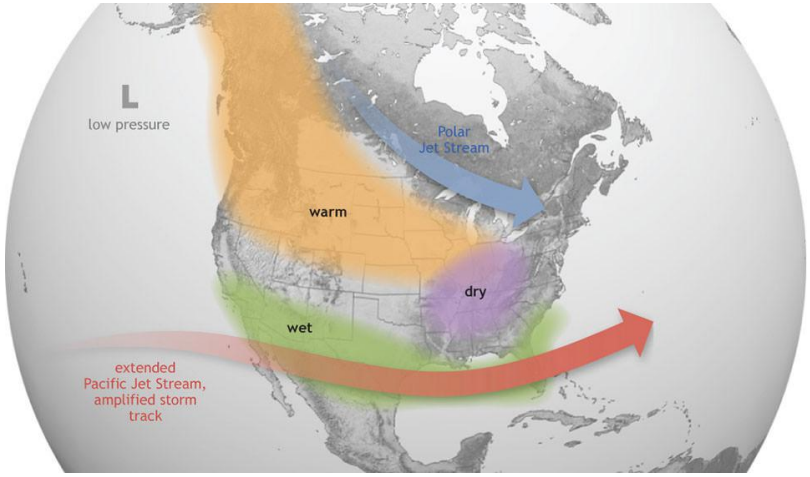
Flooding in Manitoba's Parkland Region.
Photo Credit: Manitoba RCMP

Temperature and Precipitation Outlook

October – December 2026

The Fall temperature outlooks from both American and Canadian models show an enhanced chance of above-normal temperatures across the entire domain with the highest likelihood of above normal temperatures near the Rocky Mountains. Both precipitation outlook suggests drier than normal conditions just along the northern Rocky Mountains and equal chances of below or above precipitation across the Prairies and High Plains.

ENSO Outlook for Prairies and High Plains – The El Niño-Southern Oscillation (ENSO) is a recurring climate pattern involving changes in water temperatures in the tropical Pacific Ocean and the overlying atmosphere. According to the NOAA Climate Prediction Center, a rapidly strengthening El Niño event is expected to dominate North American weather patterns through the fall and winter of 2026 – 2027. Model predictions indicate a 75% chance of a record-breaking event that would exceed the strength of previous El Niño events dating back to 1950. This intense ocean-atmosphere coupling is driving a strong consensus between models, therefore El Niño conditions will likely remain firmly locked in place well into early 2027.



El Niño causes the Pacific jet stream to move south and spread further east. During winter, this leads to wetter conditions than usual in the Southern U.S. and warmer and drier conditions in the North.

Diagram Credit: National Oceanic and Atmospheric Administration

For the Prairies and High Plains, this historic El Niño setup favors an abnormally warm, less snowy winter. The typical weather pattern keeps frigid Arctic air much farther north than usual, making extreme cold snaps less common. This lack of sustained cold limits snow accumulation and increases the likelihood of an early, dry spring. However, because strong El Niño events are rare and every ENSO cycle is unique, these broad seasonal trends may not always hold true.

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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