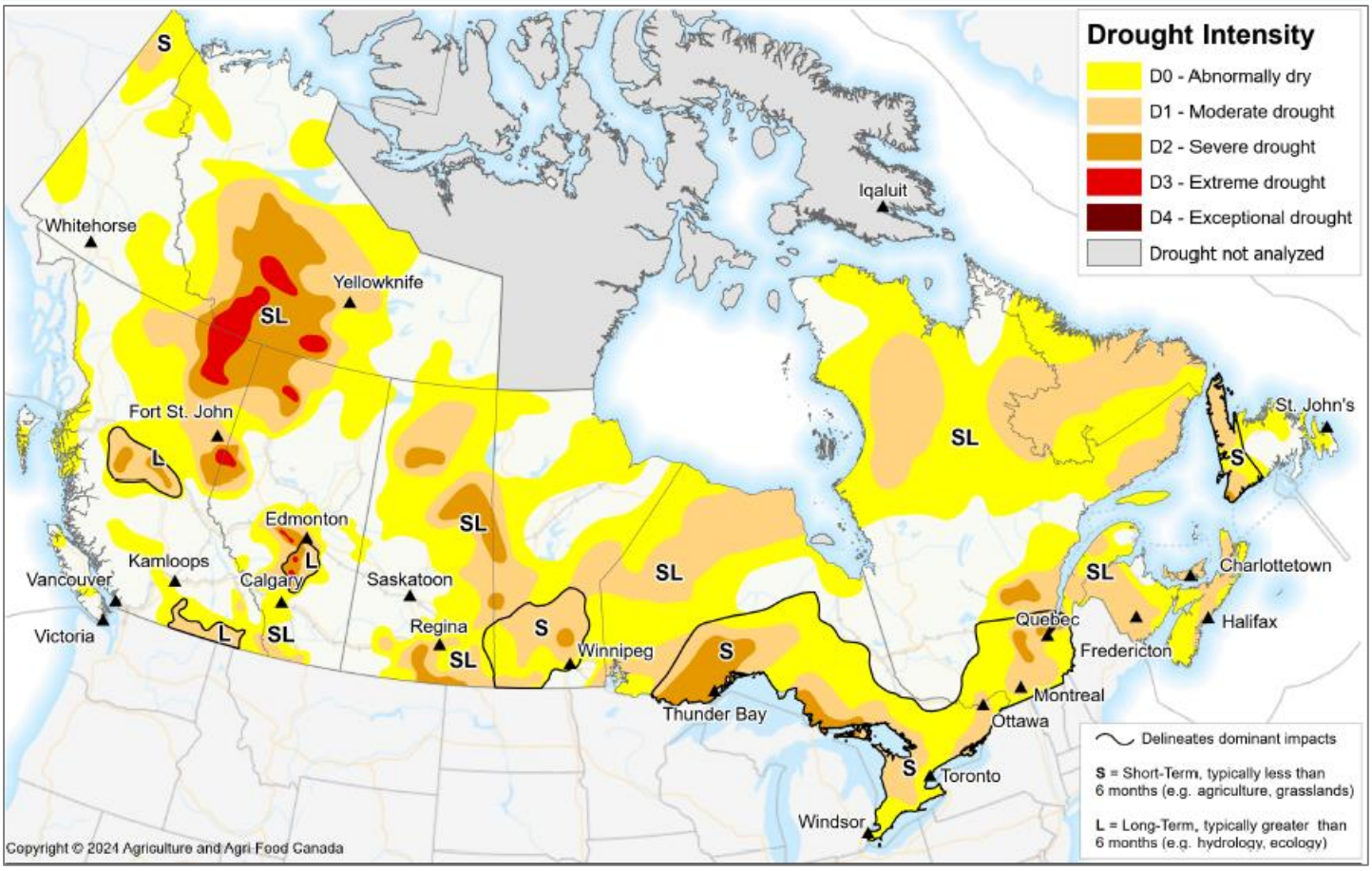
Canadian Drought Monitor

Conditions as of October 31, 2024



Drought expanded and worsened throughout much of the country, as above normal temperatures and below normal precipitation dominated October's weather throughout much of Canada. The exception to the dry conditions was in British Columbia and northern Alberta, where above to well above normal precipitation was received in October which resulted in reduced long term precipitation deficits and related impacts. The southern Prairies, southern Ontario, southern Quebec and much of the Atlantic region received less than 60% of normal October precipitation leading to an increase in drought severity. Mean monthly temperatures were generally 2 to 3 degrees Celsius warmer than normal across Canada with larger departures in the southern Prairies, southeastern British Columbia, northern portions of the Northwest Territories and the Yukon.

At the end of the month, 64% of the country was classified as Abnormally Dry (D0) or in Moderate to Extreme Drought (D1 to D3), including 67% of the country's agricultural landscape.

Pacific Region (BC)

Precipitation across British Columbia varied widely in October with well above normal precipitation throughout the Lower Mainland region and western Interior and well below normal precipitation was received in the northeast and also the central and northern coast. Most areas in southern and central parts of the province received above-normal precipitation, with pockets of the Lower Mainland and southern Vancouver Island recording more than double their normal monthly precipitation. In contrast, areas in the northwest, along the central portions of the coast, the eastern Kootenays and northern Vancouver Island received less than 60% of normal precipitation. The northeast was drier recording less than 40mm of accumulated precipitation this month.

Southern British Columbia saw significant improvements to drought conditions, with recent rainfall alleviating short-term precipitation deficits, leading to the removal of Abnormally Dry (D0) to Moderate Drought (D1) across many areas. Despite the recent rainfall, some drought concerns remain across the Okanagan Valley, with Abnormally dry (D0) and Moderate Drought (D1) persisting in this area. In central and northern British Columbia, drought conditions also improved, with the pockets of Severe Drought (D2) conditions across the central Interior and the northeast reducing significantly. Extreme Drought (D3) continues to affect portions of the Peace River region as well as northeastern British Columbia as a result of continued significant precipitation deficits, poor soil moisture and low streamflow.

At the end of the month, 54% of the Pacific Region was classified as Abnormally Dry (D0) or in Moderate to Extreme Drought (D1 to D3), including 60% of the region's agricultural landscape.

Prairie Region (AB, SK, MB)

Well below normal precipitation and above normal temperatures throughout the southern Prairies resulted in deteriorating conditions in October. Short-term drought conditions have once again developed throughout southwestern Alberta, southern Saskatchewan and much of Manitoba with monthly precipitation below 40% for most of the agricultural region in the Prairies. Central and northern Alberta and portions of Northern Saskatchewan received above to well above normal precipitation in October, alleviating short and longer-term precipitation deficits resulting in reductions of drought conditions including the improvement in Severe (D2) and Extreme Drought (D3) in northwestern Alberta. The Prairies experienced a warm month, recording temperatures between more than 2 degrees Celsius above normal, with the exception of parts of the Peace region which experienced cooler temperatures.

In October, precipitation in Alberta varied, with drier conditions in southern and central regions and wetter conditions in the north. Southern Alberta received less than 40% of normal precipitation, while northern Alberta saw between 85% and 150% of normal precipitation, with some pockets recording more than 200% of normal precipitation. Mean monthly temperatures were generally above normal, particularly in the south, while parts of the Peace region in the northwest experienced cooler temperatures. Abnormally Dry (D0) and Moderate Drought (D1) conditions expanded across southwestern Alberta due to warm temperatures, growing precipitation deficits and ongoing impacts such as lower water and soil moisture levels. Recent rainfall and snow in the south have been adequate to stabilize soil moisture conditions but have not significantly increased river or reservoir levels. All major reservoir levels in the south are within their normal range for this time, although still in the lower range. In central Alberta, drought conditions improved, with reductions to Abnormally Dry (D0) to Extreme Drought (D3) conditions as recent precipitation has reduced long term deficits. Reported impacts in the central region are limited, as major rivers, including the North Saskatchewan and Red Deer rivers, remain within or above their normal levels for this time of the year, and soil moisture levels are not a significant concern. Similarly, northern Alberta also saw improvements in drought conditions, with reductions to Abnormally Dry (D0) to Extreme Drought (D3) conditions. The Extreme Drought (D3) pocket around Grande Prairie was significantly reduced due to near-normal precipitation and cooler temperatures, which have helped alleviate long-term precipitation deficits and replenish soil moisture levels. In the northeast corner, Extreme Drought (D3) conditions also saw a significant reduction, with D3 conditions only persisting around High Level.

Most of southern Saskatchewan received less than 40% of normal precipitation, while central and northern regions recorded between 60% and 150% of normal precipitation. Mean monthly temperatures were warm across the province, with southern regions recording temperatures 2 to 4 degrees above normal. Limited rainfall across southern and central Saskatchewan led to increasing short-term precipitation deficits, which worsened drought conditions across the region to varying extents. North Battleford and Moose Jaw received only 7% and 6% of normal precipitation, respectively, marking their second and third driest October’s on record. Strong winds and limited rainfall further reduced topsoil moisture across southern and central regions, worsening drought conditions with impacts on topsoil moisture and pasture conditions. Abnormally Dry (D0) to Severe Drought (D2) conditions expanded across southern and east-central Saskatchewan. In contrast, northern Saskatchewan received more rainfall, improving drought conditions in the region. Abnormally Dry (D0) to Moderate Drought (D2) areas saw reductions, with significant improvement in the north-central Moderate Drought (D2) pocket due to recent precipitation that helped alleviate short-term deficits.

Manitoba experienced warm and dry conditions in October, with most areas having received less than 40% of normal precipitation and temperatures 2 to 4 degrees above normal. The southeast fared slightly better, receiving between 40% and 60% of normal precipitation. Despite a very dry October, soil moisture throughout much of the province remains adequate thanks to well above normal precipitation in September. Abnormally Dry (D0) to Severe

Drought (D2) conditions expanded across most of southern and central Manitoba. In southern Manitoba, Abnormally Dry (D0) to Moderate Drought (D1) conditions expanded, with two Severe Drought (D2) pockets emerging, one in the Interlake region and another around Swan River in the west-central region. These regions have accumulated significant precipitation deficits throughout the late summer and fall period, resulting in poor soil moisture, low stream flow and reduced water availability. Parts of southeast Manitoba remained drought-free due to adequate moisture reserves and relatively good stream flow. In northern Manitoba, drought conditions remained largely unchanged from the previous month, with only slight expansions of Abnormally Dry (D0) conditions.

At the end of the month, 61% of the Prairie Region was classified as Abnormally Dry (D0) or in Moderate to Severe Drought (D1 to D2), including 57% of the region's agricultural landscape.

Central Region (ON, QC)

October precipitation was well below normal across southern portions of the Central Region. Large areas in northwestern Ontario, southern Ontario, and southern Quebec received less than 60% of normal precipitation, while areas northwest of Toronto and in the Montréal region received less than 40% of normal precipitation. Following a wet growing season, the late summer has been seen well below normal precipitation resulting in quickly developing abnormally dry and drought conditions across the region. Mean monthly temperatures remained slightly above normal throughout the region in October.

Southern portions of Ontario and Quebec were dry this month, with growing short-term precipitation deficits leading to the expansion of Abnormally Dry (D0) and Moderate Drought (D1) conditions. Drought conditions also worsened in northwestern Ontario, where a Severe Drought (D2) pocket emerged east of Lake Superior near Sault Ste. Marie as well as around Hudson Bay. Similarly, Quebec faced worsening drought conditions, with Abnormally Dry (D0) and Moderate Drought (D1) expanding and two pockets of Severe Drought (D2) emerging in the Gaspé region a result of continued below normal precipitation.

At the end of the month, 76% of the Central Region was classified as being Abnormally Dry (D0) or in Severe Drought (D2), including 57% of the region's agricultural landscape.

Atlantic Region (NS, NB, PE, NL)

In October, the Atlantic Region experienced warm temperatures and a mix of drier-than-normal and wetter-than-normal conditions. Despite some local heavy rain leading to flooding early in the month, October was a dry month overall for New Brunswick, Prince Edward Island, and Nova Scotia recorded. These regions generally received less than 85% of normal precipitation,

and western and southern parts of New Brunswick and eastern Nova Scotia recorded less than 40% of normal. Meanwhile, much of Newfoundland and Labrador saw near-to above-normal precipitation, ranging from 85% to 150% of normal, with the northern coastline of Labrador receiving between 150% and 200% of normal precipitation.

Due to growing short-term precipitation deficits, Abnormally Dry (D0) and Moderate Drought (D1) conditions expanded across the Maritimes, with Moderate Drought (D1) pockets expanded across western New Brunswick and eastern Nova Scotia. Recent precipitation in Labrador eastern Newfoundland has alleviated short-term precipitation deficits, leading to improved drought conditions. Severe Drought (D2) pockets around Labrador City and Happy Valley-Goose Bay were removed. In Newfoundland, drought conditions varied, with some improvements in the island's eastern areas, including the removal of Abnormally Dry (D0) conditions in certain locations, though these conditions remain around St. John's. In other parts of the island, drought conditions worsened, with Moderate Drought (D1) expanding across the Northern Peninsula and Severe Drought (D2) emerging at the southern tip.

At the end of the month, 90% of the Atlantic Region was classified as Abnormally Dry (D0) or in Severe Drought (D2), including 94% of the region’s agricultural landscape.

Northern Region (YT, NT)

Conditions across the Northern Region improved slightly this month, as much of the Yukon and the eastern portion of the Northwest Territories received normal to above-normal precipitation. The central portion of the North region continued to receive below normal precipitation. Temperatures were warmer than normal across most of the region, with northernmost areas of the Yukon and Northwest Territories recording temperatures 3 to 5 degrees above normal. Southern Yukon and parts of southwest Northwest Territories were cooler, with temperatures 2 degrees below normal.

Recent precipitation led to some reduction in Abnormally Dry (D0) and Moderate Drought (D1) conditions in northern areas of the Northwest Territories, but conditions across the southern and central region remained largely unchanged, as recent precipitation was not enough to alleviate long-term precipitation deficits. Severe (D2) and Extreme (D3) long term drought conditions persisted due to low water levels and well below normal stream flow. Great Slave Lake remains at its lowest recorded level for this time of year and water levels near Norman Well are 4 meters below normal. Recent precipitation has not been adequate, and going into the winter, an exceptionally high snowpack will be necessary to begin recovery from these extremely low water levels. Extreme Drought (D3) persisted and slightly expanded around Fort Liard, Hay River, and Fort Simpson. Recent precipitation and snowfall across the Yukon – British Columbia border led to improvements to drought conditions in the southeast corner of the Yukon with Moderate Drought (D1) conditions pulled back from the area. The rest of the Yukon saw little change to drought conditions, with pockets of Abnormally Dry (D0) and Moderate Drought (D1) persisting in the northern and southwestern areas.

At the end of the month, 47% of the Northern Region was classified as Abnormally Dry (D0) or in Moderate to Extreme Drought (D1 to D3).