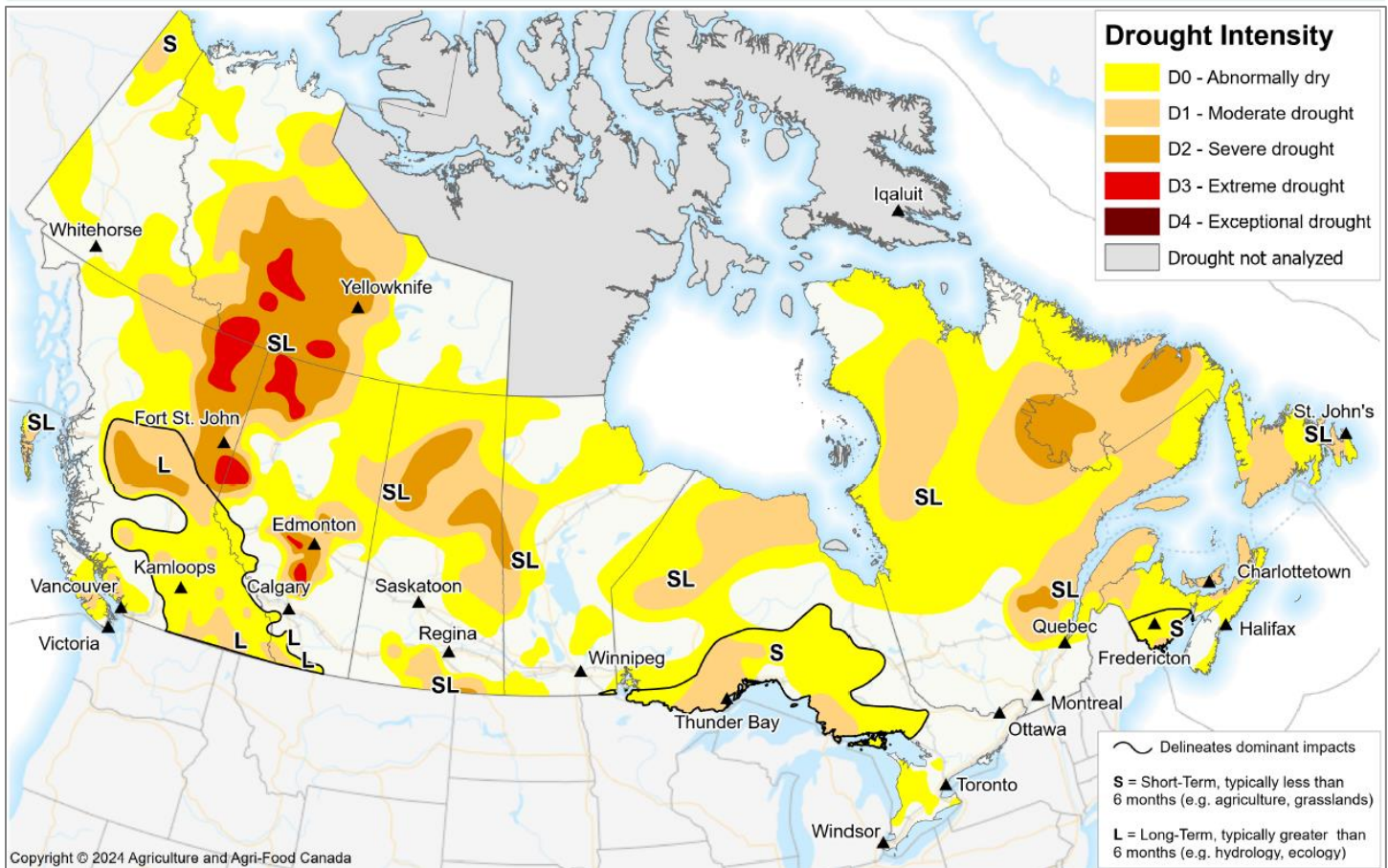


# Canadian Drought Monitor

Conditions as of September 30, 2024



Much of the country received well below normal precipitation through September, particularly in Eastern Canada with two significant exceptions, central British Columbia and the southwestern Prairies where precipitation was above normal this month. Multiple atmospheric rivers passed through British Columbia, and several storm systems impacted eastern Alberta, and western Saskatchewan. Significantly dry conditions persisted across northern Prairies, extending into Ontario, Quebec, and the Atlantic region. Drought patterns generally mirrored this precipitation distribution, with drought improving across British Columbia and much of the Prairie Region, emergent drought conditions across southern Ontario and Quebec and drought expansion in the Atlantic region. Extreme Drought (D3) reduced slightly in southern NWT, the Peace Region of BC, and Alberta as a result of significant precipitation and improved moisture

conditions. Mean monthly temperatures were generally 3 to 5 degrees warmer than normal across Western Canada and northwestern Ontario. While temperatures were less than 3 degrees above normal in Eastern Canada.

At the end of the month, 65% of the country was classified as Abnormally Dry (D0) or in Moderate to Extreme Drought (D1 to D3), including 46% of the country's agricultural landscape.

## **Pacific Region (BC)**

In September, precipitation varied significantly in British Columbia, with areas in the Northeast, Southeast, and on Vancouver Island recording less than 60% of normal precipitation. Parts of coastal British Columbia and the central interior received well above-normal precipitation, with more than 125 mm of accumulated precipitation this month. The southeast was the driest region of the province, with Kelowna and Cranbrook recording only 25% and 32% of normal precipitation, respectively.

An intense atmospheric river delivered heavy precipitation to coastal British Columbia with significant rainfall extending into the southern interior. This precipitation led to the removal of Abnormally Dry (D0) to Severe Drought (D2) across the central and northern coast, with the exception of Haida Gwaii. The southern interior saw similar improvements to drought conditions. Further southwest, the Lower Mainland and much of southeastern British Columbia saw Abnormally Dry (D0) to Moderate Drought (D1) conditions improve as recent rainfall alleviated precipitation deficits and replenished surface and groundwater supplies, with wells in portions of the Okanagan Valley returning to normal. In the northeast and the Peace Region, slight improvements were seen, with a reduction in Extreme Drought (D3), but recent rainfall was not enough to fully alleviate the nearly 450 mm long-term precipitation deficits and critically low reservoir levels. Drought conditions persist in the northeast due to ongoing precipitation deficits and low reservoir levels, leaving Abnormally Dry (D0) to Severe Drought (D2) conditions there largely unchanged.

At the end of the month, 71% of the Pacific Region was classified as Abnormally Dry (D0) or in Moderate to Extreme Drought (D1 to D3), including 84% of the region's agricultural landscape.

## **Prairie Region (AB, SK, MB)**

Conditions across much of the southern Prairies continued to improve in September, however warmer than normal temperatures and declining surface water storage resulted in continued

drought concerns in some regions. A large area along the border of Alberta and Saskatchewan as well as pockets of southeastern Manitoba received more than 115% of normal precipitation this month providing significant recharge to systems that have been in drought for several years. Western and northern parts of Alberta and also pockets of Saskatchewan and Manitoba were drier than normal, recording less than 60% of normal precipitation. In Manitoba, southern Saskatchewan and southern Alberta drought conditions improved. However, northern Alberta and northern Saskatchewan experienced a slight expansion of Abnormally Dry (D0) to Severe Drought (D2) conditions this month.

Weather across Alberta was variable this month, with northern and western Alberta receiving less than 60% of normal precipitation while eastern and southern Alberta received more than 115% of normal precipitation. Alberta experienced high temperatures in September, with many communities recording their top 10 warmest temperatures on record. Southern Alberta experienced an overall improvement in drought conditions, leading to the removal of Abnormally Dry (D0) areas in the southeast and a reduction of Abnormally Dry (D0) to Moderate Drought (D1) in the southwest. While most of eastern Alberta received much-needed rainfall that improved soil moisture, southwestern Alberta missed out on this precipitation. Drought conditions in central Alberta remained largely unchanged due to a lack of precipitation to improve surface soil moisture conditions. Minor adjustments were made to Severe (D2) and Extreme (D3) drought areas, including the removal of the D3 pocket around Stettler and the emergence of a new D3 pocket west of Edmonton. Drought conditions in the northwest saw minor adjustments, including slight changes to Extreme Drought (D3) areas. In northern Alberta, Abnormally Dry (D0) conditions expanded, while further south, Extreme Drought (D3) around Grande Prairie also expanded slightly. Alberta received increased precipitation at the end of the month; however, this delayed harvest progress across much of the province and only improved soil moisture in some areas, particularly southeastern Alberta. Despite improved soil moisture through many parts of the province, 36 water basins have water shortage advisories, including in the northwest, central, southwest and southern regions of the province.

September brought well above normal precipitation to western regions of Saskatchewan and near normal or below normal precipitation in eastern regions. Most of western Saskatchewan received precipitation ranging from 150% to more than 200% of normal, while areas in the east central portion of the province received less than 85% of normal precipitation. Temperatures were generally 3 to 5 degrees above normal across the province this month. Southern Saskatchewan saw improvements in drought severity and extent, as recent above-normal precipitation across western parts of the province alleviated precipitation deficits and helped recharge soil moisture and pastures for fall grazing. This led to the removal of Severe drought (D2) around Swift Current and the overall reduction of Abnormally Dry (D0) to Moderate

Drought (D1) conditions across southern Saskatchewan. In east-central Saskatchewan, Abnormally Dry (D0) and Moderate Drought (D1) conditions expanded, with a new Moderate Drought (D1) pocket emerging near Melfort. More precipitation is needed to alleviate topsoil moisture shortages and improve livestock water supply in southwest and east-central regions. Northern Saskatchewan also saw an expansion of Abnormally Dry (D0) to Severe Drought (D2), largely due to increasing precipitation deficits and low water flows.

September precipitation in Manitoba continued to be variable, with central Manitoba receiving less than 60% of normal precipitation, while the southeast region received over 200% of normal precipitation. Mean monthly temperatures were 3 to 5 degrees warmer than normal across the province. Abnormally Dry (D0) conditions slightly expanded across southern Manitoba, while in central and northern Manitoba conditions improved. Southwestern Manitoba received less than 85% of normal precipitation, while mid-month storms brought over 200 mm to southeastern Manitoba, leading to most areas receiving more than 150% of normal by month's end. In southern Manitoba, drought conditions varied. Most of the southeast remained drought-free due to high precipitation, resulting in standing water and significant harvest delays. However, Abnormally Dry (D0) conditions expanded in southwestern Manitoba towards Dauphin due to short-term precipitation deficits, and the southern Interlake region also saw Abnormally Dry (D0) conditions emerge due to precipitation deficits and low soil moisture.

At the end of the month, 58% of the Prairie Region was classified as Abnormally Dry (D0) or in Moderate to Severe Drought (D1 to D2), including 42% of the region's agricultural landscape.

## **Central Region (ON, QC)**

Southern Ontario and Quebec experienced drier-than-normal conditions in September, a departure from the trend of wetter conditions over the past 3 months. Parts of northwestern Ontario, southern Ontario and Quebec received less than 60% of normal precipitation, while only a few pockets of the Central Region recorded between 85% and 150% of normal precipitation. Mean monthly temperatures were near normal across the Central Region.

Parts of Southern Ontario received less than 40% of normal precipitation, which led to the addition of Abnormally Dry (D0) conditions due to short-term precipitation deficits. Northwestern Ontario also saw worsening drought, with Abnormally Dry (D0) conditions expanding south of Hudson Bay and a pocket of Moderate Drought (D1) forming around Thunder Bay. Similarly, Quebec faced worsening drought, with Moderate Drought (D1) added in northern Quebec and Moderate (D1) to Severe Drought (D2) expanding in the south. A Severe

Drought (D2) pocket emerged east of the St. Lawrence Seaway, and drought conditions expanded across the Gaspé Peninsula in southeast Quebec.

At the end of the month, 72% of the Central Region was classified as being in Abnormally Dry (D0) or in Severe Drought (D2), including 33% of the region's agricultural landscape.

## **Atlantic Region (NS, NB, PE, NL)**

Most of the Atlantic Region saw drier-than-normal conditions in September, with less than 60% of normal precipitation, except for southeastern Nova Scotia, which had between 85% and 150% of normal precipitation. Southern New Brunswick, southern Newfoundland, and parts of Labrador received less than 40% of normal precipitation, with western New Brunswick experiencing 17 days without precipitation. Woodstock had its 4th driest September, and Fredericton recorded its 6th driest, with only 31% of normal precipitation. Despite dry conditions, mean monthly temperatures were near normal across the region.

Due to increasing precipitation deficits, Abnormally Dry (D0) conditions expanded across the Maritimes, with Moderate Drought (D1) pockets developing around northern New Brunswick and Prince Edward Island (PEI). PEI is particularly dry, with limited precipitation, dry soil, and rising concerns about late-season wildfires. In Newfoundland, drought conditions also worsened, with Abnormally Dry (D0) expanded to cover the entire island and pockets of Moderate Drought (D1) conditions added in central and eastern areas of the island that received less than 40% of normal precipitation. In Labrador, drought also intensified as Abnormally Dry (D0) to Severe Drought (D2) conditions spread, with two Severe Drought (D2) pockets forming near Labrador City and Happy Valley-Goose Bay due to continued short and long-term precipitation deficits.

At the end of the month, 94% of the Atlantic Region was classified as Abnormally Dry (D0) or in Severe Drought (D2), including 86% of the region's agricultural landscape.

## **Northern Region (YT, NT)**

In September, precipitation remained below normal for much of the North especially throughout southwestern portions of the Northwest Territories. Eastern regions received above normal precipitation improving drought conditions. Temperatures were warmer than normal, with the northernmost areas of the Northwest Territories and the Yukon recording the warmest temperatures.

Drought conditions improved across large portions of the Northern region, although the southwestern portions of the Northwest Territories continued to be in Severe (D2) and Extreme (D3) drought. The majority of the Yukon saw improvements in drought conditions this month, with the removal of swaths of Abnormally Dry (D0) conditions from across the central Yukon and Moderate Drought (D1) conditions were removed in the northeastern Yukon. However, southern Yukon saw drought conditions slightly worsen, with the addition of Moderate Drought (D1) conditions in the southeast due to growing short-term precipitation deficits and low stream flows. Drought conditions across the Northwest Territories improved with the reduction of the extent of Abnormally Dry (D0) to Severe Drought (D2) and the removal of parts of Extreme Drought (D3). Significant reductions in Extreme Drought (D3) occurred along the NWT-Alberta border as near-normal precipitation helped alleviate some deficits. Nevertheless, Extreme Drought (D3) persisted around Fort Liard, Hay River, and Fort Simpson.

At the end of the month, 51% of the Northern Region was classified as Abnormally Dry (D0) or in Moderate to Extreme Drought (D1 to D3).