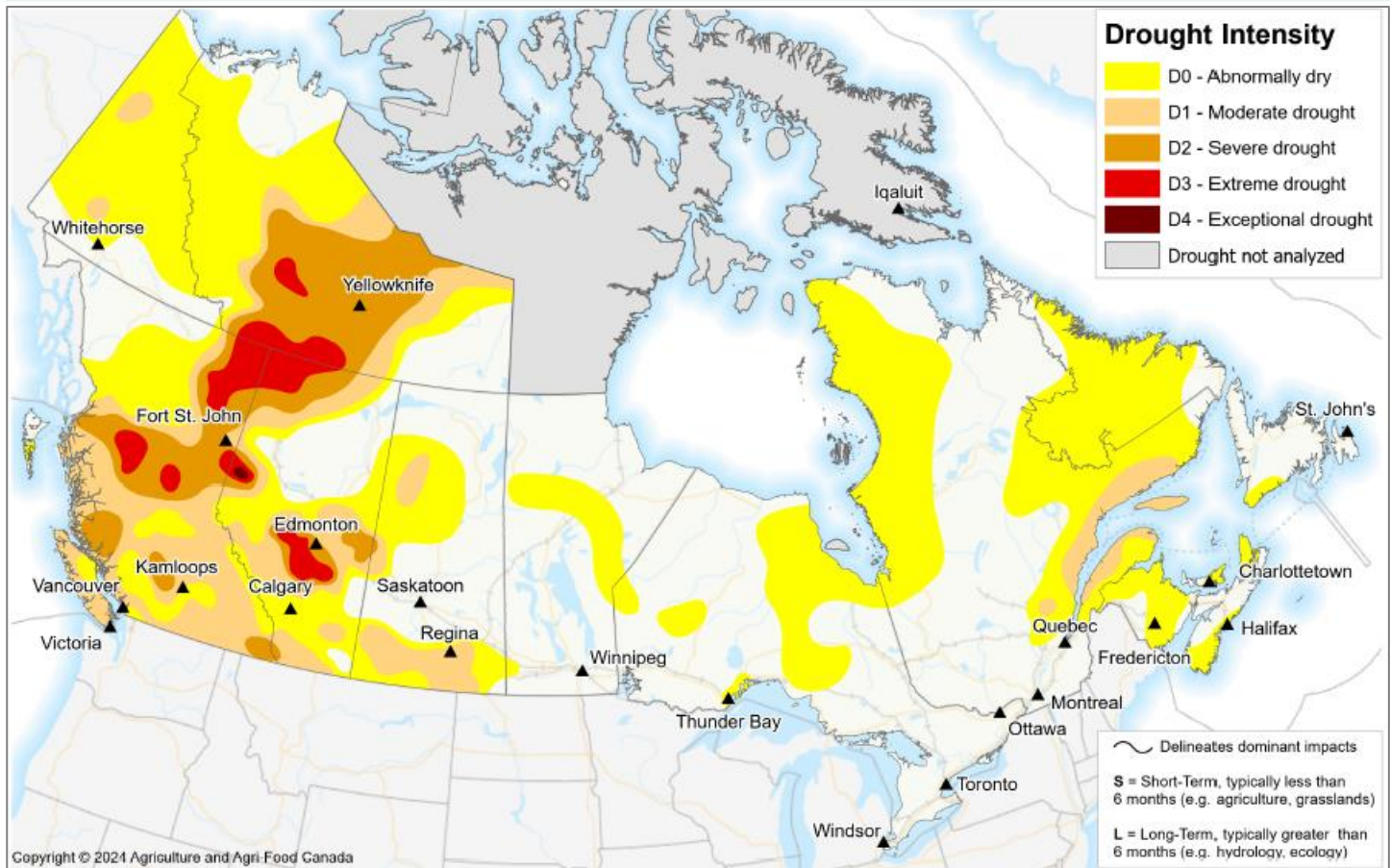


Canadian Drought Monitor

Conditions as of July 31, 2024



Precipitation throughout July was below normal across most of Canada, with large areas of Western Canada receiving less than 15mm of precipitation. However, southern Ontario, southern Quebec, and central parts of the Maritime provinces experienced above-normal precipitation, standing out as exceptions to the widespread dryness. In addition to drier than normal conditions, most of the country recorded above normal temperatures, with the most significant departures in southern British Columbia and western Alberta, where temperatures soared over 5 degrees above monthly normal.

The combination of warmer temperatures and below-normal precipitation in Western Canada led to the expansion of Abnormally Dry (D0) to Severe Drought (D2) conditions across northern



Manitoba, southern Saskatchewan, and most of Alberta and British Columbia. Large areas of British Columbia and the Prairies fell back into drought, with Extreme Drought (D3) conditions re-emerging in west-central Alberta. In Eastern Canada, drought conditions spread across parts of northwestern Ontario, Quebec, and Newfoundland. The Northwest Territories and the Yukon Territory also saw Abnormally Dry (D0) to Severe Drought (D2) conditions expand, with another pocket of Extreme Drought (D3) conditions emerging west of Great Slave Lake in the N.W.T.

At the end of the month, 59% of the country was classified as Abnormally Dry (D0) or in Moderate to Exceptional Drought (D1 to D4), including 67% of the country's agricultural landscape.

Pacific Region (BC)

In July, British Columbia experienced an overall expansion in drought conditions due to a province-wide heatwave and limited precipitation. Most areas received less than 40% of normal precipitation, except for pockets of the Cariboo region that received 60% to 115% of normal precipitation. The mainland's July temperatures were above normal, with the Cariboo, Thompson-Okanagan and Kootenay regions recording temperatures 4 degrees above normal. Southeastern regions underwent a prolonged dry period, recording less than 0.5mm of precipitation for 16 or more days in the second half of the month. Drought conditions worsened across Vancouver Island, the South Coast, Lower Mainland, Thompson-Okanagan and the Kootenay region. Conversely, northern British Columbia, especially the Northeast and the Cariboo- Nechako regions, saw slight improvement to drought conditions.

Southern British Columbia experienced an expansion of Abnormally Dry (D0) to Severe Drought (D2) conditions. On Vancouver Island, drought conditions worsened, prompting Nanaimo and surrounding communities to enforce stricter water restrictions. Across the South Coast and Lower Mainland short-term precipitation deficits and low streamflows contributed to the shift from Abnormally Dry (D0) to Moderate Drought (D1) conditions. In specific areas south of Bella Coola (within the South Coast region) and around Cranbrook (in the Southeast region), Severe Drought (D2) conditions expanded due to longer-term precipitation deficits and short-term dryness. Notably, Cranbrook recorded no precipitation in July, with nearby stations recording under 10% of normal precipitation.

In northern British Columbia, drought conditions improved. Both the Cariboo-Nechako region and the Northeast corner of the province, saw improvements, including the reduction of the two pockets of Extreme Drought (D3) near Prince George and Fort St. John due to recent precipitation. The Cariboo-Nechako region, which had been grappling with Extreme Drought (D3) conditions, saw some relief as it received between 85% and 150% of its normal

precipitation. Above-normal rainfall has helped to ameliorate soil moisture deficits, allowing for the removal of Extreme Drought (D3) in areas west of Prince George. In contrast, the Northeast recorded less than 60% of its normal precipitation. However, thanks to above-average rainfall in June and the accumulation of 30mm to 40mm of rain in July around Fort St. John, the Extreme Drought (D3) conditions have been lifted north of the city. Despite these improvements, the rest of northern British Columbia continued to experience Moderate Drought (D1) to Severe Drought (D2) conditions, with ongoing precipitation shortfalls leading to persistent water restrictions and increased wildfire risk.

At the end of the month, 84% of the Pacific Region was classified as Abnormally Dry (D0) or in Moderate to Extreme Drought (D1 to D3), including 98% of the region's agricultural landscape.

Prairie Region (AB, SK, MB)

Following good precipitation and tremendous drought improvement for much of the Prairie region throughout the spring and early summer, in July conditions took a step back with expansion of dry and drought regions. Most of the Prairie region received well below-normal precipitation in July, with many areas recording less than 40mm of precipitation and extended periods without any precipitation. However, some regions in north-central Alberta and southeastern Manitoba were exceptions, receiving between 50 and 175mm of precipitation. In addition to extremely low precipitation, the region went through several extended heat waves resulting in rapid drying of soils. South-central Alberta and Saskatchewan were especially dry this month, with less than 10mm of rainfall. Mean monthly temperatures varied this month with the western Prairies experiencing warmer than normal temperatures, while the eastern Prairies had temperatures closer to normal. Western Alberta's temperatures were over 4 degrees above the norm, whereas central Saskatchewan and Manitoba experienced up to 2 degrees above their usual temperatures.

Precipitation varied across Alberta in July, with much of the province recording less than 60% of normal precipitation. However, small areas in north-central and northeastern Alberta were the exception, recording 85% to 200% of normal precipitation. Mean-monthly temperatures were warmer than normal across the province, with some areas recording temperatures more than 5 degrees above normal. Alberta also experienced a few heat events with the warmest temperatures being recorded from southwestern into central Alberta.

Abnormally Dry (D0) and Moderate Drought (D1) conditions expanded across southern Alberta. Most of the region received less than 20mm of precipitation this month, and some south-central areas saw less than 10mm. Well-below normal precipitation combined with recurring heat events led to a decline in soil moisture and increased heat stress in crops. Consequently,

Moderate Drought (D1) was added west of Lethbridge toward the Alberta – U.S.A border, and around Brooks. Abnormally Dry (D0) conditions expanded from the Foothills region, through Calgary and toward Medicine Hat. Central Alberta is facing the most severe deterioration in drought conditions with Moderate Drought (D1) to Severe Drought (D2) expanding and a pocket of Extreme Drought (D3) emerging west of Edmonton toward Red Deer. This has resulted in reports of heat stress and a rapid decline in soil moisture. Additionally, communities such as Sylvan Lake are facing reduced well refill rates due to long-term drought conditions and limited short-term precipitation. Northern Alberta experienced a mixture of changes to drought conditions. Above-normal precipitation in the north-central area has alleviated some moisture deficits, leading to the reduction of drought severity and extent. The northwestern corner of Alberta also saw improved conditions which led to the reduction of Extreme Drought (D3) conditions. The Peace region remained unchanged, with only minor adjustments made to the pockets of Extreme Drought (D3) and Exceptional Drought (D4) around Grande Prairie.

Saskatchewan experienced below-normal precipitation this month, with much of the province reporting less than 60% of normal precipitation. Mean monthly temperatures were cooler to near normal across eastern parts of the province, while some western areas recorded temperatures 2 to 3 degrees above normal. Warmer June temperatures and short-term precipitation deficits contributed to a slight expansion of Abnormally Dry (D0) and Moderate Drought (D1) conditions.

Pockets of southern Saskatchewan faced dry-spell conditions, receiving less than 0.5mm of precipitation for the past 25 to 27 days (about 4 weeks). Parts of the southeast and north-central regions recorded their driest July on record, while La Ronge and Meadow Lake in northern Saskatchewan recorded their warmest July. Recent heat and the lack of precipitation have resulted in declining topsoil moisture conditions, particularly in the southwest resulting in the expansion of Abnormally Dry (D0) and Moderate Drought (D1) conditions. Mid-July heat events worsened soil moisture deficits in areas still recovering from long-term drought. Despite worsening soil moisture conditions, lakes and reservoirs across the province remain near-normal for this time of year, with Lake Diefenbaker almost 2 meters higher than last year. Northern Saskatchewan also experienced worsening drought this month due to limited precipitation. The soil absorbed the rainfall, leaving insufficient moisture to prevent grass from drying out and wildfires from spreading north of Prince Albert. Due to limited precipitation, low soil moisture and wildfire activity Abnormally Dry (D0) conditions in northeast Saskatchewan expanded and Moderate Drought (D1) conditions emerged around Buffalo Narrows.

Manitoba received varied precipitation in June, with the eastern half of the province receiving 85% to 150% of normal precipitation, while the southwestern and northwestern regions recorded less than 60% of normal precipitation. The province's temperatures largely remained

close to average, sparing Manitoba from the frequent heat events and consecutive warm days experienced by the rest of Western Canada. These near-normal temperature and precipitation conditions led to only minor adjustments in drought conditions throughout the month. In northern Manitoba Abnormally Dry (D0) conditions expanded because of limited precipitation of the past two months. In southern Manitoba drought conditions continued to improve with Abnormally Dry (D0) conditions around Swan River removed due to recent above-normal precipitation alleviating short-term dryness.

At the end of the month, 67% of the Prairie Region was classified as Abnormally Dry (D0) or in Moderate to Exceptional Drought (D1 to D4), including 87% of the region's agricultural landscape.

Central Region (ON, QC)

In July, southern Ontario and parts of southern Quebec experienced near-normal to above-normal precipitation, recording between 85% to 150% of normal precipitation. The remnants of Hurricane Beryl brought more than 200% of normal precipitation to localised areas in southern Ontario, with some areas recording more than 100mm of precipitation. Conversely, the majority northwestern Ontario and northern Quebec recorded less than 85% of normal precipitation. Mean monthly temperatures were generally near-normal across the Central Region, though some localised areas in southern Ontario and around Hudson Bay saw temperatures 2 degrees below normal.

Short-term precipitation deficits grew across the Central Region this month, leading to the addition of Abnormally Dry (D0) conditions from northwestern Quebec and James Bay southward toward Lake Superior. The rest of northwestern Ontario saw improvement in drought conditions, resulting in the reduction of the pocket of Abnormally Dry (D0) conditions northwest of Dryden. Southern Ontario's heavy rainfall, a result of Hurricane Beryl's remnants, caused flooding in localized areas, which helped alleviate dry conditions and led to the removal of Abnormally Dry (D0) conditions. In southern Quebec, particularly the Gaspé Peninsula, drier conditions and extreme mid-July heat events contributed to growing precipitation deficits, resulting in the expansion of Moderate Drought (D1) conditions across the St. Lawrence Seaway. Additionally, the previously added pocket of Moderate Drought (D1) at the northernmost tip of Quebec was removed.

At the end of the month, 53 % of the Central Region was classified as Abnormally Dry (D0) or in Moderate Drought (D1), including 15% of the region's agricultural landscape.

Atlantic Region (NS, NB, PE, NL)

Precipitation in June was variable across the Atlantic region, with parts of New Brunswick, Prince Edward Island and Newfoundland reporting between 85% and 200% of normal precipitation. Southern New Brunswick and Nova Scotia experienced over 100mm of precipitation due to storms and the remnants of Hurricane Beryl, causing soil saturation along the coast and flash floods in certain areas. Temperatures across Atlantic Canada were also variable, with Labrador and Newfoundland experiencing warmer than normal temperatures. The northeast coast of Labrador recorded temperatures over 3 degrees above normal, with Nain recording its warmest July. Channel-Port Aux Basques, at the southern tip of Newfoundland, also recorded its warmest July. In contrast, the Maritimes had near-normal temperatures, and western Nova Scotia recorded temperatures 2 to 3 degrees below normal.

Recent precipitation though the Maritimes led to Abnormally Dry (D0) conditions being reduced across southern Nova Scotia and western P.E.I. However, a small pocket of Abnormally Dry (D0) conditions emerged in northern Nova Scotia. Labrador received less than 85% of normal precipitation. Dry, windy conditions along with thunderstorms in western Labrador sparked and spread wildfires. Due to ongoing precipitation deficits, dry conditions, and wildfires Abnormally Dry (D0) conditions expanded across most of Labrador, while Moderate Drought (D1) conditions slightly expanded in southern Labrador. Drought conditions remained unchanged across Newfoundland, as storm systems brought in more than 60% of normal precipitation to most areas, which was enough to maintain the almost abnormally dry or drought-free conditions across the island, with the exception of the pocket of Abnormally Dry (D0) conditions around Channel-Port Aux Basques, at the southern tip of Newfoundland which remained from last month.

At the end of the month, 36% of the Atlantic Region was classified as Abnormally Dry (D0) or in Moderate Drought (D1), including 3% of the region's agricultural landscape.

Northern Region (YT, NT)

Temperatures across the Northern Region were warmer than normal in July. Most of the Northwest Territories and the Yukon recorded temperatures 2 to 4 degrees above normal, with some regions recording their warmest July on record. Below normal precipitation was received throughout most of the northern region this past month with East central regions of the Northwest Territories received significantly low precipitation.

Drought conditions in the Northern Region worsened this month due to growing precipitation deficits and declining water levels in major rivers and lakes. The Northwest Territories experienced an expansion

of Abnormally Dry (D0) to Severe Drought (D2) conditions. Precipitation deficits continued to grow throughout the region with Yellowknife recording its 3rd driest July on record. Water levels are extremely low, with Great Bear Lake and Great Slave Lake nearing their lowest-ever recorded levels. Most locations along the Mackenzie River are also well below or at the lowest recorded levels for this time of year. Due to increasing precipitation deficits and low water levels, Abnormally Dry (D0) conditions were expanded northward over Great Bear Lake, N.W.T., and northern Yukon. Additionally, Extreme Drought (D3) conditions developed along the N.W.T.–Alberta border, and a pocket of Extreme Drought (D3) conditions emerged northeast of Fort Simpson. In the Yukon, drought conditions worsened slightly, with Abnormally Dry (D0) conditions spreading across northern Yukon, east-central Yukon around the Mackenzie Mountains, and southern Yukon. However, the area of Moderate Drought (D1) near the Yukon–N.W.T. border was removed as short-term precipitation deficits in that area were alleviated over the month.

At the end of the month, 53% of the Northern Region was classified as Abnormally Dry (D0) or in Moderate to Extreme Drought (D1 to D3).