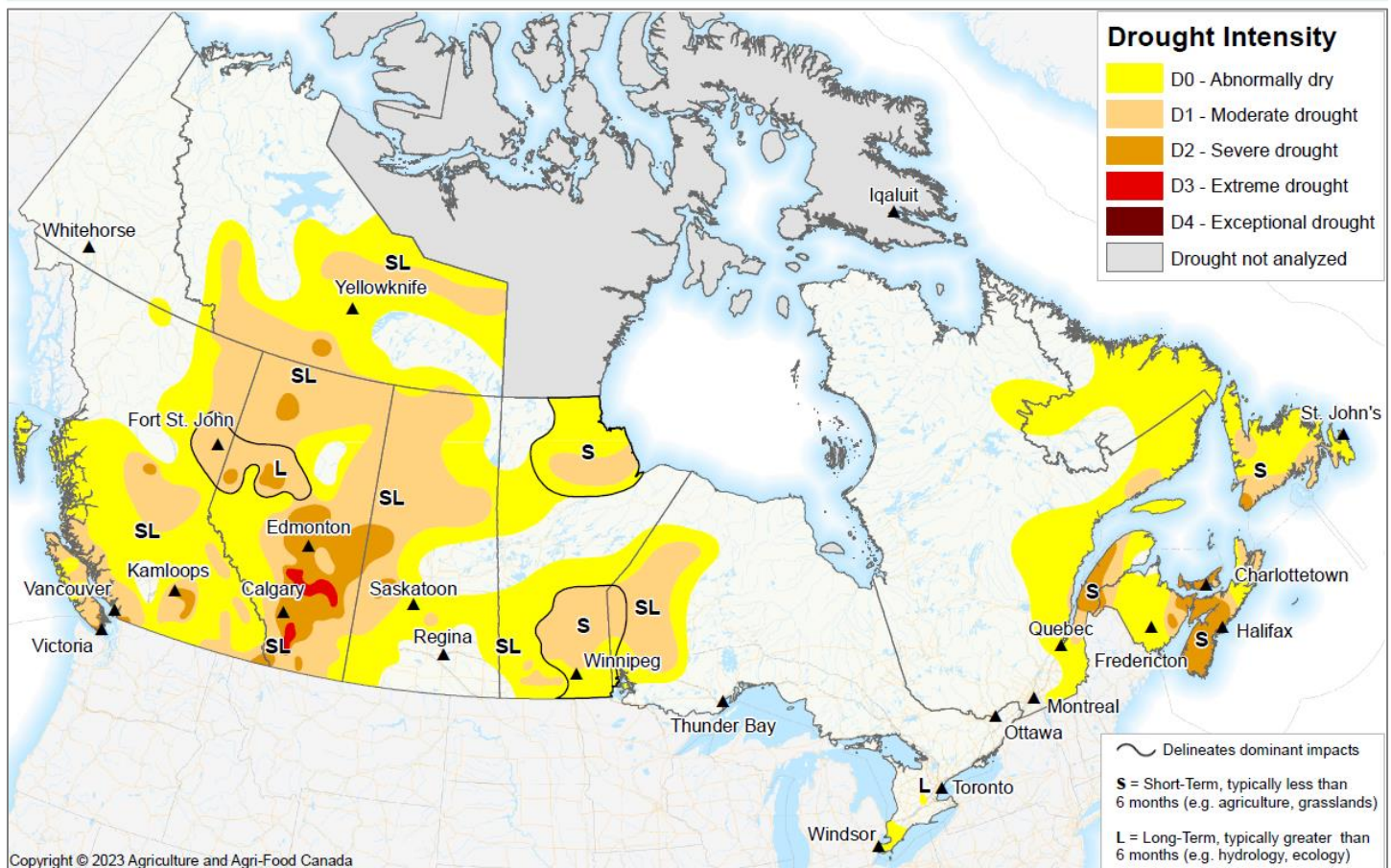


Canadian Drought Monitor

Conditions as of May 31, 2023



The month of May was marked with significant heat and continued dryness in many regions of the country. A number of wildfires were reported across both Western and Eastern Canada this month, in addition to early-month flooding in B.C. and late-month frost in the Atlantic Region. Alberta experienced historically active wildfires this spring as vegetation was late to green-up from a delayed warm-up in April. The driest conditions across the country this month were reported along both east and west coasts, northern Alberta, northwestern Ontario and eastern Quebec. Temperatures were significantly warmer than normal in May, with only southern Ontario and parts of Atlantic Canada reporting slightly cooler than normal monthly temperatures. Extreme Drought was added to parts of Alberta, the first D3 designation in Canada since January 2023.



At the end of the month, 47% of the country was classified as Abnormally Dry (D0) or in Moderate to Extreme Drought (D1 to D3), including 70% of the country's agricultural landscape. There was no Exceptional Drought (D4) reported this month.

Pacific Region (BC)

Conditions across the Pacific Region were generally warm and dry in May, with the exception of a few areas in the Interior. Many communities in B.C. recorded their warmest May on record, including Victoria, Penticton, Cranbrook and Fort St. John. A number of locations also reported drier than normal conditions this month including Abbotsford which experienced their 5th driest May on record. Only a few areas reported wetter than normal conditions this month, including Penticton and Fort St. John.

Overall, much of the west coast reported significantly below-normal precipitation this month, continuing a longer-term trend of dry conditions since August 2022. Much of Vancouver Island and the Lower Mainland also reported dry conditions this month as these areas received less than 40% of their normal precipitation. Moderate Drought (D1) remained across much of the west coast and a pocket of Severe Drought (D2) was designated around Vancouver towards Abbotsford as a result.

Warmer than normal temperatures this month resulted in significant snowmelt across Interior B.C., which initially led to mid-month flooding, but ultimately the month ended with extremely low streamflows and water levels. Precipitation has been below normal in the past three months, with only 50-75% of normal precipitation reported. These impacts led to the expansion of Moderate (D1) and Severe Drought (D2) across the Okanagan. Dry conditions were somewhat alleviated further east towards the Rocky Mountains as only a few pockets of Moderate Drought (D1) remained.

After a month of significantly below-normal precipitation, Abnormally Dry (D0) conditions were expanded northward from Haida Gwaii towards Fort Nelson in northeastern B.C. Moderate Drought (D1) was also designated around Prince George, with a small pocket of Severe Drought (D2) around Fort St. James.

At the end of the month, 71% of the Pacific Region was considered Abnormally Dry (D0) or in Moderate to Severe Drought (D1 to D2), including 94% of the region's agricultural landscape.

Prairie Region (AB, SK, MB)

The Prairie Region experienced a significantly dry and warm May, especially across southern and central parts of Alberta and southern parts of Manitoba. Slow vegetative green-up from a late spring thaw contributed to a record number of wildfires across northern parts of the region this month as well, with some areas reporting the most active spring on record. Average temperatures were reported between 3 and greater than 5 degrees above normal across the region this month, with a number of locations reporting temperatures of more than 7 degrees above normal.

Dry conditions in Alberta were centred in southern, east central and northern parts of the province where less than 40% of normal precipitation fell in May. Soil moisture reserves are reported as extremely low across much of the province; because of these low reserves, crops will require timely rains to sustain them throughout the growing season. Extremely low amounts of precipitation fell between Lethbridge and Edmonton over the past 6 months, in addition to reports of very short soil moisture, dugouts drying out and the need to haul or drill for water. Given these impacts, and after months of persistent Severe Drought (D2) in the area, conditions have led to the designation of two Extreme Drought (D3) pockets. Despite mid-month precipitation across parts of the Peace Region, longer-term precipitation deficits and impacts persisted. As a result, Moderate Drought (D1) and a couple pockets of Severe Drought (D2) remained in the area. Dry conditions in northern Alberta, and the emergence of wildfires, led to the expansion of Moderate Drought (D1). More than 1,000,000 hectares was reportedly burned in Alberta by the end of the month, leading to the most active spring wildfire season on record.

The drought situation in Saskatchewan changed slightly this month compared to April, though the pattern remained the same: near- to above-normal precipitation fell in southern parts of the province while the north remained dry. The significant dryness in northern areas of the province led to evacuations from wildfires, with many areas reporting less than 60% of normal precipitation in the past 3 to 6 months. Due to this ongoing precipitation deficit, Moderate Drought (D1) was expanded as well as a slight expansion of Severe Drought (D2) towards Meadow Lake. Western parts of the province also continued to deal with impacts from the dry conditions as producers reported a lack of spring runoff and limited water availability. In contrast, a persistent jet stream allowed several storm systems to pass into southern parts of the province, bringing sufficient moisture to the area. This allowed Abnormally Dry (D0) conditions to reduce from the southeastern corner of the province towards Assiniboia. Dry conditions in Manitoba shifted slightly eastward this month, as southeastern and northeastern parts of the province received limited precipitation. These areas saw less than

40% of normal precipitation in May, while southwestern Manitoba saw a wide range of precipitation: anywhere between 60 and 115% of the expected monthly normal. This led to an expansion of Moderate Drought (D1) in the Interlake area and along the Manitoba/Ontario border. Additionally, similar to parts of Alberta and Saskatchewan, wildfires emerged across central parts of Manitoba. Concerns for flooding along the Red River also faded this month with minimal impacts reported.

At the end of the month, 79% of the Prairie Region was classified as Abnormally Dry (D0) or in Moderate to Extreme Drought (D1 to D3), including 82% of the region's agricultural landscape. 9% of Severe to Extreme Drought (D2 to D3) persisted this month, compared to 4% from last month.

Central Region (ON, QC)

Unlike recent months, May was relatively dry across the Central Region: southern Ontario and western Quebec received less than 40% of normal precipitation. This is contrary to the previous 3-month average where much of the region received between 85-150% of normal precipitation. Significant drought concerns centred primarily along the Gaspé Peninsula in western Quebec as the area only received 40-60% of their average precipitation since March. This led to the rapid development of both Moderate (D1) and Severe Drought (D2) stretching from northern parts of the peninsula towards Quebec City. A large pocket of Moderate Drought (D1) also expanded into northwestern Ontario as less than 25% of normal precipitation fell this month and 25-50% of normal precipitation since March. Southern Ontario also experienced significant dryness this month, however with the ample precipitation in the past 3 to 6 months, only a small section of Abnormally Dry (D0) conditions emerged. A small pocket of D0 also re-emerged around the Kitchener-Waterloo area as long-term impacts were still being felt.

At the end of the month, 21% of the Central Region was classified as Abnormally Dry (D0) or in Moderate to Severe Drought (D1 to D2), including 22% of the region's agricultural landscape.

Atlantic Region (NS, NB, PE, NL)

The month of May was significantly dry across southern parts the Atlantic Region, with southeastern New Brunswick, western P.E.I. as well as north and western Nova Scotia reporting less than 50% of their average monthly precipitation. This led to the fourth straight month of below-normal precipitation for the region, with less than 60% of normal precipitation reported over this period. The west coast of Newfoundland also saw dry May conditions as only 42% of

normal precipitation fell; this includes the communities of Port-aux-Basque, Cormack and Stephenville. Significant wildfires emerged across parts of Nova Scotia and southern New Brunswick this month, leading to evacuations, school closures and damage to local infrastructure. Although the temperatures averaged out to near-seasonal for the month of May, the end of the month saw significantly warm temperatures exceeding 30 degrees Celsius. As a result of the continued severe dryness, Moderate Drought (D1) expanded across southern New Brunswick, southern Nova Scotia, Cape Breton as well as south and western Newfoundland. A large pocket of Severe Drought (D2) was also designated across much of P.E.I. and south and central Nova Scotia.

At the end of the month, 76% of the Atlantic Region was classified as Abnormally Dry (D0) or in Moderate to Severe Drought (D1 to D2), including 99% of the region's agricultural landscape. 20% of Moderate to Severe Drought (D1 to D2) persisted in the region, up by 16% from last month.

Northern Region (YT, NT)

The entire Northern Region reported warmer than normal temperatures this month, with many areas seeing temperatures more than 5 degrees above normal. Although most of the region saw near- to above-normal precipitation, southern and eastern Northwest Territories continued to experience significantly dry conditions: some areas reported less than 25% of normal precipitation. This continued the dry trend over the past 3 to 12 months, where these areas received between 25 and 75% of normal precipitation. Given the significant short- and long-term precipitation deficits, Moderate Drought (D1) was added to these areas, along with a small pocket of Severe Drought (D2) around Hay River in southern NWT. The risk of wildfires remained a concern by the end of the month. In contrast, parts of the Yukon reported higher than normal precipitation in May: the community of Mayo in central Yukon received more than double their average May precipitation.

At the end of the month, 27% of the Northern Region was classified as Abnormally Dry (D0) or in Moderate to Severe Drought (D1 to D2).

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