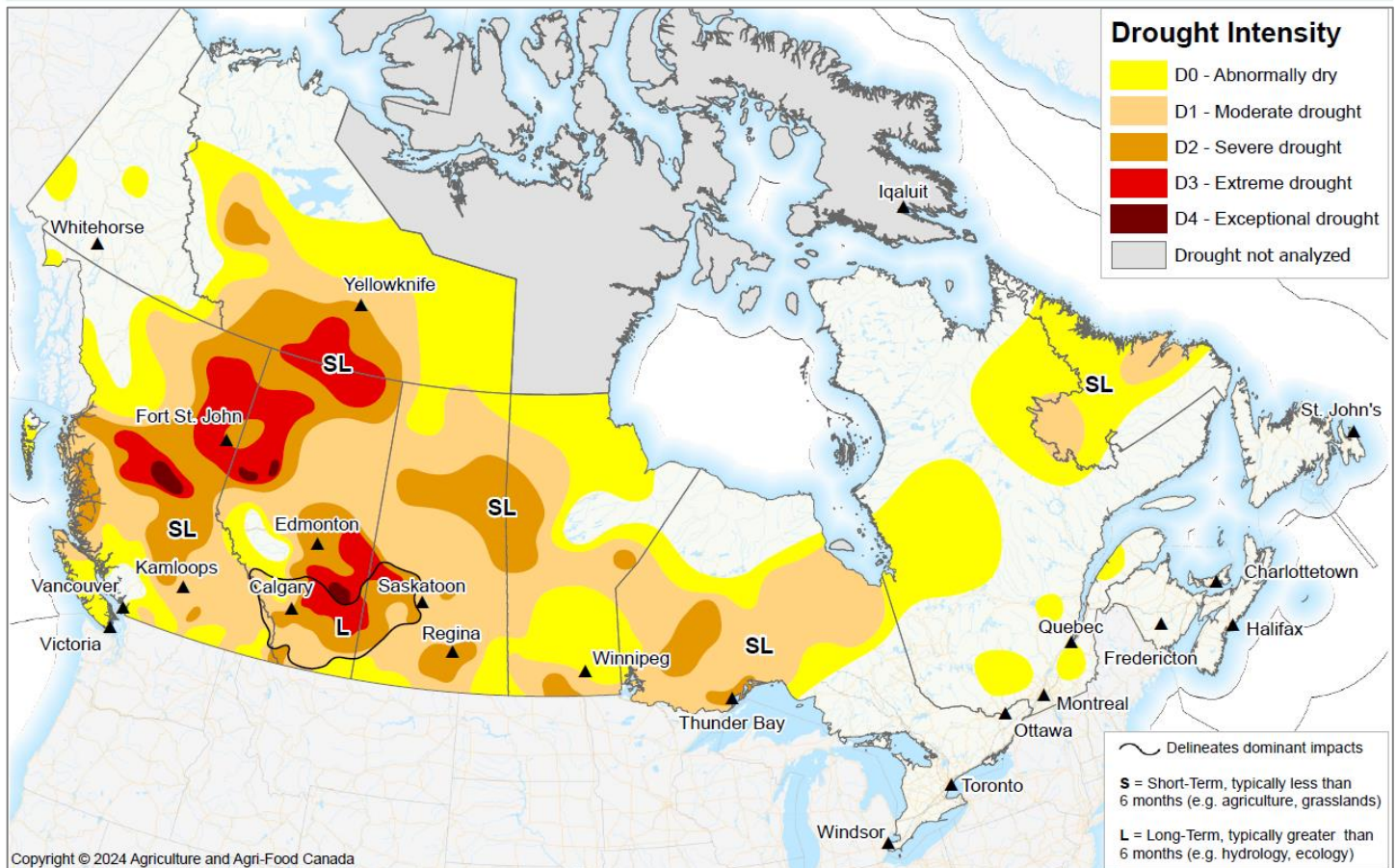


# Canadian Drought Monitor

Conditions as of April 30, 2024



Temperatures in April trended slightly warmer than normal, with Northern Canada and northern parts of the Prairie Region experiencing the warmest temperatures on average. Monthly precipitation, on the other hand, varied across the country, with a mixture of above-normal, near-normal and well below-normal precipitation. Central Ontario and Quebec as well as much of the Prairie Region received more than 150% of normal monthly precipitation while Northwestern Ontario and central British Columbia trended drier than normal. However, despite the above-normal precipitation this month, longer-term deficits persisted across the Prairies and parts of Northern Canada. Multi-year precipitation deficits remained the concern as very low snowpack was reported throughout much of Western Canada. Both Extreme (D3)

and Exceptional Drought (D4) persisted across parts of Alberta and B.C. as well as large areas of Severe Drought (D2) across much of Western Canada.

At the end of the month, 61% of the country was classified as Abnormally Dry (D0) or in Moderate to Exceptional Drought (D1 to D4), including 75% of the country's agricultural landscape.

## **Pacific Region (BC)**

Overall drought conditions worsened slightly across the Pacific Region this month. Vancouver Island and the Lower Mainland saw an expansion of Abnormally Dry (D0) to Severe Drought (D2) conditions, while central and northern parts of the province saw an expansion of Extreme Drought (D3) conditions. Much of the province received below-normal precipitation this month, with central British Columbia receiving only 40 to 60% of normal precipitation. As of the beginning of April, the province reported the lowest snowpack on record since 1970 at 63% of normal, which could lead to an increased risk for drought in the upcoming spring and summer months.

Significant drought conditions impacted communities in central and northern parts of B.C. this month: stream flows in the Prince George area continued to report at significantly lower levels than normal. The community of Chetwynd, west of Dawson Creek in the Peace River region in northeastern B.C. was forced to briefly evacuate due to a nearby early season wildfire exacerbated by a lack of soil moisture and long-term precipitation deficits. The area stretching across Central British Columbia, including Prince George, Quesnel and Williams Lake was identified as an area of concern due to ongoing low water levels and reported low snowpack; as a result, Severe Drought (D2) conditions were expanded and Extreme (D3) to Exceptional Drought (D4) remained in place.

Elsewhere across the province, drought changes were varied. Southern B.C. saw a slight expansion of Abnormally Dry (D0) conditions across Vancouver Island and the Lower Mainland. At the start of April, river basins in these areas recorded snowpack levels ranging from 27 to 53% of normal, whereas river basins in the southeast regions were slightly better off, recording between 70 and 79% of normal seasonal snowpack levels. Impacts have been noted including snowmelt disappearing faster than normal, and marshy areas and wetlands reporting as drier than normal. Additionally, water levels at Osoyoos Lake in the Okanagan Region have been maintained at higher elevations than normal in an attempt to counteract lower spring run-off due to lower-than-normal snowpacks. Given these impacts, Abnormally Dry (D0) to Moderate Drought (D1) conditions remained or expanded across Vancouver Island and the Lower

Mainland. In contrast, Moderate Drought (D1) was slightly reduced across southeastern parts of B.C. along the Canada-U.S. border.

At the end of the month, 89% of the Pacific Region was classified as Abnormally Dry (D0) or in Moderate to Exceptional Drought (D1 to D4), including 99% of the region's agricultural landscape.

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

Precipitation generally trended near to above normal across the Prairie region in April, with pockets of below-normal monthly precipitation reported in south-central Saskatchewan as well as central and northwestern Alberta. This meant that swathes of the region saw upwards of 150% of normal April precipitation in between pockets of precipitation less than 60% of normal. Accumulated April precipitation varied between 0 to 50 mm across most of the region except for Alberta's Rocky Mountains, which reported over 75 mm of precipitation this month. Mean monthly temperatures were warmer than normal, with parts of the Rocky Mountains and northern parts of the Region reporting more than 3 degrees warmer than normal.

Much of Alberta received higher than normal precipitation in April except for central and northwestern areas which reported below- to well below-normal monthly precipitation. Precipitation deficits continued to grow across the Peace Region in northwestern Alberta, while long-term deficits began to alleviate across the heavily impacted drought areas in southern Alberta. However, southern Alberta continued to face concerns for water supplies: many local jurisdictions have implemented water restrictions for municipal use and irrigation purposes, with the hope of reducing water consumption going into the 2024 summer season. Reservoirs and streamflows continued to report low levels but snow and rainfall this month helped to alleviate short-term concerns going into the growing season. Significant long-term moisture deficits remained but slightly improved this month due to the timely precipitation. This led to a small reduction of Severe (D2), Extreme (D3) and Exceptional Drought (D4) west and north of Medicine Hat. However, precipitation was lacking in parts of northern Alberta this month with deficits growing particularly in the Peace Region. This area has received less than 60% of normal precipitation since July of last year, indicated by limited snowpack, low streamflows and an early start to the wildfire season. Fire restrictions have been implemented across the entire forest protection area in the province due to the extremely dry conditions, with the exception of the Calgary Forest Protection Zone. As a result, Extreme Drought (D3) persisted and two small pockets of Exceptional Drought (D4) were added. Nearly all of Alberta is at risk of significant drought impacts with a mixture of both short- and long-term deficits plaguing large

swaths of the province. Significant precipitation is still needed to see many of these impacts subside, especially regarding longer-term impacts across the province.

Precipitation across most of the agricultural regions of Saskatchewan was split between below-normal and near-normal monthly precipitation. West-central and south-central areas received less than 60% of normal while the rest of agricultural Saskatchewan received between 85 to 115% of normal. Meanwhile, the province's northern region received above-normal precipitation this month, with a mid-month rain event turning into a snow event for a few spots along the northern grain belt. April's mean monthly temperatures were near normal for most of Saskatchewan and trended warmer further north in the province. Recent snowfall helped fill some of the province's reservoirs, with only 6 out of 45 major reservoirs not expected to fill, located in provinces southwest. Additionally, Lake Diefenbaker, which was of significant concern this time last year, is currently 1 meter higher than it was last year as a result of conservative water management. This equates to slightly above historical mean or about 80% full, indicating slight improvements to long-term drought. However, concern remained for limited snowmelt leading to the Saskatchewan Water Security Agency temporarily surcharging some reservoirs to prepare for increased irrigation use in the spring and summer seasons. Drought changes were minor this month across Saskatchewan, with slight reductions to long-term drought in west-central parts of the province and a slight increase in Severe Drought (D2) in southern Saskatchewan, both due to either improved or degraded short-term moisture conditions, respectively. Northern Saskatchewan also saw a slight expansion of Severe Drought (D2) towards La Ronge due to long-term precipitation deficits, warm temperatures and low streamflows.

Precipitation across Manitoba was generally above normal, with much of the province receiving more than 150% of normal precipitation this month. Mid-month storms brought in much needed precipitation and snowfall across the province. Mean monthly temperatures were near normal for most of the province, with northern Manitoba experiencing temperatures over 3 degrees above normal. The warmer than normal temperatures led to early snowmelt and low snow cover in the first two weeks of April. Frost depths across the province were shallower than normal due to above-normal winter temperatures, which could be good news for the province in the upcoming months as shallower frost depths potentially allow for more infiltration of melt water. Southern Manitoba saw improvements to drought conditions including a reduction to Moderate (D1) and Severe Drought (D2) and the removal of Extreme Drought (D3) due to recent short-term precipitation events, a lack of drought impacts reported and improvements to long-term precipitation deficits. Manitoba went into winter with better conditions than Alberta and Saskatchewan and, as such, had a 'carry over effect' that conserved more soil moisture. However, southern Manitoba is still vulnerable to drought conditions and

will be closely monitored for changes this upcoming spring and summer. Northwestern Manitoba is facing growing concerns for earlier-than-normal wildfire season due to ongoing dry conditions and minimal winter snowfall. Provincial drought codes were worse than those reported in 2021 and wildfires have already been reported this month. As a result, Severe Drought (D2) persisted this month and will be monitored for further impacts and increased drought severity if required.

At the end of the month, 95% of the Prairie Region was classified as Abnormally Dry (D0) or in Moderate to Exceptional Drought (D1 to D4), including 99% of the region's agricultural landscape.

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

April was a wet month across much of the Central Region, with a large portion of Ontario and parts of southern Quebec receiving more than 200% of normal monthly precipitation. Only the Gaspé Peninsula in southeastern Quebec and parts of northwestern Ontario reported below-normal precipitation this month. Mean monthly temperatures across the region were near normal.

Overall conditions improved across the region, with some communities reporting short-term moisture surpluses that have delayed agricultural operations for some farmers due to muddy conditions. The above-normal precipitation led to a significant decrease in Abnormally Dry (D0) conditions in south and central Ontario as well as slight improvement to Abnormally Dry (D0) and Moderate Drought (D1) in Northwestern Ontario. Pockets of Severe Drought (D2) remained across parts of Northwestern Ontario, however, due to lingering long-term precipitation deficits. Only small pockets of Abnormally Dry (D0) conditions remained in south and central Quebec as these areas continued to experience minor short-term precipitation deficits.

At the end of the month, 40% of the Central Region was classified as Abnormally Dry (D0) or in Moderate to Severe Drought (D1 to D2), including 15% of the region's agricultural landscape.

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

Conditions across the Atlantic Region varied in April, with the Maritime provinces receiving below-normal monthly precipitation but Newfoundland and Labrador reporting near- to above-normal precipitation. Low precipitation dominated across New Brunswick, Nova Scotia and P.E.I., with only two significant storm systems passing through this month. P.E.I., southern New

Brunswick and parts of Nova Scotia reported less than 60% of normal precipitation and no more than 60 mm of accumulated precipitation for April. Mean monthly temperatures were slightly warmer than normal this month, reporting temperatures 0 to 2 degrees warmer than normal.

Despite the drier than normal conditions across much of the Atlantic Region in April in addition to low snowfall and warmer than normal temperatures during the winter season, longer-term precipitation trends were still much above normal. This prevented the formation of Abnormally Dry (D0) regions, but these areas will be monitored and re-evaluated in case these dry trends persist into May. Consistent moisture over the next few months will be needed to maintain current drought-free conditions. Abnormally Dry (D0) and Moderate Drought (D1) conditions across Labrador reduced in size this month as long-term precipitation deficits started to improve.

At the end of the month, 39% of the Atlantic Region was classified as Abnormally Dry (D0) or in Moderate Drought (D1).

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

Temperatures across Northern Canada were above normal this month, with many stations reporting temperatures more than 4 degrees warmer than normal. Precipitation was varied in April, as most of the region reported near- to above-normal precipitation except for stations in and around Yellowknife; these stations reported significantly lower than normal precipitation this month. Drought changes this month were minimal, with slight adjustments to Abnormally Dry (D0) and Moderate Drought (D1) pockets across the region and the addition of a Severe Drought (D2) pocket between the Franklin and Mackenzie Mountains in west-central Northwest Territories.

Northern Yukon faced growing concerns with spring flooding due to above-normal snowpack in many river basins. As of April 1, the Porcupine and Peel River Basin recorded 166% and 140% above historic median snowpack levels, respectively. In contrast, southern and central Yukon reported average to slightly below-average snowpacks. In the Northwest Territories, concerns were around hot and dry conditions including the risk of wildfires in southern parts of the territory. In 2023, large swaths in the southern parts of the territory were burned and some of those fires continued to smolder underground throughout the winter season. Near-normal precipitation will be needed in the upcoming months to ease current drought conditions and replenish soil moisture in order to reduce wildfire risk.

At the end of the month, 43% of the Northern Region was classified as Abnormally Dry (D0) or in Moderate to Extreme Drought (D1 to D3).

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