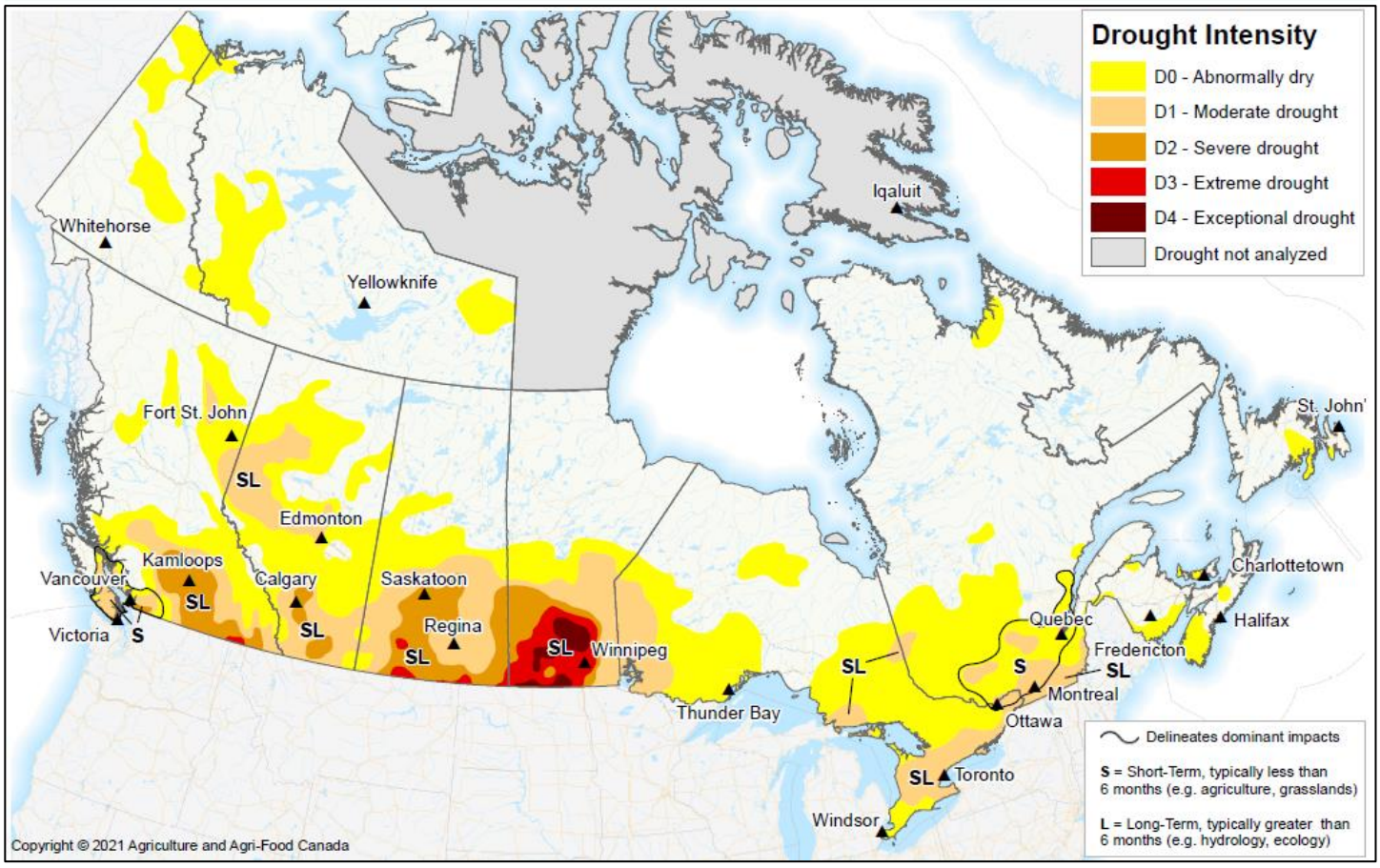
Canadian Drought Monitor

Conditions as of June 30, 2021



Drought conditions across much of the agricultural landscape of Canada worsened in June. Although moderate precipitation amounts were recorded in numerous locations, dry spring conditions, elevated temperatures and strong winds depleted excess soil moisture.

Below-normal precipitation and record-breaking high temperatures plagued Interior British Columbia, which exacerbated previous dry and drought conditions in the Pacific region. The Prairie provinces saw a similar worsening of drought conditions with below-normal precipitation for the month, with moisture evaporating quickly, causing stress to crops and reducing availability and quality of livestock water supplies. Drought in Central Canada remained relatively unchanged, apart from increasing drought severity in northwestern

Ontario. Low precipitation in the Atlantic region caused an expansion of abnormally dry conditions, while the Northern region received average precipitation, which led to minor improvement to abnormally dry areas.

Pacific Region (BC)

Drought conditions expanded significantly in British Columbia during the month of June given below-normal precipitation since April 1st, with impacts intensified by recent lack of precipitation and record-breaking high temperatures. The most significant impacts occurred throughout the Interior, where daily high temperature records were shattered as an intense high-pressure system developed near the end of the month. Many localities reached temperatures over 40 degrees Celsius and many areas received less than 40 percent of expected precipitation for the month of June. Lytton, British Columbia broke the national historic record, set in 1937, as temperatures reached 49.6 degrees Celsius. The Interior received less than 40 percent of normal precipitation in the last 90 days, while areas closer to the border received between 40 to 60 percent of normal; this roughly translates to receiving 55 to 150 mm less than normal precipitation. Below-normal precipitation and recent intense heat lead to increased evapotranspiration and poor moisture conditions resulting in increased drought extent and severity. Moderate Drought (D1) conditions pushed west, while a large expanse of Severe Drought (D2) and a small pocket of Extreme Drought (D3) arose north of the U.S./British Columbia border. The drought conditions also expanded further west, towards Vancouver and onto Vancouver Island, where two small Severe Drought (D2) pockets were placed. Producers reported non-stop irrigation efforts on Vancouver Island, due to the warm, dry Spring. In the northern portion of the province, Abnormally Dry (D0) conditions were introduced, as well as Moderate Drought (D1) conditions in the Peace region, where producers reported signs of stress on cereal and forage crops.

Prairies (AB, SK, MB)

The Prairie region welcomed scattered precipitation in the month of June. Rainfall provided a reprieve from a very dry spring and aided in the growth of crops and pasture lands. However, the reprieve was short lived, as warm, dry conditions returned for the second half of the month, reducing soil moisture. High temperatures near the end of the month also exacerbated pre-existing dry conditions and lowered available soil moisture, which resulted in significant crop stress.

In general, drought conditions either remained in place or expanded across much of Alberta. A lack of precipitation caused the expansion of Moderate Drought (D1) conditions in the northern

portion of the province, encompassing much of the Peace River region and extending over the British Columbia/Alberta border. In the central region, D1 conditions expanded west, from Edmonton into British Columbia, where precipitation over the past 30 days was 75 to 100 percent below-normal. Severe Drought (D2) conditions expanded in the same region, as Grande Prairie received only eight percent of average precipitation for the month of June. Although drought conditions were absolved from precipitation during the month of May around Edmonton, Severe Drought (D2) conditions have re-appeared due to the area receiving only thirty percent of average precipitation. In the southcentral region, a large swath of D2 conditions was added to surround Calgary due to lacking soil moisture and low amounts of precipitation. Calgary has seen its 5th driest year on record from September 1, 2020 to June 30, 2021. In the southeast region, Moderate Drought (D1) conditions expanded and Severe Drought (D2) conditions emerged. This area saw just over half of the precipitation typically seen during the winter and spring seasons. Low precipitation and recent warm temperatures have reduced the soil moisture significantly. Going forward, substantial rainfall is required to prevent yield loss.

In Saskatchewan, the central and northern regions of the province saw upwards of 100 mm of precipitation over the past 30 days, while the southern region received significantly less. The impacts of long-term soil moisture deficits have become more noticeable where reports of dried-out sloughs were seeded for feed and the potential for devastating impacts on projected yields. In the southwest corner of the province, Severe Drought (D2) conditions were expanded north from the U.S. border, where moisture conditions have declined significantly due to low precipitation, consistent wind and heat. Crops advanced quickly with the extreme heat and began to flower and head out prematurely, which likely will result in poor yields. In the central agricultural region, hot weather and intense winds continued to degrade soil moisture, leading to the expansion of D2 conditions surrounding Saskatoon. Thus far, Saskatoon recorded its fifth driest year on record from September to June. Although the southcentral region of the province saw significant precipitation, conditions surrounding Regina degraded to Moderate Drought (D1), due to very poor soil moisture conditions and continued lack of surface water supplies. In the southeast region of the province, producers were appreciative of rainfall they received. Although soil moisture improved in this region, it has been reported that the rain did little to improve the long-term dry conditions in the area. The drought conditions have resulted in reduced hay yields, as well as producers reducing pasture capacity. Along the southern Saskatchewan/Manitoba border, Extreme Drought (D3) conditions were alleviated from the previous month where precipitation has improved surface soil conditions.

In Manitoba, Severe (D2) to Exceptional Drought (D4) continue to dominate the southern portion of the province despite scattered storms bringing rain to most regions of the province.

The city of Brandon in southeastern Manitoba, and Dauphin in the east central region as well as Winnipeg in the southeast, were all rated to be in their driest 5 years on record based on precipitation from September 1, 2020 to June 30, 2021. Agricultural conditions continued to degrade with variable crop conditions reported across the province. The Interlake region, received well below-normal precipitation in both the long-term and short-term, which has resulted in the addition of Exceptional Drought (D4); this area received approximately 50 percent of normal precipitation since April. Livestock producers in the region reported very little surface soil moisture where dugouts and pastures have run dry. Another pocket of D4 conditions developed in the western region of the province caused by exceptionally low precipitation in both the short- and long-term. The southeast corner of the province saw the expansion of D1 conditions east toward the Manitoba/Ontario border, based on well below-normal precipitation and record low streamflow levels. Extreme Drought (D3) conditions expanded east from the central region of the province to now encompass Winnipeg, where precipitation amounts accounted for only half of what is typically seen during the month of June as well as significant dryness consistent in the last 9 months.

Central Region (ON, QC)

There were minimal changes to drought conditions in Central Canada through the month of June. Multiple precipitation systems flowed through Ontario and Quebec throughout the month, relieving Moderate Drought (D1) conditions in many parts of the south-eastern region.

In the northwest region of Ontario, lower than normal precipitation contributed to the expansion of both Abnormally Dry (D0) and Moderate Drought (D1) conditions eastward from the Manitoba/Ontario border to the area surrounding Thunder Bay. Northeastern Ontario received 25 to 50 percent of precipitation over the past 30 days and recorded well below-normal streamflow, which resulted in the expansion of Abnormally Dry (D0) conditions. Significant precipitation across southern Ontario alleviated Severe Drought (D2) conditions in the Essex/Chatham Kent region, along the U.S./Ontario border. Although agricultural conditions appeared to be adequate, record low water levels were recorded for Lake Ontario, where levels have not been this low since 1966. An expansion of Moderate Drought (D1) conditions along the northern Ontario/Quebec border occurred due to low precipitation values over the past 90 days, where the area had barely recovered from dry conditions during the 2020 growing season. In Quebec, minimal changes were made to Moderate Drought (D1). Conditions were alleviated along the St. Lawrence region, west of Quebec City, reflecting near- to above-normal precipitation received over the past 90 days.

Atlantic Region (NS, NB, PE, NL)

Much of the Atlantic region remained unchanged for the month of June. Minor changes were made to Abnormally Dry (D0) conditions along the southeast coast of Nova Scotia as a result of low precipitation amounts over the past 60 days. Abnormally Dry (D0) conditions expanded further east into New Brunswick due to below-normal precipitation through the past 60 days, as well as the western edge of Prince Edward Island. Newfoundland received a mixed bag of weather through the month of June, from snowfall and low temperatures at the beginning of the month, to record-breaking high temperatures towards the end of the month along the northwest coast. Despite rapid changes to the weather, only minimal changes were made to Abnormally Dry (D0) conditions along the southwest coast due to below-normal precipitation through the past 90 days.

Northern Region (YT, NT)

The Northern region saw both expansion and improvement to Abnormally Dry (D0) conditions. Degradation of D0 conditions occurred along the northwest coast of the Northwest Territories caused by low amounts of precipitation through the month of June, contributing to lower than normal precipitation amounts over the past 90 days. In the Yukon Territory, the northern region saw the emergence of a large pocket of Abnormally Dry (D0) conditions form due to below-normal precipitation over the past 90 days. Along the western edge of the Yukon, D0 conditions expanded to surround Old Crow, where the area received only sixty percent of its long-term normal precipitation and streamflow values were well below-normal.

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