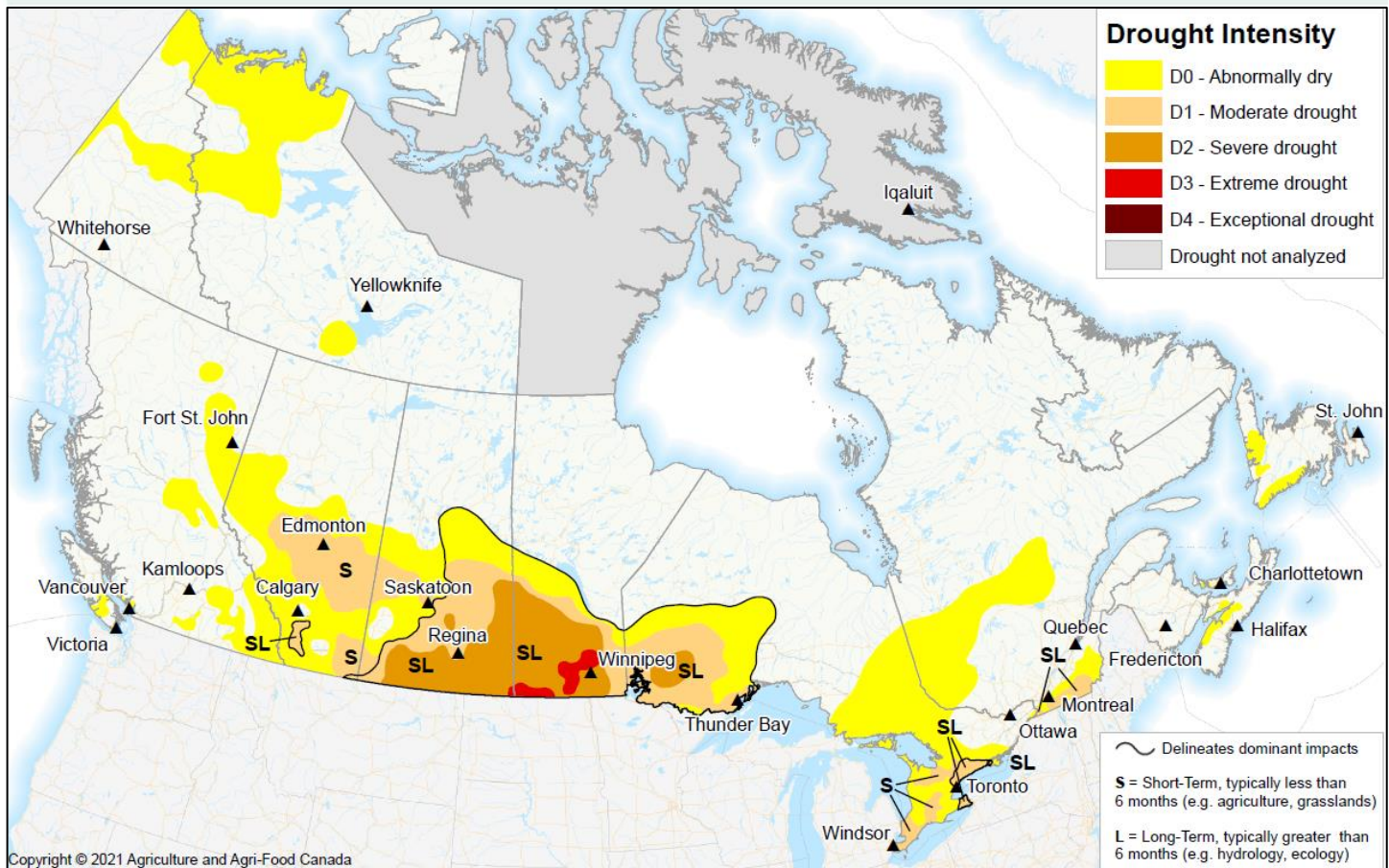


Canadian Drought Monitor

Conditions as of March 31, 2021



Below-normal precipitation and above-normal temperatures continued to plague most regions across Canada; this resulted in an overall expansion and increased severity of drought. In Western Canada, emerging dry conditions led to Abnormally Dry (D0) conditions developing in the Pacific region while a persistent lack of moisture led to worsening, widespread drought throughout the southern Prairies. In Eastern Canada, drought persisted in northwestern Ontario and southern Quebec while drought conditions expanded slightly across southern Ontario. Atlantic Canada, on the other hand, experienced slight improvement as a result of significant precipitation received in late March. In the Northern region, only minimal changes were made to Abnormally Dry (D0) conditions and the region remained drought-free.



Approximately twenty-six percent of the country was considered Abnormally Dry (D0) or in drought; this includes seventy-six percent of the agricultural landscape.

Pacific (BC)

In British Columbia, abnormally low precipitation throughout March resulted in a slight expansion of Abnormally Dry (D0) conditions, particularly in the southeastern part of the province. D0 conditions were added around Nelson towards Cranbrook, and north towards Revelstoke. The existing D0 at the Alberta border in the Rocky Mountains was also extended further into B.C. to include Fernie. In this southeast corner of the province, streamflow levels were deceptively high due to an early season snowmelt. However, valley snow was either abnormally low or absent, leading to the addition of Abnormally Dry (D0) conditions in this area. This short-term lack of moisture also led to the development of D0 around Kelowna and Penticton. Further north, there were small improvements made to the existing D0 around Prince George; Abnormally Dry (D0) conditions were eliminated from Cunningham Lake to Great Beaver Lake where precipitation improved in the last 30 days and streamflow values were well above-average. Precipitation percentiles in the last 90 days also indicated this area as near-normal. Minimal changes were made to the D0 pocket in the Peace River region given similar conditions to last month. There continued to be no drought on Vancouver Island, however precipitation deficits over the past couple months led to the development of an Abnormally Dry (D0) pocket. Although Victoria reported it's third driest March on record with 23 percent of normal precipitation, D0 conditions were not extended to include the city as this is a short-term departure, but will be closely monitored as spring progresses. Fifteen percent of the province was considered to be Abnormally Dry (D0), which accounts for nearly thirty-six percent of the agricultural landscape.

Prairies (AB, SK, MB)

Drought and dry conditions in the Prairies continued to worsen in March as below-average precipitation further impacted short-term and long-term dryness. While March typically is a fairly dry month through the Prairie Region, persistent and lingering dry conditions resulted in further drought concerns. At this time, the eastern Prairies are of highest concern with both long-term and short-term precipitation deficits which have led to very dry spring soils. While streamflow levels at many stations reported average to above-average levels, this was primarily due to early snowmelt and runoff. Therefore, streamflow for this time of year can be deceiving and may not paint an accurate picture of the current conditions. In central Alberta, although precipitation throughout the winter was significantly limited, the substantial moisture received throughout the 2020 growing season helped to buffer impacts from this winter's lack of

moisture. For this reason, although Edmonton reported it's second driest March on record, drought surrounding the city remained relatively unchanged. As of March 25th, the area from Vegreville south to Brooks and Medicine Hat received only 5-10 mm of precipitation in the last three months. There was also a slight expansion of Moderate Drought (D1) in southern Alberta including Claresholm, High River and Fort Macleod. This area experienced wildfires in late March, indicating both short- and long-term dry conditions. Contrary to the lack of precipitation across the region, an area around Kindersley and Leader received ample late-month moisture, which led to the removal of D0 previously reported. However, long-term precipitation deficits in central Saskatchewan led to the expansion of D1 surrounding Davidson, Watrous and Humboldt. This area received 95 to 150 mm below-average precipitation in the last year. Outlook was also included in the expansion of Moderate Drought (D1) given the record low surface streamflow the area experienced. Severe Drought (D2) in eastern Saskatchewan was expanded westward to include Fort Qu'Appelle and Indian Head as well as a pocket surrounding Watrous. This area received less than 150 to 220 mm below the expected annual precipitation. In Manitoba, Severe Drought (D2) was also extended to reach as far east as Steinbach. This area was previously in Moderate Drought (D1), but conditions in the last three and twelve months now show short- and long-term drought; precipitation in the last 90 days was also below the second percentile. Two pockets of Extreme Drought (D3) were added to Southern Manitoba; one pocket formed along the Canada-U.S. border and another from Morden towards Portage La Prairie, Selkirk and Gimli. In these areas, the snow has melted and soils have been exposed for nearly the entire month of March. In addition, Snow Water Equivalents have been close to 0 mm for many weeks throughout the winter, indicating a lack of moisture for spring melt. Furthermore, indicators suggest substantial dryness and a lack of moisture in the past five years in this area. The lowest possible Standardized Precipitation Evapotranspiration Index (SPEI) value was also reported across much of the region in the last 365 days. All of these indicators led to the development of D3 in this area. Approximately forty-seven percent of the Prairie region was classified as either Abnormally Dry (D0), in Moderate Drought (D1), Severe Drought (D2) or in Extreme Drought (D3); this includes ninety-three percent of the region's agricultural landscape.

Central (ON, QC)

In the month of March, conditions improved slightly in northern parts of the Central region while drought either expanded or persisted in southern Ontario and Quebec, respectively. In northwestern Ontario, Moderate Drought (D1) was expanded eastward to include Thunder Bay. The Standardized Precipitation Index (SPI) and the SPEI both indicated dryness in this area for the last 365 days. The Abnormally Dry (D0) conditions in northern Ontario improved significantly and were eliminated from Nipigon to Moosonee following adequate moisture this

month. D0 was also pulled back in northern Quebec to Matagami as precipitation in the last 30 days and 180 days returned to near-average. In southern Ontario, however, Moderate Drought (D1) was expanded to include LaSalle north to Kitchener and from Walkerton east to Toronto and Brighton. In these areas, 90-day precipitation was below the 20th percentile and 50 to 75 mm below-average precipitation was received in the last three months. This region has been without snow for much of March and exposed soils have led to an increased rate of evapotranspiration. The Niagara peninsula was also added back into Moderate Drought (D1) given both short- and long-term precipitation deficits. A very slight expansion of Abnormally Dry (D0) conditions was added to include Kingston and north of Peterborough; this was the result of low SPEI values in the last six months. Petawawa also appeared fairly dry over the last six months, however this area received ample precipitation in the 2020 growing season which provided adequate soil moisture this spring. Minimal adjustments were made in southern Quebec though Cornwall, ON was removed from the Moderate Drought (D1) pocket surrounding St-Jean-sur-Richelieu. However, the other pocket of D1 still remained around Sherbrooke. Abnormally Dry (D0) conditions were removed in the Chicoutimi and Saguenay area as 25 to 50 mm of precipitation above-average were received in the last month. Twenty-three percent of the Central region remains Abnormally Dry (D0), in Moderate Drought (D1) or in Severe Drought (D2); this includes about fifty-eight percent of the agricultural landscape.

Atlantic (NB, NS, PEI, NL)

Significant precipitation helped to alleviate drought and dry conditions across the Atlantic region in the month of March; much of this moisture fell across eastern New Brunswick, P.E.I. and Cape Breton, Nova Scotia. In Nova Scotia, this moisture helped reduce Abnormally Dry (D0) conditions across much of the mainland and D0 was completely removed from Cape Breton Island. However, D0 conditions expanded south to Annapolis Valley, NS, as the region missed much of the precipitation the rest of the province received and has experienced dry conditions for the past 90 to 180 days. Conditions on the northwest coast of Prince Edward Island improved from Tignish to Elmsdale, as this area received 75 mm above-normal precipitation over the past 60 days. Newfoundland also received adequate precipitation over the last 60 days leading to the removal of Moderate Drought (D1) that surrounded Pasadena as well as overall improvement to Abnormally Dry (D0) conditions on the northern and eastern coasts of the island. Two pockets of D0 remain from Stephenville to north of Rocky Harbour as well as Cape Ray towards St. Alban's, as these areas received 25 to 50 percent below-normal precipitation in the last two months. Almost six percent of the Atlantic region is classified as Abnormally Dry (D0) or in Moderate Drought (D1); this includes approximately fourteen percent of the region's agricultural landscape.

Northern (YT, NWT)

Conditions in Northern Canada were a mixed bag for the month of March: conditions improved slightly throughout the North West Territories, while the Yukon saw a decrease in precipitation. Precipitation in the past 90 days appeared to normalize across the western edge of the territory, which led to the removal of D0 in the area surrounding Great Bear Lake. D0 conditions were also removed from Yellowknife to Hay River due to average precipitation received in the last month. However, Abnormally Dry (D0) conditions expanded from Old Crow, YT to the northern coast as well as west to the U.S. border. Further south, D0 conditions also expanded west from Norman Wells, NWT to the U.S. border, but did not reach Dawson City or Mayo. These areas were excluded because they received above-average precipitation this month. Approximately nineteen percent of the Northern region is classified as Abnormally Dry (D0).