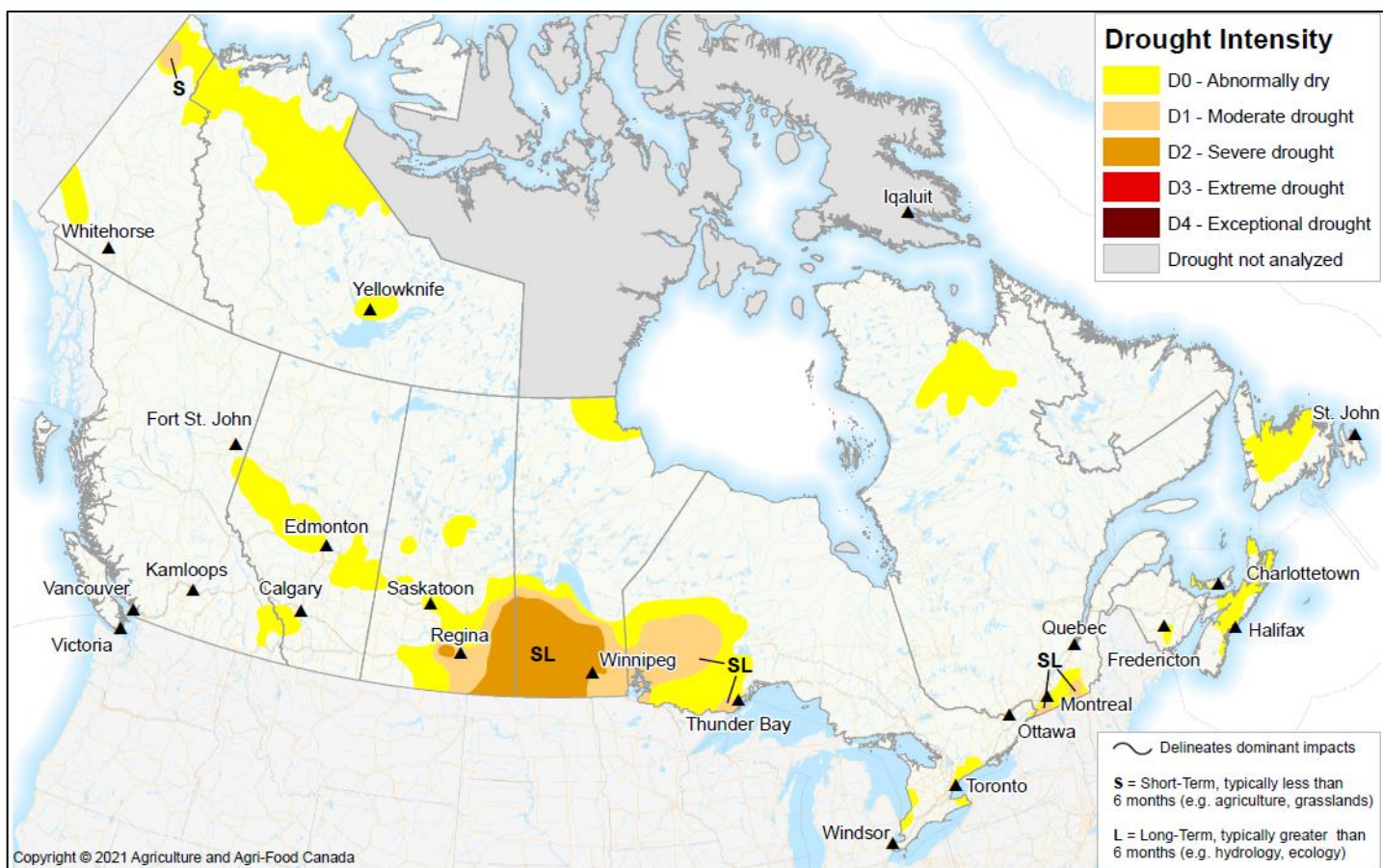


Canadian Drought Monitor

Conditions as of December 31, 2020



There were no significant changes to drought conditions throughout Canada in December. Overall, there was a small reduction of drought severity and extent. Mean monthly temperatures were reported as above-normal for the entire country, with some areas experiencing as much as 5 degrees or higher than normal. Nearly all areas of Abnormally Dry (D0) conditions were reduced throughout British Columbia. Despite long-standing dry conditions in southern areas, streamflow and snowpack remain adequate, if not above-normal for this time of year. In the western Prairies, snowfall events in December led to reductions of drought and dry conditions. However, Severe Drought (D2) persists in southwestern Saskatchewan and southeastern Manitoba due to ongoing dry conditions in both the short- and long-term. Dry conditions carried over into northwestern Ontario. Conditions in Ontario,



Quebec and the Atlantic region have improved significantly from earlier in the fall as all significant areas of Moderate Drought (D1) were removed. The Northern region remained relatively unchanged, barring a pocket of Abnormally Dry (D0) conditions developing around Yellowknife. Approximately eighteen percent of the country was considered Abnormally Dry (D0) or in drought; this includes close to thirty-five percent of the agricultural landscape.

Pacific Region (BC)

British Columbia was considered drought-free by the end of December, with minimal areas experiencing Abnormally Dry (D0) conditions. Only one and a half percent of the Pacific region was in Abnormally Dry (D0) conditions, which accounts for just four percent of the agricultural landscape. Although southern areas of the province experienced fairly dry conditions in the late summer and early fall, precipitation in the last 90 days was considered near-normal according to precipitation percentiles. In addition, streamflow values were near-normal and snowpack in the region was reported at 98 percent of normal, indicating sufficient runoff for the spring months. As a result of these factors, the pocket of Abnormally Dry (D0) conditions that previously stretched to Nelson and the U.S. border was pulled back to Cranbrook and towards the B.C.-Alberta border. Significant precipitation in December led to the removal of Moderate Drought (D1) along the provincial border region as well: nearly 50 mm of precipitation fell in this area over the past 30 days. While dry conditions began to develop in the Peace River region stretching towards Fort Nelson, the remainder of the province saw near- to above-normal conditions in the month of December.

Prairie Region (AB, SK, MB)

The Prairies have thus far experienced little of the normal conditions associated with an La Niña winter. In fact, temperatures were generally 2 to 3 degrees above-normal in the last 30 days. Also contrary to a typical La Niña, parts of the Prairies saw a lack of precipitation, especially in central Alberta and southern Manitoba. However, a number of storm systems passed through southern Alberta and western Saskatchewan, bringing much-needed moisture to drought-affected areas. In southwestern Alberta, previously reported Moderate Drought (D1) near Calgary was removed and the Abnormally Dry (D0) area was reduced. This area saw up to 40 mm of precipitation in December as well as near- to above-normal precipitation in the last 60 days; precipitation deficits now only show up in the last six months. However, Abnormally Dry (D0) conditions persisted in central Alberta, where a pocket of D0 near Edmonton expanded further northwest towards Grande Prairie and Dawson Creek. This area reported a deficit of 55 to 95 mm below-normal precipitation over the last 6 months, which roughly equates to 10 to 25

percent below-normal. The pocket near Vegreville also expanded towards North Battleford as only 10 mm of precipitation fell in the area this month, along with dry conditions reported in the 90 day Standardized Precipitation Evapotranspiration Index (SPEI) data. Storm events in December brought up to 25 mm of precipitation to Southern Saskatchewan; this resulted in slight improvements to all drought classifications in the area, barring Saskatoon, as it reported its third driest December on record. Central Saskatchewan, however, was exempt from these precipitation events. A pocket of Abnormally Dry (D0) conditions was added around La Ronge, where they reported 55 to 95 mm below-normal precipitation within the last six months. The area covered by Severe Drought (D2) conditions expanded slightly eastward to Beausejour, MB, as this area received less than 60 percent of normal precipitation in the last 90 days. The D2 includes Estevan, SK and Winnipeg, MB – both of which broke records this past year by experiencing their driest year on record. The area from Swan River to Dauphin, MB shows adequate precipitation in the past six months, however this is largely due to a single-day storm event in August in which most precipitation was likely lost due to runoff. This area received less than 40 percent of normal precipitation in the last 90 days and as a result, remained in Severe Drought (D2). The Moderate Drought (D1) in southern Saskatchewan and Manitoba persisted, though it was reduced in eastern Saskatchewan based on adequate precipitation over the agricultural year since the beginning of April. Nearly thirty-seven percent of the Prairie region was classified as either Abnormally Dry (D0), in Moderate Drought (D1) or in Severe Drought (D2); this includes forty-eight percent of the region's agricultural landscape.

Central Region (ON, QC)

Conditions differed between northern and southern portions of the Central region: minimal precipitation fell in northwestern Ontario, while the south generally saw improved moisture conditions, with the exception of southern Quebec. In northwestern Ontario, Moderate Drought (D1) was expanded to include Ear Falls, Sioux Lookout, and Osnaburgh House. In the last three months, this area received only 25 to 50 percent of normal precipitation. However, Abnormally Dry (D0) conditions and Moderate Drought (D1) were reduced significantly from Thunder Bay towards Nipigon as near-normal precipitation was reported in the last two months. In southern Ontario, Abnormally Dry (D0) conditions were also reduced due to near-normal precipitation in the last three months, in addition to near-normal streamflow levels. Moderate Drought (D1) near Niagara Falls was also removed and surrounding D0 was reduced. Only areas from Lucknow to Windsor and Vaughan to Peterborough remained in pockets of D0. Eastern Ontario and western Quebec saw a slight expansion of Abnormally Dry (D0) and Moderate Drought (D1) conditions following a period of short-term dryness. Moderately low to extremely low precipitation, below the 20th percentile, was received in this area in the last 60

days. As a result, D1 remained near Sherbrooke, QC and a pocket of D1 developed east of Cornwall, ON. The Abnormally Dry (D0) conditions in this area were expanded slightly further north up to Montreal and Drummondville, QC as satellite-derived data showed below-normal precipitation in the last 90 days. Fourteen percent of the Central region remains in either Abnormally Dry (D0) or in Moderate Drought (D1); this includes approximately thirteen percent of the agricultural landscape.

Atlantic Region (NS, NB, PE, NL)

Significant precipitation in the Atlantic region in December greatly improved Abnormally Dry (D0) conditions and led to the removal of all drought. New Brunswick in particular received substantial precipitation, with some areas receiving up to 80 mm above-normal precipitation in the last 30 days. Previously reported Moderate Drought (D1) was eliminated in New Brunswick, Nova Scotia, and Prince Edward Island (PEI) as a result of near-normal precipitation in the last 60 days. However, satellite-derived data still showed signs of dryness in some areas. As a result, Abnormally Dry (D0) conditions covered a small area south of Fredericton, the western half of PEI, and from Liverpool to the northern tip of Nova Scotia. A small portion of D0 was removed around Inverness, Nova Scotia, but the surrounding areas remained affected by Abnormally Dry (D0) conditions as satellite-derived data show below-normal precipitation in the last three months. Abnormally Dry (D0) conditions persisted in Newfoundland from Victoria Lake to Twillingate, despite adequate streamflow levels. Only fourteen percent of the Atlantic region is classified as Abnormally Dry (D0); this includes twenty-six percent of the region's agricultural landscape.

Northern Region (YT, NT)

Much of the Northern region remained relatively unchanged from last month. A large swath of Abnormally Dry (D0) conditions remained in place across northern Yukon and Northwest Territories, as 25 to 50 percent below-normal precipitation was indicated by satellite-derived data in the past three months. Similar conditions also developed around Yellowknife, resulting in the creation of a small D0. Abnormally Dry (D0) conditions still remained from Burwash Landing to Beaver Creek. Moderate Drought (D1) also persisted in Old Crow, which reported its 5th driest December at 37 percent below-normal precipitation. Approximately fourteen percent of the Northern region is classified as Abnormally Dry (D0) or in Moderate Drought (D1).

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