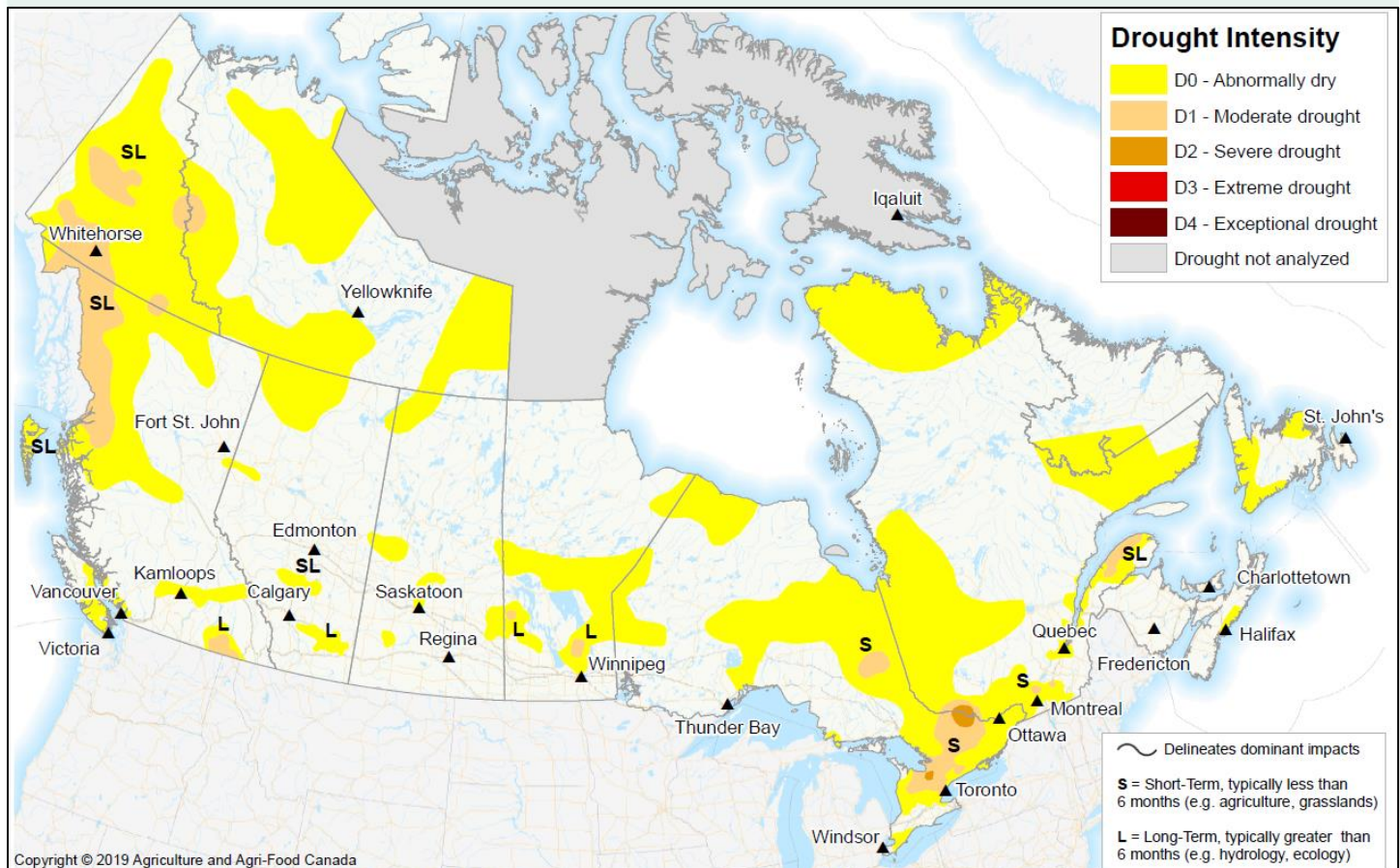


Canadian Drought Monitor

Conditions as of September 30, 2019



Drought conditions continued to improve throughout western Canada this month, while drought regions grew in central and eastern Canada. The most significant region of drought or dryness in western Canada continues to be northwestern British Columbia. Southern parts of British Columbia received above average precipitation during September leading to improved soil moisture and helping replenish water supplies. Nevertheless, significant long-term deficits still remained due to the early season dryness. Long-term and short-term precipitation and water supply deficits persist in northwest and southeast British Columbia. Late-month storm systems brought well above normal precipitation across the southern Prairie region, bringing relief to all remaining drought areas. Some Abnormally Dry (D0) conditions remain across the region, mainly as a result of significant long-term precipitation deficits, however soil moisture has been replenished. In Eastern Canada, drought conditions continued to grow through September. Precipitation was average to below average across the Central region. Precipitation



deficits in southern Ontario and parts of southern Quebec were 15 to 55 mm for the month of September. As a result, Moderate Drought (D1) areas expanded and a small region of Severe Drought (D2) remained southwest of Barrie, Ontario. In the Atlantic region, Abnormally Dry (D0) areas developed northeast of Halifax and remained in Newfoundland because of short-term precipitation deficits. At the end of September 2019, Moderate to Severe Drought (D1-D2) affected 3.6 percent of land area in Canada.

Pacific Region (BC)

All short-term drought conditions were alleviated in southern British Columbia during the month of September, however long-term deficits remained on Vancouver Island and in southeastern British Columbia. On Vancouver Island, Severe Drought (D2) pockets improved to Moderate Drought (D1) around the Courtenay area in the northeast portion of the island. Though the Nanaimo region received twice the normal September precipitation, the region is designated Abnormally Dry (D0) and Moderate Drought (D1) owing to long-term precipitation deficits. The southern coast and interior British Columbia along the US border have received extremely high precipitation in excess of 100mm, and above normal streamflow which has improved conditions in this Abnormally Dry (D0) and Moderate Drought (D1) area. The southern border region of Abbotsford experienced the fifth wettest September on record. The central interior received near normal September precipitation. While Williams Lake experienced near record levels of precipitation, the surplus was not enough to make significant changes to long-term deficits or to the Abnormally Dry (D0) designation. At the end of September, Abnormally Dry (D0) and Moderate drought (D1) pockets persisted in the northwestern interior due to long-term deficits. Continued below average precipitation in many regions resulted in minimal improvement and, despite small improvement, the region remains largely classified as Abnormally Dry (D0) or Moderate Drought (D1) according to the majority of our short-term and long-term indicators. Abnormally Dry (D0) and Moderate Drought (D1) conditions also remain south of Nelson in the southeastern corner of the province. These are a result of long-term deficits, though recent conditions have shown considerable improvement. Moderate Drought (D1) conditions have affected 10.9 percent of the area and 4.0 percent of the population of British Columbia.

Prairie Region (AB, SK, MB)

The Prairies have shown the greatest improvement in drought conditions over the month of September. Recent rain and, in the south, snow, has replenished soil moisture in all regions of the Prairies. As of the end of September, only a few small pockets of Abnormally Dry (D0) remain due to long-term moisture deficits. Despite these deficits, there are no ongoing moisture concerns going into the winter season. Southern Alberta's drought conditions improved significantly with late season precipitation. As a result of the recent rain and snow, the Abnormally Dry (D0) regions were reduced and the Moderate Drought (D1) designation in the south part of the province was removed. Small Abnormally Dry (D0) ratings persist around Brooks in southern Alberta, in a region south of Red Deer and around Grande Prairie in the

Peace river region. Northern Alberta also has improved substantially and only Abnormally Dry (D0) conditions remain in the High Level area. Southern Saskatchewan received high precipitation through September, with accumulated precipitation exceeding 100 mm. Conditions also improved in central Saskatchewan, where Abnormally Dry (D0) designations were removed in areas around Kindersley and North Battleford. Small pockets of Abnormally Dry (D0) conditions remain due to long-term deficits. Southern Manitoba received exceptionally high precipitation, greater than 150 mm, bringing some moisture to the Interlake region. However, owing to severe surface water shortages the Interlake region is Moderate Drought (D1). Abnormally Dry (D0) conditions remain in the northwest and across the east central regions of the province due to long-term deficits going back over 9 months. Overall, above normal precipitation in the Prairies replenished soil moisture and water supplies during September.

Central Region (ON, QC)

In central Canada, precipitation was average to below average and dry conditions remained relatively unchanged throughout September. Severe Drought (D2) remains in a small region northwest of Ottawa, and Moderate Drought (D1) conditions continued to dominate much of Southern Ontario. In addition Abnormally Dry (D0) and Moderate Drought (D1) areas developed across southern and central Ontario and also in southern and eastern Quebec. Abnormally Dry (D0) areas expanded in the Greater Toronto Area due to below normal monthly precipitation and streamflow. A Moderate Drought (D1) pocket also persisted in Timmins in northeastern Ontario. Throughout Ontario, corn growth is extremely variable and 2019 harvest delays are the third worst on record due to dry soil conditions over the second half of the summer and cooler than normal conditions. Drought concerns in Quebec have diminished. Many of the short-term indicators show very dry conditions particularly in Repentigny and Drummondville northeast of Montreal which have developed to Moderate Drought (D1). Yet, drought conditions have improved in areas around Quebec City and eastern Quebec as a result of above average precipitation and near normal streamflow levels in September. Moderate to Severe Drought (D1-D2) conditions affected 3.0 percent of the area and 27.2 percent of the population of the Central Region.

Atlantic Region (NS, NB, PE, NL)

Most of Atlantic Canada received extremely high precipitation, over 120 mm accumulated precipitation, during the past 30 days due to seasonal post tropical storm events. Newfoundland and areas northeast of Halifax experienced precipitation deficits in September as well as August, which has led to the expansion and the development of Abnormally Dry (D0) pockets. During the past three months, the departure from normal precipitation in Newfoundland and around Halifax was 50 to 90 mm and 30 to 50 mm below normal respectively. Abnormally Dry (D0) areas persisted on the island of Newfoundland and Labrador.

Northern Region (YT, NT)

Conditions in Northern Canada worsened during September due to below normal precipitation throughout the summer and well below normal stream flows. In the Yukon, many regions were among the warmest on record leading to dry conditions. Burwash experienced the driest conditions since 1967 while low precipitation in Watson Lake led to a downgraded Moderate Drought (D1) condition. Whitehorse experienced the driest recorded year since 1943 with only 15% of normal September rainfall leading to a designation of Moderate Drought (D1). Moderate Drought (D1) pockets expanded in central Yukon and northwestern Yukon near the Alaska border. Abnormally Dry (D0) conditions remained relatively consistent in southern and northern regions of the Northwest Territories as a result of precipitation deficits. Moderate Drought (D1) conditions affected 5.3 percent of the area and 41.5 percent of the population of the Northern Region.