

# PROVINCIAL LOW WATER LEVELS CONDITIONS REPORT

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For the month ending: Monday, October 31, 2022

## MNRF Southern Region

### Confirmed Conditions in Southern Region<sup>3</sup>

- To date: (November 7, 2022) there are seven jurisdictions in a confirmed Low Water Condition in the Southern Region:
  - Level 1: Catfish Creek CA, Central Lake Ontario CA, Lower Thames Valley CA
  - Level 2: Credit Valley CA, Grand River CA, Halton Region CA, Hamilton Region CA

### Precipitation (monthly)<sup>1</sup>

- 1-month precipitation:
  - Many stations reported below 60% of the average expected precipitation for October with several stations in the south east and south west below 40%.
  - Pockets of above-average precipitation occurred near Lake Huron, Georgian Bay and between Kingston and Pembroke.
- 3-month precipitation:
  - Several stations surrounding Lake Ontario reported below 60% of the average expected precipitation for the period August 1, 2022 through October 31, 2022 with many more reporting below 80% in this area.
  - Most stations away from Lake Ontario reported above 80% of the average expected precipitation for the period August 1, 2022 through October 31, 2022
- 18-month precipitation:
  - Nearly all stations reported above 80% average expected precipitation for the period May 1, 2021 to October 31, 2022.

### Precipitation Forecast

- Southern Ontario is forecast to receive 0-15 mm of precipitation over the next 5 days.

### Average Historical Precipitation

- Precipitation ranges from 70 mm to 110 mm for October for most stations.

## Environment Canada 3 Month Outlook (November-December-January)<sup>5</sup>.

- Above normal temperatures for the region.
- Near normal precipitation for the region.

## Flows (monthly)<sup>2</sup>

- South Western Ontario - many stations reported less than 70% of the average using the criterion<sup>2</sup> for stream flow with a substantial number of stations reporting below 50% and 30% in some areas (e.g. CCCA, GRCA, HCA, HRCA, KCCA, LPRCA, UTRCA).
- Most stations in other parts of southern Ontario reported above 70% of the average using the criterion<sup>2</sup> for stream flow with many above 100%.

## Flood Potential

- Low

# MNRF Northeast Region

## Confirmed Conditions in Northeast Region<sup>3</sup>

- To date, (November 7, 2022) there are no jurisdictions in a confirmed Low Water Condition in the Northeast Region.

## Precipitation (monthly)<sup>1</sup>

- 1-month precipitation:
  - Many stations in NE Region reported above 80% of the average expected precipitation for October with only one station below 60%
- 3-month precipitation:
  - Nearly all stations in NE Region reported above 80% of the average expected precipitation for the period August 1, 2022 through October 31, 2022
- 18-month precipitation:
  - All stations reported above 80% of the average expected precipitation for the period May 1, 2021 to October 31, 2022.

## Precipitation Forecast

- Northeastern Ontario is forecast to receive 5-65 mm of precipitation over the next 5 days.

## Average Historical Precipitation

- Precipitation ranges from 50 mm to 110 mm for October for most stations.

## Environment Canada 3 Month Outlook (November-December-January)<sup>5</sup>.

- Above normal temperatures for the region.
- Above normal precipitation for the region.

## Flows (monthly)<sup>2</sup>

- Nearly all stations are reporting above 70% of the average using the criterion<sup>2</sup> for stream flow with many reporting above 100%.

## Flood Potential

- Moderate

# MNRF Northwest Region

## Confirmed Conditions in Northwest Region<sup>3</sup>

- To date, (November 7, 2022) there are no jurisdictions in a confirmed Low Water Condition in the Northwest Region

## Precipitation (monthly)<sup>1</sup>

- 1-month precipitation:
  - Most stations in NW Region reported below 80% of the average expected precipitation for October with many stations reporting below 60% and two below 40%
- 3-month precipitation:
  - Most stations in NW Region reported below 80% of the average expected precipitation for the period August 1, 2022 through October 31, 2022 with a few stations reporting below 60% and one below 40%
- 18-month precipitation:
  - All stations reported at, or above, 80% average expected precipitation for the period May 1, 2021 to October 31, 2022.

## Precipitation Forecast

- Northwestern Ontario is forecast to receive 5-55 mm of precipitation over the next 5 days.

## Average Historical Precipitation

- Precipitation ranges from 50 mm to 100 mm for October for most stations.

## Environment Canada 3 Month Outlook (November-December-January)<sup>5</sup>.

- Near normal to above normal temperatures for the region.
- Near normal to above normal precipitation for the region.

## Flows (monthly)<sup>2</sup>

- Many stations are reporting below 70% of the average using the criterion<sup>2</sup> for stream flow with several above reporting above 70% and one station reporting below 50%.

## Flood Potential

- Low

## Great Lakes<sup>4</sup>

### Conditions – October

- Lake Superior was **8 cm** above its period-of-record (1918-2021) average
- Lake Michigan-Huron was **14 cm** above its period-of-record (1918-2021) average
- Lake St. Clair was **23 cm** above its period-of-record (1918-2021) average
- Lake Erie was **23 cm** above its period-of-record (1918-2021) average
- Lake Ontario was **21 cm below** its period-of-record (1918-2021) average
- The Montreal Harbour was **56 cm below** its period-of-record (1967-2021) average

### Outlook – Beginning-of-November

- Lake Superior's level is **7 cm** above the period-of-record (1918-2020) average
- Lake Michigan-Huron's level is **16 cm** above the period-of-record (1918-2020) average
- Lake St. Clair's level is **26 cm** above the period-of-record (1918-2020) average
- Lake Erie's level is **23 cm** above the period-of-record (1918-2020) average
- Lake Ontario's level is **19 cm below** the period-of-record (1918-2020) average
- The Montreal Harbour was **91 cm below** its period-of-record (1967-2021) average

## Source

- This report is compiled through products available from the [Surface Water Monitoring Centre](http://www.ontario.ca/lowwater) available at: <http://www.ontario.ca/lowwater>.

## Endnotes

<sup>1</sup> Environment Canada's synoptic stations are equipped to measure snow. Precipitation gauges from dataloggers often are not set up to measure snow adequately. The resulting errors plus the elimination of many of the readings for these gauges means our precipitation coverage is poor during months with snow.

<sup>2</sup> For each gauge used in the analysis the average flow is calculated for July, August and September from the historical record. The minimum of these three values is compared to the past month's average flow. During the winter months most streams are partially filled or covered over with ice. This ice reduces the cross-section of the stream resulting in flow readings that are higher than actual. This error is corrected in the historical record. Thus the observed, relative to the historical minimum, is also higher than the actual in streams with significant ice conditions.

<sup>3</sup> Level 1 conditions initiate the formation of a Water Response Team (WRT) which encourages a voluntary 10% reduction in water use. At Level 2 the WRT encourages a further 10% reduction by restricting non-essential water use; Level 3 represents the condition where there is insufficient supply of water to meet all needs which could result in regulation of water use.

<sup>4</sup> Great Lakes summary includes information from Environment Canada, Great Lakes - St. Lawrence Regulation Office and the Detroit District U.S. Army Corps of Engineers.

<sup>5</sup> Outlook provided by Environment Canada.

## Issuing Low Water Duty Officer

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November 7, 2022