

## Information

Recorded monthly mean water levels in this bulletin are derived from a representative network of water level gages on each lake (see cover map). Providers of these data are the U.S. Department of Commerce, NOAA, National Ocean Service, and Integrated Science Data Management, Department of Fisheries and Oceans, Canada. The Detroit District, Corps of Engineers and Environment and Climate Change Canada derive historic and projected lake levels under the auspices of the Coordinating Committee on Great Lakes Basic Hydraulic and Hydrologic Data.

This bulletin is produced monthly as a public service. The Corps also, on a weekly basis publishes online the *Great Lakes, Connecting Channels and St. Lawrence River Water Levels and Depths*, which provides a forecast of depths in the connecting rivers between the Great Lakes and the International Section of the St. Lawrence River. This *Monthly Bulletin of the Lake Levels for the Great Lakes* may be obtained free of charge by writing to the address shown on the front cover, by calling (313) 226-6441 or emailing [hhpm@usace.army.mil](mailto:hhpm@usace.army.mil). Notices of change of address should include the name of the publication. This information is available on the internet at <http://www.lre.usace.army.mil/Missions/GreatLakesInformation.aspx>.

### Great Lakes Basin Hydrology October 2019

Preliminary precipitation estimates indicate that all of the lakes experienced above average precipitation during the month of October. Precipitation ranged from as much as 8% above average in the Lake Superior basin to as high as 86% above average in the Lake Ontario basin. The wet conditions led to above average water supplies for Lakes Superior, Michigan-Huron, and Lake Ontario. Although precipitation was above average in the Lake Erie basin, water supplies were slightly below average. Outflows for all of the lakes continued to be above average during October. Preliminary estimates reveal that the St. Clair River had record high flows for the month of October.

Monthly mean water levels for each lake in October were below their record high monthly average levels. From September to October, Lakes St. Clair, Erie, and Ontario continued their seasonal declines and dropped by 4, 5, and 8 inches, respectively. Conversely, Lakes Superior and Michigan-Huron rose less than an inch from September to October, during a time of year when the lakes typically decline. Seasonal declines are forecasted to continue on all of the Great Lakes this month, except for Lake Ontario, which is forecasted to rise slightly in November before resuming a seasonal decline. However, over the next several months it's projected that water levels will remain well above average.

PRECIPITATION (INCHES)								
BASIN	October				12-Month Comparison			
	2019	Average (1900-2017)	Diff.	% of Average	Last 12 months	Average (1900-2017)	Diff.	% of Average
Superior	3.10	2.88	0.22	108	29.62	30.58	-0.96	97
Michigan-Huron	4.62	2.95	1.67	157	34.81	32.52	2.29	107
Erie	4.04	2.83	1.21	143	38.94	35.53	3.41	110
Ontario	5.90	3.17	2.73	186	40.12	35.84	4.28	112
Great Lakes	4.28	2.94	1.34	146	34.45	32.74	1.71	105

LAKE	October WATER SUPPLIES <sup>1</sup> (cfs)		October OUTFLOW <sup>2</sup> (cfs)	
	2019	Average (1900-2008)	2019	Average <sup>3</sup> (1900-2008)
Superior	74,000	40,000	102,000	80,000
Michigan-Huron	121,000	1,000	251,000	191,000
Erie	-31,000	-21,000	252,000	201,000
Ontario	33,000	7,000	313,000	243,000

Notes: Values (excluding averages) are based on preliminary computations; cfs denotes cubic feet per second.

<sup>1</sup> Net basin supply is the net result of precipitation falling on the lake, runoff from precipitation falling on the land which flows to the lake, and evaporation from the lake. Negative net basin supply denotes evaporation exceeded runoff and precipitation. The net total supply can be found by adding the net basin supply and the outflow from the upstream lake.

<sup>2</sup> Does not include diversions.

<sup>3</sup> Lake Ontario average water supplies and average outflows are based on period of record 1900-2005