



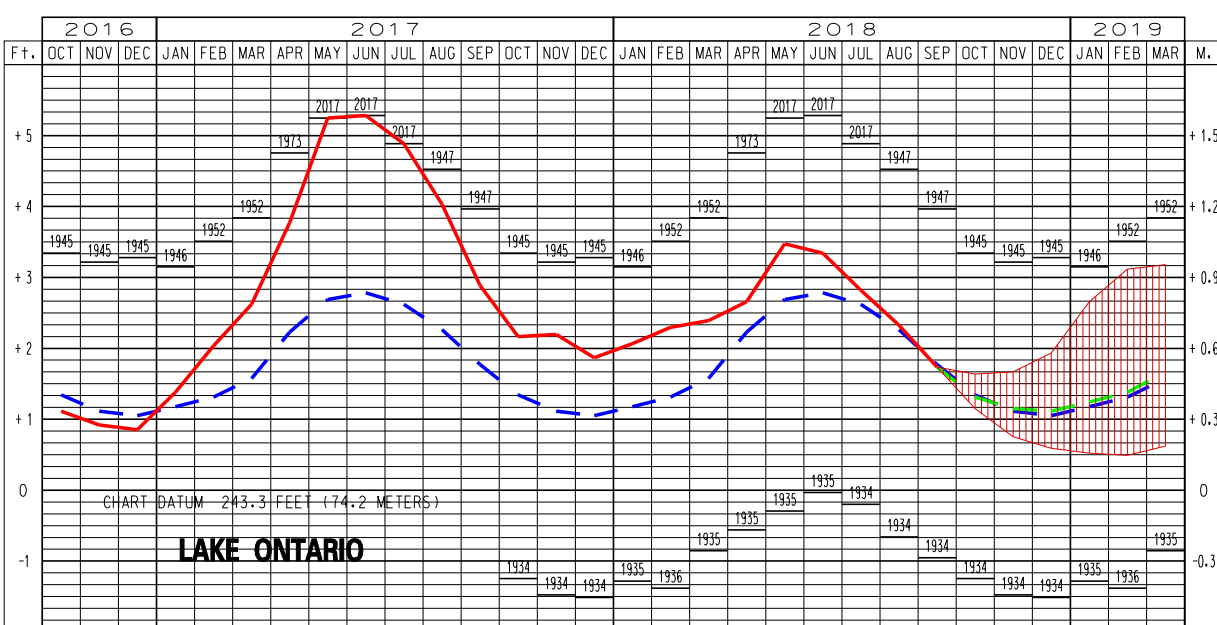
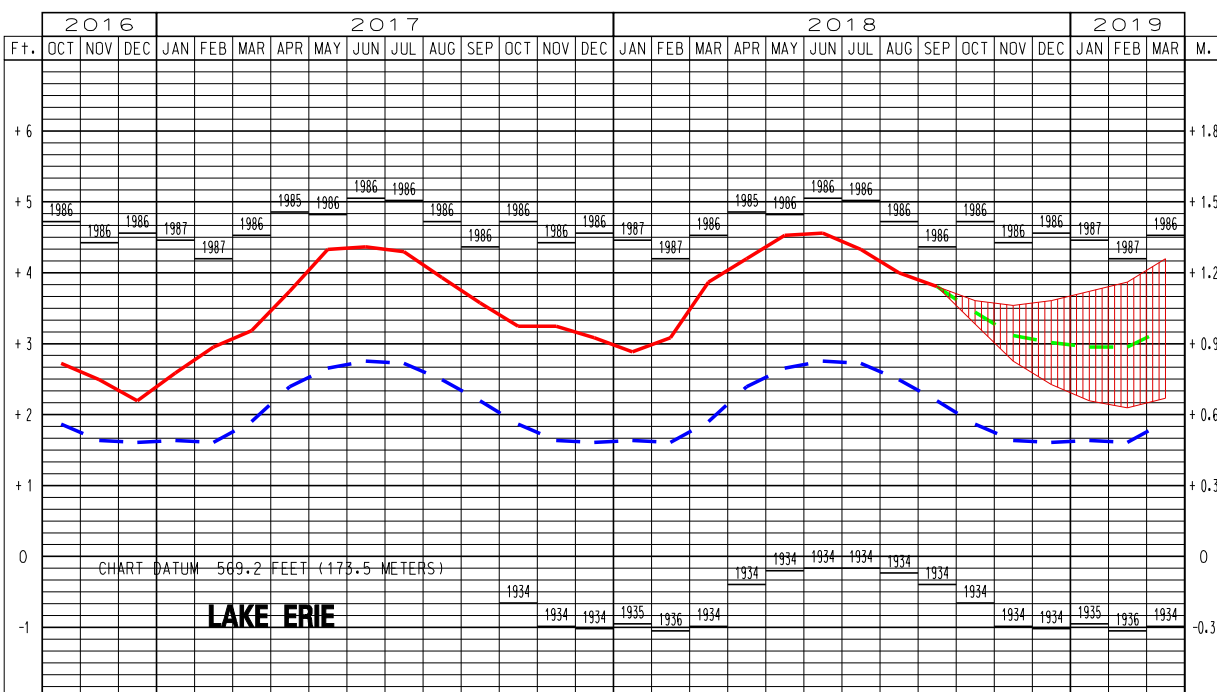
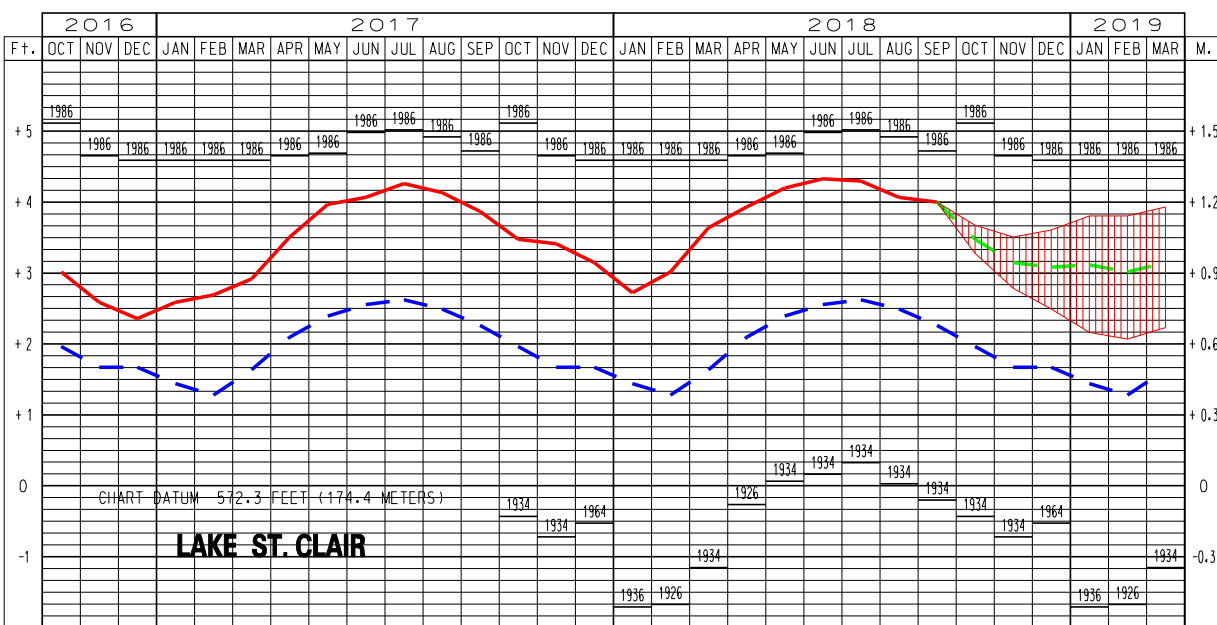
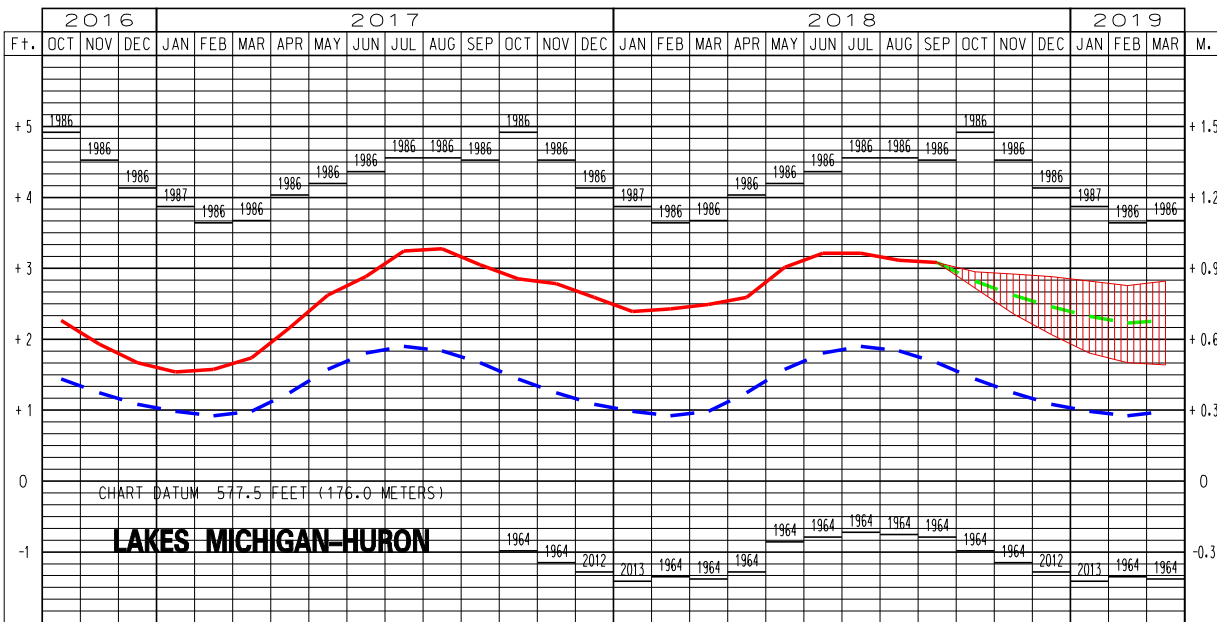
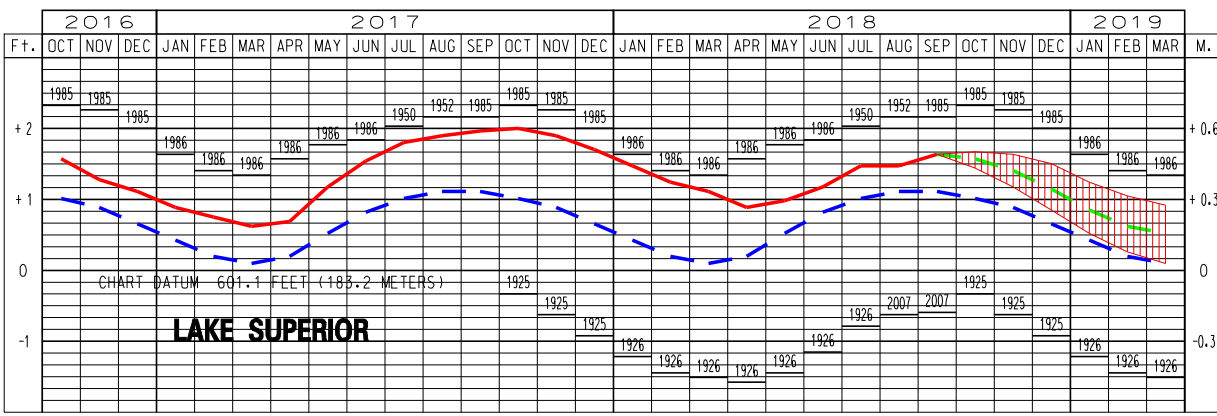
**US Army Corps  
of Engineers**  
Detroit District

**MONTHLY BULLETIN OF  
LAKE LEVELS FOR THE  
GREAT LAKES**

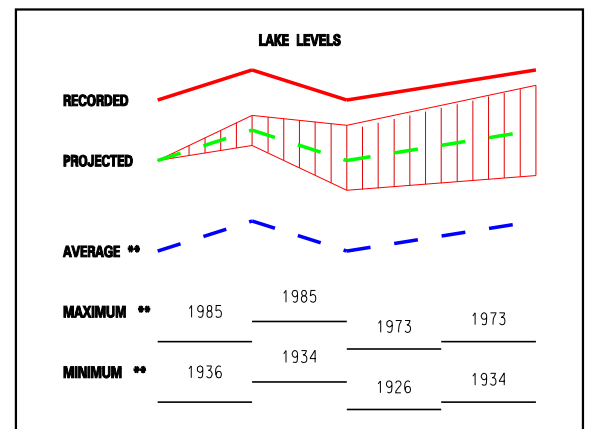
OCTOBER 2018

**Water levels for the previous year and the current year to date are shown as a solid line on the hydrographs. A projection for the next six months is given as a dashed line. This projection is based on the present condition of the lake basin and anticipated future weather. The shaded area shows a range of possible levels over the next six months dependent upon weather variations. Current and projected levels (solid and dashed lines) can be compared with the 1918–2017 average levels (dotted line) and extreme levels (shown as bars with their year of occurrence). The legend below further identifies the information on the hydrographs.**

ELEVATIONS REFERENCED TO THE CHART DATUM OF EACH RESPECTIVE LAKE



**LEGEND**



**The levels on the hydrographs are shown in both feet and meters above (+) or below (-) Chart Datum. Chart Datum, also known as Low Water Datum, is a reference plane on each lake to which water depth and Federal navigation improvement depths on navigation charts are referred.**

**All elevations and plots shown in this bulletin are referenced to International Great Lakes Datum 1985 (IGLD 1985). IGLD 1985 has its zero base at Rimouski, Quebec near the mouth of the St. Lawrence River (approximate sea level).**

SEPTEMBER MEAN LAKE LEVELS  
(IGLD 1985)

	Superior	Mich-Huron	St. Clair	Erie	Ontario
* 2018	Ft. 602.69	580.51	576.18	573.03	245.18
	M. 183.70	176.94	175.62	174.66	74.73
2017	Ft. 603.02	580.48	576.05	572.80	246.33
	M. 183.80	176.93	175.58	174.59	75.08
Ft. 603.22	581.96	576.90	573.59	247.41	
** MAX.	M. 183.86	177.38	175.84	174.83	75.41
Yr. 1985	1986	1986	1986	1947	
Ft. 600.46	576.64	571.98	568.83	242.49	
** MIN.	M. 183.02	175.76	174.34	173.38	73.91
Yr. 2007	1964	1934	1934	1934	1934
** AVG.	Ft. 602.17	579.10	574.44	571.42	245.21
	M. 183.54	176.51	175.09	174.17	74.74

\* provisional  
\*\* Average, Maximum and Minimum for period 1918–2017

## Information

Recorded 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) 226-6442 or emailing [hphm@usace.army.mil](mailto:hphm@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 September 2018

According to preliminary estimates, precipitation within the Great Lakes basin was 11% below average in September. All the individual lake basins saw near to below average precipitation during the month. Lake Superior was the only lake to reach average precipitation for the month, receiving 3.52 inches of rain. Lakes Michigan-Huron, Erie, and Ontario saw 83%, 87%, and 87% of average precipitation in September, respectively. Despite near to below average precipitation, water supplies to the lakes were above average for all the lakes, except Lake Ontario. Outflows from all lakes continued to be above average during the month of September.

September monthly mean water levels were above their long-term average for all lakes, except Lake Ontario. From August to September, Lake Superior rose 2 inches, while the rest of the lakes declined. Lakes Michigan-Huron and St. Clair fell by less than an inch, while Lake Erie and Lake Ontario declined by 2 and 7 inches, respectively. Lake Superior's monthly mean level for September was 4 inches below what it was last year and Lake Ontario was 14 inches below its level from a year ago. Lake St. Clair and Lake Erie were above their levels from last year by 2 and 3 inches, respectively, while Lake Michigan-Huron was near its level from a year ago.

PRELIMINARY PRECIPITATION (INCHES)								
BASIN	September				12-Month Comparison			
	2018	Average (1900-2016)	Diff.	% of Average	Average Last 12 Months	Average (1900-2016)	Diff.	% of Average
Superior	3.52	3.51	0.01	100	27.63	30.58	-2.95	90
Michigan-Huron	2.84	3.44	-0.60	83	30.77	32.55	-1.78	95
Erie	2.82	3.23	-0.41	87	35.43	35.62	-0.19	99
Ontario	2.85	3.28	-0.43	87	35.03	35.87	-0.84	98
Great Lakes	3.02	3.41	-0.39	89	30.95	32.77	-1.82	94

LAKE	September WATER SUPPLIES <sup>1</sup> (cfs)		September OUTFLOW <sup>2</sup> (cfs)	
	2018	Average (1900-2008)	2018	Average <sup>3</sup> (1900-2008)
Superior	131,000	70,000	92,000	83,000
Michigan-Huron	31,000	27,000	214,000	195,000
Erie	-8,000	-17,000	234,000	204,000
Ontario	-5,000	5,000	286,000	249,000

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