



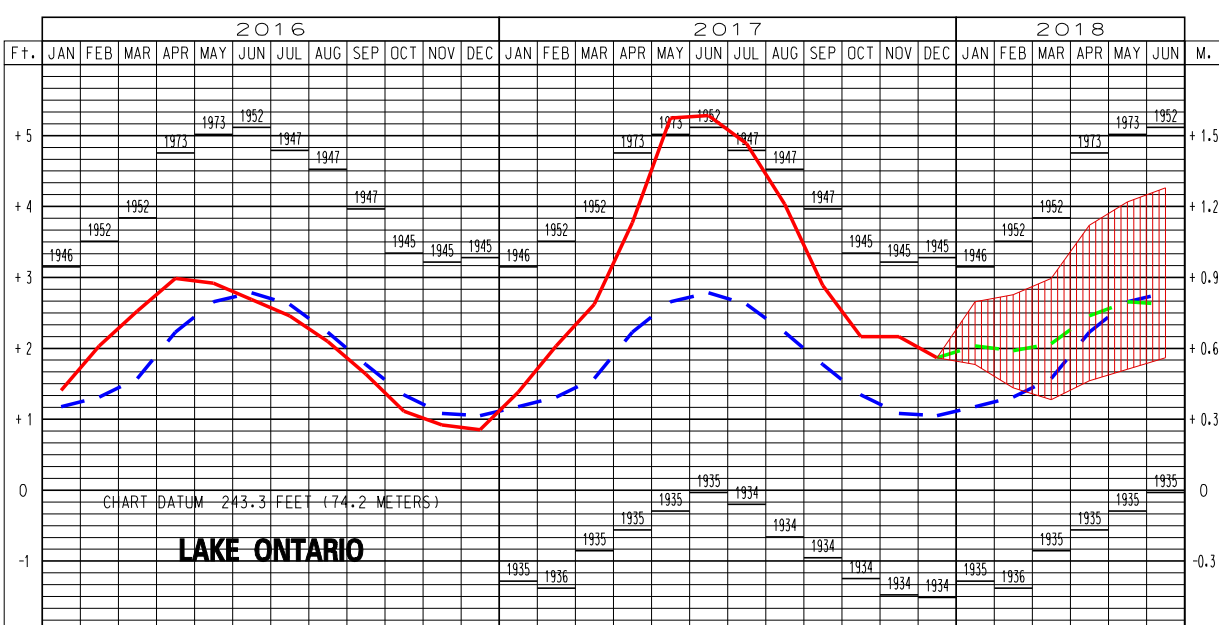
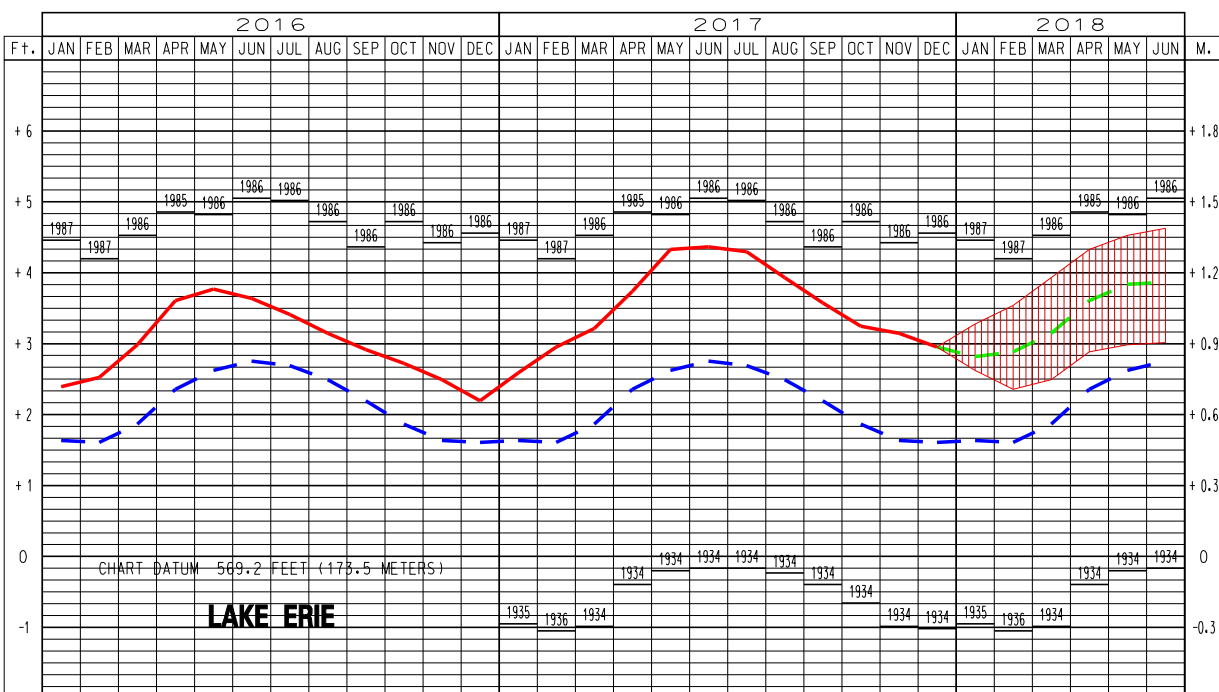
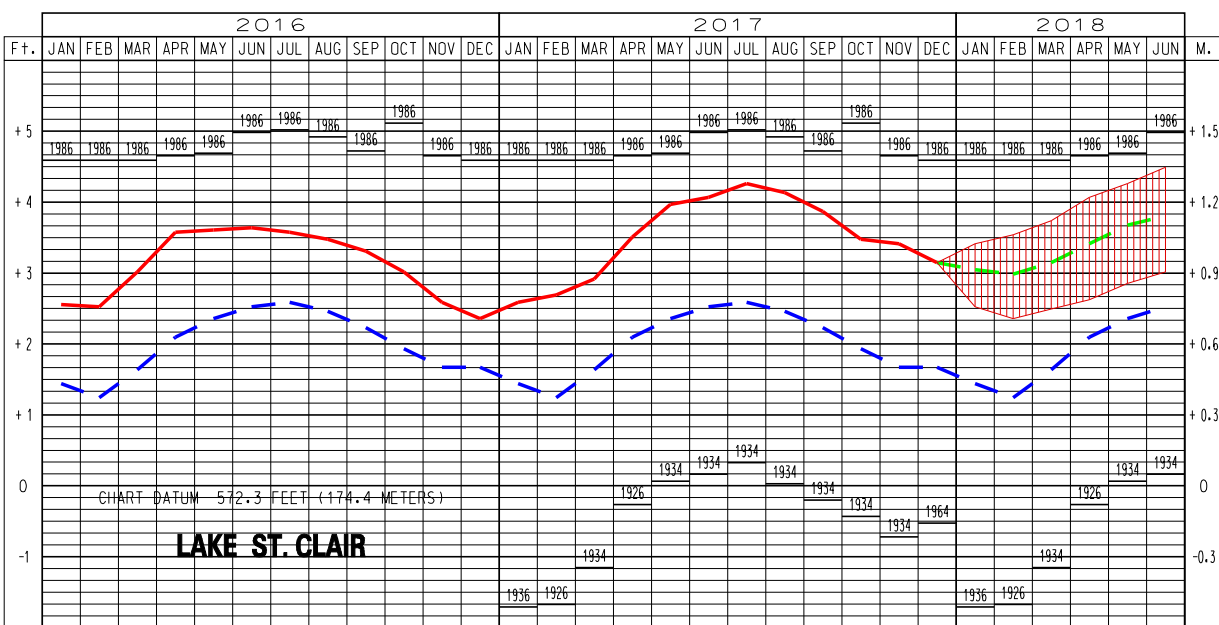
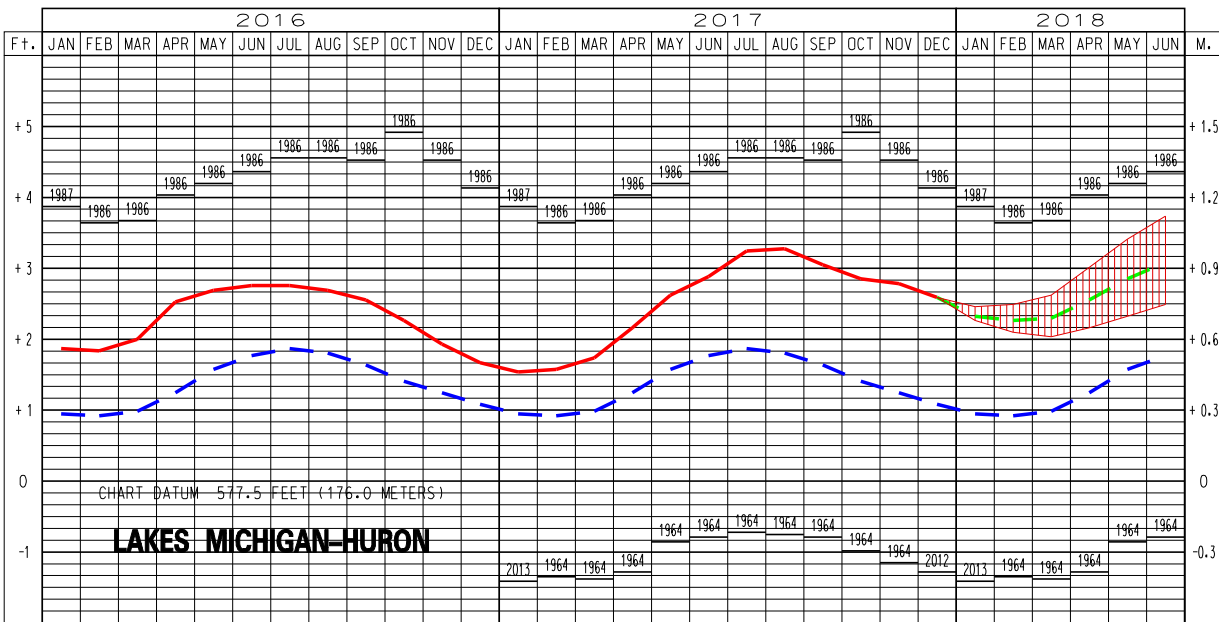
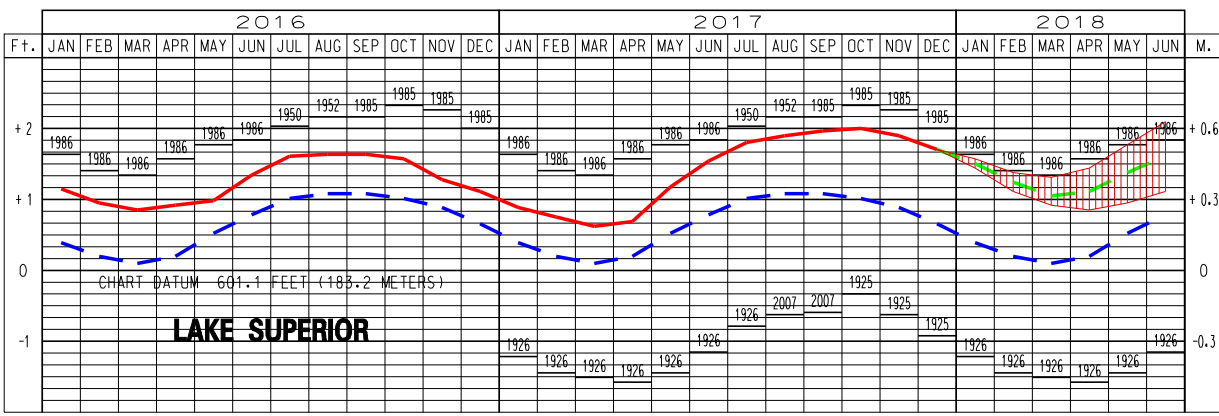
**US Army Corps
of Engineers**
Detroit District

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

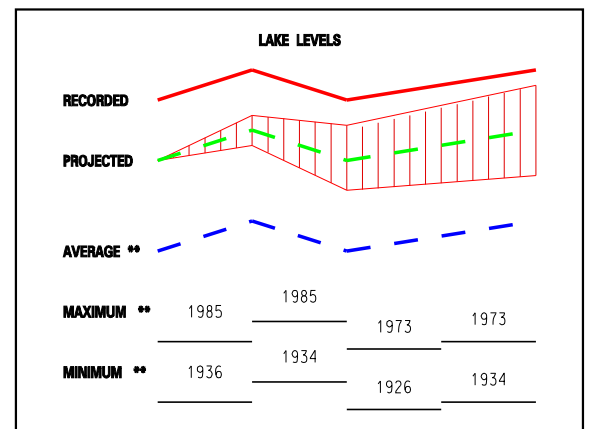
JANUARY 2018

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 1918–2016 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).

DECEMBER MEAN LAKE LEVELS

(IGLD 1985)

| | Superior | Mich-Huron | St. Clair | Erie | Ontario |
|---------|------------|------------|-----------|--------|---------|
| * 2017 | Ft. 602.76 | 580.02 | 575.33 | 572.18 | 245.31 |
| | M. 183.72 | 176.79 | 175.36 | 174.40 | 74.77 |
| 2016 | Ft. 602.17 | 579.10 | 574.54 | 571.42 | 244.29 |
| | M. 183.54 | 176.51 | 175.12 | 174.17 | 74.46 |
| Ft. | 603.05 | 581.56 | 576.77 | 573.79 | 246.72 |
| ** MAX. | M. 183.81 | 177.26 | 175.80 | 174.89 | 75.20 |
| Yr. | 1985 | 1986 | 1986 | 1986 | 1945 |
| Ft. | 600.13 | 576.15 | 571.65 | 568.21 | 241.93 |
| ** MIN. | M. 182.92 | 175.61 | 174.24 | 173.19 | 73.74 |
| Yr. | 1925 | 2012 | 1964 | 1934 | 1934 |
| ** AVG. | Ft. 601.71 | 578.51 | 573.85 | 570.83 | 244.49 |
| | M. 183.40 | 176.33 | 174.91 | 173.99 | 74.52 |

* provisional
** Average, Maximum and Minimum for period 1918–2016

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 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 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 December 2017

According to preliminary estimates, basin-wide precipitation was below average for most of the Great Lakes, with the exception of Lake Superior. Lake Superior received slightly above average precipitation with estimates at 105% of its average December precipitation. The rest of the basins received less than 65% of their average December precipitation, with Michigan-Huron and Ontario receiving 63% and 62% respectively, and Lake Erie trailing with 49% of its December precipitation. On the whole, the Great Lakes basin received 70% of average December precipitation. Over the last 12 months, the total precipitation has been just above average for the Great Lakes basin. Net basin supply was below average for all but Lake Superior. Lake outflows in December were above average for all lakes.

All of the lakes were above their December long-term average water levels. From November to December, all of the lakes' levels declined, where Lake Superior, Lake Michigan-Huron and Lake Erie fell 2 inches, Lake St. Clair fell 3 inches and Lake Ontario fell by 4 inches. This December's levels were 9 to 12 inches above last year's levels for all but Lake Superior, which was 7 inches above last year's December level. All of the lakes are below their record high levels. Lake Superior is 4 inches below its record December high level, while other lakes are 17 to 19 inches below.

| PRELIMINARY PRECIPITATION (INCHES) | | | | | | | | |
|------------------------------------|----------|------------------------|-------|-----------------|---------------------|------------------------|-------|-----------------|
| BASIN | December | | | | 12-Month Comparison | | | |
| | 2017 | Average (1900-2014) | Diff. | % of Average | Last 12 months | Average (1900-2014) | Diff. | % of Average |
| Superior | 2.13 | 2.02 | 0.11 | 105 | 34.00 | 30.52 | 3.48 | 111 |
| Michigan-Huron | 1.49 | 2.35 | -0.86 | 63 | 35.05 | 32.57 | 2.48 | 108 |
| Erie | 1.32 | 2.68 | -1.36 | 49 | 36.57 | 35.65 | 0.92 | 103 |
| Ontario | 1.85 | 2.97 | 1.80 | 62 | 41.35 | 35.87 | 5.48 | 115 |
| Great Lakes | 1.67 | 2.37 | -0.70 | 70 | 35.75 | 32.76 | 2.99 | 109 |

| LAKE | December Net Basin Supplies ¹ (cfs) | | December Outflows ² (cfs) | |
|----------------|--|------------------------|--------------------------------------|-------------------------------------|
| | 2017 | Average (1900-2008) | 2017 | Average ³ (1900-2008) |
| Superior | 61,000 | -22,000 | 89,000 | 72,000 |
| Michigan-Huron | -17,000 | 34,000 | 210,000 | 183,000 |
| Erie | 0 | 21,000 | 242,000 | 201,000 |
| Ontario | 18,000 | 27,000 | 286,000 | 234,000 |

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

¹ 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.

² Does not include diversions.

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