



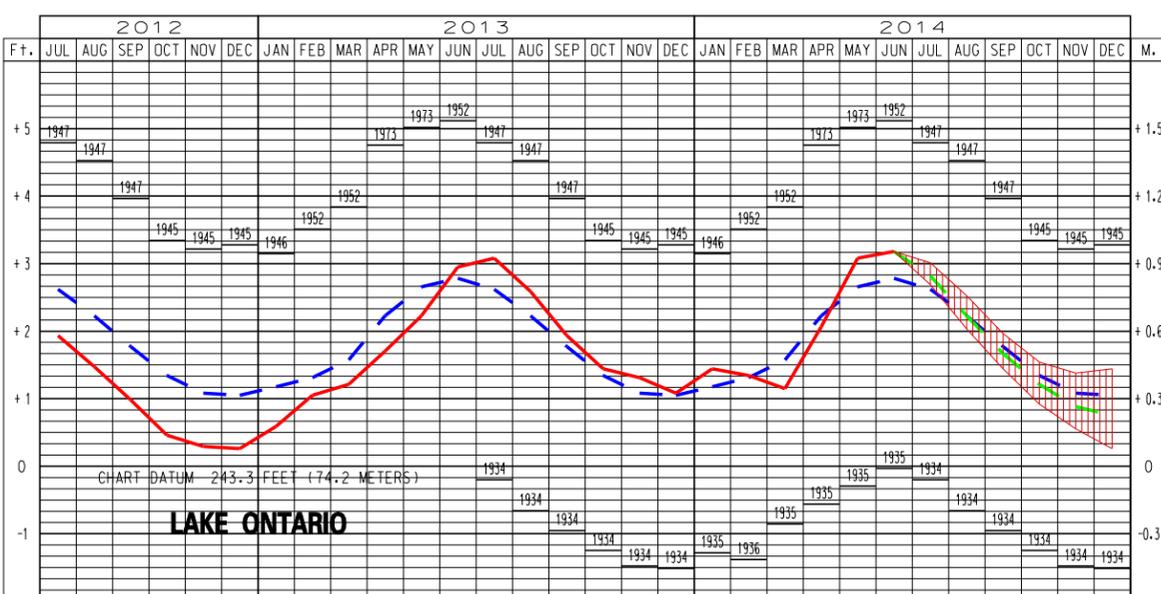
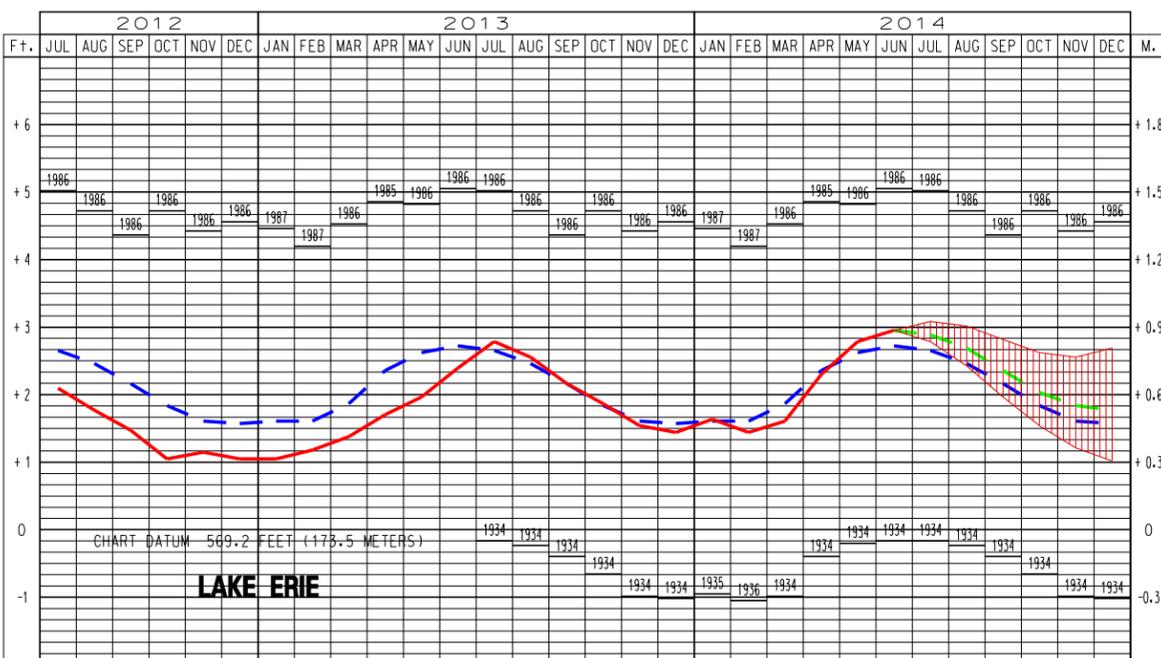
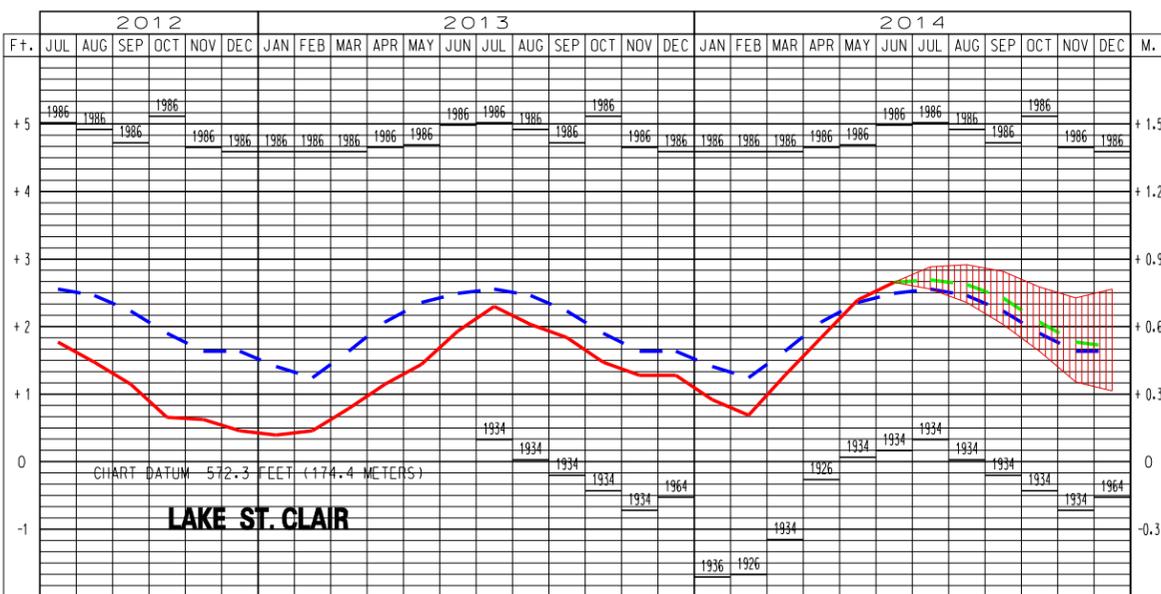
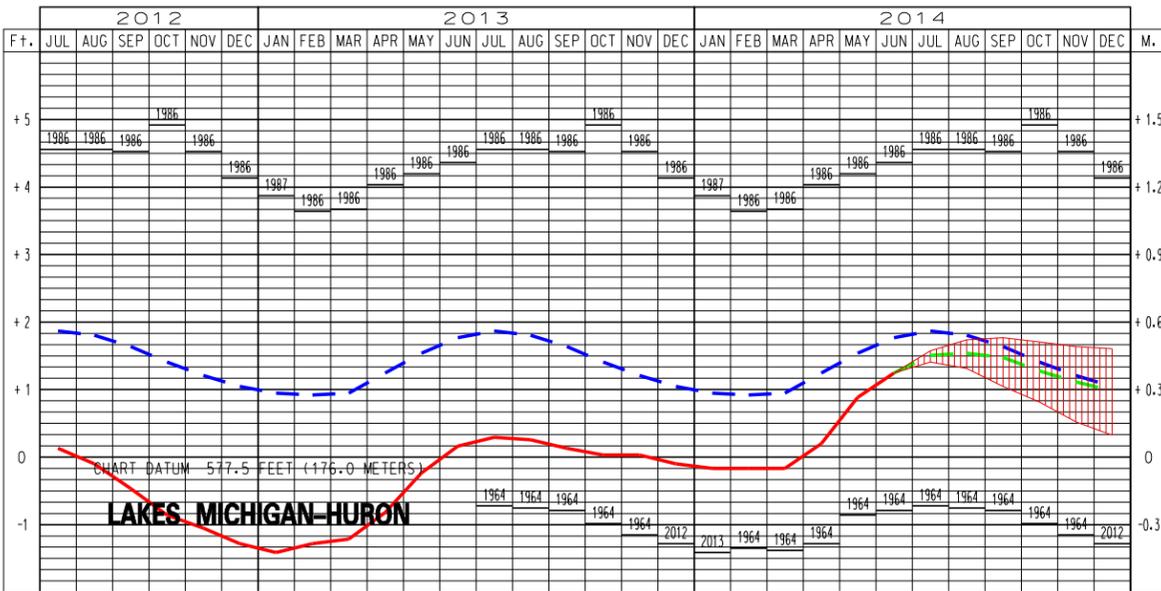
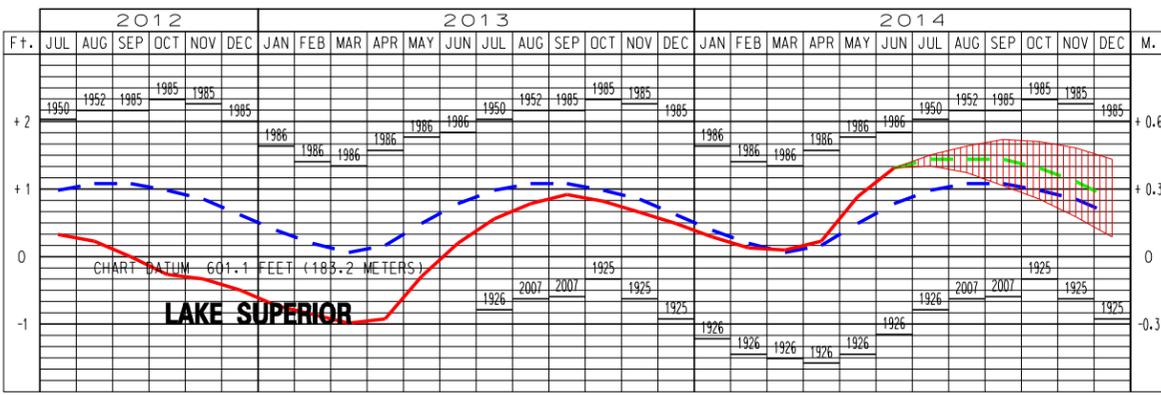
**US Army Corps  
of Engineers**  
Detroit District

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

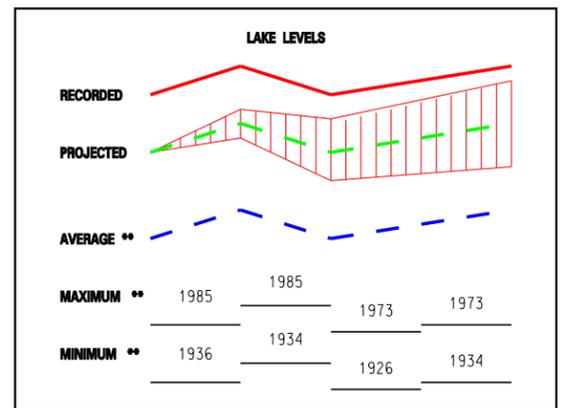
JULY 2014

**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 1918–2013 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).**

**JUNE MEAN LAKE LEVELS**

(IGLD 1985)

	Superior	Mich-Huron	St. Clair	Erie	Ontario
* 2014	Ft. 602.36	578.67	574.84	572.18	246.62
	M. 183.60	176.38	175.21	174.40	75.17
2013	Ft. 601.25	577.59	574.11	571.62	246.39
	M. 183.26	176.05	174.99	174.23	75.10
Ft.	602.89	581.79	577.17	574.28	248.56
** MAX.	M. 183.76	177.33	175.92	175.04	75.76
Yr.	1986	1986	1986	1986	1952
Ft.	599.90	576.64	572.34	569.06	243.41
** MIN.	M. 182.85	175.76	174.45	173.45	74.19
Yr.	1926	1964	1934	1934	1935
** AVG.	Ft. 601.84	579.20	574.67	571.95	246.23
	M. 183.44	176.54	175.16	174.33	75.05

\* provisional  
\*\* Average, Maximum and Minimum for period 1918-2013

## 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* June be obtained free of charge by writing to the address shown on the front cover, by calling (313) 226-6442 or emailing hhp@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 June 2014

The overall Great Lakes basin experienced precipitation that was 33% above average in June. Lakes Superior received nearly 2 inches more precipitation than it historically receives in June, while the Lakes Michigan-Huron and Ontario basins saw precipitation that was over 25% above normal. The net basin supplies of water to Lakes Superior and Michigan-Huron were above average in June, and have been above average for the past 3 months. In addition, the net basin supply to Lake Erie was near average, while the net basin supply to Lake Ontario was above average in June. The tables below list June precipitation and water supply information for all Great Lakes basins.

A comparison of monthly mean lake levels for June to long-term average (1918-2013) shows Lake Superior was about 6 inches above average, while Lake Michigan-Huron was 6 inches below average. Lakes St. Clair, Erie and Ontario were 2, 3, and 5 inches, respectively, above long-term average. Boaters should be aware of hazards to navigation due to continued below average water levels on Lake Michigan-Huron.

PRECIPITATION (INCHES)								
BASIN	June				12-Month Comparison			
	2014	Average (1900-2010)	Diff.	% of Average	Last 12 Months	Average (1900-2010)	Diff.	% of Average
Superior	5.11	3.27	1.84	156	33.23	30.46	2.77	109
Michigan-Huron	4.08	3.17	0.91	129	32.86	32.44	0.42	101
Erie	3.79	3.47	0.32	109	36.55	35.43	1.12	103
Ontario	4.00	3.14	0.86	127	36.52	35.73	0.79	102
Great Lakes	4.30	3.23	1.07	133	33.78	32.64	1.14	103

LAKE	June Net Basin Supplies <sup>1</sup> (cfs)		June Outflows <sup>2</sup> (cfs)	
	2014	Average (1900-2008)	2014	Average <sup>3</sup> (1900-2008)
Superior	184,000	155,000	94,000	77,000
Michigan-Huron	274,000	204,000	191,000	192,000
Erie	32,000	31,000	215,000	216,000
Ontario	51,000	42,000	279,000	260,000

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