



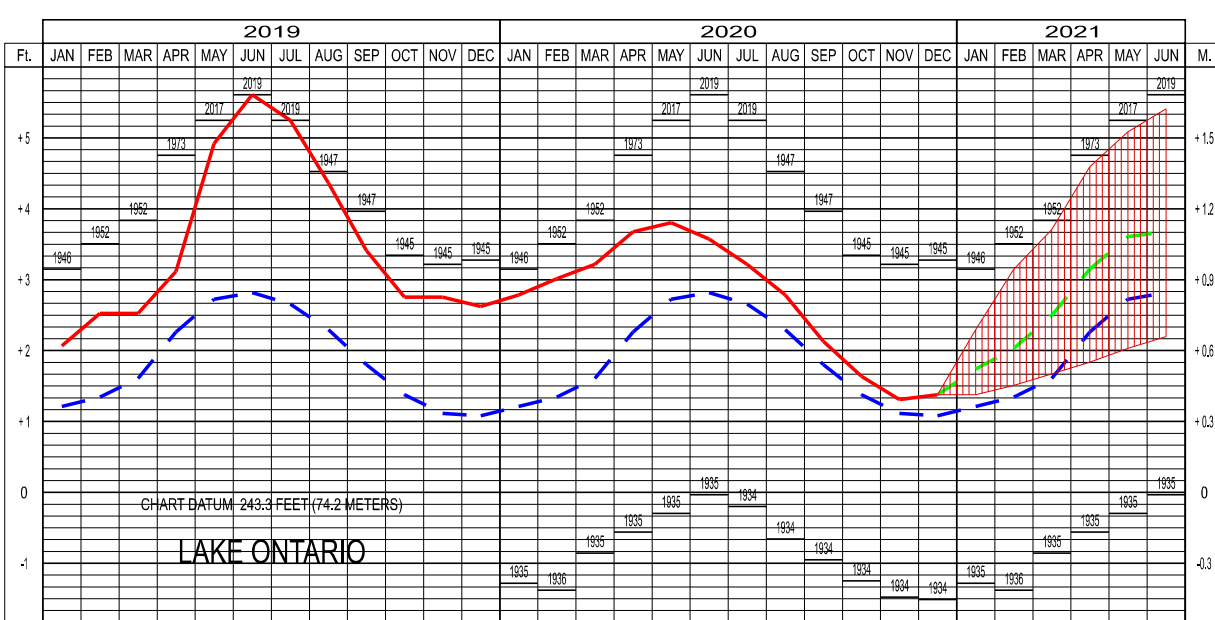
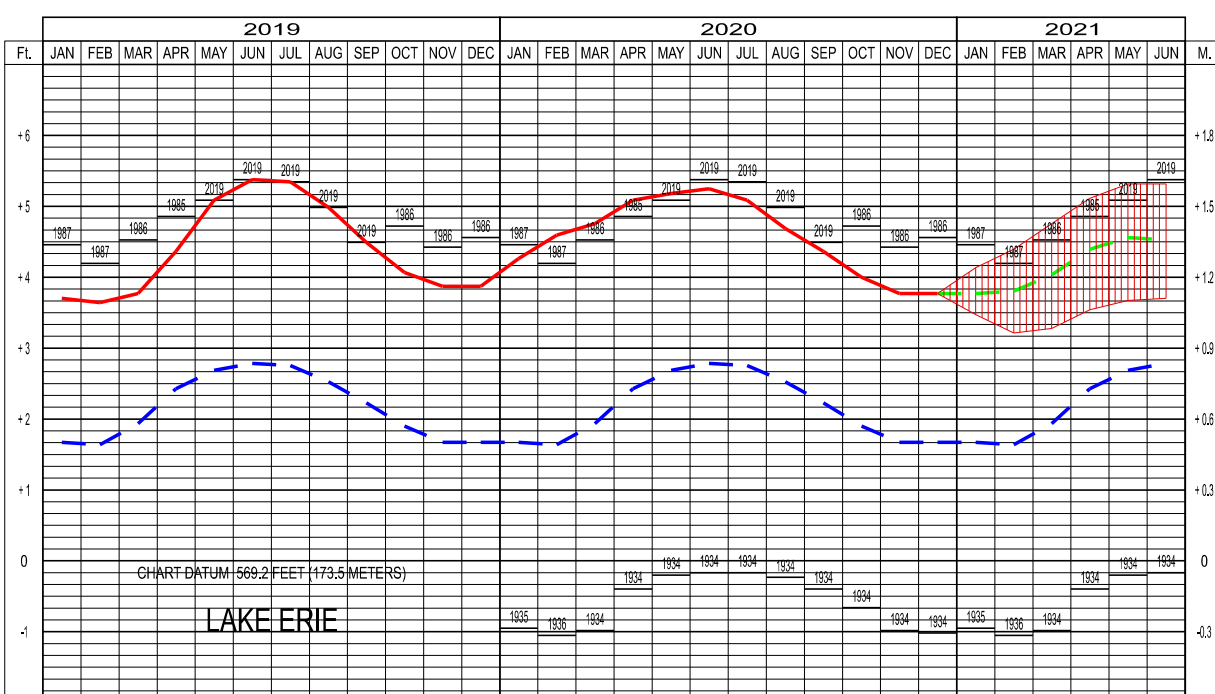
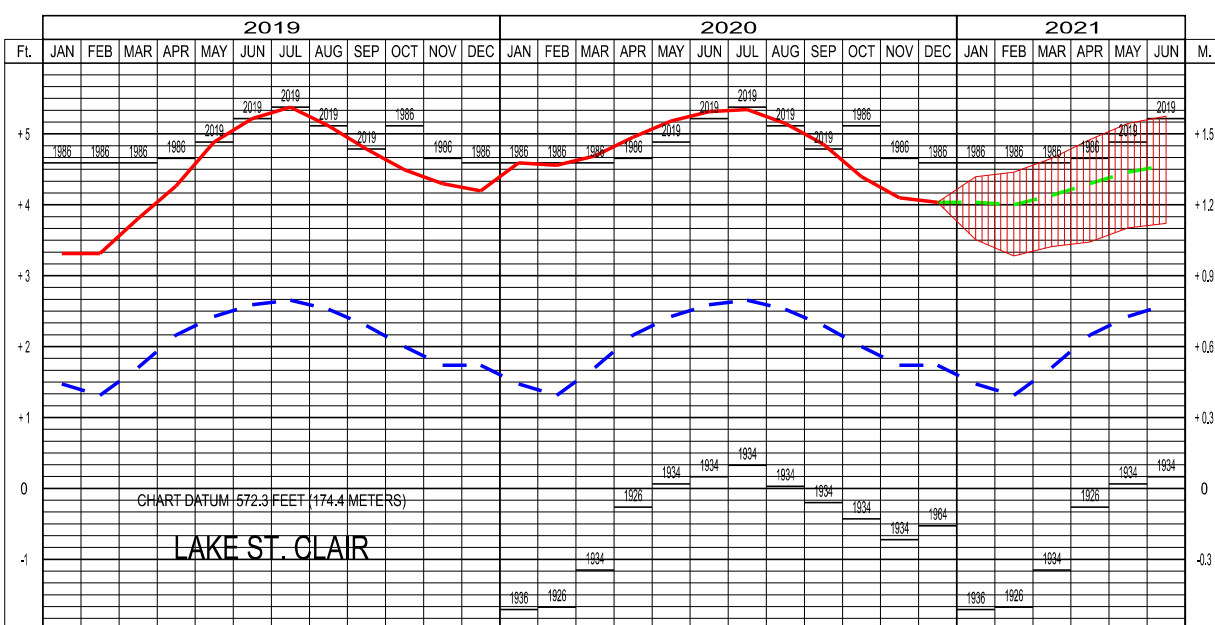
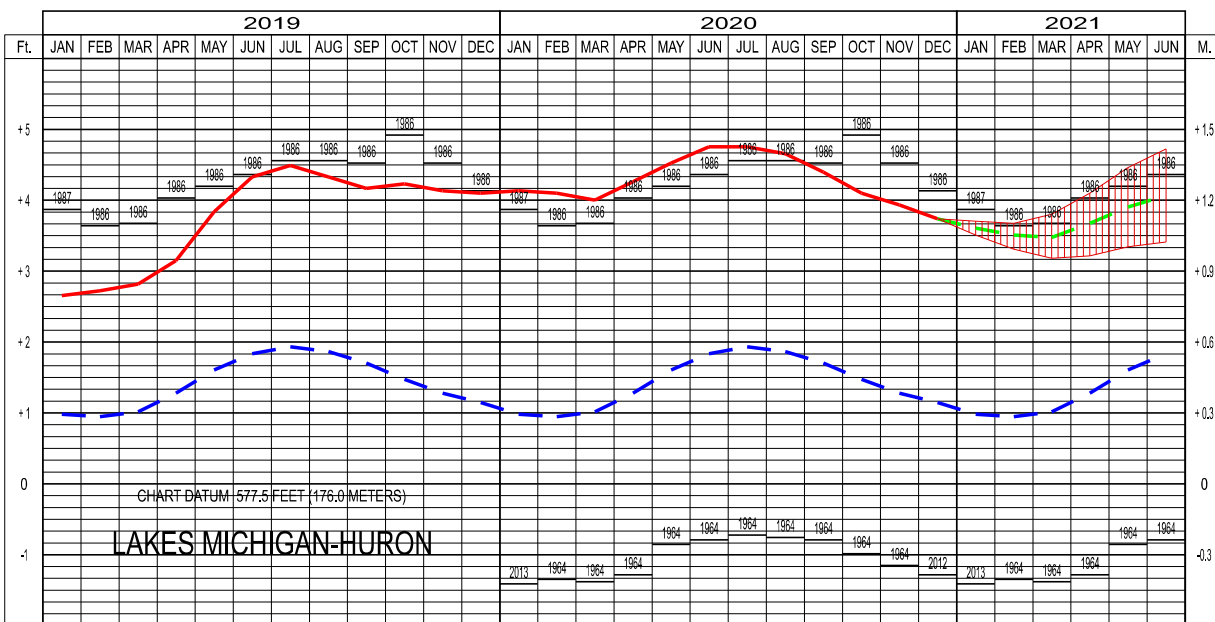
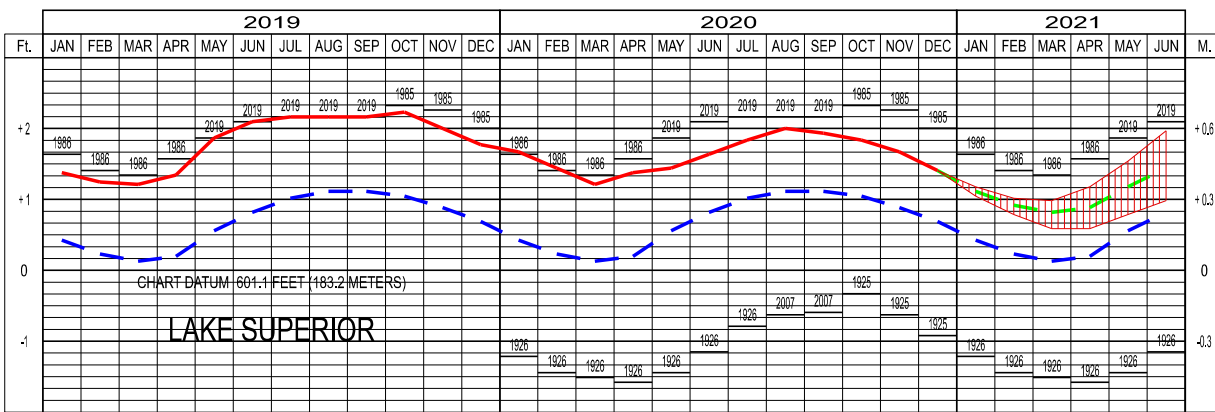
US Army Corps
of Engineers
Detroit District

MONTHLY BULLETIN OF LAKE LEVELS FOR THE GREAT LAKES

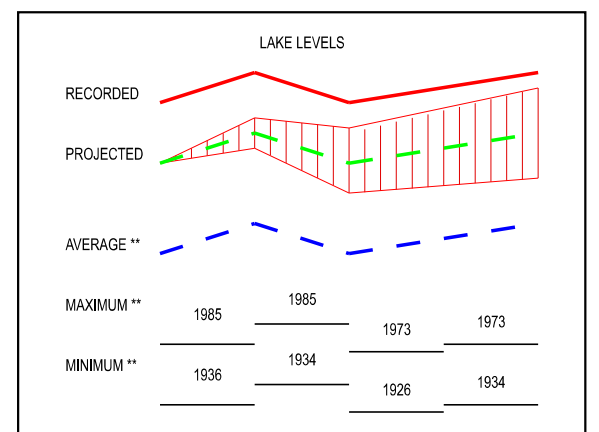
JANUARY 2021

Monthly mean 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 1918-2019 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	
* 2020	Ft.	602.46	581.17	576.21	573.00	244.82
	M.	183.63	177.14	175.63	174.65	74.62
2019	Ft.	602.82	581.53	576.38	573.10	246.06
	M.	183.74	177.25	175.68	174.68	75.00
** MAX.	Ft.	603.05	581.56	576.77	573.79	246.72
	M.	183.81	177.26	175.80	174.89	75.20
** MIN.	Ft.	600.13	576.15	571.65	568.21	241.93
	M.	182.92	175.61	174.24	173.19	73.74
** AVG.	Ft.	601.74	578.58	573.92	570.90	244.52
	M.	183.41	176.35	174.93	174.01	74.53

* provisional
** Average, Maximum and Minimum for period 1918-2019

Provisional record high water levels reached in 2020 will be coordinated and reflected on the Monthly Bulletin in early 2021.

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. 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 2020

The Great Lakes basin and each individual lake basin received below average precipitation, with the exception of Lake Ontario which had near average precipitation. Water supplies were below average for Lake Superior, likely a result of the below average precipitation. Lake Michigan-Huron also received below average precipitation, however likely due to below average evaporation, water supplies were above average. December water supplies for Lake Erie were near average and Lake Ontario experienced slightly above average water supplies during the month. Outflows in December remained above average as a result of the high-water level conditions.

From November to December, Lake Superior, Lake Michigan-Huron, and Lake St. Clair continued their seasonal decline. Lake Erie remained near the same level from November into December, and Lake Ontario began its seasonal rise. Lakes Superior, Lake Michigan-Huron and Lake St. Clair declined about 3, 2 and 1 inches, respectively. Lake Ontario rose less than one inch from November to December. The 6-month forecast indicates that Lakes Superior and Michigan-Huron will continue their seasonal declines into the winter months, while Lakes St. Clair and Erie may begin their seasonal rise in January or February, and Lake Ontario will continue on its seasonal rise over the next 6 months.

PRECIPITATION (INCHES)								
BASIN	December				12-Month Comparison			
	2020	Average (1900-2017)	Diff.	% of Average	Average Last 12 months	Average (1900-2017)	Diff.	% of Average
Superior	1.46	2.05	-0.59	71	25.30	30.59	-5.29	83
Michigan-Huron	1.69	2.36	-0.67	72	32.11	32.52	-0.41	99
Erie	1.50	2.68	-1.18	56	31.65	35.55	-3.90	89
Ontario	2.89	2.95	-0.06	98	31.19	35.83	-4.64	87
Great Lakes	1.72	2.40	-0.68	72	29.93	32.76	-2.83	91

LAKE	December WATER SUPPLIES ¹ (cfs)		December OUTFLOW ² (cfs)	
	2020	Average ³ (1900-2008)	2020	Average ³ (1900-2008)
Superior	-60,000	-20,000	76,000	72,000
Michigan-Huron	89,000	35,000	238,000	183,000
Erie	23,000	21,000	258,000	201,000
Ontario	35,000	28,000	285,000	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