LEVEL *news*

Great Lakes - St. Lawrence River Water Levels

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May Increases Reflected in June Monthly Mean Water Levels

In last month's LEVEL*news* we reported that at the beginning of June water levels on Lakes Michigan-Huron were 30 cm higher than they were at the same time last year and 28 cm below average. At the same time, information provided in the water level information table and the May 2004 Water Level Bulletin, indicated that the May 2004 monthly mean water level for Lakes Michigan-Huron was only 20 cm higher than it was in May 2003 and 40 cm below average. These differences left a number of LEVEL*news* readers wondering if the values provided were incorrect or if they were misinterpreting the information in someway. The following discussion should help clarify this issue.

Daily water levels recorded on Lakes Michigan-Huron on June 1, 2004 were 30 cm higher than they were on June 1, 2003. However, because much of the 23 cm increase in water levels experienced during May occurred during the last half of the month, May's *monthly* mean water level did not increase as much as one might have expected. As a result, the May 2004 *monthly* mean water level was only 20 cm higher than May 2003.

Part of the increase experienced during May is reflected in June's *monthly* mean water level. *Daily* water levels on the Lakes Michigan-Huron increased 9 cm during June, but June's *monthly* mean water level is 19 cm higher than May's, 31 cm higher than last year, and just 27 cm below average.

Lake Ontario Example

Recent changes in Lake Ontario water levels also provide a good example of where care must be taken

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Great Lakes Water Level Information

Lake	June 2004 Monthly Mean Level		Beginning of July 2004 Level	
	Compared to Monthly Average (1918-2003)	Compared to One Year Ago	Compared to Beginning-of-Month Average (1918-2003)	Compared to One Year Ago
Superior	11 cm below	12 cm above	12 cm below	15 cm above
Michigan-Huron	27 cm below	31 cm above	26 cm below	32 cm above
St. Clair	5 cm below	23 cm above	5 cm below	22 cm above
Erie	4 cm above	19 cm above	4 cm above	19 cm above
Ontario	10 cm above	2 cm above	7 cm above	1 cm above

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when discussing changes on a *daily* or *monthly* basis.

After increasing 18 cm during May, *daily* water levels on Lake Ontario increased 2 cm more during the first two days in June. After holding steady from June 2nd to the 11th, daily levels began to decline on June 12th. At the end of June the *daily* level for the lake was 3 cm lower than it was on the 1st of the month.

On a *monthly* basis, however, water levels increased 10 cm from May to June, reflecting the increase in *daily* water levels that occurred for the most part in late May. Therefore, although Lake Ontario started its seasonal decline around mid-June when we look at *monthly* mean water level data the decline will first appear in the July value.

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June Precipitation over the Great Lakes

As a percentage of the long-term June average:

Great Lakes Basin	**86%**	**Lake Erie**	**92%**
Lake Superior	**73%**	**(including Lake St. Clair)**	
Lakes Michigan-Huron	**94%**	**Lake Ontario**	**83%**

NOTE: These figures are preliminary

Water Level Data

Whether you would like to know approximately what water level conditions are like, would like to track water levels as they change from day to day, or need to know how water levels compare to Chart Datum right now, the information is available. Please visit: **http://www.on.ec.gc.ca/water/levels/intro.html** and choose from the selection of links provided under the "Current and recent water level data" and "Water Level Forecasts" headings.

Current Conditions

The levels of lakes St. Clair, Erie and Ontario appear to have reached their annual peaks in June, while the levels on lakes Superior and Michigan-Huron continued to rise, albeit slowly, during the month. The level of Lakes Michigan-Huron is expected to reach its annual peak in July, while Lake Superior is expected to continue its seasonal rise during July.

June Outflows from the Great Lakes

As a percentage of the long-term June average:

Lake Superior	**101%**	**Lake Erie**	**99%**
Lake Huron	**90%**	**Lake Ontario**	**103%**

NOTE: These figures are preliminary