

2021: A High Bottom – Low Water Season

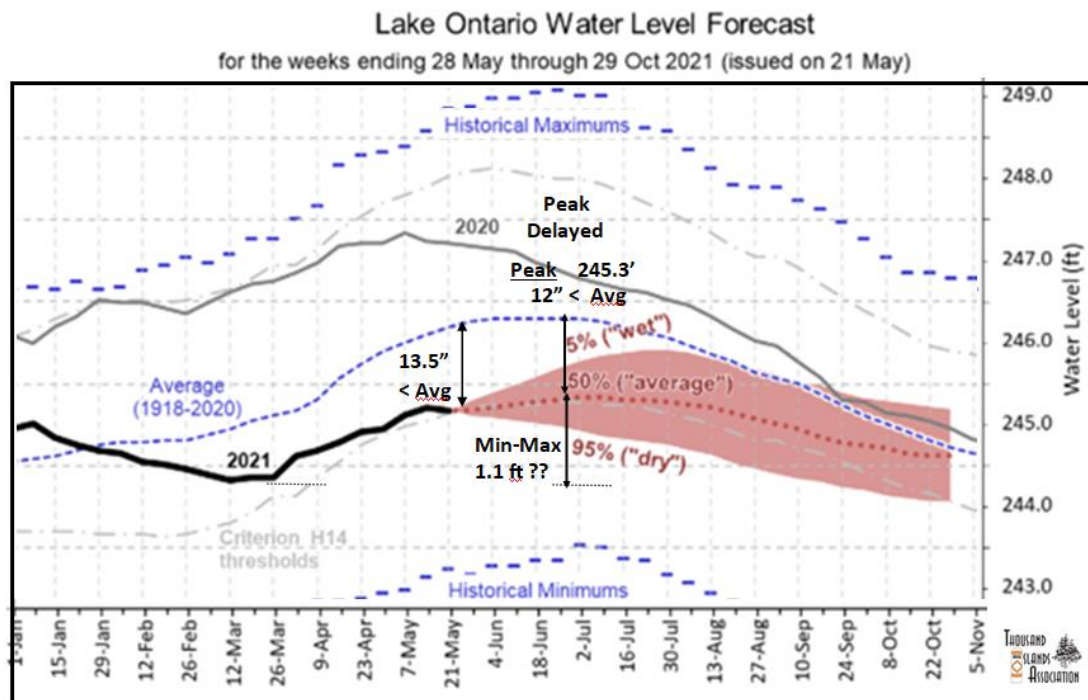
TIA Water Levels Committee – Ken White & Vince Barton (5/30/21)

Does Anyone Know How to Do a Rain-Dance?

We tried, and we made progress. We got rain but washed out the Friday leading into Memorial Day Weekend as well as Sunday afternoon and evening here in Central NY. Oops!

Outlook

- Summer levels will be like fall/end-of-season. One more tidbit - the last time we had similar levels in late May was in 1999.
- Docking & navigation will be challenging. We'll have the normal fall-like River for boating the during the 2021 summer. Levels right now are very, very similar to an "average" mid to late September and into October.
- More precautions when boating are certainly warranted as a result!



Source: <https://ijc.org/en/loslr/watershed/forecasts> w/data graphics added by the Thousand Islands Association (TIA)

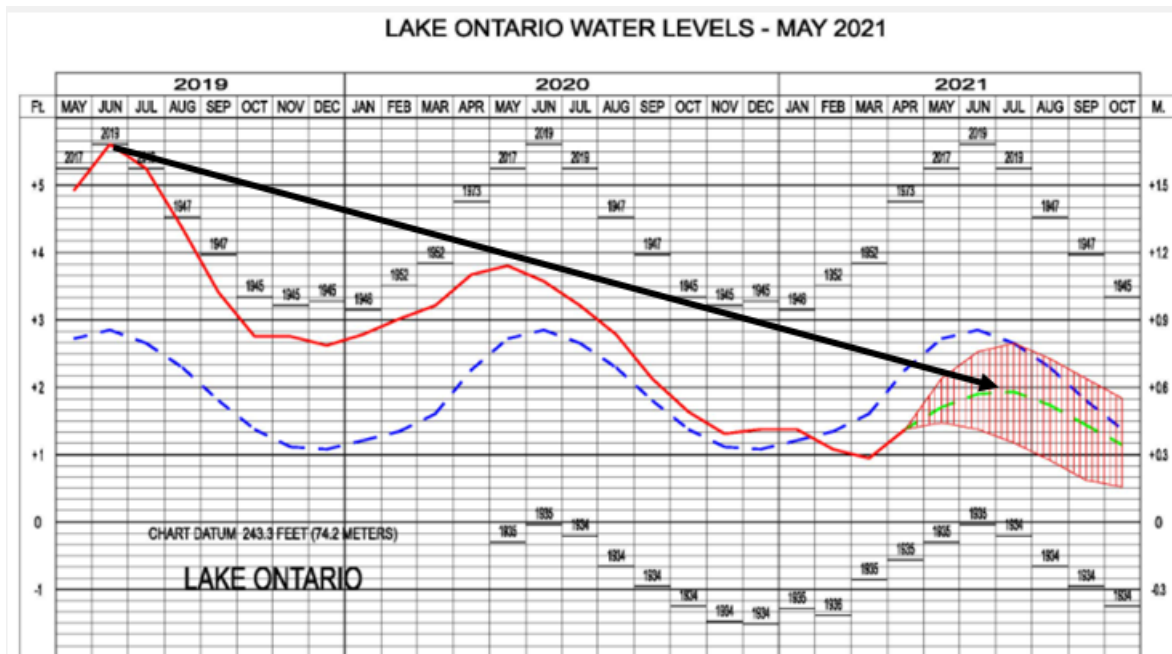
Current 6-month Water Levels Forecast Chart Observations

(Note: Our discussion assumes future levels to be at the 50% probability line above)

- Since our May report, the red shaded area depicting the 90% range of uncertainty has narrowed 47% at the forecast peak (beginning of July 2021). Additional water rise will be slow to recover with a more certain forecast
- A paltry 1.1 feet Min-to-Max total level swing (late March to the early July peak *may* break the current 1.3 foot record set back in 1987 for the lowest Min-to-Max swing
- The projected 50% chance peak level is only 3-4" above early January!
- The current level is 13.5" below the average (100-year for May 27th). There is little momentum for rising levels, even with a move from “average” to “wet” conditions

Lake Ontario Level Changes over 3 Years

As shown on a hydrology report from the US Army Corp of Engineers, this 3 year-chart below demonstrates that summer water level peaks are decreasing sharply in a straight line! (We drew the bold line as an overlay for emphasis). Obviously, this trend cannot continue, but the rapid decrease of peaks is most remarkable.



US Army Corps of Engineers – click this [link](#) to view in a separate browser window

Just less than 5 months ago in early January, we were still nearly half a foot above average, and many people were calling for the Board to let out MORE water to prevent flooding like occurred in 2017/2019 at that time. Rather quickly thereafter, the entire water level control situation and focus changed.

- The 12-month dry cycle through April 1st tied for the driest 12 months since 1950

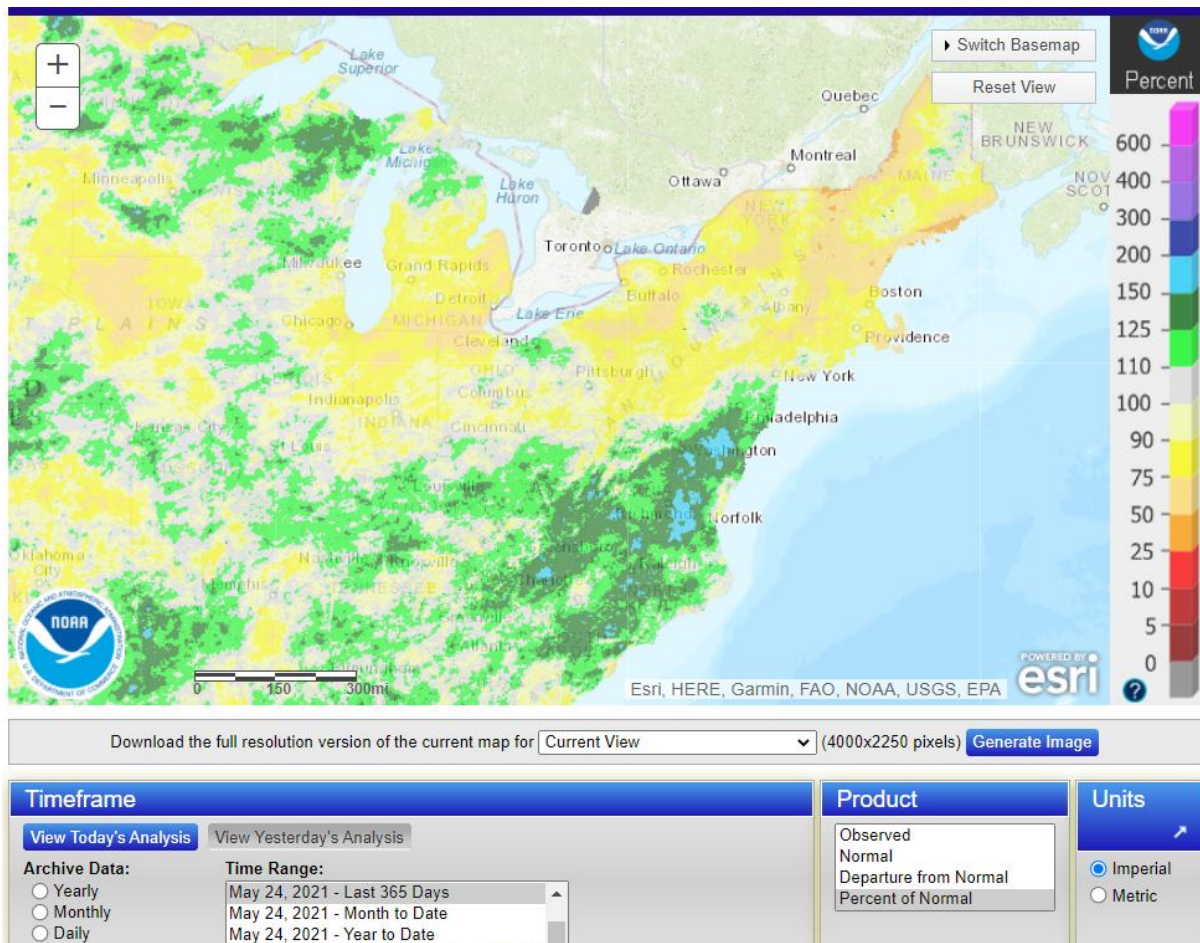
Check out this quote from Bryce Carmichael of the US Army Corps of Engineers: "Over the last twelve months we've seen a significant decline on Lake Ontario. The period from March of 2020, or April 1, 2020, through the end of March 2021 was tied for the driest 12-month period on record according to the NOAA database record since 1950."

The above quote came from a WSYR TV9 in Syracuse Video Interview (5/19/21). [Click on this link for an excellent water levels report video](#) during the weather segment, followed by four short, yet very informative segments from their interview with Bryce Carmichael.

How Does the Current Dry Cycle Affect Great Lakes Water Levels?

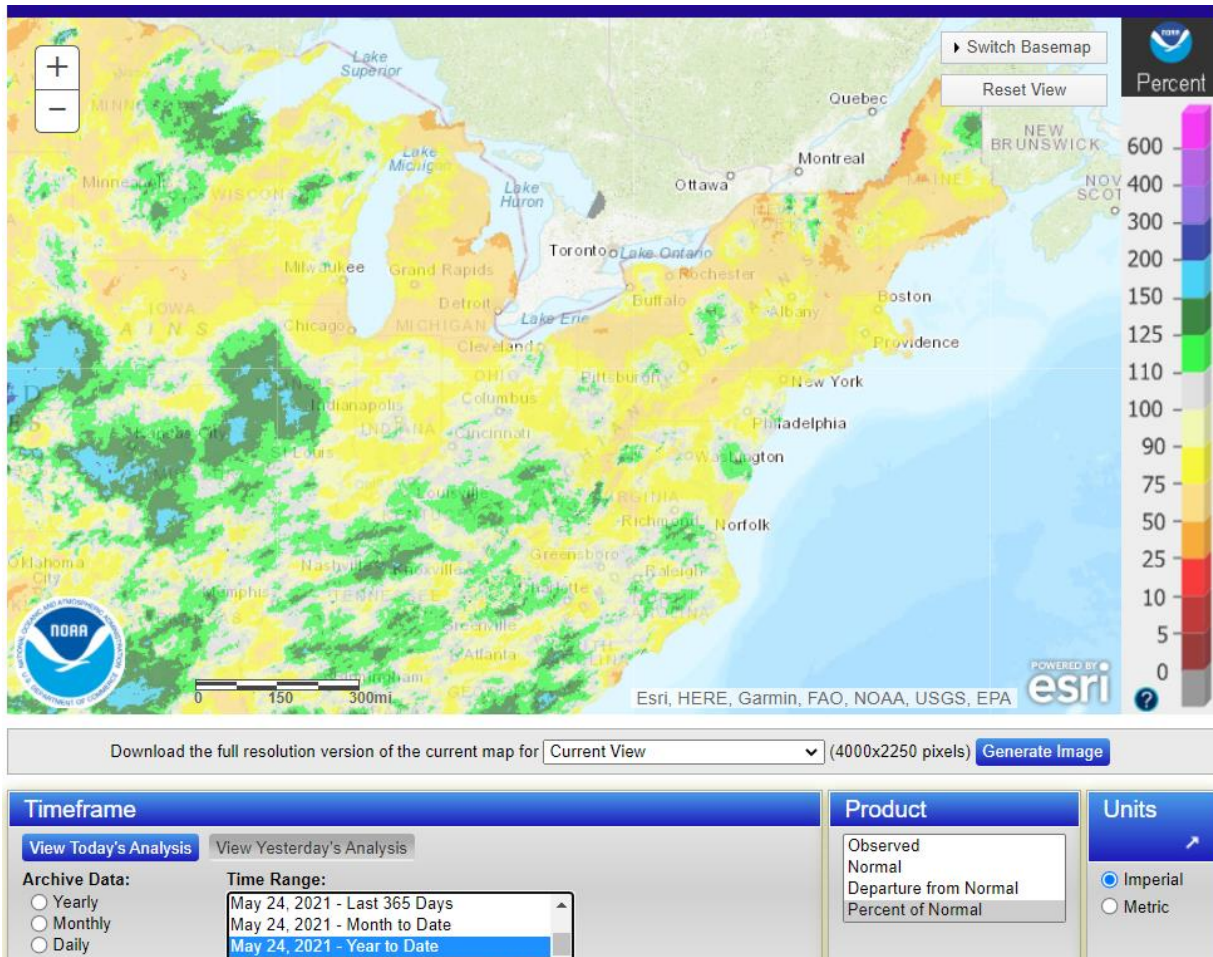
Precipitation (US Northeast) for the Last 365 Days

Note the light brown, yellow, and tan areas (25% - < 90% of normal precipitation). Only the Lake Superior region shows rainfall above normal in the light and dark greens.



Precipitation (US Northeast) for 2021 through 5-24-21

There is lots more yellow in the entire Great Lakes region this year, as well as a significant increase in light and dark browns.



May's Lake Ontario Precipitation Update

After a promising start to May weather-wise, it turned exceptionally dry for the month - AGAIN. Through 5/30, the Lake Ontario basin has received 46% of average precipitation - a whopping total of 1.38 inches. And from 5/10 through 5/23, a full 2-week period – it got just 0.06 inches! Pathetic. Until we finally got some rain on Wednesday, 5/26, followed by a Friday Spoiler to start the US Memorial Day Weekend, precipitation was under 1" for the month.

IJC – Where Did the Water Go?

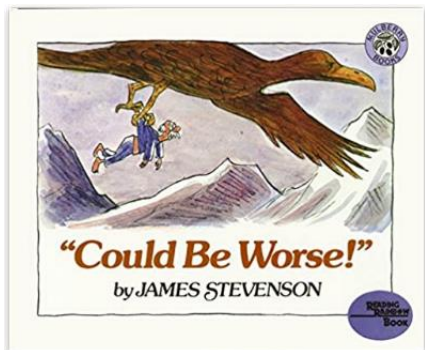
Last month we reported:

“Beginning April 10th, the IJC’s River Board (ILOSLRB) reduced outflows to compensate for 3.7” extra water removed during Jan/Feb winter months. This 3-week reduction will add back 2.4” before flows return to Plan 2014 rates.”

UPDATE: The IJC's ILOSLR Board just announced further outflow reductions due to water levels dropping below the Criterion H14 low water trigger levels (*find the gray dashed line on our first chart, the current 6-month forecast*). Here's their statement:

"The water level of Lake Ontario has declined below the applicable low criterion H14 threshold and the Board is implementing a major deviation strategy as authorized by the [IJC's Directive](#). For the coming week, the average Lake Ontario outflow is expected to be 7,840 m³/s (276,900 cfs), which is 100 m³/s (3,500 cfs) less than the amount prescribed by the regulation plan. The Board will continue to monitor conditions and the effects of its deviation strategy closely and will re-assess its deviation strategy regularly." 5/27/21 [Weekly Regulation Summary from ILOSLRB](#)

"Could Be Worse" – says the title of the James Stevenson children's book



For a primer on drought conditions covering the US, with discussions of drought terms, mention of the Northeast region and special emphasis on the west coast's current situation, click below
<https://www.pbs.org/newshour/science/early-signs-signal-a-disastrous-wildfire-season-in-the-west>