

DETROIT DISTRICT U.S. ARMY CORPS OF ENGINEERS CELRE-CDH-W 477 MICHIGAN AVENUE DETROIT, MICHIGAN 48226

MARCH 2025 GREAT LAKES WATER LEVEL SUMMARY

LAKE SUPERIOR

Lake Superior continued its seasonal decline from February to March, dropping about an inch to a level of 600.66 feet. This level is 6 inches below its March long-term average (LTA) level, 5 inches below last March's level, 21 inches below its March record high level, and 13 inches above its March record low level. Precipitation in the Lake Superior basin was near average, while runoff was above normal, particularly in Michigan's Upper Peninsula, which both contributed to above average water supplies. The current 6-month water level bulletin projects Lake Superior to begin its seasonal rise in the coming month and continue rising over the forecast horizon. From April to September, Lake Superior water levels are forecast to be 1 to 6 inches below last year's levels, about 5 to 6 inches below LTA levels, and 18 to 22 inches below record high levels. Over the next 6 months, water levels are forecast to be 16 to 18 inches above record low levels.

LAKE MICHIGAN-HURON

Lake Michigan-Huron began its seasonal rise from February to March, rising about an inch to a level of 577.89 feet. This level is 7 inches below its March LTA level, 10 inches below last year's level, 42 inches below the record high level from March 2020, and 22 inches above its March record low level. Water supplies were well above average on Lake Michigan-Huron, which was likely a result of well above average precipitation, and above normal runoff, especially in the northern half of the basin. The current 6-month water level bulletin projects Lake Michigan-Huron to continue its seasonal rise over the next few months until peaking around July. Over the next 6 months, Lake Michigan-Huron water levels are predicted to be 8 to 11 inches below last year's levels, 6 inches below LTA levels, 39 to 41 inches below record high levels, and 24 to 26 inches above record low levels.

LAKE ST. CLAIR

Lake St. Clair rose 11 inches from February to March, rebounding after a drop in the previous month when ice restricted flow into the lake. The March monthly mean level is about one inch above its March LTA level. This level was also 9 inches below last March's level, 34 inches below its March record high level, and 36 inches above its March record low level. The current 6-month water level bulletin projects Lake St. Clair's water level to continue its seasonal rise through July. From April to September, Lake St. Clair water levels are projected to be 11 to 14 inches below last year's levels, 2 inches below LTA levels, and 32 to 34 inches below record high levels. Also, water levels are forecast to be 26 to 28 inches above record low levels.

LAKE ERIE

Lake Erie rose 2 inches from February to March to a level of 571.26 feet. The March mean water level is about half an inch above its LTA level, 12 inches below last March's level, 33 inches below its March record high level, and 36 inches above its March record low level. Precipitation in this basin was average for March, while streamflows were a mix of below normal and normal in March, which contributed to Lake Erie's below average water supplies*. The current 6-month water level bulletin projects Lake Erie to continue its seasonal rise this month. Over the 6-month forecast period, Lake Erie water levels are projected to be 11 to 12 inches below last year's levels, 0 to 1 inch below LTA levels, 28 to 31 inches below record high levels, and 31 to 35 inches above record low levels.

LAKE ONTARIO

Lake Ontario rose about 4 inches from February to March to a level of 244.59 feet. This level is 6 inches below its March LTA level, 7 inches below last March's level, 32 inches below its March record high level, and 24 inches above its March record low level. Precipitation in this basin was slightly above average, and streamflows were a mix of normal and above normal, which likely contributed to above average water supplies*. From April to September, Lake Ontario is projected to be within 2 inches of last year's levels, 2 to 3 inches below LTA levels in the next five months, then 2 inches above the LTA level in September, 24 to 37 inches below record high levels, and 31 to 35 inches above record low levels.

^{* &}quot;Water supplies" refers to the combined quantity of precipitation plus runoff minus evaporation. Also known as the net basin supply.



Back To The Shallows: After Years Of High Water, Lake Michigan Water Levels Dip Below Average By Craig Manning | Jan. 8, 2025

Stretches of sandy beach re-emerging from the depths. Docks reaching out farther and farther into the bay.

They're the hallmarks of lower-water cycles throughout the Grand Traverse Bay watershed. And if recent statistical trends are anything to go by, Traverse City might be heading for lower water levels for years.

According to Heather Smith, Grand Traverse Baykeeper for the Watershed Center Grand Traverse Bay, water levels for Lake Michigan and Lake Huron – which she says "are hydrologically considered a single lake because of the flow of water through the Mackinac Straits" – recently dipped below the long-term average for the first time in a decade.

"Right now, we are just under the long-term average," Smith says, citing recent data from the United States Army Corps of Engineers. "We're down two inches from last month, and we're down eight inches from a year ago."

While Smith is quick to note that current water levels hardly qualify as "low" based on a broader historical timeline – "We're still over two feet above the lowest low on record," she tells *The Ticker* – she also acknowledges recent trends feel surprising given what local shorelines have looked like for the past five years.

"We've been living in a very high-water world for a long time, and I think it's just kind of a shock for folks to see the water levels go back down again," Smith says. She's mostly referencing the period from 2019 to 2021, when high water became a legitimate point of crisis locally.

In February 2020, <u>The Ticker reported</u> how record high water levels had inflicted some \$1 million in damages in Traverse City, ranging from flooded boardwalks and parking lots to eroded shorelines and roadways. Property owners with homes near water <u>responded by installing boulders and retaining walls</u> to stabilize their shorelines and stave off erosion. Some areas, like Bluff Road on Old Mission Peninsula, <u>are still dealing with the fallout</u>.

But what a difference five years makes. In 2020, Lake Michigan-Huron repeatedly broke monthly high-water mark records, with water levels regularly hitting numbers 20 inches above the long-term average. As 2024 drew to a close, though, water levels in Michigan-Huron were consistently measuring 5-6 inches below that same long-term average. Between last year's mild winter and a low-precipitation summer and fall, Smith says Lake Michigan has been losing more water by evaporation than it's gained back through rainfall and snowmelt.

"That's the formula for lake levels: precipitation and evaporation," Smith explains. "We had very low ice cover last winter, and with no ice cover or very low ice cover, there's going to be more evaporation. And then, just in general across the Great Lakes basin, 2024 was below average for precipitation. So, when you have lots of evaporation because of low ice cover, and then low precipitation, that's a recipe for receding water lines."

What will northern Michigan's shorelines look like come spring or summer? According to Smith, it's still early to forecast what the rest of the winter will bring. While northern Michigan has received considerable snowfall this winter — per the National Weather Service, Traverse City has tallied 60.1 inches so far, 63 percent over the normal-to-date amount of 36.8 inches — it's also experienced major warming patterns that have limited accumulation and kept water temperatures warm. A recent MLive report noted that water temps on Monday were "still warmer than any January 6 in recent memory." As such, ice cover on Lake Michigan is virtually nonexistent, sitting at 2.21 percent compared to a season-to-date norm of around 5 percent.

Another winter of low ice cover could spell further evaporation, and Smith says most forecasts are indeed calling for Lake Michigan "to drop at least another inch or two into February and March." In other words, northern Michigan could be in for a shallow-water summer. Things could also dip further in the coming years: Smith says typical Great Lakes cycles see 10-15 years between high water and low water, which means 2025 could simply be the midway point between 2020's peak and the next brush with truly low water levels. The last low period came in the early 2010s, culminating in January 2013 with average. As waters recede, Smith is hopeful locals won't forget the intensity of 2020's high-water crisis but will instead use these in-between years as an opportunity to prepare for what's next.

"We tend to get into trouble when we're at our highest highs or our lowest lows," Smith says. "That's when there's stress on the ecosystem, stress on our infrastructure, stress on personal property. So, this is a good time to prepare. In these middle years, we need to not lose sight of the fact that we're going to be faced with really high highs and really low lows once again, and that those extremes are only predicted to become more extreme with the changing climate future we're facing." The Watershed Center is going to spend the next few years beating the drum for "coastal resiliency best practices," and pushing locals to ask the question: "How can we exist on the shoreline in the most harmonious way?"

"We're encouraging people to think about building structures further back from the water's edge. We're encouraging people to allow grass, willows, and other native deeprooted vegetation to naturally grow on the shoreline, because those are really great erosion prevention mechanisms for our high-water years, and they provide a lot of ecological value, too. This really is the time to think about what we can do – not just as individuals, but also as communities, in terms of zoning and planning policy – to better withstand and recover from future extremes."