

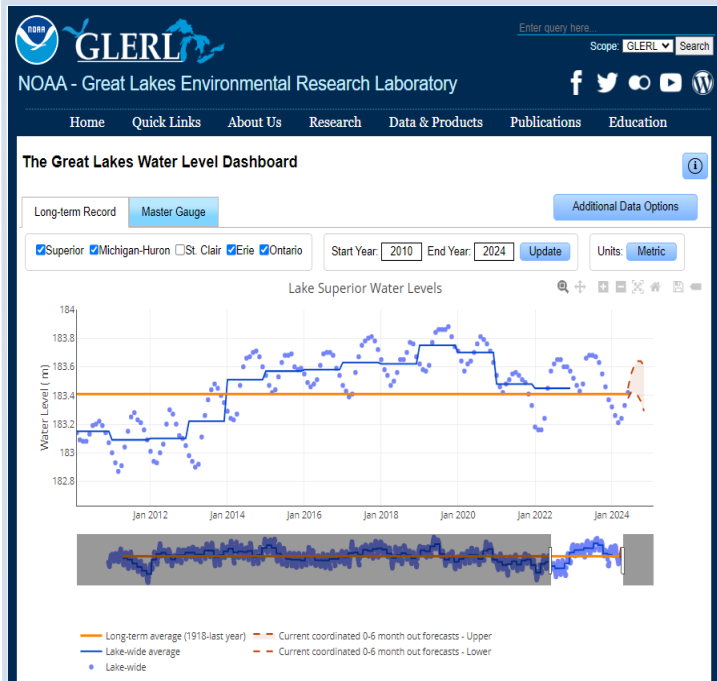
# Great Lakes Water Level Dashboard: Tool Overview and Guidance

[glerl.noaa.gov/data/wlevels/dashboard](https://glerl.noaa.gov/data/wlevels/dashboard)

GLISA developed this tool guidance based on their experience as a potential user. It is intended to help other users in the Great Lakes region better understand the tool and its potential applications. For an in-depth walkthrough of how to use the tool, please see this [tutorial video](#).

## Overview

Water levels on the Great Lakes fluctuate across different time scales and impact numerous human and environmental sectors in the region, including tourism, coastal habitats, recreational boating, erosion, and shipping. The Great Lakes Water Level Dashboard allows users to access and visualize historical Great Lakes water level data, as well as forecasted water levels 6 months into the future.



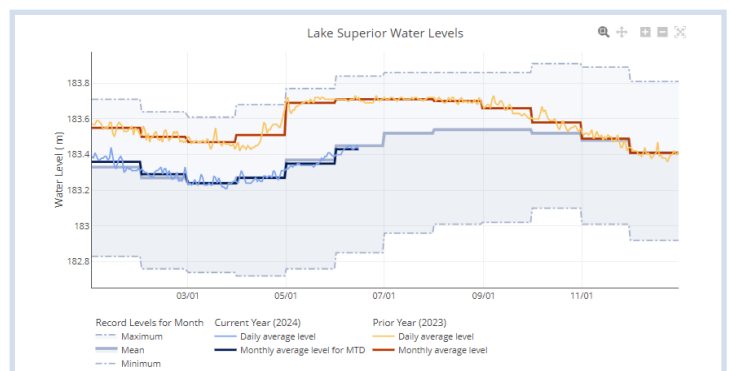
Landing page of the Great Lakes Water Level Dashboard displaying a time series graph of Lake Superior water levels. Credit: NOAA GLERL.

## Outputs

- Provides over 100 years of water level data through interactive graphs for each of the Great Lakes.
- Users can specify the timeframe and variables they wish to view and/or download in the graphs, including monthly averages, long-term maximum and minimums, and annual mean and range.

## Applications and Use

- **Intended audience:** Coastal managers, marina operators, property owners, etc. can use this tool to conduct historical analyses of Great Lakes water level fluctuations over time and prepare for short-term future conditions with the 6-month forecasts.
- **Background needed:** This tool is easy to navigate for accessing water level data throughout time and visualizing monthly and annual water level averages.
- **Example of potential uses:** Coastal communities can access up-to-date information on water level conditions and short-term forecasts to monitor changes and plan for summer tourism impacts (e.g., shoreline conditions at public parks, access to marinas, temporary shoreline protection). See [tutorial video](#) for example demonstration.



Graph of master gauge water level data for Lake Superior from the Great Lakes Water Level Dashboard. Credit: NOAA GLERL.

## Potential Limitations and Considerations

- While the graphs can be downloaded as PNG files, users must navigate to external sources to download files of the displayed data, which are linked to from the tool under Data Information.
- Long-term projections for future lake levels are not available through this tool; only 6-month forecasts are available and are based on observed and expected weather conditions.
- Some of the data options displayed on the graphs may be difficult to interpret from the legend labels without seeking additional explanation, which is available under Data Information.

## Data Sources

Data type	Source
Long-Term Record Water Level Graphs (lake level observations)	<a href="#">US Army Corps of Engineers</a> , NOAA/NOS Center for Operational Oceanographic Products and Services ( <a href="#">CO-OPS</a> )
Lake level forecasts (6-month)	<a href="#">US Army Corps of Engineers</a> in coordination with Environment and Climate Change Canada
Master Gauge Plots	<a href="#">NOAA/NOS CO-OPS</a>

## More Information on the Tool

This tool was developed by the National Oceanic and Atmospheric Administration (NOAA)'s Great Lakes Environmental Research Laboratory (GLERL) and the Cooperative Institute for Great Lakes Research (CIGLR) in 2013 and redeveloped in 2024. This product is made publicly available and hosted by NOAA's Office for Coastal Management Digital Coast. Data is updated daily. For any questions, suggestions, or problems with this application, contact: [oar.glerl.www@noaa.gov](mailto:oar.glerl.www@noaa.gov).

*This guidance document and accompanying tutorial video were developed by GLISA, NOAA's Great Lakes Climate Adaptation Partnerships (CAP, formerly RISA) team, under a project funded by Michigan Sea Grant to help make climate, weather, and coastal resilience tools more accessible to end users in the Great Lakes region. They were created for educational purposes only and are in no way affiliated with the Great Lakes Dashboard or its developers.*