



NOAA in the Great Lakes



NOAA is a science-to-service agency, transforming research into products and services that people use every day. NOAA's services in the Great Lakes region include weather warnings and climate forecasts, research and habitat restoration, and coastal protection and management.

NOAA is a key player in addressing important Great Lakes issues:

Harmful Algal Blooms (HABs)

Harmful algal blooms lead to the degradation of water quality, resulting in unsafe conditions for aquatic life and humans. NOAA research on the formation of HABs is used to create products for coastal communities and the public for making important decisions, such as managing drinking water plants or going to the beach. A weekly forecast bulletin for HABs in western Lake Erie provides current location, future movement, and intensity of HABs as they form. Additionally, NOAA's HAB Tracker combines remote sensing, monitoring, and modeling to produce 5-day forecasts of bloom extent, intensity and movement. These real-time predictions are updated twice daily and can provide water intake managers, anglers, recreational boaters, and beach users timely information for decision-making.



Credit: NOAA Great Lakes CoastWatch

Habitat Restoration

Since 2007, NOAA has awarded nearly \$100 million to improve fish passage, clean up marine debris and associated contaminants, restore coastal wetlands, and remove invasive species. NOAA has restored over 2,130 acres of habitat for fish and wildlife, removed over 186,755 metric tons of waste and demolition material, and opened over 718 miles of river for fish passage.



Credit: Muskegon Lake Restoration Project, NOAA

Water Levels

The Great Lakes experienced record low water levels in January 2013 then rebounded to above-average levels in 2014. NOAA's Great Lakes Water Levels Dashboard allows the general public to view historical water level data and forecasts (www.glerl.noaa.gov/data/now/wlevels/dbd/). This work improves public understanding of water level changes and their impacts on local resources and the regional economy.



Credit: Grand Haven, MI, R. Greaves

Improved Marine Forecasts

Marine forecasting in the Great Lakes is serious business for both commercial ships and recreational vessels. NOAA has developed a new marine forecasting process for predicting waves and dangerous conditions that will increase consistency among marine forecasts and save lives.

NOAA participates in several regional initiatives providing mission-directed leadership and valuable products and services.

- The **Great Lakes Restoration Initiative (GLRI)**, has provided more than \$1.6 billion to support Great Lakes restoration including more than \$125 million to NOAA since 2010. The GLRI supports NOAA's mission-focused work in the areas of toxic chemical remediation, habitat restoration, invasive species, nearshore modeling, observation and ecosystem forecasting, and climate change adaptation.
- The **Great Lakes Water Quality Agreement** Protocol of 2012 is the updated Agreement between the United States and Canada to restore and protect the physical, chemical, and biological integrity of the Great Lakes with many of its provisions codified in the Clean Water Act. NOAA is an active participant and leader, working on many annexes of the agreement.

www.regions.noaa.gov/great-lakes

Contact

Jennifer Day
NOAA Great Lakes Regional Coordinator
jennifer.day@noaa.gov
734.741.2266

NOAA's Great Lakes Offices

