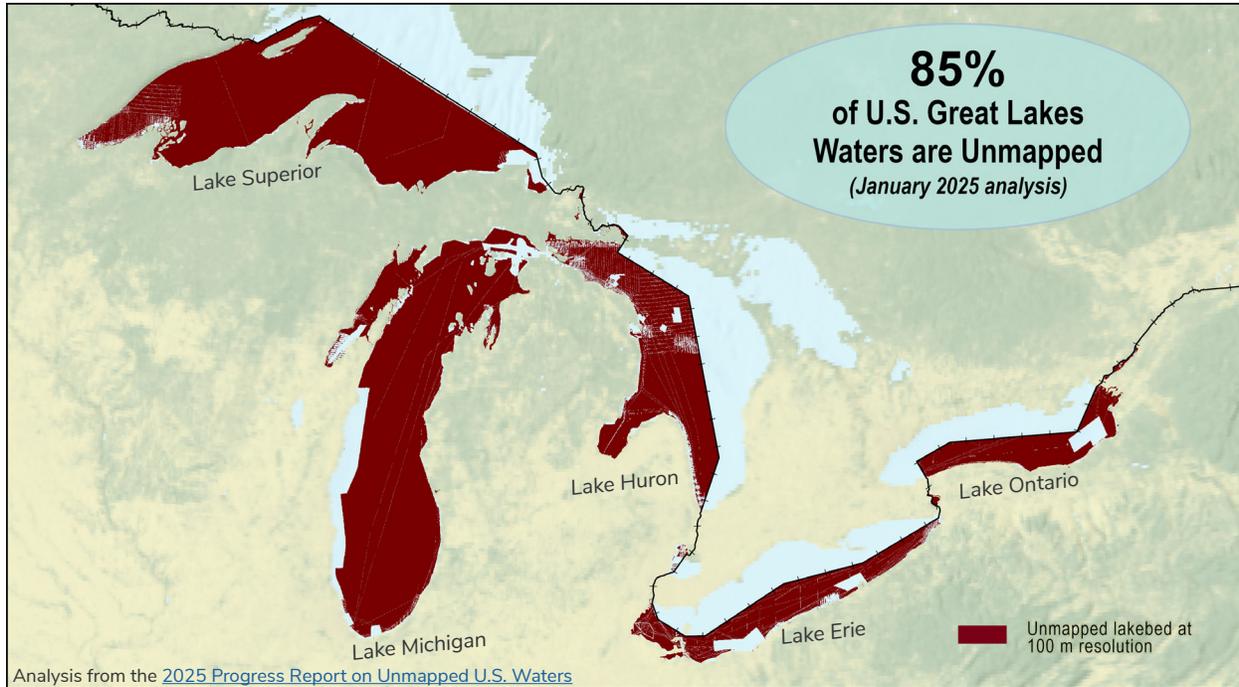


2025 PROGRESS REPORT: Unmapped U.S. Great Lakes Waters

Contributing [\\$28 billion to the U.S. GDP](#), the Great Lakes are an economic engine for North America, supporting 500,000 jobs, maritime commerce, a prosperous fishing industry, and a thriving tourism industry. Modern, high-resolution mapping data are critical to maintain these vast economic, ecological, and societal benefits; mitigate natural disasters; and manage the natural resources within this unique environment. As of January 2025, [85% of the U.S. Great Lakes](#) are not mapped to modern standards.



Mapping the Lakebed

primary sources of bathymetry

Multibeam and LIDAR surveys
by trained hydrographers and other personnel
from government, academia, and private industry

Coastline

Representing ~0-40 meters water depth, mapping in this area is ideal for aircraft using LIDAR technology and autonomous systems using multibeam sonar technology.

uncrewed

Shallow water

Representing ~40-200 meters water depth, mapping this area is ideal for ships using multibeam sonar technology alongside autonomous systems as a force multiplier.

Deep water

Representing water depths >200 meters, mapping this area is ideal for ships using multibeam sonar technology.

other sources



Uncrewed aerial vehicles



Satellite-derived bathymetry



Sidescan sonar



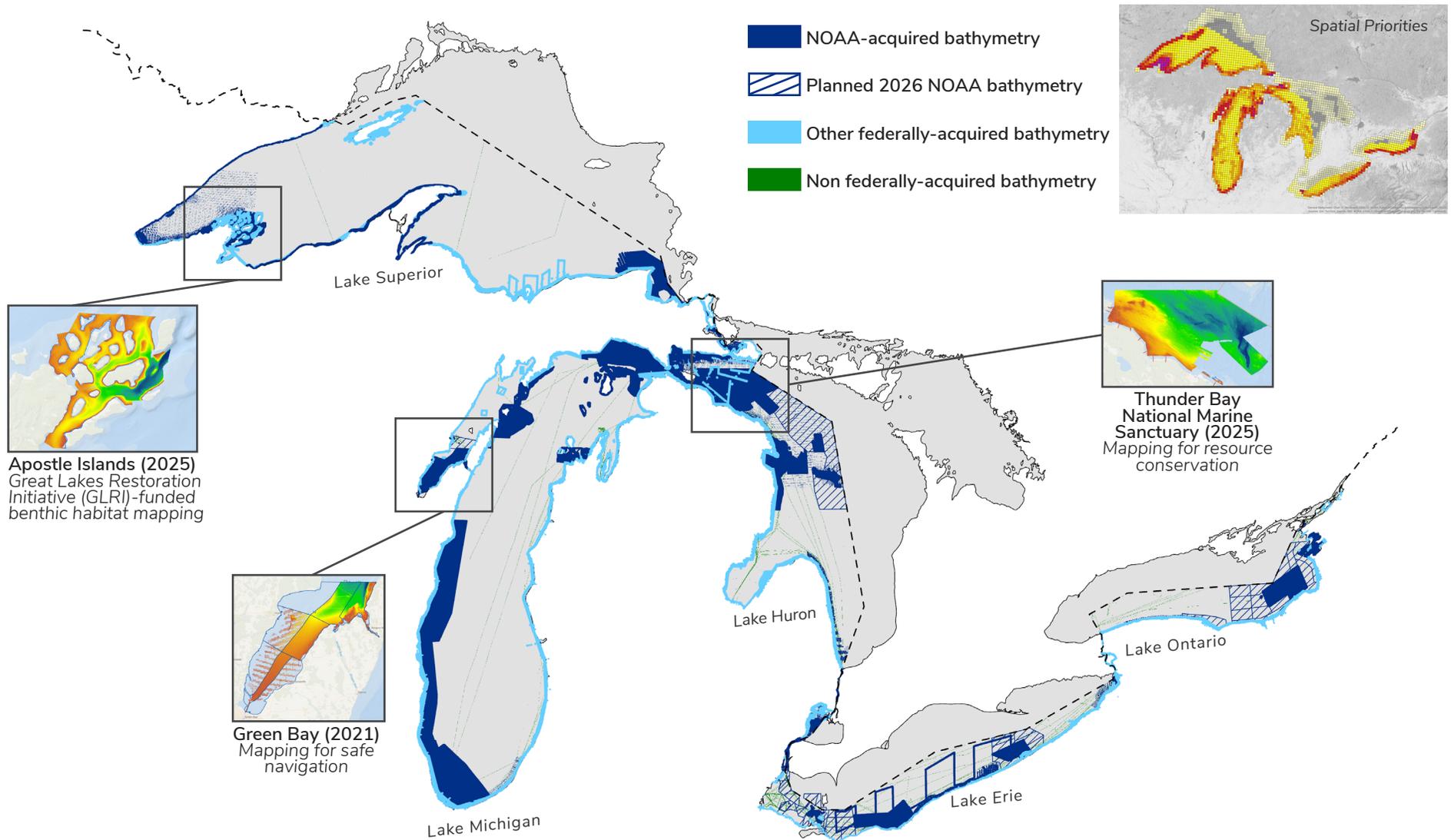
Single beam bathymetry



Crowdsourced bathymetry

Progress to Date

Shown below, NOAA and its federal partners have mapped nearly 15% of Great Lakes waters in the last five years, primarily in support of safe navigation, benthic habitat mapping, and resource conservation and management. In 2026, NOAA plans to map an additional 6% of Great Lakes waters. These data are made publicly accessible through NOAA's [National Centers for Environmental Information](#) and [Digital Coast](#).



Regional priorities and data acquisition plans may be found on the [U.S. Mapping Coordination](#) website, a tool to facilitate cost-effective use of government mapping resources. These efforts, many of which have been funded by the [Great Lakes Restoration Initiative](#), support the [National Ocean Mapping, Exploration, and Characterization \(NOMECE\) Strategy](#) and the regional [Lakebed 2030 Initiative](#), where partners have consistently cited navigation, fisheries, habitat classification, and natural hazards as primary justifications for mapping in [spatial priorities studies](#), requiring products with accurate elevation and habitat and substrate characterization.

