

# NOAA IN THE GREAT LAKES: Accomplishments, Assets, and Challenges

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Performing the Functions and Duties of the  
Assistant Secretary for Conservation and  
Management  
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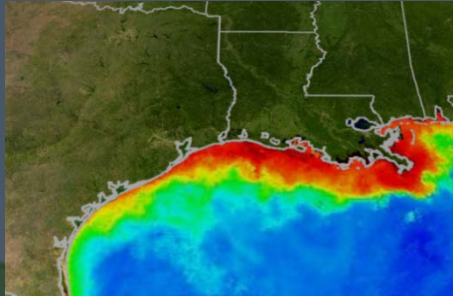
# NOAA's STRATEGIC PRIORITIES

## Science, Service, Stewardship

Solid, Credible  
Science



Healthy oceans



Sustainable  
seafood and jobs



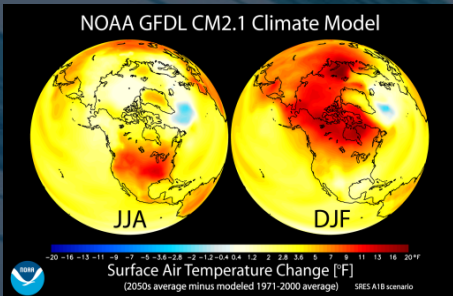
Resilient coastal  
communities &  
economies



Weather Ready  
Nation



Climate  
Information &  
Decision Support





# GREAT LAKES GOVERNANCE

## Science, Service, Stewardship



- NOAA conducts valuable scientific research in the Great Lakes Region.
- Regional Collaboration's value rests with translating place-based science into service and stewardship, building upon NOAA's scientific expertise to improve governance, restoration, and protection of the Great Lakes both now and for future generations.
- The GLRCT represents NOAA in regional governance efforts, bringing the agency's scientific expertise to governance organizations such as the Great Lakes Restoration Initiative, Great Lakes Water Quality Agreement, and Great Lakes Wind Collaborative.



# REGIONAL ASSETS

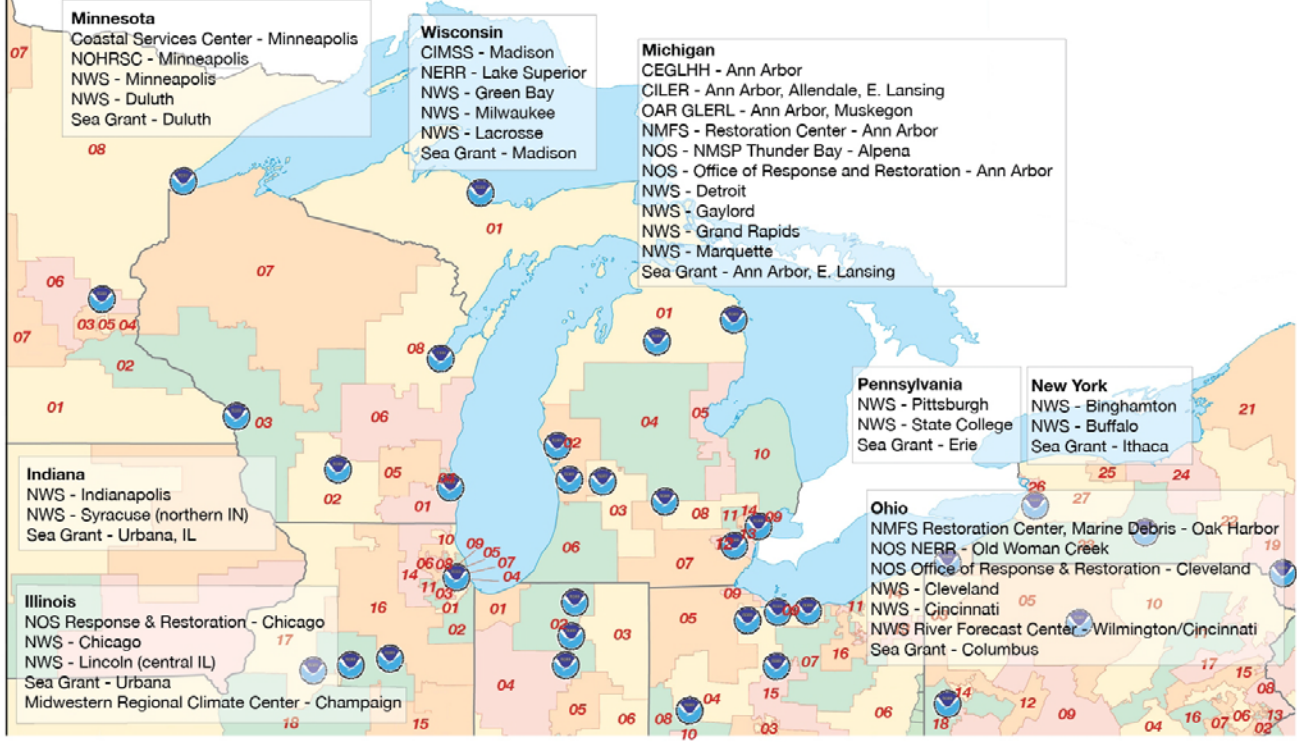
## NOAA In Your State



### NOAA in Your State

NOAA Great Lakes Regional Collaboration Team

Freshwater resources, Great Lakes coasts, Climate impacts, Aquatic invasive species, Great Lakes forecasting, Great Lakes Restoration Initiative, Great Lakes observing system



**KEY:**  
 Numbers in red=U.S. Congressional district  
 CEGLHH=Center of Excellence for Great Lakes & Human Health  
 CILER=Cooperative Institute for Limnology & Ecosystems Research  
 CIMSS=Cooperative Institute for Meteorological Satellite Studies  
 NERR=National Estuarine Research Reserve  
 NMFS=National Marine Fisheries Service  
 NMSP=National Marine Sanctuary Program  
 NOHRSC=National Operational Hydrologic Remote Sensing Center  
 NOS=National Ocean Service  
 NWS=National Weather Service  
 OAR=Office of Oceanic & Atmospheric Research



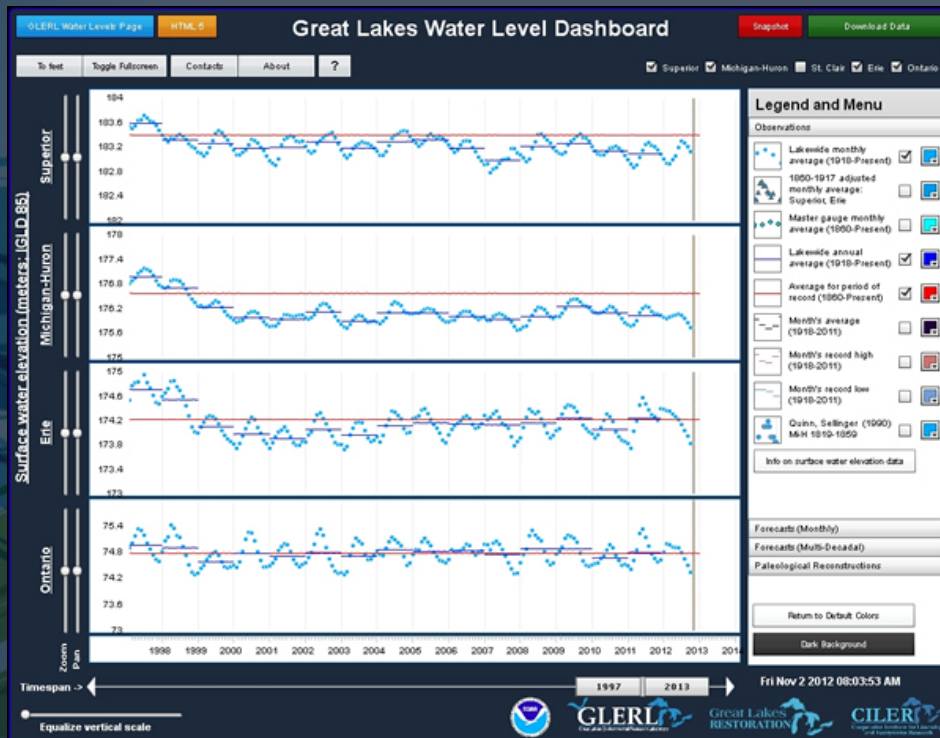
NOAA OAR  
 Great Lakes Environmental  
 Research Lab (GLERL) Facility  
 Ann Arbor, MI





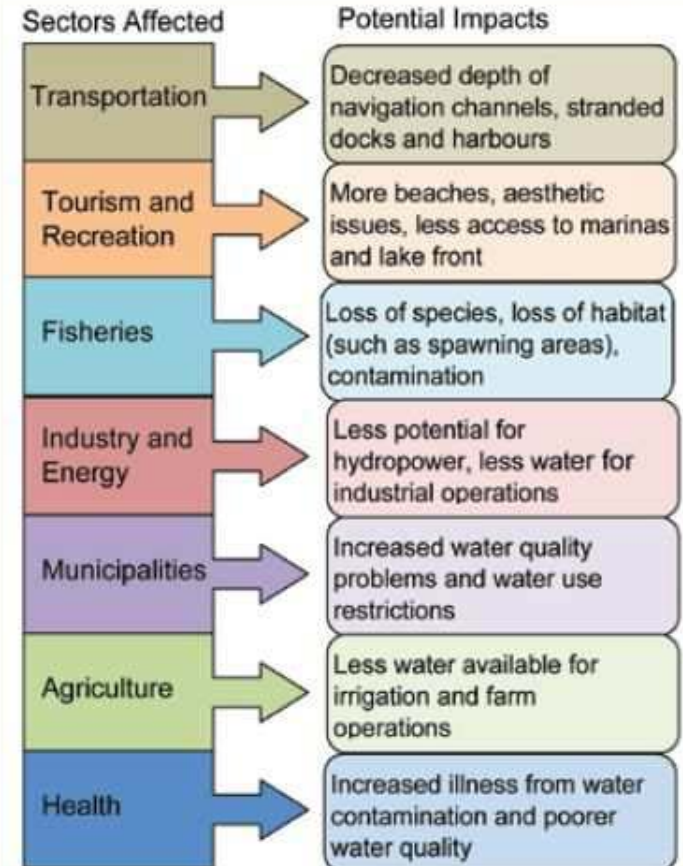
# GREAT LAKES RESEARCH

## Water Levels



Great Lakes water levels constitute one of the longest high-quality hydrometeorological data sets in North America, with reference gage records beginning ~1860.

### Lower Water Levels in the Great Lakes



Adapted from Field et al.<sup>164</sup>

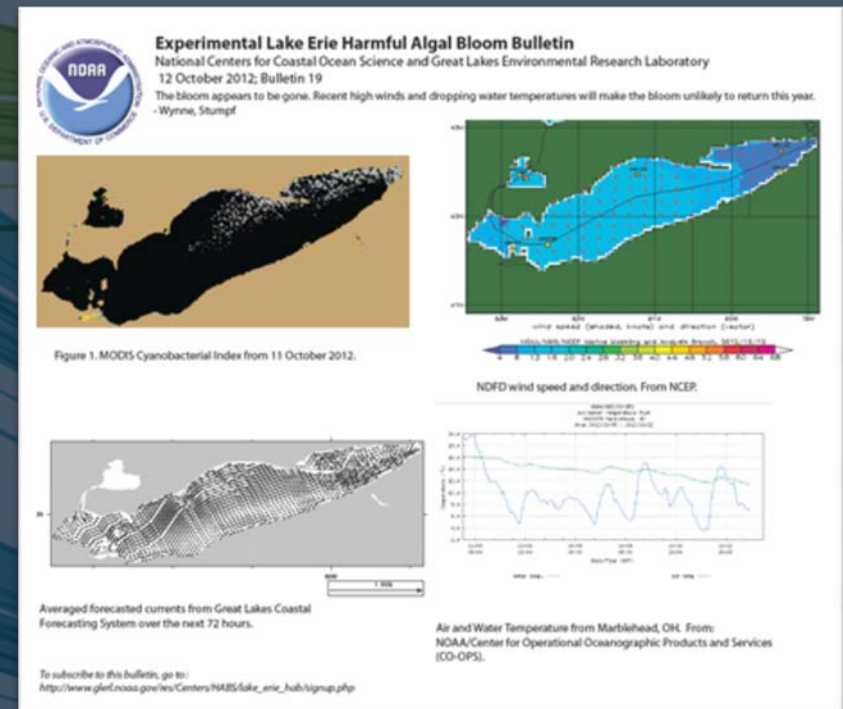


# GREAT LAKES RESEARCH

## Harmful Algal Blooms

GLERL/CEGLHH is executing a multi-pronged HABs research program in partnership with government, academic, and private sector experts.

- **Experimental HABs Bulletin:** weekly user-friendly forecasts of *Microcystis* blooms in western Lake Erie.
- **Statistical analysis:** timing, intensity, and spatial extent of HABs.
- **Mechanistic modeling (food webs and nutrients):** relationships and HABs predictors.
- **Remote sensing:** estimation of blooms.
- **Hydrologic analysis:** potential role of nutrient inputs in HABs.





# MANY GOALS, ONE MISSION

## Science, Service, Stewardship

