

U.S. EPA GLNPO Open Lake Monitoring Programs

Long-term Monitoring and Assessment of Water Quality for Lake Erie 1983-2015



Lake Erie Millennium Network
February 21, 2017

GLNPO Monitoring Programs

Great Lakes Fish
Monitoring and
Surveillance
Program



IADN



Biology Monitoring



Coastal
Wetlands



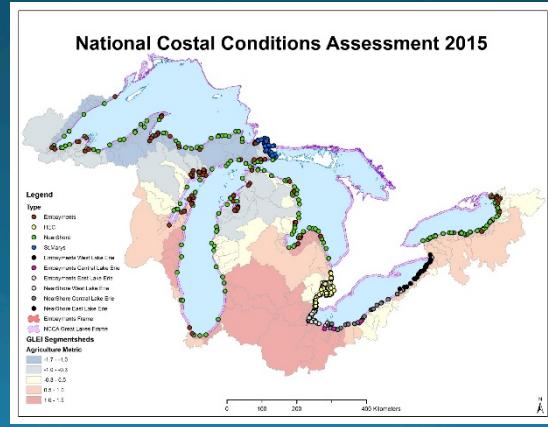
Water Quality Monitoring



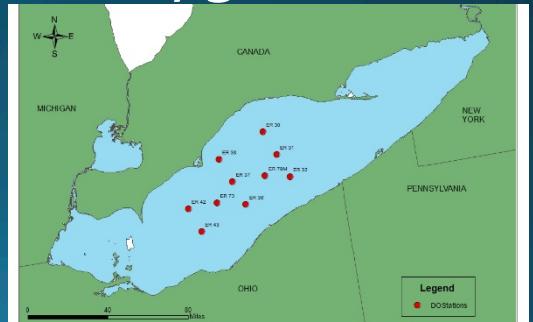
Great Lakes
Sediment
Surveillance
Program



Nearshore



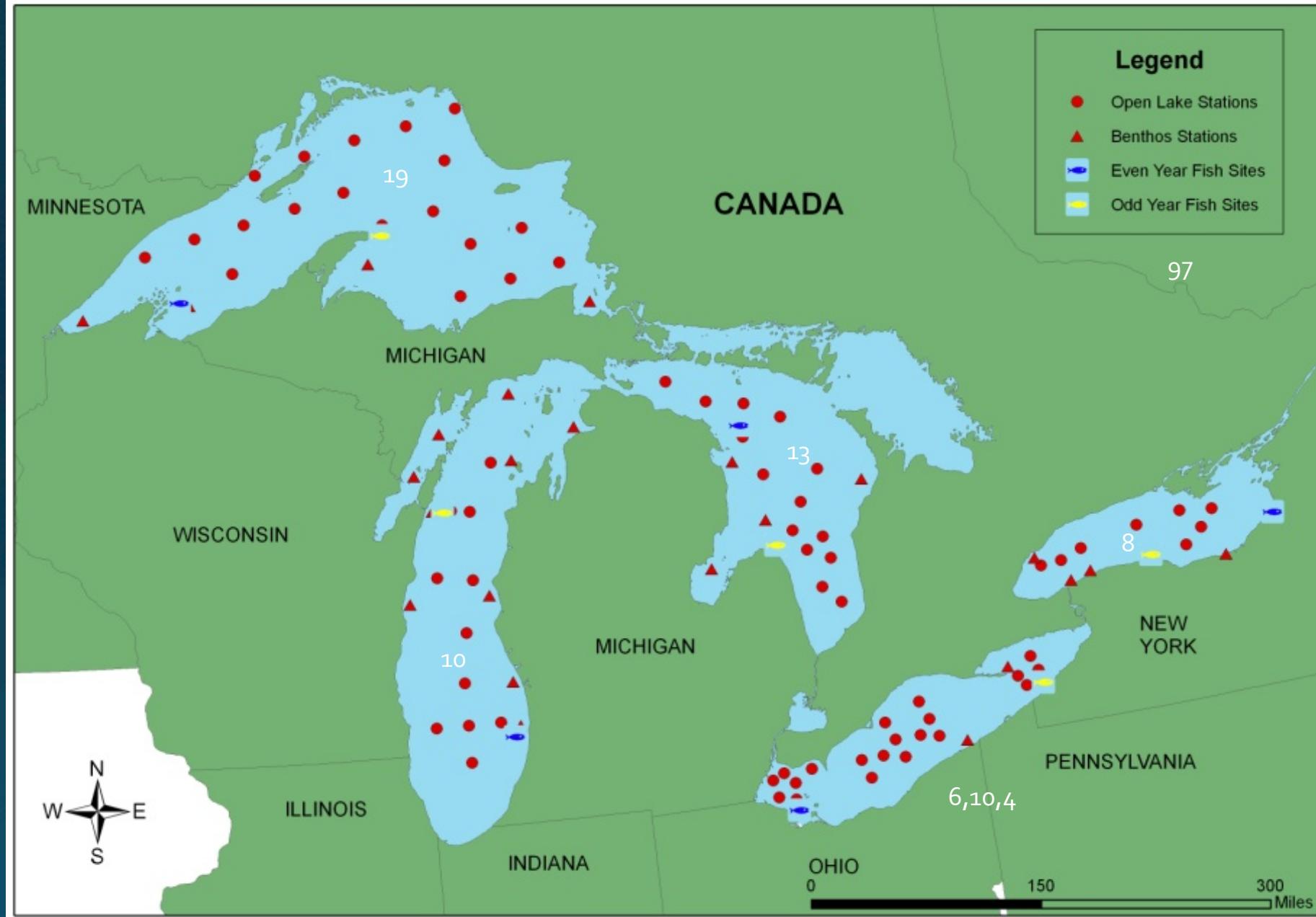
Dissolved
Oxygen



GLNPO's Open Lake Water Quality Monitoring Program



GLNPO'S Water Quality Survey Sampling Stations



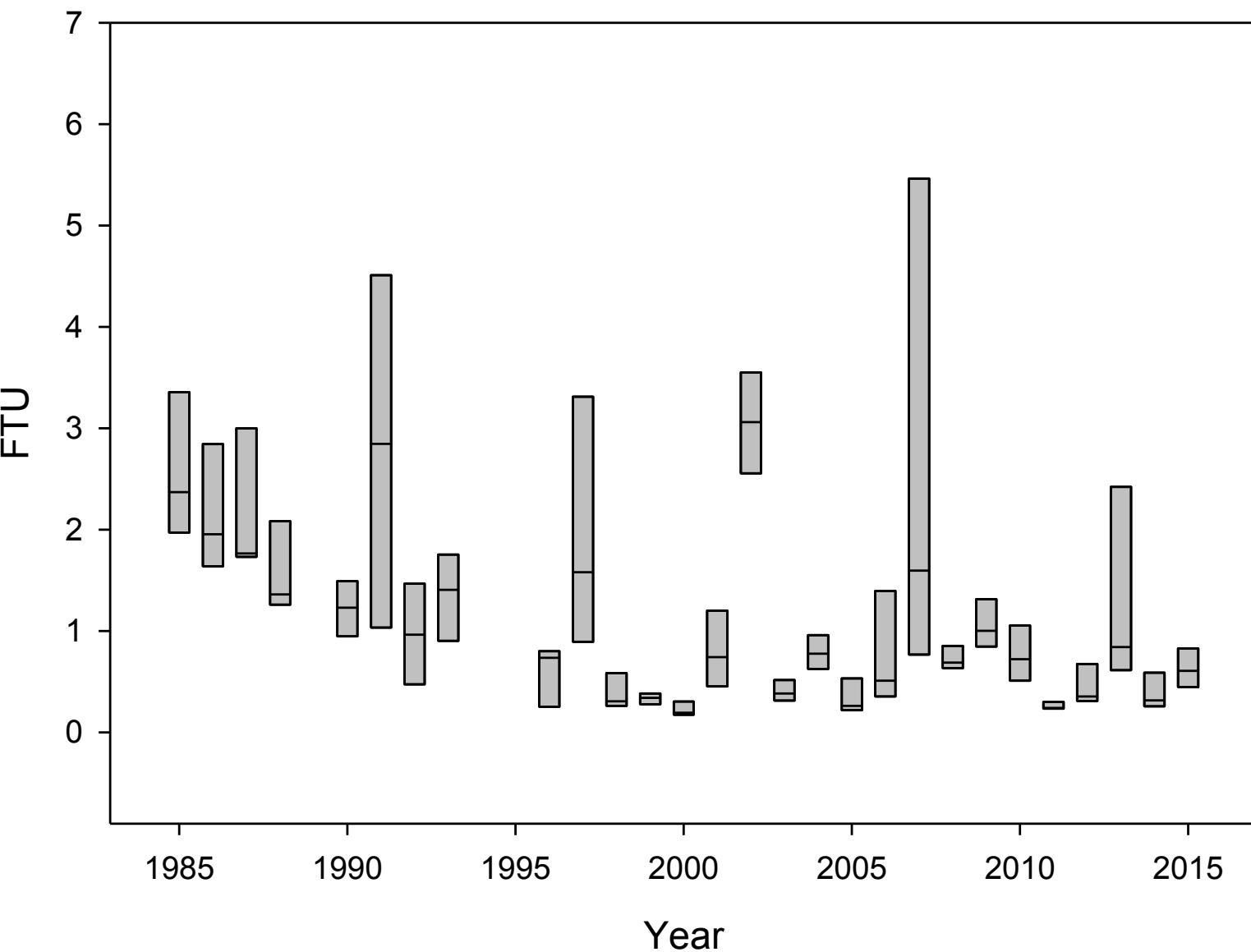
Grab sample parameters:



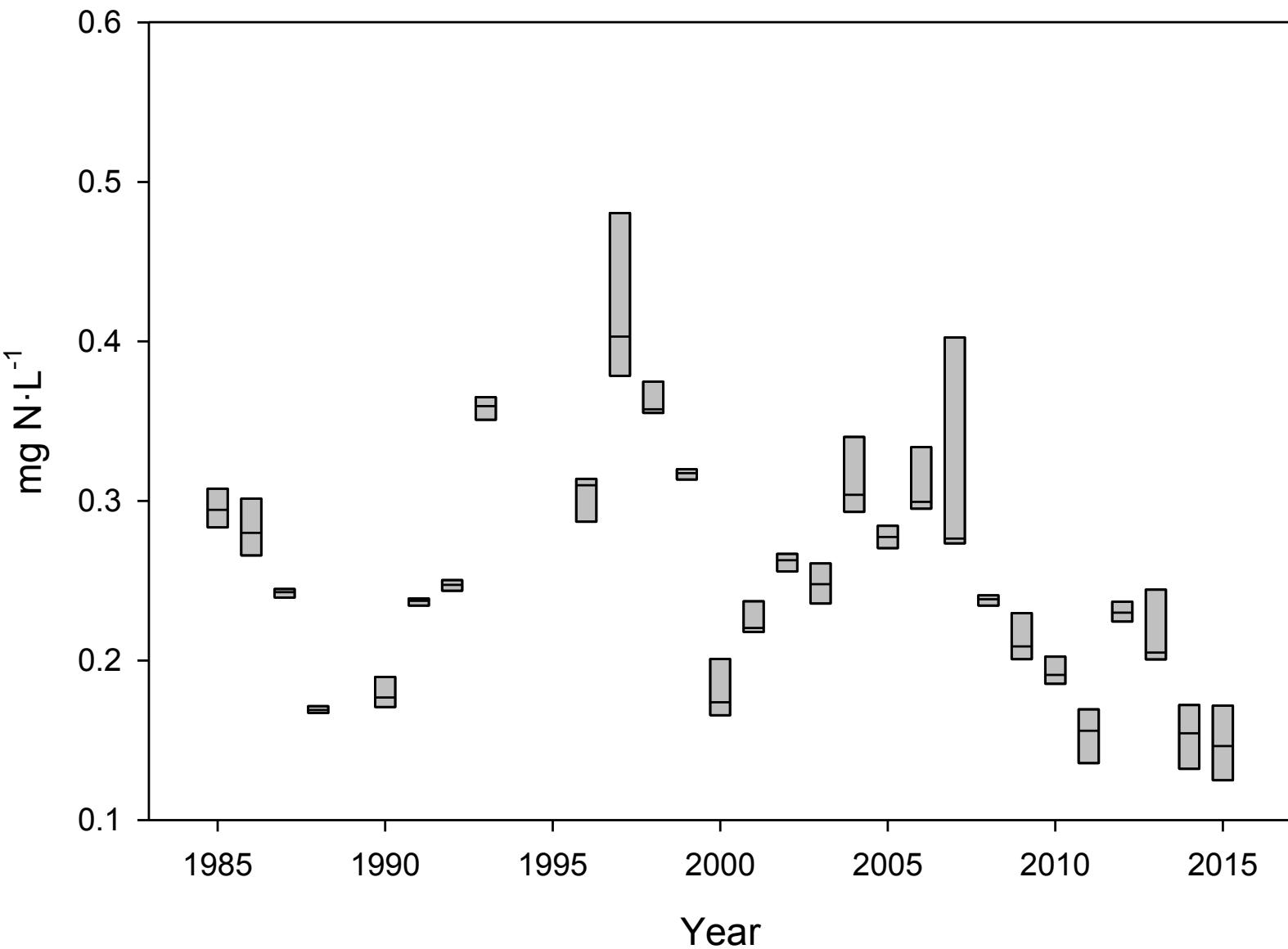
TP, TDP, PP, DRP
Nitrate/Nitrite, PN
POC, DOC
Cl⁻, Reactive Silica
Specific Conductance
Alkalinity, pH
TSS
D.O.
Ca, Na, Mg
Sediment TOC, TP, TN

All 5 lakes sampled by one program, one principal lab

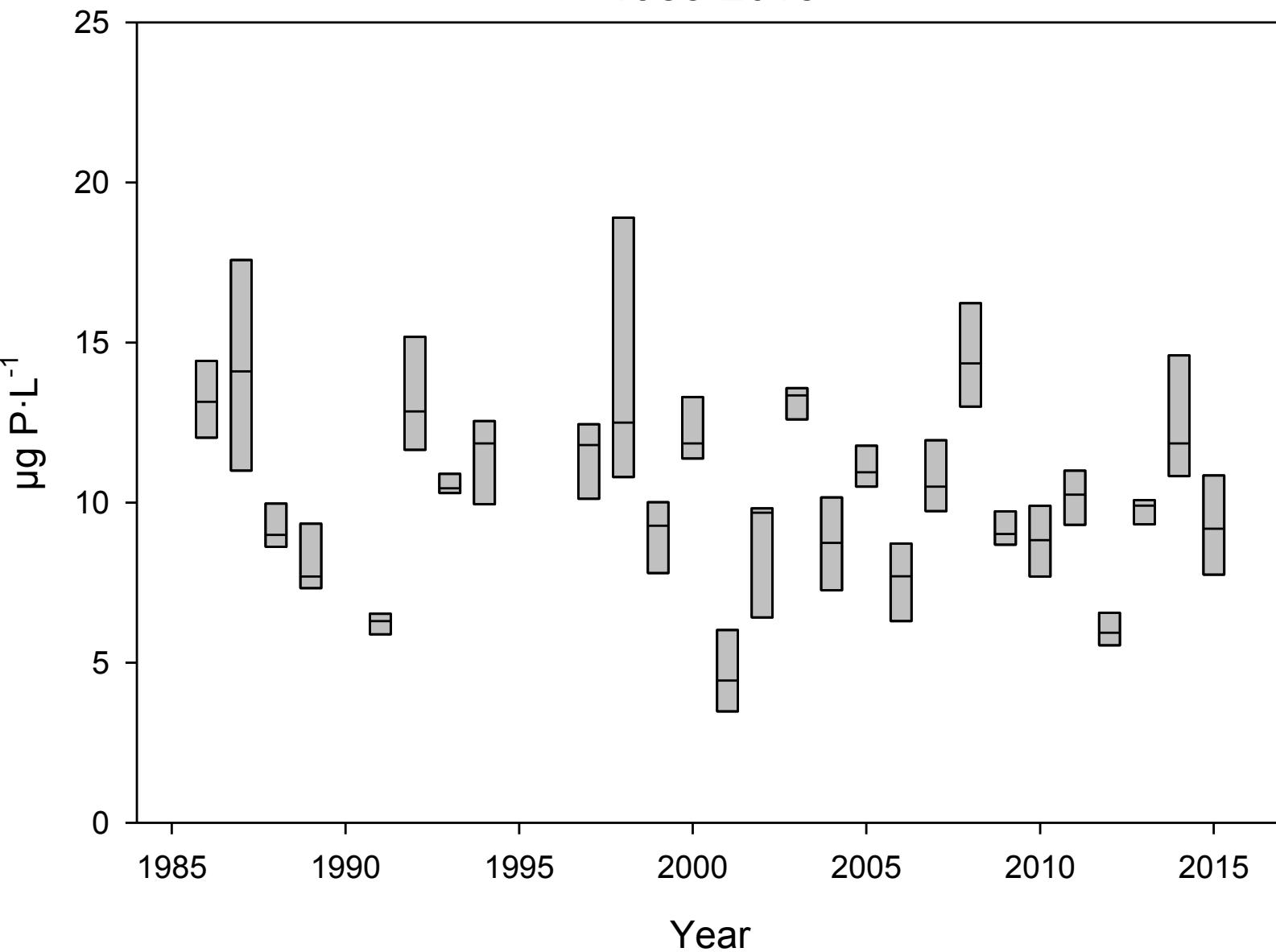
Lake Erie Eastern Basin Open-Waters
GLNPO Station Averages
Turbidity
1985-2015



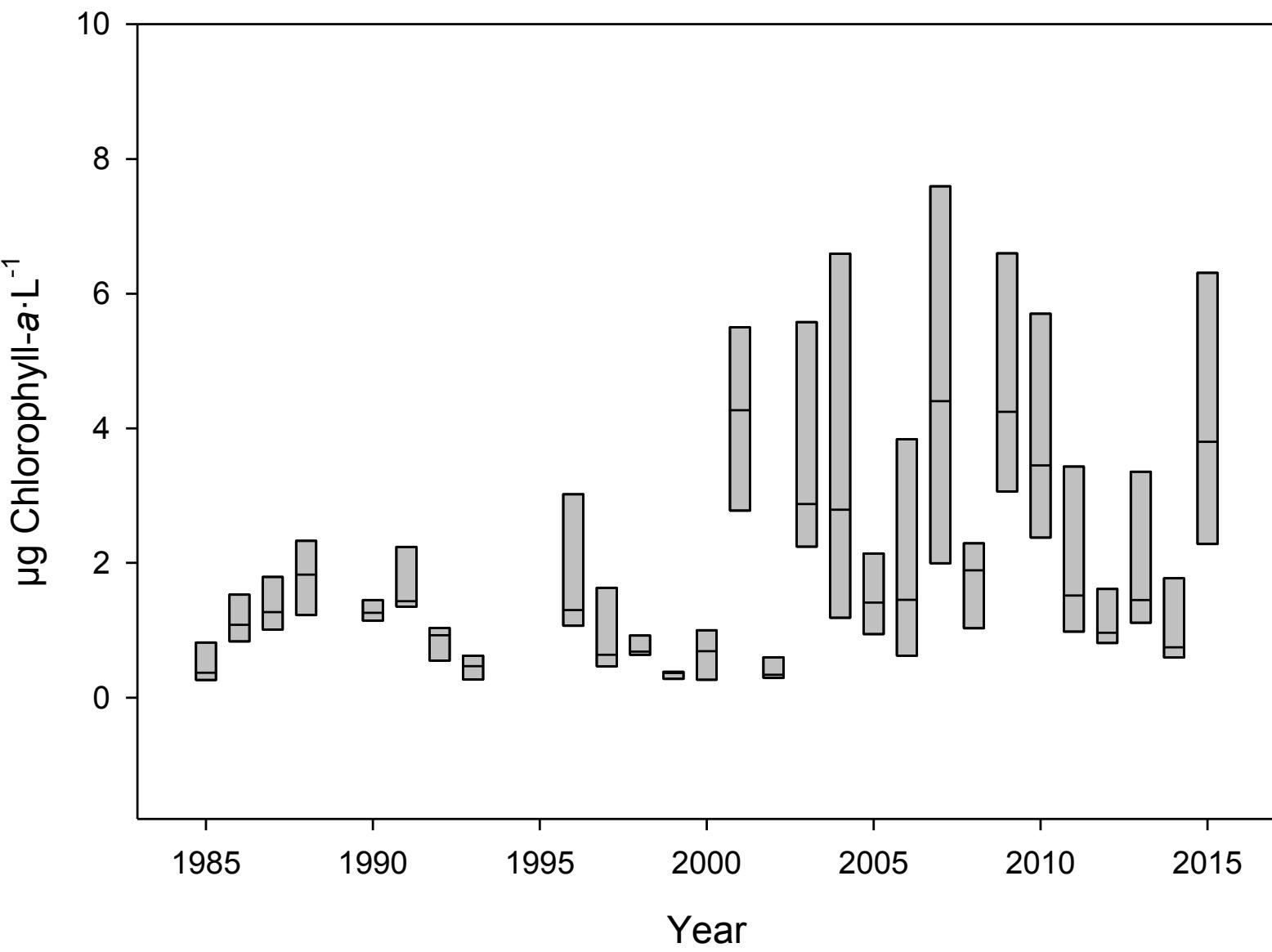
Lake Erie Eastern Basin Open-Waters
GLNPO Station Averages
Nitrite-Nitrate Nitrogen
1985-2015



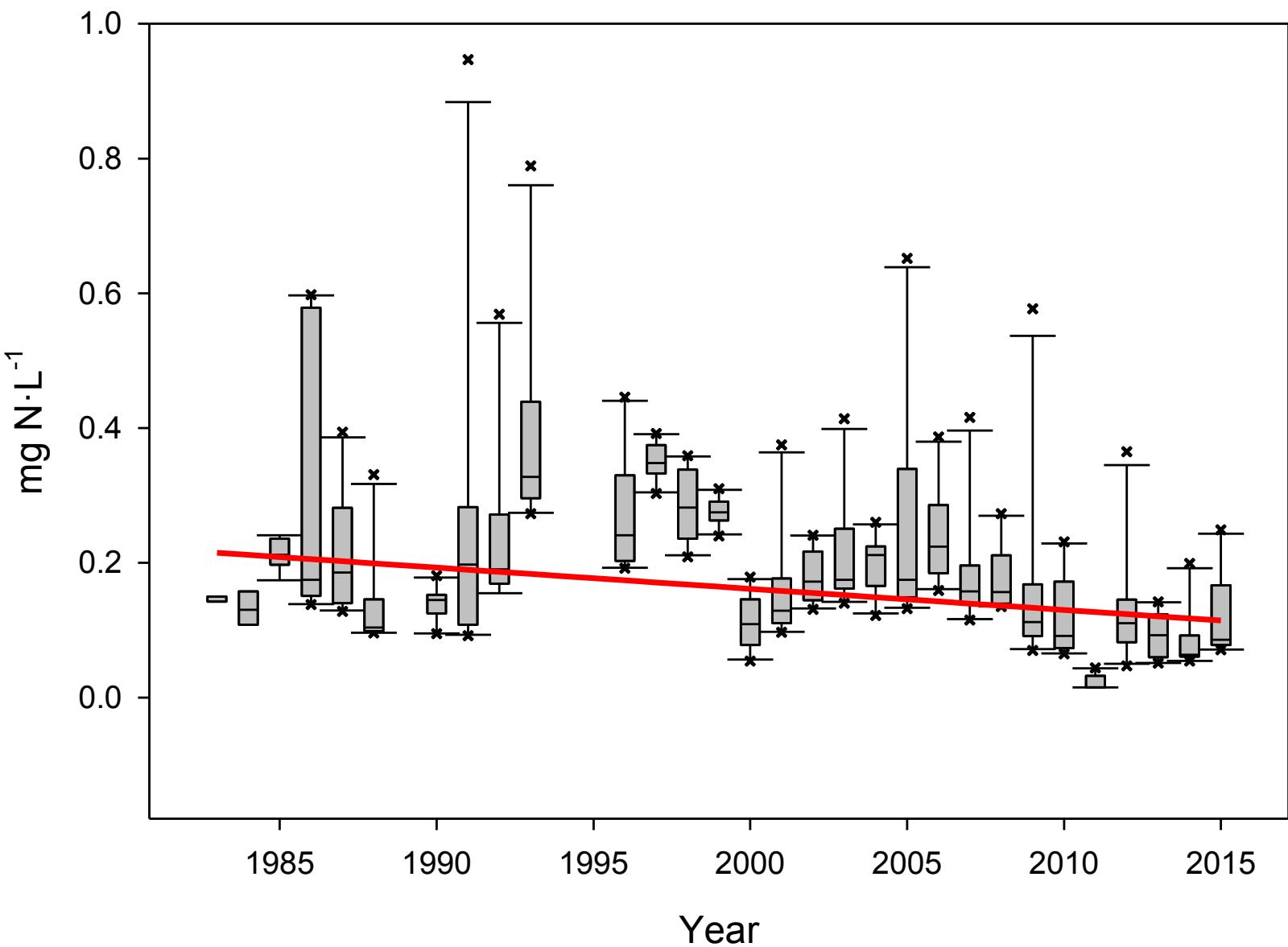
Lake Erie Eastern Basin Open-Waters
GLNPO Station Averages
Total Phosphorous
1985-2015



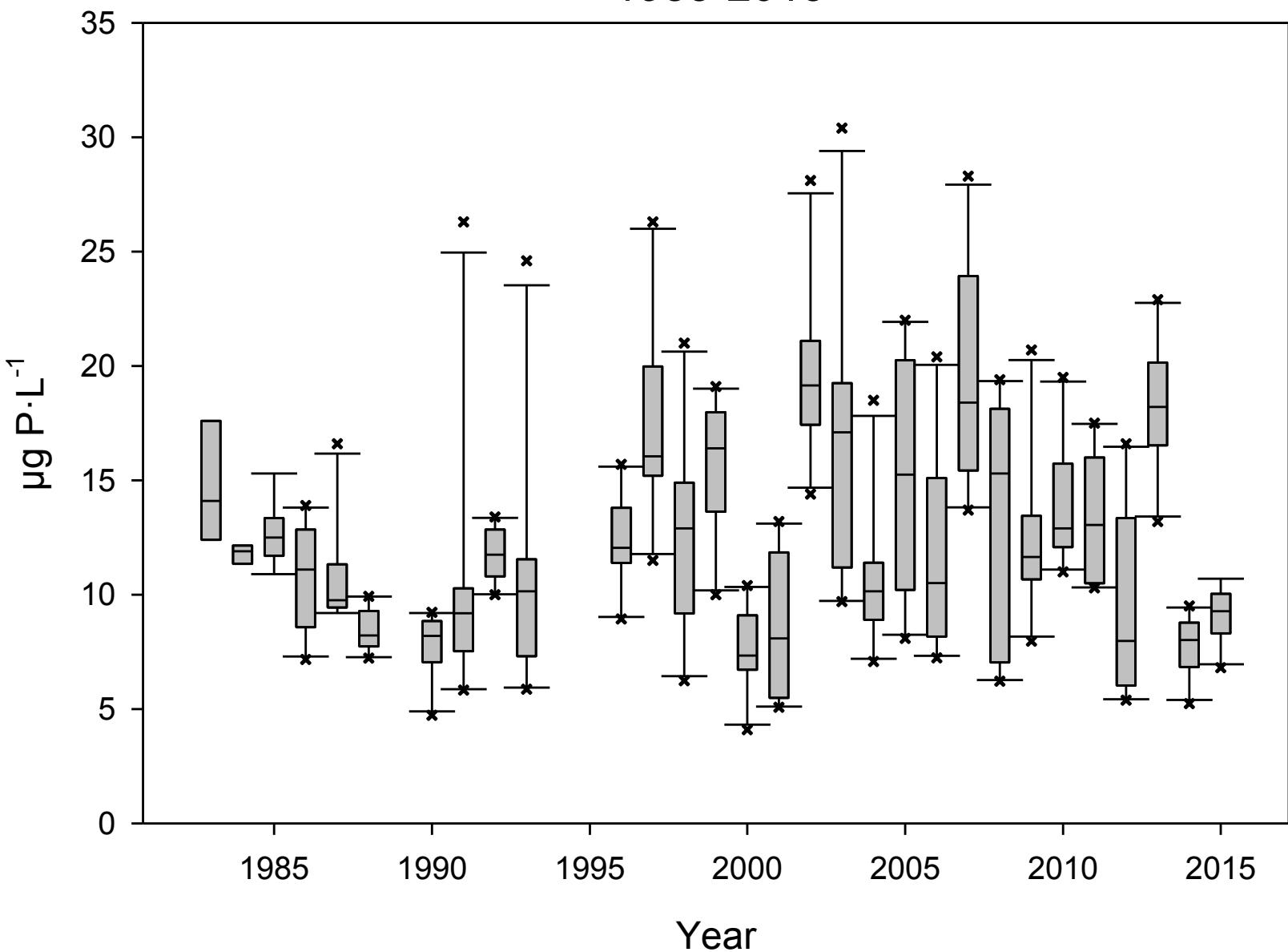
Lake Erie Eastern Basin Open-Waters
GLNPO Station Averages
Chlorophyll-a Extracted
1985-2015



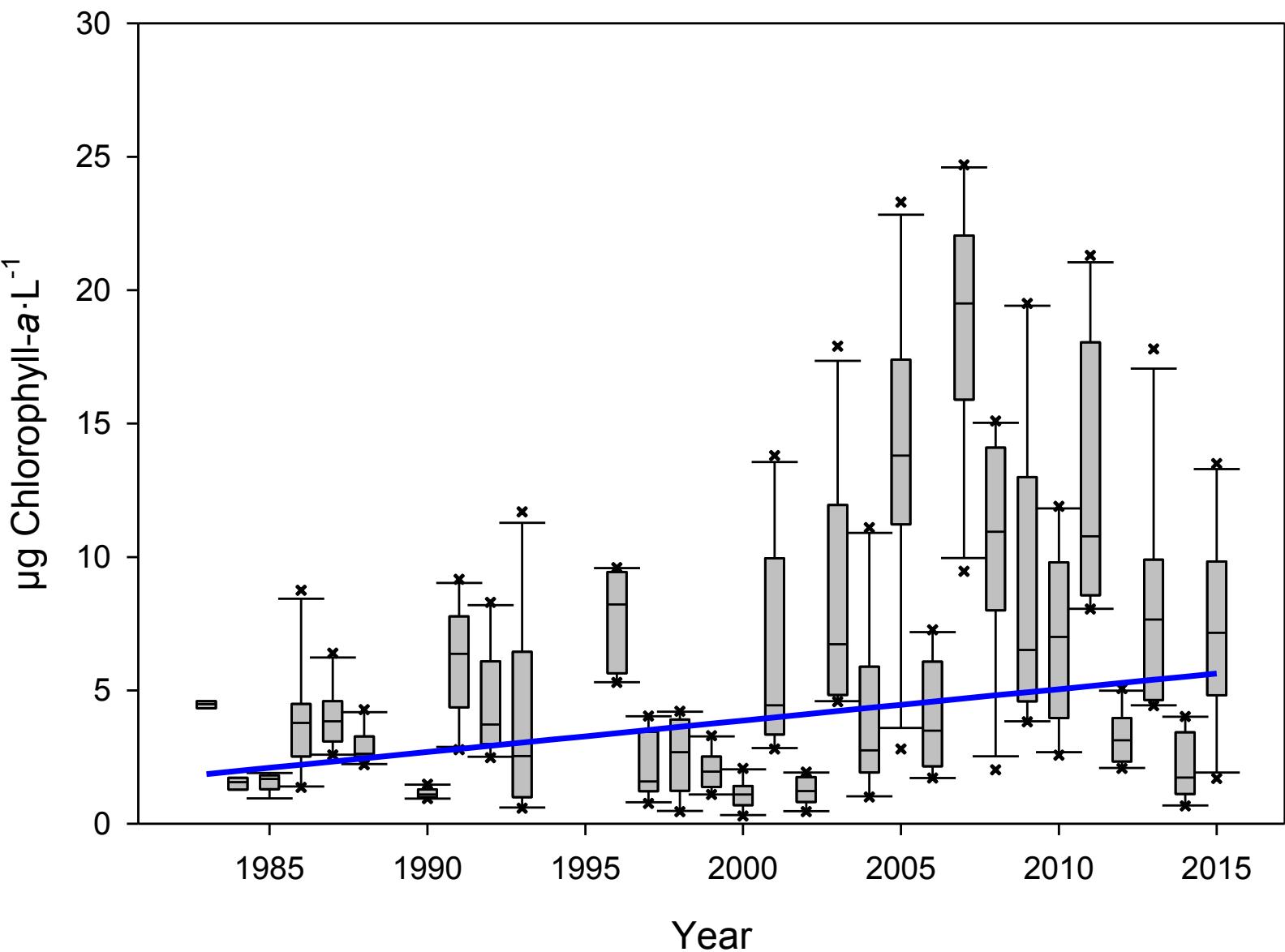
Lake Erie Central Basin Open-Waters
GLNPO Station Averages
Nitrite-Nitrate Nitrogen
1983-2015



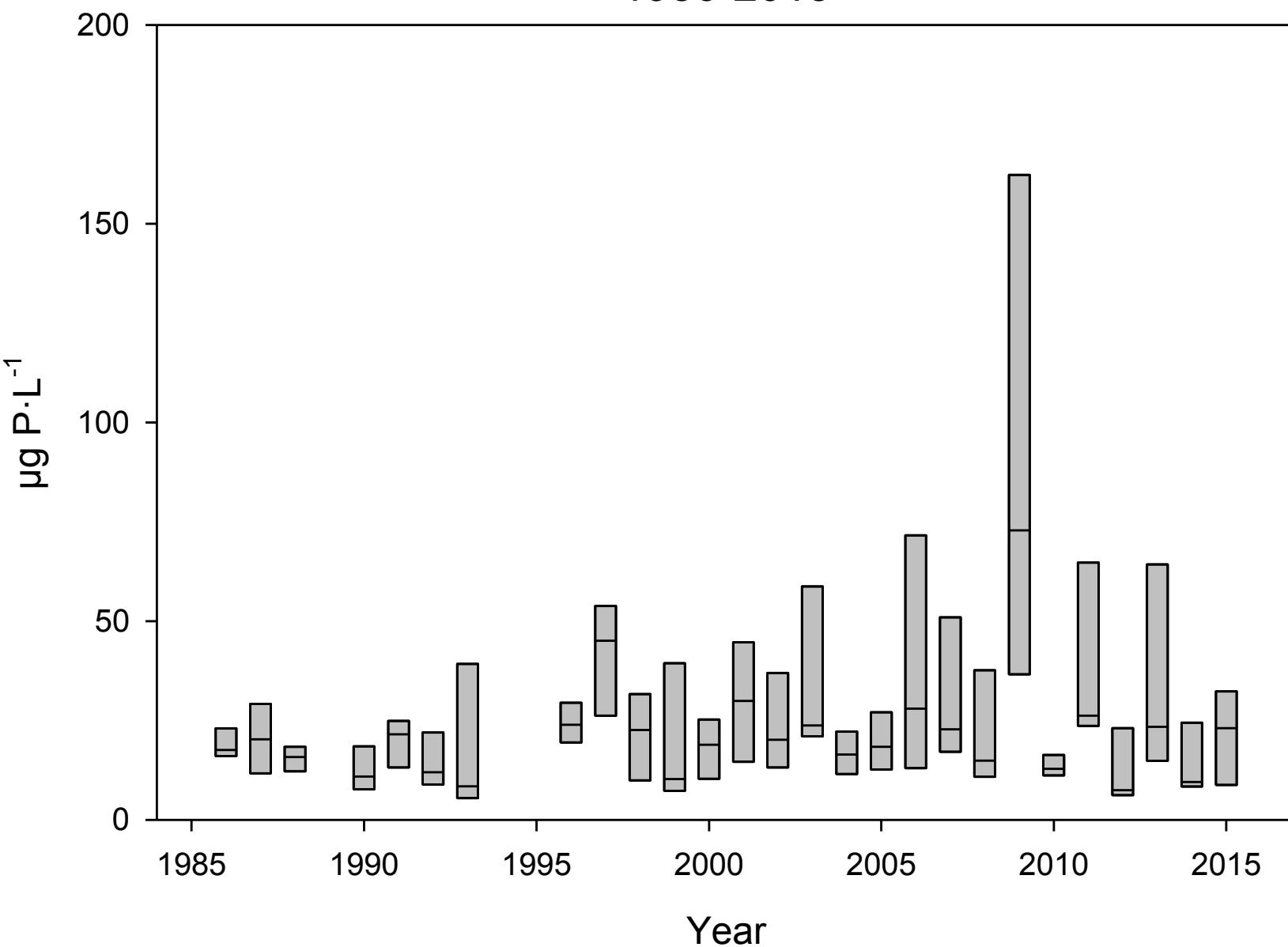
Lake Erie Central Basin Open-Waters
GLNPO Station Averages
Total Phosphorous
1983-2015



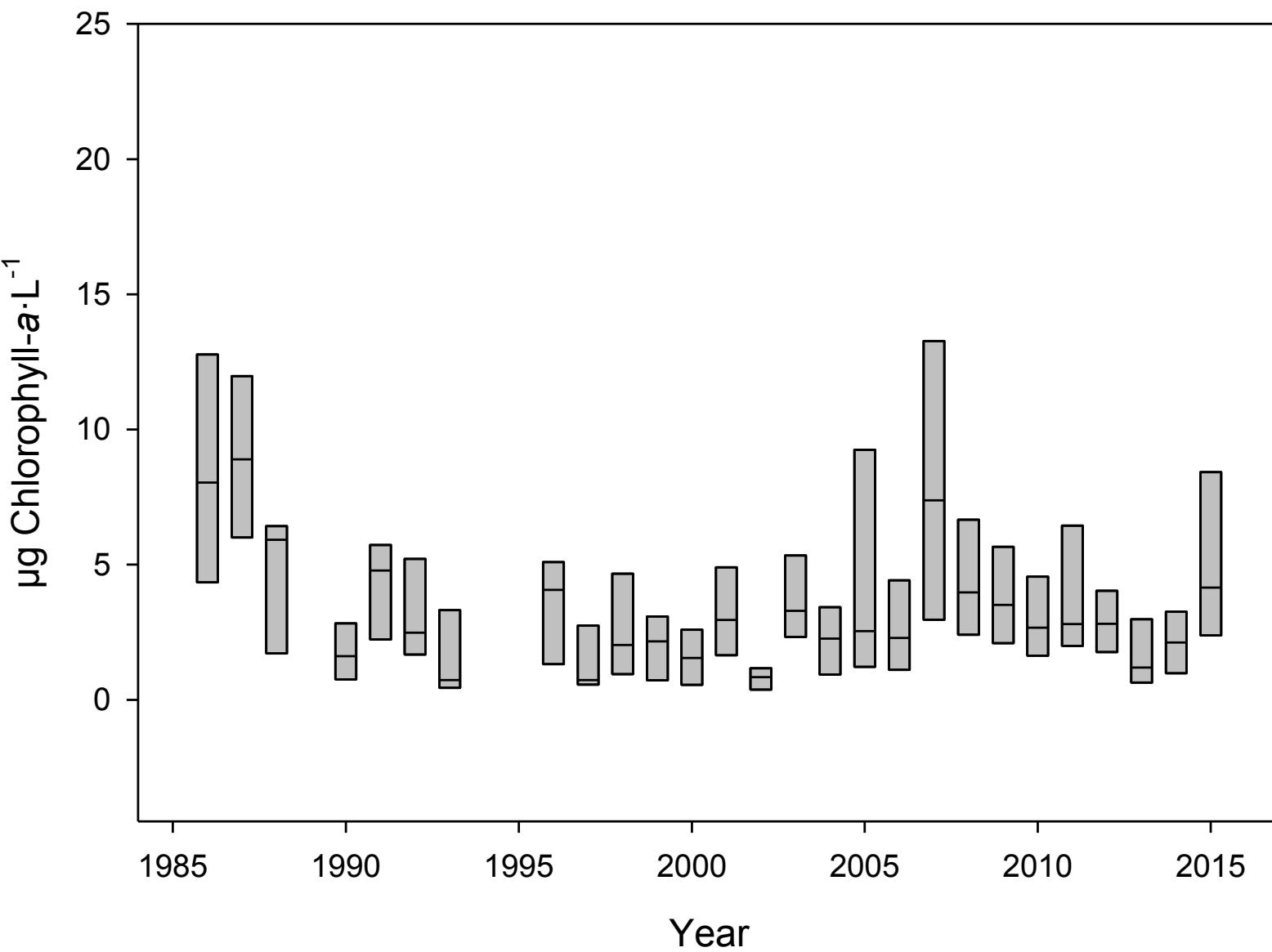
Lake Erie Central Basin Open-Waters
GLNPO Station Averages
Extracted Chlorophyll-a
1983-2015



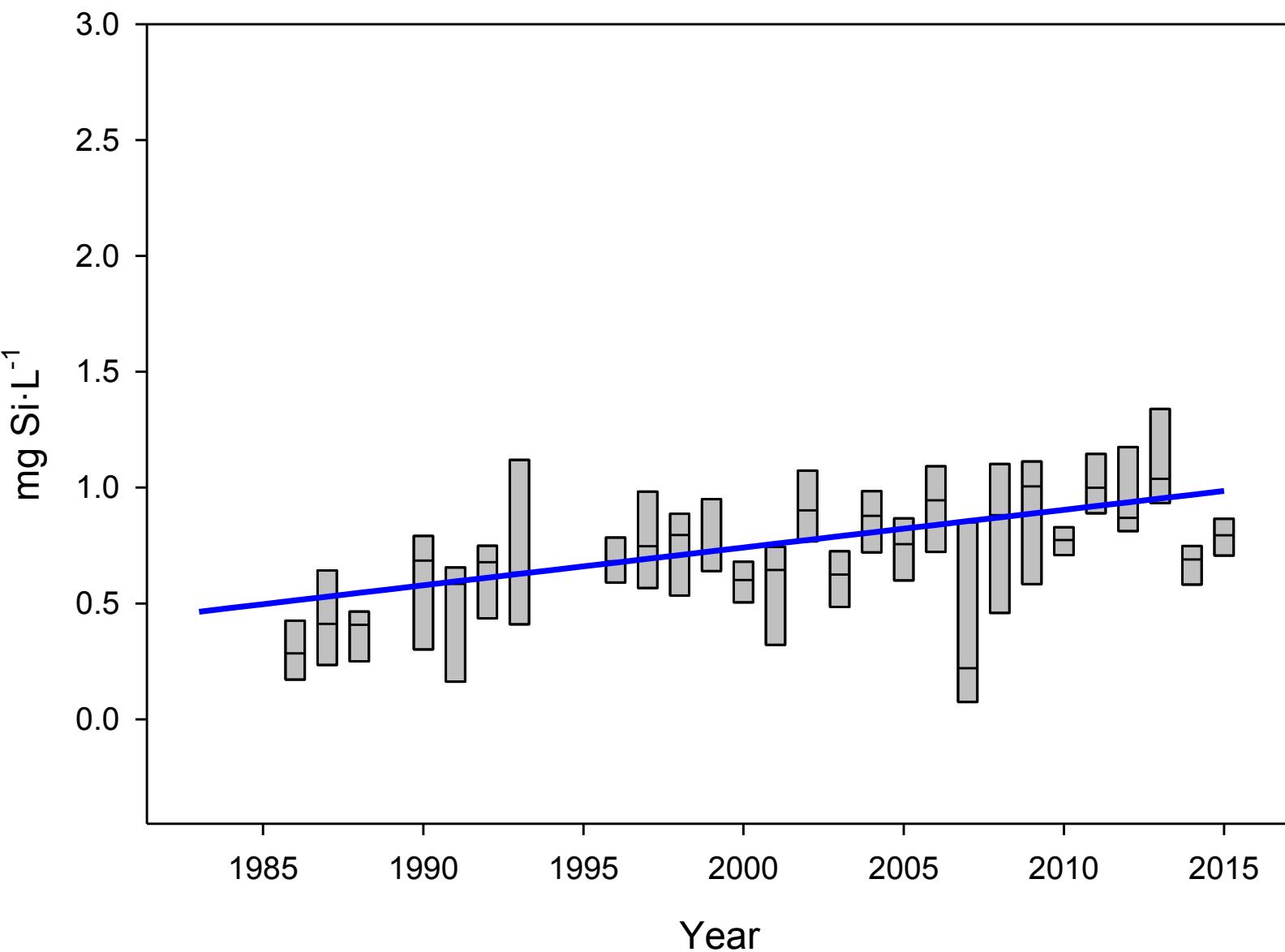
Lake Erie Western Basin Open-Waters
GLNPO Station Averages
Total Phosphorous
1986-2015



Lake Erie Western Basin Open-Waters
GLNPO Station Averages
Extracted Chlorophyll-a
1986-2015



Lake Erie Western Basin Open-Waters
GLNPO Station Averages
Dissolved Reactive Silica
1985-2015



Conclusions

- Provides the only consistent long-term data set for *all* Great Lakes
- Supports ecosystem reporting
- Supports fishery and water quality managers
 - Dozens of data requests a year
- Historically a primary source of information for GLWQA