



Lake Michigan Mass Balance Study
Results and Predictions
*Major Findings and Policy
Implications*

U.S. EPA

Great Lakes National Program Office
ORD-Large Lakes Research Station

Major Findings

- ◆ Forecasted PCB concentrations in 5.5 year old lake trout may permit unlimited consumption as early as 2039 at Sturgeon Bay and 2044 at Saugatuck
- ◆ Most observed mercury concentrations in Lake Michigan lake trout exceed the EPA guidelines for unrestricted consumption
- ◆ Phosphorus loads and concentrations are low and below Great Lakes Water Quality Agreement and International Joint Commission targets
- ◆ Observed and forecasted concentrations of atrazine in Lake Michigan are well below present EPA biological effects thresholds

LMMB Policy Implications

- ◆ Atmospheric input is particularly important for PCBs and mercury – part within-basin, part external to basin
- ◆ Results can inform TMDLs for PCBs and mercury
- ◆ Tributaries –ranking by load or concentration can be used to set priorities by State in terms of potential load reduction and exposure
- ◆ Local contaminant problems - even if the open lake is clean, are nearshore and local areas clean?
- ◆ Urban centers as important sources of contaminants to Lake Michigan
- ◆ Legislation

Statutory / Regulatory Authorities

Clean Water Act

Clean Air Act

Great Waters Program

U.S. / Canada Water Quality Agreement

Lakewide Management Plans

Remedial Actions Plans

Great Lakes Binational Toxics Strategy

Critical Programs Act

Great Lakes Regional Collaboration-Executive Order

Great Lakes Legacy Act