

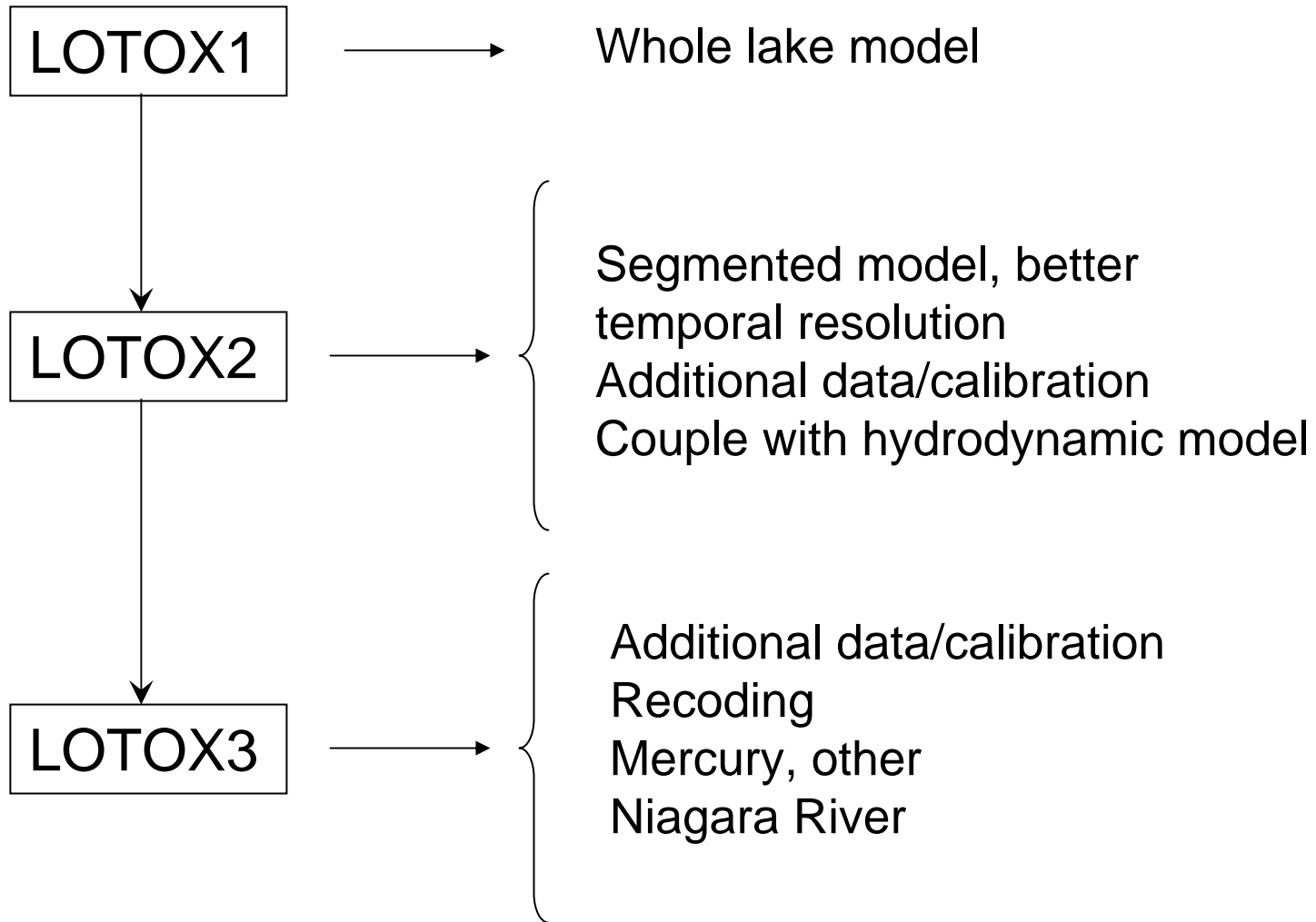
Development and Application of LOTOX3 –

A mass balance and bioaccumulation model for
contaminants in Lake Ontario

Joseph Atkinson, Scott Brown
University at Buffalo
Joseph DePinto
Limno Tech, Inc.

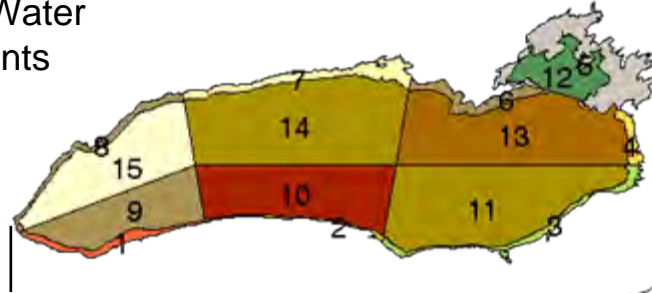
Presented at Lake Ontario Contaminant Monitoring and Research Workshop
Planning for the 2008 Cooperative Monitoring Year (Contaminants)

History

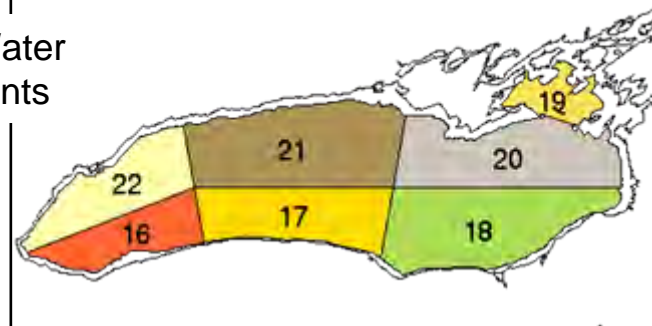


LOTOX2/3 segmentation

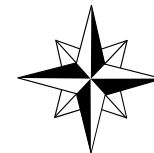
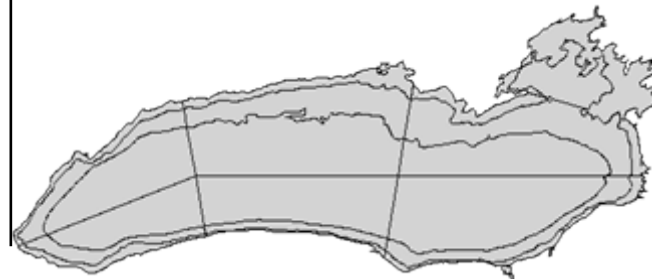
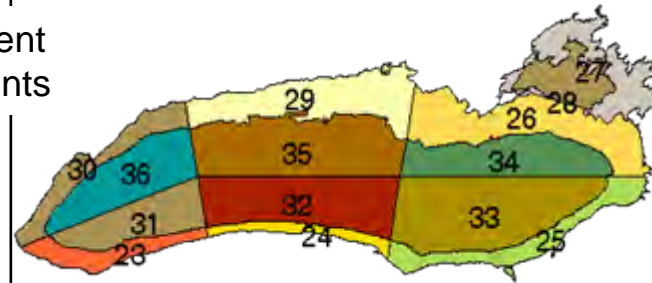
Surface Water
Segments



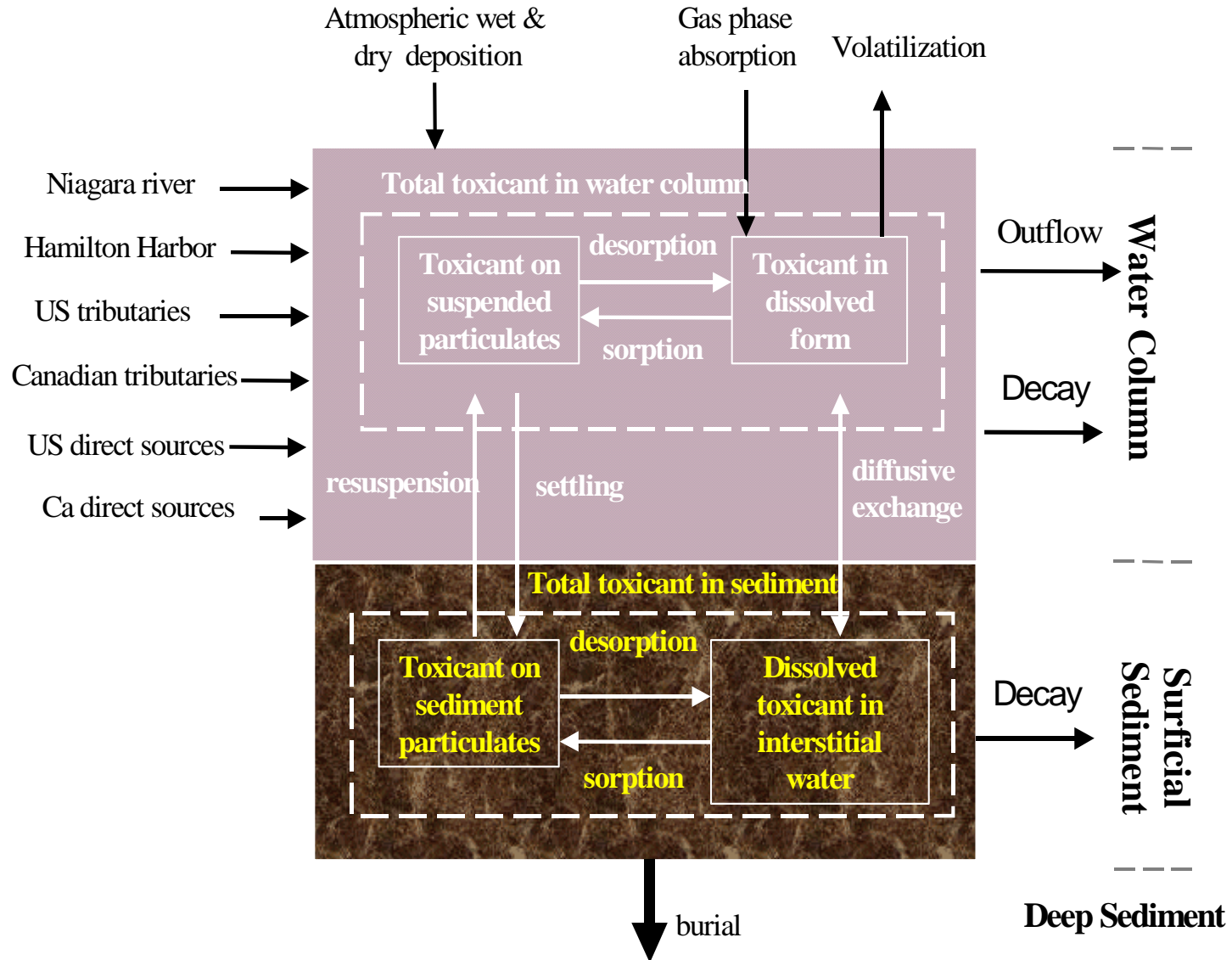
Deep Water
Segments



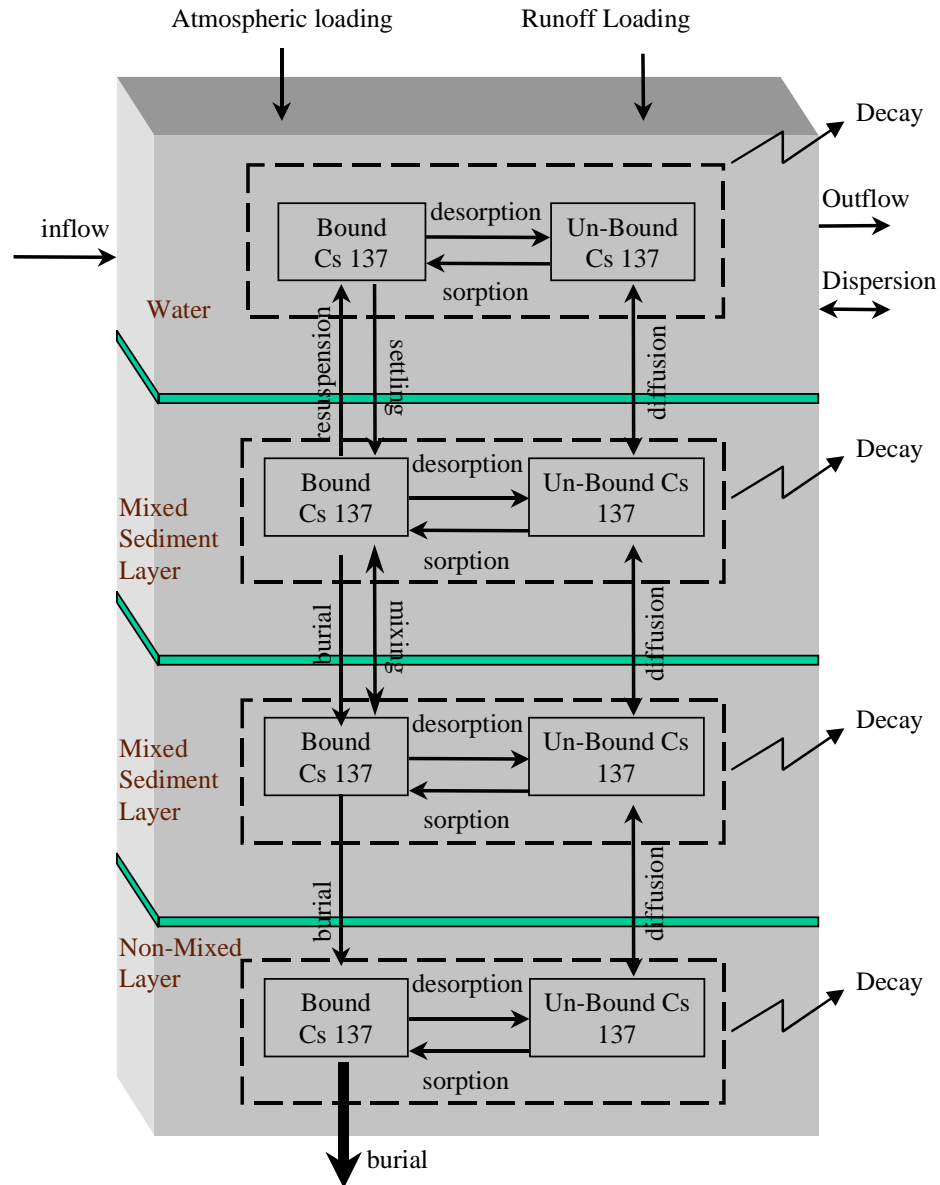
Sediment
Segments



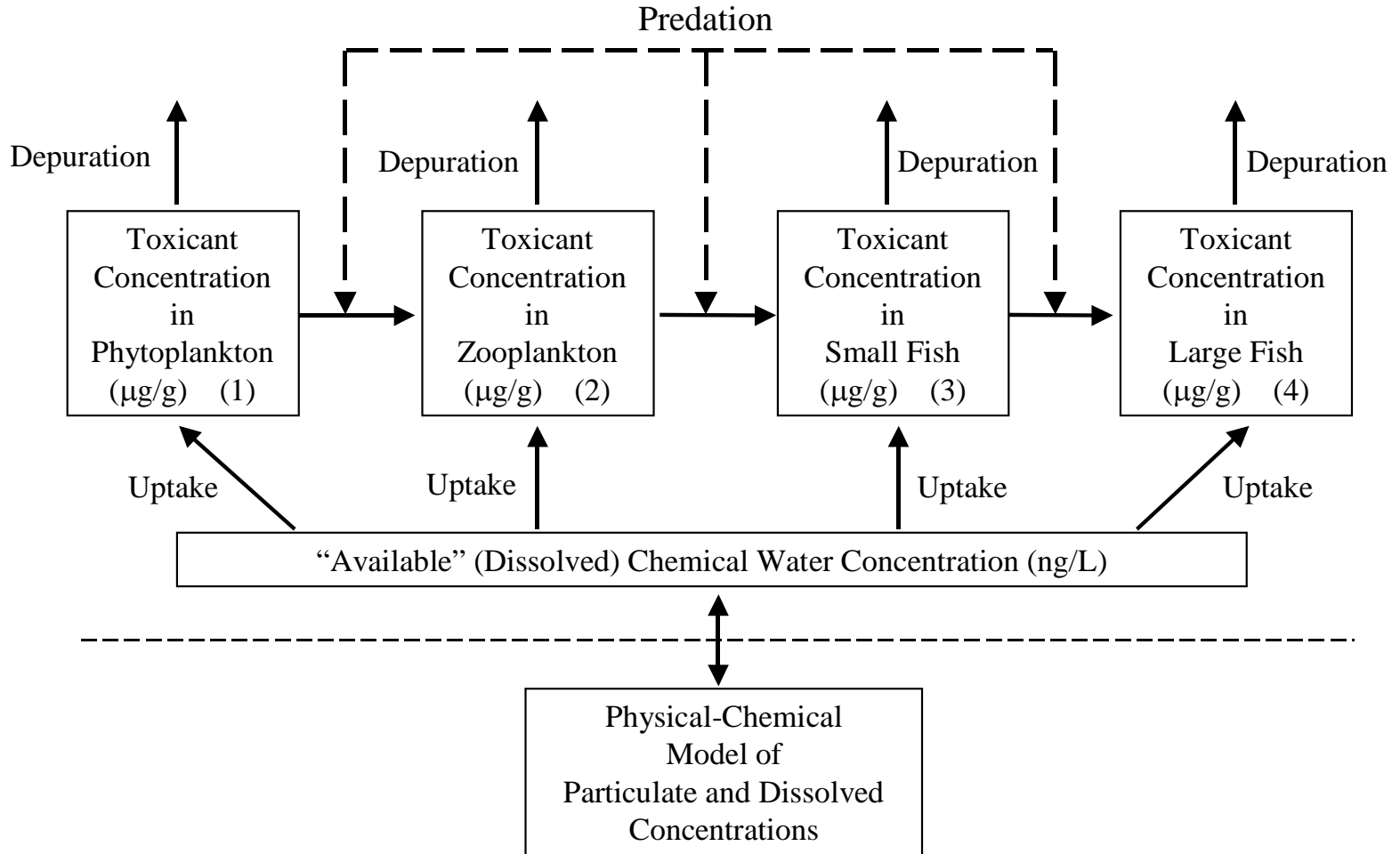
Conceptual model for PCBs



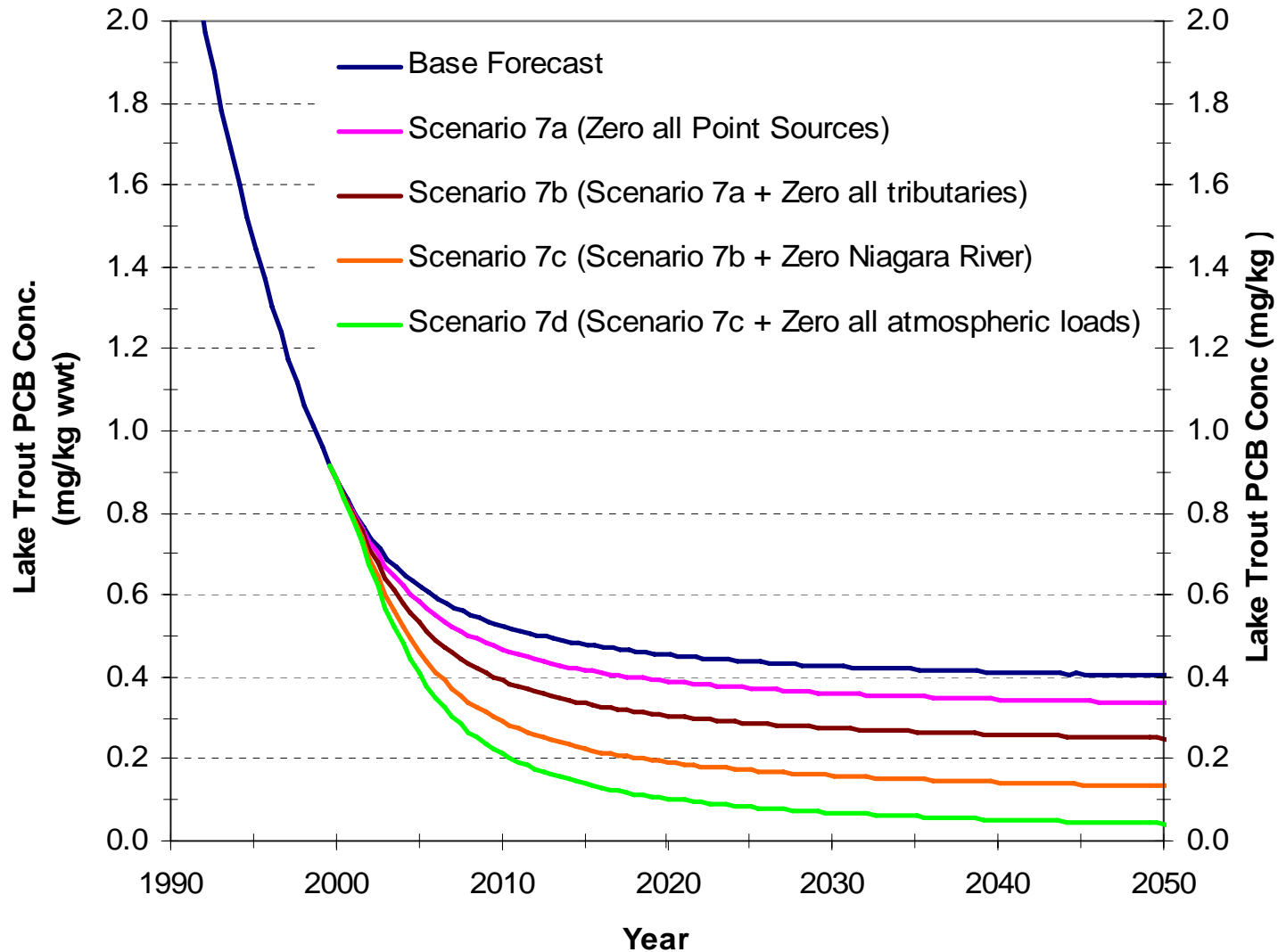
Chemical transport in sediments



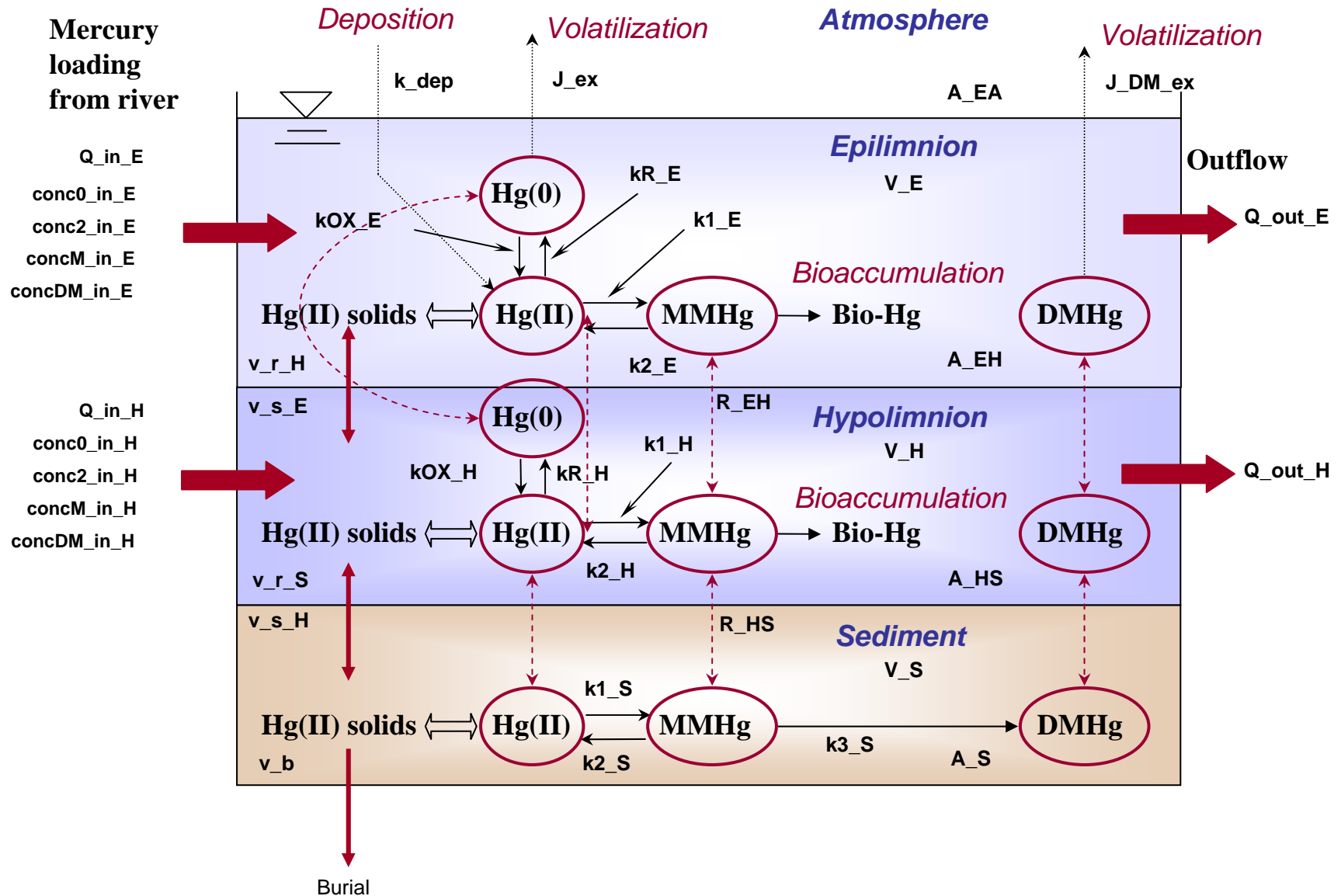
Food Chain and Bioaccumulation



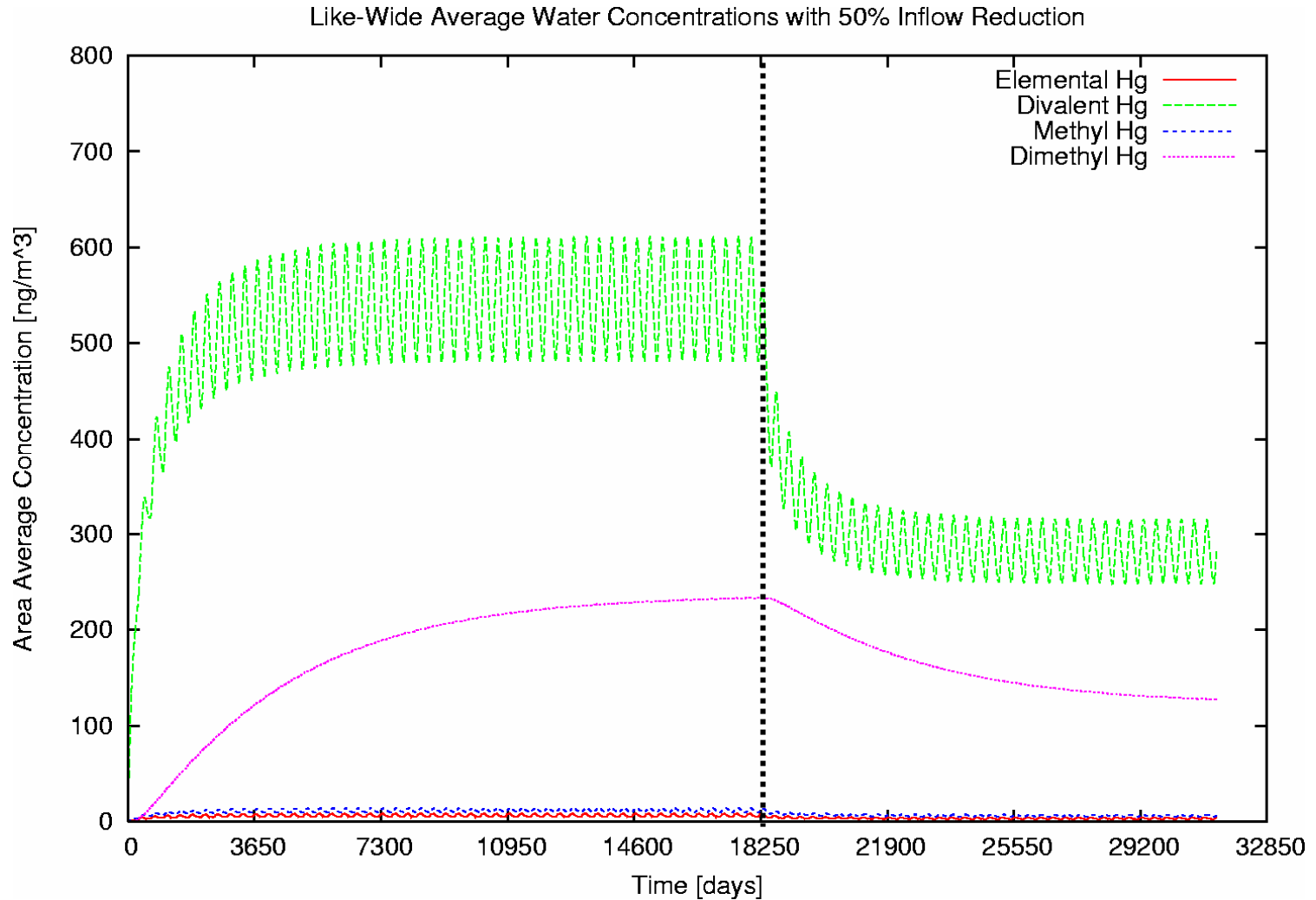
Results – varying management scenarios



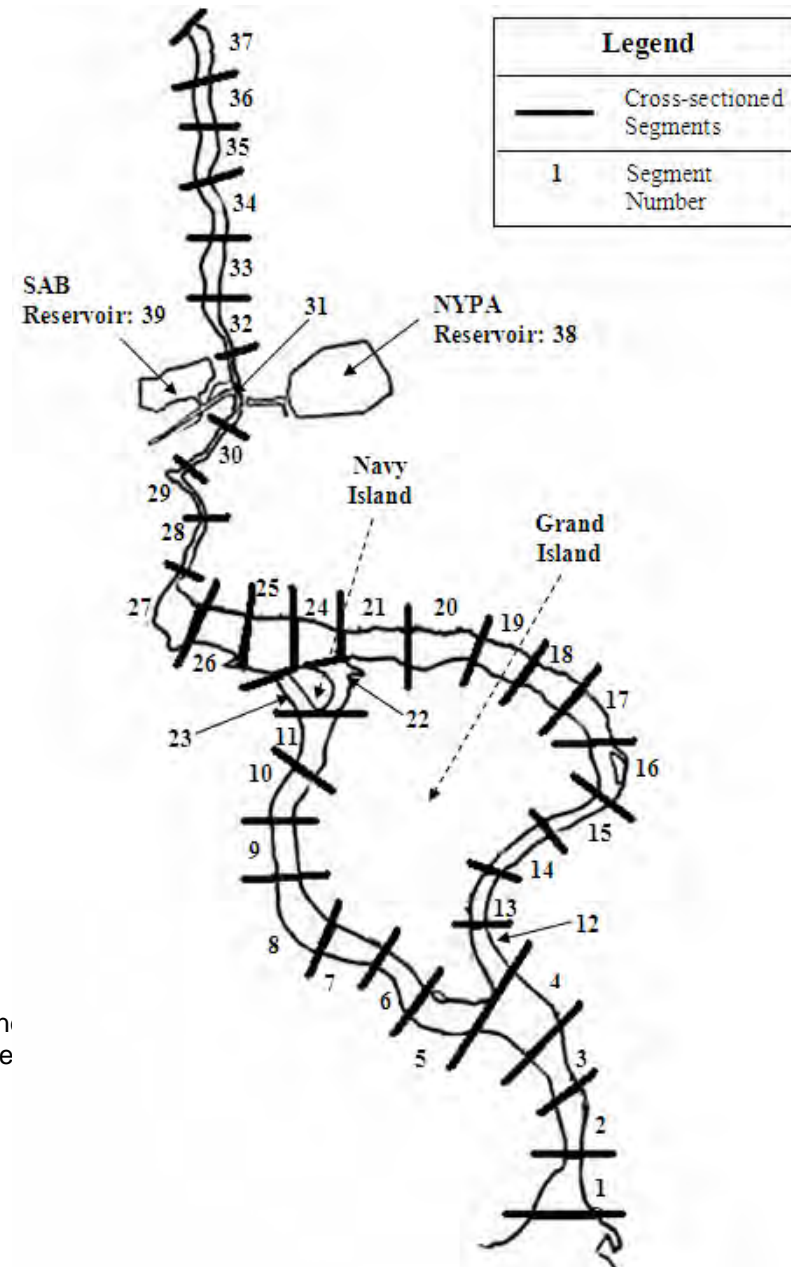
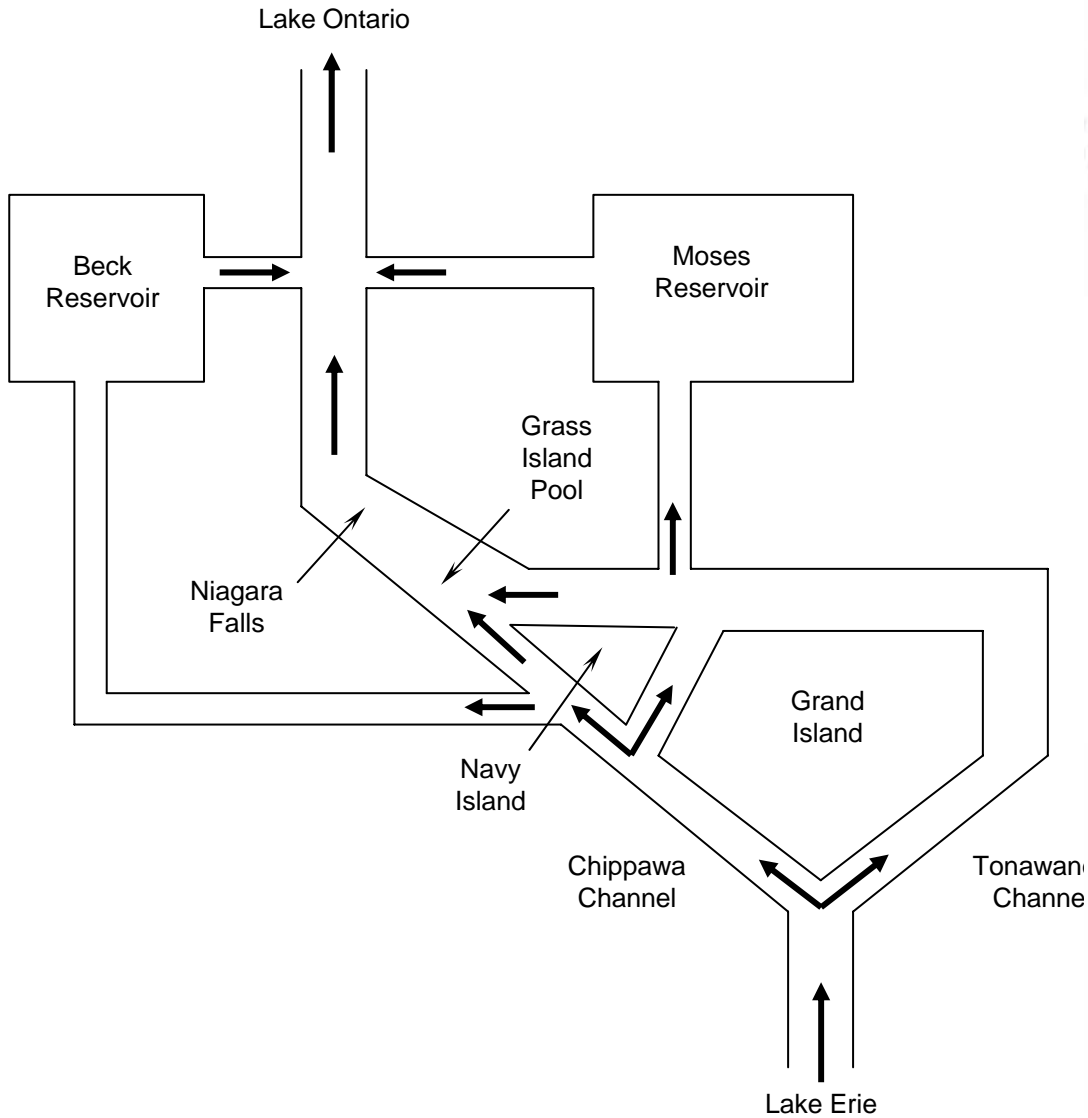
Conceptual mercury model



50% River Loading Reduction (after 50 years)



Niagara River model



Use of models (like LOTOX3) in management/decision making

