

Findings of the IJC Nearshore Workshops

By

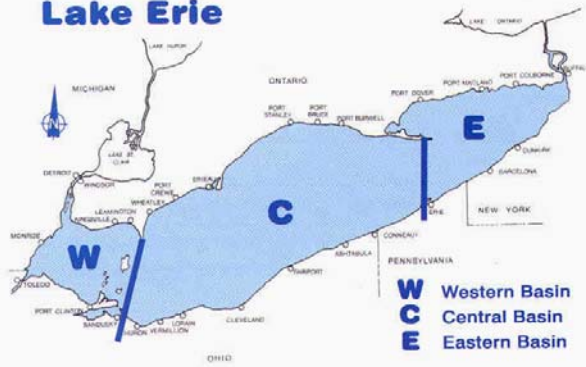
John E. Gannon
Great Lakes Regional Office
International Joint Commission
Windsor, Ontario

For

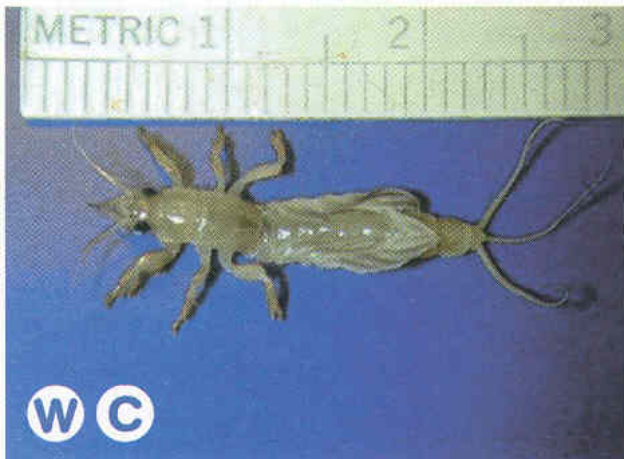
Loadings from Landscapes and Coastal Effects Workshop
Toledo, OH
March 17, 2008

Lake Erie

Lake Erie



50



(c)

(d)



Lake Erie



(c)

(d)



(e)

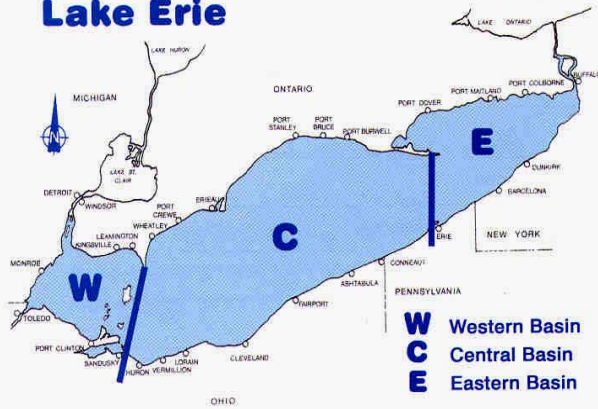
(f)



Actual Size 7.8 mm

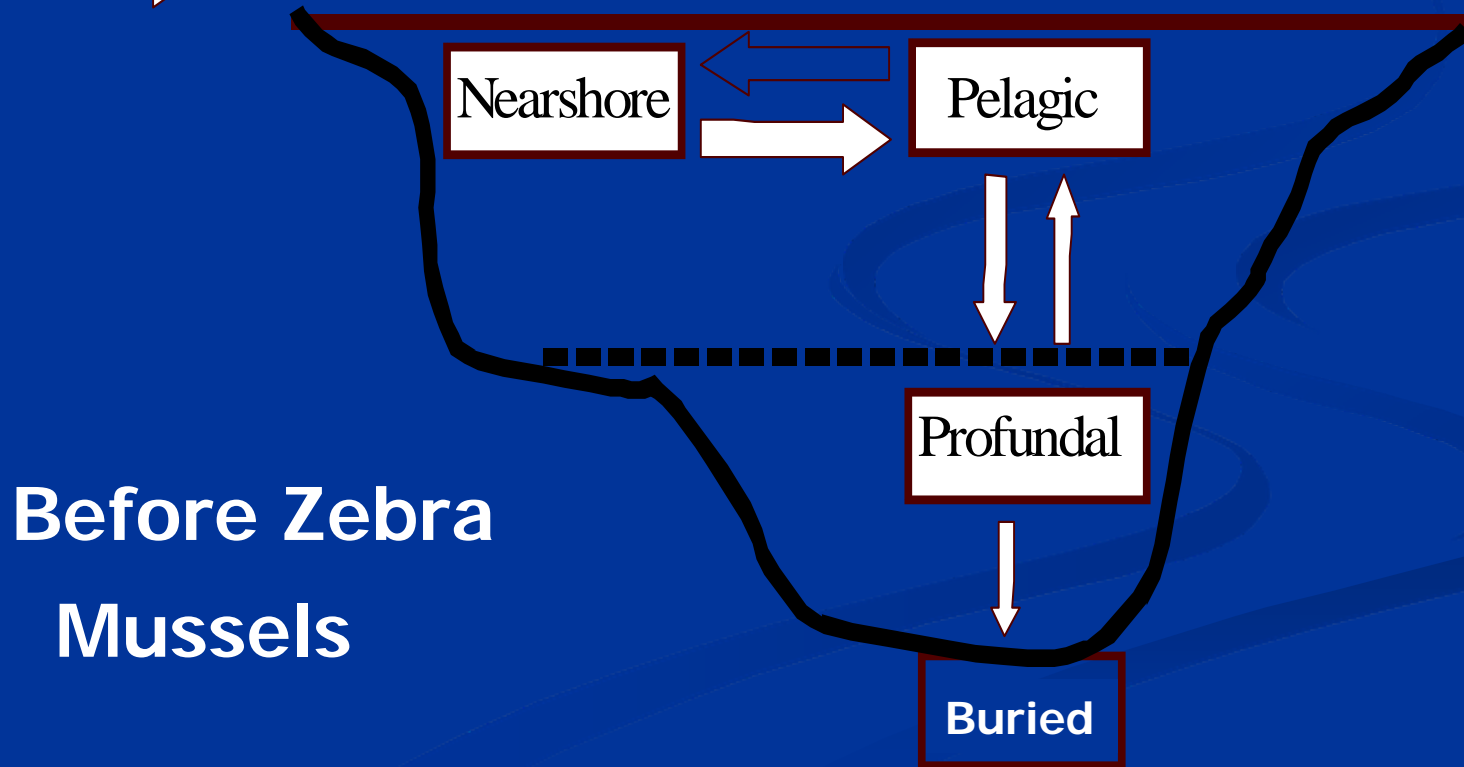


Lake Erie



Increased Rates or New Pathways of Internal Cycling?

External Loading



Before Zebra
Mussels

Buried

Food Web Disruptions Caused by Invaders?

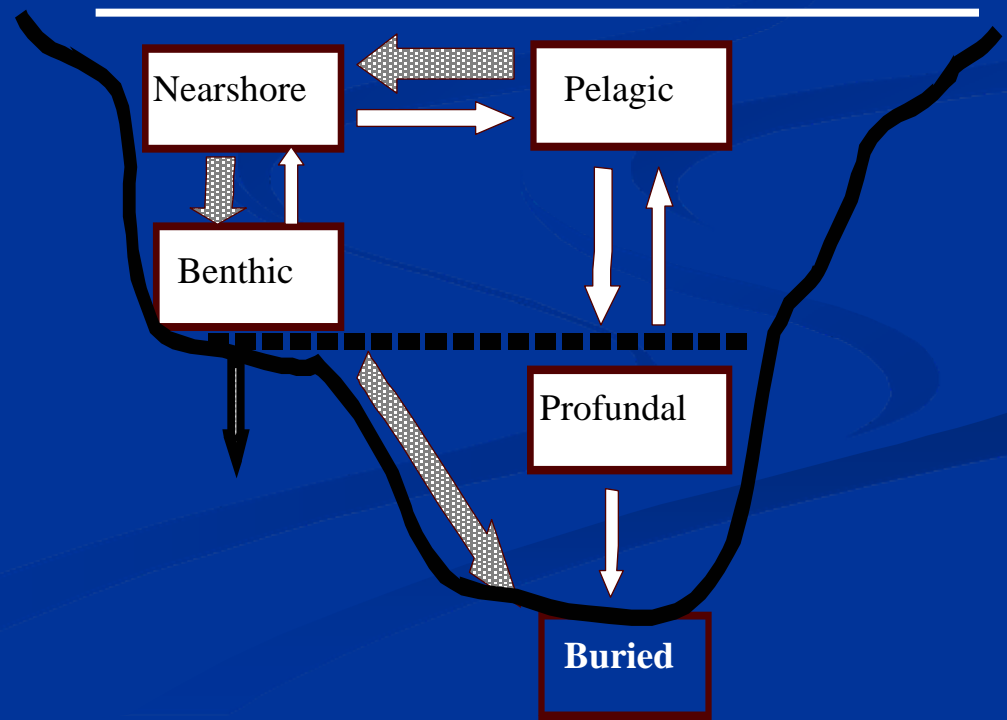
“Nearshore shunt model”

R. Hecky *et al.* Univ. of Waterloo

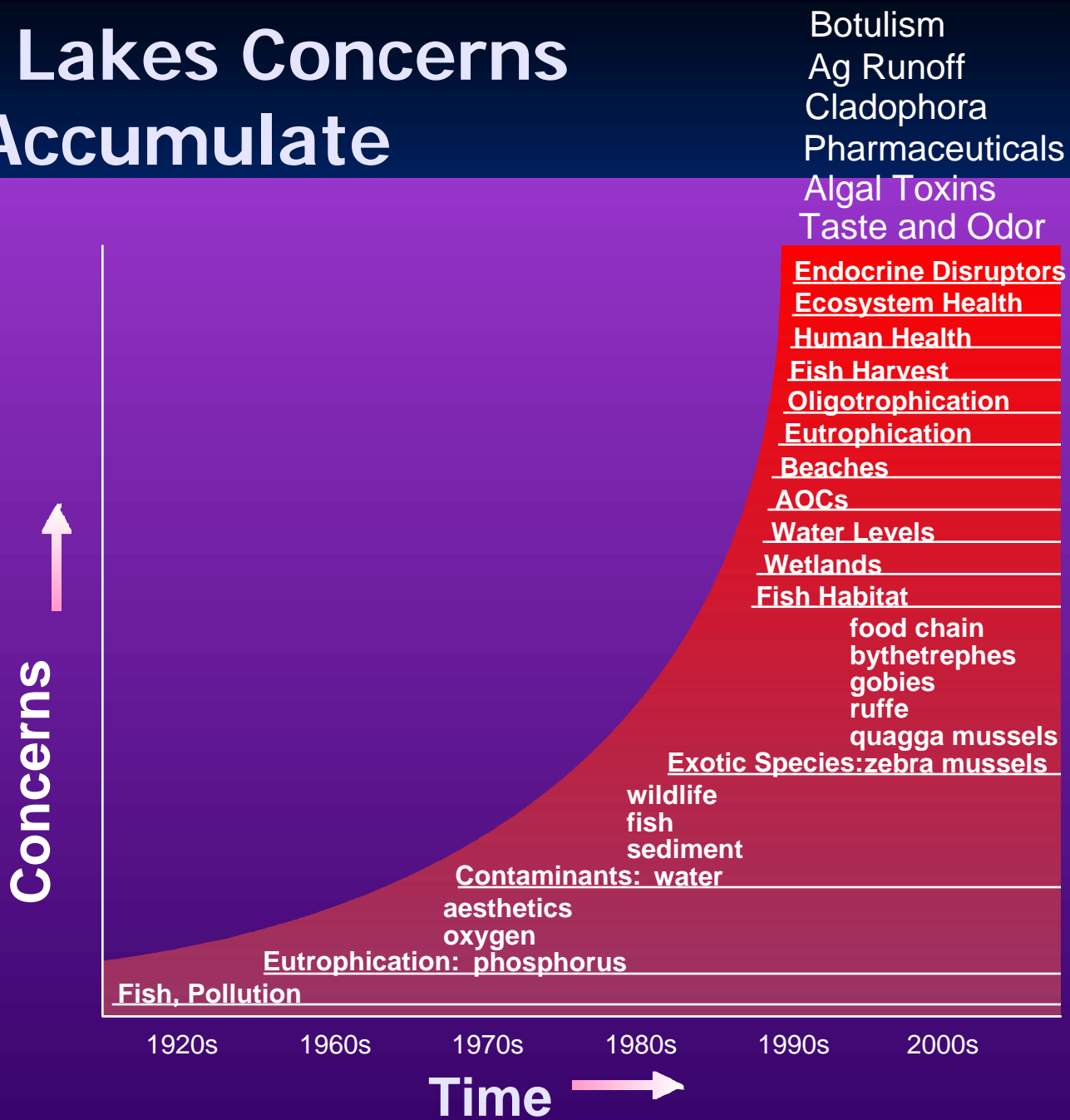
External loading



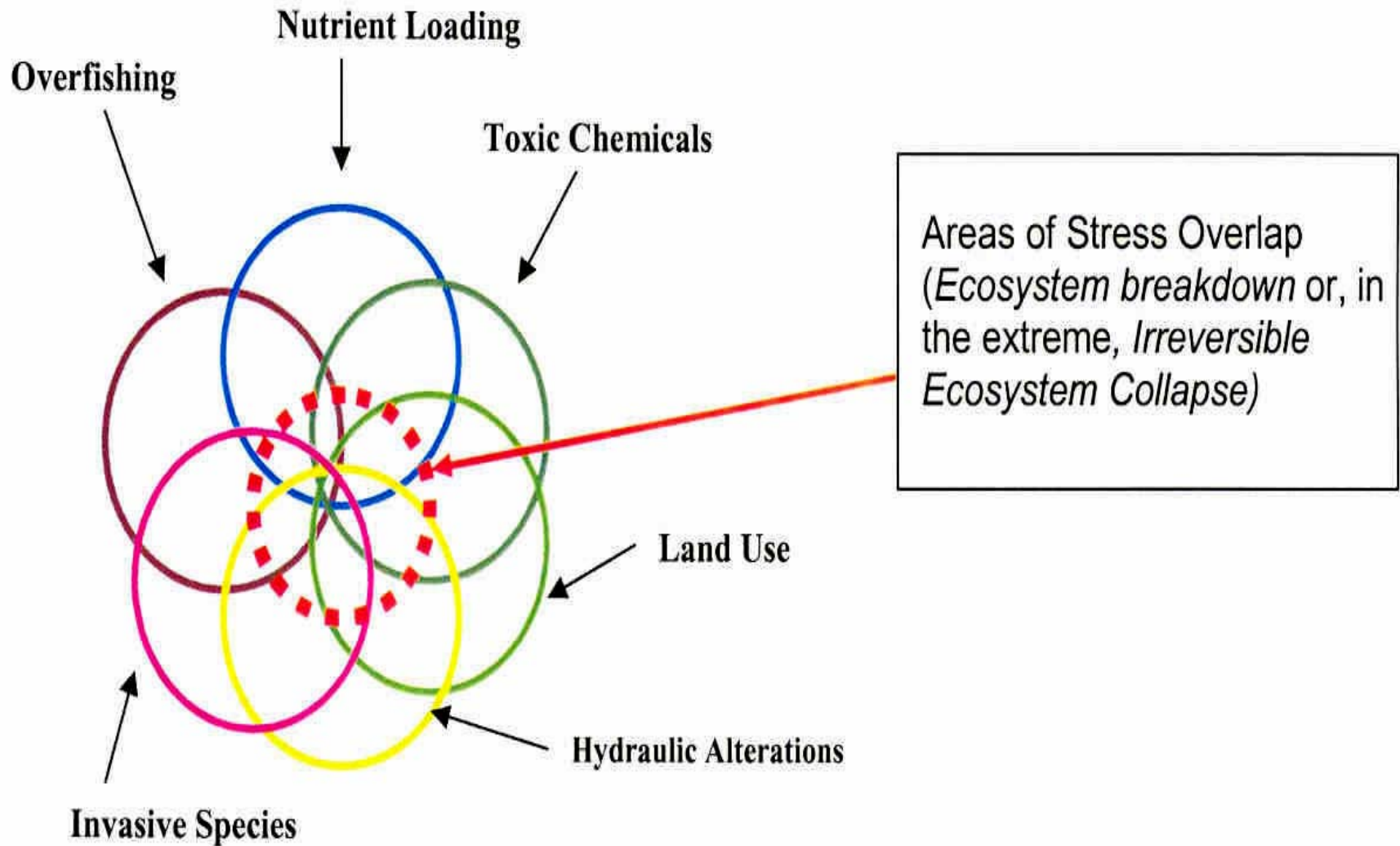
Zebra mussels
established



Great Lakes Concerns Accumulate



Great Lakes Stressors Overlap



Prescription for Recovery

- Restore and enhance critical nearshore areas, tributaries, and connecting channels
- Remediate basinwide sources of stress
- Protect healthy functioning elements
- Monitor ecosystem health

www.restorethelakes.org

IJC 07-09 Great Lakes Nearshore Waters Priorities

- **Nearshore Waters Adaptive Management Framework**
 - Scoping Session, November, 2007
 - Expert Consultation, March, 2008
- **Nearshore Issues**
 - Eutrophication
 - Beach Closings
 - Fish Consumption Advisories
 - Emerging Chemicals of Concern
 - Aquatic Invasive Species

IJC 07-09 Great Lakes Nearshore Waters Priorities (cont'd)

- Nearshore “Cross-Cutting” Issues
 - Climate change
 - Groundwater
 - Population growth and land use changes

IJC Letters to Governments on Agreement Review

“Despite their vital importance, the current Agreement contains few specifics on nearshore waters. The Commission views this as an issue significant enough to warrant opening the Agreement on this basis alone for substantive revisions or replacement to provide the means to address the critical science, resource management, governance and policy needs related to the nearshore waters.

July 12, 2007

Letters (Cont'd)

- **Nearshore water quality problems are:**
 - **Serious in most areas of the Great Lakes**
 - **Have bi-national implications and bi-national cooperation will be needed to solve them**
- **Pollution from non-point sources of agricultural and urban areas need to be reduced**
- **There are significant gaps in our understanding of the science and linkages between land sources and waters in the nearshore and offshore**

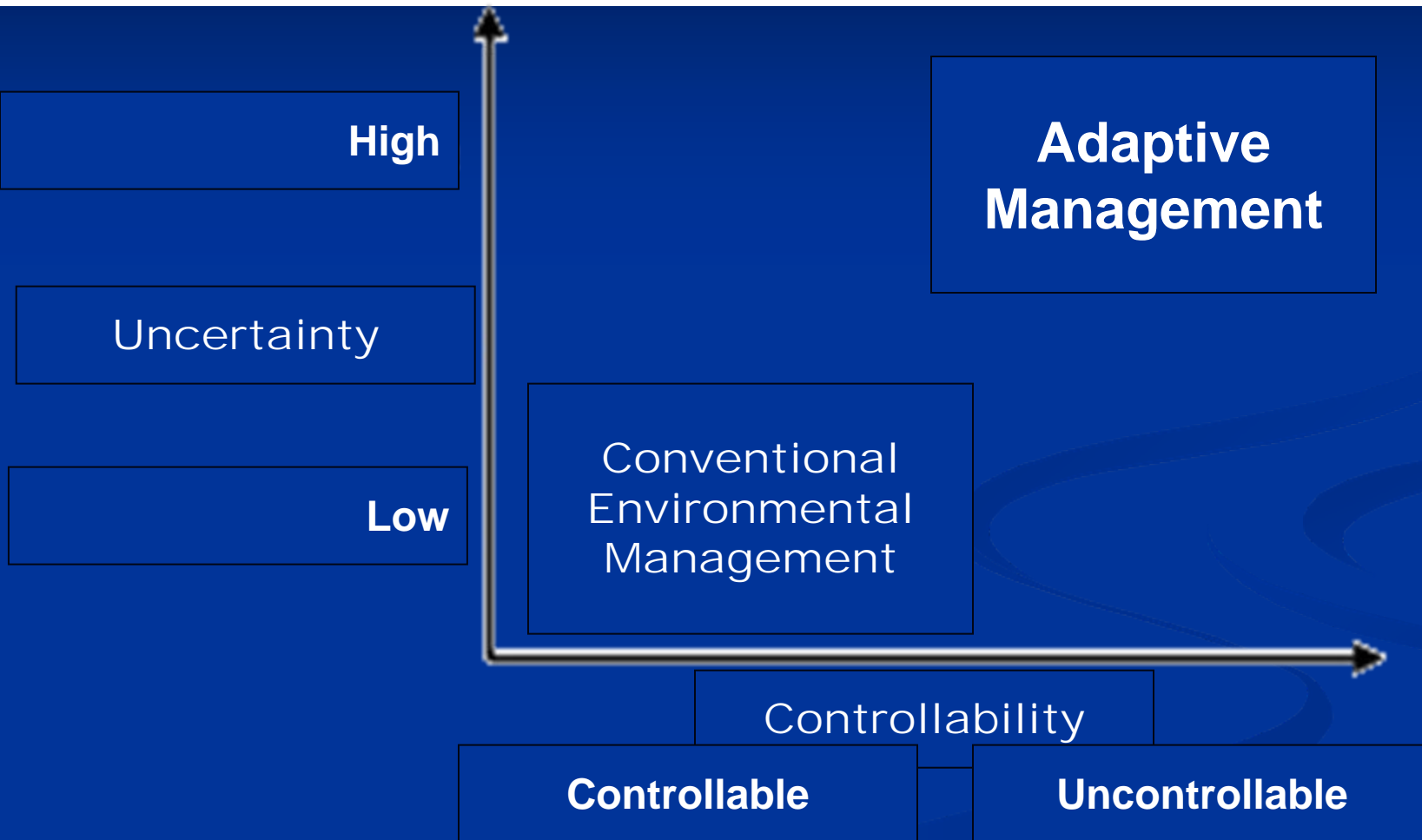
December 21, 2007

Adaptive Management Definition

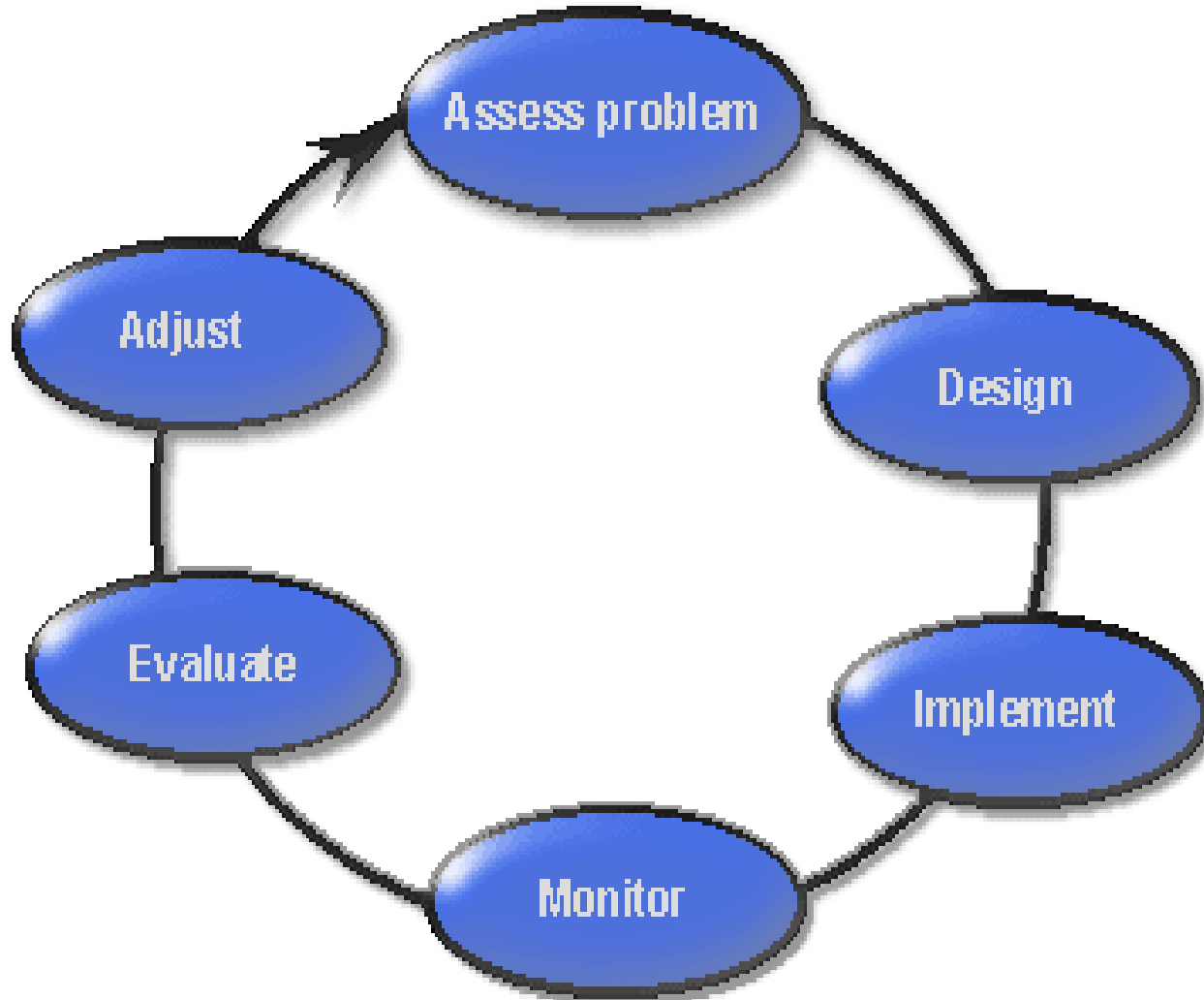
“Adaptive Management focuses on learning and adapting, through partnerships of managers, scientists, and other stakeholders who learn together how to create and maintain sustainable ecosystems”

- U.S. Fish & Wildlife Service

Adaptive Management



Six Step Cycle



“Connecting the Dots” to Achieve Accountability*

- Step 1. Develop a Rigorous Plan
- Step 2. Monitor and Assess
- Step 3. Report
- Step 4. Use Reports to Review and Adjust Plans

*IJC 13th Biennial Report on Great Lakes Water Quality (December, 2006)

IJC Great Lakes Water Quality Board Linking LaMPs and Jurisdictional Watershed Planning

- Watershed Approaches Workshop, March 2005, Ypsilanti, MI
- Lake Erie Critical Leaders Dialogue, March, 2006, Erie, PA
- Lake Erie Areas of Concern Summit, July, 2006, Erie, PA
- Lake Erie Land and Lake Nutrient Workshop, March, 2007, Windsor, ON

Anticipated Outcomes

- Assist Lake Erie LaMP in moving from planning to implementation using the LaMP nutrient goals as case study
 - Technical Issues
 - Governance Issues
- Provide IJC/WQB advice to governments on Agreement Review
 - Linking land and lake
 - Adopting/adapting lessons learned on Lake Erie to the other LaMPs and the Lake Huron Partnership initiative

IJC Special Report on Agreement Review

- Affirm ecosystem approach with focus on Great Lakes water quality
- Recommend watershed as operational framework
- Recommend Binational Action Plan separate from but attached to the Agreement

"The Commission is encouraged that several of the LaMPs have moved beyond a focus on critical pollutants and have adopted an ecosystem approach, including the watershed perspective, in their planning activities. In the context of accelerating progress in protecting and restoring the waters of the Great Lakes basin ecosystem, LaMPs have the potential to be the core instrument for consolidation and integrating the components of the Binational Action Plan, and engaging a broader array of governments, agencies and programs to implement the Plan." (P.23)

<http://www.ijc.org/rel/pdf/advicefinalwc.pdf>

August 2006

An Adaptive Management Framework for the Nearshore Waters of the Great Lakes-Opportunities 7 Challenges

■ Opportunities

- Great Lakes Water Quality Agreement Review/Revisions?
- “Connecting the Dots”

■ Challenges

- Reach consensus on most suitable adaptive management process
- Link upper watershed, AOCs, nearshore and offshore
- Address multiple scales; basinwide, lakewide, regional and local
- Engage multiple agencies and stakeholders (“top down” and “bottom up”)