



Lake Erie Millennium Network

Binational Research and Monitoring for the Millennium

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**Developing and Evaluating Dynamic Environment/Habitat Models  
for the Huron-Erie/St. Clair Corridor**  
LEMN RESEARCH NEEDS WORKSHOP 3.0.2

April 13-14, 2005  
University of Windsor  
Windsor, Ontario, Canada

**Sponsors:** The Ohio State University, University of Windsor, Michigan DNR, GLFC, and the USGS. Workshop supported by a grant from the GLFC/USFWS Restoration Act.

**Overview:** There is increasing recognition that aquatic habitats are created and maintained by dynamic interactions among environmental, hydrological, geological, and biological processes. Strategies for long-term habitat protection and restoration depend on understanding these dynamic processes and the environmental factors that control them.

This workshop brings together physical scientists (geologists, hydrologists, engineers), fishery biologists, aquatic ecologists, and resource managers to learn about and explore the potential of using existing physical and biological models to better understand the dynamic linkages between the processes that create, maintain, and regulate habitat structure within the Huron-Erie Corridor (HEC) system. This is the second of three workshops focused on the HEC system.

**Purpose:** The workshop builds on the results of our February 2005 meeting. We will explore the potential of using existing physical and biological models to better understand the dynamic linkages between the processes that create, maintain, and regulate habitat structure. Participants will be asked how best to apply these dynamic models to describe and predict the current and future distribution and quality of aquatic habitats within the HEC system, including ways to integrate modelling results in a geospatial context and present modelling results in ways that are most useful to resource managers and conservation planners. These ideas will be explored more fully in a third, final workshop designed to develop long-term data collection/research needs and build research/management project teams to directly address those needs.

**Presentations:** Invited speakers will describe existing hydrodynamic and habitat models. Where appropriate, examples will be drawn from HEC test datasets, especially as they pertain to the four major hydrogeomorphic zones defined in the previous workshop - the St. Clair and Detroit Rivers, St. Clair delta, Lake St. Clair, and coastal margin areas of Western Lake Erie.

**Discussions:** In a roundtable format, workshop participants will be asked to evaluate data input needs and the potential of each of these models to capture and identify the attributes of high-quality fish habitat for each of the four major hydrogeomorphic zones identified within the HEC system. This would include an assessment of data and/or modelling "gaps". Participants will also be asked to provide additional guidance and expertise as to how these tools might be used to guide development of long-term research and management strategies that will predict the distribution of future critical aquatic habitats and assess the effects of long-term stressors, such as climate-driven water level change on aquatic habitats.

**Conveners:** **Scudder D. Mackey** - University of Windsor (847) 360-9820 [scudder@sdmackey.com](mailto:scudder@sdmackey.com)  
**Jan J.H. Ciborowski** - University of Windsor (519) 253-3000 x2725 [cibor@uwindsor.ca](mailto:cibor@uwindsor.ca)  
**Jeffrey M. Reutter** - The Ohio State University (614) 292-8949 [reutter.1@osu.edu](mailto:reutter.1@osu.edu)

**A follow-up invitation will be e-mailed to you with workshop details and registration instructions.  
Attendance will be limited.**