

Special Session Abstract

GREAT LAKES REGIONAL COASTAL STUDIES

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ABSTRACT

Over the past few years a number of large scale coastal investigations have been initiated in the Great Lakes basin. These include the Lake Michigan Potential Damages Study (LMPDS), the Lower Great Lakes Erosion Study (LGLES), and the International Joint Commission (IJC) Lake Ontario –St. Lawrence River Water Level Regulation Review. The LMPDS, begun in late 1996, is conducting a number of state-of-the-art, lakewide modeling investigations that will ultimately provide estimates of potential flood, erosion and low water damages due to future extreme water levels. The LGLES, initiated in 1998, is modeled closely after the LMPDS, but is focusing on the development of modeling tools for improved prediction of erosion on sandy and cohesive shorelines on Lakes Erie and Ontario. The IJC Study, expected to begin in late 2000, will re-examine the way in which the water levels of Lake Ontario and the St. Lawrence River are regulated, including a full examination of the physical, social and economic impacts associated with different water level regulation scenarios.

This special session will provide an introduction to these studies and provide a review of key findings to date. Emphasis will be on the data collection and modeling activities that have been undertaken, as well as on issues related to human influences and ecological and economic impact assessment.

PAPERS TO BE INCLUDED

1. **History of Great Lakes Water Levels: Natural Cycles and Human Influences** – Roger Gauthier, U.S. Army Corps of Engineers, Detroit District.
2. **The Lower Great Lakes Erosion Study and The IJC Lake Ontario – St. Lawrence River Regulation Study** – Tony Eberhardt and Tom Bender, U.S. Army Corps of Engineers, Buffalo District.
3. **Coastal Zone GIS Database Development, Visualization and Distribution in the Great Lakes - The Lake Michigan Potential Damages Study and the Lower Great Lakes Erosion Study** - Christian J. Stewart, Mark N. Law and James G. Duyndam, Christian J. Stewart Consulting Inc.
4. **The Development and Application of a Flood and Erosion Prediction System (FEPS) for the Lake Michigan Potential Damages Study and the Lower Great Lakes Erosion Study** – Rob Nairn and Pete Zuzek, Baird & Associates.
5. **Ecological and Economic Impact Assessment for the Lake Michigan Potential Damages Study**, Marie Strum, U.S. Army Corps of Engineers, Detroit District.

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