

# Evaluation of Potential Ecological Impacts Resulting from Lake Michigan-Huron Water Level Restoration and the Placement of Structures in the St. Clair River



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# Ecosystem Workshop Goals

- ❖ Goals
  - ❖ Share initial ideas and concepts with technical stakeholders as to how and where this might be done
  - ❖ Receive input from technical stakeholders as to existing environmental datasets, reports, publications, and information
  - ❖ Identify and evaluate concerns/issues related to placement and impacts of proposed structures
  - ❖ Review applicable legal and regulatory framework with respect to the environment
- ❖ 31 participants on-site, +5-7 participated by webinar and conference call due to weather (blizzard of 2011)
- ❖ Broad range of expertise, included scientists and resource managers who work on the St. Clair River
- ❖ Draft ecosystem white paper to be integrated with workshop materials to produce a Summary Report

# Structural Options

## Restoration

1. Submerged rock weirs in the Upper St. Clair River
2. Parallel dikes and weirs extending into Lake Huron
3. Fixed rock-fill dikes across east channels at Stag and Fawn Islands

## Regulation

4. Adjustable inflatable flap gates across east channels at Stag and Fawn Islands
  - Limited Regulation: designed and operated to restore (raise) levels during low water periods, but not increase high levels



# Ecosystem Workshop Summary

- Reviewed type, placement, and timing of possible structures to retard St. Clair River flows
- Summarized hydrogeomorphic changes, distribution and importance of fish spawning habitat, species at risk, overall fish community structure, and economics
- Summarized type, distribution, and environmental effects of contaminants in the St. Clair River, also reviewed status of contaminant remediation
- Summarized First Nation issues and concerns
- Summarized applicable environmental legal, policy, and regulatory issues related to placement of structures in the St. Clair River – both United States and Canada

# Ecosystem Workshop Results

- Locations of proposed structures overlay critical habitat areas
- Discussed alternative methods/strategies to implement (increase bed roughness)
- Species at Risk (Northern Madtom and Lake Sturgeon) may be a “show stopper” in Canadian waters under Fisheries Act
- Effects of GIA are important due to length of time to implement project, e.g. 10 cm change yields no net benefit to GB
- Environmental issues are significant
- Reconsider benefits, approach, and methods