Great Lakes Coastal Wetland Monitoring in Michigan

Great Lakes Restoration Initiative Project

Michigan’s Intensification of the National Wetland Condition Assessment

Next Steps
Great Lakes Coastal Wetlands Monitoring Plan

- The Great Lakes Coastal Wetland Consortium consisted of approximately two-dozen scientific and policy experts from key US and Canadian federal, state, and provincial agencies, NGO’s, and other interest groups with responsibility for coastal wetland monitoring.

- Goal: Design an implementable, long-term program to monitor GL Coastal Wetlands.

- The Great Lakes Coastal Wetland Monitoring Plan was completed in 2008.

  - Indicators were selected through the State of the Lakes Ecosystem Conference (SOLEC) process
  
  - Further refined based on scientific investigation and pilot studies. These protocols are specific to coastal wetlands than other protocols
GLRI Project: Great Lakes Coastal Wetland Monitoring

- Great Lakes Coastal Wetlands Monitoring Plan (Great Lakes Coastal Wetland Consortium, 2008)
  - Protocols: Vegetation, Invertebrates, Fish, Amphibians, Birds, Water Chemistry
- 5 Year Project 2011-2015
- Monitor approximately 900 - 1000 coastal wetlands
- Throughout the Great Lakes basin, including Canada

<table>
<thead>
<tr>
<th>Country</th>
<th>Site count</th>
<th>Site percent</th>
<th>Site area</th>
<th>Area percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>386</td>
<td>38%</td>
<td>35,126</td>
<td>25%</td>
</tr>
<tr>
<td>US</td>
<td>628</td>
<td>62%</td>
<td>105,250</td>
<td>75%</td>
</tr>
<tr>
<td>Totals</td>
<td>1014</td>
<td></td>
<td>140,376</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Counts, areas, and proportions of the 1014 Great Lakes coastal wetlands deemed sampleable following Great Lakes Coastal Wetland Consortium protocols. Area in hectares.
GLRI Project:
Great Lakes Coastal Wetland Monitoring

Project Funded by: USEPA GLNPO
Project Lead: Central Michigan University
Natural Resources Research Institute
Oregon State University
University of Windsor
University of Wisconsin - Superior
Bird Studies Canada
University of Notre Dame
University of Wisconsin - River Falls
Lake Superior State University
Grand Valley State University
State University of New York Brockport
Environment Canada
University of Wisconsin - Green Bay
Michigan Department of Environmental Quality
Table 2. Counts, areas, and proportions of the 176 Great Lakes coastal wetlands sampled in 2011 and the 206 wetlands sampled in 2012 by the GLIC: Coastal Wetland Monitoring Project. Area in hectares.

<table>
<thead>
<tr>
<th>Country</th>
<th>Site count</th>
<th>Site %</th>
<th>Site area</th>
<th>Area %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>2011</td>
<td>50</td>
<td>3,303</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>2012</td>
<td>82</td>
<td>7,917</td>
<td>27%</td>
</tr>
<tr>
<td></td>
<td>CA total</td>
<td>132</td>
<td>11,220</td>
<td>20%</td>
</tr>
<tr>
<td>US</td>
<td>2011</td>
<td>126</td>
<td>22,008</td>
<td>87%</td>
</tr>
<tr>
<td></td>
<td>2012</td>
<td>124</td>
<td>21,845</td>
<td>73%</td>
</tr>
<tr>
<td></td>
<td>US total</td>
<td>250</td>
<td>43,853</td>
<td>80%</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td>382</td>
<td>55,073</td>
<td></td>
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3 More Years of Monitoring...
Michigan Intensification of the National Wetland Condition Assessment:

Coastal Wetland Monitoring

- USEPA Funded Intensification
- Michigan DEQ and Central Michigan University
- Protocols: Vegetation, Invertebrates, Fish, Amphibians, Birds, Water Chemistry
- ALSO, Michigan Rapid Assessment Method
- 3 Year Project 2010-2012
- Monitor approximately 75 coastal wetlands
- Michigan coastlines of Lake Michigan and Lake Huron, only

Field Work is Done!...Final Report Summer 2013
Michigan Intensification of the National Wetland Condition Assessment:
Next Steps for Michigan:

• Update the *Michigan Wetland Monitoring and Assessment Strategy*
  - Refine protocols and site selection criteria for inland wetland monitoring
  - Initiate 5-year cycle for wetland monitoring in Michigan
• Further develop interactive database and GIS mapping tool to track wetland monitoring results
• Analyze ongoing monitoring efforts for:
  - status and trends information, climate change, restoration and preservation priorities, etc.
Anne Hokanson
DEQ Coastal Wetland Ecologist
517-241-4506
hokansona@mi.gov