Mapping and Monitoring Great Lakes Waterbirds to Support Management

November 15, 2017
History and Origins

➢ Began as a planning assessment for proposed offshore wind development in the Great Lakes

➢ Interest in Great Lakes wind power declined over the course of the project

➢ Great Lakes avian research and coastal planning community see significant value in the project

➢ Workplan and deliverables were slightly updated to reach a broader audience and provide utility for a wider array of researchers and planners unrelated to offshore wind development
Multi-Phase Approach

Phase I
➢ Aerial surveys, fall 2012 and spring 2013 migration seasons

Phase II
➢ Aerial surveys, fall 2013 through the spring 2014 migration and overwintering seasons

Phase III
➢ Development of a data management system for over-lake survey data and the development of predictive models
Phases I and II: Complete

- Over 1.8 million individual birds observed
- More than 53 different species
- Over twice the number of birds per km of transect in Lake St. Clair than other sites
- Fewer individuals in Phase II, maybe due to high level of ice coverage during that winter

<table>
<thead>
<tr>
<th>Study Area</th>
<th>Bird Count</th>
<th>% of Total</th>
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</thead>
<tbody>
<tr>
<td>Lake St. Clair</td>
<td>1,401,982</td>
<td>76%</td>
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<tr>
<td>Lake Erie</td>
<td>276,392</td>
<td>15%</td>
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<tr>
<td>Lake Michigan</td>
<td>141,589</td>
<td>8%</td>
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<tr>
<td>Lake Huron</td>
<td>9,545</td>
<td>1%</td>
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Monitoring and Mapping of Avian Resources over the Great Lakes
Phase III: Project Summary

- September 2015 – August 2017
- Funded by U.S. FWS – Great Lakes Fish and Wildlife Restoration Act
- Research questions:
  - How do birds use near-shore and offshore areas of the Great Lakes during the non-breeding season?
  - How can this information be used to evaluate the potential impact of offshore and coastal development projects, and other resource management decisions?
Phase III Objectives

➢ Build a community of Great Lakes avian researchers.
➢ Inform Great Lakes conservation and management decisions.
➢ Develop and promote the use of the Midwest Avian Data Center.
➢ Develop predictive models of waterbird distributions and densities across the Great Lakes.
➢ Incorporate data and project results into relevant decision-making and conservation planning tools and documents.
Phase III: Stakeholders Workshop

March 22-23, 2016 in Ann Arbor

Objectives:

➢ Identify management needs for which data can inform decision-making.

➢ Work with conservation managers and the regional project team to determine the best ways to apply the project’s information to support their management activities.

➢ Define user interface options for the analysis tools developed by the project that will be integrated into the Midwest Avian Data Center website.

➢ Gauge the need for continued data collection, monitoring and review of impacts of management actions.
Phase III: Data Management
Phase III: Predictive Modeling
Phase III: Outreach

Outreach products

➢ Websites
   GLC: www.glc.org/work/avian-resources

➢ Factsheet

➢ Posters

➢ Workshop summary
THANK YOU!

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