Michigan's Great Lakes Coastal Wetlands

Enhancing Local Governmental Capacity to Address Change

In 2016, a team of researchers from University of Michigan and Michigan Technological University worked with LIAA, a non-profit community planning organization, under a grant from MDEQ (Office of the Great Lakes) to develop strategies to better assess the resiliency of Great Lakes coastal wetlands and their relationships to adjacent communities. Ultimately, the goal of this project was to enhance local capacity to protect and enhance coastal wetlands, with a special emphasis on responding to changing water levels and dynamic ecosystems.

To accomplish this, the team sought to integrate existing Great Lakes coastal wetlands datasets into one usable data package to be used by policy makers, land managers, and MDEQ's Office of the Great Lakes. After compiling existing data, the team worked with local officials and community stakeholders in two pilot communities - Luna Pier and Les Cheneaux to field test the wetlands data. Both communities served as a pilot location for field testing wetlands data and for evaluating local data needs, local capacity, and local commitment to protecting wetlands. Through community conversations and workshops, the team worked to develop a model for fostering coastal wetland stewardship across the State of Michigan. Visit www.glahf.org/_____ to view project findings and to learn more about how climate and changing water levels could impact Great Lakes coastal wetlands.

Funding

Funding for this project was provided by MDEQ's Coastal Zone Management program

PROJECT GOALS

1. Map hydrologically-connected wetlands in Michigan

2. Inform DEQ funding priorities and management efforts

3. Develop tools to assist local decision makers

4. Better understand ecosystem resilience in a community context

KEY PROJECT DELIVERABLES

1. A single, integrated and comprehensive Great Lakes coastal wetlands database encompassing Michigan;s entire Great Lakes shoreline.

2. A statewide assessment of the potential impacts of climate-related factors to coastal wetlands.

3. An assessment of local data, community capital, and level of commitment to wetland protection of two pilot communities - Les Cheneaux and Luna Pier.

4. An assessment of state and local coastal wetlands management needs and policy options.

CLIMATE CHANGE AND WETLANDS

Although the full extent of how climate change will impact Michigan's Great Lakes coastal wetlands is not known, initial predictions of direct and indirect factors include:

Lower pH in the Great Lakes (acidification)
Increased erosion
Increased occurrence of invasive species
Degradation of water quality
More variation in water supply
Disruption of plant and wildlife assemblages
Sedimentation and nutrient overloading

PROJECT PHASES

Task 1: Define "Great Lakes Coastal Wetland" and Evaluate Local Management Options

Task 2: Integrate and Augment Existing Coastal Wetlands Data

Task 3: Evaluate Potential Impacts to Coastal Wetlands

Task 4: Field Test Integrated Wetlands Data Base/System

Task 5: Evaluate Local Capacity and Commitment for Wetlands Management

Task 6: Prepare White Paper and Disseminate findings

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2016 Michigan Coastal Zone Management Grant

Michigan Technological University

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LIAA