

Defining Michigan's Great Lakes Coastal Wetlands

Enhancing Local Government 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.

This page lists a number of definitions of wetlands and coastal wetlands used by various agencies and organizations throughout Michigan. These definitions showcase the broad policy definitions currently used to build wetland management strategies at all levels of government. Ultimately, the project team may recommend a new or altered definition of coastal wetlands based on this project's outcomes.

Funding

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



REGULATORY DEFINITION

Michigan's statutory definition of a "wetland" is, according to Section 30301(d):

Land characterized by the presence of water at a frequency and duration sufficient to support, and that under normal circumstances does support, wetland vegetation or aquatic life, and is commonly referred to as a bog, swamp, or marsh.

The Michigan Department of Environmental Quality regulates wetlands that are:

- Connected to other waterbodies
- Within 500 feet of an inland lake, stream or pond
- Within 1,000 feet of a Great Lake
- Greater than 5 acres in size
- If MDEQ determines the wetland is essential to the preservation of natural resources of the state and the landowner has been notified

OTHER DEFINITIONS

The Michigan Natural Features Inventory offers a definition specifically for coastal wetlands. A coastal wetland is any wetland that "occurs along the Great Lakes shoreline and in portions of tributary rivers and streams that are directly affected by Great Lakes water regimes. These wetlands form a transition between the Great Lakes and adjacent terrestrial uplands and are influenced by both."

Michigan Sea Grant defines a coastal wetland primarily as connected to the Great Lakes either by surface water or groundwater. A number of sizes and types of wetlands may be considered coastal wetlands according to this definition including river deltas, swales, drowned river mouths, and emergent marshes.

The Great Lakes Commission defines a coastal wetland as a wetland "dominated by large lake processes such as water level fluctuations, wave actions, and wind tides or "seiches."

CHALLENGES IN DEFINING WETLANDS

Defining wetlands is an important step in protecting them from the impacts of a changing climate and increased human development. Great Lakes coastal wetlands exist in many shapes and sizes, and a clear definition on what is and is not a coastal wetland can form the basis of continued education to local planners and land managers. There are, however, a number of challenges in identifying a clear definition of coastal wetlands, including:

- Policy Usefulness - A definition of coastal wetlands may make clear sense to ecologists, but may be confusing or too technical for property owners and local officials.
- Adaptation - Coastal wetlands change in response to climate and water level fluctuations and may not look like a wetland year-round. Definitions of coastal wetlands should be applied to areas where land managers can access information on the long-term ecological and historical soil conditions.