

Proposal

Planning for Coastal Resilience on Beaver Island

Under the Coastal Community Resilience Matching Grant Program

INTRODUCTION

Great Lakes coastal communities face a unique subset of vulnerabilities and challenges that shift and change under unpredictable conditions over long periods of time. It is no secret the Great Lakes are one of the most unique and dynamic environmental features in the world. The Great Lakes Basin contains more than 20% of the world's surface freshwater, 84% of North America's surface freshwater and supports a population of more than 33 million people. Michigan — the Great Lakes State — is surrounded by four of the five Great Lakes and is home to 3,300 miles of Great Lakes shoreline.

Yet in general, riparian land (land adjacent to water bodies) in coastal communities throughout the state is not adequately protected from development pressures. Coastal communities especially have an important role to play in protecting the Great Lakes. In 2001, the Michigan Department of Environmental Quality acknowledged "fragmentation of coastal habitats, loss of agricultural and forest lands, increased impervious surfaces and resulting stormwater runoff, and the increased development of coastal hazard areas, wetlands and Great Lakes Islands, could be improved through better coastal land use planning." The record-high Great Lakes water levels of 2020 brought a new sense of urgency to coastal communities.

Planning for coastal areas at the local level requires knowledge of both local conditions and state and federal regulations. It also calls for a robust community engagement effort, ensuring that key stakeholders and the public at large understand the need to implement best practices that support coastal sustainability. Therefore, the goal of this project is to help the Beaver Island Community plan for and respond to changes to the region's climate and the potential for coastal hazards.

ABOUT LIAA

Founded in 1993, the Land Information Access Association (LIAA) is a federally approved, Section 501(c)(3) nonprofit corporation that works to make Michigan communities even better places to live, work and play. From its headquarters in Traverse City, LIAA serves communities throughout the state with a staff of nine professionals. LIAA provides innovative community-building and support services for governments, organizations and individual citizens, including: community planning and development; geographic information systems (GIS) and cartography; asset inventories and asset mapping; website development, software and database development, and IT support; community media and video production; public resource management; and related facilitation, training and education. A six-member volunteer Board of Directors oversees all of LIAA's operations, finances and programs.

LIAA is recognized as a leading organization in coastal resilience planning. LIAA has developed *Resilience Master Plans* in over a dozen communities across Michigan as well as plans for the three primary military installations in Michigan. In addition, LIAA and its partners have developed several statewide resilience planning resources, including the *Planning for Resilient Communities Handbook*. More recently, LIAA worked with the Michigan Association of Planning to develop the content for its annual Spring Institute as well as a series of statewide training workshops.

PROPOSED SCOPE OF SERVICES

This project will provide St James Township and Peaine Township with education and an informed analysis on coastal processes and hazards for the island. Deliverables include a public education and engagement process, flood scenario mapping, a shoreline erosion analysis, and vulnerable population mapping and data, all compiled into a published chapter of information that can be added to the townships' Master Plans as part of their five-year update.

Task 1 – Public Engagement

LIAA will begin the project by facilitating a public kickoff meeting with key township staff members, local officials, interested stakeholders and community residents. Meeting participants will be encouraged to watch a coastal resilience presentation by the Coastal Resilience Team partners prior to attending. The initial meeting will review the details of the online presentation and offer the opportunity for participants to discuss existing conditions on Beaver Island. A project website developed by LIAA will serve as a repository for project documents and opportunities for the public to provide input.

Following the first meeting, LIAA will work with local officials in each of the municipalities to complete the Community Sustainability Self-Assessment, the results of which will be discussed in a second meeting.

LIAA will present the results of the community analysis and a draft version of the Master Plan chapter addendum (see below) at a regularly scheduled public meeting (e.g., Planning Commission, City Council, etc.).

Task 2 – Complete Data Collection/Aggregation and Community Mapping

Concurrent with Task 1, LIAA will compile the data necessary for the community to make informed land-use decisions that are conducive to community resilience. This will involve data collection and mapping that illustrates different shoreline flood risk scenarios; shoreline movement, both historical, current and projected; tree canopy and impervious surfaces; and areas of the community with populations most associated with vulnerability to climate change impacts.

Task 3 – Develop a Coastal Resilience Master Plan Chapter for the Master Plan Update

Lastly, LIAA will develop and finalize a coastal resilience Master Plan Chapter that each jurisdiction can include in its Master Plan update. The chapter will include a comprehensive description of the problems facing Michigan's coastal communities, along with the results of LIAA's mapping and data analyses for the community.

PROJECT COSTS

The total value of services provided under the project is \$15,000. Local cost share for the participating municipalities would be \$7,500 (\$3,750 each), which will be matched dollar for dollar by the Coastal Community Resilience Grant Program. Financial assistance for this project is being provided, in part, by the Michigan Coastal Management Program, Department of Environment, Great Lakes, and Energy, and is supported through a grant under the National Coastal Zone Management Act of 1972, as amended, administered by the Office for Coastal Management, National Oceanic and Atmospheric Administration.