Description

The purpose of this project is to build upon coordination efforts with state Coastal Zone Management programs and federal agencies that date back to January 2017 and continue to work collaboratively with these partners to develop a comprehensive Project Management Plan (PMP) for the Great Lakes Coastal Resiliency Study that outlines specific activities to identify coastal vulnerabilities and recommend measures to increase resilience. The PMP will include the following elements: detailed task descriptions for each of the study deliverables, work breakdown structure, schedule, budget, and cost-sharing breakdown between the USACE and the non-federal sponsors.

The development of an overarching Great Lakes Coastal Resiliency Plan is intended to support and integrate ongoing and future resilience initiatives across the region being conducted by the individual Great Lakes states, by USACE and other federal partners such as the U.S. Environmental Protection Agency (USEPA), the National Oceanic and Atmospheric Administration (NOAA), and the U.S. Geological Survey (USGS) and others through various authorities and programs including the Great Lakes Restoration Initiative (GLRI). The PMP serves as a "road map" to completing the Great Lakes Coastal Resiliency Plan and is an essential part of the USACE planning process.
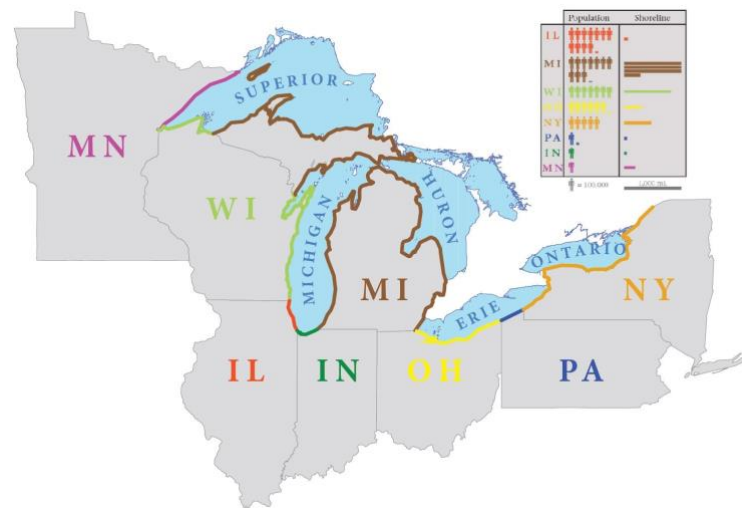

Figure 1: Study Area (includes all Great Lakes and connecting channels)

Issue/Challenge To Address

Coastal environments in the Great Lakes include both built and natural environments. Located at the intersection of land and water, coastal environments are exposed to upland, lacustrine, and climate stressors such those caused by temperature, wind, and precipitation. These anthropogenic and natural stressors contribute to a number of disturbances, including coastal storms, interrupted littoral transport, and watershed nutrient and contaminant loadings that put coastal populations, property, infrastructure, and ecosystems at risk.

Resilient coastal environments are able to withstand, recover from, and adapt to disturbances and underlying stresses. However, applying previous strategies for improving coastal resilience based on existing site conditions may no longer be sufficient to guide decision-making in coastal resilience, due to the uncertainty of future physical conditions

in the Great Lakes. The study of nearshore natural and built systems will aide in the design of protection measures for more vulnerable coastal ecosystems. Without an integrated plan that identifies vulnerabilities and recommends measures to increase resilience, federal, state, and local jurisdictions will continue to address these problems through a piecemeal approach, which does not take the larger system into account.

Successes
Lessons Learned

This is a unique effort in that the watershed study covers eight states, and there are potentially eight non-federal sponsors. Coordination, transparency, and frequent communication have proven to be essential for a project of this scale. Through the various outreach and data collection efforts that have taken place through the GLRI program, relationships between federal and state partners have been strengthened, and this project will building upon those successes. Lessons learned with regard to developing a workable PMP for a watershed study of this scale will be documented during the duration of this RSM project.

Projected Benefits
Cost Savings
Value Added

In conducting watershed planning, USACE uses its planning capability in a broader sense to meet the changing water resources needs of the nation. Watershed planning addresses identified water resources needs from any source, regardless of agency responsibilities, and provides a shared vision of a desired end state that may include recommendations for potential involvement by USACE, other federal agencies or non-federal interests.

Ultimately, the Great Lakes Coastal Resiliency Study will inform multiple audiences and decision-makers at all levels of government and provide a strategic roadmap to guide future investment decisions. By understanding the Great Lakes' vulnerabilities in both the built and natural environment, USACE and its partners can take a proactive approach to reducing risk and future damages from upland, lacustrine, and climatic stressors along the coast.

Expected Products

- Presentations at IPR and state working group meetings
- Collaborative framework for Project Management Plan that includes detailed task descriptions, work breakdown structure, schedule, budget, and cost-sharing breakdown

Stakeholders/Users

USACE Great Lakes Districts, Great Lake Coastal Zone Management Programs, FEMA, NOAA, USEPA, and USGS

Leveraging
Opportunities

This project leverages federal and state coastal management expertise and data. There is strong buy-in regarding coastal resiliency initiatives in the Great Lakes from federal agencies and each of the eight state Coastal Zone Management Programs. This project will also leverage data collected by two parallel multi-year GLRI-funded projects currently underway: Great Lakes-wide Sediment Budget development led by USACE and the Hardened Shoreline Inventory led by NOAA-Office for Coastal Management.

Points of Contact

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Participating Partners

USACE Great Lakes Districts, ERDC, IWR, PCX and Coastal States Organization, Great Lake Coastal Zone Management Programs, FEMA, NOAA, USEPA, USGS