

Great Lakes and Ohio River Division

Great Lakes Coastal Resiliency Study

Lake Michigan Monitoring Coordination Council (LMMCC) Webinar

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Great Lakes Coastal Resiliency Study: BLUF

- Purpose: provide a summary of the proposed study
 - Coastal resiliency is a major focus of many federal, state and regional partners within the Great Lakes
 - Superstorm Sandy highlighted coastal vulnerabilities
 - LRD is requesting a new start study in FY19

Great Lakes Coastal Resiliency Study: Summary

Study Goal

- To develop a collaborative risk-based decision framework that utilizes a systems approach to identify potential opportunities to improve coastal resilience over a range of future conditions across the Great Lakes built and natural environments.

USACE Approach

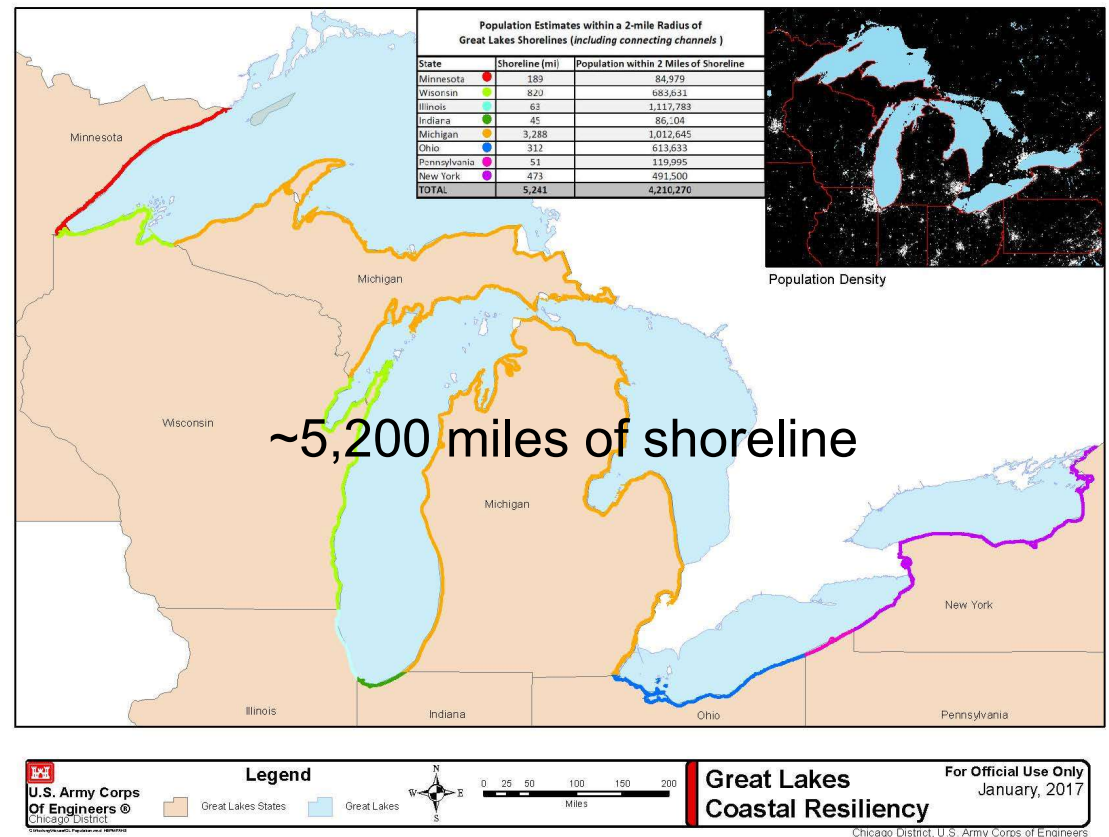
- Study conducted across three GL districts: Buffalo, Chicago, Detroit
- Technical/collaboration assistance by IWR, ERDC, PCX-CSR
- Approach inspired by NAD's recently completed North Atlantic Coast Comprehensive Study (NACCS)

Partnerships

- Federal partners: NOAA, USGS, USEPA, FEMA, etc.
- Regional partners: Great Lakes states, CSO, GLC, IJC, Conference of Great Lakes and St. Lawrence Governors and Premiers, etc.

Budgeting

- Watershed Planning Study Authority: Section 729, WRDA86, as amended
 - ☐ 75% Federal / 25% Non-Federal cost-sharing
- FY2019 USACE new start budget request
 - ☐ Non-Federal sponsor letter(s) of intent
 - ☐ Federal agency support letters
- USACE lead development of a study scope/budget/schedule to support budget request
 - ☐ Developed in partnership with federal, state and regional partners/stakeholders
 - ☐ Utilize all applicable data, analyses, plans either completed or underway

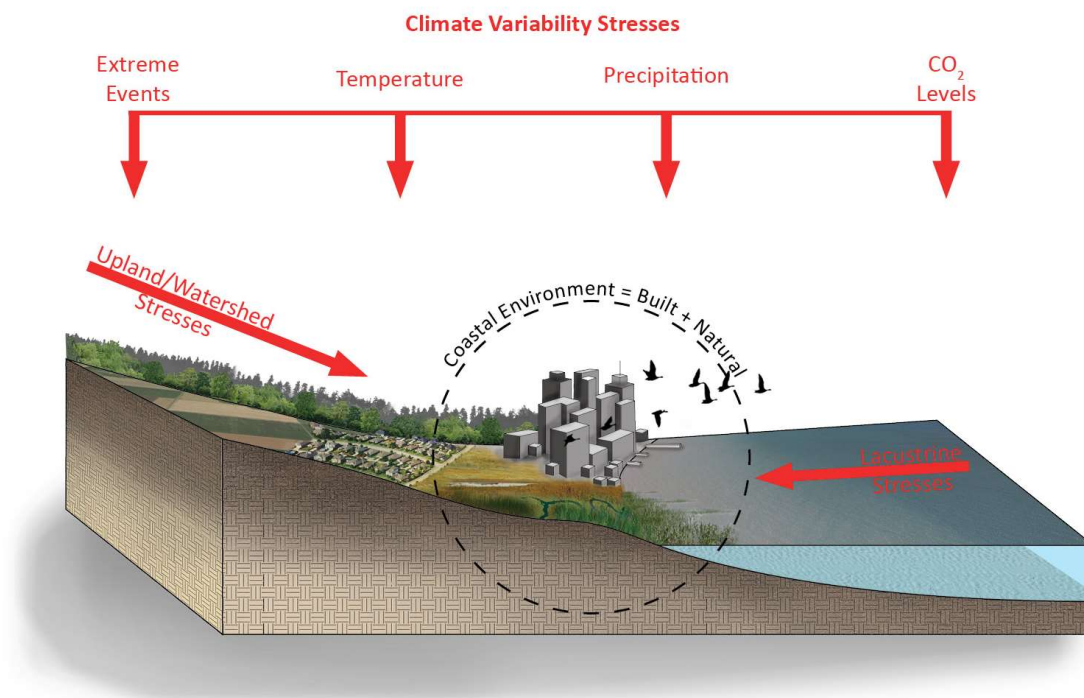


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Great Lakes Coastal Resiliency Study: Definitions

- **Coastal Resilience -**
the ability of a coastal environment to withstand, recover from, and adapt to disturbances and underlying stresses in order to maintain and improve economic, environmental, and social/cultural values over time. Coastal resilience applies to both built and natural environments.
- **Built Environment**
 - Populations
 - Buildings
 - Infrastructure
 - Social/Cultural Resources
- **Natural Environment**
 - Ecosystems
 - Coastal Landscapes
 - Natural Processes
- **Future Conditions to Consider**
 - Climate Variability
 - ❑ Coastal storm damage/frequency
 - ❑ Precipitation
 - ❑ Temperature
 - Development and Land Use Patterns
 - ❑ Stormwater
 - ❑ Agricultural runoff
 - Natural Processes
 - ❑ Littoral transport
 - ❑ Lake level fluctuations



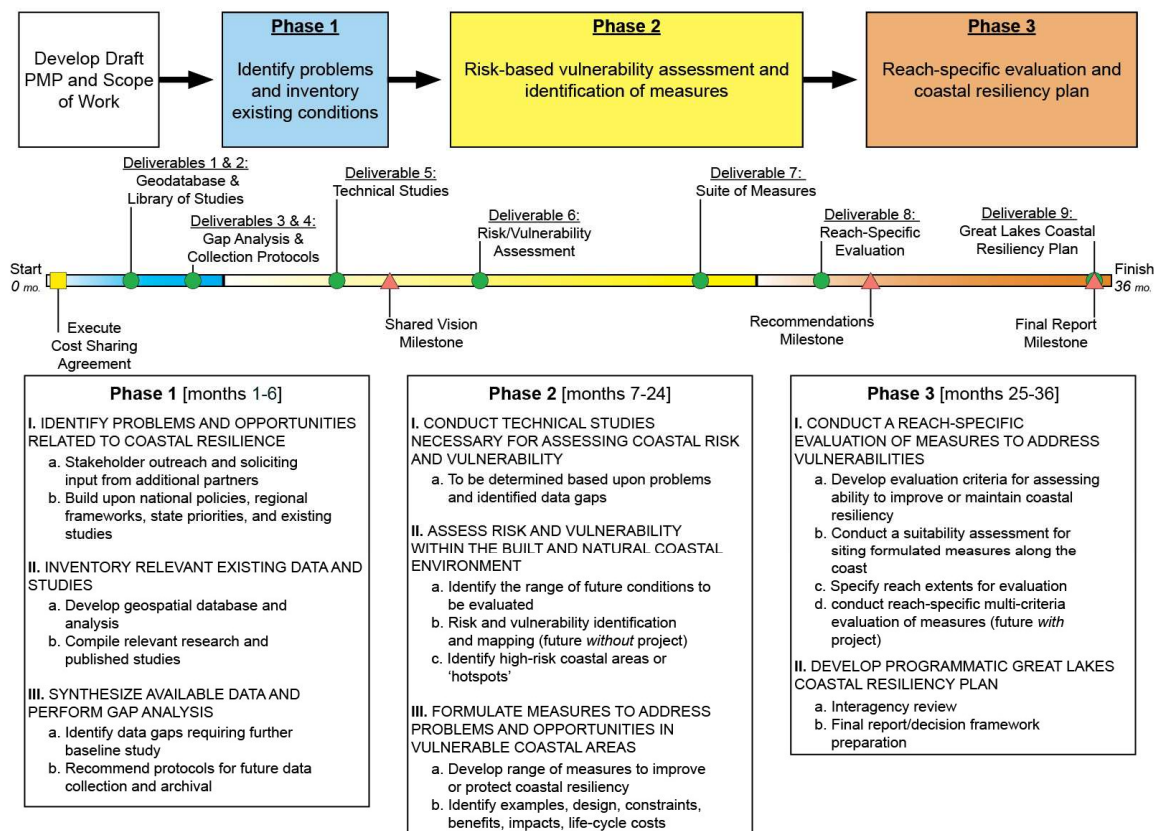
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Great Lakes Coastal Resiliency Study: Framework

Major activities

- **Identify problems and opportunities in each of the five Great Lakes**
 - Collaboration with Federal, State and Regional stakeholders
- **Inventory and analysis of Great Lakes coastal environments**
 - Use and build on existing datasets
 - Identify information gaps to be filled
- **Conduct technical studies to fill in identified data gaps**
- **Assess risk and vulnerability within the built and natural coastal environment**
 - Forecast future conditions
 - Risk and vulnerability mapping
 - Identify 'hotspots'
- **Formulate measures to improve coastal resilience** (including benefits, impacts, parametric costs)
 - Structural, non-structural
 - Beneficial use of dredged material
 - Living shoreline restoration, natural and nature-based features
 - Institutional/regulatory
- **Reach-specific multi-criterial evaluation of measures to improve coastal resilience**
 - Develop metrics
 - Suitability assessment (siting)
 - Specify reach extents
- **Programmatic Great Lakes Coastal Resiliency Plan**
 - Includes risk communication tools



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Great Lakes Coastal Resiliency Study: Collaboration

- Coastal States Organization annual meeting (15SEP16, Milwaukee, WI)
 - HQUSACE, Chief Planning & Policy (Mr. Tab Brown, SES) expressed strong support
 - Expressed interest from CSO and Great Lakes state coastal management program managers
- Regional meeting of Coastal Management Program Managers (26-29SEP16, Clayton, NY)
 - Expressed state funding support from Great Lakes coastal program managers
- Inter-governmental collaboration meeting (01DEC16, Chicago, IL)
 - In-person attendance from all Great Lakes states and four Federal agencies (NOAA, USGS, FEMA, USEPA)
 - USACE-LRD (Ms. Clay), IWR (Mr. Chesnutt), LRB, LRC, LRE all attended
 - Identified major activities, available data sources, budget/schedule, and partnership opportunities.
- Scoping Work Group meetings (8 phone mtgs JAN-APR17)
 - CSO, 8 state reps, NOAA, USGS, FEMA, USACE
 - Collaboratively developed a draft scope for the study

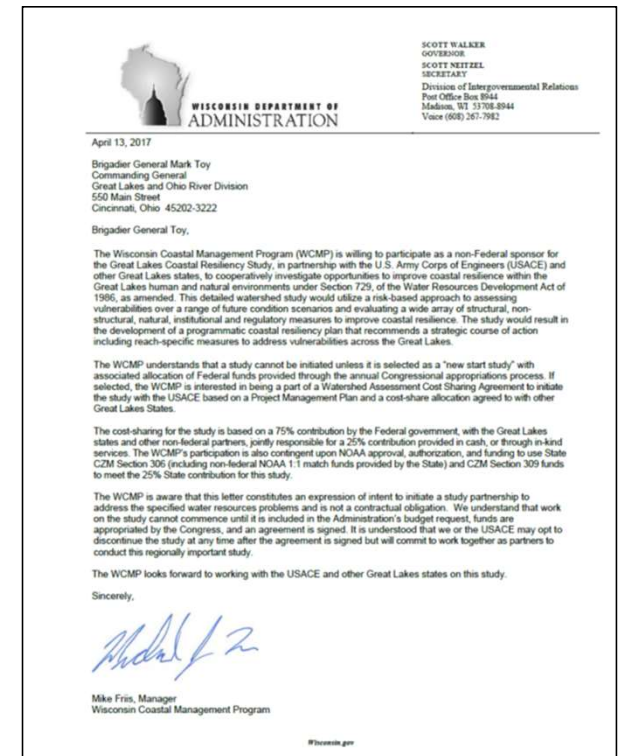
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Great Lakes Coastal Resiliency Study: Next Steps

- Draft PMP developed collaboratively (24FEB17)
 - States met on 1MAR17 in Washington, DC to solidify support for study
 - USACE is incorporating feedback recieved
- Non-Federal sponsor letters of intent (30APR17)
 - All eight GL states have expressed willingness to provide letters stating support and intention to serve as cost sharing sponsors
 - Received 5 of 8 (IL, MI, MN, NY, WI); 3 forthcoming (IN, OH, PA)
 - NOAA, USGS and CSO provided a support letters; FEMA support letter forthcoming
- FY19 New Start Budget submission (01MAY17)
 - LRD to submit new start budget request to HQUSACE
 - \$12M total study cost inline w/ similar studies (NACCS, Texas Coastal)
 - \$9M Federal cost over 4 years:
 - FY19-\$1.2M, FY20-\$3.6M, FY21-\$3.6M, FY22-\$0.6M
 - \$3M non-Fed cost: states will provide their share as WIK



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Feedback/Questions

