Great Lakes Coastal Flood Study

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Schedule for Great Lakes Coastal Flood Study

The Great Lakes Coastal Flood Study incorporates modern analysis of historic storm and high water events and provides for updated flood risk information serving United States communities having shoreline along the Great Lakes. This study is a collaboration of the U.S. Army Corps of Engineers (USACE), FEMA, the Association of State Floodplain Managers (ASFPM), and state partners, to deliver updated flood maps and other coastal public safety and asset management data. It is funded through Risk MAP (Mapping, Assessment & Planning), a FEMA program designed to enhance community resilience through sustained actions in hazard mitigation practices and planning.

Program Highlights

Lakewide Data Collection

The project includes the acquisition of wind, barometric pressure, water level and ice field data for each of the Great Lakes. This data feeds into the Storm Surge and Wave Modeling aspect of the study, which is ultimately used to determine Base Flood Elevations (BFE) and implement the revisions to Flood Insurance Rate Maps (FIRMs). For more information on this aspect of the study see the *Storm Surge and Wave Modeling Fact Sheet* on the *greatlakescoast.org* website.

The study also includes collection of LiDAR data and oblique photography for the shoreline of each lake. LiDAR is an airborne laser system flown aboard an aircraft that is used to acquire offshore bathymetry and onshore topography. The oblique photographs will be used for wave run-up modeling and mapping decisions, and will be available for public viewing via a website.

Community Outreach and Public Meetings

A series of public meetings will be held over the project lifecycle. These meetings will include opportunity to interface with National Flood Insurance Program (NFIP) experts, hazard mitigation specialists and state coastal zone managers. Keystone events will include the following:

- Technical Workshops Brief technical stakeholders and provide an opportunity to review and understand study methods.
- ✓ Flood Study Discovery and Initial Coordination Meetings Share details of the coastal flood study and collect information about community needs and unique coastal features.
- ✓ Risk Data and Mitigation Meetings Review draft study results for each community and participate in discussions regarding potential application for data in mitigation practices.
- ✓ Flood Risk Open House Meetings Provide local officials and the general public an opportunity to review flood maps produced under NFIP map revision processes, overview public comment procedures, and discuss map adoption requirements.

Communication with stakeholders will be accomplished through factsheets, quarterly newsletters and an inquiry management network. In addition, a project website has been established at *http://greatlakescoast.org*.



2010 Major Actions Collect data and build basin-wide storm/wave grid for Lake Michigan

2011 Major Actions

Evaluate storm sampling approach for Lake Michigan basin-wide model

Initiate basin-wide storm surge modeling for Ontario, Erie, St. Clair, Huron and Superior basins

> Data Storage System Development [Phase 1]

Collect LiDAR [Year 1]

2012 Major Actions Complete storm surge modeling for Ontario, Erie, St. Clair and Michigan basins – provide for near-shore "save points"

Data Storage System Development [Phase 2]

Finalize Methodology (Appendix D Guidance and Specifications)

Begin Public Meetings

Conduct Pilot wave elevation study for select shoreline, Lake Erie and Lake Michigan

Collect Oblique Photos, all shoreline

Collect LiDAR [Year 2]

2013 Major Actions Complete storm surge modeling for Huron and Superior basins

Conduct large-scale wave elevation modeling and mapping for Lake Erie, Lake St. Clair and Lake Michigan

Public Meetings – Lake Superior, Lake Huron

Collect LiDAR [Year 3]

2014-2016 Major Actions

Conduct Flood Data and Mitigation Workshops, and follow up with Flood Insurance Rate Map release and review/comment process

Conduct wave elevation modeling and mapping for Lake Huron and Lake Superior

Data Archiving





Figure showing a timeline of processes in the Great Lakes Coastal Flood Study



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