

## Great Lakes Coastal Flood Study – Lake Erie Studies Summer 2016 Email

*FEMA has prepared this email to keep Lake Erie communities up to date on its ongoing work on the coastal analysis, flood hazard mapping, risk assessment and planning assistance for Lake Erie coastal communities.*

### **Great Lakes Coastal Flood Study Overview**

The Great Lakes Coastal Flood Study (GLCFS) is a multi-year project led by the Federal Emergency Management Agency (FEMA) to put a wide range of decision-making data in the hands of Great Lakes coastal communities, including more accurate and up-to-date Flood Insurance Rate Maps (FIRMs). These flood maps and related information are powerful tools that can help communities make more informed decisions about how to make their families, homes, and businesses safer and stronger. Flood maps and flood risk information can help identify high-risk areas and guide comprehensive land use planning and safe capital investments to mitigate the severity of future losses.

### **The Latest Updates**

Work maps of the Lake Erie shoreline in Ohio and Michigan are being compiled based on completed flood and wave hazard analyses. By late summer 2016, FEMA expects to release draft flood hazard work maps to all coastal communities in Ohio and Michigan located along the Lake Erie shoreline. The draft flood hazard work maps reflect the input FEMA has received from Lake Erie communities throughout the GLCFS process to date. Release is first expected for counties on the east side of the State of Ohio, progressing clockwise around Lake Erie. Mapping is already complete for Erie County, Pennsylvania, where communities reviewed their work maps in fall 2015.

The scope of the study includes depiction of new coastal hazard areas, including AE and VE Zones. Coastal high hazard areas or VE Zones are areas where wave hazards are expected to be particularly strong and have the potential for causing structural damage to buildings. AE Zones indicate areas exposed to smaller waves or no waves at all (also referred to as stillwater). Mapping criteria will place the VE Zones where waves are 3 foot or greater during a 1-percent-annual-chance storm event, wave runup depths are 3 feet or greater, or where wave overtopping is most severe. These large waves can increase associated hazards to life and property compared to storm surge alone.

VE Zones will not cover the entire county-wide Special Flood Hazard Area (SFHA) floodplain. Rather, they should be expected in areas directly adjacent to Lake Erie where exposure to open-lake wave energy occurs. VE Zones can also be anticipated in low-lying areas where wave energy could spread over land.

The VE Zone is a new concept for most communities in the Great Lakes, and it carries unique coastal construction standards, which are intended to help safeguard against damaging wave forces, when implemented under local floodplain management ordinances. FEMA is initiating the VE Zone designation and will be showing these areas on the draft flood hazard work maps. This is in light of an independent study conducted to review methodologies and evaluate applicability of the VE Zone designation in the Great Lakes. After careful review, FEMA determined that identifying VE Zones is not only appropriate for the Great Lakes, but critical for ensuring proper flood hazard awareness by coastal communities. The independent study also looked at FEMA's use of coastal engineering and mapping methods and determined the lake-wide water level modeling used to identify hazards is state-of-the-art.

More information about VE Zones, including details about the reasons they appear on the draft flood hazard work maps and floodplain management implications, is currently being compiled in a series of fact sheets FEMA will share at the Flood Risk Review Meetings (refer to “What’s Next?”). Specific questions regarding VE Zones can be directed to the study team to ensure concerns are addressed (refer to “How to Contact Us” at the end of this newsletter).

### **Project Status Update**

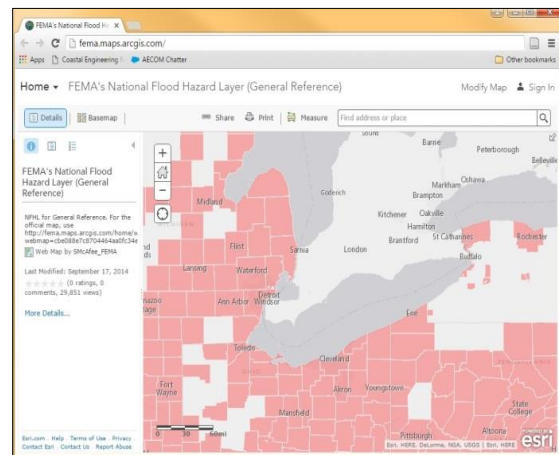
Modeling was recently completed in spring 2016, following the acquisition of topographic data and the assessment of the study area. Identification of the 1-percent-annual-chance SFHAs is in various stages of completion. Draft floodplain mapping is complete for Ashtabula, Lake, and Cuyahoga counties in Ohio and is currently underway for the remainder of the Lake Erie coastal counties in Ohio and Michigan.

The results show that wave runup will be the dominant hazard along much of the Ohio shoreline. Flood hazard information and base flood elevations shown on the draft flood hazard work maps will include the effects of wave runup. These draft flood hazard work maps will reflect the input we have received from Lake Erie communities throughout the study process and the recommendations of the independent study mentioned earlier.

### **What’s Next?**

The release of these draft flood hazard work maps is slated to begin in July 2016, and communities will have an opportunity to download and review them using the Lake Erie Work Map Data Viewer. The Viewer can be accessed using the following URL: <http://arcg.is/29qEIdS>; click [here](#) to access the guidance document on navigating the Viewer.

Additional opportunities for input will be provided through a series of Flood Risk Review meetings that will begin in early August and run through early- to mid-September 2016. Meeting dates, times, and locations are provided below.



EXAMPLE MAP ON MAPPING PLATFORM

### **Group 1:**

#### **Lake and Ashtabula Counties, OH**

*Tuesday, August 2, 2016*

2 pm – 4 pm EDT

Lake County Department of Utilities

(Learning and Business Center)

1981 Blase Nemeth Road

Painesville, OH

#### **Cuyahoga County, OH**

*Wednesday, August 3, 2016*

2:30 pm – 4:30 pm EDT

Bay Village Police Station (Community Room)

28000 Wolf Road

Cleveland, OH 44140

**Group 2:****Lorain County, OH***Tuesday, September 6, 2016*

9 am – 11 am EDT

Ritter Public Library (Community Room A)  
5680 Liberty Avenue  
Vermilion, OH 44089**Lucas County, OH***Wednesday, September 7, 2016*

9 am – 11 am EDT

Toledo Lucas County Public Library (Huntington Room)  
325 N Michigan Street  
Toledo, OH 43604**Group 3:****Ottawa, Sandusky, and Erie Counties, OH***Wednesday, September 14, 2016*

2 pm – 4 pm EDT

Oak Harbor Public Library  
147 W. Main Street  
Oak Harbor, OH 43449**Monroe & Wayne Counties, MI***Thursday, September 15, 2016*

2 pm – 4 pm EDT

Frenchtown Charter Township Hall  
2744 Vivian Road  
Monroe, MI 48162

Once the meetings have taken place, a 60-day comment period will provide even more opportunities for communities to provide their input on the draft work maps. This is separate from the formal comment and appeals period when the preliminary FIRMs are issued, and is designed to provide community leaders with an opportunity to review the draft work maps in more detail and better understand the maps. It also provides them with a means to ask questions, seek clarification, and provide input based on their own community perspectives.

Over the next year, as the draft flood hazard work maps are developed into final regulatory products, there will be more opportunities for communities to review the maps and provide input. These include FEMA-hosted workshops and public open house meetings that will coincide with the phases of the new FIRM development and rollout.

This Great Lakes Coastal Flood Study is funded by FEMA under the Agency's Risk Mapping Assessment and Planning Program, and is intended to address flood risk. Mapping data from the study will be used to revise the FEMA FIRMs. This data is not specifically related to erosion control statutes executed by the National Oceanic and Atmospheric Administration (NOAA) or state government under the authorities of the Coastal Zone Management Act.

**How to Contact Us**

Please visit [www.greatlakescoast.org](http://www.greatlakescoast.org) to learn more about the Great Lakes Coastal Flood Study. You may also contact Ken Hinterlong, FEMA Region V Senior Engineer, and Great Lakes Coastal Flood Study Project Manager, at [Ken.Hinterlong@FEMA.dhs.gov](mailto:Ken.Hinterlong@FEMA.dhs.gov).