

## CUYAHOGA COUNTY COMMUNITY CONSULTATION OFFICERS (CCO) MEETING

November 30, 2017





**TODAY'S AGENDA** 

The Value of Updated Flood Maps for Your Community Reviewing the Updated Flood Risk Data for Your County Next Steps in the Map Adoption Process Understanding Flood Insurance

## Why Are We Here?

FEMA is here today to:

- Present Cuyahoga County's New Flood Insurance Rate Maps (FIRMs)
- Help You Assess Your Community's Flood Risk
- Explain How the FIRMs Inform Risk Assessment & the National Flood Insurance Program (NFIP)
- Review Your Role in the Next Steps of the Mapping Process
- Answer Your Questions





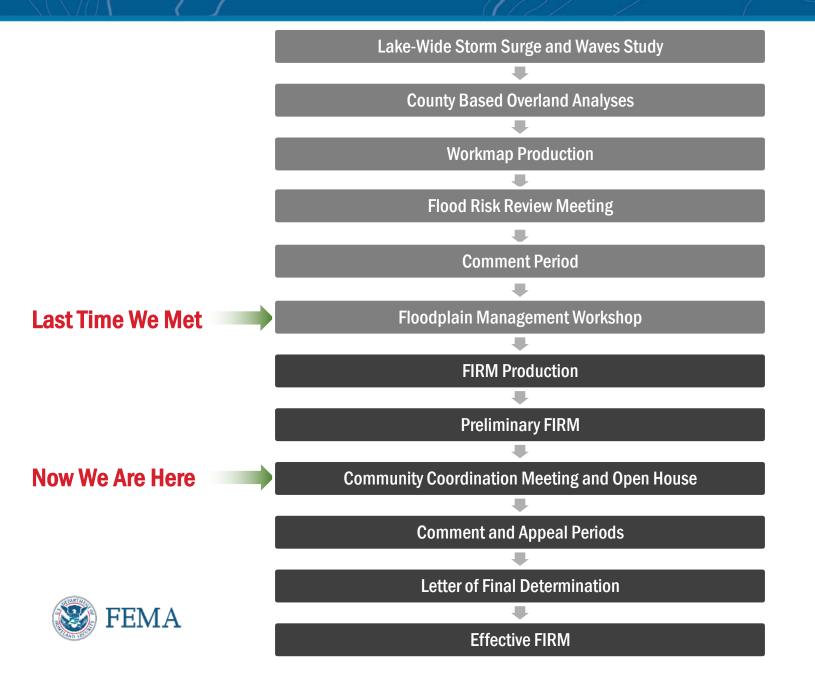
## **The National Flood Insurance Program**

The National Flood Insurance Program, or NFIP, balances three related areas that must support each other. Flood Hazard Mapping





## The Status of this Study





# The Value of Updated Flood Maps for Your Community





## Flood Maps are Used to Make Important Decisions







To Establish Rates for Flood Insurance To Guide Local Land Use Decisions

To Inform Engineers and Developers

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To Prepare Emergency Managers





## Why is FEMA Updating this Community's Flood Maps?

The Great Lakes Coastal Flood Study provides updated flood risk information across each of the Great Lakes, including Lake Erie, using uniform methodology, updated terrain data, and modern wave modeling techniques.

Many factors contribute to flood risk changes over time:

- Population growth & increased development
- Movement in rivers & coastline
- Changing weather patterns & updated rainfall data

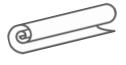




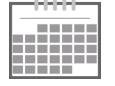


## **Your Role in this Process**

#### As Local Officials, Floodplain Administrators, and Staff you can:









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Submit questions and comments to FEMA Share new flood risk information with property owners and stakeholders Identify mitigation needs and priorities Update local plans, codes, and ordinances





# **Reviewing the Updated Flood Risk Data for Your County**

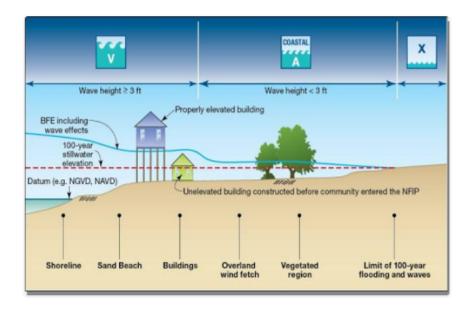




### **The Great Lakes Coastal Flood Study Approach**

#### Regional Study Approach

- Water level and wave analysis
  - 155 storms from 1960-2009
- Greater consistency in assumptions
- Reduces number of boundary conditions





#### Local/County Level Activities

- Mapping level tasks performed at county level
- Nearshore wave transformations
- Erosion
- Wave runup
- Overland wave propagation





#### The Great Lakes Coastal Flood Study in Cuyahoga County

#### 37 miles of coastline

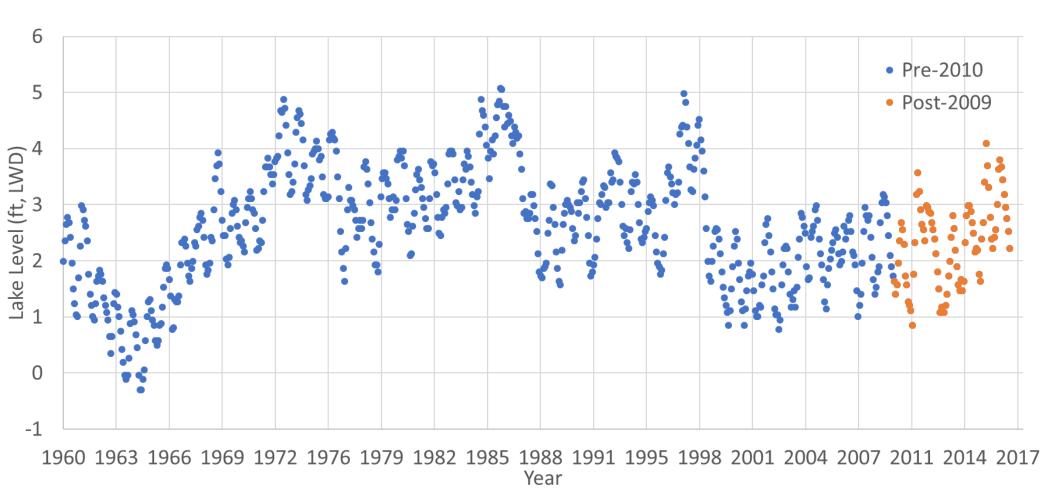
- Coastal Hazard Analysis
  - 35 Coastal Transects
- Riverine-Coastal Special
  Flood Hazard Area integration
- Topography
  - 2012 U.S. Army Corp of Engineers Lake Erie LiDAR
  - 2006 Cuyahoga County Ohio Statewide Imagery Program (OSIP) LiDAR







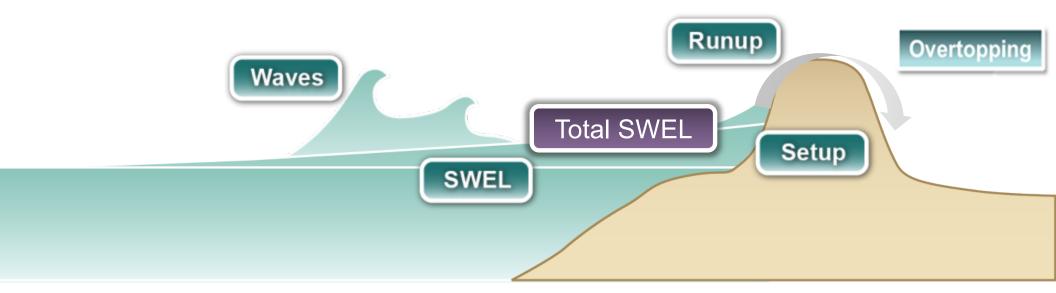
## **Great Lakes Water Levels**







## **Measuring Coastal Base Flood Elevation**

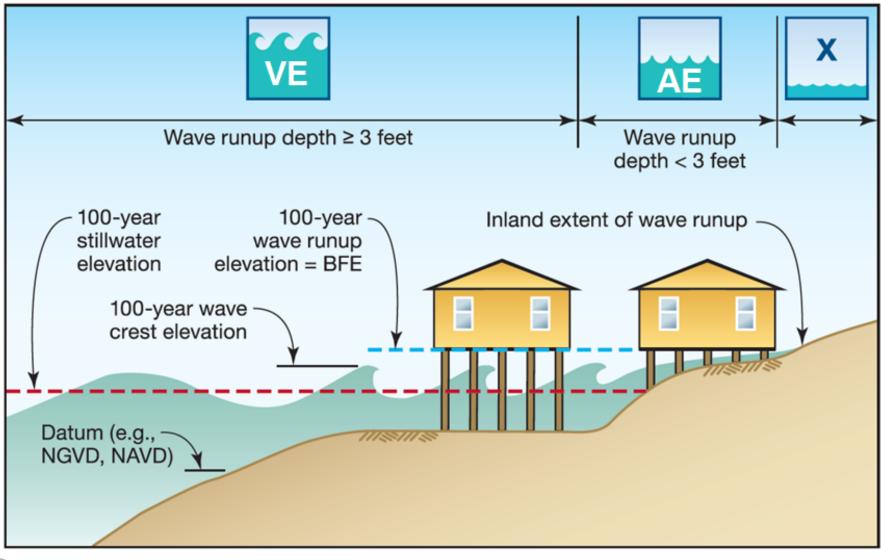


SWEL = Stillwater Elevation (storm surge level) Total SWEL = Stillwater Elevation, inclusive of wave setup





#### **Runup Mapping**







### **Wave Runup Mapping**

- Wave runup is very sensitive to shoreline characteristics
- Single Base Flood Elevation (BFE)
- Gutters perpendicular to the shore divide the BFEs
- Transitional zones capture changes in shoreline characteristics between transects
- Wave runup mapping may have associated overtopping or AO zones







## Wave Overtopping: Zone AO

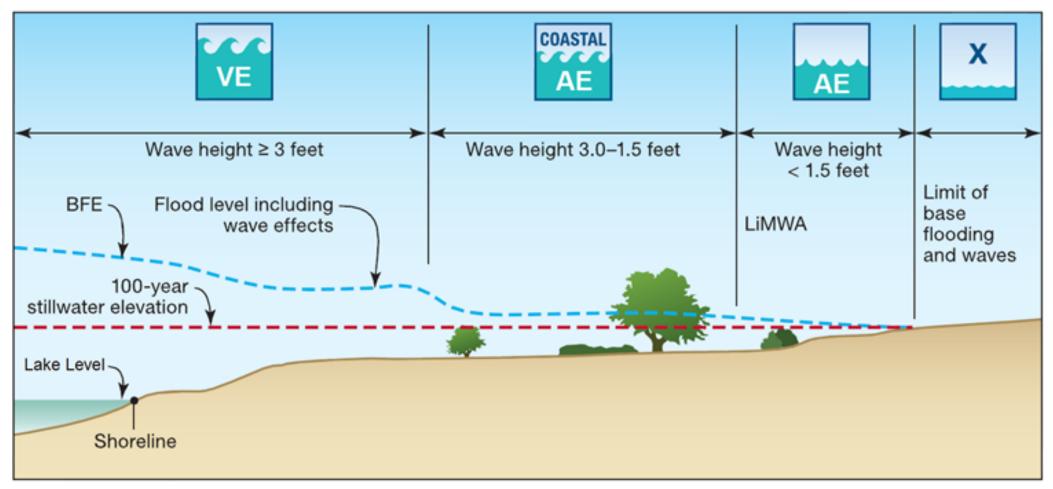




- Overtopping rate considerations for establishing flood insurance rate zones
- Sheet Flow Considerations
  - Areas where AE not present beyond slope break
  - Duration of overtopping
  - Rainfall associated with event
  - Topography
  - Drainage landward of the overtopped barrier



### **Overland Mapping**



#### LiMWA: Limit of Moderate Wave Action





#### **Special Flood Hazard Area (SFHA) Zones**

#### Zone VE

- Coastal high-hazard zone areas where wave action and/or high-velocity water can cause structural damage during the 1-percent-annual-chance flood
- Wave heights > 3ft
- Subdivided into elevation zones & BFEs are assigned

#### **Zone AE**

- Applied in areas subject to inundation by the 1-percent-annual-chance flood
- Wave heights < 3ft
- Subdivided into elevation zones & BFEs are assigned
- Zone AO
  - Applied in areas of sheet-flow, ponding & shallow flooding



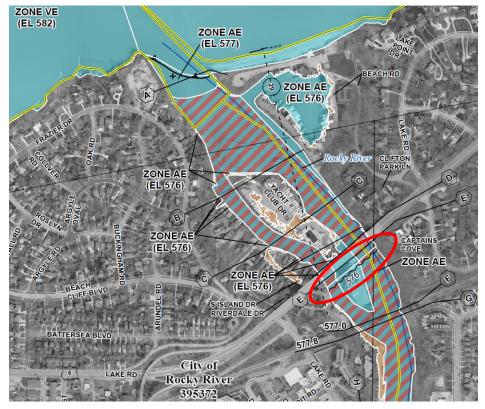


#### **Scope of Work: Integrating Riverine and Coastal Data**

#### **Updated Coastal Stillwater BFE**



#### **Effective Riverine BFE**

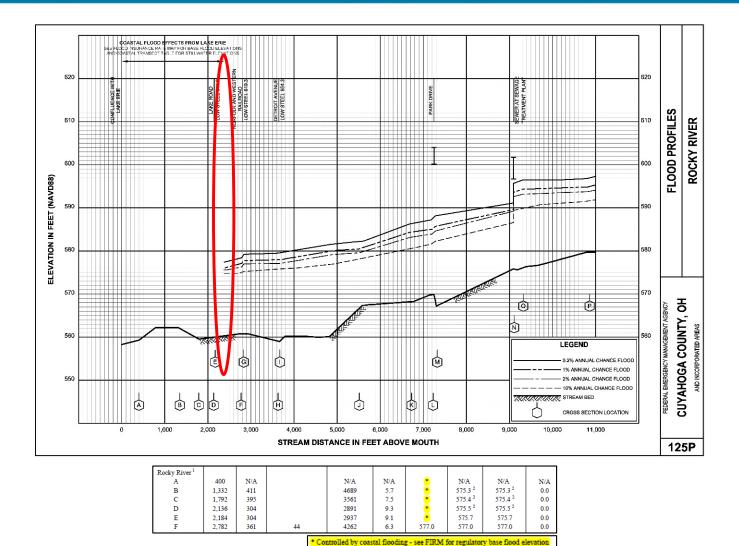


Limits of Coastal Flood Effects from Lake Erie are shown on FIRM (white line) and in the Flood Insurance Study (in Table 24: Floodway Data and in Flood Profiles)





## **Scope of Work: Riverine-Coastal SFHA Integration**







### **Scope of Work: Riverine-Coastal SFHA Integration**

- Detailed Zone AE
  - Cahoon Creek
  - Cuyahoga River
  - Euclid Creek
  - Nine Mile Creek
  - Porter Creek (Huntington Creek)
  - Rocky River
  - Spencer Creek
  - Wischmeyer Creek

#### Approximate Zone A

- Dugway Brook
- Sperry Creek
- Tributary L
- Tributary M
- Tuttle Creek





#### What are "Changes Since Last FIRM" in Cuyahoga County?

The "Changes Since Last FIRM" (CSLF) product compares the Effective Flood Insurance Rate Maps (FIRMs) to the new Preliminary FIRMs in GIS format.

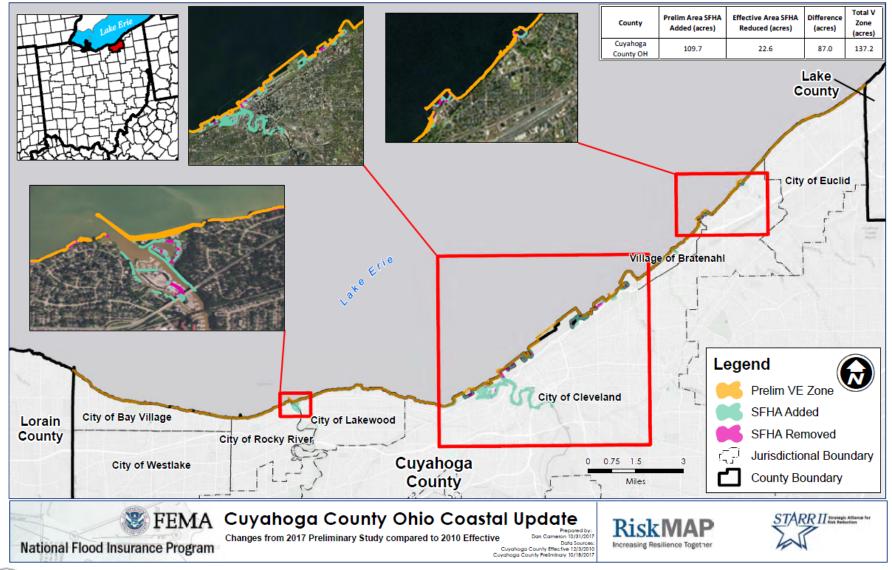
#### In Cuyahoga County, as in all counties along the Great Lakes:

- Coastal VE Zone replaced Effective Zone AE
  - Coastal High Hazard (Wave heights > 3ft)
- New Coastal AE Zones
  - Inland (behind shoreline) (Wave heights < 3ft)</li>
- New Coastal AO Zones
  - Shallow Ponding Depths 1-3ft
- Riverine AE & A Zones were integrated
  - Coastal Stillwater Backwater Elevations were remapped, where applicable





## **Changes Since Last FIRM in Cuyahoga County**







# Summary of Cuyahoga County's Letter of Map Changes (LOMCs)

PRELIMINARY SUMMARY OF MAP ACTIONS

Community No: 390093

SOMA-1

#### 2A. LOMCs on Revised Panels

Community: BAY VILLAGE, CITY OF

LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
LOMA	94-05-572A	03/29/1994	30400 CRESTVIEW DRIVE	3900930001 B	39035C0127F
LOMA	98-05-4612A	08/05/1998	26626 MIDLAND ROAD	3900930002B	39035C0131F
LOMA	98-05-6598A	12/09/1998	RED OAK WOODS SUBDIVISION, SUBLOT 3 - 568 RED OAK LANE	3900930003B	39035C0132F
LOMA	98-05-6602A	12/09/1998	RED OAK WOODS SUBDIVISION, SUBLOT 2 - 574 RED OAK LANE	3900930003B	39035C0132F
LOMA	98-05-6256A	12/22/1998	BAYFAIR COURT SUBDIVISION BLOCK B , SUBDIVISION 23 , 580 RED OAK LANE	3900930003B	39035C0132F
LOMA	98-05-6684A	12/22/1998	RED OAK WOODS SUBDIVISION - LOT 4 - 566 RED	3900930003B	39035C0132F
LOMA	99-05-3300A	04/14/1999	CAHOON ESTATES S/D NO. 2 - LOT 39 - 26538 E OVIATT RD	3900930002B	39035C0131F
LOMA	01-05-1926A	06/13/2001	HUNTINGTON VALLEY ESTATES SUBDIVISION NO. 4, SUBLOT 12; 30208 CRESTVIEW DRIVE	3900930001B	39035C0127F
LOMA	02-05-1790A	06/12/2002	WILLOWBROOK SUBDIVISION, SUBLOT NO. 10; 30517 WILLOWAY LANE	3900930001B	39035C0127F
LOMA	03-05-4621A	08/22/2003	BAYFAIR COURT SUBDIVISION, LOT 25; 584 RED OAK LANE	3900930003B	39035C0132F
LOMA	06-05-BY19A	08/24/2006	WIEBER REALTY CO.'S METROPOLITAN BEACH, SUBLOT 32 26610 NORMANDY ROAD (OH)	3900930002C	39035C0131F
LOMR-FW	07-05-1044A	01/11/2007	DANIELS PARK, SUBLOTS 33 AND 34 26617 NORMANDY ROAD (OH)	3900930002C	39035C0131F
LOMA	09-05-4561A	10/01/2009	30222 CRESTVIEW DRIVE SUBLOT 10, HUNTINGTON VALLEY ESTATES	3900930001B	39035C0127F
LOMR-FW	11-05-5501A	07/26/2011	SUBLOTS 53 AND 54, CAHOON ESTATES SUBDIVISION NO. 2 26701 EAST OVIATT ROAD	39035C0131E	39035C0131F
LOMR-FW	12-05-6601A	07/06/2012	LOT 86 26707 OSBORN ROAD	39035C0131E	39035C0131F

9/20/2017

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All LOMCs were addressed in the preliminary Summary of Map Actions (SOMA) and placed into one of four categories:

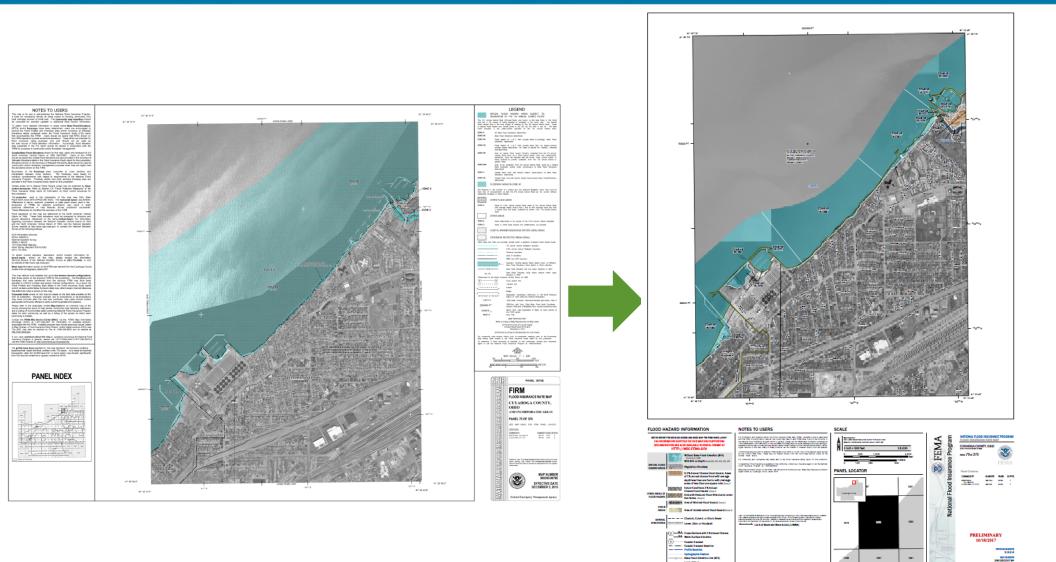
- 1. Incorporated
- 2. Not Incorporated (validated)
  - LOMCs on Revised Panels
  - LOMCs on Unrevised Panels
- 3. Superseded
- 4. To be Re-determined

# Be sure to review the prelim SOMA for completeness

If you note a LOMC missing from the list, submit the omission with your comments



## **NOTE: Format Changes to the FIRM**





RiskMAP

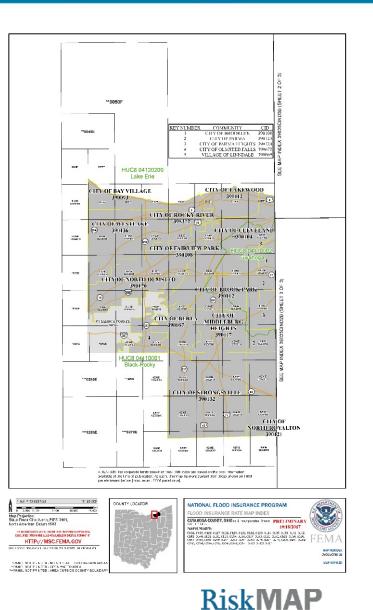
## **NOTE:** Format Changes to the Flood Insurance Study (FIS)

#### FIRM Index integrated into the FIS

- Simplified significantly
  - FIRM Panel Index, Political Areas, & Watershed Boundaries
  - Panel dates/Panel-Not-Printed notes kept on Index
- 11x17 fold-out
- Map repositories and community dates are moved into FIS tables

Other additions to FIS:

- Summary Tables added
  - Hydrologic and Hydraulic Analysis
- FIRM "Map Legend" added to FIS
- FIRM "Notes to Users" moved to FIS



Increasing Resilience Togethe

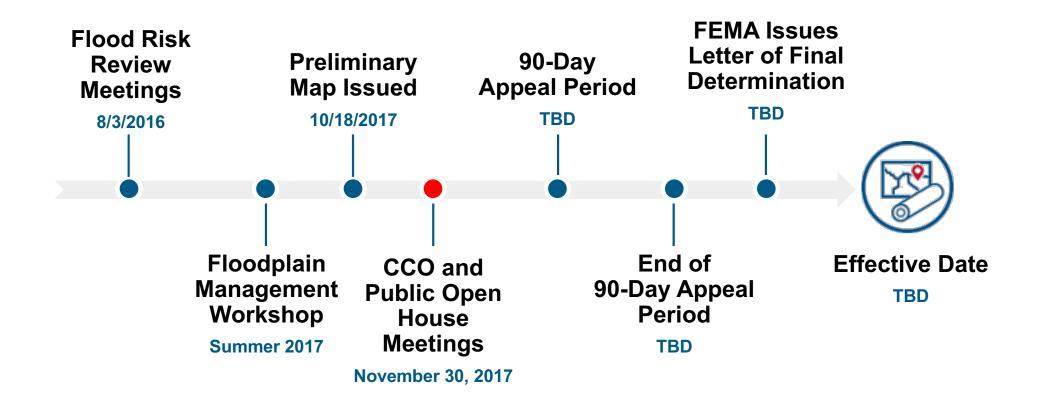


## Next Steps in the Map Adoption Process





## **Timeline for Cuyahoga County**







## **4-Step Pre-Adoption Process**









Inform the Community

#### Gather Comments and Additional Data

**Appeal Process** 

**LFD Issued** 





#### **#1: Inform the Community – Open House**

- Notifications to the Public
- Property Identification Mapping Assistance
- Comment Sheets Collected for Review
- Attendees Notified as Process Moves Forward







## **#2: Gather Community Comments**

- Comment forms are available at the Open House
- Homeowners submit their comments to local community officials
- Local community officials forward comments to FEMA Region V Service Center







## **#3: Appeal Process**

#### Appeal Period is 90 days

#### Publication of Notice in Federal Register

• Notification to communities by letter including two local newspaper publications

#### All are welcome to submit information

- FEMA recommends directing comments through local community officials to provide a consolidated picture
- Appeals should be submitted to STARR II or FEMA Region V
  - Additional instructions will be provided to Community CEO
- FEMA will evaluate all appeals and comments for resolution after the Appeal Period







### The Appeals Period: Appeals vs. Comments

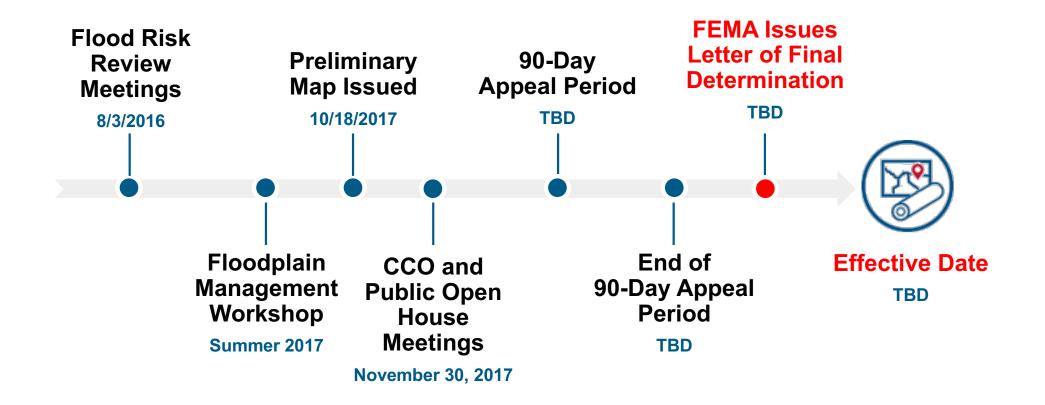
#### **•** To be considered an appeal, a submittal must:

- Include data that shows the proposed flood hazard information (e.g. new or modified Special Flood Hazard Area zones or boundaries, Base Flood Elevations, base flood depths, and/or floodway boundaries) is scientifically or technically incorrect;
- Include the necessary revisions to the FIRM and/or FIS report (e.g. boundaries of revised floodplains);
- Be received during the statutory 90-day appeal period
- The term comment is used for any submittal that does not meet the requirements for an appeal as outlined above





## **#4: Issuing the Letter of Final Determination**







Understanding Floodplain Management Ordinance Requirements





### **Participation in the National Flood Insurance Program**

- NFIP is a voluntary program.
- Participation requires that communities adopt and enforce floodplain management regulations in the form of a community ordinance.
- At a minimum, the floodplain management regulations need to be based on the risk data provided by FEMA (the FIRM and FIS).
- Participation in the NFIP makes flood insurance available to the residents and businesses within your communities.
- Flood insurance is a requirement for federal loans (insured or otherwise) or other federal financial assistance to purchase, repair, improve or rehabilitate buildings within the Special Flood Hazard Area (SFHA).
- Many forms of disaster assistance are a type of federal loan or federal financial assistance.





### **Ordinance Adoption During Map Updates**

#### • Timeline Prior to Effective Date:

- 6 months prior: FEMA 6-month LFD Letter
- 4 months prior: Draft Ordinance (suggested)
- 3 months prior: FEMA 90-day Reminder Letter
- 1 month prior: FEMA 30-day Reminder Letter
- Ordinance needs to be compliant prior to effective date of FIRM & FIS (or community may be suspended from NFIP)







### Where to Find Minimum NFIP Requirements

- NFIP Minimum Floodplain Management Standards are found in Part 60 of Title 44, Code of Federal Regulations
- Coastal specific standards are found in Part 60.3(e)
- FEMA establishes the minimum requirements; however, states and local communities are encouraged to adopt more restrictive standards to better address their flood risk. When these higher standards are in place, they take precedent over the minimums.





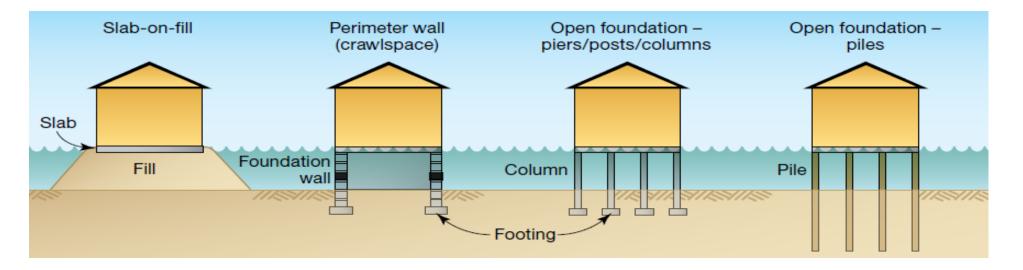
### **Differences in Development Requirements**

#### **A** Zones

- Fill outside the floodway or which can be shown to not cause a rise to the BFE allowed.
- Fully-enclosed foundation wall (flood openings required) construction allowed.
- Lowest floor elevated to or above the base flood elevation (BFE).
- As built lowest floor elevation required to be on file with permit records.

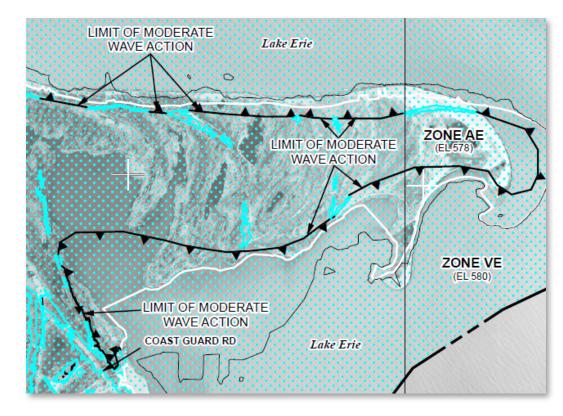
#### **V** Zones

- Fill not allowed for structural support of buildings.
- Open foundation on columns or piles free of obstructions or designed with break away walls.
- Bottom of lowest horizontal structural member to or above BFE.
- Professional Engineer or Architect shall certify the design, including wind loading, of the structure and be on file with the permit records.



### LiMWA (Limit of Moderate Wave Action) on the Map

- > At present, not a regulatory requirement
- Community Rating System (CRS) benefit for communities requiring VE Zone construction standards in areas defined by LiMWA or areas subject to waves greater than 1.5 feet
- Building codes may require construction to VE Zone standards when in a LiMWA







# **Understanding Flood Insurance**





### **Flood Insurance Basic Concepts**

- Structures built on or before December 31, 1974, or before the effective date of the initial FIRM of the community, whichever is later.
- Structures built after December 31, 1974, OR on or after the effective date of the initial FIRM of the community, whichever is later.

## Pre-FIRM Post-FIRM





### **Flood Insurance Basic Concepts**

#### Pre-FIRM (subsidized) rates

- For structures built before the first maps of the community
- Do not reflect the structure's true risk negatively or positively
- Based on building type, occupancy
- Subsidies are being phased out, with some categories increasing more quickly

#### Post-FIRM (actuarial) rates

- Uses the structure's elevation information to determine risk
- Based on elevation difference between BFE (Base Flood Elevation) and lowest floor
- For Post- and Pre-FIRM structures, if there is an elevation certificate





#### **Effects of New Flood Zones on Flood Insurance**

- A property owner's insurance needs may change with the new zones. The new FIRM may:
  - Map a property into the SFHA for the first time
    - Their lender may require them to get an insurance policy
  - Create a zone change on an already mapped-in property
    - Moving from an "A" zone to a "V" zone
    - Rating will change the next policy year
  - Not affect a property or an insurance policy at all





### **Insurance Rates in Zone VE**

#### Subsidized Rate Class

- Structures are likely already shown in the SFHA (zone A, AE, A1-30, AH, or AO) on the prior FIRM, <u>and</u>
- In Standard Rated Policy
  - The rates may be somewhat higher than other rate classes and are receiving subsidy phase-out

#### Actuarial (Elevation Based) Rate Class

- Built after first FIRM or New construction in V zones
- Rates are higher across the board based on obstructions: lattice work, horizontal member, enclosures, etc.
- Built correctly without obstruction can be less costly





### **New Construction in Post-FIRM VE Zone**

- Don't expect, or predict, "affordable" flood insurance to be available for new construction in Zone VE
- Hold design professionals and construction contractors to the highest standard in Zone VE
- Avoid it if possible





### **Insurance Rating and Product Possibilities**

#### Grandfathering (Standard)

Keeps lower rate zone and/or BFE

#### Two Ways

- Continuous coverage (Pre & Post)
  - Coverage obtained prior and through a map change
- Built-in-compliance
  - Post-FIRM ONLY
  - Built in compliance with the map at the time

#### Newly Mapped Preferred Risk Policy

- Must be Newly Mapped into SFHA from previous FIRM
- Must have two or fewer losses from NFIP or disaster assistance
- Bundled standard Preferred Risk Policy for the first year
- Multiplier added after the first year





### **Insurance Rating and Product Possibilities**

- Grandfathering (Standard)
- Exceptions
  - Can't have lapse in coverage
  - Building can't be altered/substantially improved

- Newly Mapped Preferred Risk Policy
- Exceptions
  - Can't be community's first FIRM
  - Multi-unit buildings insured under the RCBAP
  - Policy is first purchased more than 12 months after the effective date of the FIRM
  - Can't have lapse in coverage
  - Building can't be altered/substantially improved





#### **Resources for Insurance**

#### **FEMA.GOV**



- Grandfathering
- Newly Mapped PRP
- Flood Insurance Reform

#### Flood Insurance Manual

- <u>https://www.fema.gov/flood-insurance-</u> <u>manual</u>
  - General Rules
  - Newly Mapped
  - Rating
- Flood Insurance Rate Maps
  - www.msc.fema.gov





## **Question & Answer Session**





### **For Questions & Additional Information**

Visit: <u>www.greatlakescoast.org</u>

www.fema.gov/preliminaryfloodhazarddata

FEMA ArcGIS Online Preliminary Map Viewer

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