



MONROE COUNTY COMMUNITY CONSULTATION OFFICERS (CCO) MEETING

September 19, 2018



FEMA



TODAY'S AGENDA

Review the Updated Flood Risk Data for Your County

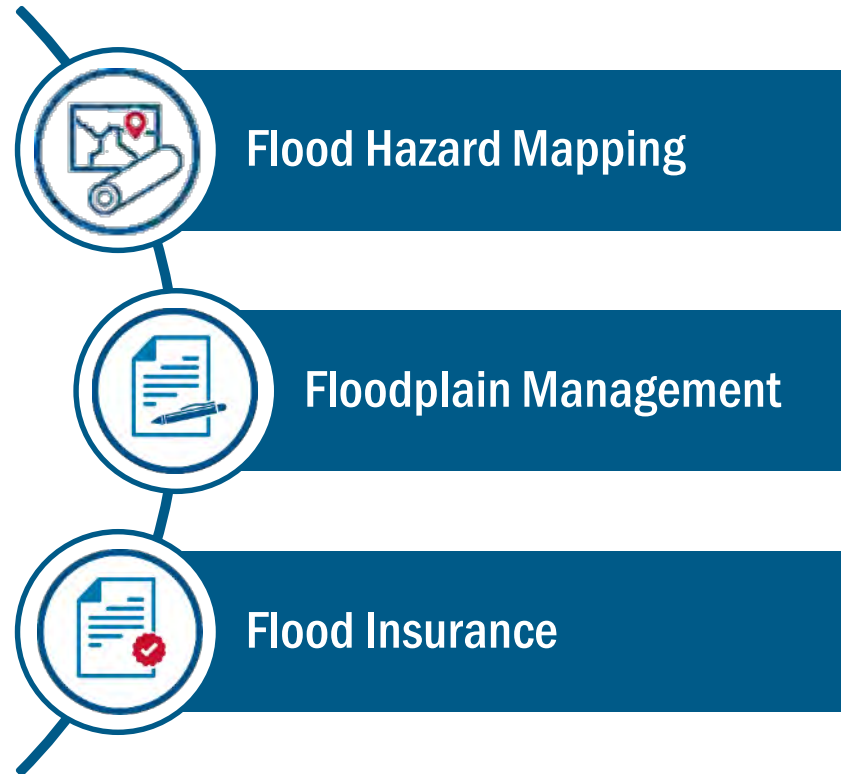
Next Steps in the Map Adoption Process

Understanding Flood Insurance

A Look at Hazard Mitigation

The National Flood Insurance Program

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



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The Status of this Study



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Reviewing the Updated Flood Risk Data for Your County



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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:

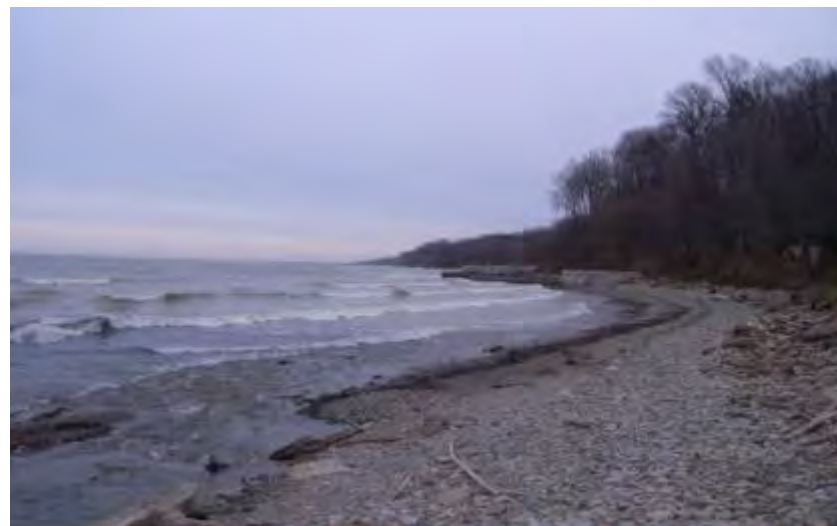
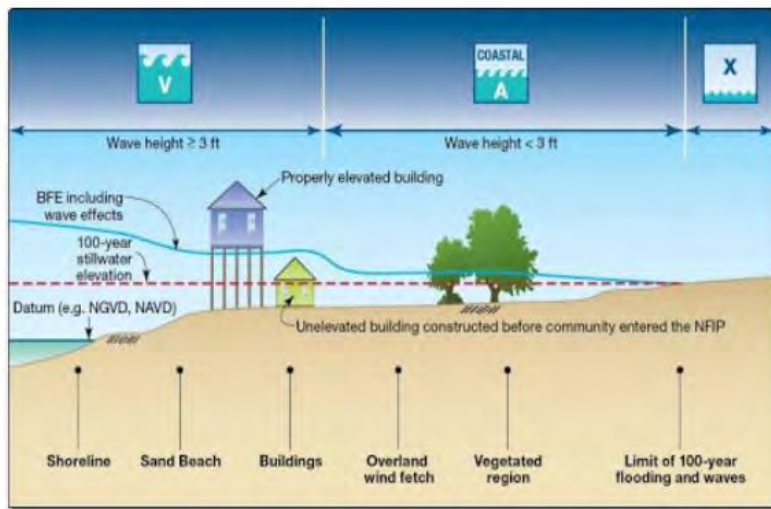
- ☐ Population growth & increased development
- ☐ Movement in rivers & coastline
- ☐ Changing weather patterns & updated rainfall data



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 Monroe County

□ 57 miles of coastline

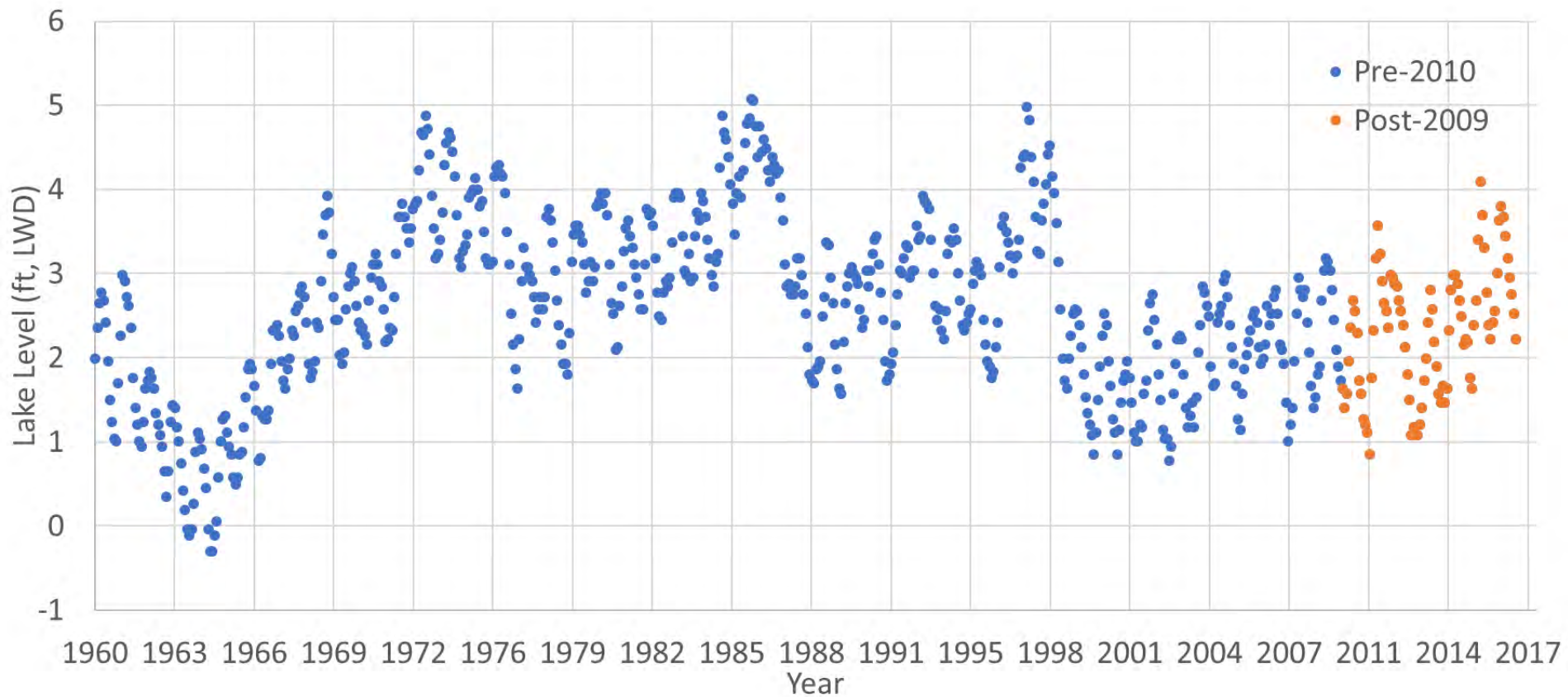
- Coastal Hazard Analysis
 - 42 Coastal Transects
- Riverine-Coastal Special Flood Hazard Area integration
- Topography
 - 2012 U.S. Army Corp of Engineers Lake Erie LiDAR
 - 2010 Southeast Michigan Council of Governments (SEMCOG) LiDAR



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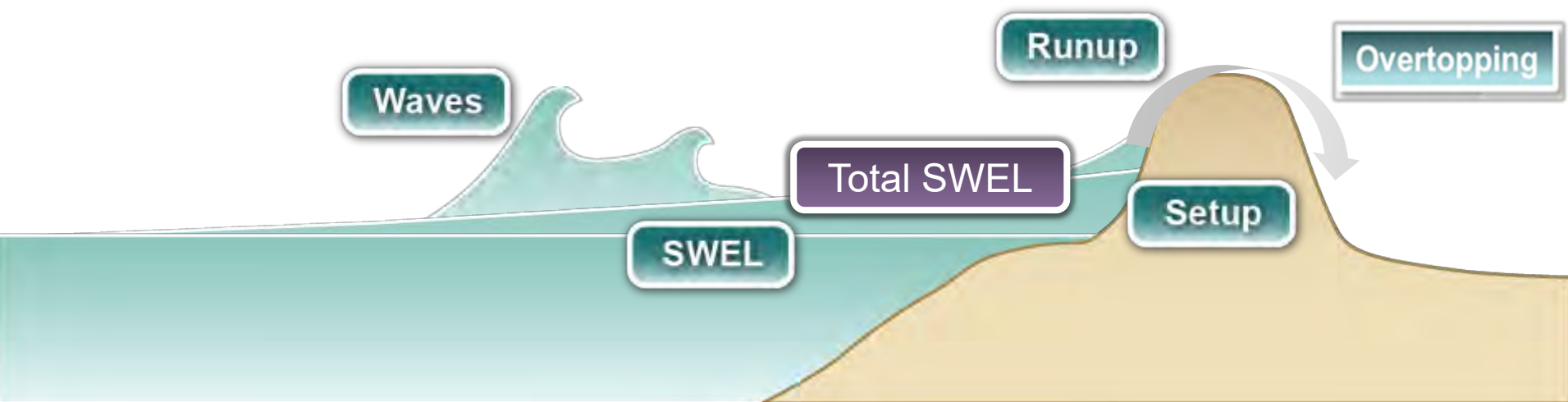
Great Lakes Water Levels



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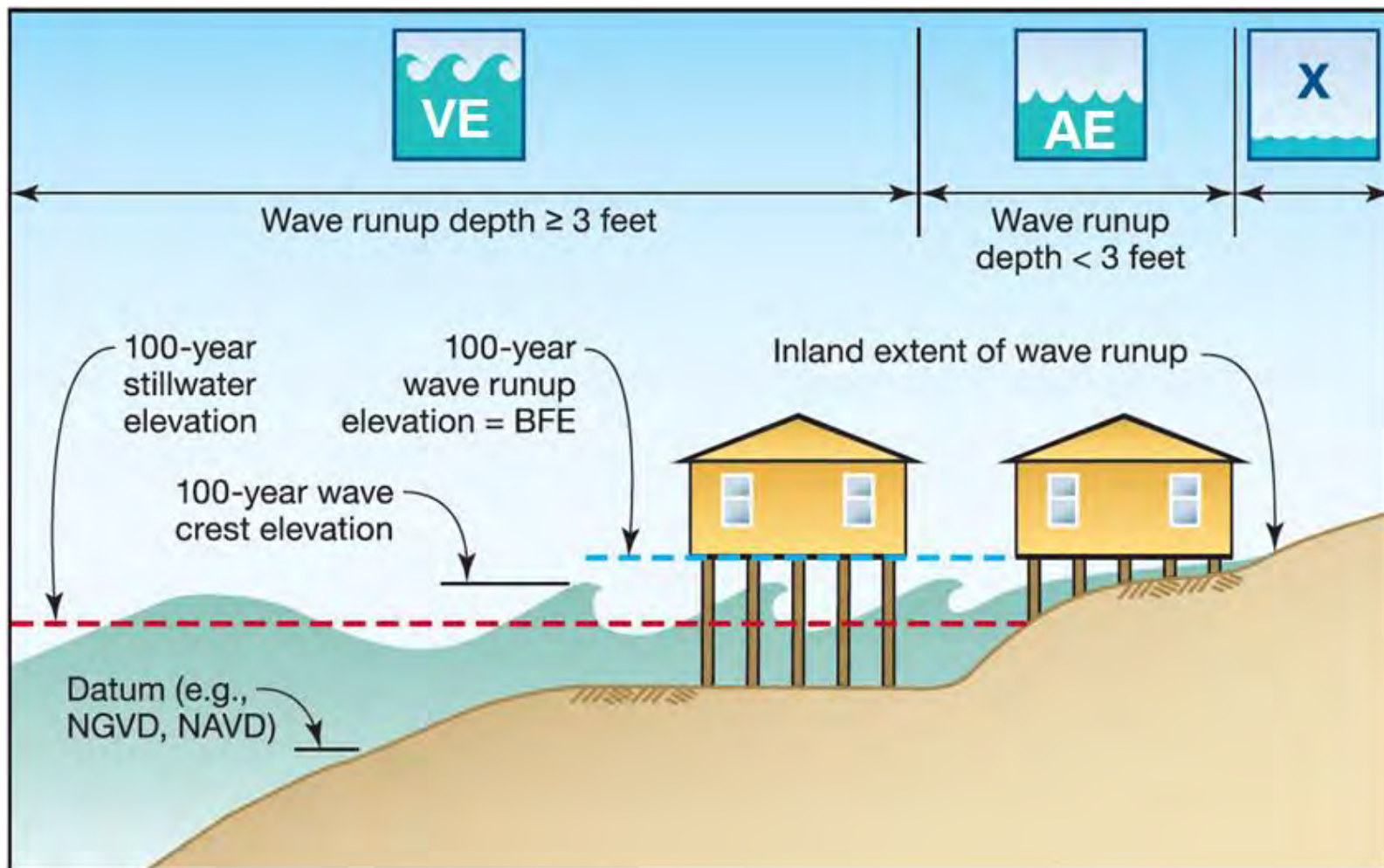
Measuring Coastal Base Flood Elevation



SWEL = Stillwater Elevation (storm surge level)

Total SWEL = Stillwater Elevation, inclusive of wave setup

Runup Mapping



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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

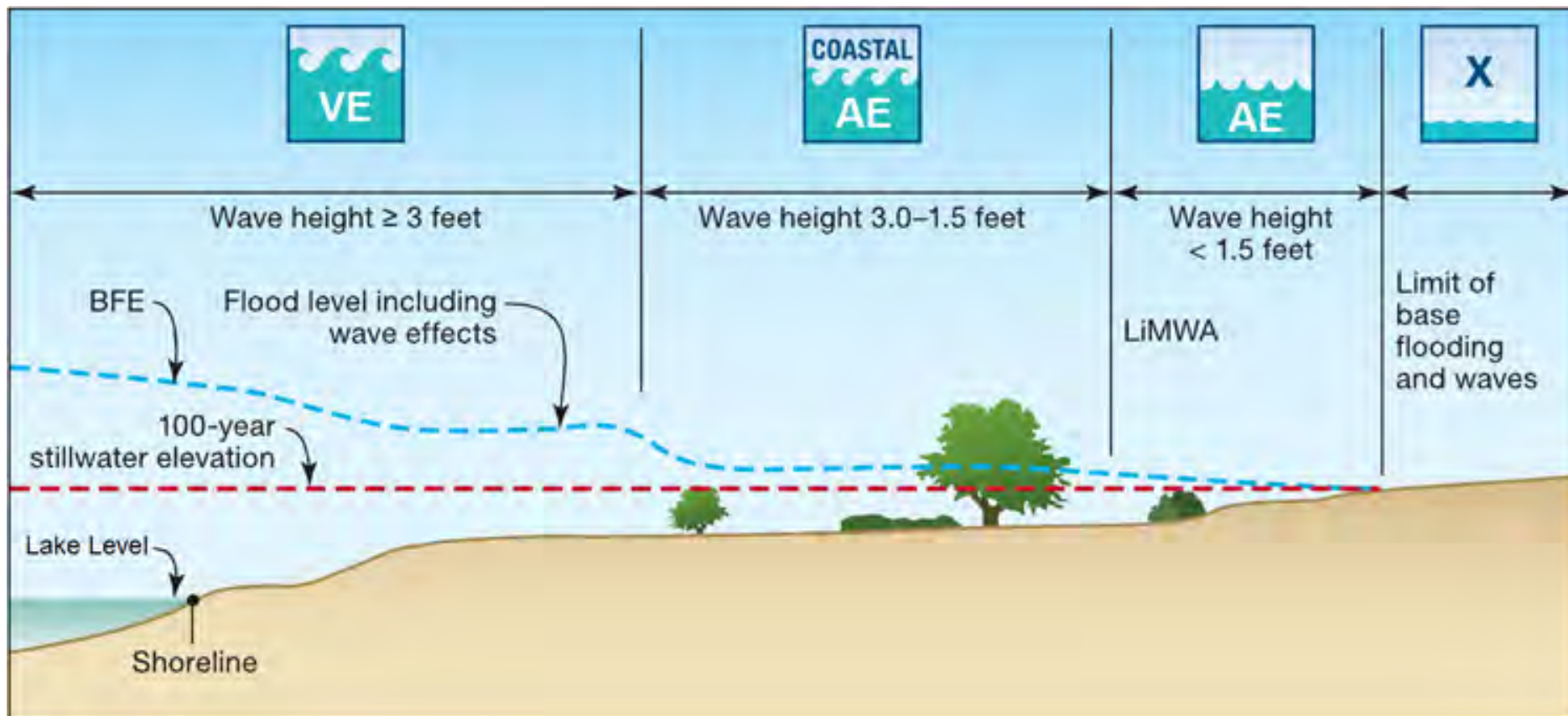


Wave Overtopping: Zone A0



- 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

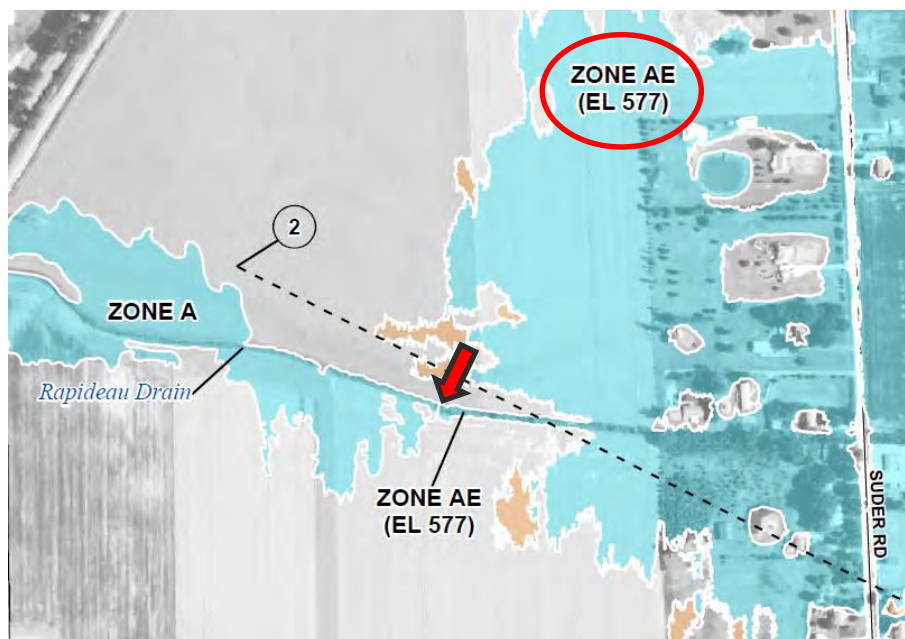
- Applied in areas subject to inundation by the 1-percent-annual-chance flood
- Wave heights < 3ft
- Subdivided into elevation zones & BFEs are assigned

□ Zone AO

- Applied in areas of sheet-flow & shallow flooding

Scope of Work: Integrating Riverine and Coastal Data

Updated Coastal Stillwater BFE

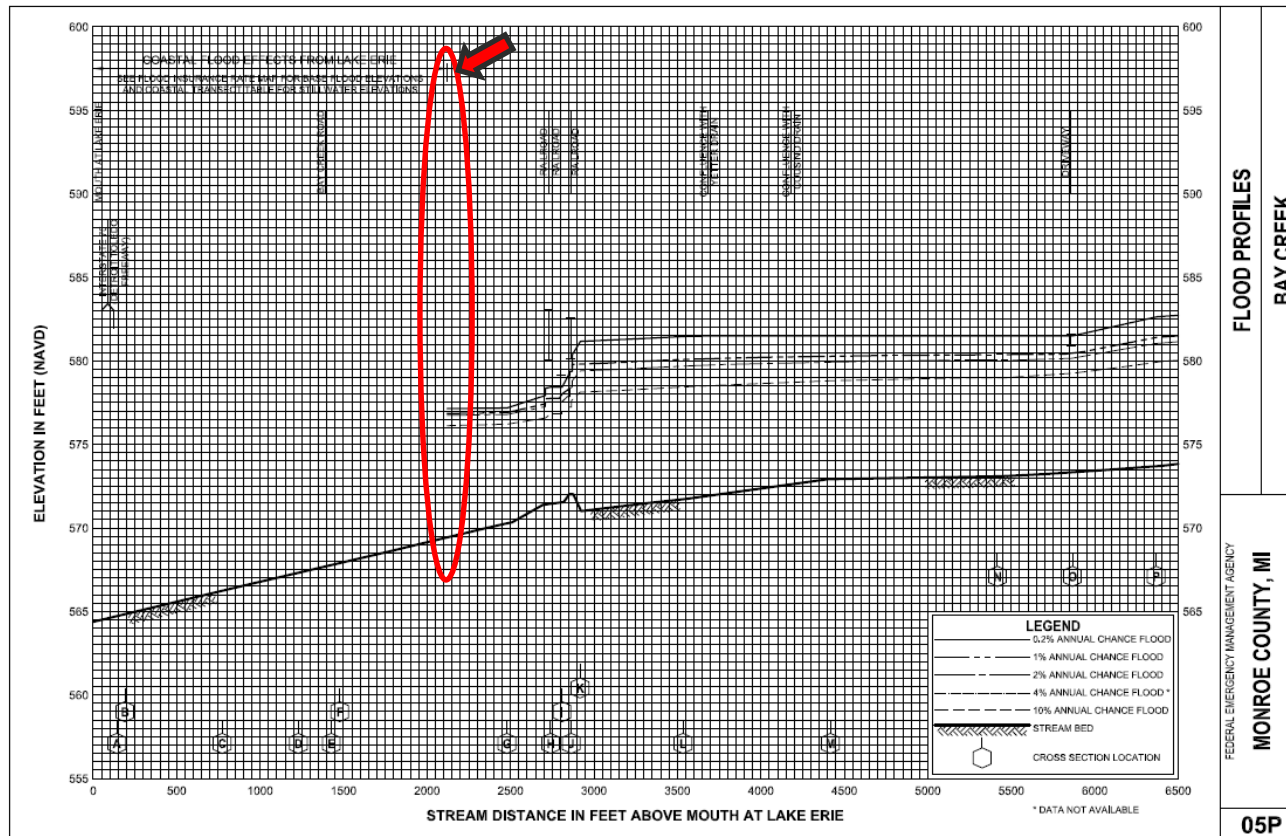


Effective Riverine BFE



➡ 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



FLOODING SOURCE		FLOODWAY				1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	WIDTH REDUCED FROM PRIOR STUDY (FEET)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	141	34	143	6.9			573.8 ²	573.8	0.0
B	192	74	271	3.6			574.5 ²	574.6	0.1
C	772	300	804	1.2			575.2 ²	575.3	0.1
D	1,232	410	755	1.3			575.5 ²	575.5	0.0
E	1,427	493	728	1.4			576.5 ²	576.6	0.1
F	1,478	450	1,042	1.0			576.7 ²	576.8	0.1
G	2,478	32	139	7.1		576.9	576.9	576.9	0.0
H	2,742	26	136	7.2		577.8	577.8	577.8	0.0

* Controlled by coastal flooding -- see Flood Insurance Rate Map for regulatory base flood elevation



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Scope of Work: Riverine-Coastal SFHA Integration

- **Detailed Zone AE**

- Bay Creek
- Huron River
- Laudenschlager Drain
- Mouillee Creek
- Otter Creek
- River Raisin
- Sandy Creek
- Stony Creek
- Swan Creek

- **Approximate Zone A**

- Cousino-Martin Creek
- Davis Swale
- Flat Creek
- La Plaisance Creek
- Little Lake Creek
- Little Swan Creek No. 2
- Miller and Malosh Drain
- Pike Swale
- Rapideau Drain
- South Branch Mouillee Creek

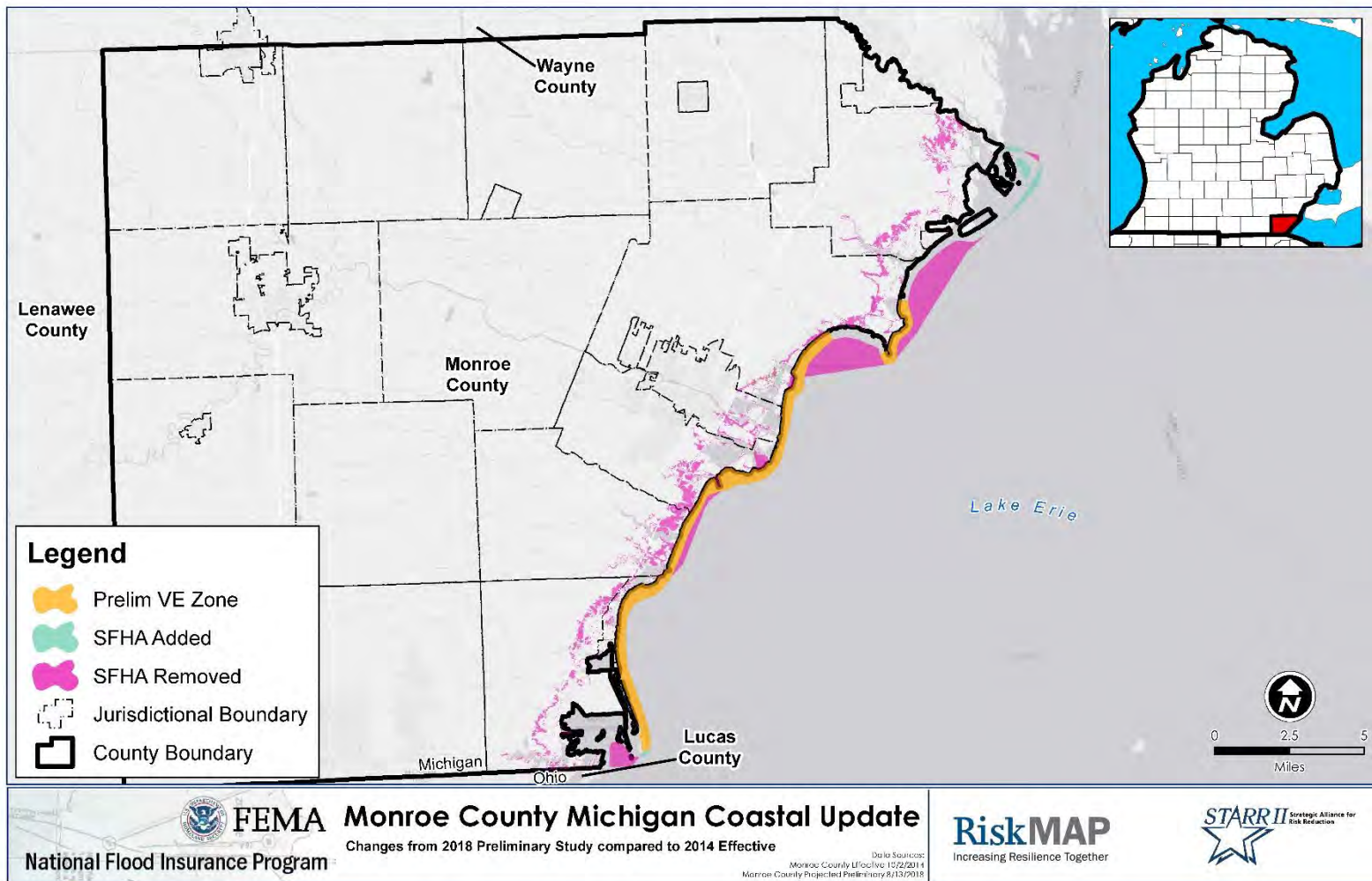
What are “Changes Since Last FIRM” in Monroe County ?

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

In Monroe 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)
- 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 Monroe County



Summary of Monroe County's Letter of Map Changes (LOMCs)

SOMA-1

PRELIMINARY SUMMARY OF MAP ACTIONS

Community: MONROE, CITY OF

Community No: 260153

2A. LOMCs on Revised Panels

LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
LOMA	93-05-780A	03/11/1993	PART OF LOTS 62 & 63 - SHADOWLAWN HEIGHTS	260153H&A	26115C0242F
LOMA	96-05-994A	01/07/1996	RMERVIEW SUBMISSION - LOTS 12 & 13 - 131 RMERVIEW AVENUE	260153 A	26115C0242F
LOMA	01-05-1855A	05/04/2001	LOT 190, RMERVIEW PLAT; 601 EAST ELM AVENUE	26115C0242D	26115C0242F
LOMA	02-05-0896A	12/21/2001	LOCKWOOD AND LITTLE'S SUBMISSION, LOT 7; 151 LINCOLN AVENUE	26115C0242D	26115C0242F
LOMA	03-05-1936A	06/11/2003	ESADORE NAVARRE FARM, SOUTH 69 FEET OF LOT 32; 86 NAVARRE STREET	26115C0242D	26115C0242F
LOMA	04-05-3703A	06/23/2004	CONSOLIDATED LAND CO., INC., PLAT NO. 1, LOTS 18 AND 19; 1753 OAK STREET	26115C0244D	26115C0244F
LOMA	04-05-3633A	07/21/2004	HAGANS FARM, LOT 160; 615 CLARK STREET	26115C0244D	26115C0244F
LOMR-F	05-05-2029A	03/23/2005	A PORTION OF PRIVATE CLAIMS 499 & 500	26115C0244D	26115C0244F
LOMA	05-05-1610A	03/21/2005	WADSWORTH & NAVARRE PLAT, THE SOUTH 100 FEET OF LOT 151 - 501 HUMPHREY STREET	26115C0242D	26115C0242F
LOMA	05-05-0444A	12/19/2005	1171 LAPLAINCE ROAD - PORTION OF PRIVATE CLAIM 500	26115C0244D	26115C0244F
LOMA	05-05-0625A	01/03/2006	223 GODFREY AVENUE	26115C0242D	26115C0242F
LOMA	05-05-8199A	02/28/2006	PRIVATE CLAIM 160, LOTS 59-62 - 1125 EAST FRONT STREET (N)	26115C0242D	26115C0242F
LOMA	05-05-1062A	02/19/2006	LOCKWOOD & LITTLE'S SUBDM, LOT 9 - 201 LINCOLN AVENUE	26115C0242D	26115C0242F
LOMA	05-05-2321A	03/18/2006	SHADOWLAWN HEIGHTS, LOT 66 - 409 GODFREY AVENUE	26115C0242D	26115C0242F
LOMA	05-05-2520A	04/26/2006	ANDERSON PLAT, LOTS 5 & 6 - 105 WEST ELM AVENUE	26115C0242D	26115C0242F
LOMA	05-05-4232A	08/07/2006	RMERVIEW SUBDM, LOT 192 - 611 EAST ELM	26115C0242D	26115C0242F

6/22/2018

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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



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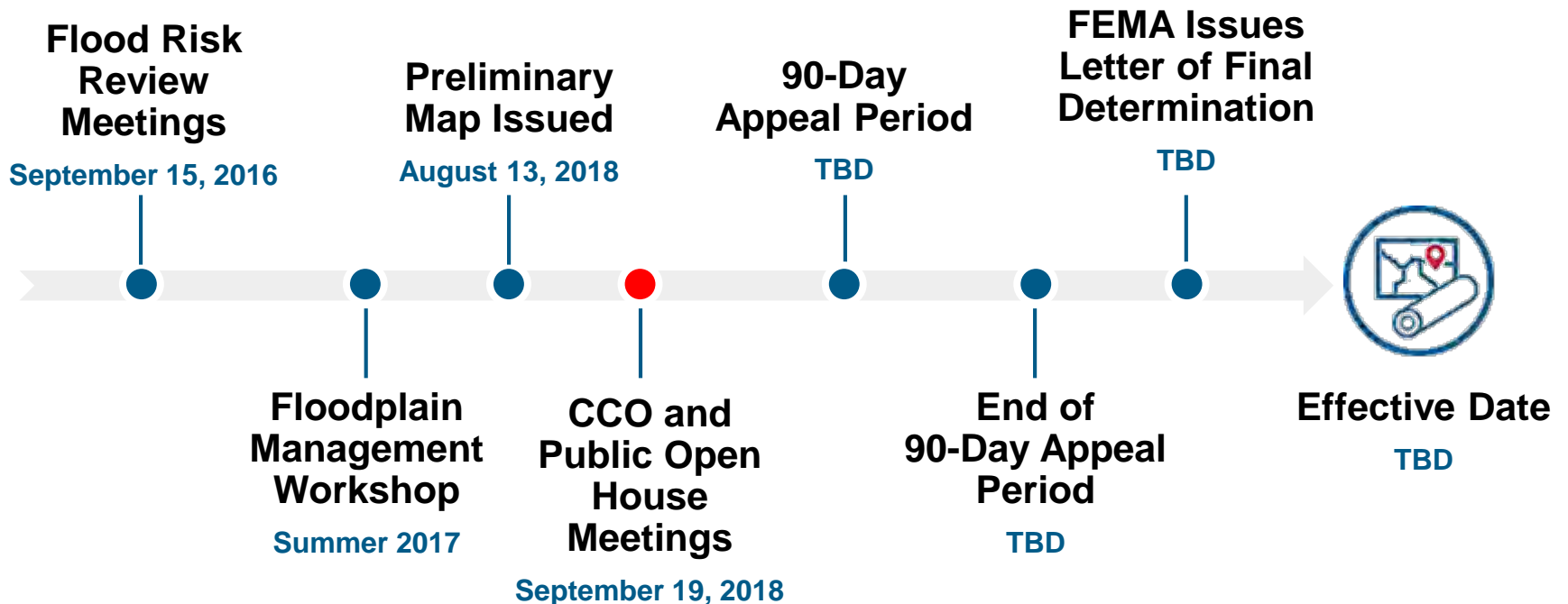
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Next Steps in the Map Adoption Process



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Timeline for Monroe County



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4-Step Pre-Adoption Process



**Inform the
Community**



**Gather Comments
and Additional Data**



Appeal Process



LFD Issued

#1: Inform the Community – Open House

- ☐ **Viewing via paper maps or map viewer**
- ☐ **Opportunity to share program info with property owners**
- ☐ **Comment Sheets Collected**
- ☐ **Attendees Notified as Process Moves Forward**



#2: Gather Community Comments

- ❑ **Homeowners may choose to submit comments through community officials**
- ❑ **FEMA request that community officials forward initial round of comments to FEMA no later than October 19, 2018**



#3: Appeal Process

- ❑ **Appeal Period is 90 days**
- ❑ **Publication of Notice in Federal Register**
 - Notification to communities by letter including 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**



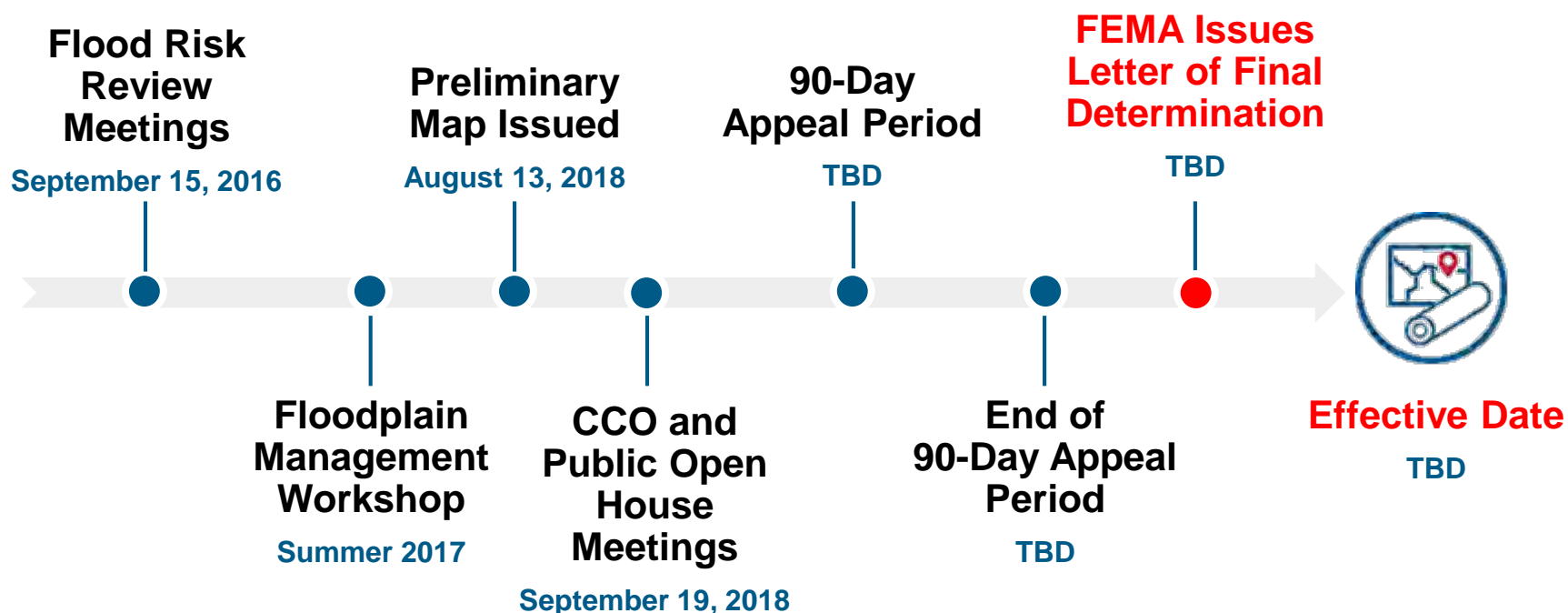
The Appeals Period: Appeals vs. Comments

❑ 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



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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 SFHA.**
- ☐ **Many forms of disaster assistance are either a type of federal loan or other 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.**

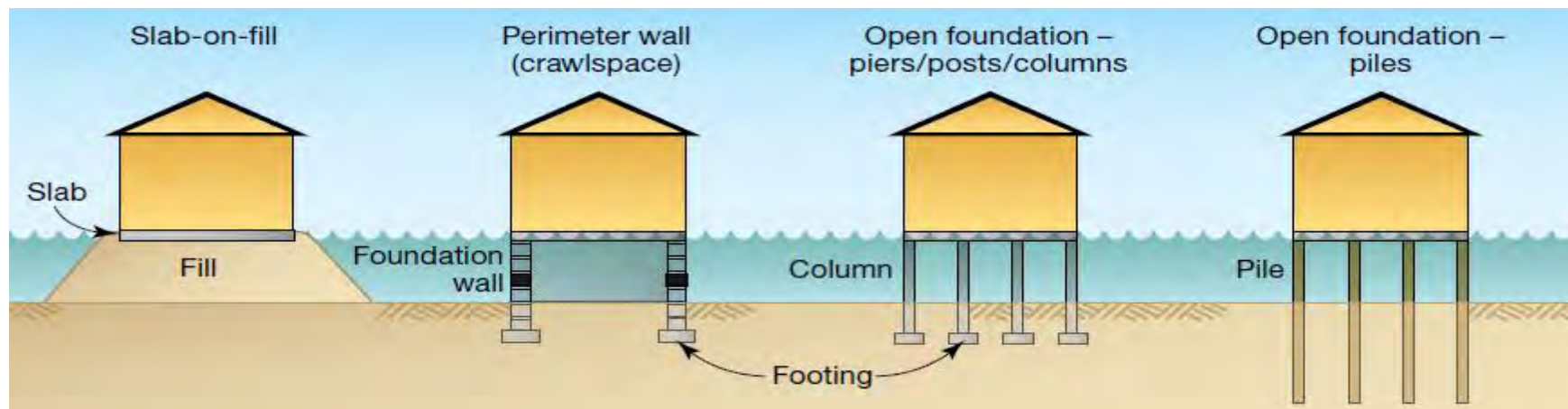
Differences in Development Requirements

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.

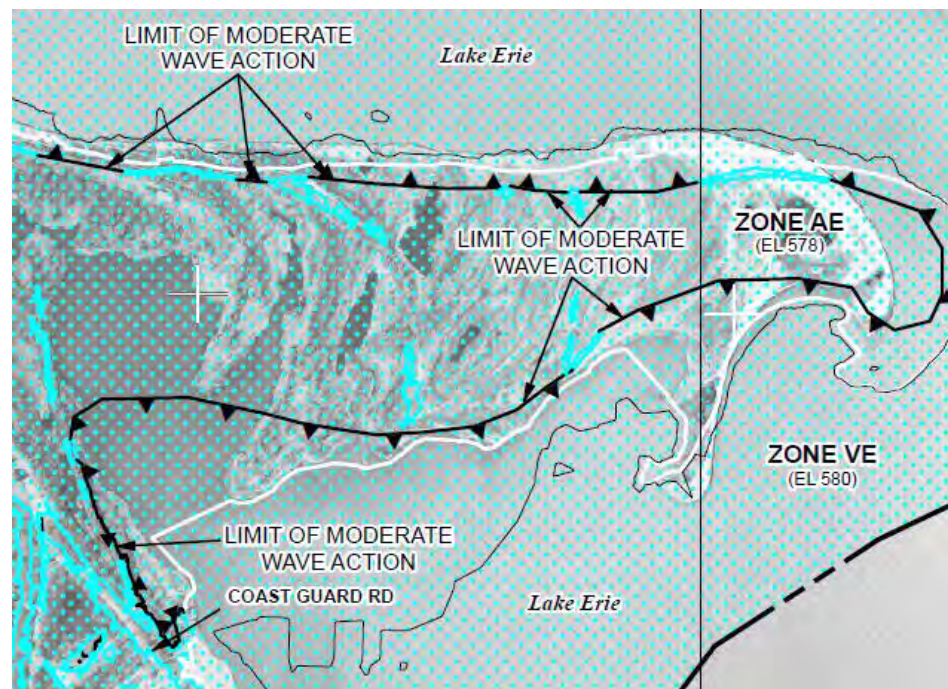
V Zones

- 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

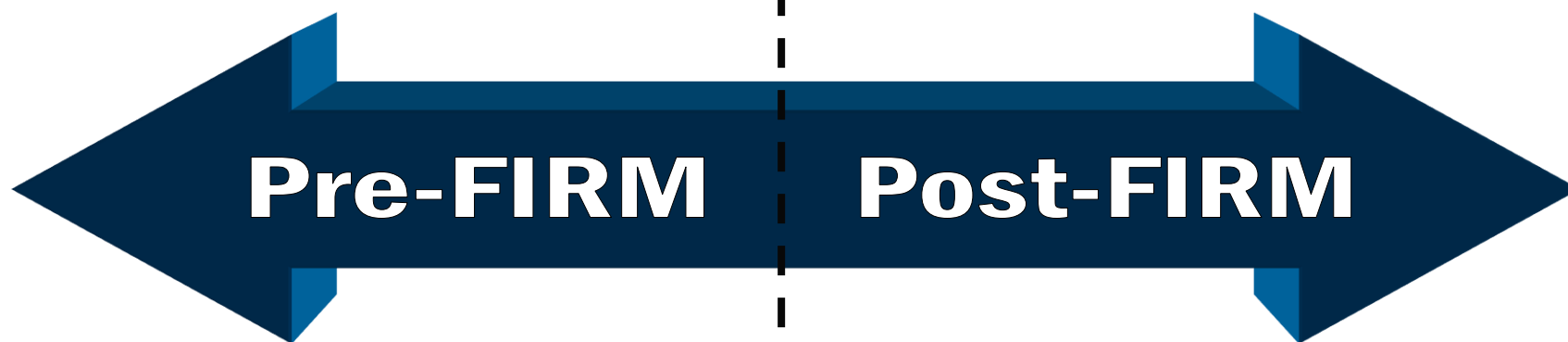


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Flood Insurance Basic Concepts

- 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.



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 Rating and Product Possibilities

□ Newly Mapped (Zone A, AE, AO, and AH)

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

□ 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

Insurance Rating and Product Possibilities

□ Newly Mapped

□ 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

□ Grandfathering (Standard)

□ Exceptions

- Can't have lapse in coverage
- Building can't be altered/substantially improved

Resources for Insurance

❑ FEMA.GOV

Search Close X

Search anything on fema.gov GO

❑ Grandfathering

❑ Newly Mapped PRP

❑ Flood Insurance Reform

❑ Flood Insurance Manual

- <https://www.fema.gov/flood-insurance-manual>
 - General Rules
 - Newly Mapped
 - Rating

❑ Flood Insurance Rate Maps

- www.msc.fema.gov

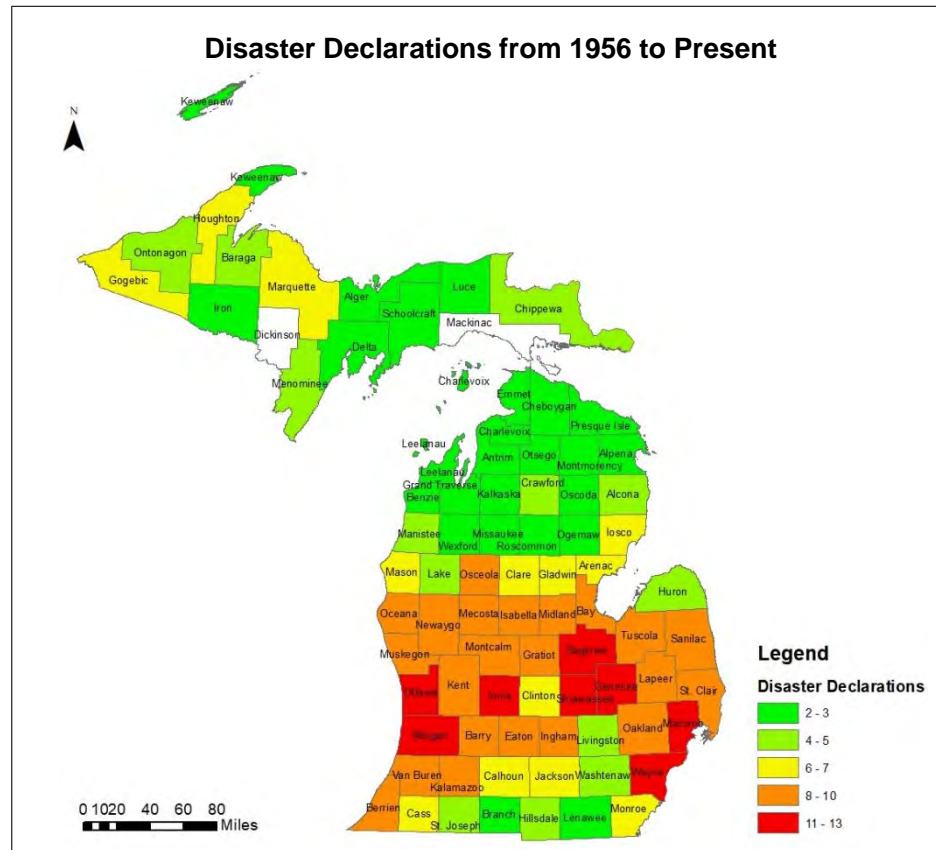
Hazard Mitigation Assistance Program Overview

**Emergency Management and Homeland Security Division
Michigan State Police**



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Michigan is Disaster Prone!



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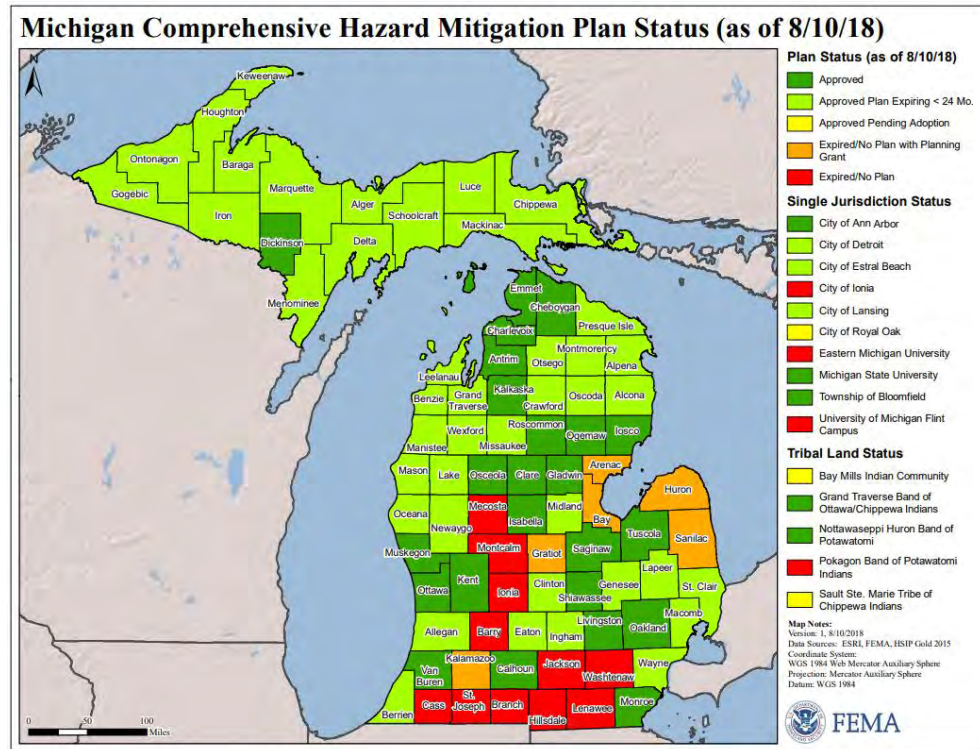
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What is Hazard Mitigation?

- ❑ **Any sustained action taken to reduce long-term risk to people and property from hazards and their effects.**
 - ❑ **Acquisition/demolition**
 - ❑ **Elevation**
 - ❑ **Storm water infrastructure**
 - ❑ **Tornado safe rooms**
 - ❑ **Flood insurance**
 - ❑ **Building, zoning and floodplain management codes**
 - ❑ **Wetland and riparian area protection**

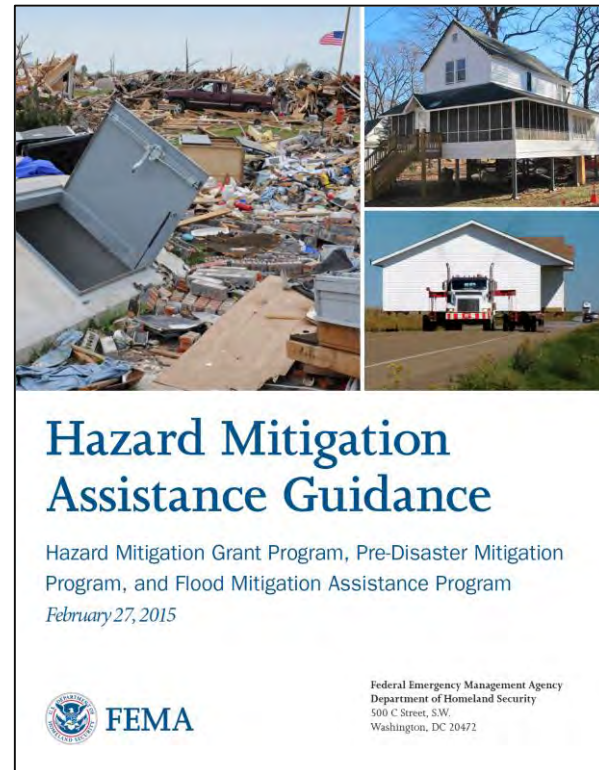
Current Local Hazard Mitigation Plan Status

- ❑ Foundation of mitigation
- ❑ Hazard Identification and Risk Assessment
- ❑ Identifies and evaluates mitigations actions
- ❑ Must be updated and approved by FEMA every 5 years



Unified Hazard Mitigation Assistance

- **Pre-Disaster Mitigation (PDM)**
- **Flood Mitigation Assistance (FMA)**
- **This year's application period opens on 10/1/2018, Contact Michigan EMHSD if you have questions.**



FEMA Hazard Mitigation Assistance

- **Each program follows this basic process:**
 - Local governments apply for grants
 - State governments assist locals, review grants, and submit applications to FEMA
 - FEMA reviews grant applications and makes funding determinations; also provides technical assistance to states and locals

FEMA HMA Programs

- ❑ **Cost effective**
- ❑ **EHP review**
- ❑ **0 – 25% non-Federal cost share requirement**
- ❑ **Projects must be consistent with local and state mitigation plans**
- ❑ **Community must participate and be in good standing with NFIP**



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EMHSD Mitigation Branch Contacts

Web: https://www.michigan.gov/msp/0,4643,7-123-72297_60152---,00.html

Phone: (517) 284-3745

Matt Schnepf
State Hazard Mitigation Officer
(517) 284-3950
schnepfm1@Michigan.gov

Eric Pratt
Hazard Mitigation Analyst
(517) 284-3987
pratte2@Michigan.gov

Question & Answer Session



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Questions and Additional Information

Visit:

www.greatlakescoast.org

www.fema.gov/preliminaryfloodhazarddata

[FEMA ArcGIS Online Preliminary Map Viewer](#)

Contact:

STARR II (Contractor)

Todd Saurer

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FEMA Region V

Ken Hinterlong

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Next Step: Open House



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