

Introductions

Risk MAP Project Team

- John Wethington FEMA Regional Engineer
- Mollie Rosario FEMA NFIP Specialist
- Frank Shockey FEMA Senior NFIP Specialist
- Lorena Reyes FEMA Planning Specialist
- Nicholas Bruscato FEMA Region 5 Tribal Liaison
- Paul Carroll STARR II Project Manager
- Rebecca Aiken STARR II Coastal Engineer
- Matthew Armstrong STARR II Riverine Engineer
- Abby Monroe CERC Outreach Lead

Michigan Department of Environment, Great Lakes, and Energy (EGLE)

- Matthew Occhipinti State NFIP Coordinator
- Linda Hansen Upper Peninsula NFIP Coordinator / Marquette District Engineer

ATTENDANCE:

Please include your name, affiliation, and email address in the chat during introductions.





TODAY'S AGENDA

Reviewing the Updated Flood Risk Data for Your County/Tribal Nation

Next Steps in the Map Adoption Process

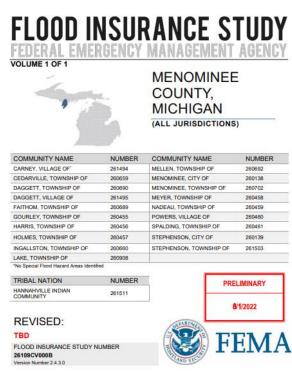
Understanding Floodplain Management Ordinance Requirements

Understanding Flood Insurance

Hazard Mitigation Planning

National Flood Insurance Program (NFIP) - Participation Status

- Participating in the NFIP. Special Flood Hazard Areas (SFHA) have been identified:
 - Township of Cedarville (260659)
 - Township of Ingaliston (260660)
 - Township of Menominee (260702)
 - City of Menominee (260138)







The Status of this Study













Why is FEMA Updating Your Flood Maps?

The Great Lakes Coastal Flood Study provides updated flood risk information for areas around each of the Great Lakes using uniform methodology, updated terrain data, and modern wave modeling techniques.

Many factors contribute to flood map revisions:

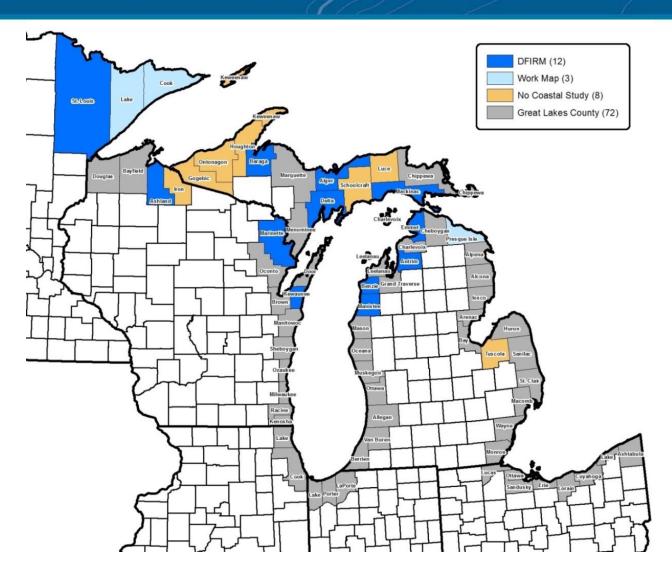
- Population growth & increased development
- Movement in rivers & shorelines
- Changing technology and improved modeling techniques and data







Program Goals and Status



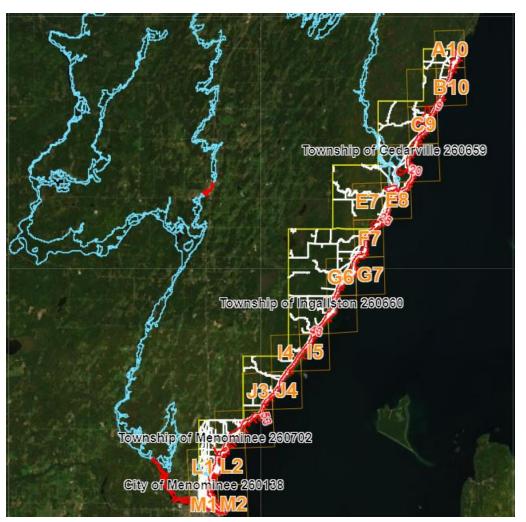




Menominee County Flood Risk

Scope of Work

- New Coastal analysis (Zone AE/VE/AH/AO) – 47 shoreline miles
- 31 Revised Panels
- Riverine tie-ins:
 - Cedar River
 - Hay Creek
 - Menominee River





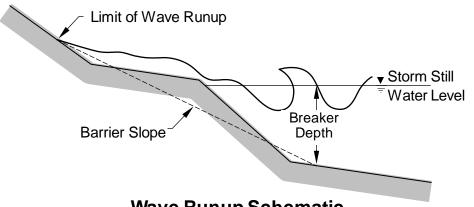


The Great Lakes Coastal Flood Study Approach

Regional Study Approach

- Lakewide water level and wave analysis
 - 150 storms from 1960 to 2009
 - Modeling conducted by STARR in 2016
- Nearshore analysis
 - Modeling conducted by STARR in 2020
- Greater consistency in assumptions





Wave Runup Schematic
from FEMA Great Lakes Coastal Guidelines "D.3" Update

Local/County-Level Activities

- Mapping tasks performed at the county level
- Nearshore wave transformations
- Episodic erosion
- Wave setup and runup
- Overland wave propagation

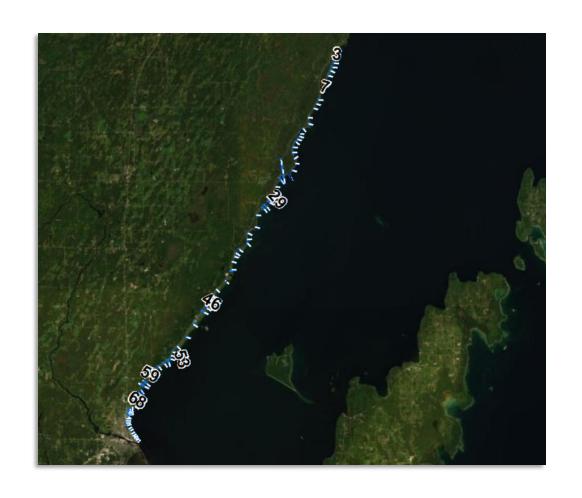




The Great Lakes Coastal Flood Study in Menominee County

Menominee County Coastal Flood Hazard Analysis:

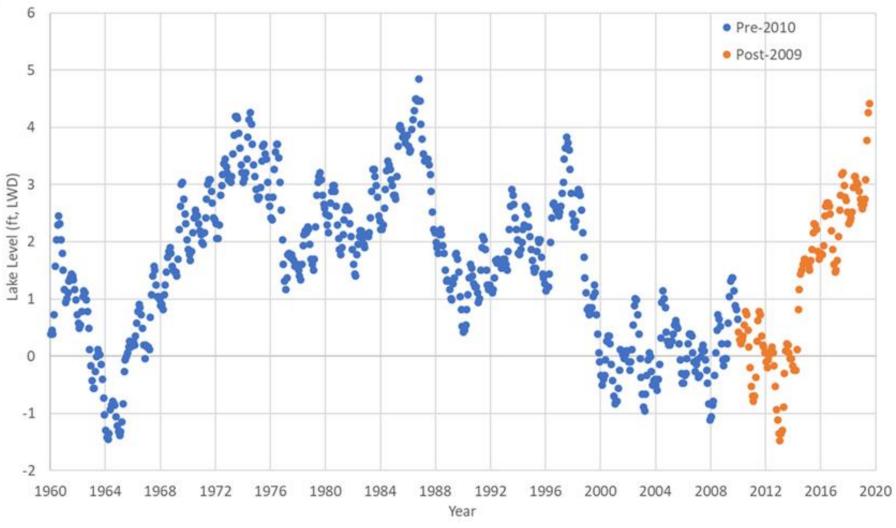
- 47 miles of coastline
- 84 coastal transects
- Transects placed at representative shoreline reaches based on:
 - Topography
 - Exposure
 - Shoreline material
 - Upland development
- Integration of riverine and coastal Special Flood Hazard Areas
- Topography
 - High resolution LiDAR flown in 2019







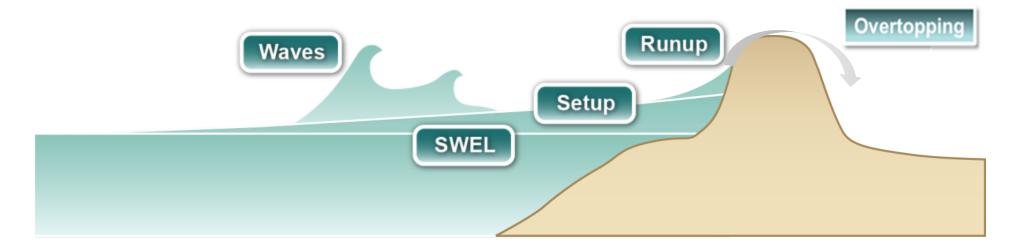
Lake Michigan Water Levels







Measuring Coastal Base Flood Elevation



SWEL = Stillwater Elevation (storm surge level)

TWEL = Total Water Elevation (SWEL + wave effects)





Special Flood Hazard Areas (SFHAs) - Coastal

ZoneVE

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

ZoneAE

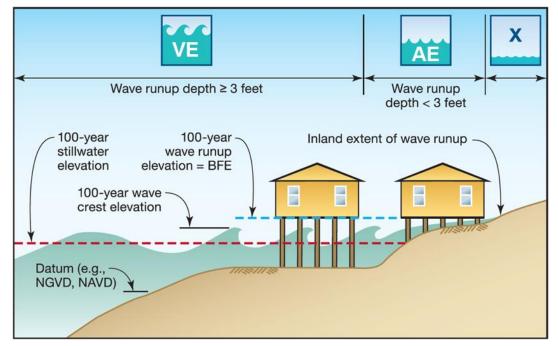
- Applied in areas subject to lower wave energy or inundation by the 1-percent-annual-chance flood
- Wave heights or wave runup < 3 feet
- Subdivided into elevation zones, and BFEs are assigned

Zone AO

- Applied in areas of sheet-flow and shallow flooding
- Given an associated depth instead of a BFE

Zone AH

- Applied in areas of ponding
- Assigned a BFE

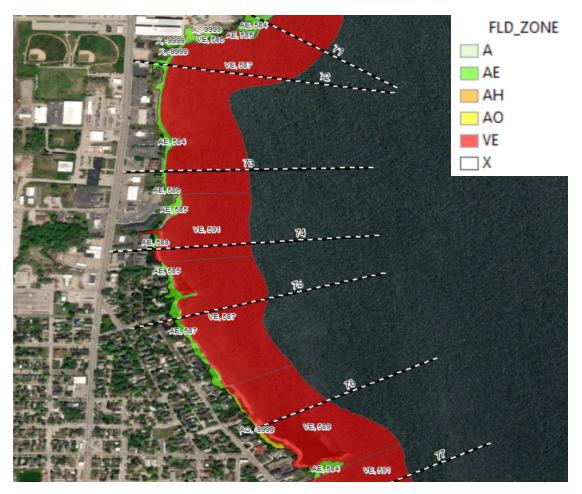






Wave Runup Mapping

- Wave runup is very sensitive to shoreline characteristics, especially slope
- Single Base Flood Elevation (BFE)
- Gutters perpendicular to the shore divide the BFEs
- Runup is mapped to elevation associated with BFE, unless overtopping occurs
- VE transitions to AE where runup elevation (BFE) is less than 3 feet above SWEL







Wave Overtopping



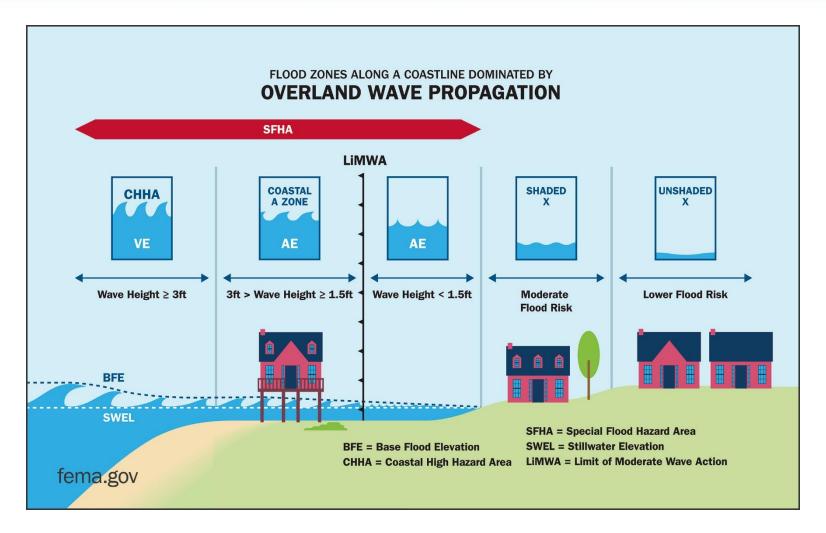


- Wave overtopping occurs when the wave runup elevation exceeds the barrier's crest elevation
- When overtopping occurs, the zone behind the barrier is designated as:
 - AE if the landward slope is positive
 - BFE established based on runup elevation
 - AO if the landward slope is negative
 - Sheet flow depth established
 - AH if the landward slope is negative and flow is trapped behind a barrier
 - BFE established
- The overtopping rate determines VE splash zones and sheet flow depths





Overland Wave Propagation Mapping

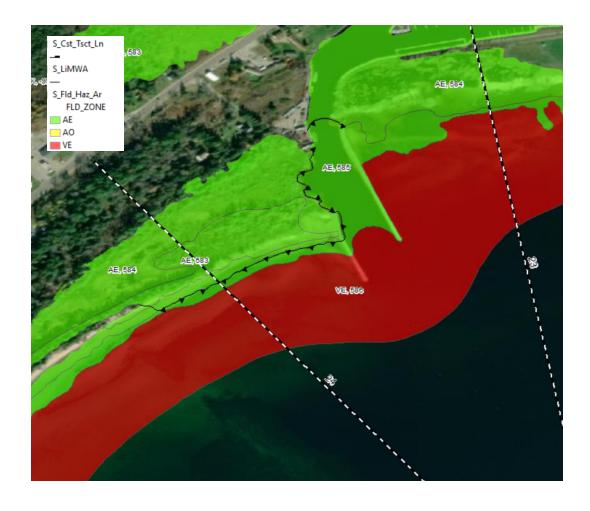






Overland Wave Propagation Mapping

- Represents overland wave decay or regeneration over inundated inland areas
- BFEs are defined by the wave crest elevation
- Internal gutters are placed where BFEs change after moving onshore
- Transitional zones capture changes in shoreline characteristics between transects
- Landward extent of mapping defined by the 1-percent SWEL







Scope of Work: Riverine-Coastal SFHA Integration

MENOMINEE COUNTY

- Detailed Zone AE
 - Menominee River
- Approximate Zone A
 - Cedar River
 - Hay Creek



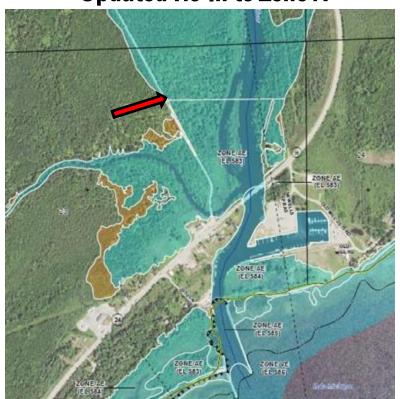




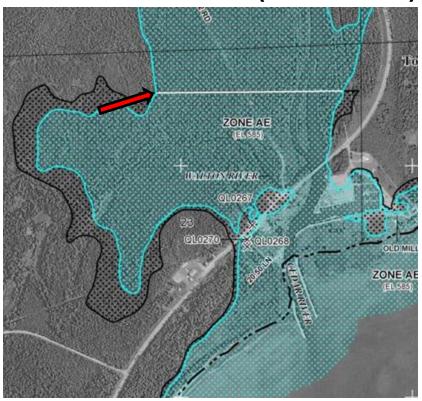
Scope of Work: Integrating Riverine and Coastal Data

Cedar River

Updated Tie-In to Zone A



Effective Tie-In to Zone A (same location)



Limits of coastal flood effects from Lake Michigan are shown on the FIRM (white line)





Summary of Letters of Map Change (LOMCs) for Menominee County

SOMA-1

PRELIMINARY SUMMARY OF MAP ACTIONS

Community: CEDARVILLE, TOWNSHIP OF Co

Community No: 260659

2A.LOMCs on Revised Panels

LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
LOMA	99-05-5550A	08/04/1999	N8235 HWY M-35	2606590030C	26109C0561E
LOMA	02-05-3128A	06/07/2002	SECTION 12, GOV'T LOTS 3 AND 4, T35N, R25W; N 9098 DUNKAS ROAD	2606590020C	26109C0554E
LOMA	04-05-0520A	12/03/2003	CERTIFIED SURVEY NO. 155, LOT 6; N9064 DUNKAS ROAD	2606590020C	26109C0562E
LOMA	06-05-0679A	03/21/2006	RAY E. CLARK SUBDIV, LOTS 4 & 5 N10526 M35	2606590010B	26109C0556E
LOMR-F	08-05-5087A	12/18/2008	PORTION OF GOVERNMENT LOT 4, SECTION 23, T35N, R25W N8151 HIGHWAY M-35	2606590030C	26109C0561E
LOMA	09-05-4557A	08/27/2009	TRACY'S INDIAN BAY SUBDIV NO. 1, LOT 1 N9190 DUNKAS ROAD	2606590020C	26109C0554E
LOMA	09-05-5124A	09/22/2009	TRACY'S INDIAN BAY SUBDIV NO. 1, LOT 2 N9190 DUNKAS ROAD	2606590020C	26109C0554E
LOMA	11-05-8540A	10/11/2011	LOTS 3 AND 4, CERTIFIED SURVEY MAP NO. 196 N9098 DUNKAS ROAD	2606590020C	26109C0562E
LOMA	13-05-2038A	12/20/2012	N9736 Highway M-35	26109C0555D	26109C0554E
LOMA	13-05-2544A	01/11/2013	Lot 15, ray e. clark Subdivision - n10594 old m-35	26109C0560D	26109C0556E
LOMA	13-05-2571A	01/31/2013	A PORTION OF GOVERNMENT LOT 1, SECTION 10, T35N, R25W N9185 COUNTY ROAD 551	26109C0555D	26109C0555E
LOMA	13-05-4383A	04/04/2013	PART OF GOVERNMENT LOT 6 SECTION 11, TOWNSHIP 35 NORTH, RANGE 25 WEST – 490 DUNKAS ROAD	26109C0565D	26109C0561E
LOMA	13-05-4386A	04/02/2013	N10498 STATE HIGHWAY M-35	26109C0560D	26109C0556E

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 redetermined

Be sure to review the preliminary SOMA for completeness

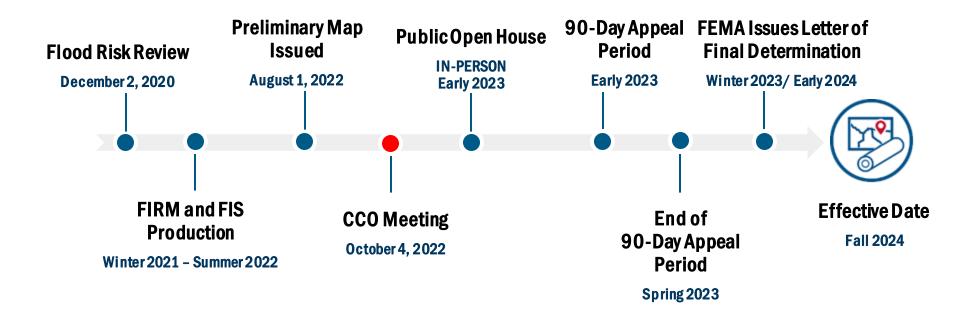
If you notice a LOMC is missing from the list, submit the omission with your comments







Timeline for Menominee Coastal Update



* estimate





NEXT: Inform the Community – Open Houses

- Experts and local officials on-hand for personalized Q&A
- Opportunity to review map changes and discuss insurance options with property owners



- Collect input from attendees
- Community partner participation

IN-PERSON Open House will take place in early 2023 Location within Menominee County TBD



How You Can Support the Open House Experience

- A Community Outreach Toolkit will be sent via email, including sample:
 - Social Media Content
 - Press Release
 - Radio, Web and Print Ads
 - Talking Points and FAQs
- Help spread the word about the Open Houses
- Commit to participation





4-Step Pre-Adoption Process









Inform the Community

Gather Comments and Additional Data

Appeal Process

LFD Issued





Gather Community Comments

- Homeowners may choose to submit comments through community officials
- Tribal nations can submit comments directly to FEMA through John Wethington or Nick Bruscato
- FEMA requests that community officials forward the initial round of comments to FEMA no later than November 7, 2022







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 5
 - Additional instructions will be provided to community CEOs
- FEMA will evaluate all appeals and comments for resolution after the appeal period







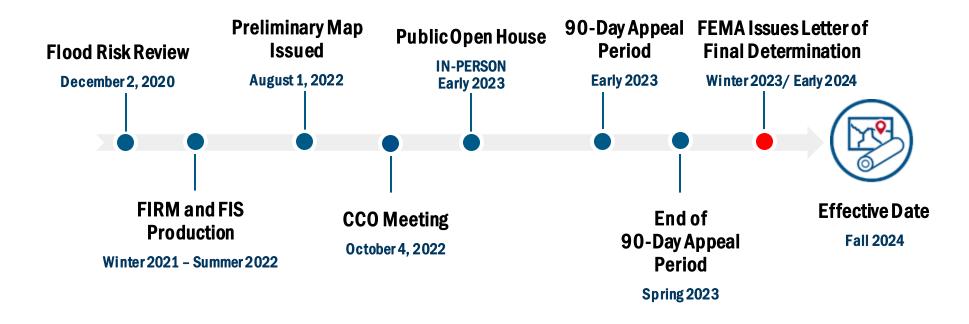
The Appeal Period: Appeals vs. Comments

- To be considered an appeal, a submission must:
 - Be received during the statutory 90-day appeal period
 - Relate to new or modified BFEs, base flood depths, SFHA boundaries, SFHA zone designations, or floodways
 - Be based on data that show the new or modified BFEs, base flood depths, SFHA boundaries, SFHA zone designations, or floodways to be scientifically or technically incorrect
 - Be accompanied by all data, including H&H if necessary and/or other supporting technical data, that FEMA needs to revise the preliminary version of the FIS report and FIRMs
 - Be certified by a Registered Professional Engineer or Licensed Land Surveyor, as appropriate
- The term comment is used for any submission that does not meet the requirements for an appeal as outlined above





Issuing the Letter of Final Determination



* estimate

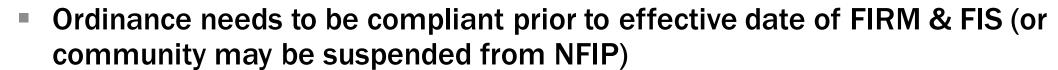






Ordinance Adoption During Map Updates

- 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



 EGLE will assist communities to update local Floodplain Management Regulations





Where to Find Minimum NFIP Requirements

- NFIP Minimum Floodplain Management Standards are found in Part 60 of Title 44, Code of Federal Regulations
- FEMA establishes the minimum requirements; however, FEMA encourages States and local communities to adopt higher safety standards, such as building structures with freeboard above the BFE. When these higher standards are in place, they take precedence over the minimums.
- Zone AE Building Requirements:
 - $_{\square}$ The lowest enclosed area, including the basement, must be at or above the BFE.
 - Non-residential buildings may be floodproofed.
 - No development that would raise the BFE in the regulatory floodway is permitted.



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)
- In Michigan, pursuant to the Stille-DeRosset-Hale Single State Construction Code Act of 1972, the Michigan State Building Code applies throughout the state.
- With the community ordinance referencing the applicable FIRM and FIS, the Michigan Building Code meets NFIP minimum floodplain standards.
 - 2015 I-Codes checklist: https://www.fema.gov/sites/default/files/2020-08/fema_nfip-2015-i-codes-asce-24-checklist.pdf
 - 2018 I-Codes checklist: https://www.fema.gov/media-library-data/1516284132591-af5c54ba83e6a5e0d36aeaee2c45f8d0/NFIP_Checklist_2018_I-Code_Dec2017.pdf





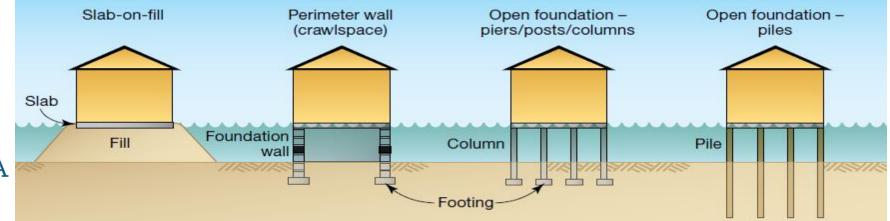
Differences in Development Requirements

A Zones

- Fill is allowed outside the floodway, or if it can be shown not to cause a rise in the BFE.
- Fully enclosed foundation walls (flood openings required) are allowed.
- The lowest floor must be elevated to or above the BFE.
- An as-built lowest floor elevation is required to be on file with the permit records.

VE Zones (and AE Zones on the water side of a LiMWA)

- Fill is not allowed for structural support of buildings.
- Only open foundations on columns or piles, free of obstructions, or breakaway walls are allowed below the BFE.
- Bottom of lowest horizontal structural member to or above BFE, with an as-built elevation on file.
- A Professional Engineer or Architect shall certify the design of the structure, including wind loading, and that must be on file with the permit records.

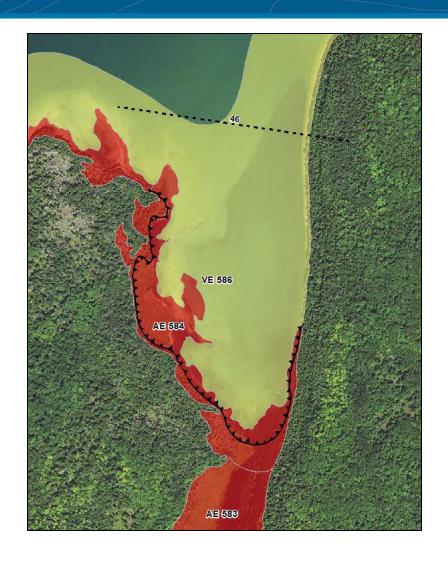






LiMWA (Limit of Moderate Wave Action) on the Map

- The Community Rating System (CRS)
 benefits communities requiring VE zone
 construction standards in areas
 defined by the LiMWA or areas subject
 to waves greater than 1.5 feet.
- Requirement to use 60.3(e) coastal high-hazard standards applies to lakeward of LiMWA line under the Michigan State Building Code through its reference to ASCE 24-14.







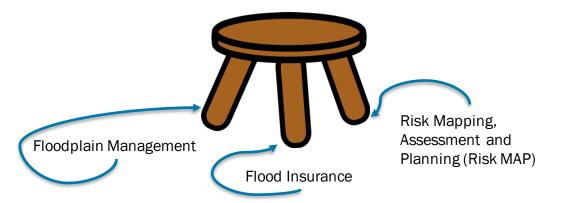
Flood Insurance and Map Changes

James Sink | Regional Flood Insurance Liaison, FEMA Region 5



National Flood Insurance Program

- Created by Congress in 1968 to reduce the loss of property and life by lessening the impact of disasters.
- The NFIP is a voluntary program.
 - Federally-backed flood insurance is available to residents in communities that enforce minimum floodplain regulations
- The NFIP is often described as a three-legged stool:



GET FLOOD INSURANCE









Anyone in a Participating Community Can Purchase Flood Insurance through the NFIP



https://www.fema.gov/flood-insurance/work-with-nfip/community-status-book

Standard Flood Insurance Policy (SFIP) Limits

- •\$250,000 building
- •\$100,000 contents
- \$30,000 Increased Cost of Compliance (ICC)
- Vacation/secondary homes are eligible for coverage
- Contents-only or rental policies are available

Dwelling Form



- •\$500,000 building
- •\$500,000 contents
- •\$30,000 ICC

General Property



- Building insured up to:
- 100% of the replacement cost of the building *or*
- The total number of units times \$250,000 (whichever is less)
- Contents insured up to \$100,000 per building
- Contents must be commonly-owned
- Co-insurance may apply
- •\$30,000 ICC

RCBAP



Special Conditions Apply to Group Flood Insurance Policies (GFIPs)



Standard Flood Insurance Policy (SFIP): Coverages

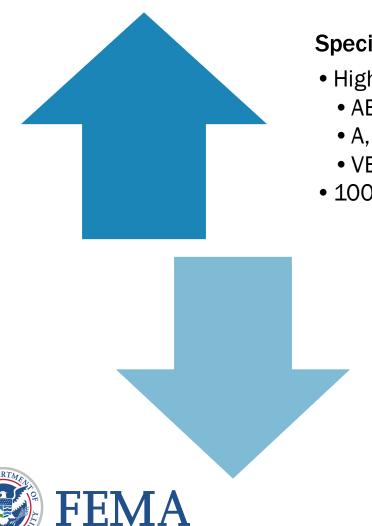
- Coverage A: Building Property
- Coverage B: Personal Property
- Coverage C: Other Coverages
 - Debris removal
 - Loss Avoidance Measures
 - Property Moved to Safety
 - Condominium Loss Assessment
- Coverage D: Increased Cost of Compliance

Flood insurance has you covered.





First, What Are Flood Zones?



Special Flood Hazard Areas (SFHAs)

- Higher risk zones
 - AE (replaces A1-A30)
 - A, AH, AO, A99, AR
 - VE (replaces V1-30), V, VO
- 100-year floodplain = 1% annual chance flood

Non-Special Flood Hazard Areas

- Lower-to-Moderate Risk Zones
 - B, C, X
 - D

Moving from Lower-Risk to Higher-Risk: What Does This Mean for Me?

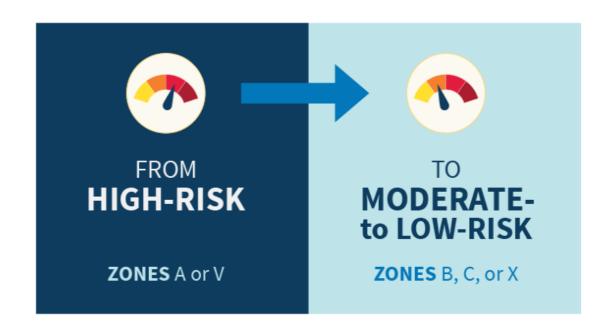
- If your risk is going up...
 - You may be required to have flood insurance if you have a federally-backed loan
 - Even if you don't have a federally-backed loan, flood insurance is strongly encouraged
 - The Newly Mapped Discount may offer costsavings for structures newly mapped into the Special Flood Hazard Area.
 - To be eligible, the structure must be newly mapped into the SFHA for the first time;
 - This must not be the community's initial FIRM; and,
 - Flood insurance must be purchased within 12 months of the effective date of the new map.
 - If your lender notifies you of a flood insurance requirement within 24-months of the effective date, you may be eligible for an exception to the 12-month window.





Moving from Higher-Risk to Lower-Risk: What Does This Mean for Me?

- If your risk is going down...
 - The mandatory purchase requirement no longer applies to federally-backed loans
 - Low risk does not mean no risk
 - Talk to your insurance agent about your options





What Else Can I Do to Reduce My Flood Insurance Costs?

- Lower Your Flood Risk
 - □ Elevate utilities
 - Install flood openings
 - Talk to your local floodplain manager or the Michigan Department of Environment, Great Lakes, and Energy (EGLE)
 - for more information and other options
- Choose a higher deductible or different coverage amounts
- Provide an elevation certificate

Did You Know?

- The Community Rating System rewards communities for outstanding floodplain management practices and exceeding the minimum NFIP standards.
- Starting October 1, 2021, CRS discount became available throughout CRS communities regardless of flood zone.
- Increasing CRS rating leads to further discounts. In Class 1 communities, the discount can be as high as 45%.



State Role

- Establish development/building protection standards and promulgate state regulations
- Provide technical assistance
- Assist with update and adoption of local flood damage prevention regulations

Michigan Department of Environment, Great Lakes, and Energy (EGLE)

Michigan National Flood Insurance Program Coordinator

Matthew Occhipinti

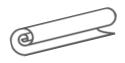
OcchipintiM@michigan.gov

(616) 204-1708



Your Role in this Process

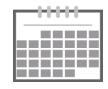
As local officials, floodplain administrators, and staff, you can:



Provide technical reviews of preliminary data



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



Resources for Insurance

FloodSmart

- Buying a Policy
- Flood Mapping Change Information
- For general inquiries about the National Flood Insurance Program, contact the FEMA Mapping and Insurance eXchange (FMIX) center at 877-336-2627 or FloodSmart@FEMA.DHS.gov
- When your community's flood map is updated to reflect the current risks where you live, requirements for flood insurance coverage and the cost of your policy can change.

https://www.floodsmart.gov/floodmap-zone/map-changes

► FEMA

 James Sink, Regional Flood Insurance Liaison

> (312) 408-4421 James.Sink@fema.dhs.gov

 Mollie Rosario, NFIP Specialist (312) 408-4458
 Mollie.Rosario@fema.dhs.gov

Michigan EGLE

 Matthew Occhipinti, State NFIP Coordinator (616) 204-1708

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Matt Occhipinti

Michigan NFIP Coordinator

Michigan EGLE

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FEMA Engineering Library Data Requests

Requests must be sent in writing to:

FEMA Engineering Library 3601 Eisenhower Ave. Suite 500 Alexandria, VA 22304-6426

E-mail: <u>FEMA-EngineeringLibrary@fema.dhs.gov</u>

Fax: (703) 202-4090 Phone: 1-877-336-2627

Request must include:

FIS Data Request Form

(https://www.fema.gov/sites/default/files/documents/fema_flood-insurance-study-data-request-form.pdf)

Applicable Fees

(https://www.fema.gov/flood-maps/change-your-flood-zone/status/flood-map-related-fees)

Payment Information Form

(https://www.fema.gov/sites/default/files/documents/fema_flood-maps-payment-information-form.pdf)

 Once the research has been completed, an information specialist will contact you to discuss the path forward.





Federal Emergency Management Agency

Washington, D.C. 20472

Flood Insurance Study (FIS) Data Requests

The Federal Emergency Management Agency (FEMA) has identified seven categories into which requests for Flood Insurance Study (FIS) backup (i.e., technical and administrative support) are separated. These categories and their associated fees are below:

Requests for Flood Insurance Backup Data	Fee
1. Portable Document Format (PDF) or	\$300, plus a \$93 per-case surcharge fee to recover the cost of
Diskettes of hydrologic and hydraulic	library maintenance and archiving. For larger requests that
backup data for current or historical FISs	require more than 4 hours of research, additional hours will be charged at \$40 per hour.
2. PDF or Mylar copies of topographic mapping developed during FIS process	\$300, plus a \$93 per-case surcharge fee to recover the cost of library maintenance and archiving. For larger requests that require more than 4 hours of research, additional hours will be charged at \$40 per hour.
3. PDF of survey notes developed during	\$300, plus a \$93 per-case surcharge fee to recover the cost of
FIS process	library maintenance and archiving. For larger requests that
	require more than 4 hours of research, additional hours will be
	charged at \$40 per hour.
4. PDF of individual Letters of Map	\$40 for first letter; \$10 for each additional letter in the same
Change (LOMCs)	request. Requesters will be notified about availability of the
	data and the fees associated with the requested data.
5. PDF of preliminary map panels	\$35 for first panel; \$2 for each additional panel in the same
	request. Requesters will be notified about availability of the
	data and the fees associated with the requested data.
6. DVDs of Digital Line Graph files,	\$150 per county or Digital LOMR attachment shape file.
FIRM files or Digital LOMR	Requesters will be notified about availability of the data and
attachment files	the fees associated with the requested data.
7. Computer diskettes and user manuals	\$25 per copy. Requesters will be notified about availability of
for FEMA computer programs	the data and the fees associated with the requested data.

As shown in the table above, for Categories 1-3, an initial fee of \$300 is required to initiate the request and required before the requested data will be provided. If the data requested are available and the request is not cancelled, the final fee is calculated as a sum of the standard per-product charge plus a per-case surcharge of \$93, to help recover library maintenance and archiving costs. The total costs of processing requests in Categories 1- 3 will vary based on the complexity of the research involved in retrieving the data and the volume and medium of the data to be reproduced and distributed. The initial flat fee will be applied against the total costs to process the request, and FEMA will invoice the requester for the balance plus the per-case surcharge before the data are provided. No data will be provided to a requester until all required fees have been paid.

For Categories 4-7, there is no initial fee to initiate a request for data. Requesters will be notified about the availability of, and the fees associated with, the requested data.

EMHSD Mitigation Contacts and More

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

Phone: (517) 284-3745

Matt Schnepp
State Hazard Mitigation Officer
(517) 284-3950
schneppm1@Michigan.gov

Mike Sobocinski
State Hazard Mitigation Planner
(517) 881-2512
SobocinskiM@Michigan.gov

Want More Information?

Hazard Mitigation Planning: https://www.fema.gov/hazard-mitigation-planning

Hazard Mitigation Assistance: https://www.fema.gov/hazard-mitigation-assistance

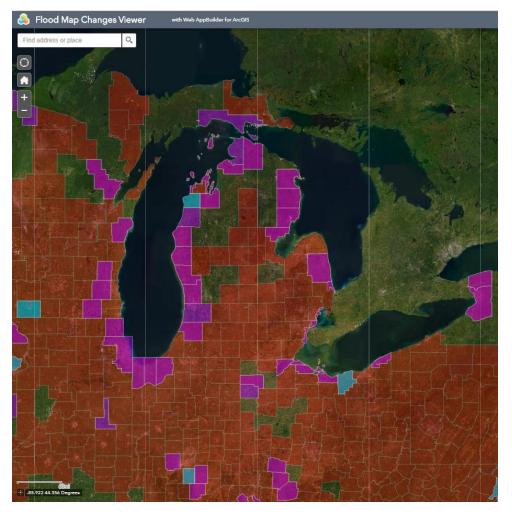
Mitigation Planning Resources: https://www.fema.gov/hazard-mitigation-planning-resources





Mapping Resources

- FEMA Flood Map Changes Viewer
 - msc.fema.gov/fmcv
- Preliminary Flood Hazard Data
 - www.fema.gov/view-yourcommunitys-preliminary-floodhazard-data
- Steady State Program
 - msc.fema.gov







Questions and Additional Information

Visit:

www.greatlakescoast.org

www.fema.gov/preliminaryfloodhazarddata

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