FEMA

LOCAL OFFICIALS' MEETING

Douglas County

DOUGLAS COUNTY, WISCONSIN
January 23, 2025

RiskMAP
Increasing Resilience Together

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DEPT. OF NATURAL RESOURCES

Zoom Meeting Housekeeping

- Please enter the organization you belong to in the group chat or to Allison Kielar so that we have a record of all stakeholders who attended
- If you were not on the original invite and would like to keep updated, please also include your e-mail with your organization in the chat to Allison
- You are muted and video turned off upon entry
- If you wish to ask a question, Raise your hand or type it in chat (to everyone or to Allison Kielar)

Welcome & Introduction

- Risk MAP Project Team, Wisconsin Department of Natural Resources (WDNR)
  - Allison Kielar – Douglas County Floodplain Mapping Project Lead
  - Ben Sanborn – Floodplain Mapping Project Manager
  - Chris Olds – State Floodplain Engineer
  - Chad Heimerl – Floodplain Engineer
  - Sarah Rafajko – State National Flood Insurance Program (NFIP) Coordinator
  - Jacob Druffner – Regional Water Management Engineer

Welcome & Introduction

- Federal Emergency Management Agency (FEMA)
  - Munib Ahmad – Region V Engineer
  - Ken Hinterlong – Region V Engineer
  - Gabriel Jackson – Region V Senior National Flood Insurance Program (NFIP) Specialist

- Wisconsin Emergency Management (WEM)
  - Heather Thole – State Hazard Mitigation Officer

Today's Agenda

1. RiskMAP Overview and Project History
2. Floodplain Engineering & Mapping
3. Coastal Engineering & Mapping
4. Hazard Mitigation Planning (WEM)
5. NFIP & Floodplain Management Overview
6. Preliminary Products Review
7. LOMCs & SOMA
8. Next Steps/Map Adoption

What is Risk MAP?

FEMA's Risk Mapping, Assessment, and Planning (Risk MAP) program involves collaboration with State, Local, and Tribal entities to deliver quality data that increases public awareness and leads to action that reduces risk to life and property.

- Deliver quality data
- Increase public awareness of flood risk
- Encourage local/regional actions that reduce risk

Risk MAP Project Benefits

- Flood risk products and flood hazard maps are:
  - Developed by FEMA in collaboration with communities
  - Based on the best available data from the community and latest technologies
  - Conducted by watershed
  - Strengthened by partnerships
- Risk MAP tools and data can be used to:
  - Create or improve Hazard Mitigation Plans
  - Make informed decisions about development, ordinances, and flood mitigation projects
  - Communicate with citizens about flood risk

Why is FEMA Updating this Community's Flood Maps?

The Douglas County Flood Insurance Rate Maps (FIRMs) are being updated county-wide.

- Last update was in 2012 (also county-wide)
- Updated Zone A and AE studies throughout the county
- New Coastal Zone VE studies for Lake Superior
- Developed digital products that are user friendly for the public and communities

Initial Flood Hazard Boundary Map (FHBM) 1976 → Initial FIRMs 1978-1988 → First Countywide FIRMs 2/2/2012 → Preliminary FIRMs 12/2/2024

Project History

- Kick-off meeting - March 20, 2020
- Data Development & Map production

  March 2020 – December 2024
- Flood Risk Review/Resilience Meeting and Workshop

  January 25, 2023
- Preliminary maps finalized and distributed

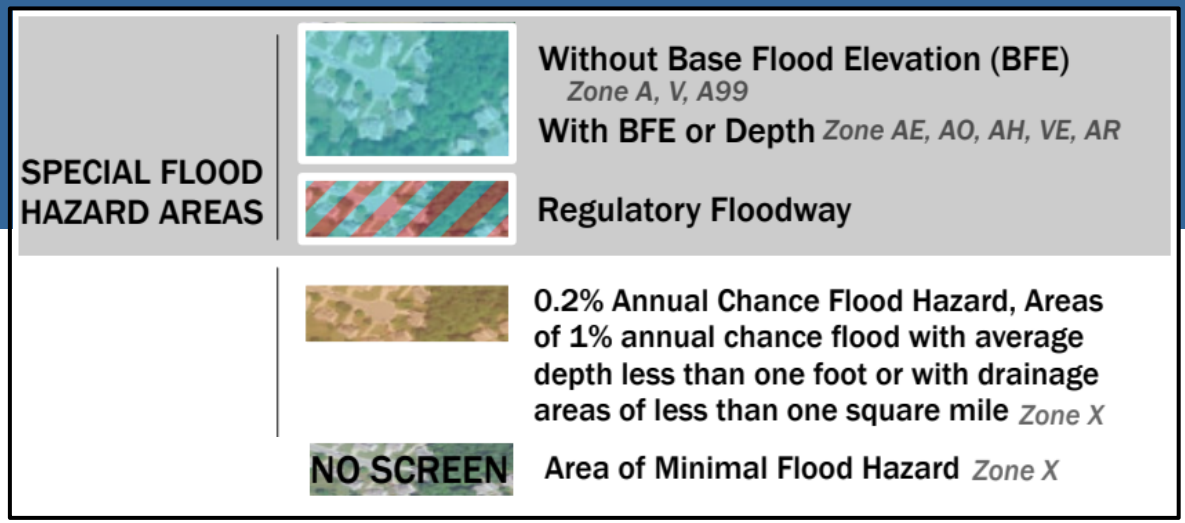
  December 2, 2024
- Local Officials Meeting – January 23, 2025

Floodplain Engineering & Mapping

- Hydrologic and hydraulic studies determined:
  - Potential depth of floodwaters
  - Width of floodplains
  - Amount of water carried during flood event
- Engineers also take into consideration certain obstructions to water flow
- Flood storage was utilized to help reduce overall peak flows
- Structure and stream survey data coupled with **2016 Douglas County LiDAR based terrain data** (5-foot DEM) used to generate hydraulic models and map floodplain

Preliminary Maps are located online at hazards.fema.gov/femaportal/prelimdownload/ or on the FEMA Viewer: *Search "FEMA preliminary map viewer"*

Flood Zones



Zone AE

- Applied in areas subject to inundation by the 1-percent-annual-chance flood
- Base Flood Elevations (BFEs) are displayed on the maps at cross-sections, at BFE lines, or under Zone AE Labels

Zone A

- Applied in areas subject to inundation by the 1-percent-annual-chance flood
- BFEs are not displayed on the maps

Zone X

- Applied in areas subject to inundation by the 0.2-percent-annual-chance flood
- Areas of minimal flood hazard

Revised Study Reaches

Detailed Study (Zone AE) Streams ≈ 27 miles

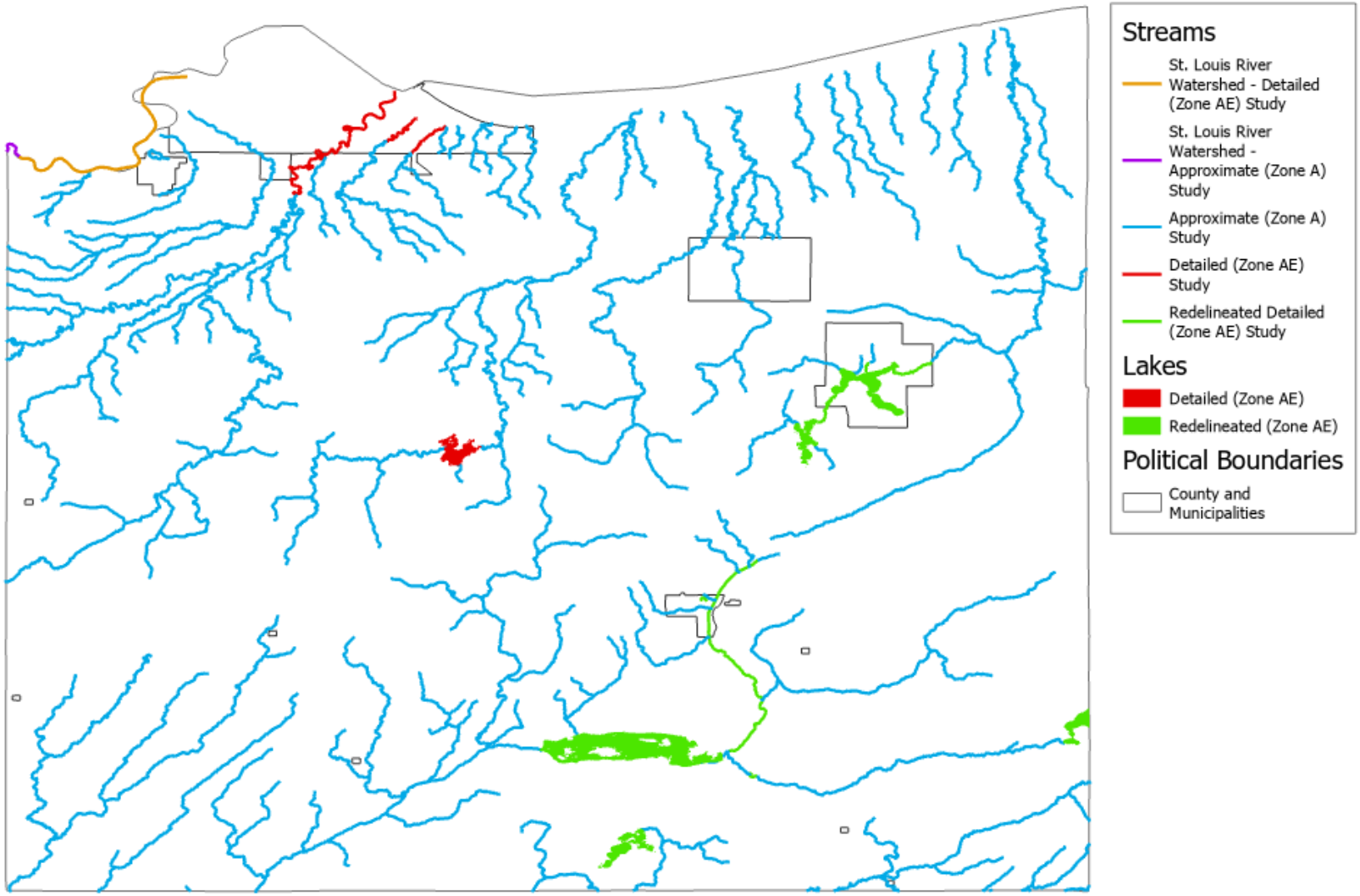
Redelineated Detailed Study (Zone AE) Streams ≈ 16 miles

Approximate Study (Zone A) Streams ≈ 943 miles

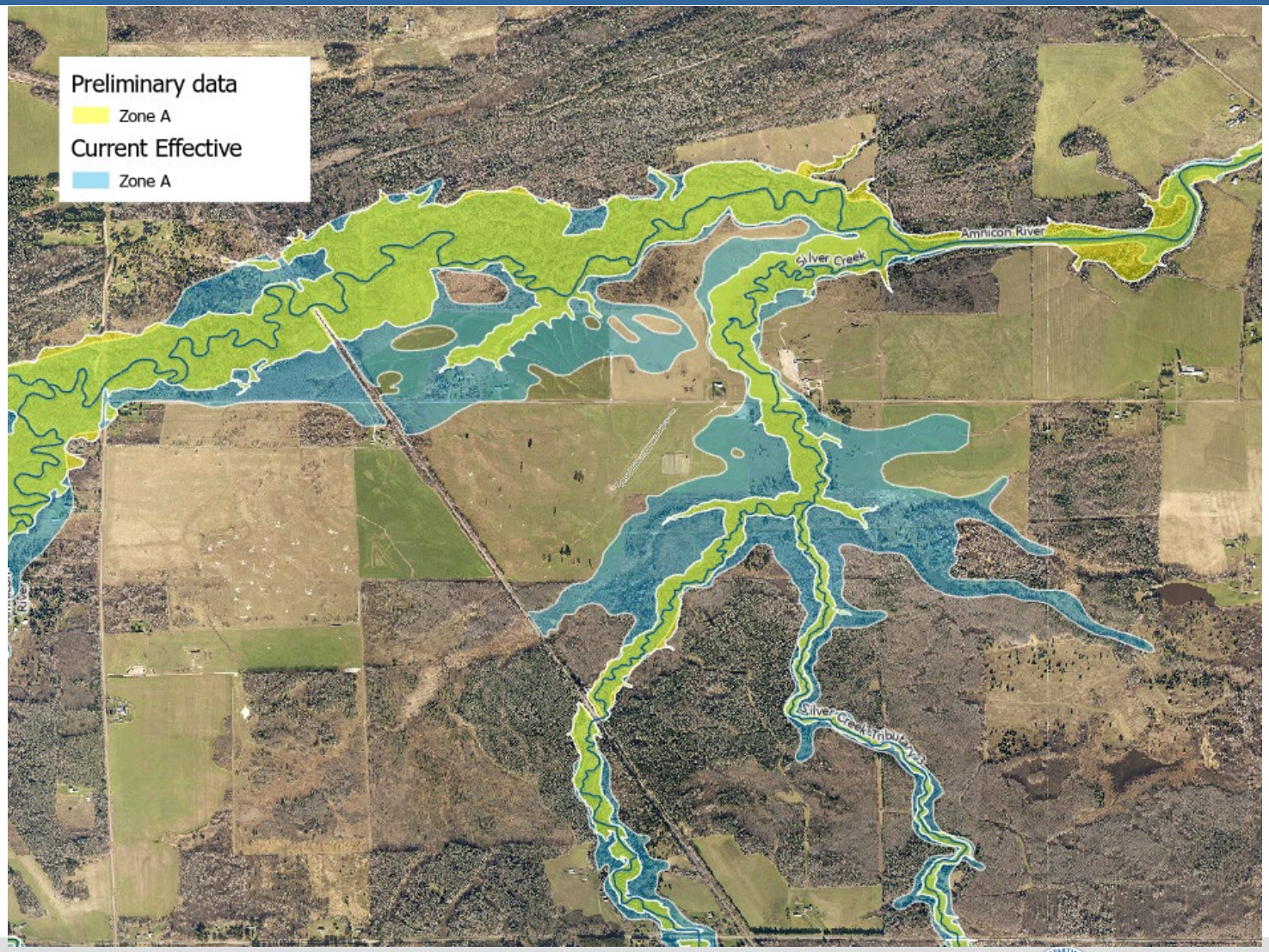
Detailed Lake Studies (Zone AE): Lyman Lake

Redelineated Lake Studies (Zone AE): Bond Lake, Lower Eau Claire Lake, Leader Lake, Lake Minnesuing, Lake Nebagamon, Saint Croix Flowage

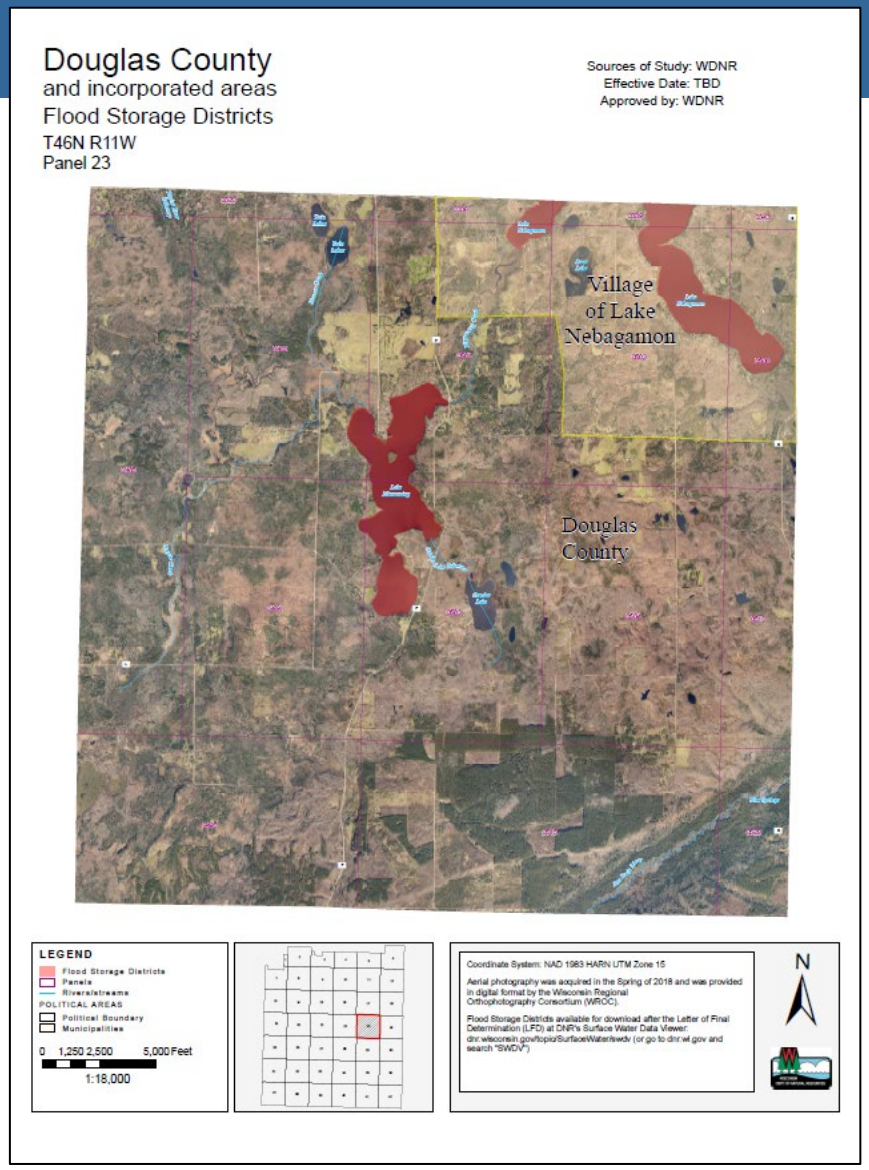
Studied Streams



Updated Digital Zone A Mapping With Estimated Base Flood Elevations



Flood Storage District (FSD) Maps



- State regulatory product used to reduce flood flows in modeling
- Maps must be adopted by communities during ordinance adoption
- Communities sent FSD shapefile. Preliminary maps also available for download:

https://dnr.wisconsin.gov/topic/FloodPlains/RiskMap.html

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Douglas County, WI

Coastal Floodplain Management

Key V Zone standard: 44 CFR 60.3(e)

The community must require that all new construction and substantial improvements have the lowest horizontal structural member of the lowest floor elevated to or above the base flood level,

... with the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls ...

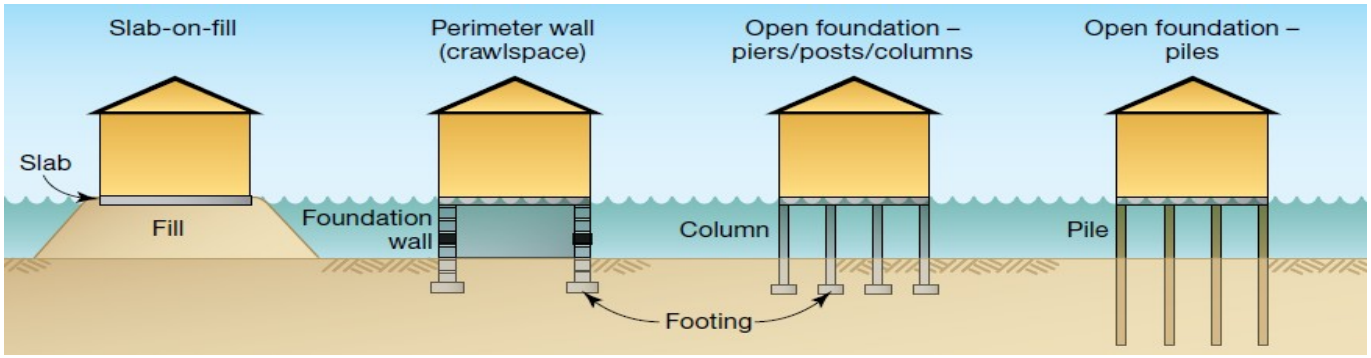
Differences in Development Requirements

A Zones

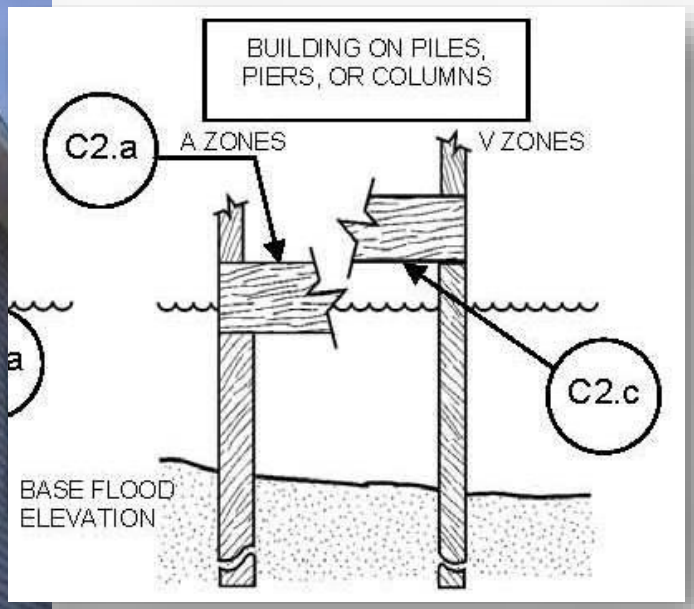
- Fill is allowed outside the floodway, or if it can be shown not to cause a rise in the BFE.
- Fully enclosed foundation walls (flood openings required) are allowed.
- The lowest floor must be elevated to or above the BFE.
- An as-built lowest floor elevation is required to be on file with permit records.

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 permit records.

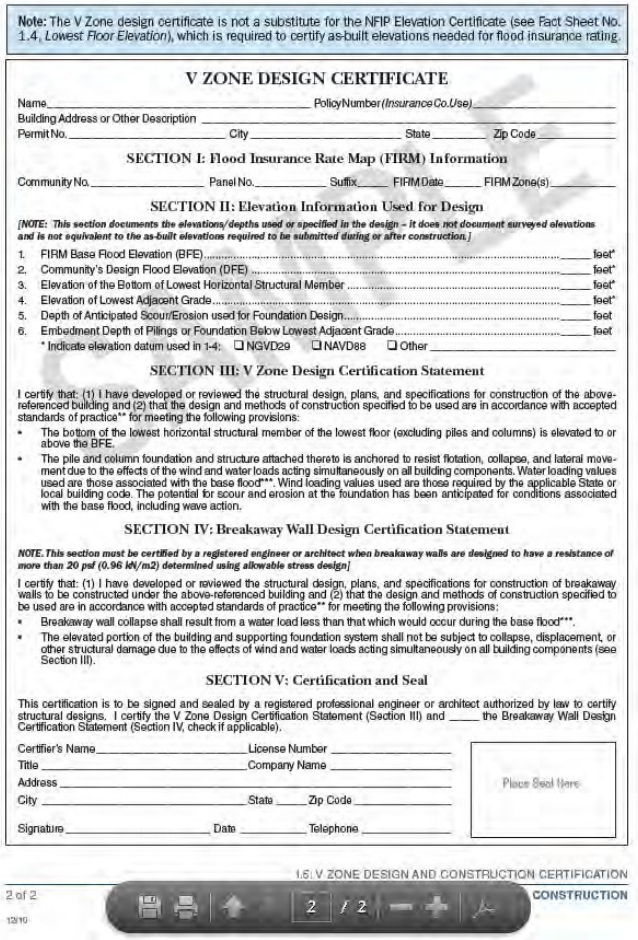


Lowest horizontal structural member



Other key standards in Zone VE:

- Fill for structural support is prohibited
- Elevated portion of the building and piling/column foundation must be designed to withstand water and wind loads acting simultaneously under base flood conditions
- Structural design, specifications and plans for construction must be developed or reviewed and certified by a registered professional engineer or architect



Note: The V Zone design certificate is not a substitute for the NFIP Elevation Certificate (see Fact Sheet No. 1.4, *Lowest Floor Elevation*), which is required to certify as-built elevations needed for flood insurance rating.

V ZONE DESIGN CERTIFICATE

Name _____ Policy Number *(Insurance Co. Use)* _____

Building Address or Other Description _____

Permit No. _____ City _____ State _____ Zip Code _____

SECTION I: Flood Insurance Rate Map (FIRM) Information

Community No. _____ Panel No. _____ Suffix _____ FIRM Date _____ FIRM Zone(s) _____

SECTION II: Elevation Information Used for Design

[NOTE: This section documents the elevations/depths used or specified in the design – it does not document surveyed elevations and is not equivalent to the as-built elevations required to be submitted during or after construction.]

1. FIRM Base Flood Elevation (BFE) _____ feet*
2. Community's Design Flood Elevation (DFE) _____ feet*
3. Elevation of the Bottom of Lowest Horizontal Structural Member _____ feet*
4. Elevation of Lowest Adjacent Grade _____ feet*
5. Depth of Anticipated Scour/Erosion used for Foundation Design _____ feet
6. Embedment Depth of Pilings or Foundation Below Lowest Adjacent Grade _____ feet

* Indicate elevation datum used in 1-4: ❑ NGVD29 ❑ NAVD88 ❑ Other _____

SECTION III: V Zone Design Certification Statement

I certify that: (1) I have developed or reviewed the structural design, plans, and specifications for construction of the above-referenced building and (2) that the design and methods of construction specified to be used are in accordance with accepted standards of practice** for meeting the following provisions:

- The bottom of the lowest horizontal structural member of the lowest floor (excluding piles and columns) is elevated to or above the BFE.
- The pile and column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of the wind and water loads acting simultaneously on all building components. Water loading values used are those associated with the base flood***. Wind loading values used are those required by the applicable State or local building code. The potential for scour and erosion at the foundation has been anticipated for conditions associated with the base flood, including wave action.

SECTION IV: Breakaway Wall Design Certification Statement

NOTE. This section must be certified by a registered engineer or architect when breakaway walls are designed to have a resistance of more than 20 psf (0.96 kN/m2) determined using allowable stress design]

I certify that: (1) I have developed or reviewed the structural design, plans, and specifications for construction of breakaway walls to be constructed under the above-referenced building and (2) that the design and methods of construction specified to be used are in accordance with accepted standards of practice** for meeting the following provisions:

- Breakaway wall collapse shall result from a water load less than that which would occur during the base flood***.
- The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (see Section III).

SECTION V: Certification and Seal

This certification is to be signed and sealed by a registered professional engineer or architect authorized by law to certify structural designs. I certify the V Zone Design Certification Statement (Section III) and _____ the Breakaway Wall Design Certification Statement (Section IV, check if applicable).

Certifier's Name _____ License Number _____

Title _____ Company Name _____

Address _____

City _____ State _____ Zip Code _____

Signature _____ Date _____ Telephone _____

Place Seal Here

1.6: V ZONE DESIGN AND CONSTRUCTION CERTIFICATION

2 of 2

12/10

CONSTRUCTION

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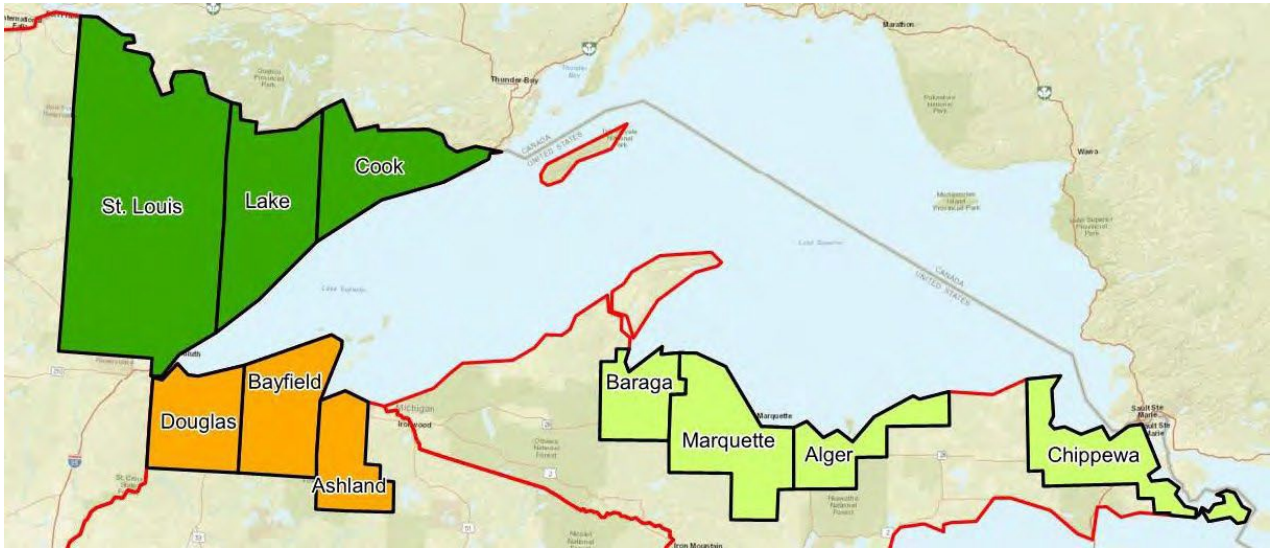
Great Lakes Coastal Flood Study Background

- New methodology finalized in 2014 adopted a response-based (stochastic) approach.
- Coastal analysis for Lake Superior communities was completed in 2019. Mapping was envisioned for all populated shoreline.
- Lake Superior modeling in Wisconsin covered all shoreline in Douglas, Bayfield and Ashland. Iron County was not covered.



Coastal data in the 12/2/2024 *Preliminary* FIRM

FEMA Shoreline characteristics at Transect DO-02:
Moderately sloped bluff – transect located approx 1.3 miles west of the Amnicon River.

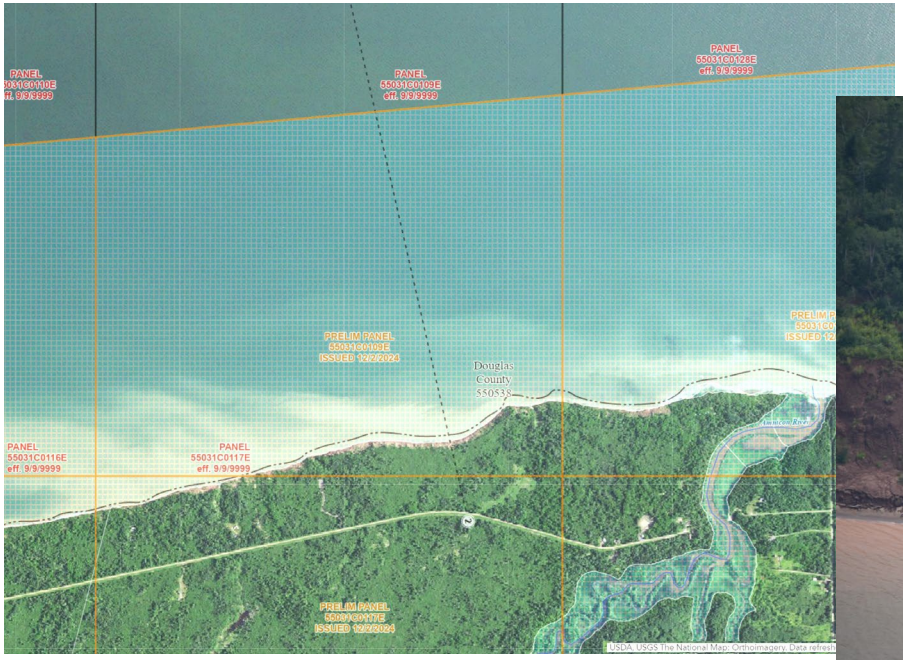


Photo: Wisconsin Shoreline Inventory DOU_2554.jpg (2024).
https://floodscience.maps.arcgis.com/apps/instant/minimalist/index.html?appid=c47ab45bb8c046e099a46df28837ca88

Coastal data in the 12/2/2024 *Preliminary* FIRM

FEMA Shoreline characteristics at Transect DO-01:
Shoreline defined by marsh region inland of the Wisconsin Point Road barrier feature

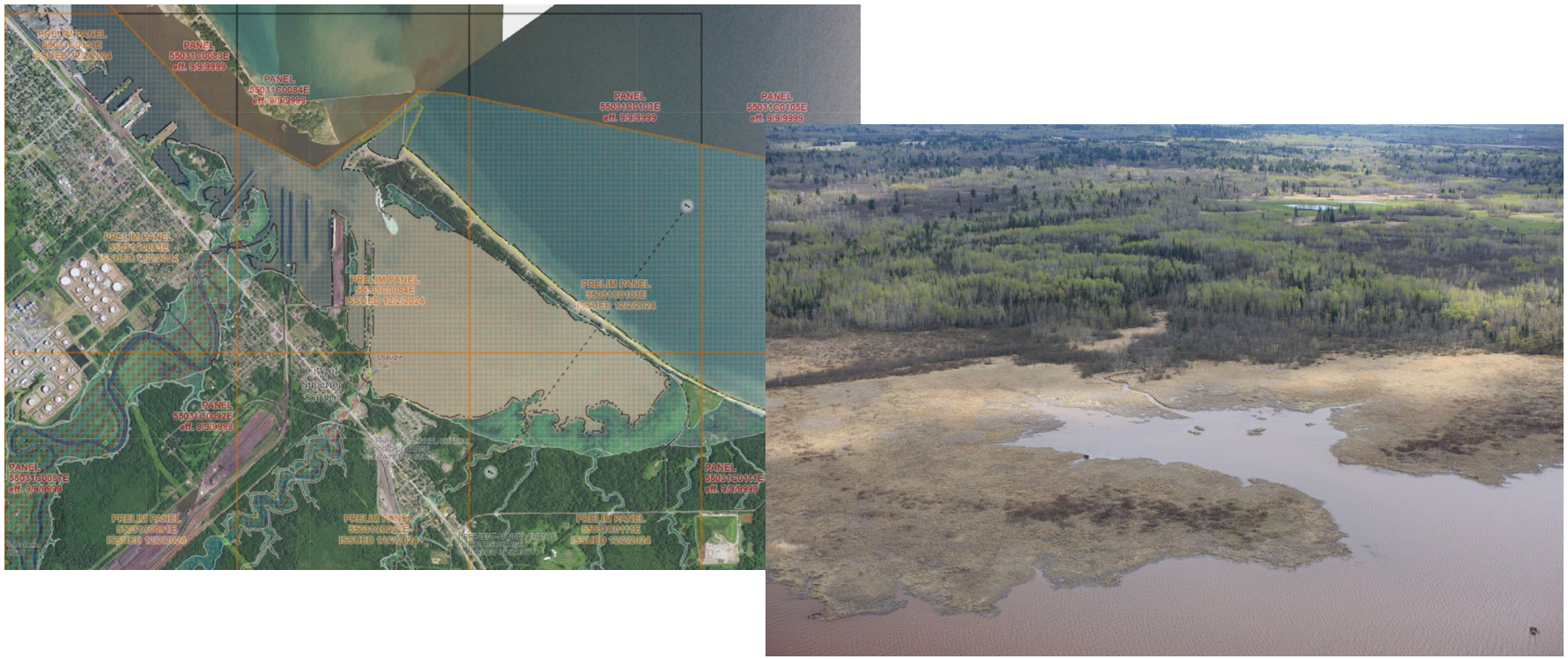
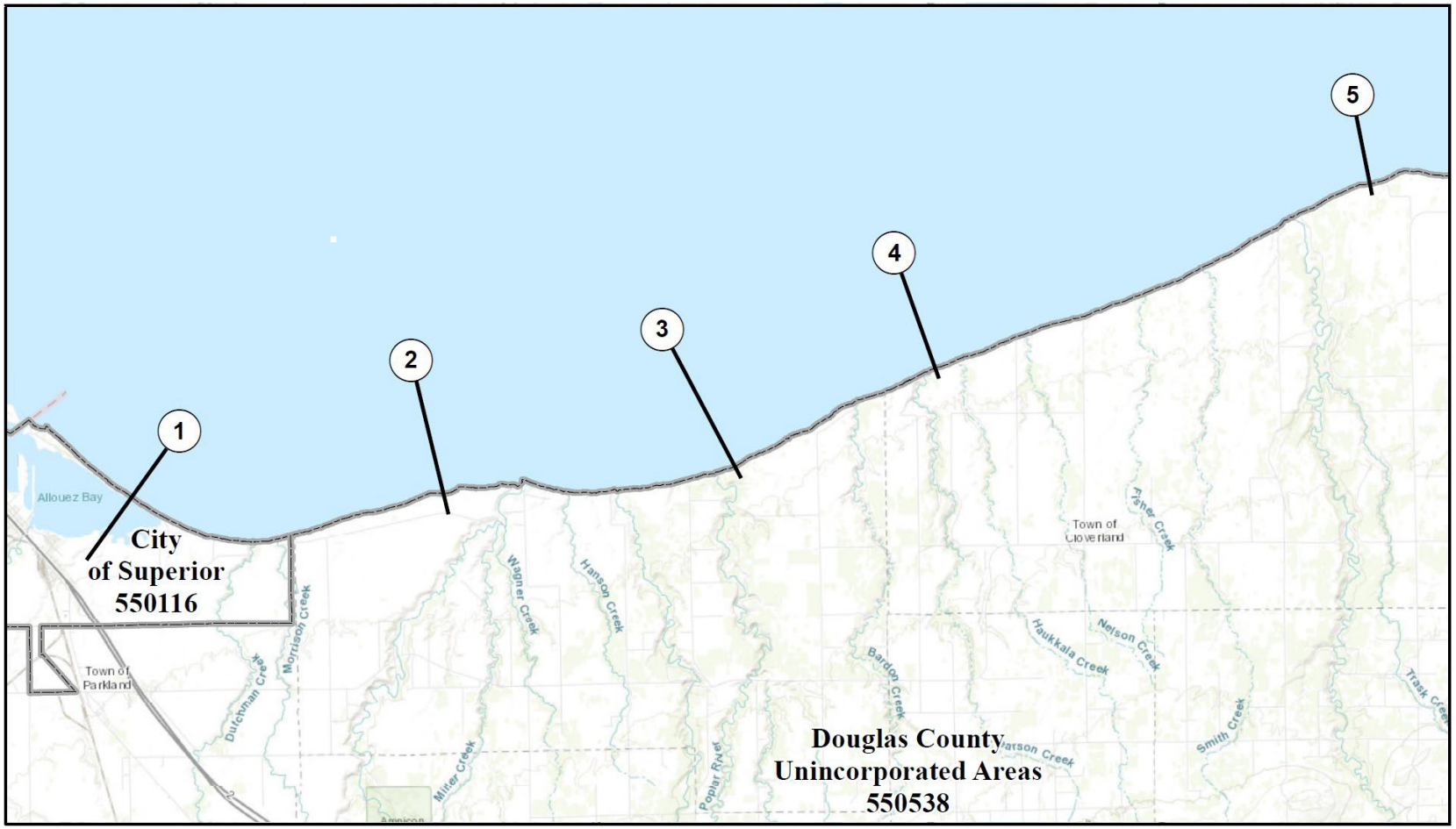


Photo: Wisconsin Shoreline Inventory SE-0579.jpg (2012).
https://floodscience.maps.arcgis.com/apps/instant/minimalist/index.html?appid=c47ab45bb8c046e099a46df28837ca88

Coastal data in the 12/2/2024 *Preliminary* FIRM



Location of Coastal Transects

Coastal data in the 12/2/2024 *Preliminary* FIRM

- Output is based on detailed near-shoreline wave analyses modeled at 5 transects
- Transect locations are selected based on assumption of similar wave environment, terrain and littoral sediment grain size for representative segments of shoreline.
- All but the western-most Transect DL-01 backshore marsh is mapped based on wave runup for calculation of Total Water Level (TWL) and wave envelope.
- Analysis method breakdown by transect:
  - DL-01: Analysis of the backshore marsh region of the Allouez Bay on far west side of Douglas County (inland of the Wisconsin Point Road barrier feature). The analysis assumes the predominance of inland wave promulgation, with wave height based on fetch length and land cover without the presence of obstruction.
  - DL-03 is modeled as beach interface, with episodic erosion of surf zone littoral sediments based on evaluation of wave energy in cross-shore direction.
  - DL-02, DL-04 and DL5 DL-05 are modeled as bluff with slope face described as stable to moderately unstable
-

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Coastal data in the 12/2/2024 *Preliminary* FIRM

Table 16: Coastal Transect Parameters

Flooding Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance[1,2]		Starting Stillwater Elevations (ft NAVD88)					1% Annual Chance Total Water Elevation[3] (ft NAVD88)
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance	
Lake Superior	1	14.5	9.2	603.3	603.3	603.6	603.7[4]	603.8	605.8
Lake Superior	2	N/A	N/A	603.3	603.3	603.6	603.7	603.8	608.7
Lake Superior	3	N/A	N/A	603.3	603.3	603.6	603.7	603.8	605.4
Lake Superior	4	N/A	N/A	603.3	603.3	603.6	603.6	603.7	608.0
Lake Superior	5	N/A	N/A	603.3	603.3	603.5	603.6	603.7	608.4

[1]Wave data are provided for WHAFIS-based transects only. The 1% starting wave parameters are not applicable for runup transects since a response-based approach is utilized.

[2]Wave data correspond to the 1-percent-annual-chance floodplain but may not be directly associated with the 1-percent-annual-chance SWEL.

[3]Includes wave action representative of 1% Total Water Level (for wave runup and overtopping) or 1% Wave Crest Elevation (for overland wave propagation).

[4]SWEL from St. Louis, MN analysis was applied in the St. Louis River

Table 16 of the Floood Insurance Study Text

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Coastal Flood Hazard Modeling Overview

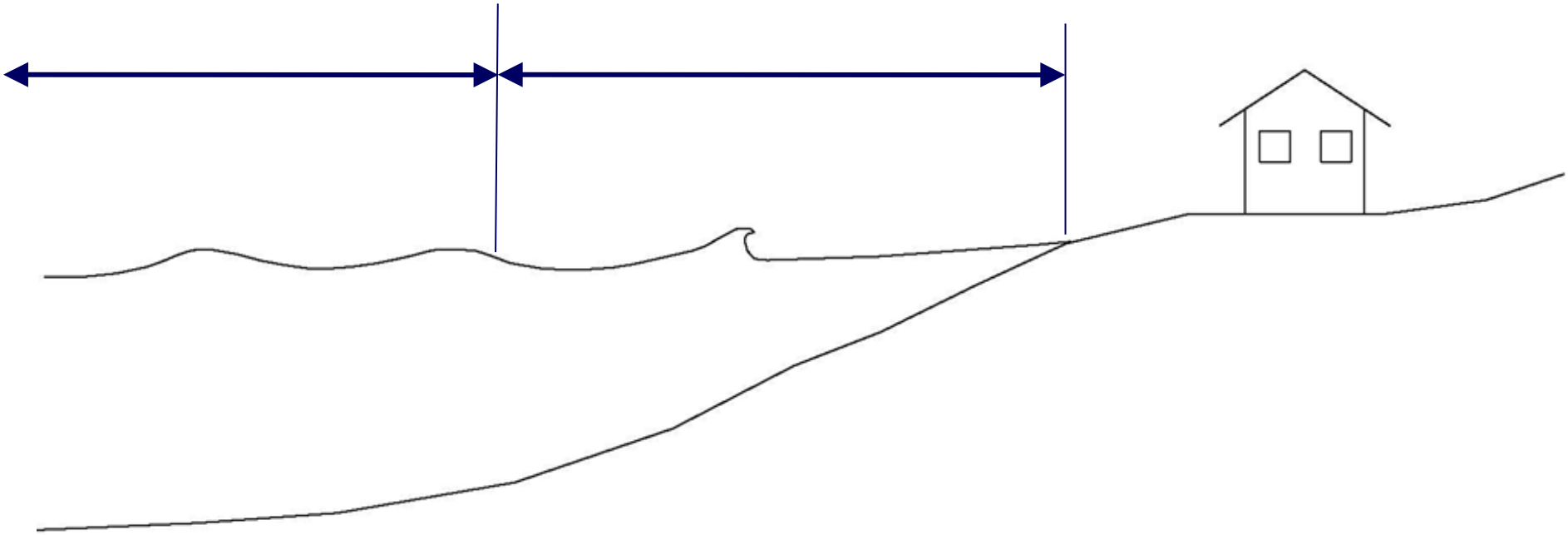
Lake-Wide Variation

Local Variation

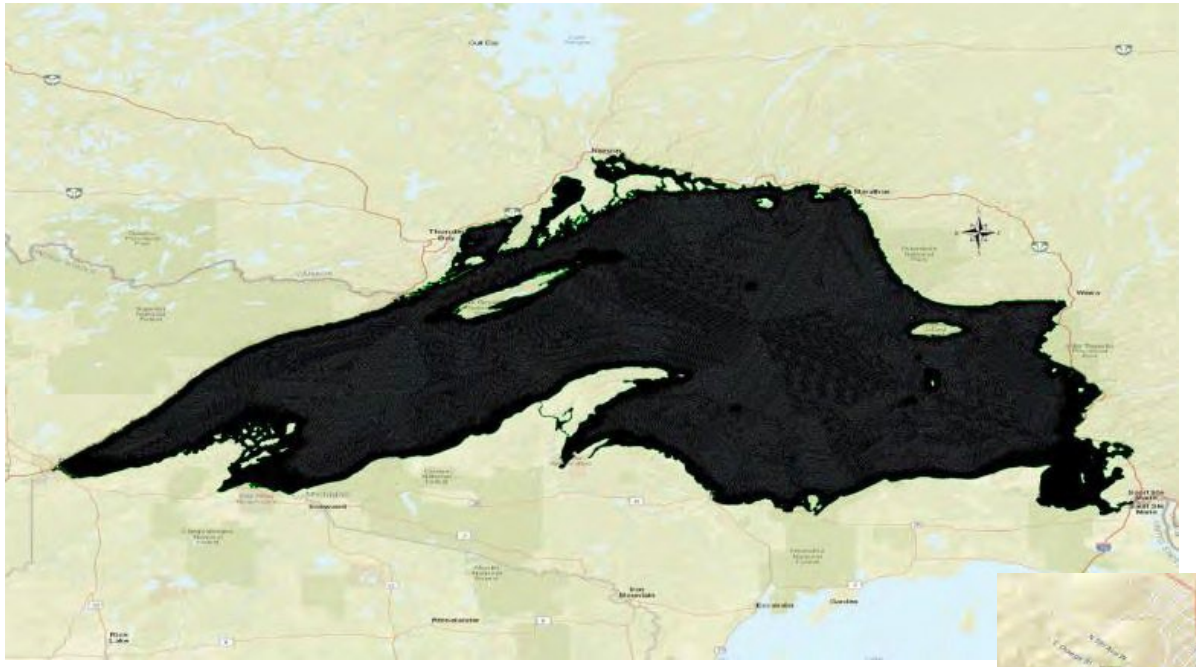
Step 1: Offshore Water Level and Wave Modeling

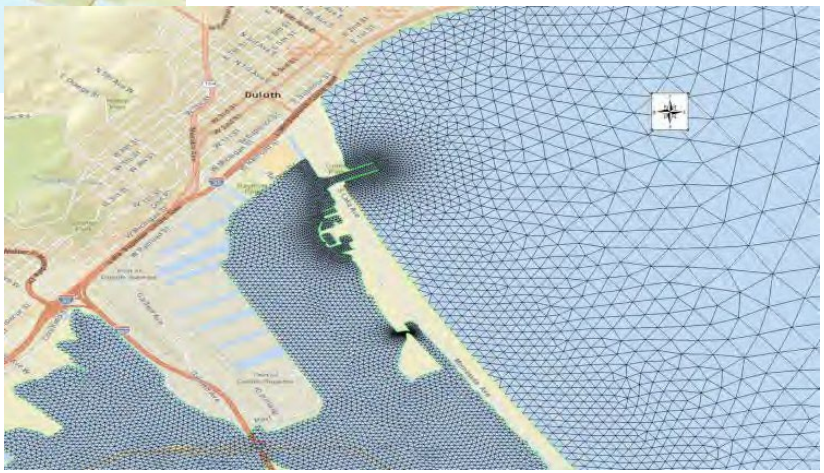
Step 2: Nearshore Wave Setup, Runup & Overtopping

Step 3: Floodplain Mapping

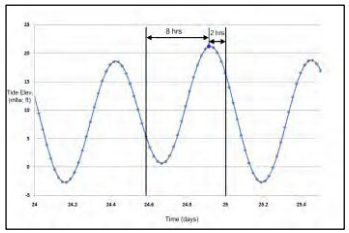


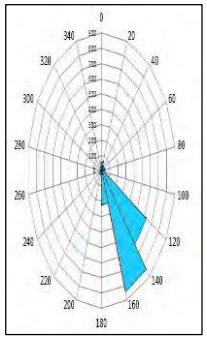
Step 1: ADCIRC+SWAN Mesh

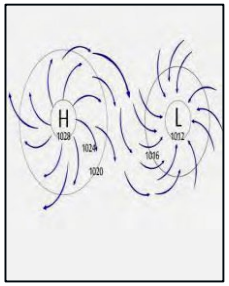


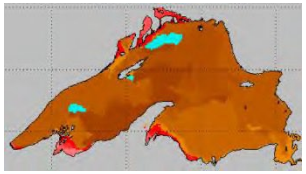


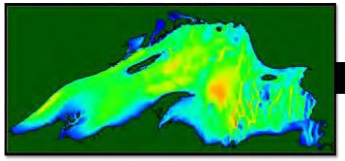
Step 1: Run the Models

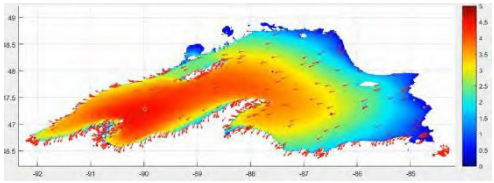


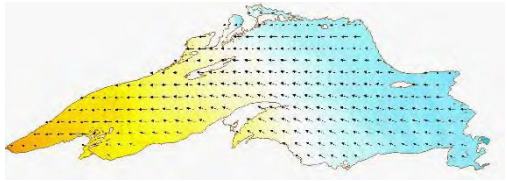












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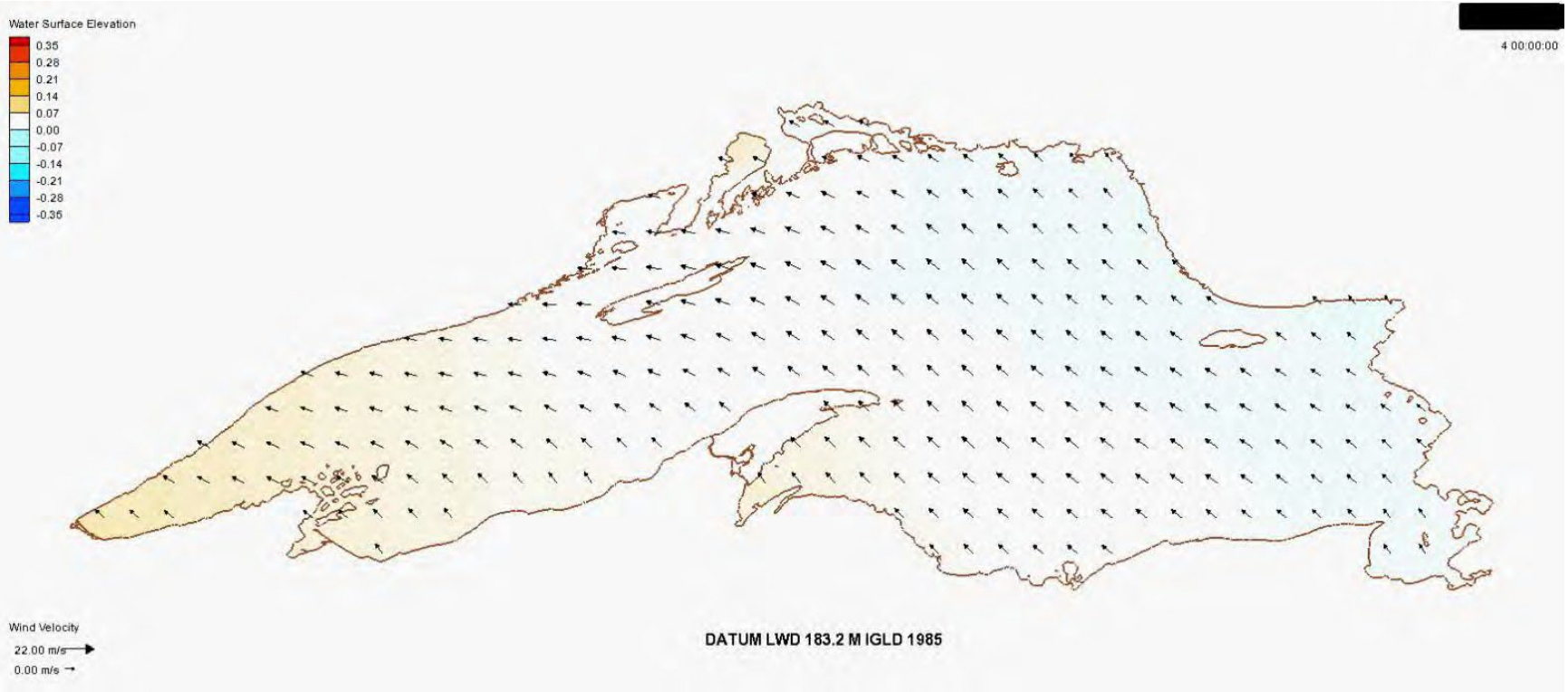
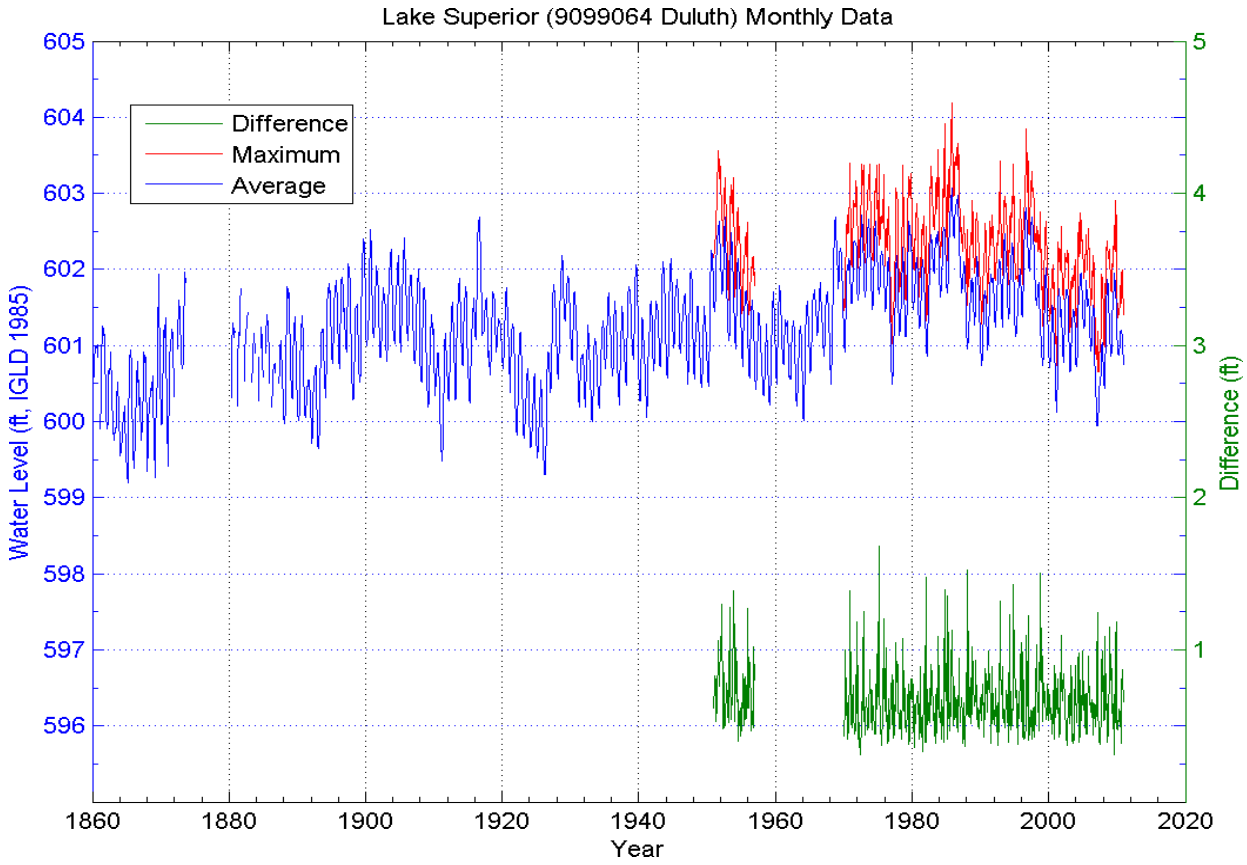
Step 1: Example Surge Behavior



Step 1: Water Level Accuracy Assessment

Location		1-percent-annual chance SWEL (m, IGLD85)	
		Modeled	Observed
9099004	Point Iroquois, MI	183.99	184.24
9099018	Marquette, MI	183.92	184.13
9099044	Ontonagon, MI	183.87	183.95
9099064	Duluth, MN	183.96	184.13
9099090	Grand Marais, MN	183.87	183.98

Step 1: Lake Levels



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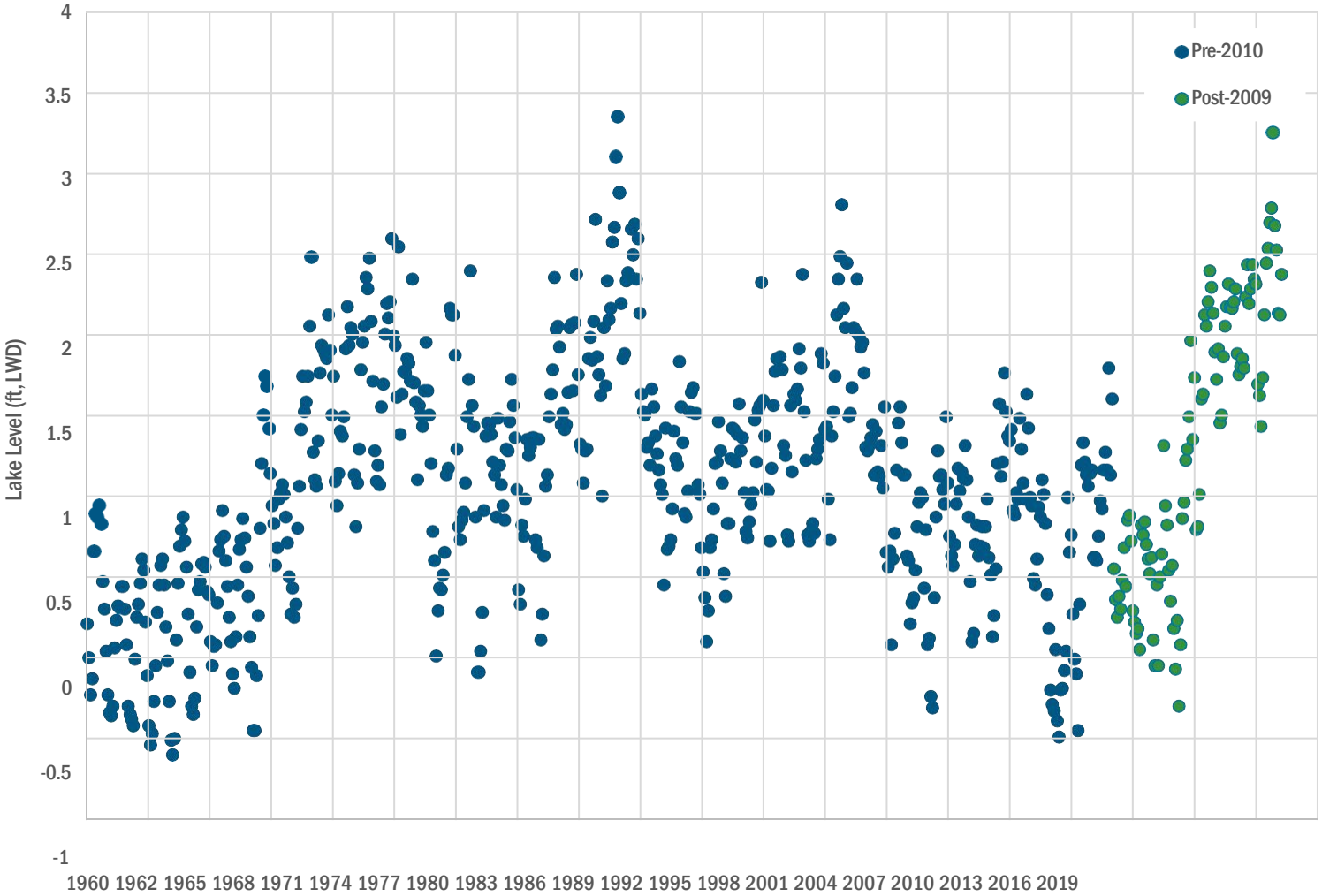
Step 1: Lake Levels



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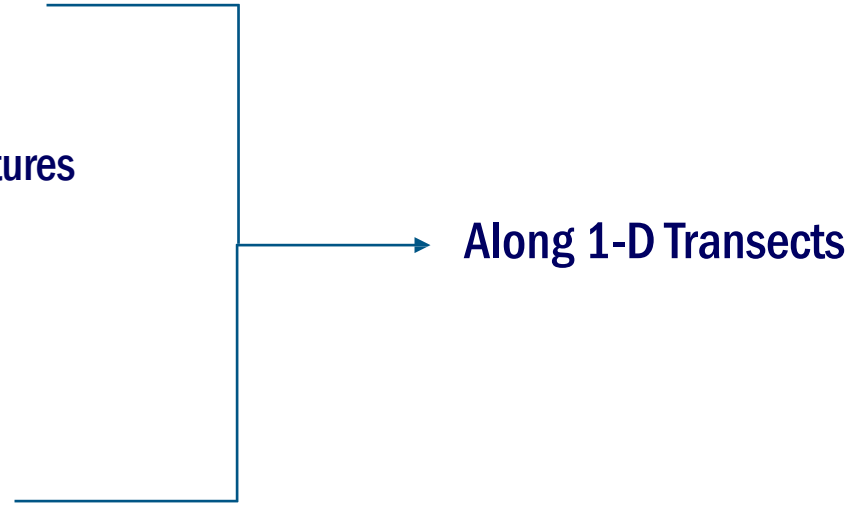
Step 2: Nearshore Wave-Induced Flooding

- **Nearshore Wave-Induced Flood Hazards Analysis includes:**
  - Shoreline classification
  - 2-D Wave and Surge Model data extraction
  - Wave setup
  - Erosion
  - Evaluation of coastal structures
  - Wave runup
  - Wave overtopping
  - Overland wave propagation
  - Statistical analysis



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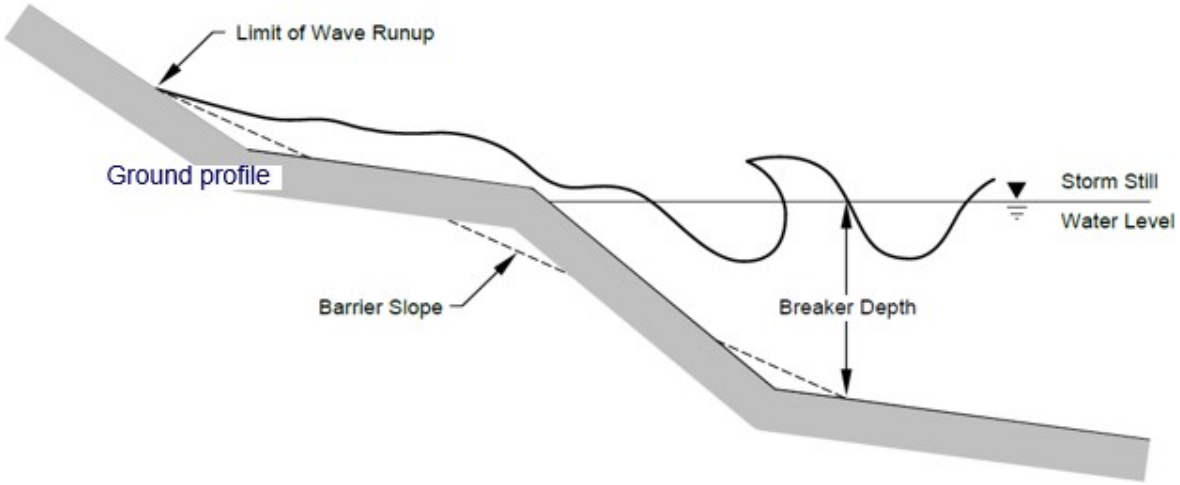
Response-Based Wave Runup

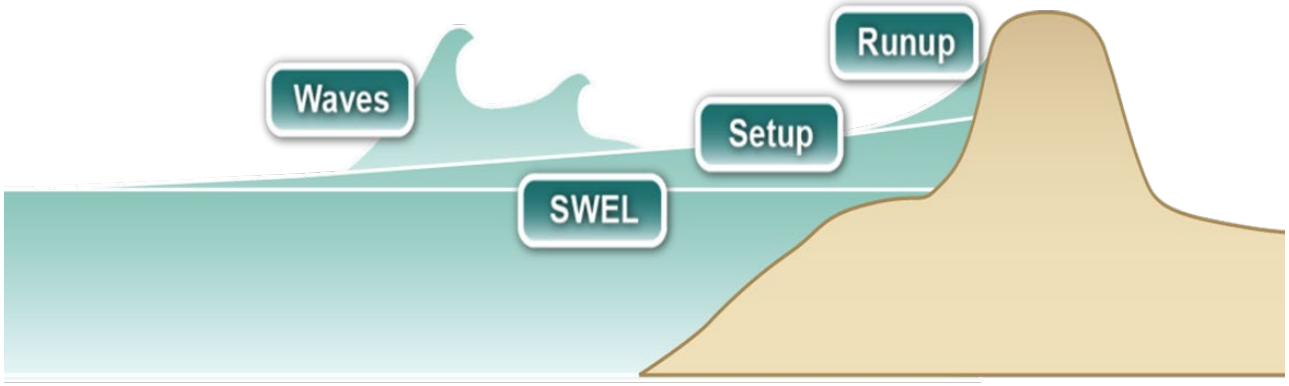
- Wave runup is the uprush of water from wave action on a beach, steep bluff or coastal structure.
- Calculated at each transect using appropriate hydrodynamic equations that simulate events for every time step captured for selected storms using lake-wide gridded record (ADCIRC-SWAN)
- Statistical analysis is performed on the maximum runup results at each transect to obtain the 1-percent-annual-chance runup elevation.



Step 2: Runup

Step 2: Compute Wave Setup and Runup

- Runup is calculated for every time step in each of 150 storm events, at each transect
- Statistical analysis ("generalize pareto distribution") is performed on the maximum runup results at each transect to obtain the 1-percent-annual-chance runup elevation.



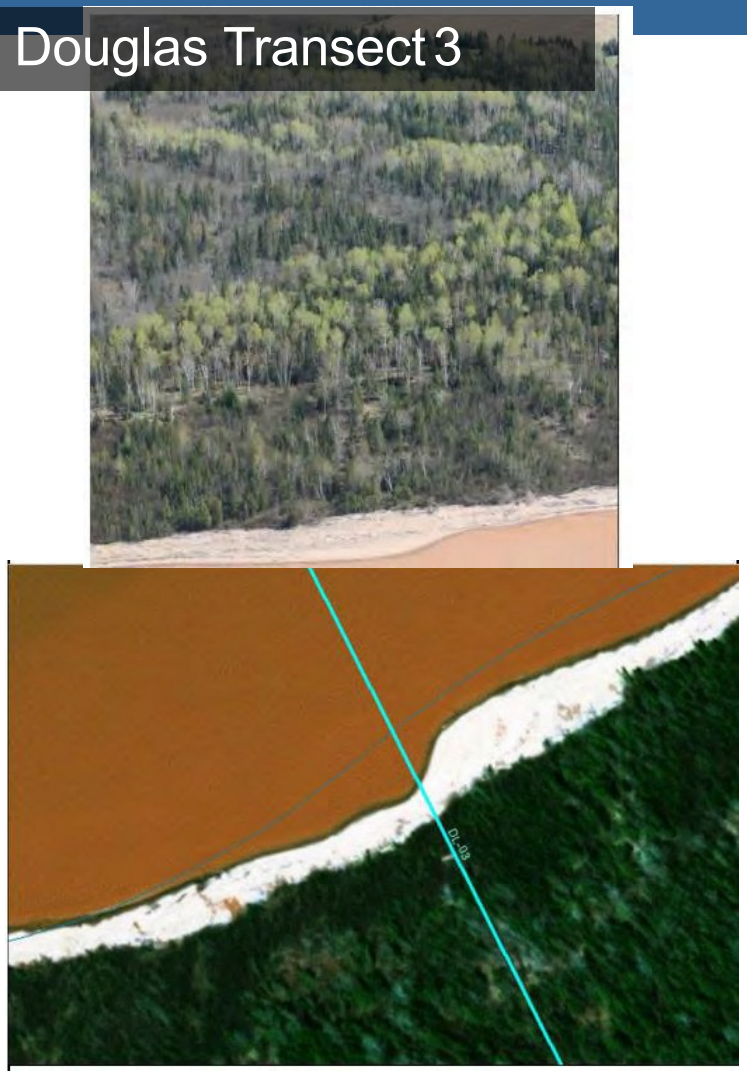
Wave Height
Wave Period
SWEL
Profile Slope

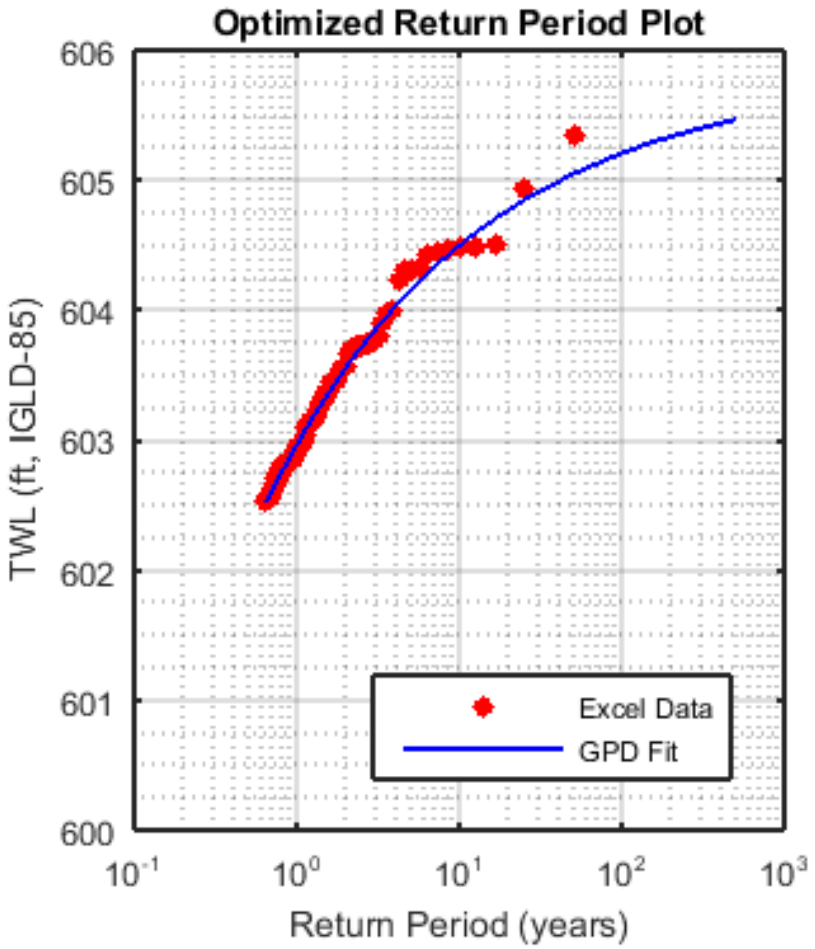
→

Wave Setup
Wave Runup

Step 2: Response-Based Wave Runup

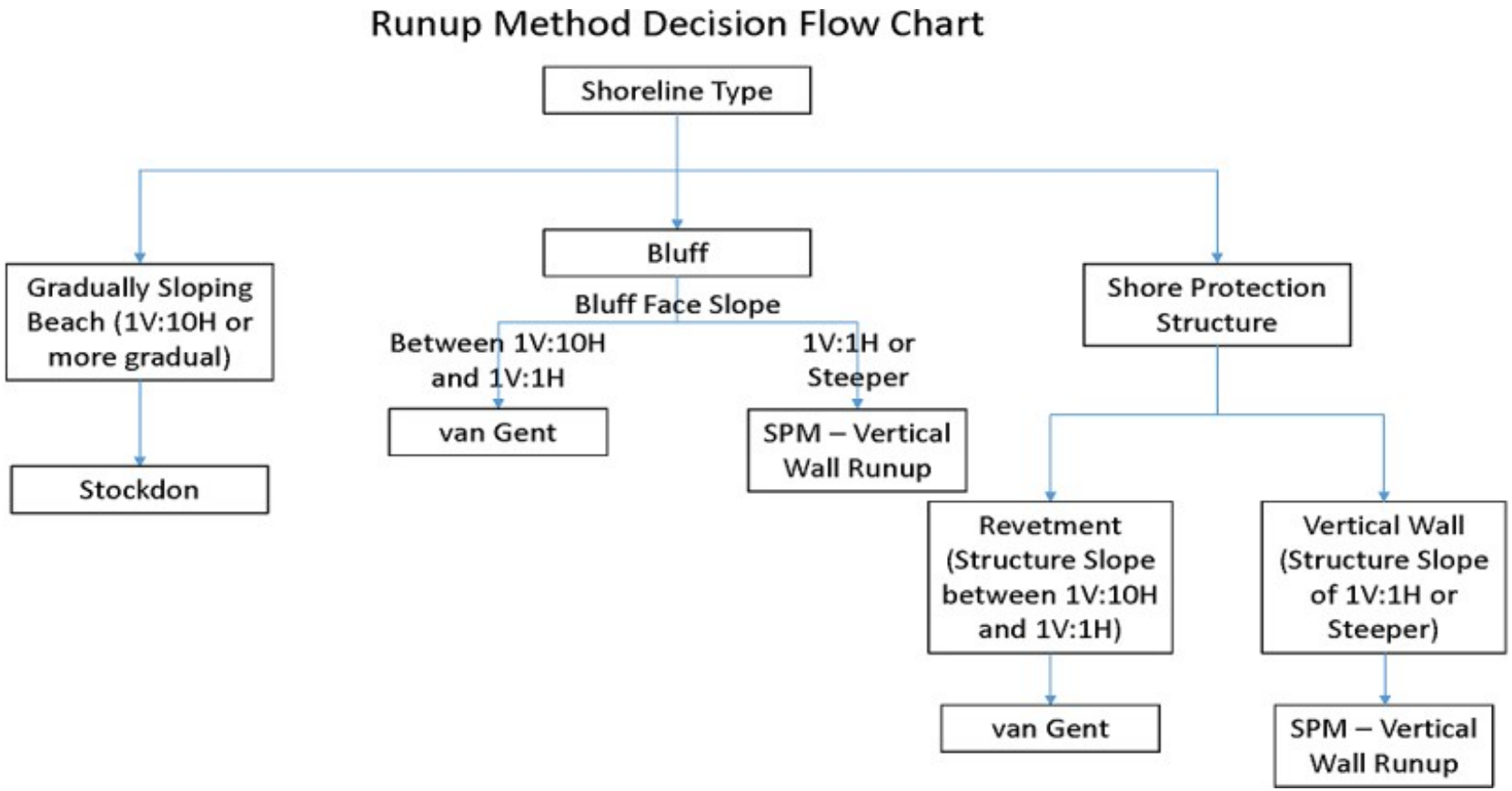
Douglas Transect 3





WISCONSIN DEPT. OF NATURAL RESOURCES
FEMA
RiskMAP
Increasing Resilience Together

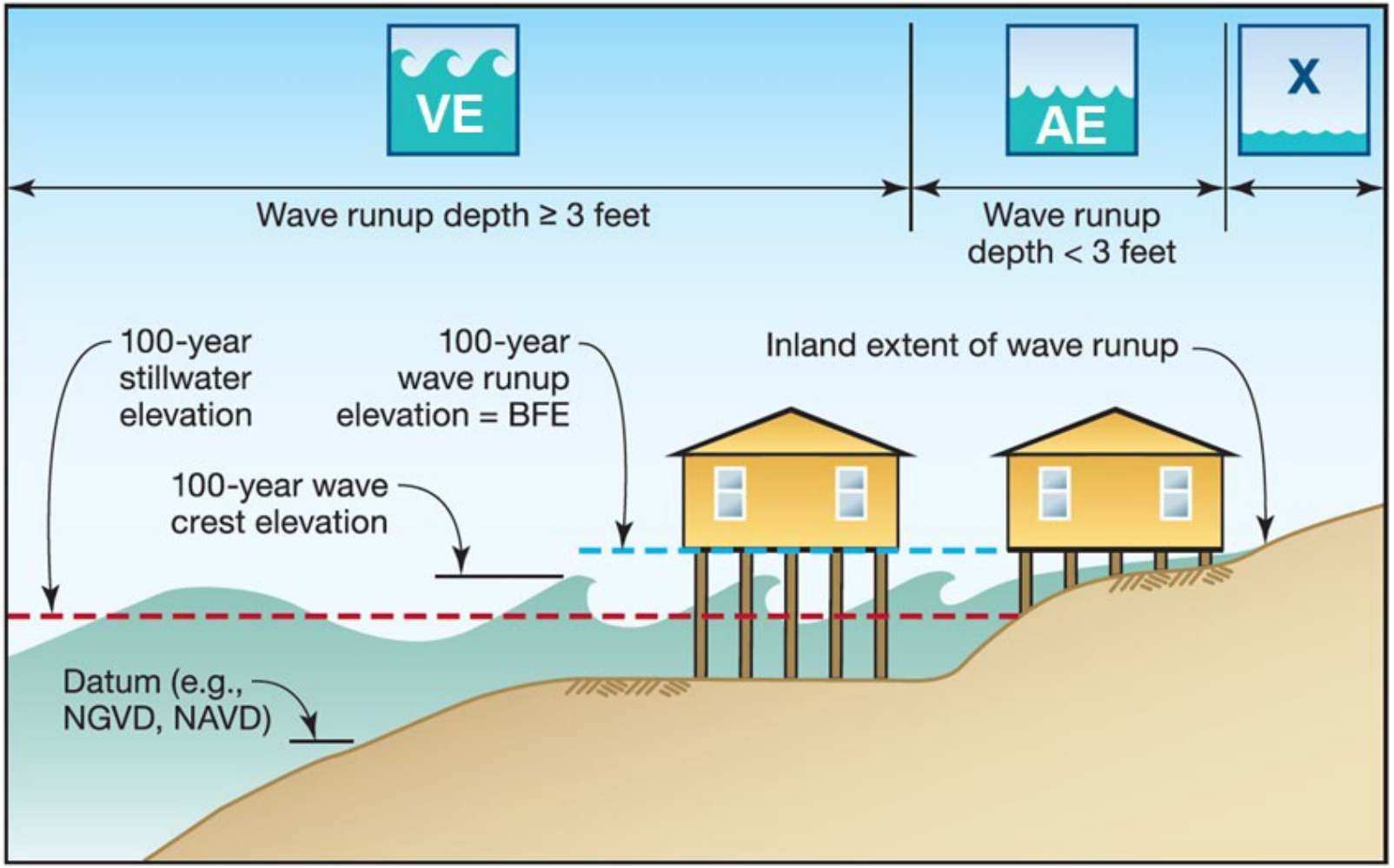
Step 2: Run-up Methods



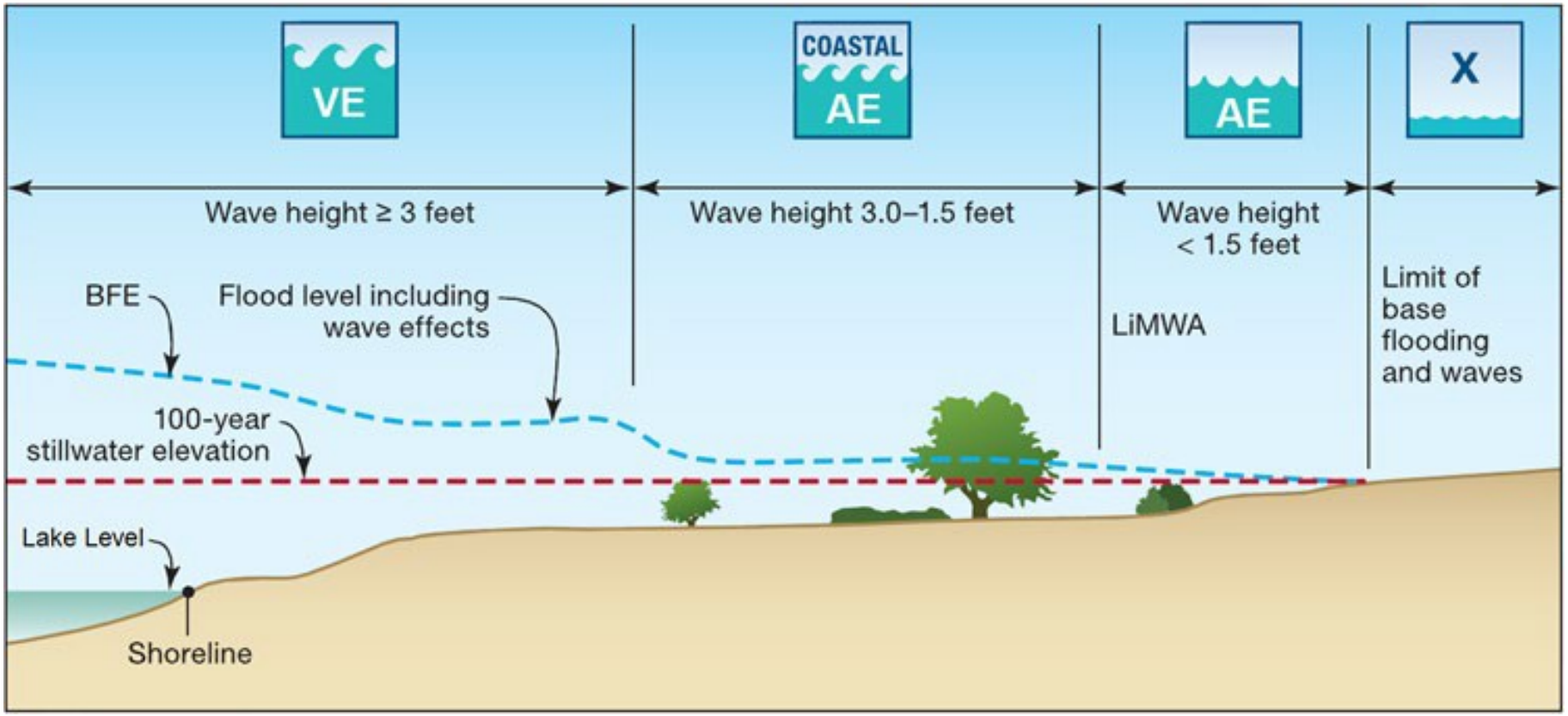
Step 2: Overland Wave Propagation AT Transect DO-01

- An evaluation of 5 different scenario pairs (water level and wave height) was conducted based on joint probability to represent a 1% annual-chance occurrence
- Determine wave setup elevations
  - Using the Direct Integration Method (DIM)
  - Wave setup + SWL = Total Stillwater Level (TSWL)
- Use Wave Height Analysis for Flood Insurance Studies (WHAFIS) to determine interaction

Step 3: Runup Mapping



Step 3: Overland Wave Propagation Mapping



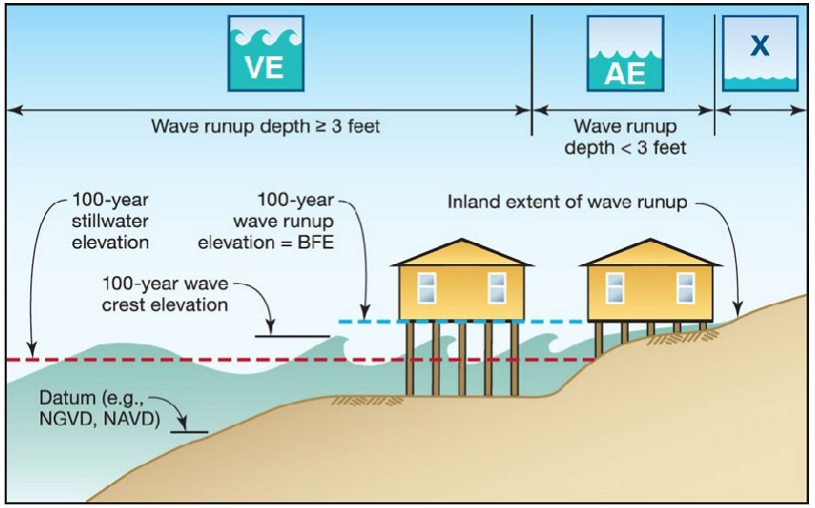
Step 3: Flood Zone Designations

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

Zone AE
- 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, associated with overtopping scenarios
- Not applicable in the Douglas County coastal analysis

Zone AH
- Applied in areas of ponding
- Assigned a BFE



Hazard Mitigation

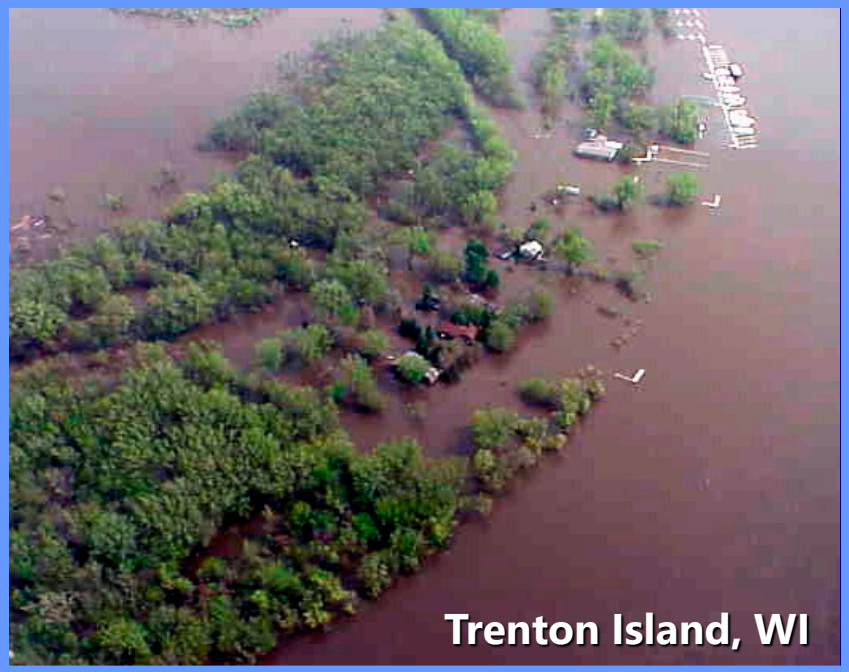
Risk MAP Douglas County
January 2025

What is Mitigation?

According to the Federal Emergency Management Agency (FEMA):

"Mitigation is any sustained action taken to eliminate or reduce the long-term risk to human life and property from natural and technological hazards."

Value of Mitigation



For every $1 spent on flood mitigation,
$6 is saved in future damages;
$7 for riverine flooding.

National Institute of Building Sciences
Natural Hazard Mitigation Saves: 2019 Report

Examples of Mitigation

Acquisition/Demolition

Communities acquire land, demolish structures, and deed restrict the land to open space in perpetuity.

Images from Darlington, WI

Elevation

Elevation raises a structure out of the floodplain.

Images from Soldiers Grove, WI

Floodwall

Floodwalls can prevent water from inundating structures that cannot be elevated, relocated, or demolished.

Image from Darlington, WI

Stormwater Retention/Detention

Detention/retention ponds can store storm water runoff, decreasing flash flooding in urban areas.

Image from Oshkosh, WI

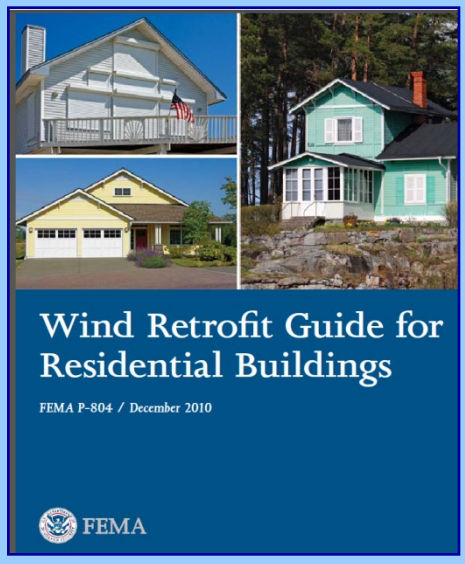
Stormwater

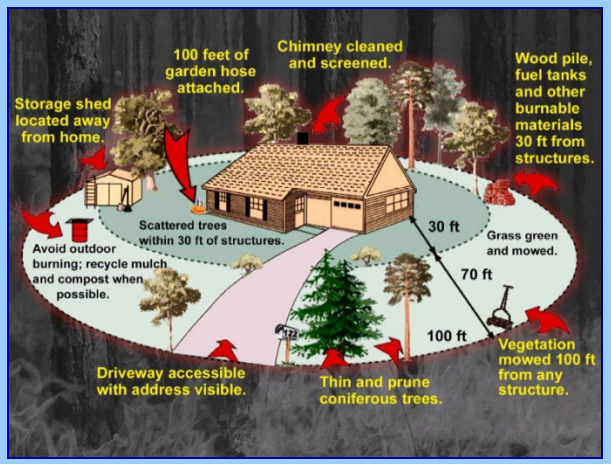
Stream restoration allows watersheds to better manage flooding.

Image from Theinsville, WI

Other Ideas

Mobile Home Tie-Downs





Proper Landscaping

- Utility protection
- Raise appliances and utilities
- Install back-flow valves
- Insurance (flood and sewer backup)
- Bank stabilization
- Land-use planning
- Wind retrofits
- Education and public awareness
- Project scoping
  - Hazard study/analysis
  - Design
  - Mitigation solution identification

Mitigation Assistance Grant Funding

FEMA Hazard Mitigation Assistance

- Hazard Mitigation Grant Program (HMGP)
- Building Resilient Infrastructure and Communities (BRIC)
- Flood Mitigation Assistance (FMA)
- Congressionally Directed Spending (LPDM)

Hazard Mitigation Grant Program

HMGP

- All-hazards, post-disaster program
- Available statewide with priority in impacted area
- 20% of funds allocated for Public and Individual Assistance
  - Wisconsin has an "Enhanced" State Hazard Mitigation Plan (normally 15%)

Building Resilient Infrastructure and Communities

BRIC

- Annual, national competition for all-hazards
- FFY23: $1 billion
- State allocation:
  - $2 million for highest priority projects
    - $1.5 million for planning, project scoping, studies
    - $400,000 for CDRZs (discussed later)
  - $2 million for building code projects
- Tribal allocation: $50 million

Flood Mitigation Assistance

FMA

- Annual, national competition
- FFY23: $800million
- Flood mitigation only
- Mitigation to NFIP insured structures
- Priority for repetitive loss and severe repetitive loss structures

Congressionally Directed Spending

LPDM (Legislative Pre-Disaster Mitigation)

- **Annual(?), congressional appropriation**
- **All hazards pre-disaster mitigation program**
- **FFY23: $233,043,782 directed to 100 congressionally selected projects**

Eligible Sub-Applicants

Entity	Program Name			
	HMGP (HAZARD MITIGATION GRANT PROGRAM)	BRIC	FMA (FLOOD MITIGATION ASSISTANCE)	LPDM
State Agencies	√	√	√	√
Tribal Governments	√	√	√	√
Local Governments	√	√	√	√
Private Non-Profit Organizations (PNPs)	√			

Cost Share

Programs	Mitigation Project Grant (Percent of Federal/Non-Federal Share)	Management Costs	
		Recipient (10%)	Subrecipient (5%)
HMGP	75/25	100/0	100/0
BRIC	75/25	100/0	100/0
BRIC – Subrecipient or tribal recipient is an economically disadvantaged rural community or CDRZ	90/10	100/0	100/0
FMA	75/25	75/25	75/25
FMA – repetitive loss property	90/10	90/10	90/10
FMA – severe repetitive loss property	100/0	100/0	100/0
LPDM	75/25	100/0	100/0
LPDM – Sub-grantee is a small impoverished community	90/10	100/0	100/0

The state contributes half of the non-federal share for HMGP!

Local Match

Can be provided by any source except federal funds or match for other federal funds

- ICC (Increased Cost of Compliance) funds
- Property owners
- Volunteer and in-kind
- State programs (CDBG, DNR Municipal Flood Control)
  - CDBG is pass-through money and loses federal identity

Requirements

- Participating in the NFIP and in good standing
- Considered other alternatives
- Environmentally-sound
- Cost-effective
- Solves the problem
- Plan requirement
- Increase protection

Town of Clover, WI

CDRZs

Community Disaster Resilience Zones

- Congressionally-mandated
- Risk + vulnerability
- Tribal CDRZs forthcoming
- 5 years
- 90/10 cost share
- $400,000 allocation
- BCA assistance

Helpful Websites

- **WEM Hazard Mitigation:** https://wem.wi.gov/mitigation-resources/
- **FEMA Hazard Mitigation Assistance:** https://www.fema.gov/grants/mitigation
- **FEMA Hazard Mitigation Planning:** https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning

Questions?

Contacts:

Heather Thole
State Hazard Mitigation Officer
heather.thole@widma.gov

Chad Atkinson
Mitigation Section Supervisor
chad.atkinson@widma.gov

Email: DMAWEMHazardMitigation@wisconsin.gov

FEMA

The National Flood Insurance Program (NFIP)

RiskMAP
Increasing Resilience Together

WISCONSIN
DEPT. OF NATURAL RESOURCES

The National Flood Insurance Program (NFIP)

- Created by the National Flood Insurance Act of 1968
- Participation is **voluntary**
  - Adopt and enforce regulations
  - Eligible for flood insurance
- **Benefits** of participation:
  - Flood insurance
  - Grants and loans
  - Disaster assistance
  - Federally-backed mortgages

NFIP Goals

- Reduce the loss of life and property caused by flooding
- Reduce rising disaster relief costs caused by flooding
- Maintain the natural and beneficial functions of the floodplains
- Minimize business interruptions an other economic disruptions

September 21, 2016 Sparta, WI

Sparta, 1899: On the night of June 11-12, an intense storm sent all local streams and rivers over their banks, washing out roads, bridges, and cultivated fields; there was no loss of life. [Wisconsin Centennial Story of Disasters and Other Unfortunate Events (Madison, 1948)]

Accomplishing NFIP Goals

- Publish maps - identify risk
- Educate the public on their own risk
- Provide federally-backed flood insurance coverage
- Encourage development away from the flooding risks and minimize the damage potential to flooding through floodplain management

Duluth, MN 2012

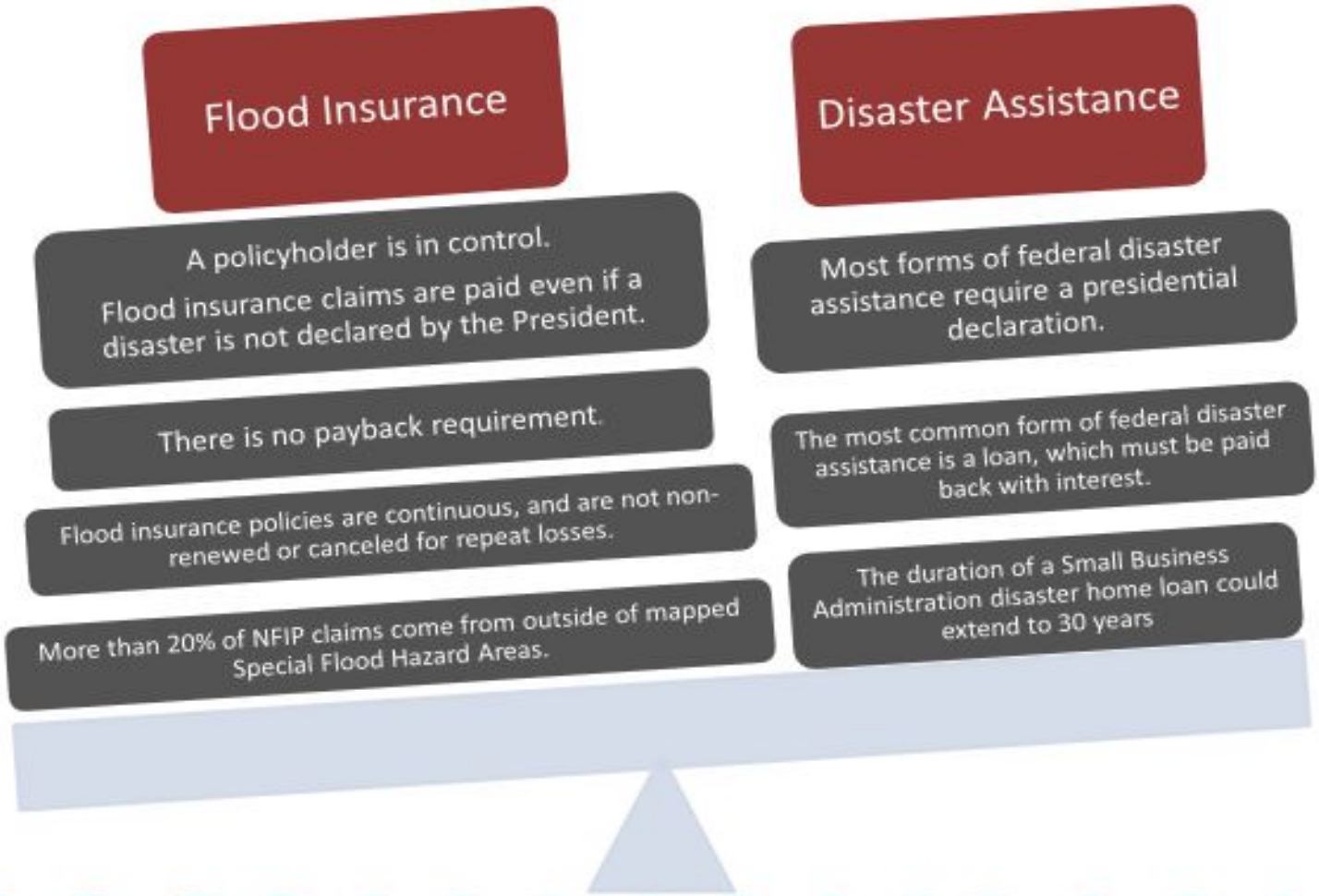
Basic NFIP Regulations

- Ensure that all proposed **development** is reasonable safe from flooding
- Ensure that the **lowest floor** of any **new** or **substantially damaged** or **improved structure** within the SFHA is elevated to or above the base flood elevation.
- Ensure that **development** within the Floodway does not increase flood heights.

Sauk County 2008

Jefferson County 2008

Flood Insurance vs. Disaster Assistance



Flood Insurance 101

- Homeowners insurance does not cover flooding
- Almost everyone in a participating community of the NFIP can buy flood insurance
- Available to homeowners, business owners, renters, condo unit owners, and condo associations
- Sold through private insurance companies and agents, or directly through the NFIP
- Claims are paid regardless of disaster declaration
- No payback requirement

Insurable by the NFIP

- Walled and roofed structures principally above ground
- Manufactured homes or travel trailers, if anchored to a permanent foundation
- Contents of structure (available to owners and renters)
- Building in the course of construction

Not Insurable by the NFIP

- Buildings completely over water
- Unanchored manufactured homes
- Motorized vehicles
- Gas and liquid storage tanks outside buildings
- Buildings principally below ground
- Machinery and equipment in the open
- Swimming pools, hot tubs, etc.

NFIP Limits of Coverage

How much flood insurance coverage is available?

Flood coverage limits for a standard flood policy are:

Coverage Type	Coverage Limit
One to four-family structure	$250,000
One to four-family home contents	$100,000
Other residential structures	$500,000
Other residential contents	$100,000
Business structure	$500,000
Business contents	$500,000
Renter contents	$100,000

NFIP-Risk Rating 2.0

FEMA is updating their flood insurance rates through a new pricing methodology called Risk Rating 2.0, starting Oct. 1, 2021.

What is changing:

- Reduce complexity
- Simplifying the quote process
- Increasing mitigation investment
- Assessing and reflecting more information on flood hazards
- Reflecting prior NFIP claims and factoring replacement cost value to calculate a premium
- More information: https://www.fema.gov/flood-insurance/risk-rating

National Flood Insurance Program (NFIP) Participating/Non-Participating Communities

What kind of assistance or support would you benefit from related to the NFIP?

CID	Community	Policies in Force	Insurance in Force	Total Paid Losses	Total Paid Amount
550538	Douglas County (Unincorporated areas)	33	$8,124,000	13	$715,886.82
550665	Fond du Lac Band of Lake Superior Chippewa*	-	-	-	-
550112	Village of Lake Nebagamon	2	$354,000	-	-
550113	Village of Oliver	-	-	1	$0.00
550114	Village of Poplar	-	-	-	-
550115	Village of Solon Springs	4	$879,000	2	$0.00
550116	City of Superior	8	$2,559,000	5	$2,056.08
550117	Village of Superior	-	-	-	-

*Not sanctioned

Mandatory Purchase Requirement

Flood Disaster Prevention Act of 1973

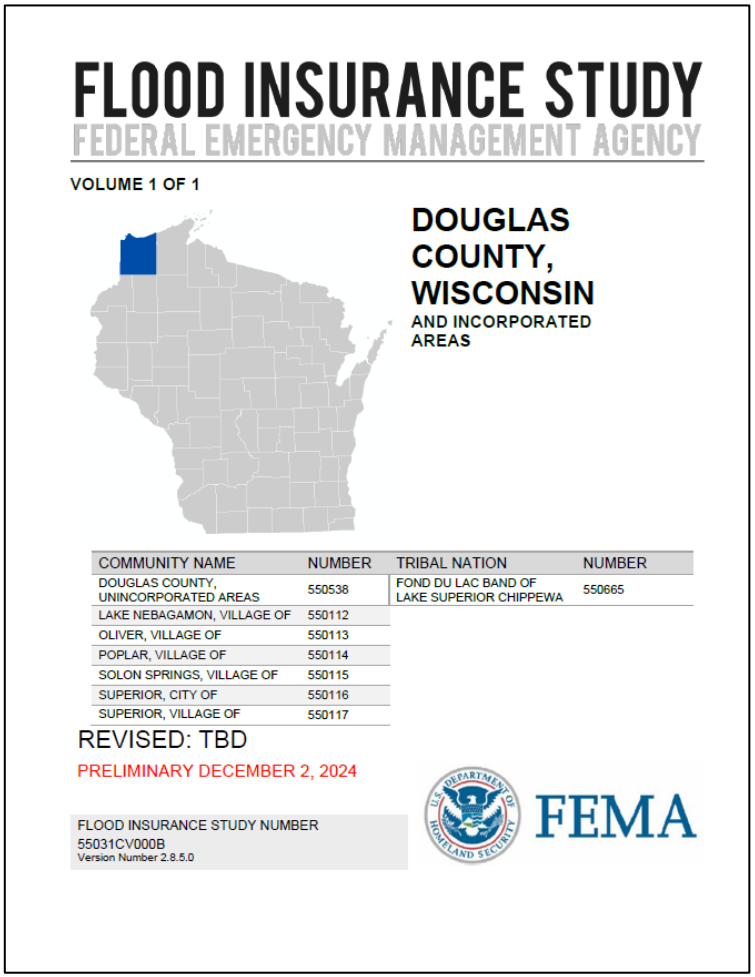
- Flood insurance purchase is required to make, increase, extend or renew any loan secured by structure in SFHA
- Flood insurance required for term of loan

Flood Insurance Reform Act of 1994

- Established penalties for lender non-compliance
- Requires lenders to review revised FIRMs
- Requires notification and mandatory purchase if revised FIRM shows structure in SFHA
- If escrow account is established, requires escrow for flood insurance

Preliminary Products

- FIRMs, FIS and Database



FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 1

DOUGLAS COUNTY, WISCONSIN

AND INCORPORATED AREAS

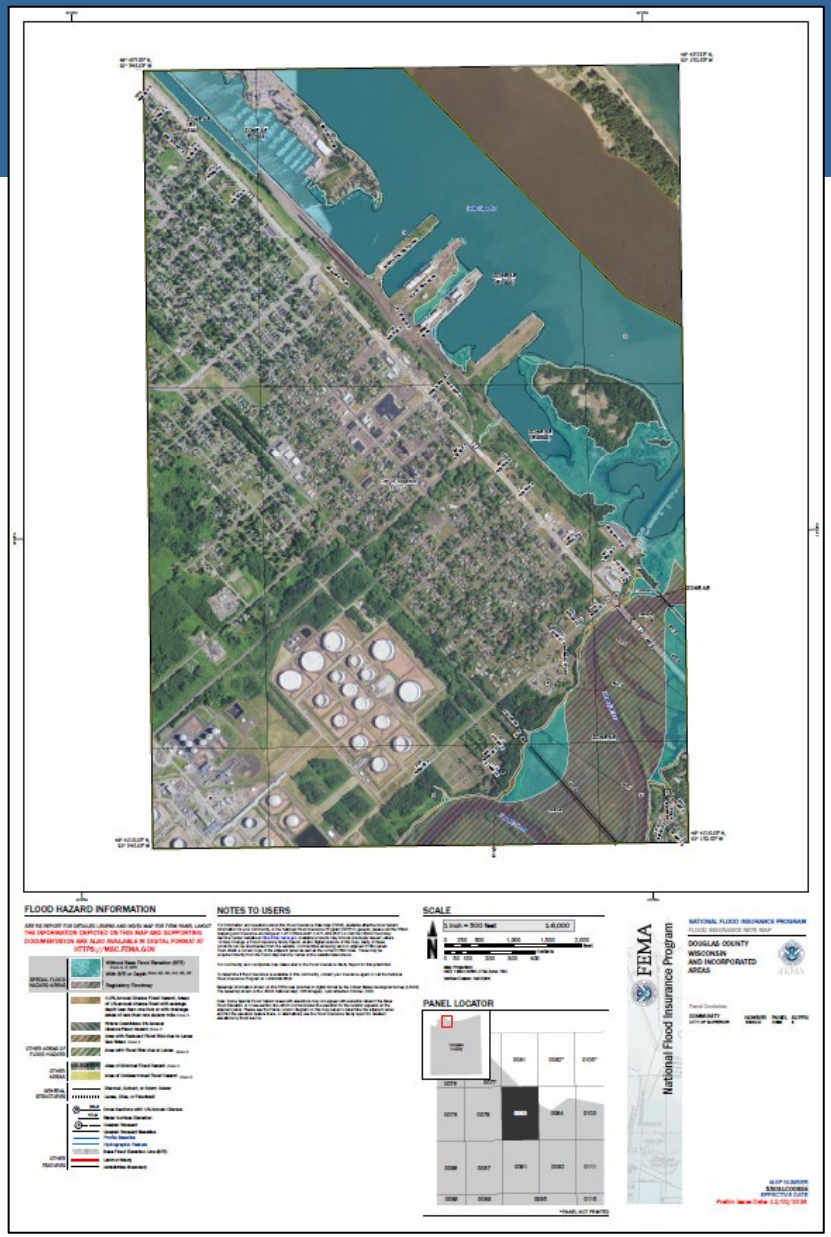
COMMUNITY NAME	NUMBER	TRIBAL NATION	NUMBER
DOUGLAS COUNTY, UNINCORPORATED AREAS	550538	FOND DU LAC BAND OF LAKE SUPERIOR CHIPPEWA	550665
LAKE NEBAGAMON, VILLAGE OF	550112		
OLIVER, VILLAGE OF	550113		
POPLAR, VILLAGE OF	550114		
SOLON SPRINGS, VILLAGE OF	550115		
SUPERIOR, CITY OF	550116		
SUPERIOR, VILLAGE OF	550117		

REVISED: TBD

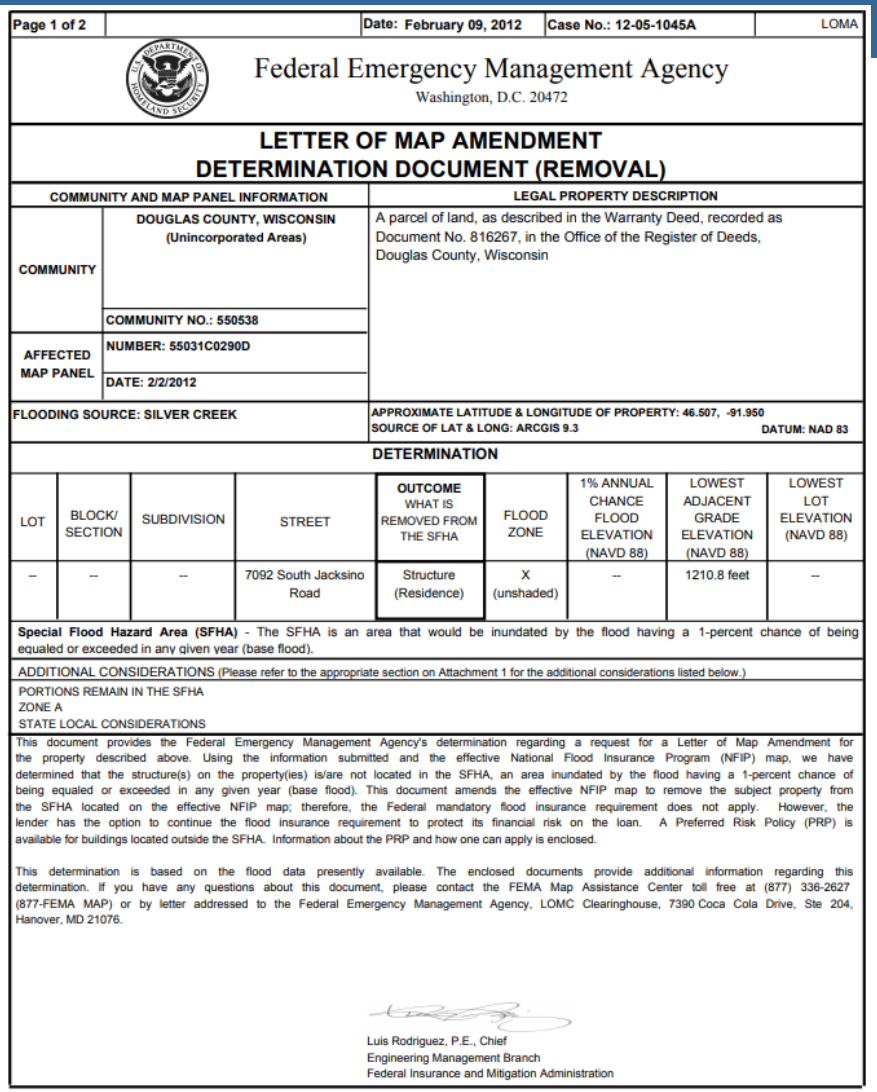
PRELIMINARY DECEMBER 2, 2024

FLOOD INSURANCE STUDY NUMBER
55031CV000B
Version Number 2.8.5.0

FEMA



Letter of Map Change (LOMC)



Page 1 of 2		Date: February 09, 2012	Case No.: 12-05-1045A	LOMA

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP AMENDMENT
DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	DOUGLAS COUNTY, WISCONSIN (Unincorporated Areas)	A parcel of land, as described in the Warranty Deed, recorded as Document No. 816267, in the Office of the Register of Deeds, Douglas County, Wisconsin
	COMMUNITY NO.: 550538	
AFFECTED MAP PANEL	NUMBER: 55031C0290D	
	DATE: 2/2/2012	
FLOODING SOURCE: SILVER CREEK		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 46.507, -91.950 SOURCE OF LAT & LONG: ARCGIS 9.3 DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (NAVD 88)	LOWEST ADJACENT GRADE ELEVATION (NAVD 88)	LOWEST LOT ELEVATION (NAVD 88)
--	--	--	7092 South Jacksino Road	Structure (Residence)	X (unshaded)	--	1210.8 feet	--

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

PORTIONS REMAIN IN THE SFHA
ZONE A
STATE LOCAL CONSIDERATIONS

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Amendment for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the structure(s) on the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document amends the effective NFIP map to remove the subject property from the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, LOMC Clearinghouse, 7390 Coca Cola Drive, Ste 204, Hanover, MD 21076.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

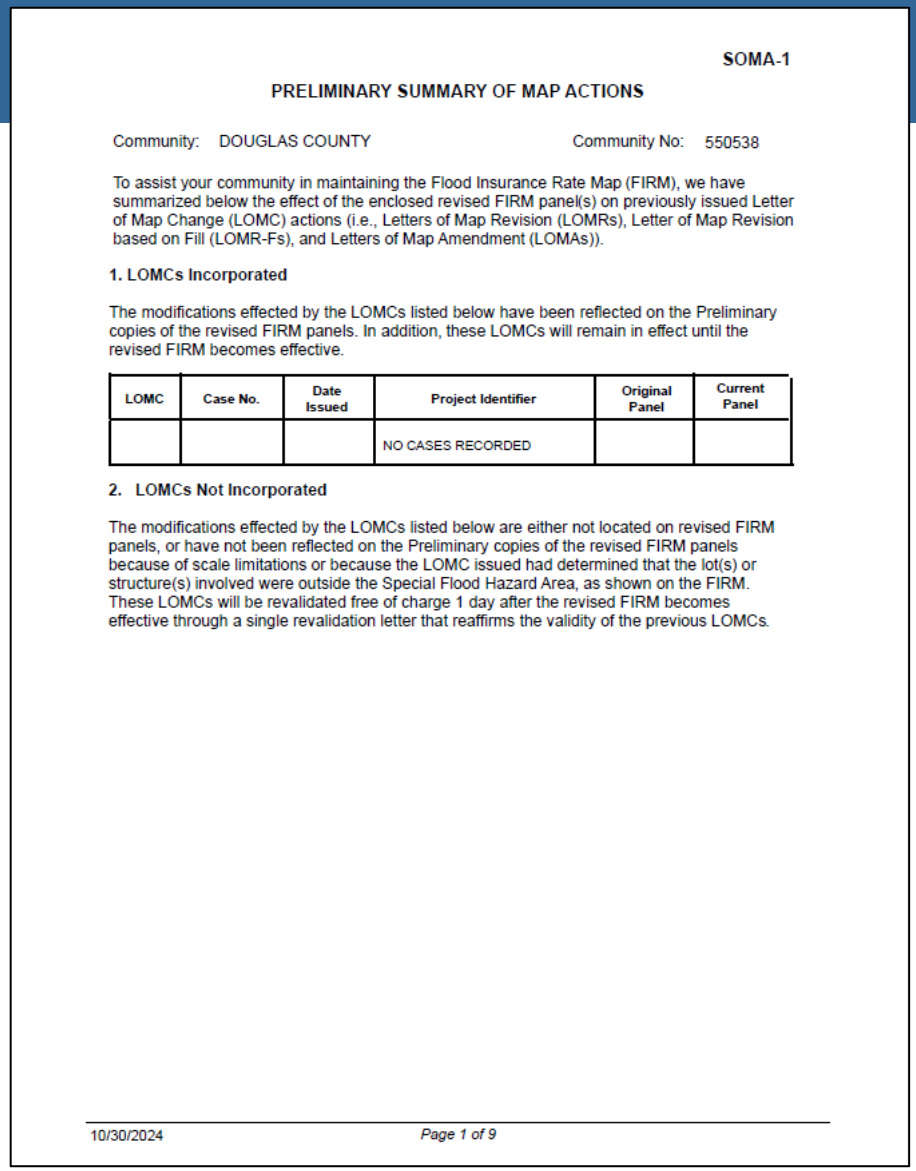
- Letter of Map Amendment (LOMA)
  - A letter from FEMA stating that an existing structure or parcel of land that has not been elevated by fill would not be inundated by the 1-percent-annual-chance flood.
- Letter of Map Revision (LOMR)
  - A letter from FEMA officially revising the effective FIRM to show changes to floodplains, floodways, or flood elevations.

Preliminary SOMA

Summarizes what will happen to previously effective LOMCs when the revised FIRM panels become effective.

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)
   a) 2A – LOMCs on revised Panels
   b) 2B – LOMCs on unrevised Panels
3. Superseded
4. To be re-determined



SOMA-1

PRELIMINARY SUMMARY OF MAP ACTIONS

Community: DOUGLAS COUNTY Community No: 550538

To assist your community in maintaining the Flood Insurance Rate Map (FIRM), we have summarized below the effect of the enclosed revised FIRM panel(s) on previously issued Letter of Map Change (LOMC) actions (i.e., Letters of Map Revision (LOMRs), Letter of Map Revision based on Fill (LOMR-Fs), and Letters of Map Amendment (LOMAs)).

1. LOMCs Incorporated

The modifications effected by the LOMCs listed below have been reflected on the Preliminary copies of the revised FIRM panels. In addition, these LOMCs will remain in effect until the revised FIRM becomes effective.

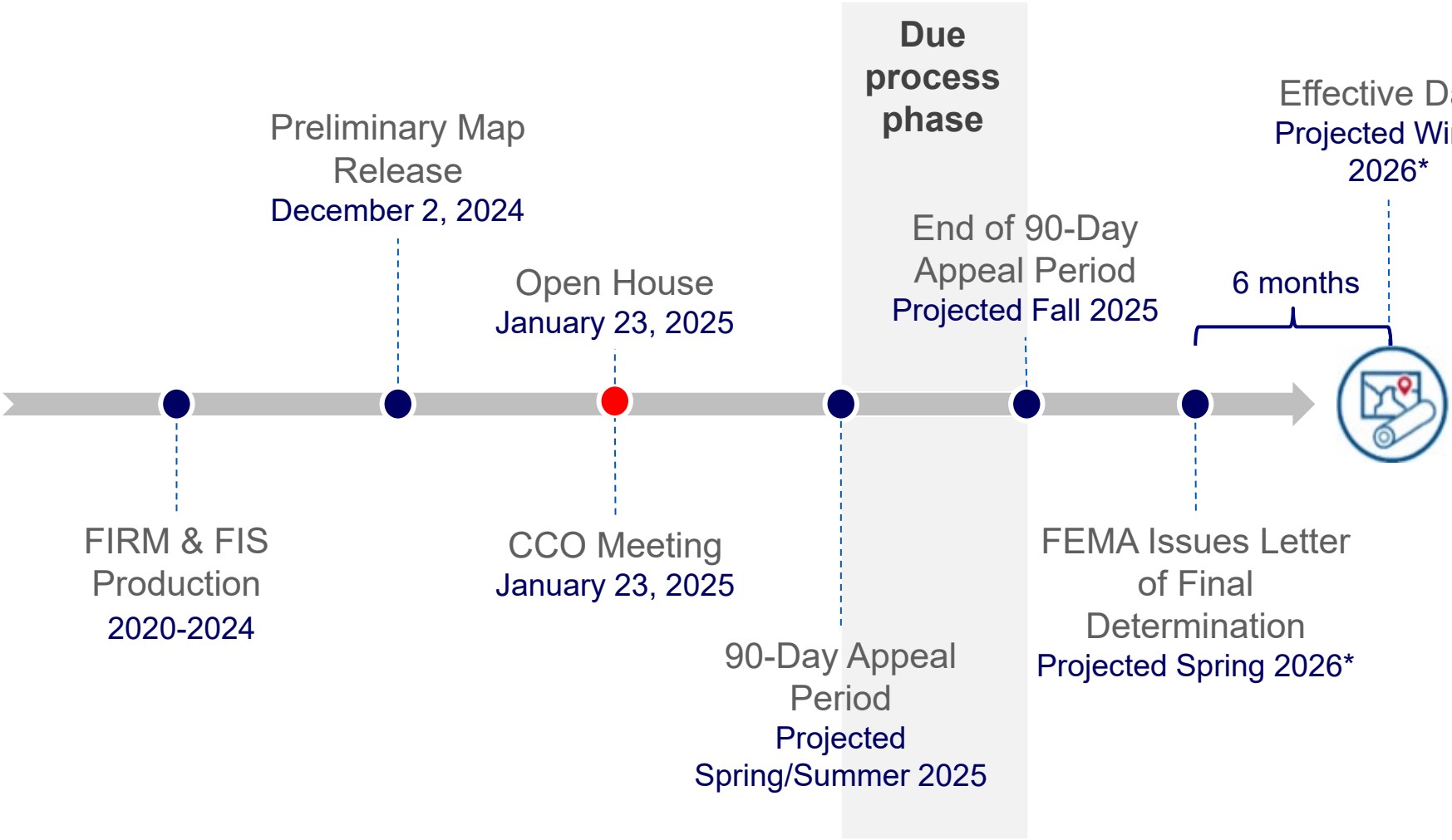
LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
			NO CASES RECORDED		

2. LOMCs Not Incorporated

The modifications effected by the LOMCs listed below are either not located on revised FIRM panels, or have not been reflected on the Preliminary copies of the revised FIRM panels because of scale limitations or because the LOMC issued had determined that the lot(s) or structure(s) involved were outside the Special Flood Hazard Area, as shown on the FIRM. These LOMCs will be revalidated free of charge 1 day after the revised FIRM becomes effective through a single revalidation letter that reaffirms the validity of the previous LOMCs.

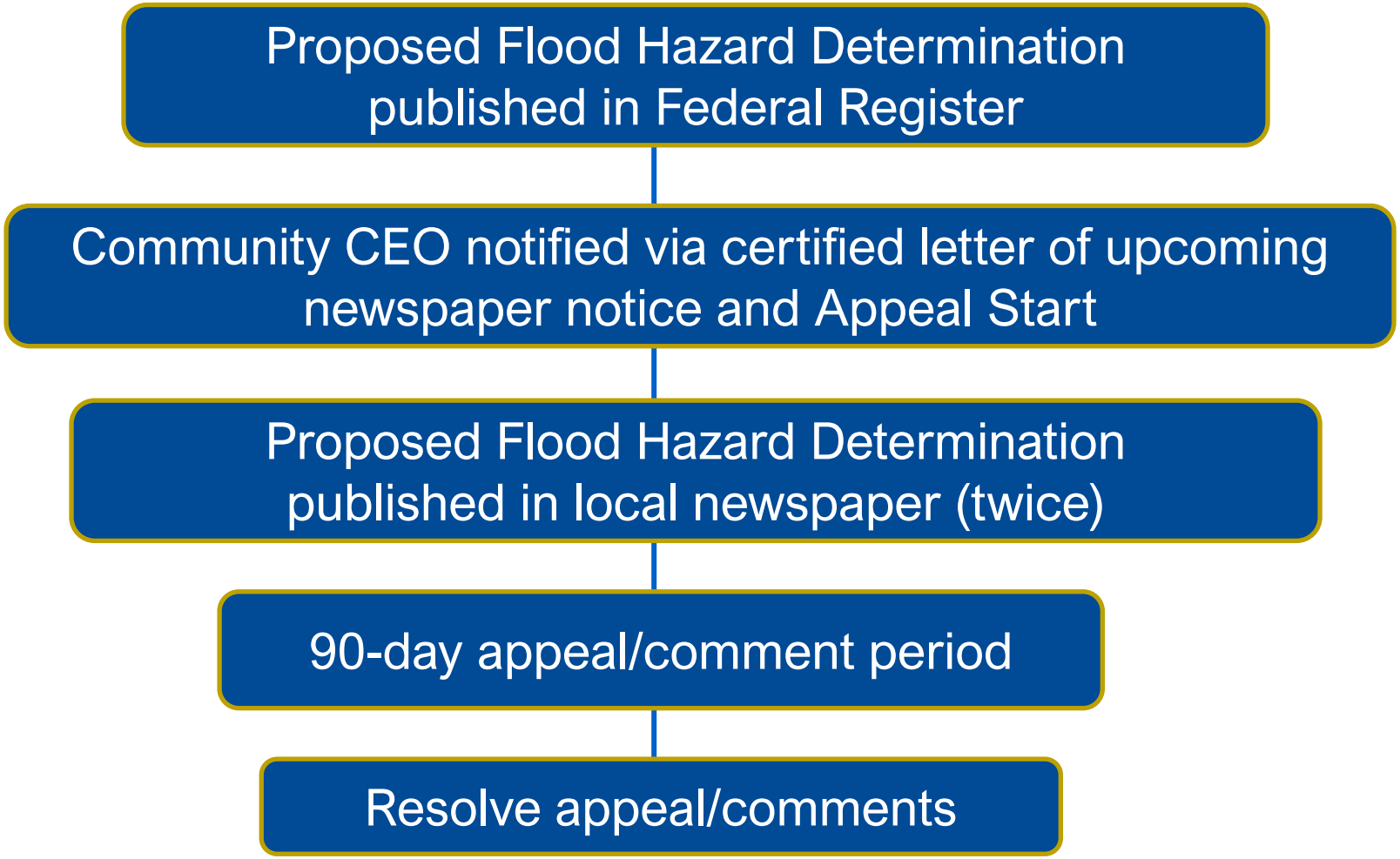
10/30/2024 *Page 1 of 9*

Timeline



*Dates subject to change pending any appeals/comments

Due Process Phase



90-Day Appeal Period

- Community (or individuals via their community) may appeal areas that:
  - Show new or revised BFEs
  - Show new or revised SFHA (increase or decrease)
  - Show new or revised regulatory Floodway boundaries (increase or decrease)

Requirements for Appeal

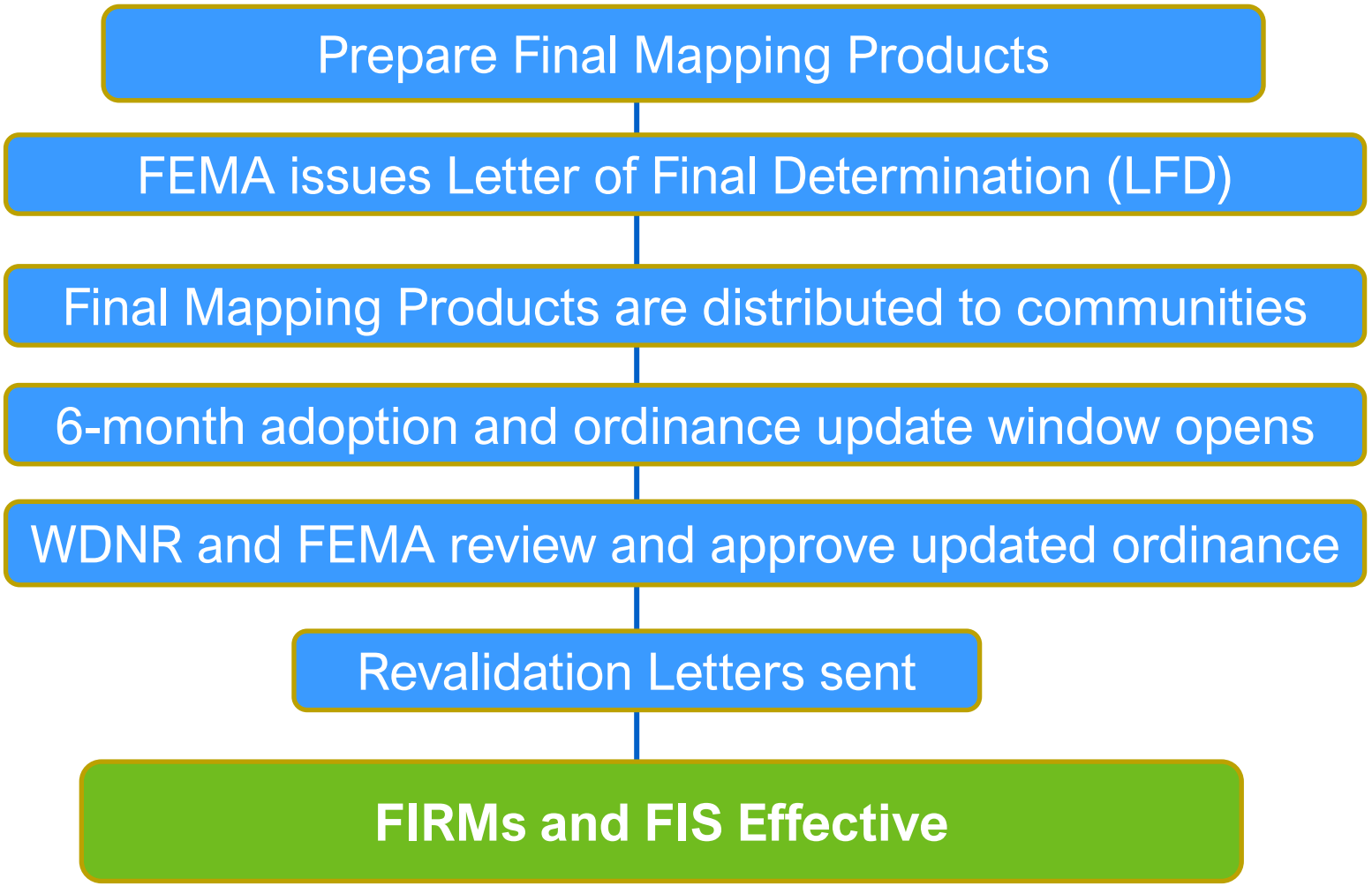
- Revised hydrologic and/or hydraulic analysis
- Revised flood profiles, floodway data tables and Summary of Discharges table
- Be based on data that show the new or modified BFEs, base flood depths, SFHA boundaries, SFHA zone designations, or floodways to be scientifically or technically incorrect
  - Documentation for source of new data
  - Proof that new topo data meets FEMA accuracy standards
  - Explanation of error or misapplication of methodology
- 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
- Must be received during the statutory 90-day appeal period

Comments

- All other challenges to the maps are considered comments:
  - Corporate limit revisions
  - Road name errors or revisions
  - Base map errors
  - Requests that changes effected by a LOMA, LOMR-F, or LOMR be incorporated
  - Other possible omissions or potential improvements to the mapping

Appeal/Comment Flow Chart

Final Delivery and Adoption



Letter of Final Determination

- Timeline Prior to Effective Date
  - 6 months prior: FEMA 6-month LFD Letter
  - ASAP: 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)
- WI DNR will assist communities to update local Floodplain Management Regulations

Adoption by Community

- Every community may have a different process to adopt ordinances or modify existing ordinances.

May require:

- A public notice and comment period
- a sub-committee approval prior to full board adoption
- two or more readings at board meetings prior to formal adoption

- Start early

Ordinance Adoption

Wisconsin Model Floodplain Ordinance

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

MODEL FLOODPLAIN ORDINANCE

FOR

WISCONSIN COMMUNITIES

Effective March 10, 2022

A cooperative effort
of
Wisconsin Department of Natural Resource
and
Federal Emergency Management Agency

Blue highlights are instructional for the ordinance writer and can be deleted once the item is completed
Yellow highlights are places where the ordinance needs to be filled in with community specific information
Grey highlights are ordinance additions for communities that choose to implement Act 175
Red highlights are ordinance additions for communities that have existing Cranberry Farms (FA-C) (when applicable)
Green highlights are ordinance additions for communities that have adopted a Flood Storage District (when applicable)
Pink highlights are ordinance additions for communities that have adopted a Coastal Floodplain District (CFD) (Great Lakes when applicable)

Please replace this page with," Floodplain Ordinance for (Name of your Community_____
Effective: Insert date ordinance was adopted by the community"

dnr.wisconsin.gov
Search "Model Ordinance"

Adoption Step by Step Guide

Adopting an Ordinance: A Step-By-Step Guide

Adopting an Ordinance

1. Proposal to Governing Body
2. Notice of Public Hearing
   - Two consecutive weeks at least a week before hearing.
3. Public Hearing
4. Decision by Governing Body
5. Ordinance Publication
6. Prepare for DNR Approval:
   - Affidavit of Publication of Notice
   - Certified Copy of Final Ordinance Text
   - Affidavit of Publication of Enacted Ordinance
7. Approval by DNR
   - This is the last step, but to speed the approval process up, submit the draft proposal to DNR before starting the ordinance adoption process.

1. Ordinance/Amendment Proposal
Generally, ordinance proposals are drafted by the zoning administrator, planning and zoning staff, corporation counsel or a regional planning commission at the request of the local governing body.

Notice of public hearing (a Class 2 notice under ch. 985, Stats.) must appear in a newspaper on two consecutive weeks, the last publication at least *seven days* prior to the hearing date.

Calendar

S	M	T	W	Tr	F	Sa
				N1		
				N2	1	2
3	4	5	6	H		

2. Notice of Public Hearing
Communities must provide notice of the public hearing to be conducted on the proposed ordinance/ amendment. Publication of the notice of public hearing must meet the Class 2 legal requirements (under Ch. 985, Stats.) in order for the zoning ordinance or amendment to be valid. Posting notice of public hearing is permitted in lieu of publication only if the municipality is not required to have an official newspaper.

3. Public Hearing
In cities and villages, the hearing may be held before the designated planning and zoning committee or before the municipal governing body. In counties, hearings on proposed zoning ordinances or amendments are held by the county zoning committee before consideration of an ordinance or amendment by the county board.

4. Decision of the Governing Body
In cities, two thirds of the members of the municipal governing body constitute a quorum except in cities with less than five aldermen, where a majority constitutes a quorum. In villages, a majority of the members constitute a quorum. In counties, a majority of the supervisors constitute a quorum and must be present for a legal vote on proposed zoning ordinances or amendments.

5. Publication of Adopted Ordinance Text
An adopted zoning ordinance or amendment must be published once in the municipality's official newspaper as a Class I Notice Posting. Posting is an option if the municipality is not required to have an official newspaper published in the municipality that meets the requirements.

6. Ordinance/Amendment Approval
For the DNR to approve an adopted ordinance, the community must submit the following documentation:

- **An affidavit of publication from the newspaper and a copy of the published notice.** This verifies that the notice of public hearing was published or posted correctly. If the notice was posted, a notarized affidavit by the local official (i.e clerk) stating that the notice of public hearing was posted in three public places (with date and location) is sufficient proof.
- **A certified copy of the adopted ordinance passed by the governing body.** A notarized statement by the local official (i.e. clerk) affixed to the ordinance stating that the ordinance is a true and correct copy of what was adopted by the municipality.
- **An affidavit of publication from the newspaper and a copy of the notice of the enacted ordinance.** If the enacted ordinance (or where to view enacted ordinance) was posted, a notarized affidavit by the local official (i.e., clerk) stating that it was posted in three public places (with date and location) is sufficient proof.

7. Wisconsin Department of Natural Resources
The DNR reviews ordinances for compliance with the minimum state standards. Both the ordinance and adoption procedures are reviewed. When it is determined that all the requirements are met, a formal approval letter is sent to the adopting community.
Floodplain zoning ordinances and amendments do not become effective until approved by the DNR; thus formal approvals are issued each time the ordinance is amended. DNR approvals are required by FEMA for a community to maintain their flood insurance.
To minimize the time and expense associated with ordinance revisions, communities should submit a draft of the proposed language to DNRFLOODPLAIN@wi.gov. Once the DNR has reviewed the draft and the community has made any needed revisions, please follow the complete adoption process outlined in this guide. If you have questions regarding floodplain ordinance adoption, please contact DNR Floodplain staff at DNRFLOODPLAIN@wi.gov or 608-220-5633.

January 2019

Websites & Questions

- FEMA Map Changes Viewer
  - *https://msc.fema.gov/fmcv*
- DNR Floodplain Management and Mapping website
  - https://dnr.wisconsin.gov/topic/FloodPlains
- Individual Questions
  - Maps
  - Floodplain Management
  - Insurance
  - Map Adoption
  - Flood Storage Maps