FEMA

WDNR

Bayfield County
Flood Risk Review Meeting

August 22, 2024

RiskMAP
Increasing Resilience Together

Zoom Meeting Housekeeping

- **Please enter the organization you belong to in the group chat 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**
- **You are muted and video turned off upon entry**
- **If you wish to ask a question, raise your hand or type it in chat**

Introductions

- **Risk MAP Project Team, Wisconsin Department of Natural Resources (WDNR)**
  - G. Fritz Statz - GIS Project Lead
  - Chris Olds - State Floodplain Engineer
  - Marc Budsberg - Project Engineer
- **NFIP Coordinator**
  - Sarah Rafajko
- **Regional Engineer**
  - Jacob Druffner
- **Wisconsin Emergency Management (WEM)**
  - Chad Atkinson – Hazard Mitigation Section Supervisor

Introductions

- **Federal Emergency Management Agency (FEMA)**
  - Munib Ahmad – Region V Engineer
  - Gabriel Jackson – Region V Senior NFIP Specialist
  - Meghan Cuneo – Community Planner
  - Troy Christensen – Public Affairs Specialist & Regional Tribal Liaison

Agenda

- **Flood Risk Review**
  - **Project Overview**
  - **Riverine Flood Risk Study and Mapping**
  - **Coastal Study and Mapping**
  - **Upcoming Mapping Schedule**
  - **NFIP Overview**
  - **Mitigation**
- **Wrap-up**
  - **Questions/View Maps**

Meeting Goals

Community input throughout the FEMA map revision process is essential to flood risk management. You are getting the first possible look at the analyses and DRAFT results so that you can provide your feedback early on.

- Provide an overview of the hydrologic and hydraulic analysis
- Present the DRAFT results
- Answer questions about the analysis
- Collect your concerns/feedback/technical data

Risk MAP

- **What is Risk MAP?**
  - Risk **M**apping, **A**ssessment, and **P**lanning
  - Supports community resilience by providing data, building partnerships, and supporting long-term hazard mitigation planning.
  - Offers a way to understand the hard realities of hazards before they happen and how to take actions now that help keep your community safe.
  - Builds off previous FEMA map revision projects

The mapping process is designed to help individuals and communities understand their flood risk and make smart decisions.	• Your community is working with FEMA to help design a map that can protect your community and the families, homes, and business within it. • The mapping process has many phases so it may be many years before you see the updated flood map. • The MAP acronym encompasses Mapping, Assessment, and Planning. In other words, helping identify and assess the risks in your area and then working together to support the kind of long-term planning that makes your community stronger and safer.

Risk MAP Project Status

- **Current effective mapping**
  - 2011 – Countywide

- **Where have we been?**
  - Bayfield County Kickoff Meeting – March 19, 2020
    - Discussed project scope, types of community data requested, and hazard mitigation

Engineering Methods

- The methods used in flood risk studies are
  - scientifically and technically appropriate
  - meet professional standards
  - explained in the ‘620’ letter sent to communities in March 2020

- Hydrologic and hydraulic studies determine
  - the potential depth of floodwaters
  - width of floodplains
  - amount of water that will be carried during flood events
  - also takes into consideration certain obstructions to water flow

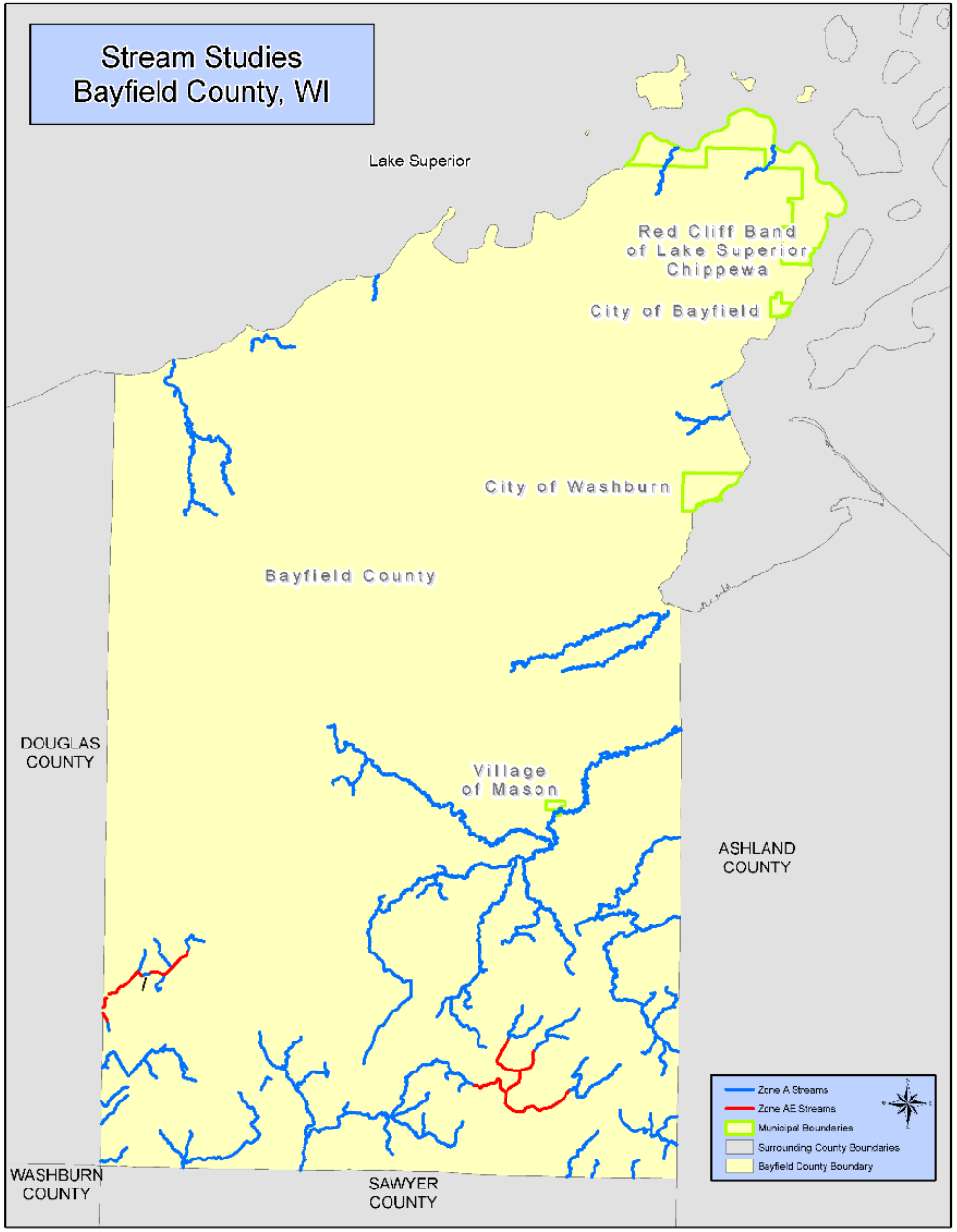
Revised Study Reaches

Bayfield Countywide

- Revised Approximate: 363.5 miles

Coastal Study

- Revised Detailed: 89.6 miles (previously released)



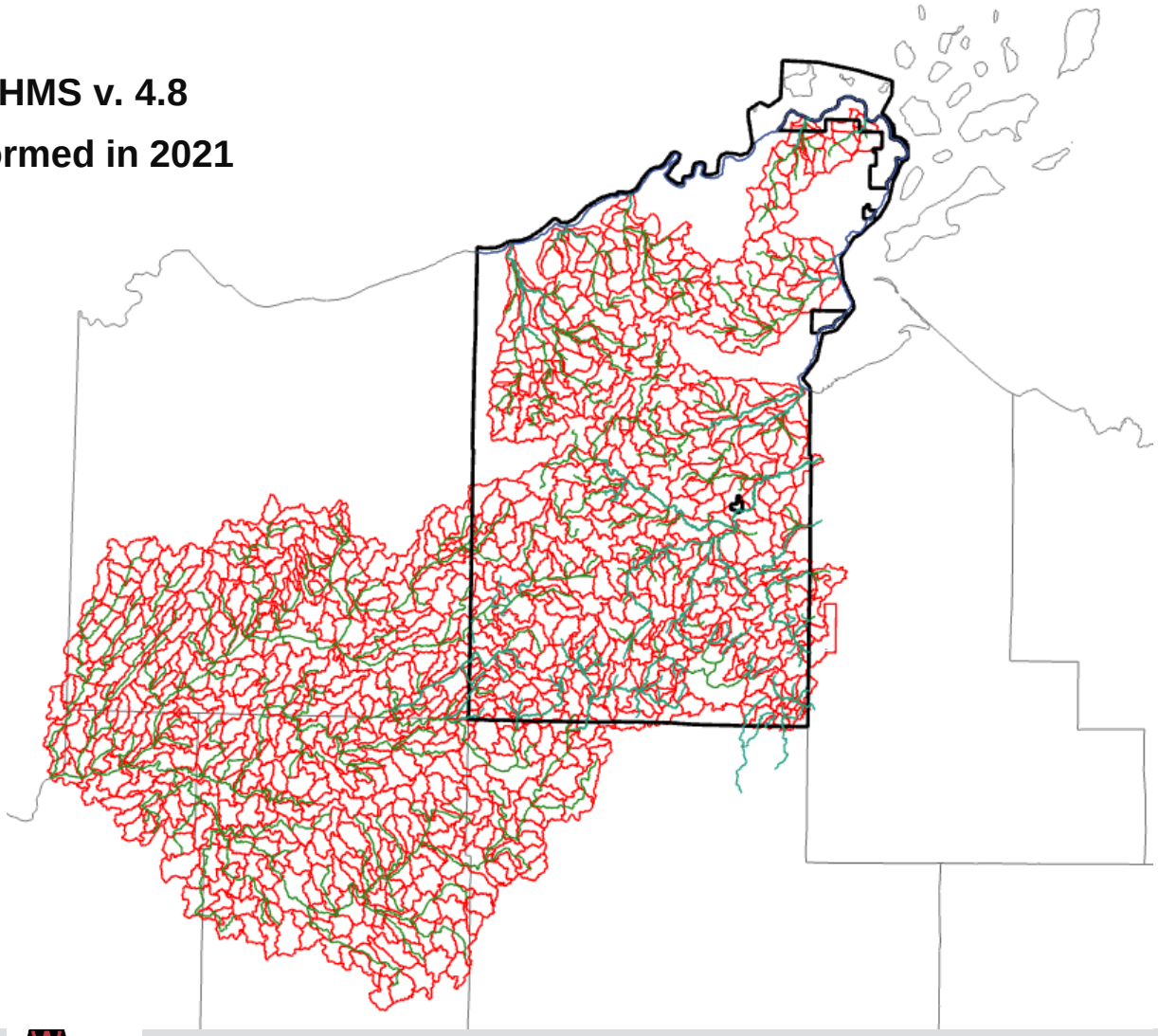
Redelineated Study Reaches

Remapped effective study elevations on 2018 Bayfield County LiDAR based terrain data (5-foot DEM)

- Lower Eau Claire Lake
- Middle Eau Claire Lake
- Namekagon Lake
- Upper Eau Claire Lake

Hydrology

- **HEC-HMS v. 4.8**
- **Performed in 2021**



Approximate Study Hydraulics

- **HEC-RAS v. 6.2**
- **Structures:**
  - Entered as bridges/culverts where DOT plans available
  - Entered as inline structures with a notch width estimated from aerial photos
- **All geometry extracted using HEC-GeoRAS and latest available LiDAR**
- **NAVD88 vertical datum**
- **Interpolated cross sections where necessary for model stabilization**
- **Ineffective flow used to model floodways in non-conveyance areas**
- **Manning's N values estimated from aerial photography**
- **Boundary conditions:**
  - Receiving stream corresponding event elevation when peaks coincide
  - Receiving stream 10-year event when receiving stream peaks after studied stream
  - Normal depth when stream downstream of last cross section is unstudied

About Flood Maps (FIRMS)

Ultimately, your flood maps belong to you and the other people who live and work in your community. They are created through a partnership between your community and FEMA.

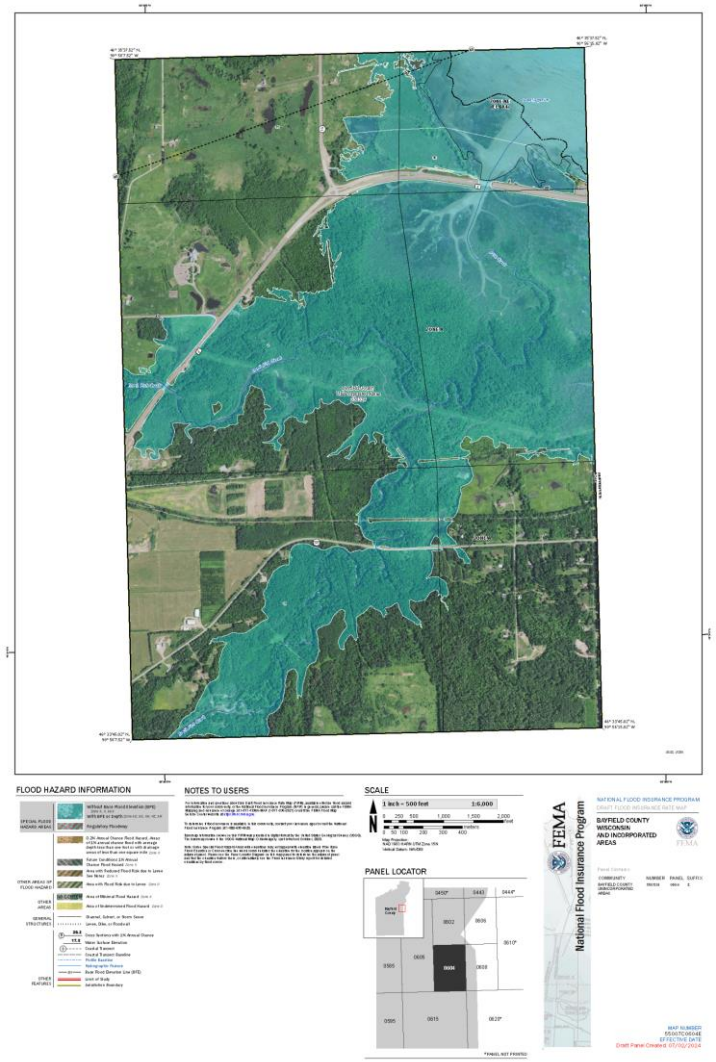
- Updates to flood maps are a collaboration between your community and FEMA. It's a lengthy process; FEMA provides the technology and relies on your community's leaders to share local knowledge and plans to make the maps as accurate as possible.
- Before the maps are adopted, you have 90 days to submit technical data to support a request to revise the FIRM though the appeals process.
- Once your maps are adopted, you can still submit data to amend or revise the flood map as part of the Letter of Map Change (LOMC) process.

- FIRMs are not predictions of where it will flood or only show where it's flooded before.
  - They provide a snapshot in time of risk.

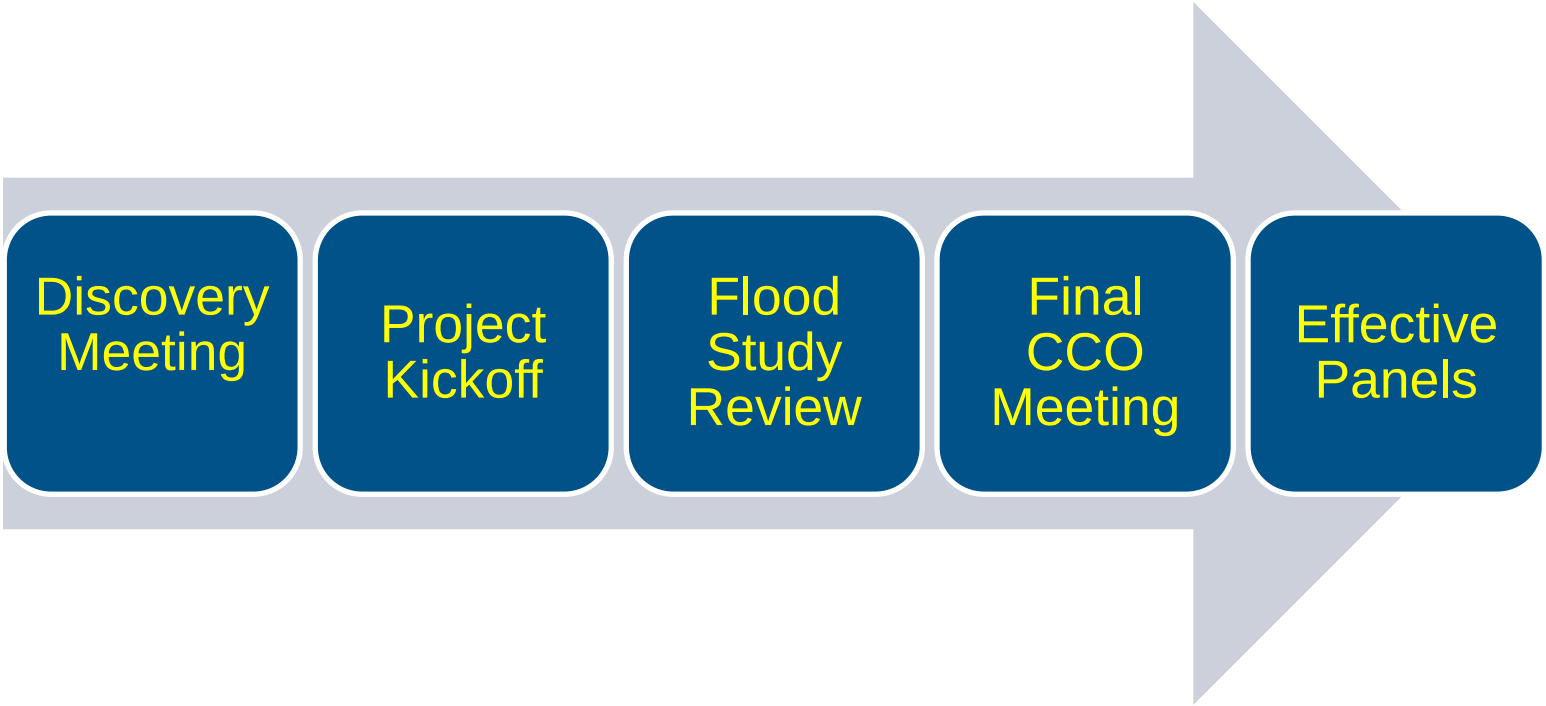
FEMA uses the best data available to help communities understand their risk. This data is a combination of the information your community provides and FEMA's own scientific research and analysis.

- The methods employed in flood risk studies are scientifically and technically appropriate and the engineering practices meet professional standards. The results are accurately represented on FIRMs and associated products.
- FEMA's flood hazard analysis and mapping standards and associated guidance are vetted, peer reviewed, and updated regularly to ensure they align with current best practices.

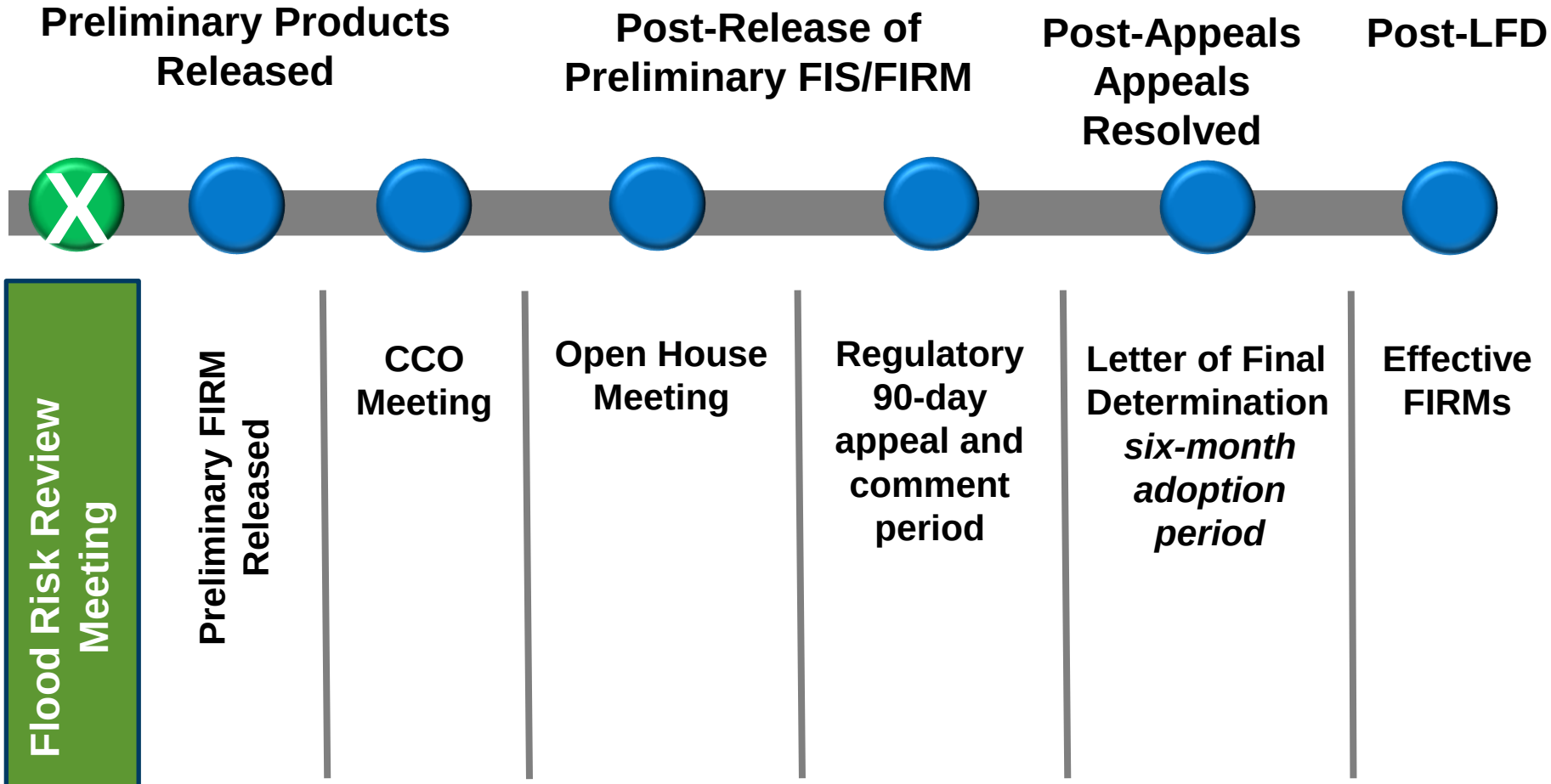
DRAFT
Workmaps



Risk MAP Project Timeline



Timeline for Bayfield County Study



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 and other economic**

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**

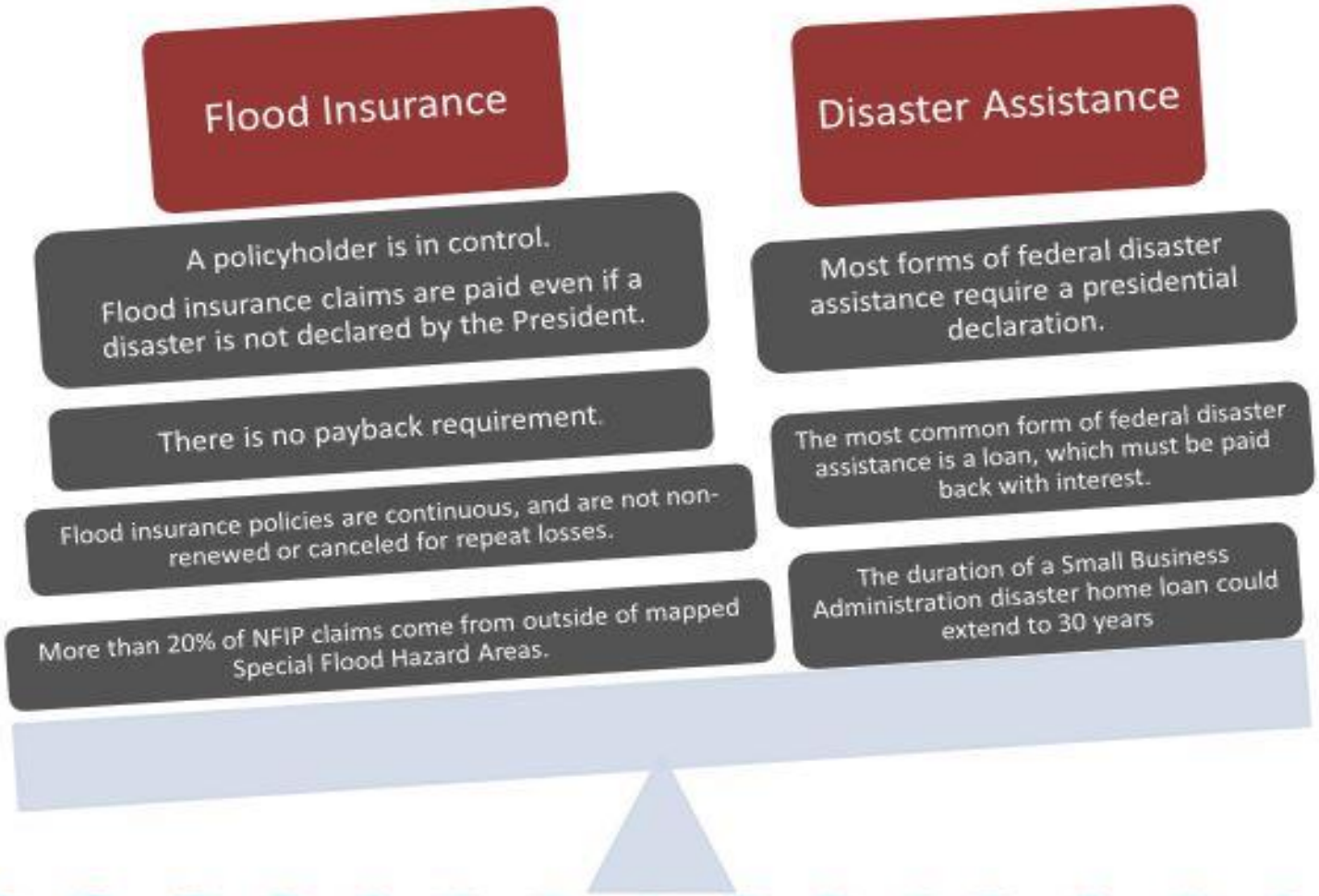
Basic NFIP Regulations

- 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	Number Policies	Total Coverage	Total Claims	Total Paid
550017	City of Bayfield	1	$ 237,000	2	$ 1,118
550019	City of Washburn	0	$0	0	$0
550364	Red Cliff Band of Lake Superior Chippewa	0	$0	0	$0
550539	Bayfield County	11	$ 3,224,000	18	$ 137,915
550598	Village of Mason*	0	$0	0	$0

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

Hazard Mitigation

Risk MAP Bayfield County
August 2024

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."

Photo from Kenosha County


Photo from Soldiers Grove, WI

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.

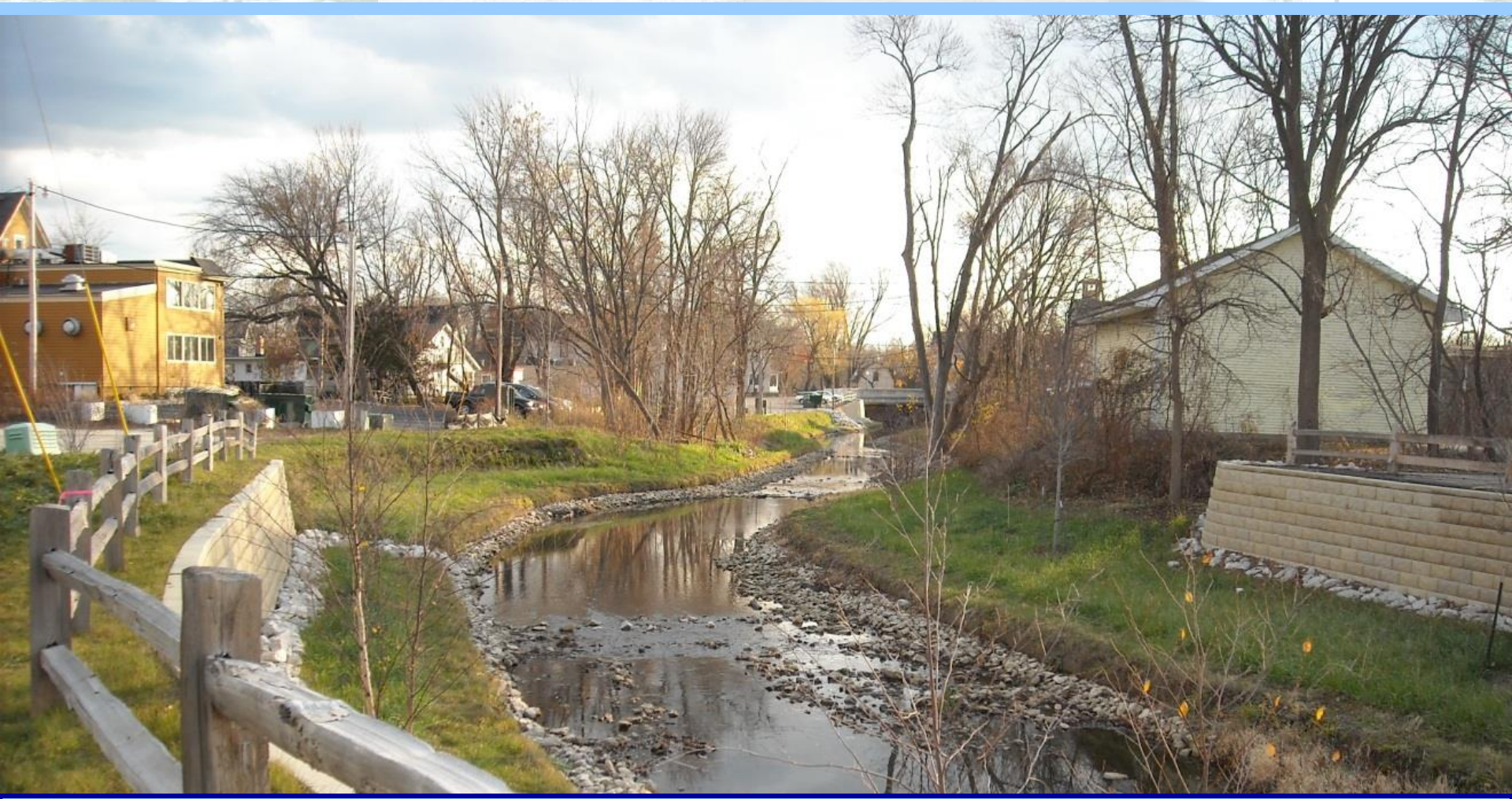
Image from Darlington, WI

Stormwater Retention/Detention

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

Image from Oshkosh, WI

Stormwater

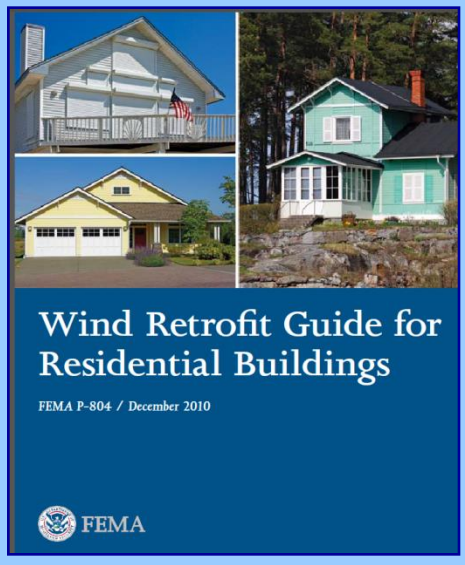


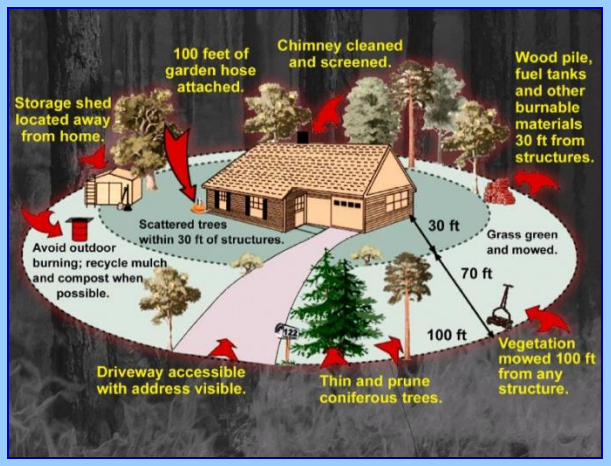
Stream restoration allows watersheds to better manage flooding.

Image from Theinsville, WI

Other Ideas


Mobile Home Tie-Downs





Proper Landscaping

- Tornado safe room
- Utility protection
- Raise appliances and utilities
- Install back-flow valves
- Retrofit for wind resistance
- Education and public awareness
- Insurance (flood and sewer backup)
- Land-use planning

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

Town of Clover, WI

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:

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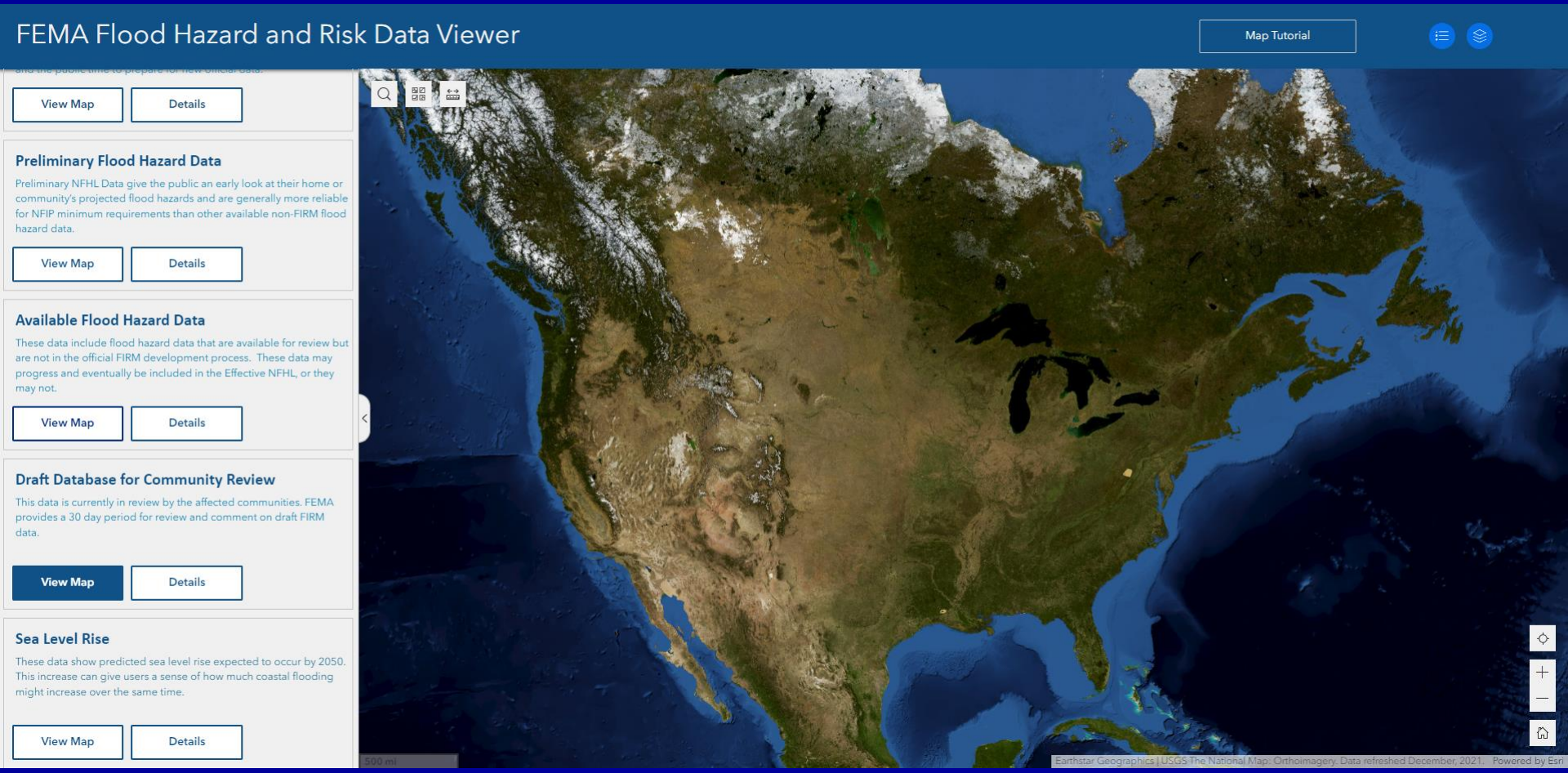

https://www.fema.gov/flood-maps/national-flood-hazard-layer

What's Next?

- **Review maps/models**
- **Work on preliminary map products**
- **A follow-up email with resources and links will be sent if necessary**

Questions & Discussion

- **Maps, Scheduling**: G. Fritz Statz
- **NFIP, Ordinance**: Sarah Rafajko
- **Engineering**: Chris Olds, Marc Budsberg
- **Mitigation, Emergency Management**: Heather Thole, Katie Sommers, Chad Atkinson

Thanks for participating! We'll be communicating again soon.