



FEMA



WDNR

# Langlade County Flood Risk Review & Resilience Meeting

**April 14<sup>th</sup>, 2023**

**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)**
  - Emily Szajna - Project Lead
  - Brian Cunningham- NFIP Coordinator
  - Chad Heimerl – Floodplain Engineer
  - Forrest Van Asten – Regional Engineer
- **Wisconsin Emergency Management (WEM)**
  - Heather Thole – State Hazard Mitigation Officer

# Introductions

- **Federal Emergency Management Agency (FEMA)**

- Munib Ahmad – Region V Engineer
- Ken Hinterlong – Region V Engineer
- Frank Shockey – Region V Senior NFIP Specialist
- Cadence Peterson – Region V Planner

# Agenda

- **Project Overview**
- **Riverine Flood Risk Study and Mapping**
- **Overview of Non-Regulatory Flood Risk Products and Datasets**
- **Hazard Mitigation**
- **Mapping Schedule**
- **Questions**

# 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

# Other Meeting Objectives

- We are here to assist you in:
  - Using flood map products to develop new strategies to reduce your risk
  - Understanding the resources available to help you implement those strategies
  - The importance of and opportunities for communicating flood risk to your constituents

# 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

- **Initial mapping**

- 1975, 1976, 1990

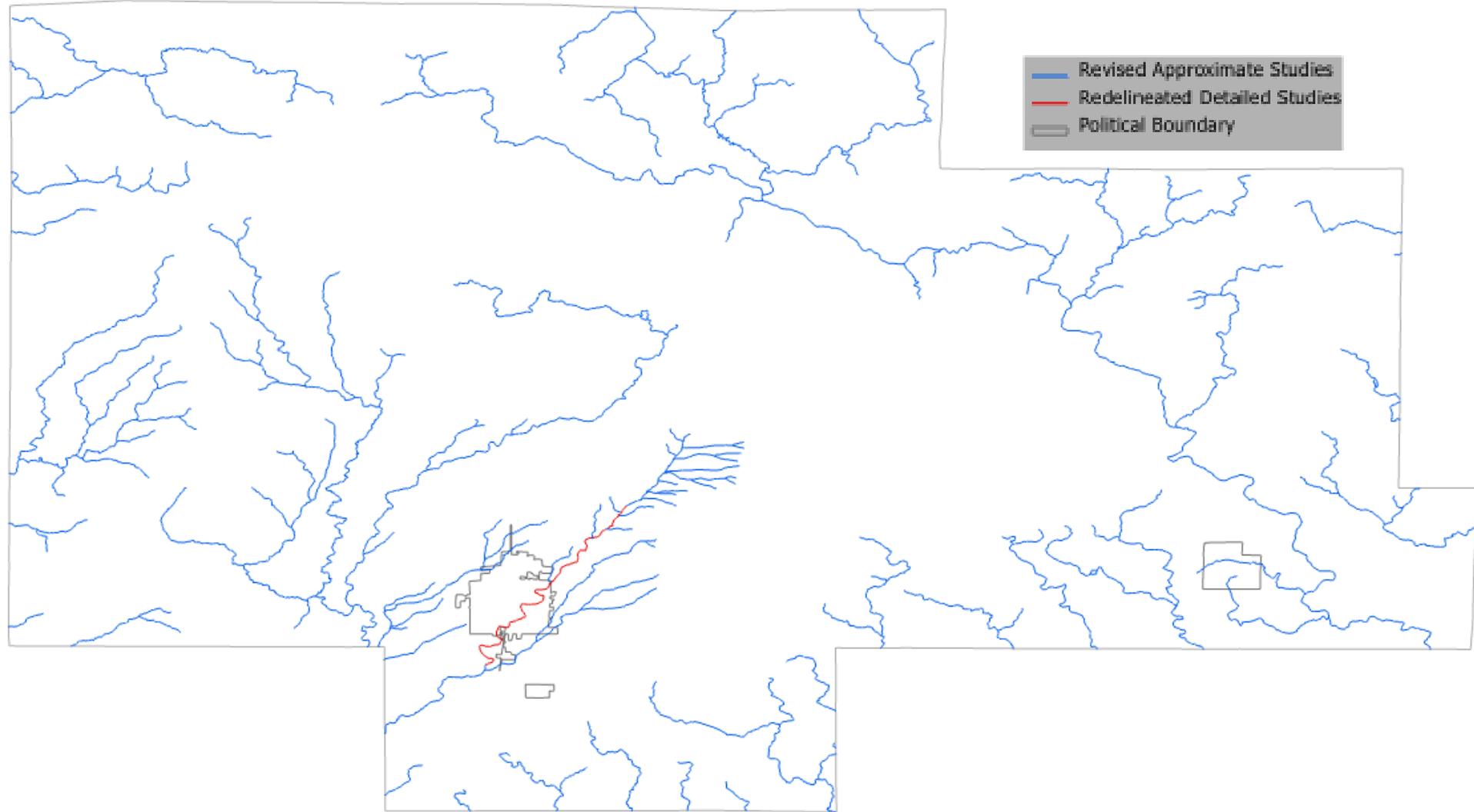
- **Where have we been?**

- Kickoff Meeting - April 29, 2020
  - Covered the goals of RiskMAP, project timeline, basic NFIP information, and types of data to be gathered
  - Discussed your flooding history and other concerns that impact flood risk and hazard mitigation
  - Discussed potential impacts resulting from the new digital data and community engagement workshop options

# 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
  
- 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

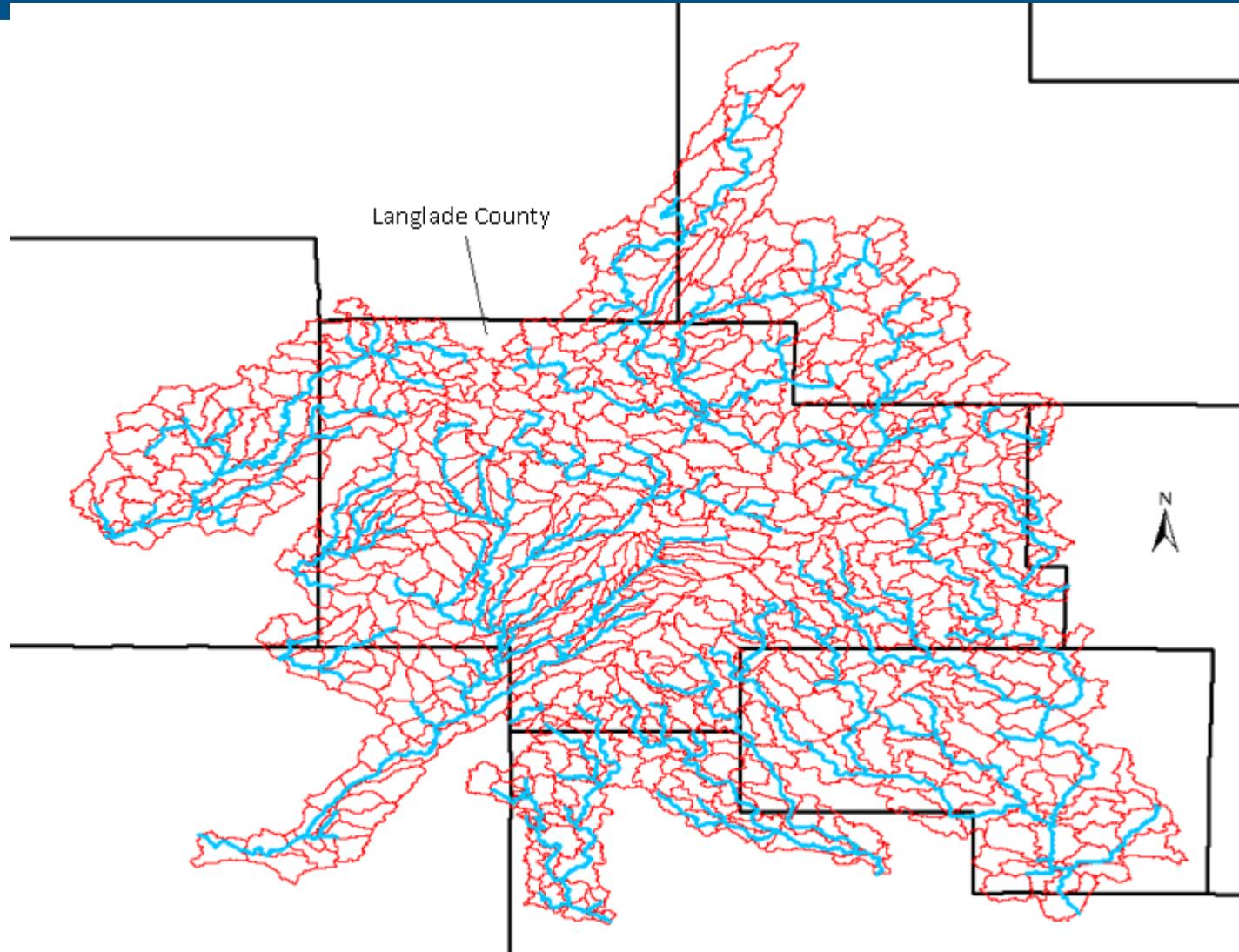
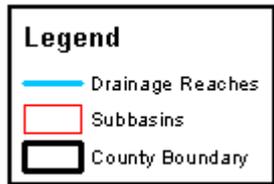


# Redelineation

- **Converted elevations from NGVD29 to NAVD88 (0.0' conversion)**
- **Remapped effective study elevations on 2017 Langlade County LiDAR based terrain data (5-foot DEM)**

# Approximate Study Hydrology

- HEC-HMS v. 4.3



# Approximate Study Hydraulics

- **HEC-RAS v. 5.0.7**
- **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 2017 Langelde County 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 through 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.**

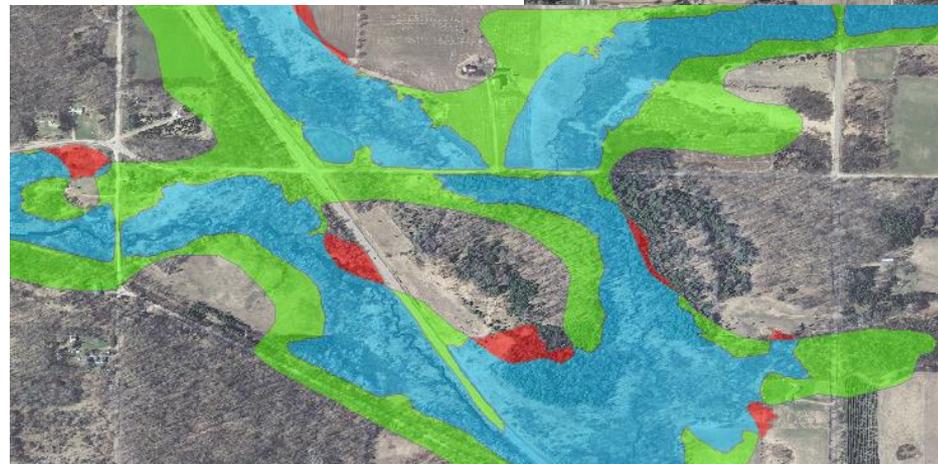
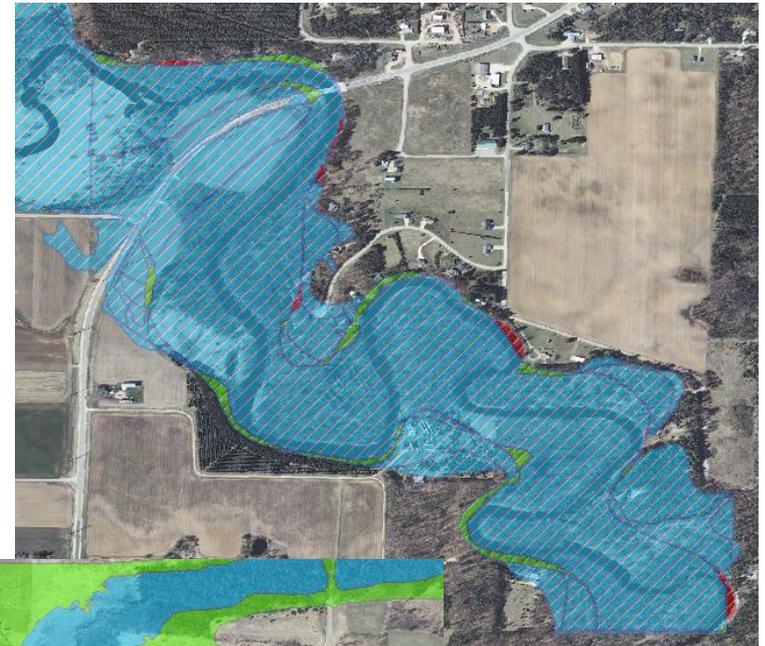
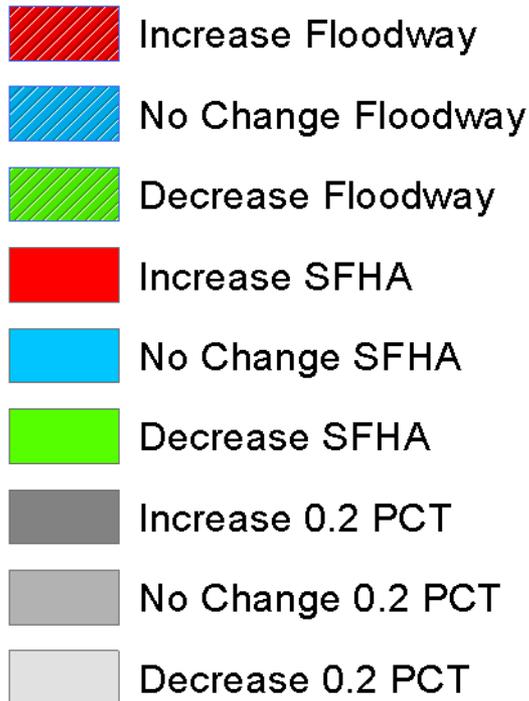
- The methods employed in flood risk studies are scientifically and technically appropriate and the engineering practices meet professional standards. The results are accurately represented on FIRMs and associated products.
- FEMA's flood hazard analysis and mapping standards and associated guidance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

# Non-Regulatory Flood Risk Products and Datasets

- **Flood Risk Products**
  - Flood Risk Database
  
- **Flood Risk Datasets**
  - Changes Since Last FIRM (CSLF)
  - Areas of Mitigation Interest (AOMI)

# Changes Since Last FIRM

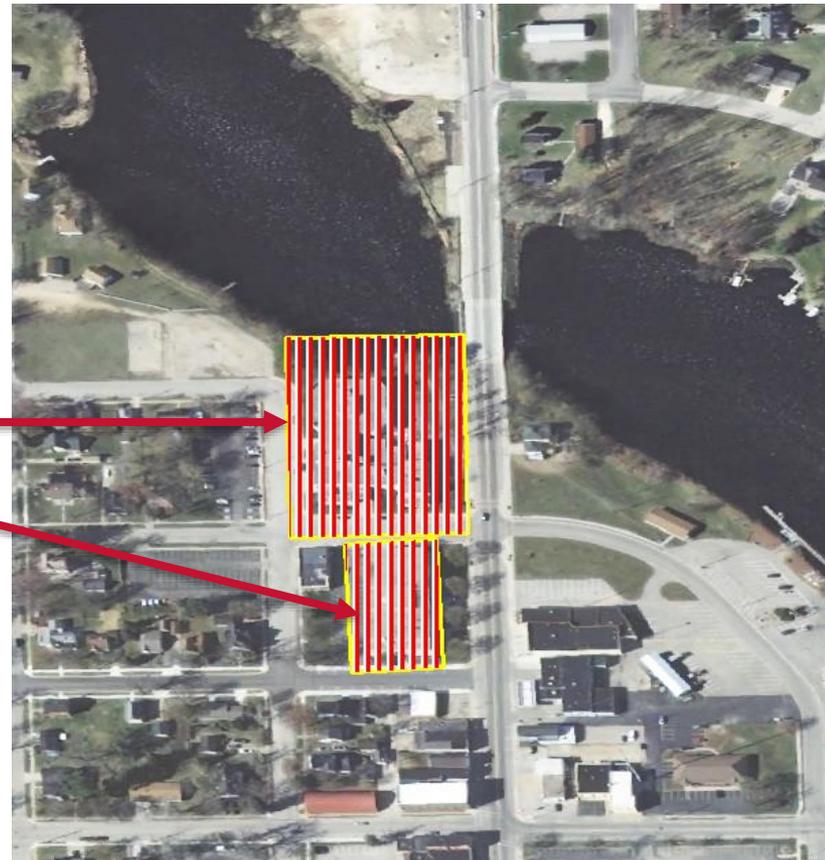
- Highlights areas where floodplain/floodway increased/decreased



# Areas of Mitigation Interest (AOMI)

- Locations of features of interest from a potential mitigation standpoint
- County Sheriff communications equipment and County server room at risk when flooding occurs

At Risk Facilities



# Applications of Non-Regulatory Products

- **Contributes to a better understanding of current and possible future flood risk in your community**
- **Leads to more informed decisions in higher risk areas**
- **Floodplain managers could use this data for advising the local elected officials (ex. adopting more freeboard)**
- **Provides a new perspective for property owners to view their flood risk**
- **Used to help develop mitigation strategies**

# Resilience

- What is resilience in this context?
- Mitigation action plays an integral role in your community's resilience.
- Along with updated flood maps, you are receiving other Flood Risk Products to help you make decisions about how to keep your residents safe.

# Understanding your Flood Risk

You can think about flood risk the same way you think about accidents. No one is safe from the occasional accident. They are unpredictable and can be minor or have terrible consequences. Similarly, floods can impact anybody anywhere with catastrophic results.

- For anyone living in a high-risk area, or anyplace with a 1-percent or higher risk of experiencing a flood each year, there is at least a 1 in 4 chance of flooding during a 30-year mortgage.
- There is no such thing as a no-risk zone, but some areas are designated as low or moderate risk.
- Understanding flood risk may seem complicated, but it doesn't have to be. There are resources to help you get up to speed. FloodSmart.gov is a great place to learn general flood info and your community officials can help you understand flood risk in your area.

- Hazard is NOT the same as risk.
  - Hazards are things that cause harm. i.e. floods, fires
  - Risk is the chance that a hazard will actually cause harm

# Understanding your Flood Risk

- Even in moderate- to low-risk areas, the risk of being flooded is not completely removed only reduced.

Remember.....

Anywhere it can rain, it can flood and everyone should consider taking steps to reduce their risk!

# Strategies to Reduce your Flood Risk

There are many strategies you can take to reduce your flood risk

- **Prevention**
  - Affects future development
  - Includes ordinances and building codes
- **Property protection**
  - Affects existing development
  - Includes elevation and acquisition
- **Public education and awareness**
  - Informs people about risk
  - Includes outreach activities
- **Natural resource protection**
  - Protects water quality
  - Protects Habitats
  - Restores resources
- **Emergency services protection**
  - Protects critical facilities
- **Structural projects**
  - Involves construction
  - Includes berms
  - Includes altering stream routes

# Communicate About Your Risk

- **Flood risk awareness:**

- Leads to action
- Increases overall community resilience
- Builds support for implementing the mitigation plan

- **Your constituents:**

- Expect to hear about flood risk from officials, lenders, insurance agents, surveyors, and real estate agents
- Will talk about flood risk impacts with neighbors, friends and family

# Communicate About Your Risk

- **Risk MAP makes it easier to share flood risk information with your constituents:**
  - Draft letters to citizens
  - Draft media materials
  - Use the Risk MAP products to communicate risk
    - Changes Since Last FIRM
    - Areas of Mitigation Interest (AOMI)
  - Local community meetings, workshops, neighborhood outreach
  - Have a Flood Risk section in your local library

# Hazard Mitigation Actions

- FIRMs and Non-Regulatory Products help identify flood risk in your community.
- Communities should use this information to identify mitigation actions.

**There are many ways you can protect your community. Mitigation is the broad term for the wide range of steps that individuals and the local government can take to reduce the impact of floods or other risks.**

- There is a wide range of mitigation action options. Communities frequently focus on planning and zoning, floodplain protection, property acquisition and relocation, or public outreach projects.
- Individual property owners can also take steps to mitigate flood damage to their homes and businesses. Some are larger in scope and require professional help, like elevating their home's lowest floor. However, smaller tasks like purchasing flood insurance or using flood-resistant materials, like tile instead of carpet, are more cost-effective and still prevent water from doing major damage.

- Long-term hazard mitigation planning and projects enable communities to break the cycle of disaster damage, reconstruction, and repeated loss.



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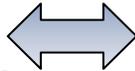
# Local Hazard Mitigation Plans (HMPs)

- Your existing mitigation plan already includes ideas for mitigation activities that can reduce risk in future events.

## Other Community Plans

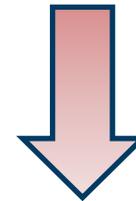
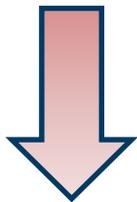
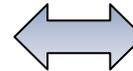
- Comprehensive plans
- Capital Improvement
- Stormwater Management Plans
- Emergency Operations
- Sustainability / Climate Change Plan

**Risk MAP**  
Risk MAP Products  
and Datasets



## Hazard Mitigation Plan

- Uses Risk Information
- Identifies Projects/Actions
- Integrated with Other Community Plans



**Mitigation Actions/Projects**

# Mitigation Actions – Types, Examples



## STRUCTURE AND INFRASTRUCTURE PROJECTS

Acquisition  
Elevation  
Retrofits  
Drainage

## LOCAL PLAN AND REGULATIONS

Zoning  
Building Codes  
Ordinances  
Open Space Plan

## COMMUNITY IDENTIFIED PROGRAMS

Firewise  
StormReady  
NFIP  
CRS

## NATURAL SYSTEM PROTECTION

Stream and wetland restoration  
Erosion control

# What Action Will You Take?

- What are some **areas of mitigation interest** in your community?
- Can you think of any **potential mitigation projects**?
- **Review draft Areas of Mitigation Interest and provide feedback** to representatives during the working session.



# What Next?

- **Review maps/models**
- **Work together to coordinate on:**
  - Mitigation planning
  - Grant applications or technical assistance
  - Communication
- **We will send a follow-up email with resources and links if necessary**

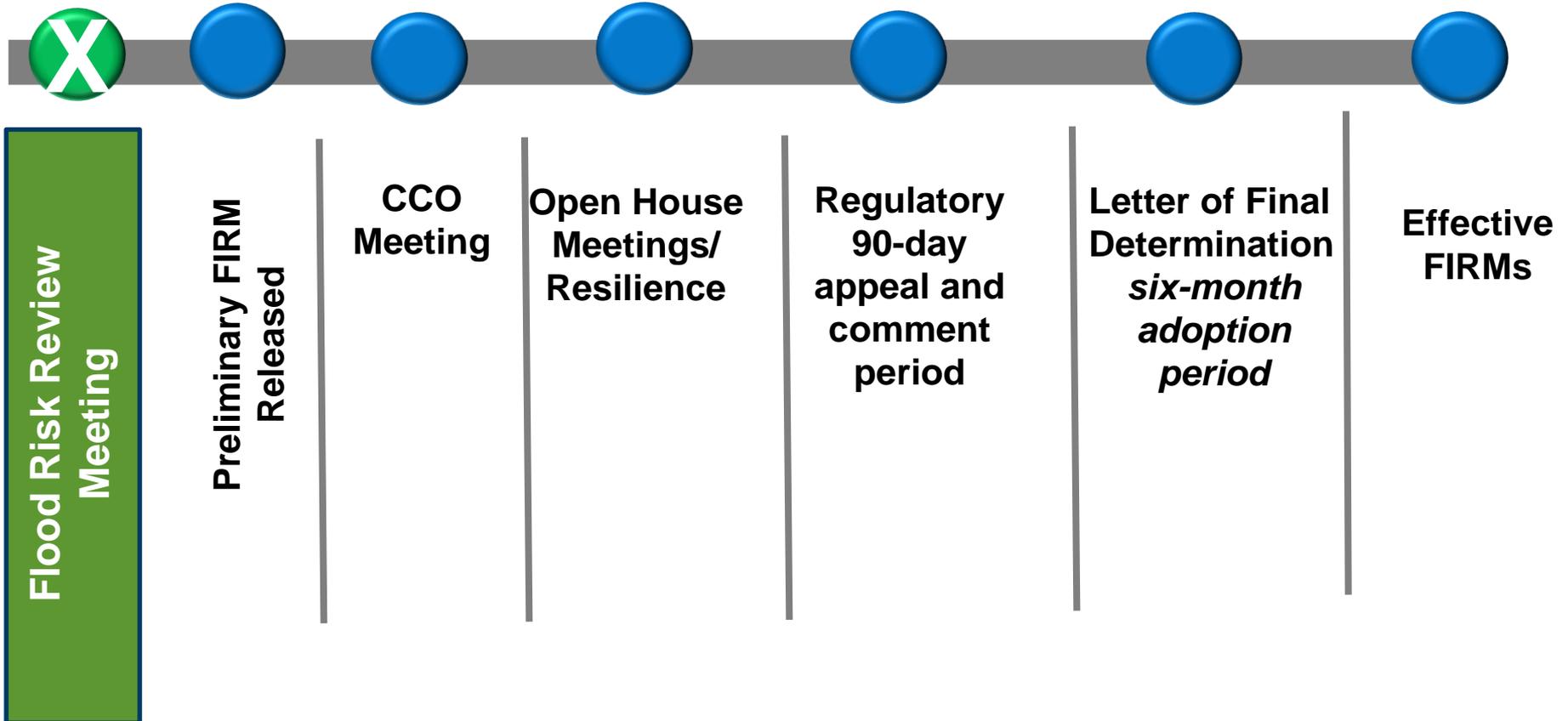
# Timeline for Langlade County

Preliminary Products Released

Post-Release of Preliminary FIS/FIRM

Post-Appeals Appeals Resolved

Post-LFD



# Questions & Discussion

- **Maps, Scheduling:** Emily Szajna
- **NFIP, Ordinance:** Brian Cunningham
- **Engineering:** Chad Heimerl
- **Mitigation, Emergency Management:** Heather Thole

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