

Trempealeau River Watershed Discovery

FEMA Region 5



FEMA

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
- You are muted and video turned off upon entry
- If you wish to ask a question, raise your hand or type it in chat

Meeting Agenda

1. Introductions
2. RiskMAP Overview
3. Explain the Role of Discovery
4. Project Timeline
5. National Flood Insurance Program
6. Hazard Mitigation
7. Next Steps
8. Questions and Discussion

Welcome & Introduction



Risk MAP Project Team, Wisconsin Department of Natural Resources (WDNR)

- Allison Kielar – Floodplain Mapping Project Lead
- Ben Sanborn – CTP Coordinator
- Bill Roznik – Floodplain Engineer
- Sarah Galster – State National Flood Insurance Program (NFIP) Coordinator
- Jen Jefferson – Dam Safety/Floodplain Section Supervisor
- Ryan Jarvis – Regional Water Management Engineer (Buffalo, Jackson, and Trempealeau Counties)

Welcome & Introduction



FEMA

Federal Emergency Management Agency (FEMA)

- Munib Ahmad – Region 5 Engineer
- John Wethington – Region 5 Risk Analysis Branch Chief
- Chad Lanctot – Region 5 Tribal Liaison and Risk MAP Outreach Specialist



Wisconsin Emergency Management (WEM)

- Chad Atkinson – Hazard Mitigation Section Supervisor
- Heather Thole – State Hazard Mitigation Officer

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 that are:

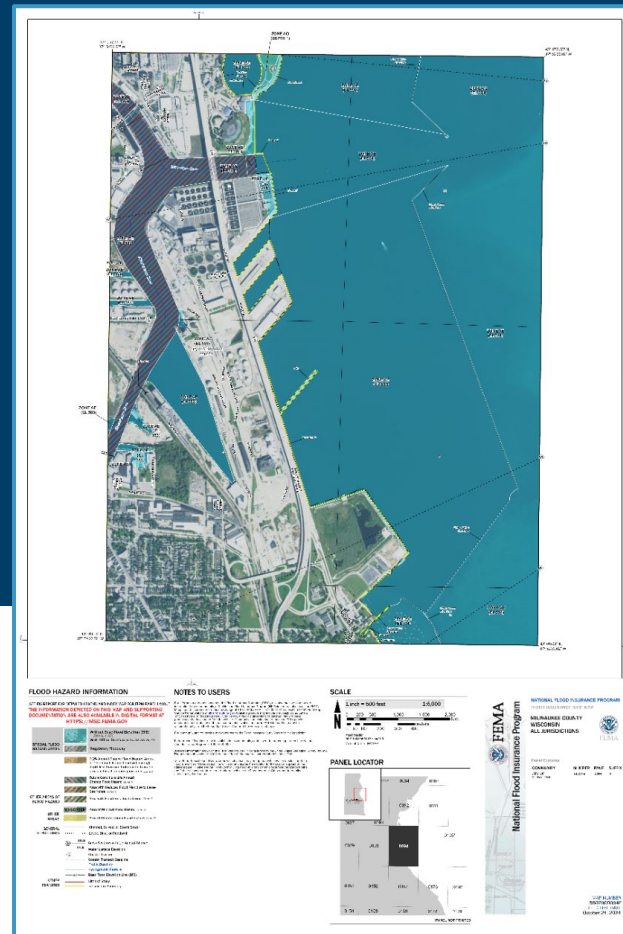
- Developed by FEMA in collaboration with communities
- Based on the best available data and latest technologies
- Conducted by watershed which provides a holistic view of a geographical area
- Strengthened by partnerships

Risk MAP tools and data can be used to:

- Create or improve your Hazard Mitigation Plans
- Make informed decisions about development, ordinances, and flood mitigation projects
- Communicate with citizens about flood risk

Regulatory Risk MAP Products

Flood Insurance Rate
Maps (FIRM)

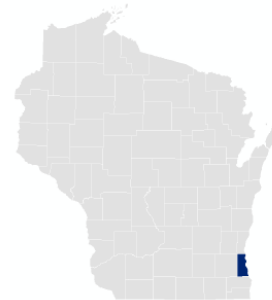


FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 6

**MILWAUKEE
COUNTY,
WISCONSIN**
(ALL JURISDICTIONS)



COMMUNITY NAME	NUMBER	COMMUNITY NAME	NUMBER
BAYSIDE, VILLAGE OF	550270	MILWAUKEE, CITY OF	550278
BROWN DEER, VILLAGE OF	550271	OAK CREEK, CITY OF	550279
CUDAHY, CITY OF	550272	RIVER HILLS, VILLAGE OF	550280
FOX POINT, VILLAGE OF	550274	SHOREWOOD, VILLAGE OF	550282
FRANKLIN, CITY OF	550273	SOUTH MILWAUKEE, CITY OF	550283
GLENDALE, CITY OF	550275	ST. FRANCIS, CITY OF	550281
GREENDALE, VILLAGE OF	550276	WAUWATOSA, CITY OF	550284
GREENFIELD, CITY OF	550277	WEST ALLIS, CITY OF	550285
HALES CORNERS, VILLAGE OF	550524	WEST MILWAUKEE, VILLAGE OF*	550561
		WHITEFISH BAY, VILLAGE OF	550286

TRIBAL NATION	NUMBER
FOREST COUNTY POTAWATOMI COMMUNITY*	550661

*No Special Flood Hazard Areas Identified

REVISED:

October 24, 2024

FLOOD INSURANCE STUDY NUMBER

55079CV001B

Version Number 2.8.3.3



FEMA

Flood Insurance Study
(FIS)

Non-Regulatory Risk MAP Products

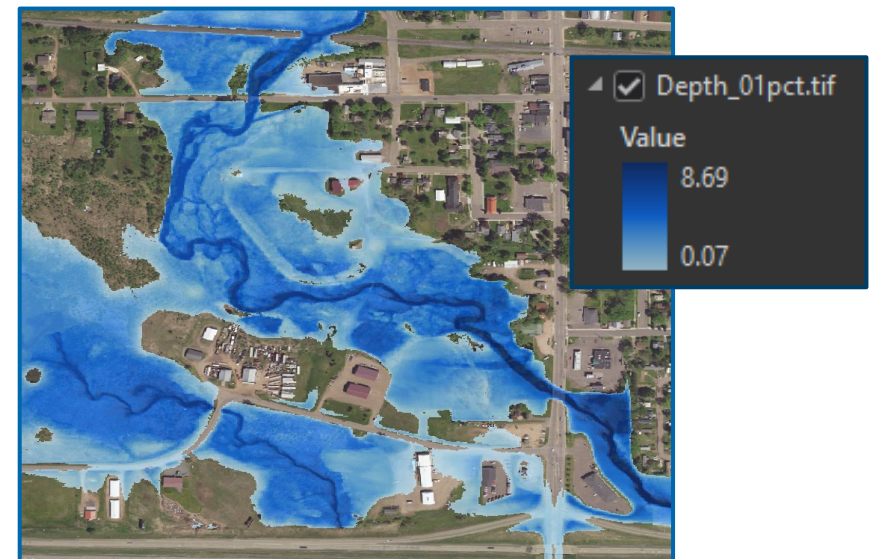
Changes Since Last FIRM

- Shows how the Special Flood Hazard Area have changed with the new map
- Available at the preliminary stage



Multi Frequency Depth Grids, Water-Surface Elevation Grids Percent Annual Chance Grids

- For 10%, 2%, 1%, 0.5%, 0.2% events
- Available at the preliminary stage



What is Discovery?

Discovery is the process of data mining, collection, and analysis with the goal of initiating a flood risk or mitigation project and risk discussions with the watershed.

When?

- After an area/watershed has been prioritized
- Before a Risk MAP project is scoped or funded

Required for new and updated...

- Flood studies
- Flood risk assessments
- Mitigation planning technical assistance projects

Why?

- Increases visibility of flood risk information, education, and involvement
- Helps inform whether a Risk MAP project will occur in the watershed

What is Discovery? (*continued*)

Discovery is the foundation for Risk MAP projects

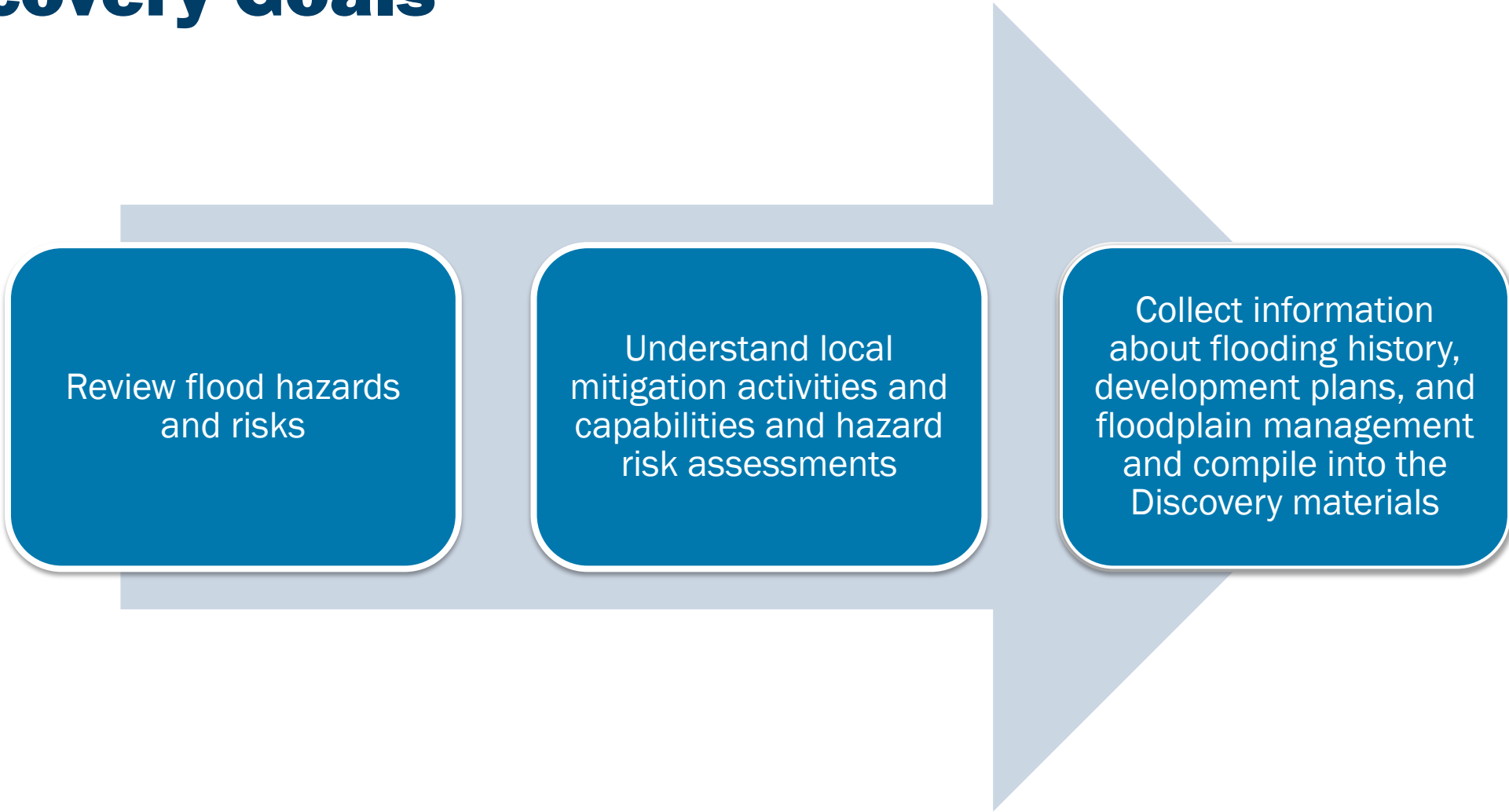
- The better the information we receive, the more accurate the tools and products we can produce
- First, we want to learn where your flood hazards are, what risk they pose, and how your community addresses that risk
- Then, we want to be a long-term partner to help you communicate and mitigate those hazards

This is the first step for communities to have input on the mapping process.



City of Arcadia
March 16th, 1919

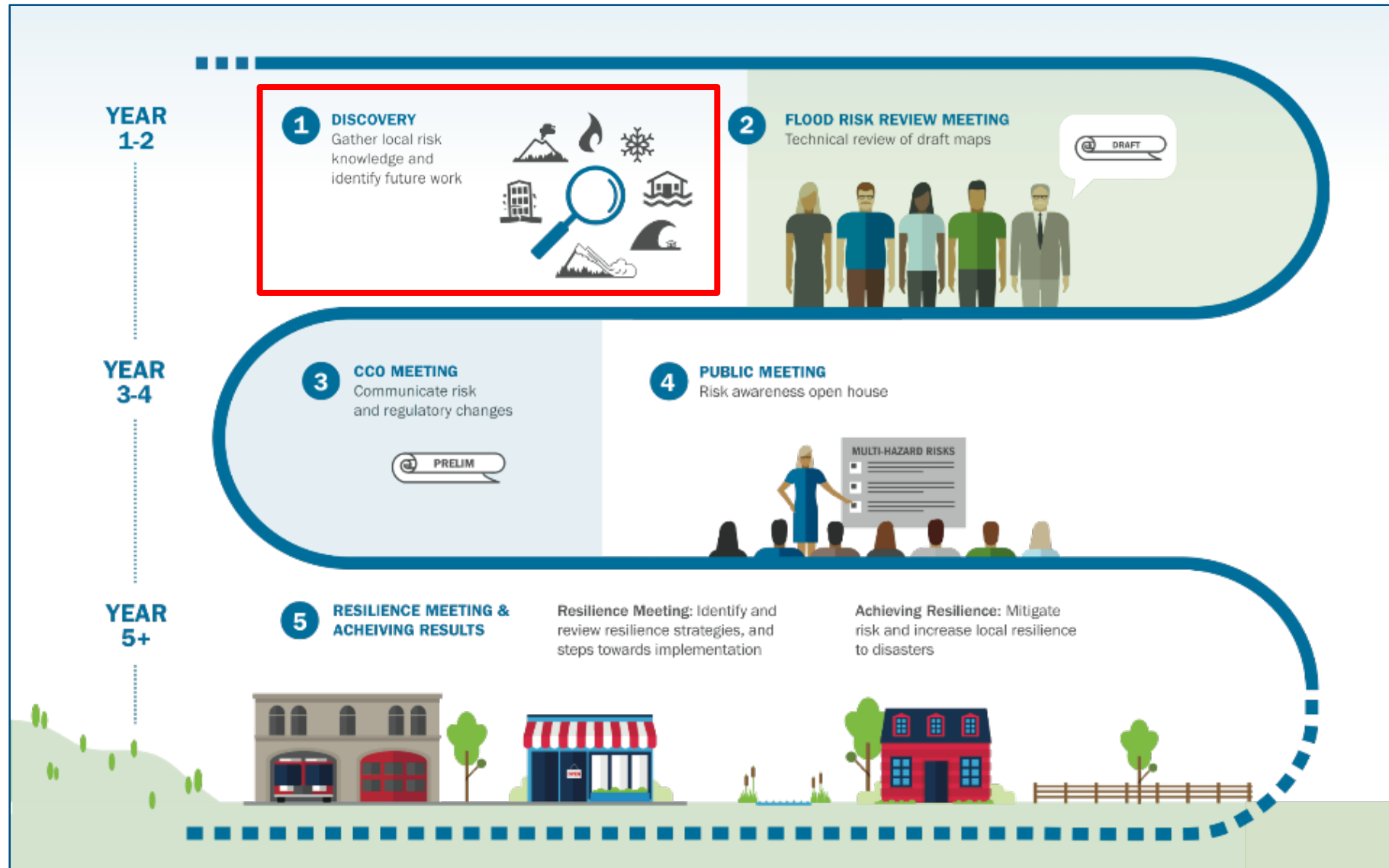
Discovery Goals



Review flood hazards
and risks

Understand local
mitigation activities and
capabilities and hazard
risk assessments

Collect information
about flooding history,
development plans, and
floodplain management
and compile into the
Discovery materials

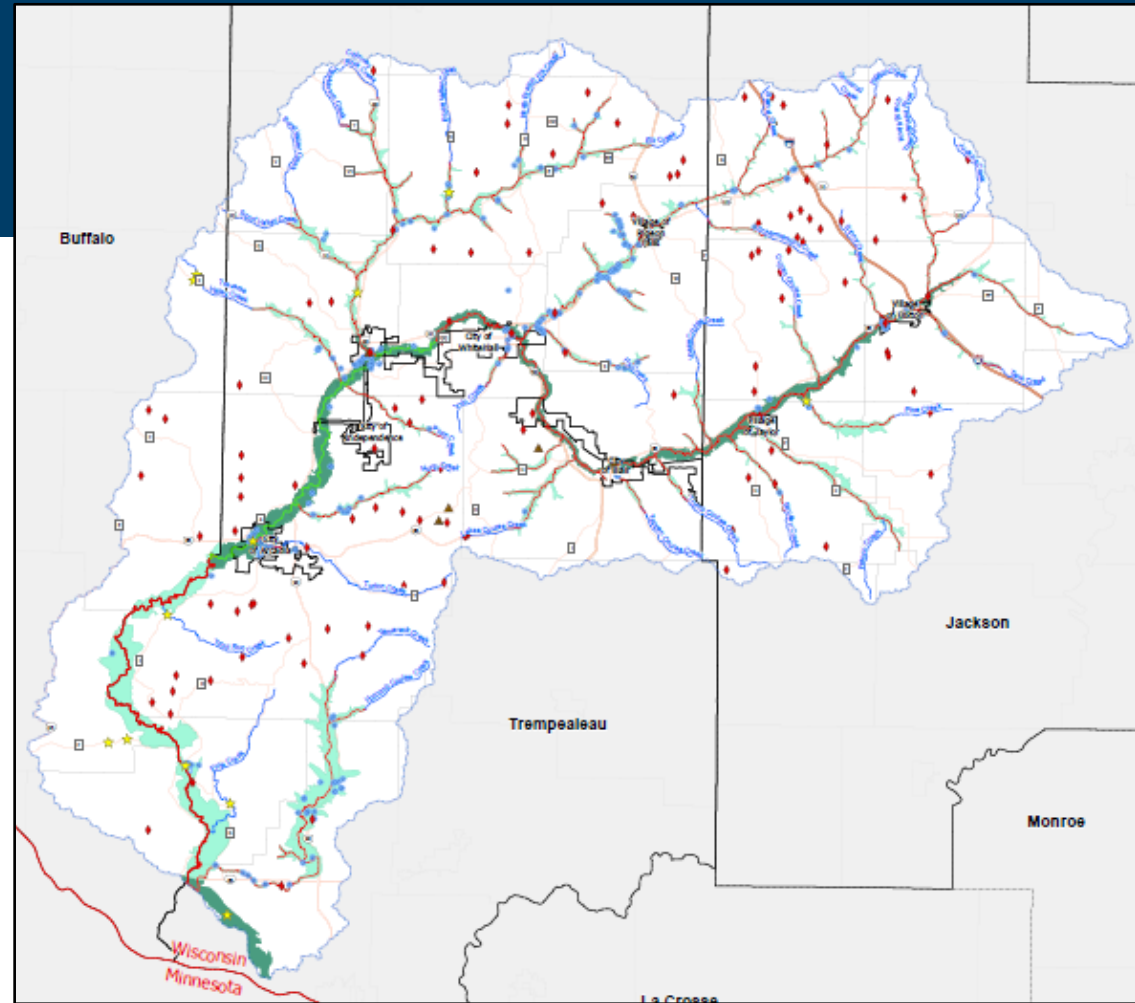


Discovery Footprint

Trempealeau River Watershed HUC8: 07040005

- 3 Counties
- 4 Cities
- 3 Villages

Majority of streams are currently Zone As



Flood Insurance Rate Map (FIRM) Status

Buffalo County: Countywide update 5/3/2010

Jackson County: Countywide update 9/29/2012, Black River Falls Levee PMR 9/29/2017(one panel updated)

Trempealeau County: Countywide update 4/4/2011

Flooding in the Trempealeau River Watershed

Community	% of Community Within Floodplain	% of Community's Floodplain that is Urban/Developed
Buffalo County Unincorporated Areas*	6.3	< 1
City of Arcadia	33.6	46.8
City of Blair	13.9	22.4
City of Independence	8.7	31.7
City of Whitehall	7.1	15.6
Jackson County Unincorporated Areas*	4.7	1.2
Trempealeau County Unincorporated Areas*	8.3	1.8
Village of Hixton	34.2	25.6
Village of Pigeon Falls	21.9	14.9
Village of Taylor	39.7	8.6

*Values within the Trempealeau River Watershed



← Effective FEMA floodplain compared with DNR's Wiscland2 30-meter land cover dataset (2017).

Draft Discovery Report

Final report will summarize:

- Findings of the Discovery process
- Identified mapping needs
- Areas of desired mitigation or future projects

Used to determine whether to conduct additional Risk MAP activities.

The Final Discovery Report will be shared after meeting information and comments have been received and incorporated.

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

Discovery Report

Trempealeau Watershed, HUC 07040005

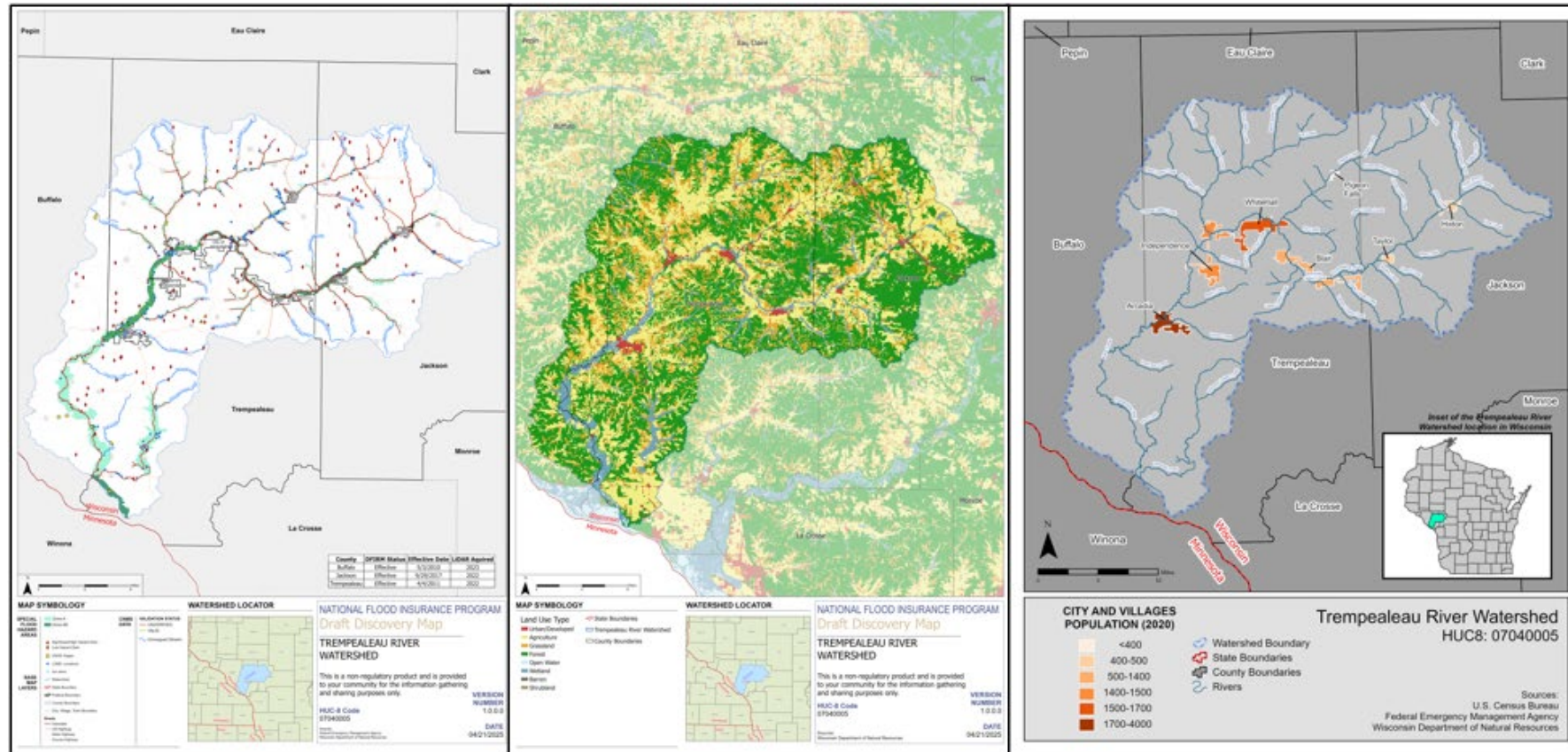
Buffalo County, Jackson County, Trempealeau County

*City of Arcadia, City of Blair, Village of Hixton, City of Independence, Village of Pigeon Falls, Village of Taylor, City of Whitehall
Wisconsin*

April, 2025



Draft Discovery Maps



Draft Discovery Map

Land Use Map

Population Map

Copies available at in-person meeting and on WI-DNR's RiskMAP webpage.

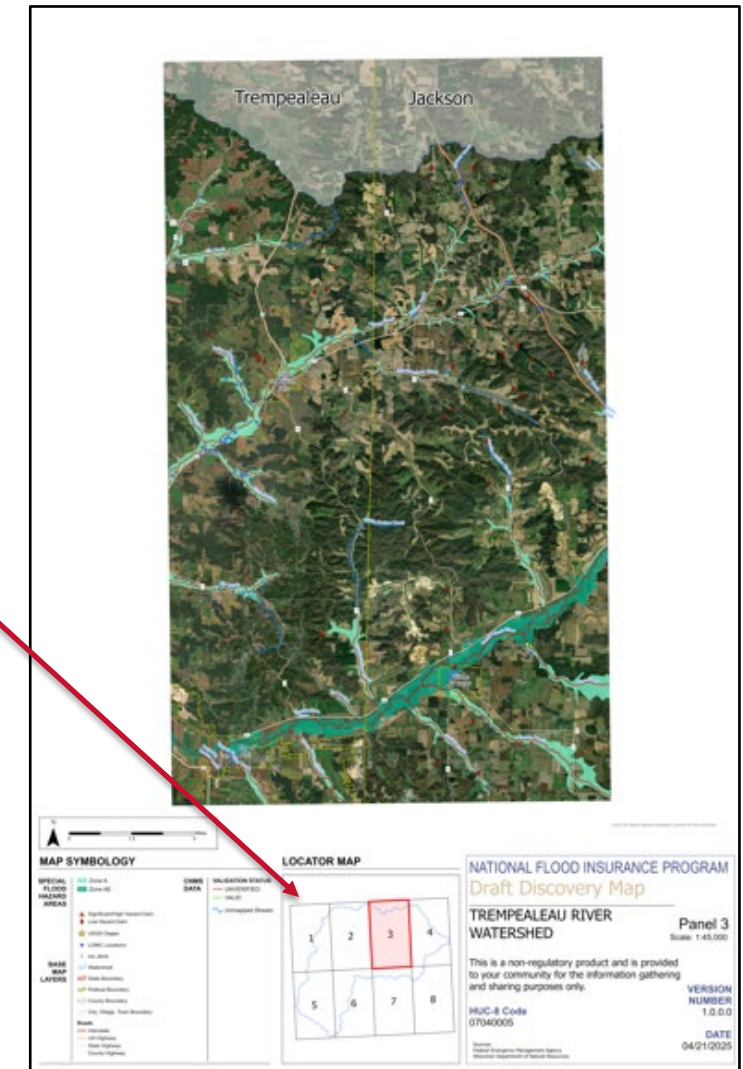
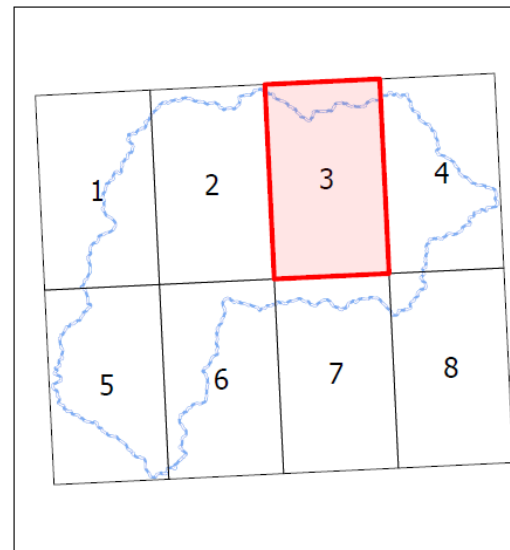
Helping people before, during and after disasters

FEMA.GOV

Draft Discovery Maps (*continued*)

Draft Discovery Map also split down into 8 smaller panels with 2019/2020 imagery.

Please mark these maps up with comments as we will use them to update the Final Discovery Map and Report.



✓ Please submit comment forms to Allison Kielar once finished:

Allison Kielar
225051 Rib Mountain Drive
Wausau, WI 54401-3336

- Commonly flooded areas
- Issues with existing flood maps
- Infrastructure changes
 - Bridge or culvert replacements/upgrades
- More examples on the provided comment form →

Helping people before, during and after disasters

How might the flood maps change?

Types of Restudy – Approximate Study

- Using a technique called Base Level Engineering (BLE)
- No on-the-ground survey information
- Improved quality from the older approximate zones
- Lower cost than a detailed study



Zone A

Types of Restudy – Redelineation

- Used when underlying flood data is still valid
- No new hydrology, hydraulics, or field survey data used
- No changes to Base Flood Elevations (BFEs)
- Existing zones are remapped using most up to date elevation data (LiDAR)



Zone AE

Types of Restudy – New Detailed Study

- Most comprehensive study update
- All new hydrology, hydraulics, survey data, elevation data
- New Base Flood Elevations (BFEs)



Zone AE

Next Steps

- ❑ Review the **Draft Discovery Report and Maps** on the DNR website
 - ❑ **Comment form**
 - Submit these to Allison Kielar, (608)235-8115, Allison.Kielar@wisconsin.gov
 - ❑ Leave comments with WI-DNR staff in-person/on Zoom today
-
- In the next few months, we will incorporate your comments and provide you with an updated Discovery Map and Report
 - From your input, FEMA and WDNR will determine areas that require further study and how the Risk MAP process will continue in the Trempealeau River Watershed

Flood Insurance and Map Changes

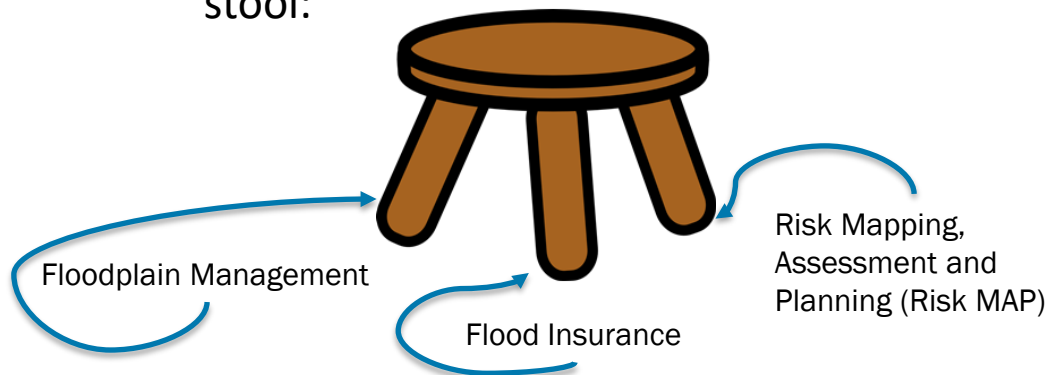
Sarah Galster | State NFIP Coordinator, Wisconsin Department of Natural Resources



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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



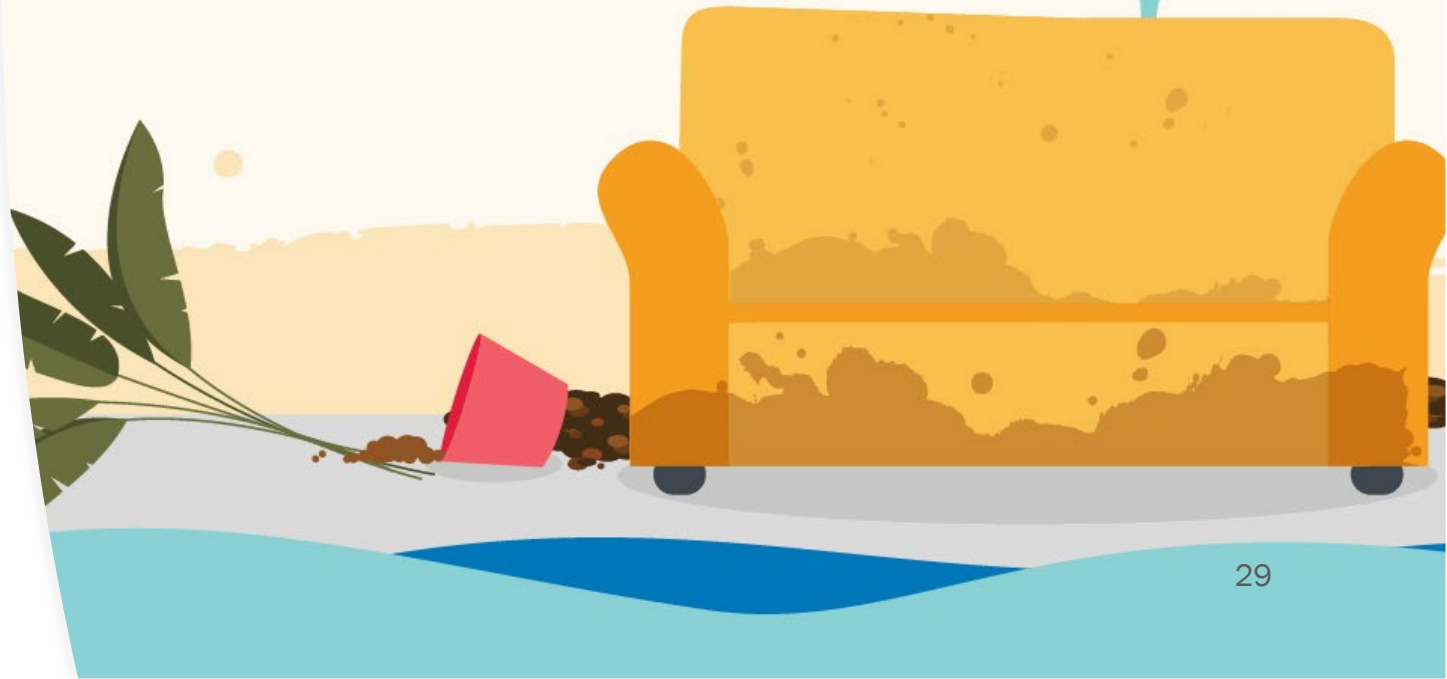
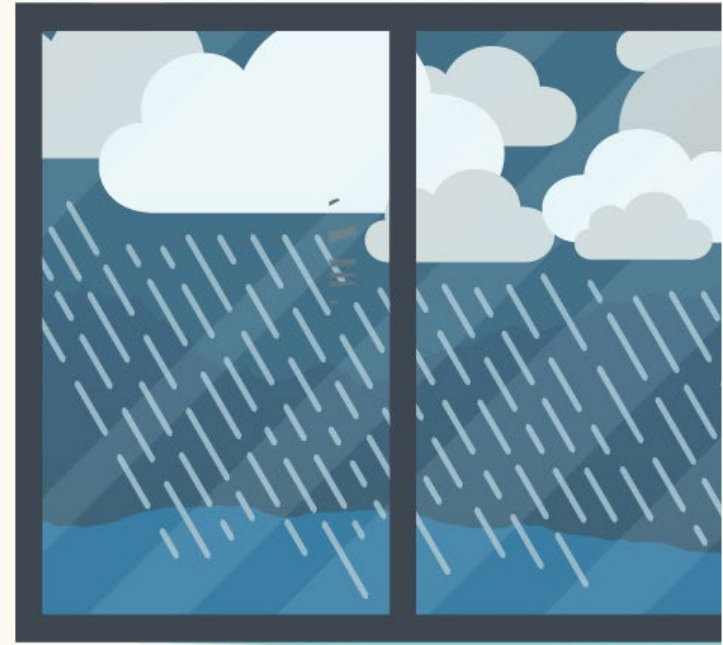
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Standard Flood Insurance Policy (SFIP): Coverages

- 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.**



FEMA

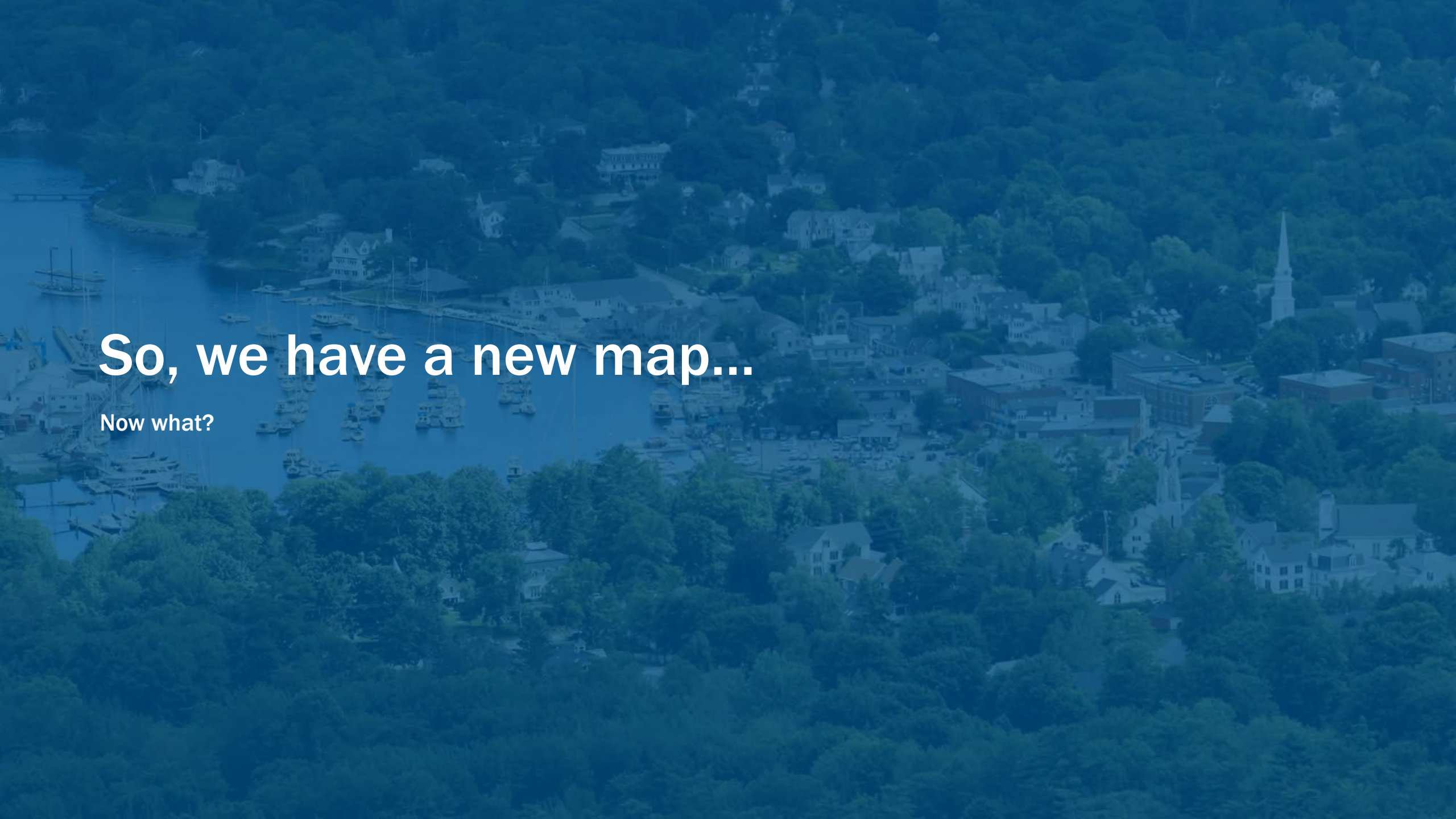
Summary of Coverage

Generally Covered

- Building & foundation
- Electrical & plumbing
- Central air, furnaces, & water heaters
- Detached garage at the insured's option
- Debris removal
- Clothing, furniture, and electronic equipment if the insured purchased contents/personal property coverage

Generally Excluded

- Avoidable moisture, mold, & mildew damage
- Currency, precious metals, and valuable papers (special limits apply)
- Property and belongings outside of the building
- Landscaping
- Temporary/additional living expenses
- Decks

An aerial photograph of a coastal town, likely in New England, featuring a harbor filled with numerous sailboats and a dense forest of green trees surrounding the built-up area. The image is overlaid with a semi-transparent blue filter.

So, we have a new map...

Now what?

Flood Zone Designations



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
- Individuals in these zones receive one-third of Federal Disaster Assistance for flooding



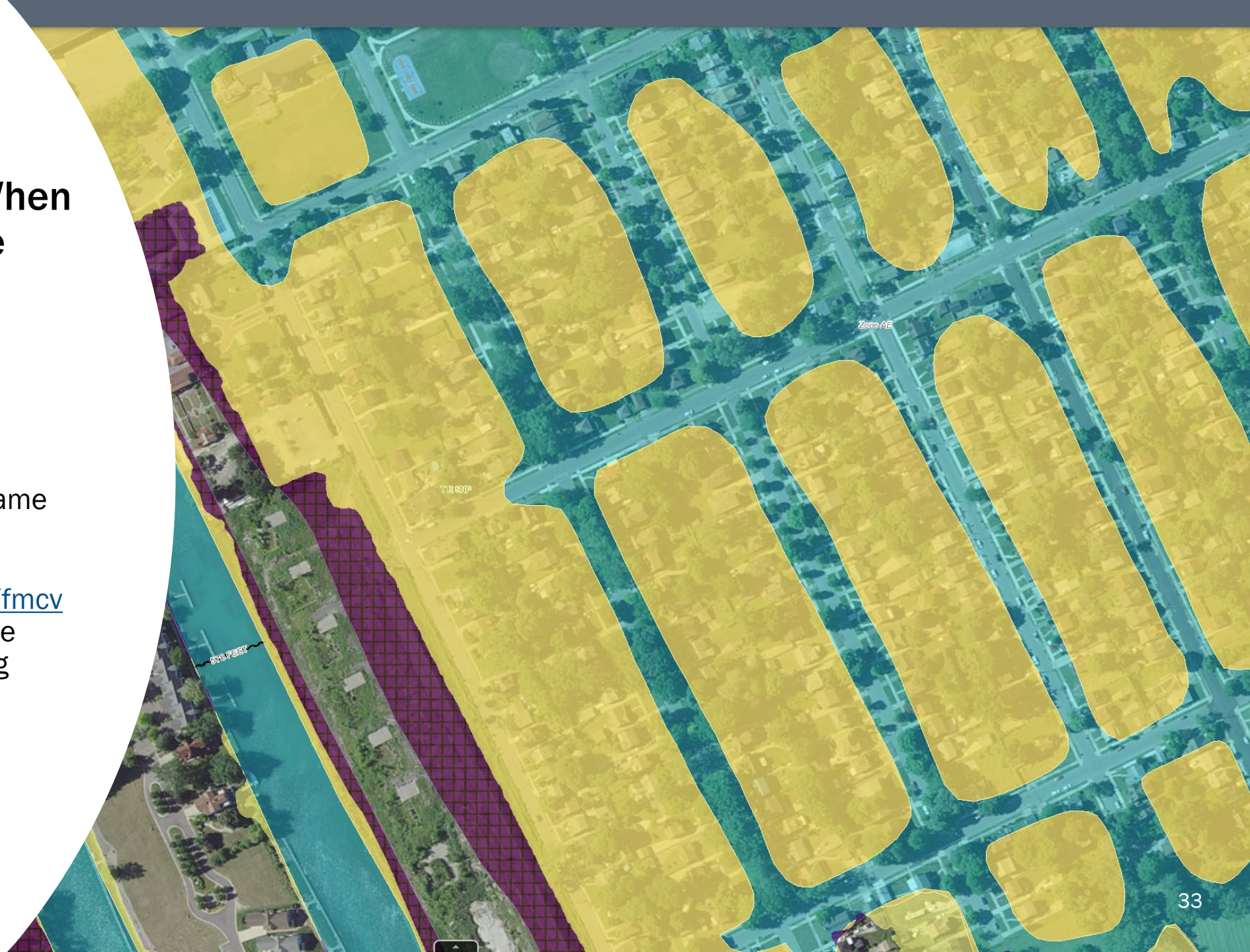
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So, What Happens When Flood Insurance Rate Maps Change?

- Flood Risk Can Increase
 - Flood Risk Can Decrease
 - Flood Risk Can Stay the Same
-
- Visit <https://msc.fema.gov/fmcv> and type in your address to see how your flood risk is changing



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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 or if you receive certain forms of federal disaster assistance
 - Even if you don't have a federally-backed loan, flood insurance is strongly encouraged
 - If you are newly mapped into a high-risk flood zone, you may be eligible for cost savings through the Newly Mapped Discount.
- Remember—
 - Map changes alone no longer directly influence flood insurance premiums.



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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
- Remember—
 - Map changes alone no longer directly influence flood insurance premiums.



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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 Wisconsin Department of Natural Resources for more information and other options
- Choose a higher deductible or different coverage amounts
- Provide an elevation certificate

Community Rating System (CRS)

The Community Rating System rewards communities for outstanding floodplain management practices and exceeding the minimum NFIP standards.

Discounts range from 5% - 45%, depending on the number of "points" the community earns

The discount applies equally to all NFIP-insured buildings in the community

Buildings known to be in violation of the minimum requirements of the NFIP are not eligible for the CRS discount

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

Wisconsin Department of Natural Resources

State NFIP Coordinator

Sarah Galster

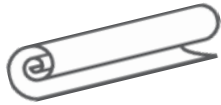
sarah.galster@wisconsin.gov



FEMA

Your Role in this Process

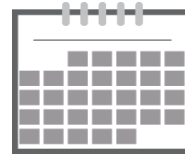
As local officials, floodplain administrators, and staff, you can:



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



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Participating/Non-Participating Communities

National Flood Insurance Program (NFIP)

CID	Community	Policies in Force	Insurance in Force	Total Paid Losses	Total Paid
555547	Buffalo County	6	\$1,561,000	19	\$335,342
550583	Jackson County	14	\$3,288,000	20	\$377,424
550187	Village of Hixton	4	\$301,000	4	\$7,214
550190	Village of Taylor	0	\$0	0	\$0
555585	Trempealeau County	11	\$1,875,000	51	\$599,177
550439	City of Arcadia	26	\$4,591,000	40	\$1,401,347
550440	City of Blair	1	\$79,000	11	\$36,111
550444	City of Independence	1	\$175,000	5	\$6,326
550446	Village of Pigeon Falls	0	\$0	0	\$0
550449	City of Whitehall	0	\$0	1	\$113

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/flood-map-zone/map-changes>

FEMA

James Sink, Regional Flood Insurance Liaison
312-408-4421
james.sink@fema.dhs.gov

Diana Espino, Floodplain Management Specialist
940-208-7480
diana.l.espino@fema.dhs.gov

Wisconsin Department of Natural Resources

Sarah Galster, State NFIP Coordinator
608 893-8710
sarah.galster@wisconsin.gov



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Trempealeau River Watershed

Discovery Meeting

July 29, 2026

Chad Atkinson – Hazard Mitigation Section Supervisor



Hazard Mitigation

“Hazard mitigation means any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards.” 44 CFR §201.2



Photo from Kenosha County, WI



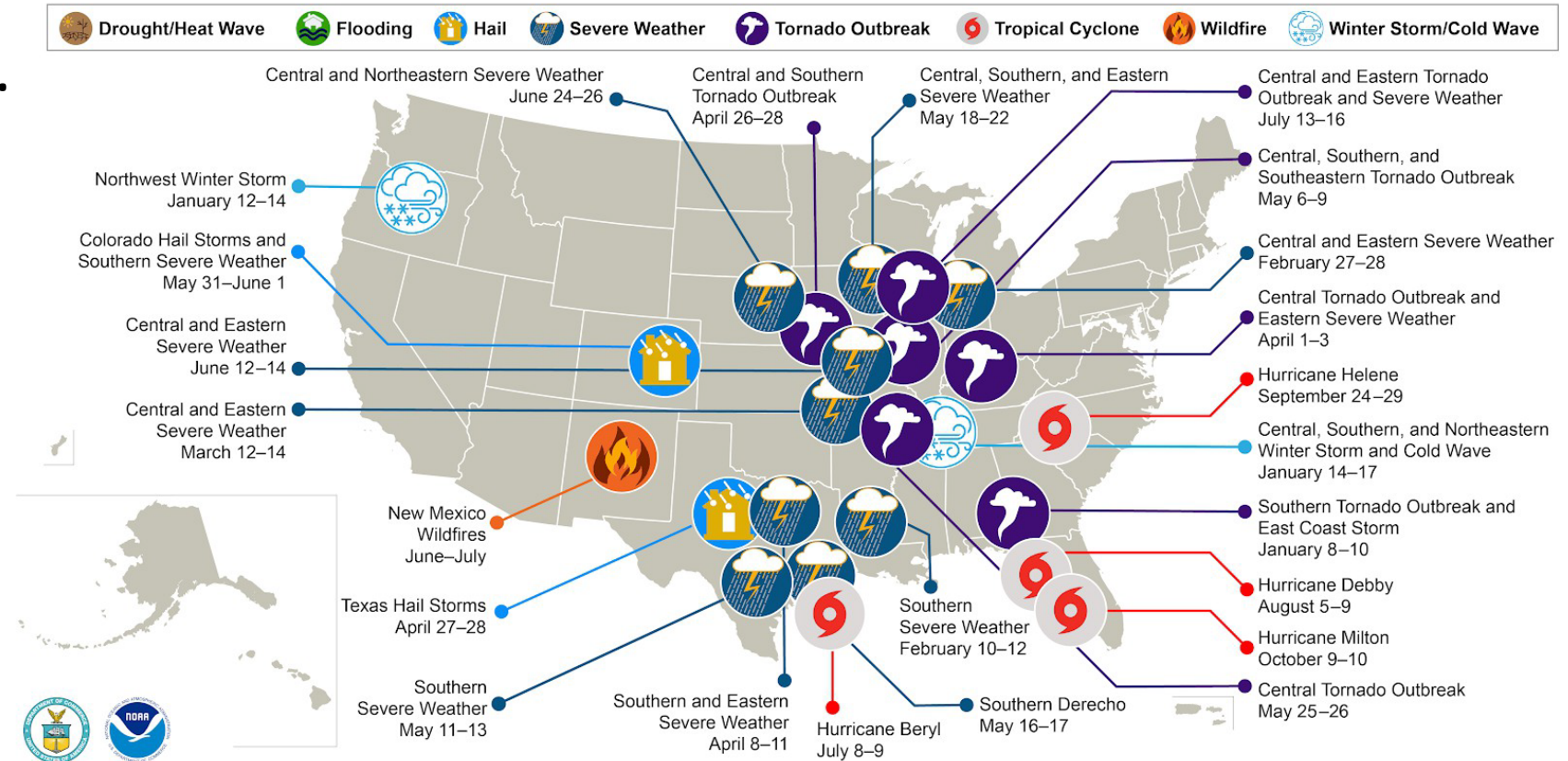
Photo from Soldiers Grove, WI



Why do we mitigate?

- Disasters are expensive.
- State and federal aid is insufficient and unsustainable.
- Mitigation actions can lessen impacts and speed response and recovery efforts.

U.S. 2024 Billion-Dollar Weather and Climate Disasters



This map denotes the approximate location for each of the 24 separate billion-dollar weather and climate disasters that impacted the United States through October 2024.



Mitigation saves



National Institute of
BUILDING SCIENCES™

Overall Benefit-Cost Ratio

ADOPT
CODE

11:1

ABOVE
CODE

4:1

BUILDING
RETROFIT

4:1

LIFELINE
RETROFIT

4:1

FEDERAL
GRANTS

6:1

Cost (\$ billion)

\$1_{/year}

\$4_{/year}

\$520

\$0.6

\$27

Benefit (\$ billion)

\$13_{/year}

\$16_{/year}

\$2200

\$2.5

\$160



Riverine Flood

6:1

5:1

6:1

8:1

7:1



Hurricane Surge

not
applicable

7:1

not
applicable

not
applicable

not
applicable



Wind

10:1

5:1

6:1

7:1

5:1



Earthquake

12:1

4:1

13:1

3:1

3:1



Wildland-Urban Interface Fire

not
applicable

4:1

2:1

not
applicable

3:1



Acquisition/Demolition (Buyout)



Acquisition of flood prone properties for demolition structures and deed restriction of the property as open space in perpetuity.

Gays Mills, WI



Elevation



Elevation of a structure above the base flood elevation.



Soldiers Grove, WI



Floodproofing



Structural techniques that reduce or prevent flood damage to a structure or its contents.

Darlington, WI



Culverts/Bridges



Upsizing, realigning culverts or transitioning a culvert to a bridge.

Clover, WI



Stormwater



Plans and projects for improved storm water management.

Oshkosh, WI



Watershed



Plans and projects for restoration or improvement of a watershed.

Thiensville, WI



Other

- ☐ Studies, analyses, planning
- ☐ Utility protection
- ☐ Education and public awareness

- ☐ Insurance
- ☐ Building codes
- ☐ River gauges
- ☐ Weather radios
- ☐ Generators



Dam Warning System

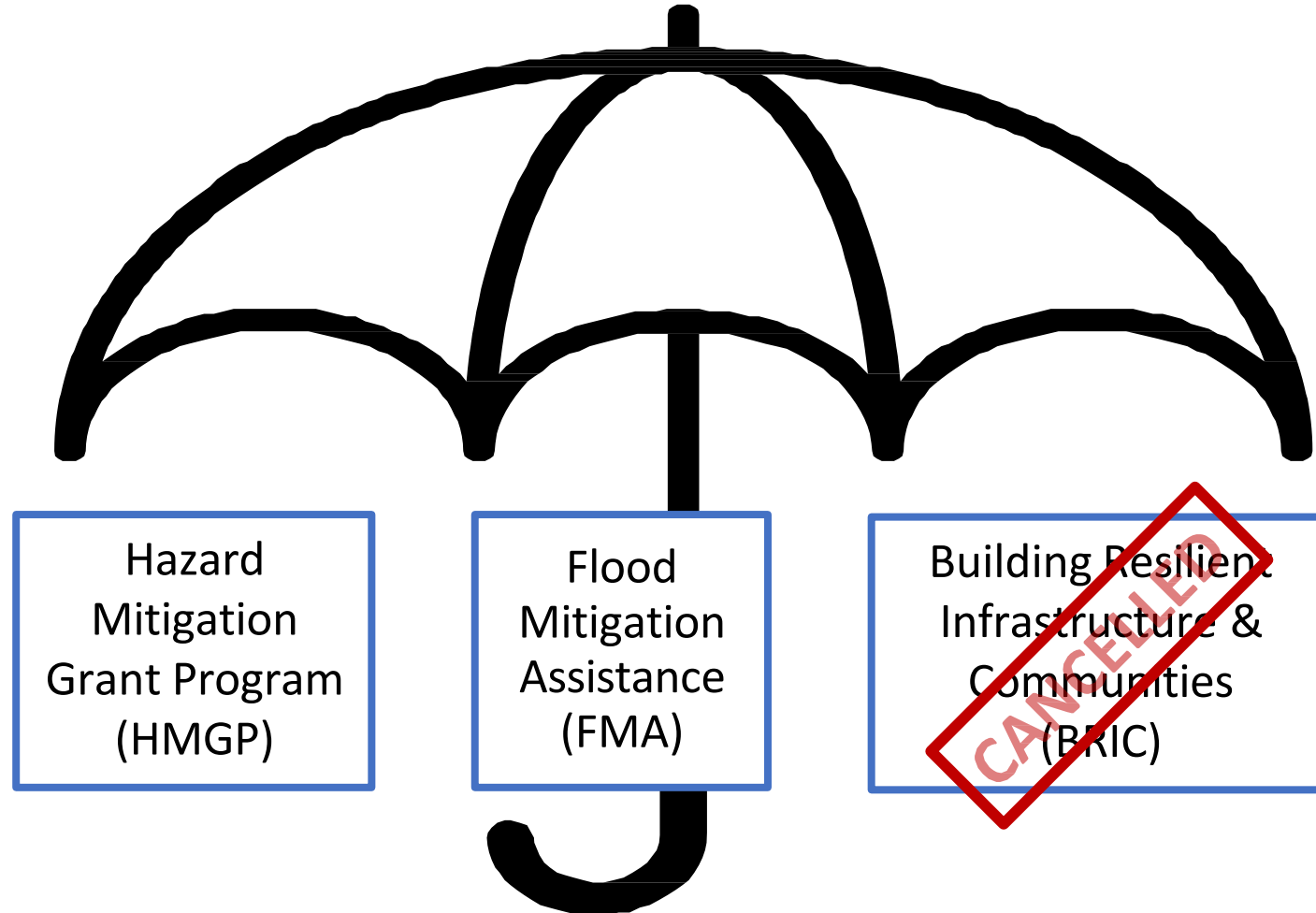


Vernon County





FEMA
Hazard Mitigation Assistance





Hazard Mitigation Grant Program (HMGP)

All-hazards disaster grant program available statewide after a federal disaster declaration.

Cost Share:

75% Federal/12.5% State/12.5% Local

Eligible Subapplicants:

- Local units of government
- Tribal governments
- Certain private nonprofits

Subapplicant Requirements:

- Current, approved, and adopted Hazard Mitigation Plan

Projects must:

Be technically feasible and cost effective.

Reduce or eliminate risk and damage from future natural hazards.

Meet all environmental and historic preservation requirements.



Flood Mitigation Assistance (FMA)

Non-disaster grant program offered annually;
nationally competitive; flood mitigation only.

Eligible Subapplicants:

- Local units of government
- Tribal governments
- Certain political subdivisions

Subapplicant Requirements:

- Current, approved, and adopted Hazard Mitigation Plan
- Participate in the National Flood Insurance Program

Cost Share:

75% Federal/25% Local

90% Federal/10% Local – CDC SVI score > 0.5

90% Federal/10% Local – repetitive loss properties

100% Federal – severe repetitive loss properties

Projects must:

Be technically
feasible and cost
effective.

Reduce or eliminate flood risk or repetitive flood damage
to structures and buildings insured by the National Flood
Insurance Program (NFIP) or enhance community
resilience within NFIP-participating communities.

Meet all environmental
and historic preservation
requirements.



Building Resilient Infrastructure and Communities (BRIC)

Non-disaster grant program offered annually; nationally-competitive; all-hazards.

Eligible Subapplicants:

- Local units of government
- Tribal governments

Subapplicant Requirements:

- Current, approved, and adopted Hazard Mitigation Plan

CANCELLED

Cost Share:

75% Federal/25% Local

90% Federal/10% Local – Community Disaster Resilience Zones & Economically Disadvantaged Rural Communities



Projects must:

Be technically feasible and cost effective.

Reduce or eliminate risk and damage from future natural hazards.

Meet all environmental and historic preservation requirements.



Pre-Disaster Flood Resilience Grant

2023 Act 265 amended Wisconsin Statute 323 to include the Pre-Disaster Flood Resilience Grant (PDFRG) program.

- Administered by Wisconsin Emergency Management (WEM)
- Provides grants for the purpose of:
 - Identifying flood vulnerabilities
 - Identifying options to improve flood resilience
 - Restoring hydrology in order to reduce flood risk and damages in flood-prone communities
- \$2 million in 2023-2025 biennium
- <https://wem.wi.gov/mitigation-grant-opportunities/>





PDFRG Eligible Applicants

- Local governmental unit:
 - Federally recognized American Indian tribe or band
 - City, village, town
 - County
 - Regional planning commission
- On behalf of a local governmental unit:
 - Nonprofit
 - Private consulting organization
- Multiple local governmental units can be included in one application.
- 25% required match





PDFRG Projects: Assessment Grants

- Minimum 60% of total funds
- Gather information on vulnerabilities and identification of flood resilience priorities on a watershed, catchment, or stream reach scale.
 - Understand flood flows and erosion hazards and vulnerabilities; identify opportunities to increase flood resilience including restoration of wetland, stream, and floodplain hydrology.
 - Develop culvert inventories using the Great Lakes Stream Crossing Inventory, or similar method that considers structural risk factors, aquatic organism passage, and upstream hydrologic conditions.
 - Conduct hydrologic and hydraulic studies that help develop hydrologic models.
- Maximum award \$300,000 state share



PDFRG Projects: Implementation Grants

- Maximum of 40% of total funds
- Implement hydrologic restoration projects identified through an assessment grant or comparable assessment process.
- Project types (multiple project types are allowable):
 - Regulatory coordination
 - Engineering & design
 - Construction
 - Post-construction monitoring





PDFRG Projects: Implementation Grants

- Project activities (multiple activities are allowable/encouraged):
 - Reconnect streams and floodplains
 - Reestablish healthy channel form and condition
 - Mitigate erosion hazards
 - Remove or reduce wetland drainage
 - Restore or improve natural flow and movement of water or sediment
 - Reestablish vegetation to support site stability and help manage flow and infiltration
- Maximum award \$250,000 state share





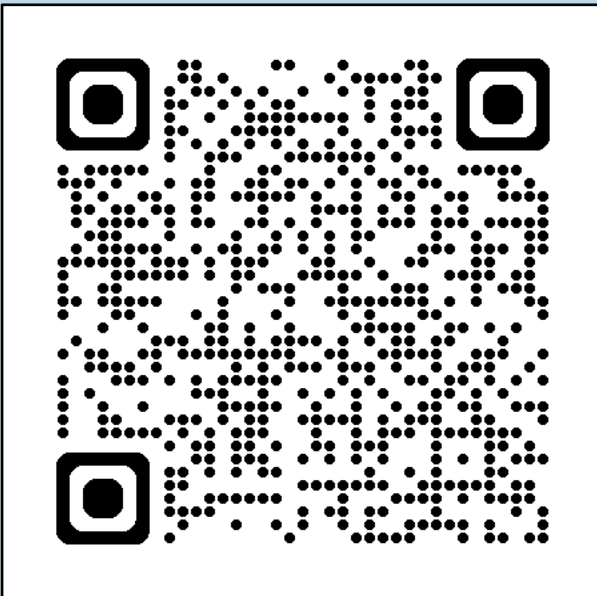
Contacts

- WEM Hazard Mitigation shared email
 - DMAWEMHazardMitigation@widma.gov
- Chad Atkinson, Hazard Mitigation Section Supervisor
 - chad.atkinson@widma.gov; (608) 893-0816
- Heather Thole, State Hazard Mitigation Officer
 - heather.thole@widma.gov; (608) 282-5301
- Katie Sommers, Policy & Grants Bureau Director
 - katie.sommers@widma.gov; (608) 516-0312

Next Steps Summary

1. Your input will be incorporated into the Discovery Report and Maps
2. Finalized Discovery materials will be shared on our RiskMAP website in the coming months, communities will be notified when available
3. FEMA and WDNR will determine the path forward and scope for the study based on those Discovery materials
4. Communities will be notified of the funding decision and potential continued RiskMAP project

WI DNR Risk MAP Webpage & Discovery Materials



[https://dnr.wisconsin.gov/topic/
FloodPlains/RiskMap.html](https://dnr.wisconsin.gov/topic/FloodPlains/RiskMap.html)

Questions?

FEMA

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Topics of Discussion

- Mapping
 - Areas currently without floodplain mapping and/or no floodway identified
 - Concerns with current/future mapping
 - Extending limits of existing studies
 - LOMC-heavy areas
 - Ongoing/future LOMRs
 - Flood storage maps
- Hazard Mitigation
 - Current mitigation plans
 - Areas of repetitive loss
 - Mitigation projects
- National Flood Insurance Program
- Development
 - Overtopping roads
 - Structure changes (bridges, culverts, etc.)
 - New development/future plans
 - Critical infrastructure in/near floodplain
 - City of Arcadia levee project
- Dam removals
- Erosion
- Campsite and mobile home flooding



Trempealeau County Emergency Management

Beau Tibbitts



Trempealeau River Flood Analysis 2026

Beau Tibbitts
Trempealeau County
Emergency Management

Outline

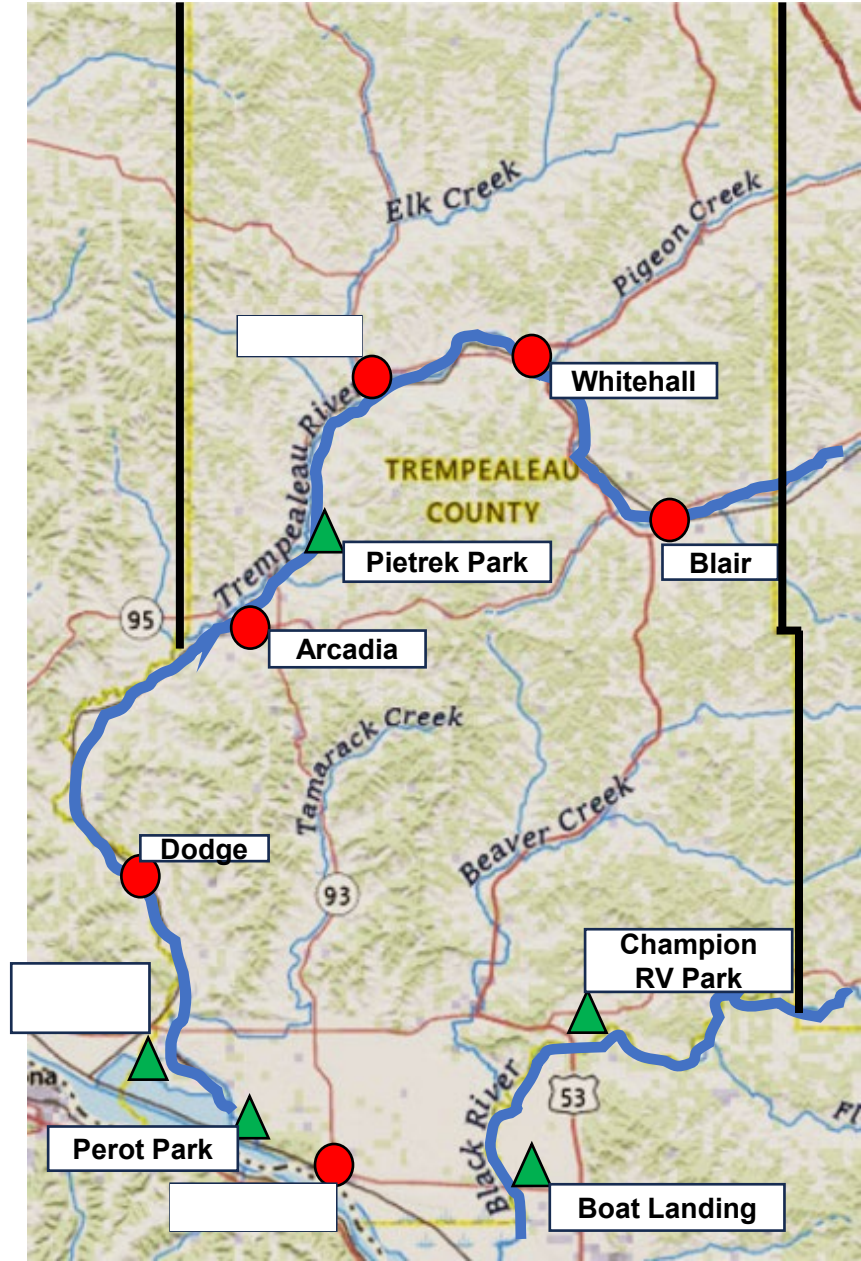
- River Overview
- Flood History
- Risk Assessment/Impacts

Rivers

- Trempealeau River
 - 50 mile within county
 - Areas of Concern
 - Blair (1,289) & Riverside Park
 - Whitehall (1,588) & Colonel Larson Park
 - Independence (1,495) & Four Seasons Park
 - Pietrek Park (100 camp sites)
 - Arcadia (3,857) & Schultz Park
 - Dodge (394 township population)
 - Wildlife Refuge
 - Perot State Park
- Black River
 - 20 Miles shoreline
 - Areas of concern
 - Champion Riverside Resort
 - Hwy 35 Boat Landing
- Mississippi River
 - 9 Miles of shoreline
 - Trempealeau (1,893)
 - Lock and Dam #6

● Populated areas

▲ Recreation areas



Map 3.6 Trempealeau County FEMA 100-Year Flood Boundary

Hazard Mitigation Plan



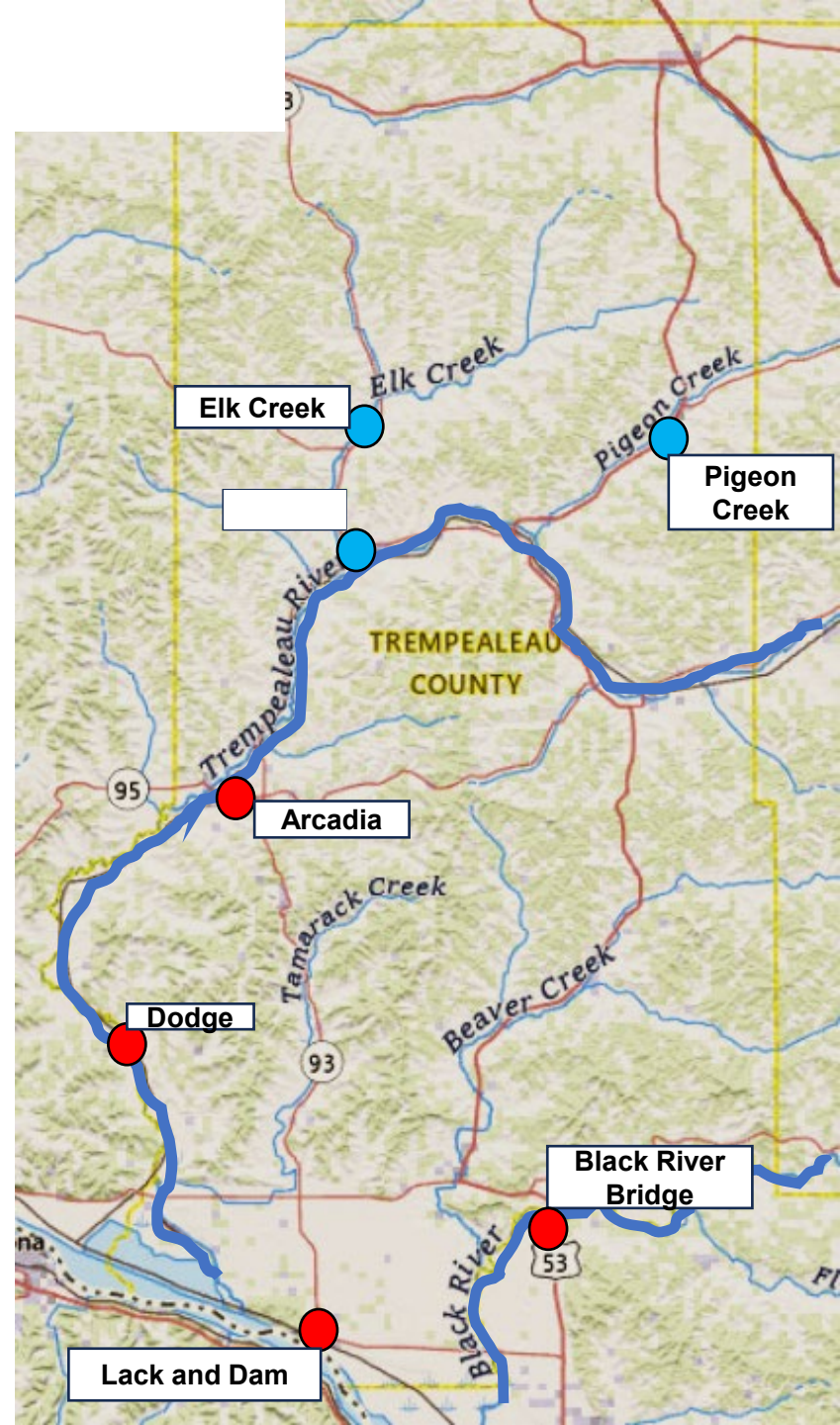
Hazard Mitigation Plan

Map 3.7 Trempealeau County Arterials With High Flood Risk



- Elk Creek @ State Road 121
 - <https://water.noaa.gov/gauges/EKCW3>
- Pigeon Creek near Pigeon Falls
 - <https://water.noaa.gov/gauges/PIGW3>
- Trempealeau River:
 - Independence
 - <https://water.noaa.gov/gauges/IDPW3>
 - Arcadia
 - <https://water.noaa.gov/gauges/ARCW3>
 - Dodge
- Black River @ HWY 53 Bridge
 - <https://water.noaa.gov/gauges/DDGW3>
- Mississippi River @ Lock and Dam #6

 **USGS Gauges**
 **Local Gauges**



Precipitation Patterns

- Rainfall: Heaviest 4-5 inches per month APR-SEP
- Snowfall: heaviest 7-9 inch per month DEC-MAR

Month	Precipitation (inches)	Avg Maximum Temperature (F)	Avg Minimum Temperature (F)	Avg Average Temperature (F)	Snowfall (inches)
January	1.12	25.4	8.5	16.9	7.40
February	1.14	30.2	12.1	21.1	10.10
March	1.84	42.6	24.2	33.4	5.80
April	3.68	57.2	36.7	46.9	1.70
May	4.44	69.4	48.3	58.8	0.10
June	4.31	78.3	58.5	68.4	0.00
July	4.63	81.9	62.8	72.4	0.00
August	4.09	79.7	60.7	70.2	0.00
September	3.78	72.4	52.6	62.5	0.00
October	2.59	59.1	40.4	49.7	0.00
November	1.76	43.2	27.9	35.6	2.30
December	1.33	30.3	15.7	23.0	8.80

Flood Recent History

- 22-23 SEP 2010 Flood
 - 5-6 Inches in 24 hours
 - Towns of Arcadia and Dodge
- 20 JUL 2017 Flood:
 - 4-13 Inches in 24 hours
 - Cities and villages of Arcadia, Blair, Galesville, Ettrick
- 2019 Flood
 - Spring Snow melt (up to 4 feet) and Deep Frost
 - Towns of Caledonia, Dodge, and Trempealeau
- 18-21 Aug 2025: Minor Flood Stage for Arcadia and Dodge

Risk Assessment

	Frequency			Population Impact			Property Impact		
Type of Hazard	5 Yrs	6-10 Yrs	11-15 Yrs	High	Medium	Low	High	Medium	Low
Floods	1	2	1						
Winter Storms	1	1							
Tornados	5	3	1						

Impacts/Risks

- | | |
|---|--|
| <ul style="list-style-type: none"> • Interruption to Government and Operations • Black Out/Brown Out (Grid Down) • Mass Casualty • Displaced persons • Evacuees • Missing Persons • Travel impacts | <ul style="list-style-type: none"> • Reduced services (Police, Fire, Health) • Food and Water Contamination/Shortages • Looting and other criminal acts • Reduced Supply Chain • Building and facility damage and destruction |
|---|--|

Little Tamarack Area
Town of Trempealeau

