



MN Floodplain (and Shoreland) Updates For MACPZA

October 13, 2023

Agenda

- DNR organization & roles related to floodplain management & state permits for work in state public waters
- Ongoing and Newer Outreach efforts
- New/updated resources
- Other efforts of interest
- Mapping updates
- Your priorities for updated or new fact sheets/guidance?
- Any other questions?

MN DNR Organization for Land Use & Public Water Permits

Statewide Contacts

- Floodplain Management/Insurance (NFIP coordinator) – Ceil Strauss; new assistant Garry Bennett (started Dec 2022)
- Floodplain Mapping/Modeling – Jeff Weiss
- State Flood Damage Reduction grant program – Pat Lynch
- Shoreland/Rivers – Dan Petrik
- Floodplain ordinances (and helping in floodplain/shoreland) – Matt Bauman

Floodplain program: floodplain.dnr@state.mn.us

Shoreland ordinance: ordinance.review.dnr@state.mn.us (see [Aug. 2023 Water Talk](#))

- DNR Public Waters permit program – Jen Sorensen
- DNR Appropriation permit program – Dan Miller

Changes in the Works

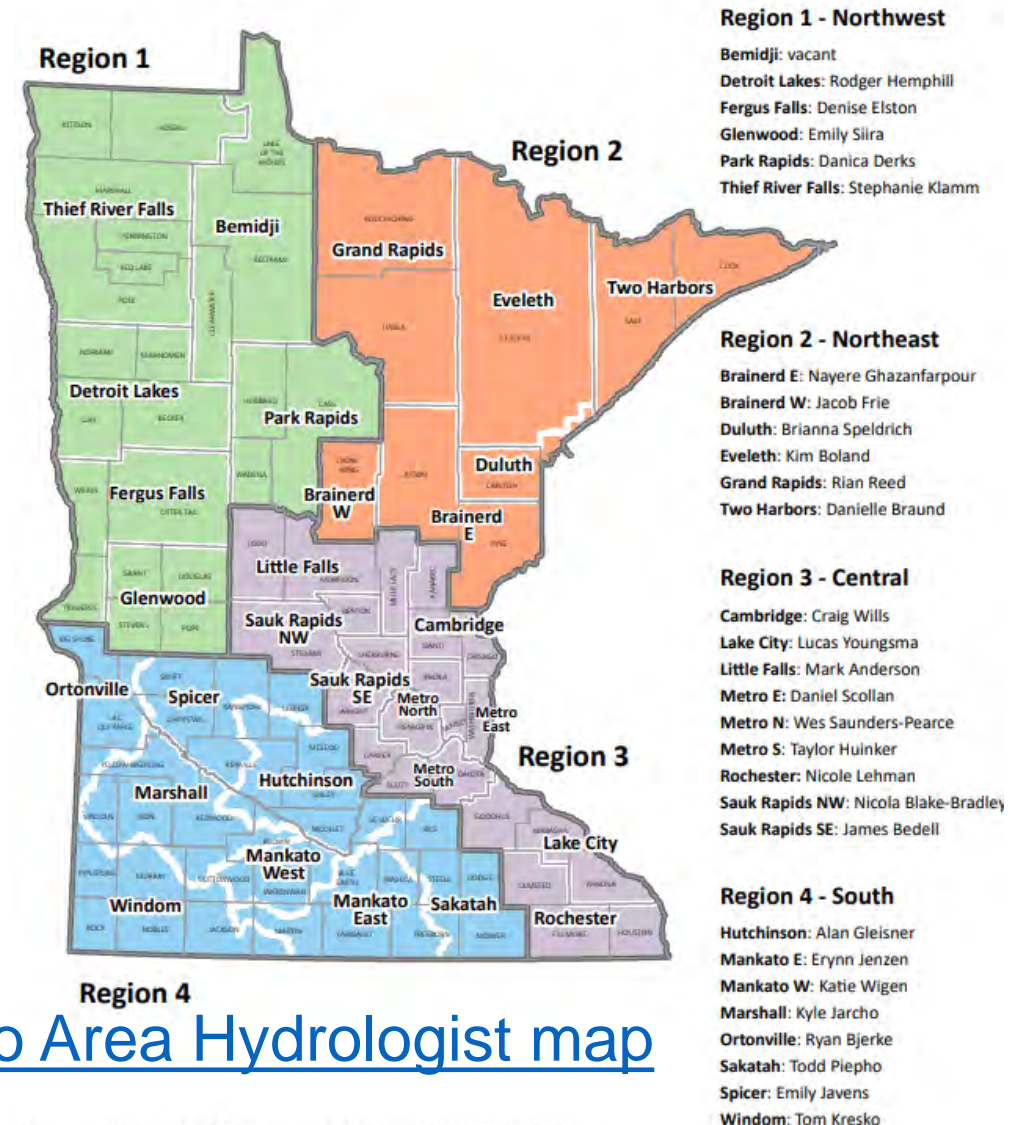
- State Flood Hazard Mitigation grant manager
 - ✓ Pat Lynch retiring Jan. 2024
 - ✓ New FHM coordinator to be named soon. Overlapping a couple months
- Two new mapping engineers
 - ✓ One to replace staffperson who went to another DNR position, and one new
 - ✓ Posting closed Oct. 9, 2023
- New Land Use Unit supervisor
 - ✓ Jenny Shillcox took new position within DNR-EWR
 - ✓ Posting closes Oct. 16

MN DNR Organization – Field Staff

Area Hydrologists

- First contact for specific projects
- Issue public water permits & water appropriation permits
- Assist local officials on floodplain and shoreland management ordinance administration

Lots of new Area Hydrologists and regional managers



[Link to Area Hydrologist map](#)


Regular Outreach – *Water Talk* newsletter

- Typically issued end of odd months, plus some bonus issues
- This past year: 8 issues - November 2022, December 2022, February 2023, March 2023, May 2023, July 2023, August 2023, September 2023
- See past issues on [Water Talk page](#) (can also subscribe at bottom of this page)
- Future addition: index of topics on web site
- Always floodplain topics (since effort is funded by FEMA grant), but also shoreland/river and other water-related or natural beneficial floodplain related
- Open to your ideas for topics of interest!

Water Talk Newsletter - September 2023

- [My Safe Yard Coloring Book](#)
- [Oct. 23: New FEMA Elevation Certificate One-Hour Virtual Training](#)
- [DNR Floodplain Engineer Position Openings](#)
- [MnAFPM Registration Open - Nov. 1-3, 2023](#)
- [New FEMA Flood and Flood Insurance Facts Fliers](#)
- [Recordings Available for Winter 2023 Floodplain and Shoreland Trainings](#)
- [FEMA Region 5 Virtual Trainings Continue](#)
- [MN Floodplain Management Office Hours Continue](#)
- [FEMA Map Status Listing](#)

My Safe Yard Coloring Book



Past coloring books have been popular with our *Water Talk* readers. FEMA staff noted a disaster safety focused issue we haven't previously shared - [FEMA's My Safe Yard](#).

The book includes:

- Basics on preparing for floods and severe wind
- Coloring and activity pages

Oct. 23: New FEMA Elevation Certificate One-Hour Virtual Training

FEMA New Elevation Certificate virtual training

FEMA issued a new Elevation Certificate in July 2023 and

National Flood Insurance Program

Regular Outreach – New LGU Page & Virtual Forums

- [New “secret” local governmental unit page](#)
- Started monthly virtual LGU forums in Feb. 2023 – typically held 9:30-11 am on 3rd Wednesday of month
- Intent is a mix of DNR & local (or other agency) presenters with 10 – 20 minute talks, and time for questions & discussion
- Links to the Teams meeting for the forums on LGU page (and included in monthly LGU emails) or request series appointment
- Agenda’s added to page ~1 week before
- Will have polls for future topics a couple times a year, but open to your ideas for topics of interest!

DNR resources specifically for Local Government Units

Note: this page requires a specific link to access. It is intended as a spot for sharing outreach specifically intended for officials of local government units (LGU) working with land use zoning.

Monthly LGU virtual forums

What: A monthly live virtual Teams forum for local officials involved in managing natural resources, especially for those involved in administering floodplain, shoreland or river-related ordinances, to learn and chat about topics of interest to you.

Purpose: Provide a regular opportunity for local officials and Department of Natural Resources to share information and have discussion outside of more formal trainings on topics that help you manage natural resources in your community.

How do I attend?

- Forums will be hosted from 9:30 to 11 a.m. on the third Wednesday of each month, beginning Feb. 15, 2023. Use the links listed under “Upcoming Forums” to join the live virtual meetings using Microsoft Teams software.
- Request a calendar invite for the 2023 series by contacting floodplain.dnr@state.mn.us (or one of the DNR floodplain and shoreland staff).

2023 forums

- [February 15](#) | Topic: Retaining walls - [Agenda \(PDF\)](#)
- [March 15](#) | Topic: Sand Blankets and Aquatic Plant Management (APM) - [Agenda \(PDF\)](#)
- [April 19](#) | Topic: Culverts and Crossings - [Agenda \(PDF\)](#)
- [May 17](#) | Topic: Culverts and Crossings - Higher Standards and Approaches - [Agenda \(PDF\)](#)
- [June 21](#) | Topic: Riprap - [Agenda \(PDF\)](#)
- [July 19](#) | Topic: Beyond Riprap: Bioengineering - [Agenda \(PDF\)](#)
- [August 16](#) | Topic: Water Surface Use Impacts and Regulations - [Agenda \(PDF\)](#)
- [September 20](#) | Topic: Stormwater Basics for Zoning Administrators - [Agenda](#)

Regular Outreach – New Monthly Emails

- New monthly “LGU Floodplain & Shoreland Reminders” emails to National Flood Insurance Program (NFIP) participating communities – since April 2023
- Usually sent around 2nd Wed of month (last sent 10/11/23)
- Sent to: Zoning/permitting (involved in floodplain or shoreland administration), engineering, EM’s, other local staff interested in getting the updates
- Includes:
 - ✓ upcoming virtual monthly LGU agenda
 - ✓ links to any Water Talk issues sent since last monthly update
 - ✓ upcoming trainings
 - ✓ FEMA updates of interest to LGUs



New Bluff Basics Video

- New on-demand video training (about 18 minutes)
- Content:
 - ✓ Why we have bluff regulations
 - ✓ What are the bluff regulations
 - ✓ Shows sample elevation data to determine whether a bluff exists using the bluff-related definitions
- Target audience: planning and zoning staff who administer bluff-related regulations for land use applications.
- Presented by Dan Petrik, DNR Lake and River Shoreland Program Manager, and recorded in August 2023.

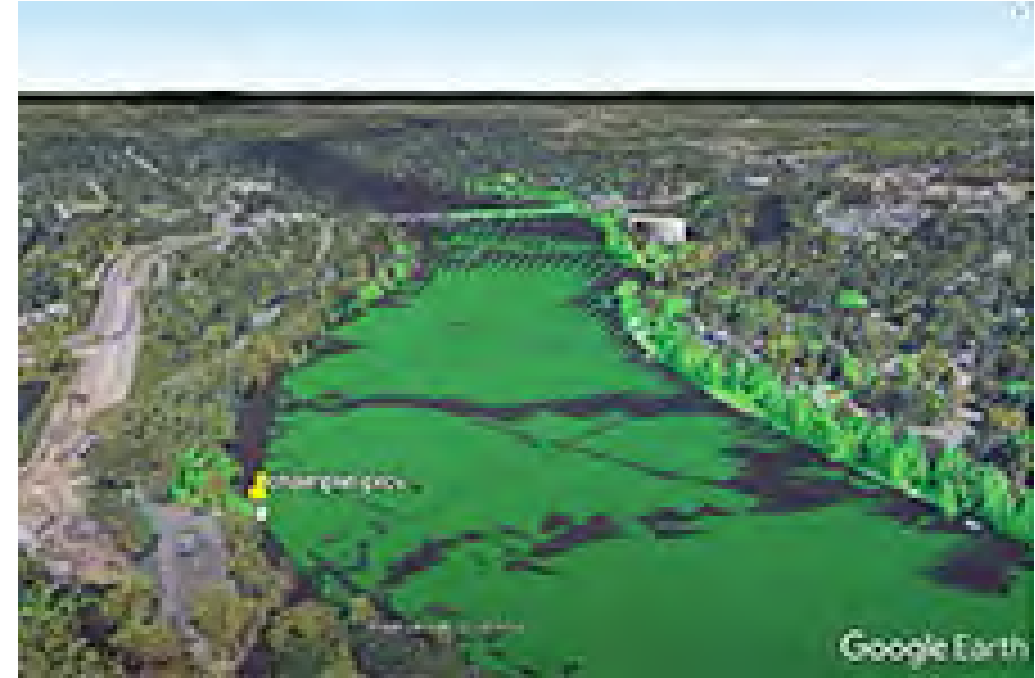
[Link to the online Bluff Basics training](#)



MRCCA Viewshed Analysis with Google Earth Pro

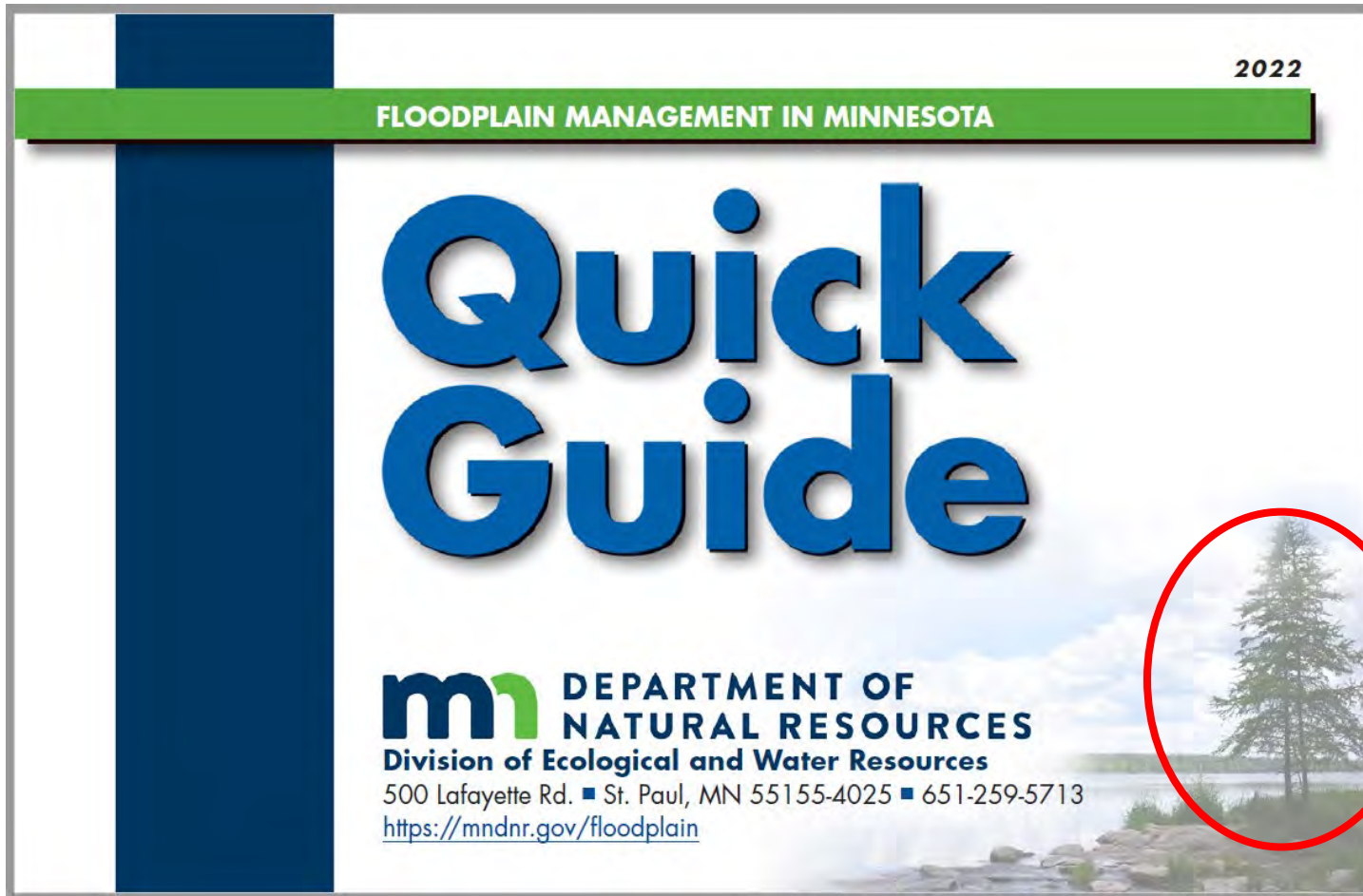
- New on-demand video training (about 7 minutes)
- Within the Mississippi River Corridor Critical Area (MRCCA), community ordinances require evaluations of potential impacts to Public River Corridor Views prior to permitting certain types of development and activities.
- This video details one way in to evaluate how a proposed structure could impact such views using Google Earth Pro.
- Target audience: Planning, zoning & engineering staff in MRCCA communities

[Link to MRCCA Viewshed Analysis with Google Earth Pro training](#)



December 2022 Minnesota Floodplain Management Quick Guide

[2022 Quick Guide link](#)



Separator Pages with Upcoming Topics

FLOODPLAINS AND FLOOD MAPS

- 10 Looking for FEMA Flood Map Information?
- 11 FIRMette: FEMA Flood Maps Online
- 12 Understanding the Riverine Floodplain
- 13 New Format Flood Insurance Rate Maps
- 14 "Pre-1988" Flood Insurance Rate Maps
- 15 "Pre-1988" Flood Boundary and Floodway Map
- 16 Using the Riverine Flood Profile to Determine Riverine BFEs
- 17 Understanding the Floodway
- 18 Floodway Data Table
- 19 Regulatory Flood Protection Elevation (RFPE)

Some
reorganization

Regulatory Flood Protection Elevation (RFPE) Page

- Moved earlier from page 40 to 19 (right after Floodway determination)
- Show natural SIZ area

Regulatory Flood Protection Elevation (RFPE)

In Minnesota, floodplain management requirements for buildings and road surfaces are measured relative to the Regulatory Flood Protection Elevation. The RFPE is determined as follows:

- Base Flood Elevation**
- + **Stage increase** up to 0.5 ft. due to floodway designation (0.0 ft. on lakes)
- + **1 foot (minimum) freeboard** (some communities have higher freeboard)

= **RFPE**

BFE + Freeboard = RFPE
And Stage Increase

Regulatory Flood Protection Elevation (RFPE) is less than the elevation of the flood plain, floodway, floodway fringe (stage increase) from a floodway.

Regional Flood is also known as "base flood," "one-percent annual chance flood," and the "100-year flood."

40

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BFE + Freeboard = RFPE
And Stage Increase

Regulatory Flood Protection Elevation (RFPE) is an elevation not less than one foot above the elevation of the regional flood plus any increases in flood elevation caused by floodplain encroachments (stage increase) that result from designation of a floodway.

Regional Flood is also known as "base flood," "one-percent (1%) annual chance flood," and the "100-year flood."

19

Terms and Definitions

Regulatory Flood Protection Elevation (RFPE) is an elevation not less than one foot above the elevation of the regional flood plus any increases in flood elevation caused by floodplain encroachments (stage increase) that result from designation of a floodway.

Regional Flood is also known as "base flood," "one-percent (1%) annual chance flood," and the "100-year flood."

Examples of Changes in QG

REQUIREMENTS FOR BUILDINGS

- 50 Fundamentals of Flood Resistant Construction
- 51 How to Elevate Buildings in Flood Zone A/AE
- 52 Placement and Compaction of Fill in Zone A/AE
- 53 Basements in Flood Zones Are Unsafe
- 54 Enclosures Below the Lowest Floor (Zone A/AE)
- 55 Crawlspace* Details (Zone A/AE)
- 56 Utility Service and Equipment Inside Enclosures
- 57 Utility Service, Equipment, and Tanks (Outside)
- 58 Manufactured Homes Require Special Attention
- 59 General Requirements in Lake Superior Coastal High Hazard Areas (Zone V)

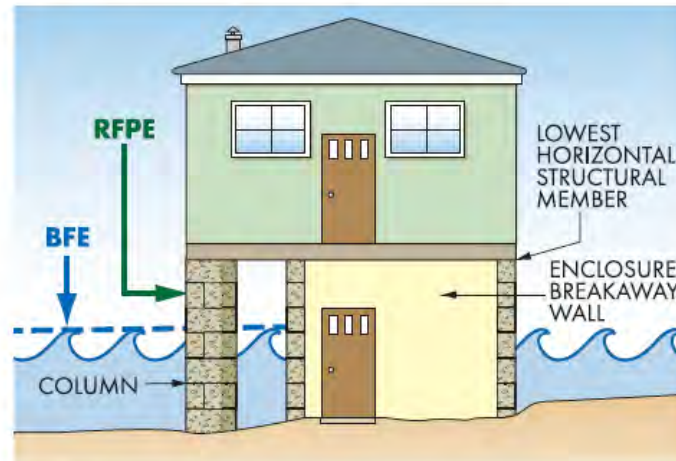
Some reorganization & separator pages with those upcoming topics/pages

New page noting coastal requirements (Zone V)

General Requirements in Lake Superior Coastal High Hazard Areas (Zone V)

FEMA revisions to Flood Insurance Rate Maps for some Lake Superior shorelines may show coastal high hazard areas (Zone V). The fundamental requirements for flood resistant construction ([see page 50](#)) apply in Zone V. In addition:

- Buildings must be elevated on “open” foundations (pilings or columns) to allow waves and water to pass under without imposing significant wave forces.
- The lowest horizontal structural member of the lowest floor must be elevated to or above the RFPE.
- Foundation designs must be prepared and certified by registered design professionals.
- Enclosures below elevated buildings must be used only for parking, limited storage, and building access.
- Walls of enclosures must be flood damage-resistant materials and designed to break away under flood loads.



Terms and

Definitions

Coastal High Hazard Areas (Zone V)

are shown on FIRMS to identify areas subject to high velocity wave action during base flood conditions. In Zone V, waves may be 3 ft. or higher.

Minnesota's
first Zone VE on
St. Louis
countywide
maps
(currently
preliminary)

Lake & Flood Elevations Online (LFEO) for 2021 additions

FLOODPLAIN DATA AND RESOURCES

- [20](#) Approximate Zone A
- [21](#) Sources for BFEs in Approximate Zone A Without BFEs
- [22](#) Minnesota's Lake & Flood Elevations Online (LFEO) Application
- [23](#) LFEO Application Options
- [24](#) Minnesota's FEMA Hydraulic Model Download Site

Lake & Flood Elevations Online (LFEO) Changes

Minnesota's Lake & Flood Elevations Online (LFEO) Application

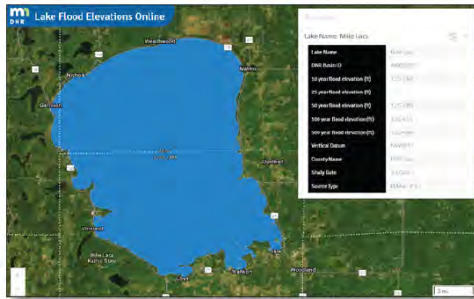
Use the **Lake & Flood Elevations Online (LFEO)** application to view and download detailed flood elevations for:

- Lakes and basins shown on FIRMs with BFEs (BFEs rounded to nearest foot)
- Lakes and basins with flood elevation data from other sources when MNDNR determines the data meet minimum quality standards

Available data may include:

- MNDNR basin name and number
- Study date and source
- Datum
- Ordinary High Water

- Flood elevations, if available, for:
 - 10-year (10% annual chance)
 - 25-year (4% annual chance)
 - 50-year (2% annual chance)
 - 100-year (1% annual chance)
 - 500-year (0.2% annual chance)



Access the Lake & Flood Elevations Online (LFEO) at:
https://arcgis.dnr.state.mn.us/ewr/lake_floodplain/

Added page for 2021 upgrade

LFEO Application Options

In 2021, MNDNR added new layers and features to the Minnesota Lake & Flood Elevations Online application (see page 22).

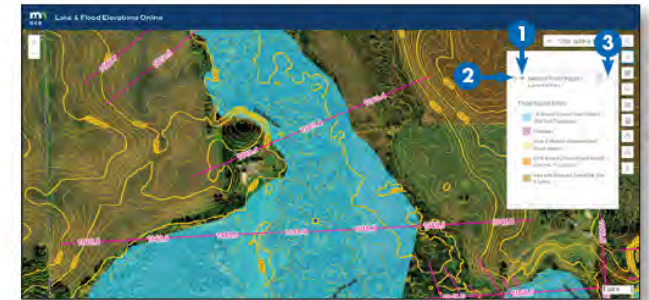
Layers: In addition to lakes and basins

- 2-foot elevation contours (NAVD88 datum)
- FEMA flood hazard areas, cross-section and BFE lines (where digital FIRMs available)
- 1% annual chance water surface elevations (aka "pink lines") for BFE estimates
- MNDNR's Unmodernized floodplain layer (where paper FIRMs available)
- Parcel boundaries
- Public Waters

Tools: Measuring (length and area) and latitude / longitude for spot location

Report options:

- Map of chosen areas and layers
- Basin report with flood elevations, Ordinary High Water, and highest recorded flood elevations



User hints for layers legend:

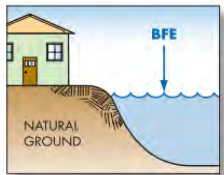
- 1 Click on "eye" symbol to turn layer off/on
- 2 Click on "pointer" to show expanded layers
- 3 Transparency option: Click on three dots to right of layer name, then increase or decrease opacity

Separate Letter of Map Changes section

2020 version

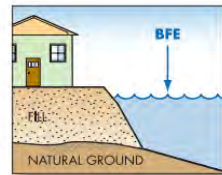
FIRM Revisions: LOMAs and LOMR-Fs

The most accurate information available is used to make flood maps, including topographic base maps and detailed engineering methods or methods of approximation. FEMA issues map revisions if technical data are submitted to support the changes.



Letter of Map Amendment (LOMA) is an official amendment to an effective FIRM that may be issued when a property owner provides additional technical information from a professional land surveyor, such as ground elevation relative to the BFE.

Lenders may waive the flood insurance requirement if the LOMA removes a building site from the SFHA because natural ground at the site is at or above the BFE.



Letter of Map Revision Based on Fill (LOMR-F) is an official FEMA determination that a structure or parcel of land has been elevated by fill above the BFE, and therefore is no longer in the SFHA for federal

mandatory flood insurance purposes. Minnesota law requires additional steps to remove a structure or parcel of land from the SFHA for regulatory purposes.

FIRM AMENDMENTS AND REVISIONS

- 25 FIRM Revisions: Letters of Map Revision (LOMA)
- 26 Are Building Sites Higher than the BFE?
- 27 LOMAs: "Out as Shown"
- 28 Options to Document Structures are Not in SFHAs
- 29 More on LOMAs: Using LiDAR Topography
- 30 More on LOMAs: Basements and Decks
- 31 FIRM Revisions: Letters of Map Revision Based on Fill (LOMR-F)
- 32 FIRM Revisions: CLOMRs and LOMRs
- 33 Levee Certification for FIRMs

Split LOMA & LOMR-F into two pages

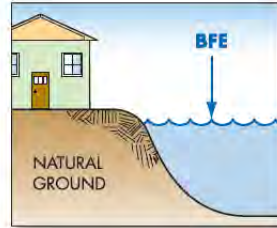
Separate LOMA & LOMR-F

FIRM Revisions: Letters of Map Revision (LOMA)

The most accurate information available is used to make flood maps, including topographic base maps and detailed engineering methods or methods of approximation. FEMA issues map revisions if technical data are submitted to support the changes.

Letter of Map Amendment (LOMA) is an official amendment to an effective FIRM that may be issued when a property owner provides additional technical information from a professional land surveyor, such as elevation of the natural ground (no fill) relative to the BFE.

- FEMA does not charge a fee to process LOMA requests.
- Lenders may waive the flood insurance requirement if the LOMA removes a building site from the SFHA because natural ground at the site is at or above the BFE.



Property owners who place fill to raise sites above the BFE can request Letters of Map Revision based on Fill (LOMR-Fs) described on [page 31](#).

Access to FEMA's web-based application for professional land surveyors to submit eLOMAs is <https://hazards.fema.gov/femaportal/resources/whatiseloma.htm>.

FIRM Revisions: Letters of Map Revision Based on Fill (LOMR-F)

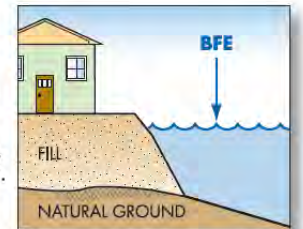
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Letter of Map Amendment Revision Based on Fill (LOMR-F) is an official FEMA determination that a structure or parcel of land has been elevated by fill above the BFE, and therefore is no longer in the SFHA for federal mandatory flood insurance purposes. Minnesota law requires additional steps to remove a structure or parcel of land from the SFHA for regulatory purposes.

To qualify for a LOMR-F, both the lowest floor (including basement or crawlspace), and the lowest point where fill is next to the building, must be at or above the BFE. Also:

- The application includes a Community Acknowledgement Form for the local official to state if the proposed fill complies with floodplain management regulations.
- The applicant must pay a fee to FEMA.

Property owners whose building sites are in the SFHA but on natural ground that is above the BFE can request Letters of Map Amendment (LOMAs) described on [page 25](#).



Check NFIP Technical Bulletin #10 to learn more about elevating building sites on fill to be reasonably safe from flooding. Guidance on map revisions is available online <https://www.fema.gov/flood-maps/change-your-flood-zone/loma-lomr-f>.

Examples of Changes in QG

OTHER STRUCTURES AND DEVELOPMENT

- 60 Accessory Structures
- 61 Agricultural Structures
- 62 Recreational Vehicles
- 63 Pools in Flood Hazard Areas
- 64 Solar Power Facilities and Solar Panels in Flood Hazard Areas

Reorganized
section on Other
Structures and
Development

New Solar Page

Solar Power Facilities and Solar Panels in Flood Hazard Areas

Solar power facilities that generate power for off-site consumption (sometimes called solar farms or solar arrays), and **ground-mounted solar panels** that serve individual buildings, are allowed in SFHAs and Shoreland Districts provided:

- **Shoreland District:** The structures satisfy shoreland management setbacks.
- **Floodway:** The structures are not located in floodways ([see page 17](#)). When a floodway is not delineated, an analysis is required ([see page 42](#)).
- **Flood Fringe:** The structures are allowed in flood fringe areas if they are:
 - ❑ Designed to have solar panels, when fully tilted, above the RFPE
 - ❑ Anchored to prevent flotation, collapse, or lateral movement during base flood conditions
 - ❑ Constructed with flood damage-resistant materials below the RFPE

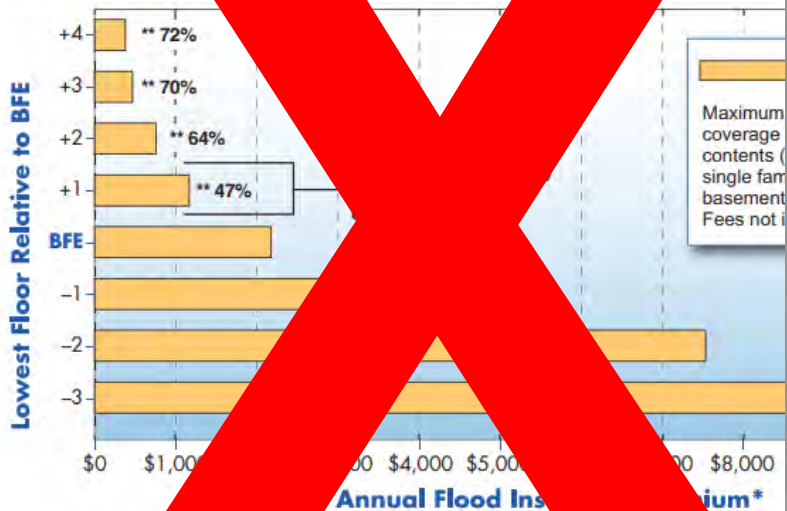
Roof-mounted solar panels are allowed on buildings in SFHAs provided the roofs and connections to electric service are above the RFPE.

For additional guidance, download MNDNR's
[Considerations for Siting Solar Power Facilities Near Lakes and Rivers](#)

Due to FEMA's flood insurance rating changes (Risk Rating 2.0)

Freeboard: Build Higher, Reduce Damage, Save on NFIP Insurance

Freeboard is additional height – a factor of safety – above the BFE. Buildings that are higher than the BFE experience less damage and less NFIP flood insurance.



Freeboard: Build Higher, Reduce Damage, Save on NFIP Insurance

Freeboard is additional height – a factor of safety – above the BFE. Buildings that are higher than the BFE experience less flood damage.

- Minnesota law requires at least one foot of freeboard plus any stage increase due to floodway designation (RFPE, [see page 19](#)).
- Some communities adopt higher freeboard requirements.
- Owners and builders may add more freeboard to better protect their buildings and contents.
- Owners of buildings that are elevated above the BFE may save on NFIP flood insurance premiums.



Important

Information

Possible NFIP Insurance Savings: For older buildings, some low-cost damage reduction actions may result in discounts in NFIP flood insurance premiums:

- Elevate machinery and equipment (M&E) to a higher floor.
- Install flood openings in walls of enclosures and attached garages used only for parking, building access, and limited storage.


DNR Floodplain Web Site

Home > Ecological and Water Resources > Water Management >

Floodplain Management

- Main page
- Floodplain Regulations
- Maps and Technical Resources
- Flood Insurance
- Preparation, Response and Recovery
- Training and Education**
- Floodplain Management History

Floodplain Management



Regulating Floodplain Development
Find information on model ordinances, permit requirements, minimum standards and elevation requirements. [Information on regulations >](#)

Floodplain Maps and Technical Resources
Resources are available for accessing flood maps, map updates and appeals, determining base flood elevations, hydraulic models and technical resources. [Learn more >](#)

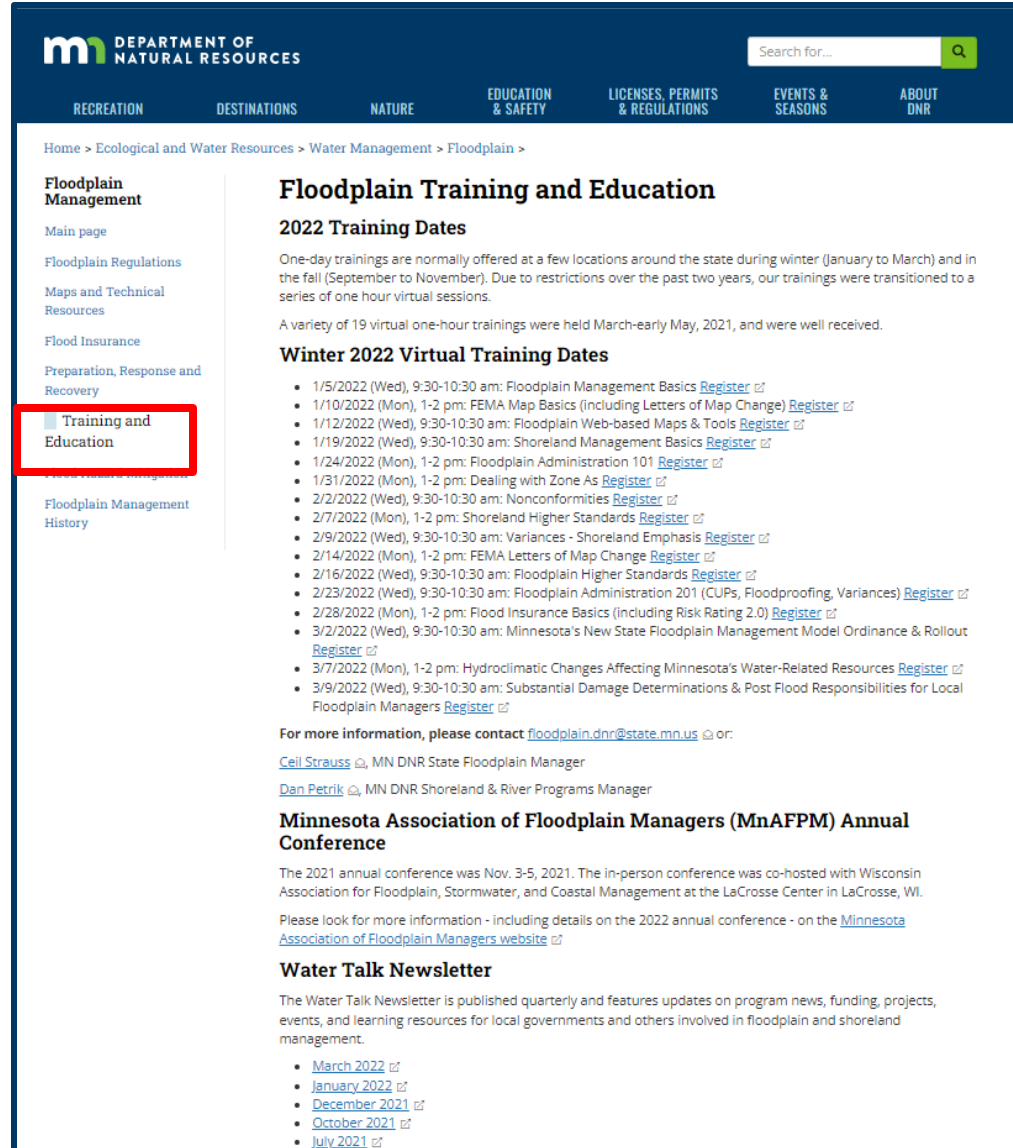
Flood Insurance
Information is available on getting a policy, mandatory purchase, coverage, policy rates, claims and other considerations. [Learn more >](#)

Floodplain Management in Minnesota: Past, Present, and Future
[Learn about Minnesota's efforts to promote responsible floodplain development >](#)

- Use mndnr.gov/floodplain or Search “MN Floodplain Management” for main page
- See upcoming trainings and past *Water Talk* newsletters on “Floodplain Training and Education” page (can also subscribe to *Water Talk*)

Previous Floodplain & Shoreland/Rivers Programs Training and Education Page

Old Training & Education Page



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Home > Ecological and Water Resources > Water Management > Floodplain >

Floodplain Management

- Main page
- Floodplain Regulations
- Maps and Technical Resources
- Flood Insurance
- Preparation, Response and Recovery
- Training and Education**
- Floodplain Management History

Floodplain Training and Education

2022 Training Dates

One-day trainings are normally offered at a few locations around the state during winter (January to March) and in the fall (September to November). Due to restrictions over the past two years, our trainings were transitioned to a series of one hour virtual sessions.

A variety of 19 virtual one-hour trainings were held March-early May, 2021, and were well received.

Winter 2022 Virtual Training Dates

- 1/5/2022 (Wed), 9:30-10:30 am: Floodplain Management Basics [Register](#)
- 1/10/2022 (Mon), 1-2 pm: FEMA Map Basics (Including Letters of Map Change) [Register](#)
- 1/12/2022 (Wed), 9:30-10:30 am: Floodplain Web-based Maps & Tools [Register](#)
- 1/19/2022 (Wed), 9:30-10:30 am: Shoreland Management Basics [Register](#)
- 1/24/2022 (Mon), 1-2 pm: Floodplain Administration 101 [Register](#)
- 1/31/2022 (Mon), 1-2 pm: Dealing with Zone As [Register](#)
- 2/2/2022 (Wed), 9:30-10:30 am: Nonconformities [Register](#)
- 2/7/2022 (Mon), 1-2 pm: Shoreland Higher Standards [Register](#)
- 2/9/2022 (Wed), 9:30-10:30 am: Variances - Shoreland Emphasis [Register](#)
- 2/14/2022 (Mon), 1-2 pm: FEMA Letters of Map Change [Register](#)
- 2/16/2022 (Wed), 9:30-10:30 am: Floodplain Higher Standards [Register](#)
- 2/23/2022 (Wed), 9:30-10:30 am: Floodplain Administration 201 (CUPS, Floodproofing, Variances) [Register](#)
- 2/28/2022 (Mon), 1-2 pm: Flood Insurance Basics (Including Risk Rating 2.0) [Register](#)
- 3/2/2022 (Wed), 9:30-10:30 am: Minnesota's New State Floodplain Management Model Ordinance & Rollout [Register](#)
- 3/7/2022 (Mon), 1-2 pm: Hydroclimatic Changes Affecting Minnesota's Water-Related Resources [Register](#)
- 3/9/2022 (Wed), 9:30-10:30 am: Substantial Damage Determinations & Post Flood Responsibilities for Local Floodplain Managers [Register](#)

For more information, please contact floodplain.dnr@state.mn.us or:

[Ceil Strauss](#), MN DNR State Floodplain Manager

[Dan Petrik](#), MN DNR Shoreland & River Programs Manager

Minnesota Association of Floodplain Managers (MnAFPM) Annual Conference

The 2021 annual conference was Nov. 3-5, 2021. The in-person conference was co-hosted with Wisconsin Association for Floodplain, Stormwater, and Coastal Management at the LaCrosse Center in LaCrosse, WI.

Please look for more information - including details on the 2022 annual conference - on the [Minnesota Association of Floodplain Managers website](#)

Water Talk Newsletter

The Water Talk Newsletter is published quarterly and features updates on program news, funding, projects, events, and learning resources for local governments and others involved in floodplain and shoreland management.

- [March 2022](#)
- [January 2022](#)
- [December 2021](#)
- [October 2021](#)
- [July 2021](#)

Trainings & Education Web Updates

New Pages!

Separate pages for:

- Shoreland Training
- Floodplain Training
- Other Land Use Training
- Water Talk Newsletter
 - Past issues
 - *Future – by topics*

The screenshot shows the Minnesota Department of Natural Resources website. The header includes the logo and navigation links: RECREATION, DESTINATIONS, NATURE, EDUCATION & SAFETY, LICENSES, PERMITS & REGULATIONS, EVENTS & SEASONS, and ABOUT DNR. A search bar is located in the top right. The main content area is titled "Shoreland and Floodplain Education and Training Center". A red box highlights a yellow callout box that says "2023 Education and Training: Register now for Shoreland and Floodplain Education and Training sessions. View the course list." Below this, there are four sections: "Shoreland training" with an image of a building and text about training formats; "Floodplain training" with an image of a floodplain and text about educational materials; "Other Land Use training" with an image of a boat and text about training topics; and "Water Talk newsletter" with an image of a boat and text about periodic updates.

Upcoming New Virtual Trainings

- ✓ 10/23/2023 FEMA New Elevation Certificate [Registration Link](#)
- ✓ TBD (Dec 2023) Mississippi River Corridor Critical Area (MRCCA)

- ✓ 1/08/24 Floodplain Basics
- ✓ 1/10/24 FEMA Map Basics
- ✓ 1/22/24 Shoreland Management Basics
- ✓ 1/24/24 Floodplain grading & Non-structural Development*
- ✓ 1/29/24 Better Culverts & Crossings* ***New topic**
- ✓ 1/31/24 Flood Insurance Basics
- ✓ 3/06/24 Dealing with A Zones
- ✓ 3/11/24 Floodplain & Watershed Higher Standards
- ✓ 3/13/24 Shoreland Higher Standards
- ✓ 3/18/24 Floodplain Violations and Enforcement*
- ✓ 3/27/24 Substantial Damage & Post Flood Responsibilities

The screenshot shows the Minnesota Department of Natural Resources website. The main heading is "2023 Shoreland and Floodplain Education and Training". Below this, it says "Register now for upcoming live trainings, January – March 2023". There are three training listings:

- Floodplain Basics**
January 23, 1-2 p.m.
A discussion of roles and responsibilities at the community level for floodplain management. Highlights include: common terms, definitions, where regulations apply, finding FEMA map, regulations and providing clarity on mandatory insurance requirements. Presenter: Cell Strauss.
[Register here >](#)
- FEMA Map Basics**
January 30, 1-2 p.m.
A discussion of mapping zones, finding and printing FEMA maps, types of FEMA maps in the state, and what map updates are in progress statewide. Also covers highlights of map appeals and amendments (LOMAs and LOMR-Fs). Presenters: Cell Strauss and Mary Presnall.
[Register here >](#)
- Shoreland Management Basics**
February 1, 9:30-10:30 a.m.
This course covers how shoreland standards protect water quality, habitat and shoreland/rural character. Topics include fundamentals of the shoreland program including lake and river classifications, covered waterbodies, and key regulations as well as tips and tricks for program administration. Special topics, including PUDs, identifying bluffs, Environmental Review, and other topics are available depending on time and participant interest.
Recommended for anyone new to shoreland regulations or those wanting a refresher.
Presenters: Dan Petrik and Matt Bauman.
[Register here >](#)

Jan. & March
2024
Registration
links in Nov.
2023 Water
Talk

Floodplain Trainings Page

Virtual trainings:

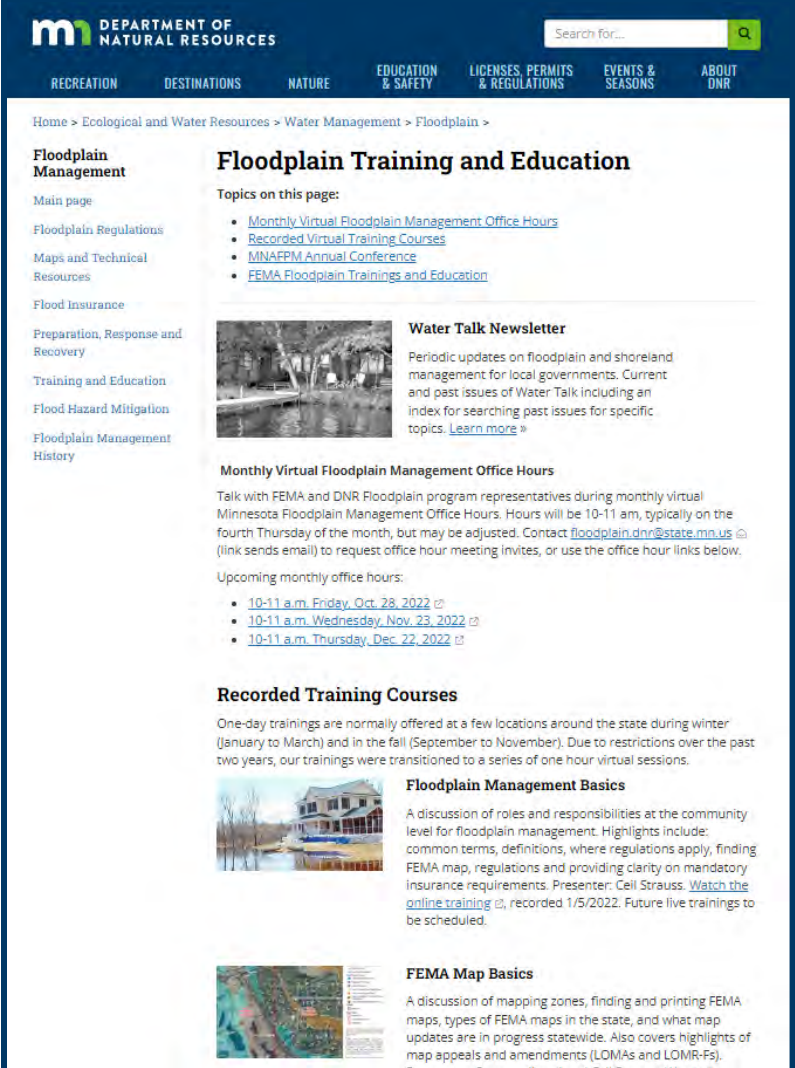
- 11 one-hour trainings Jan to March 2023 (9 updates, new H&H for Non-Engineers & new Floodplain Culverts); Recordings now available on Floodplain Training & Education page (plus several from early 2022)

- FEMA monthly topics: 9-10 am 2nd Wed of month

Monthly Office Hours:

- DNR/FEMA 10-11 am – 4th Thu

In Person Workshops: One day workshops in Brainerd/Little Falls, Rochester & Metro in March/April?



The screenshot shows the Minnesota Department of Natural Resources website. The header includes the logo and navigation links for Recreation, Destinations, Nature, Education & Safety, Licenses, Permits & Regulations, Events & Seasons, and About DNR. The main content area is titled "Floodplain Training and Education" and features a sidebar with links to various resources. The main text includes sections for "Topics on this page" with links to virtual office hours, recorded training courses, and annual conferences; "Water Talk Newsletter" with a description of updates on floodplain and shoreland management; "Monthly Virtual Floodplain Management Office Hours" with details on the schedule and contact information; and "Recorded Training Courses" with descriptions of "Floodplain Management Basics" and "FEMA Map Basics".

mi DEPARTMENT OF NATURAL RESOURCES

RECREATION DESTINATIONS NATURE EDUCATION & SAFETY LICENSES, PERMITS & REGULATIONS EVENTS & SEASONS ABOUT DNR

Home > Ecological and Water Resources > Water Management > Floodplain >

Floodplain Management

Main page
Floodplain Regulations
Maps and Technical Resources
Flood Insurance
Preparation, Response and Recovery
Training and Education
Flood Hazard Mitigation
Floodplain Management History

Floodplain Training and Education

Topics on this page:

- [Monthly Virtual Floodplain Management Office Hours](#)
- [Recorded Virtual Training Courses](#)
- [MNAFPM Annual Conference](#)
- [FEMA Floodplain Trainings and Education](#)

Water Talk Newsletter

Periodic updates on floodplain and shoreland management for local governments. Current and past issues of Water Talk including an index for searching past issues for specific topics. [Learn more »](#)

Monthly Virtual Floodplain Management Office Hours

Talk with FEMA and DNR Floodplain program representatives during monthly virtual Minnesota Floodplain Management Office Hours. Hours will be 10-11 am, typically on the fourth Thursday of the month, but may be adjusted. Contact floodplain.dnr@state.mn.us (link sends email) to request office hour meeting invites, or use the office hour links below.

Upcoming monthly office hours:

- [10-11 a.m. Friday, Oct. 28, 2022](#)
- [10-11 a.m. Wednesday, Nov. 23, 2022](#)
- [10-11 a.m. Thursday, Dec. 22, 2022](#)

Recorded Training Courses

One-day trainings are normally offered at a few locations around the state during winter (January to March) and in the fall (September to November). Due to restrictions over the past two years, our trainings were transitioned to a series of one hour virtual sessions.

Floodplain Management Basics

A discussion of roles and responsibilities at the community level for floodplain management. Highlights include: common terms, definitions, where regulations apply, finding FEMA map, regulations and providing clarity on mandatory insurance requirements. Presenter: Cell Strauss. [Watch the online training](#), recorded 1/5/2022. Future live trainings to be scheduled.

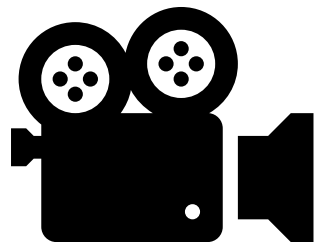
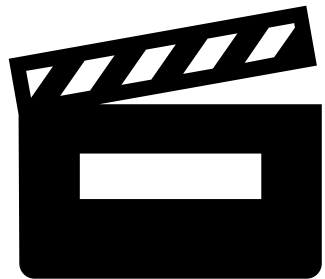
FEMA Map Basics

A discussion of mapping zones, finding and printing FEMA maps, types of FEMA maps in the state, and what map updates are in progress statewide. Also covers highlights of map appeals and amendments (LOMAs and LOMR-Fs).

Draft Letter of Map Change Videos

Goals

- Cover most common questions
- Keep each video under 10 minutes
- Target audience is local officials and homeowners, so aim to keep in plain language for person with no background



Current draft video topics

1. My house is in FEMA mapped floodplain, But I think it's high. What are the options to get the FEMA zone changed?
2. What is a Letter of Map Amendment (LOMA)?
3. How do I apply for a Letter of Map Amendment – Out As Shown (LOMA-OAS) or a LOMA with LiDAR?
4. What is a Letter of Map Revision based on Fill (LOMR-F)?
5. How to Apply for Letters of Map Amendments (LOMAs) and Letters of Map Revisions (LOMR-Fs).
6. Creating LOMA with LiDAR Map Using DNR's Lake & Flood Elevations Online (LFEO) Application

Townships – Clarifying When They Have Shoreland / Floodplain Authority

Issue

- Unclear whether townships are administering all or portions of Shoreland and/or Floodplain ordinances
- Past FEMA guidance on townships not clear

Goals

- Clarify legal authorities for townships versus counties for Shoreland and Floodplain
- Work with MN Association of Townships & MACPZA on Shoreland and Floodplain guidance for townships
- Verify FEMA interpretation of when townships are the floodplain zoning authority

Townships – Floodplain Authority

Olmsted letter prompts clarification from FEMA

- 8/4/2022 - Letter from Olmsted County to FEMA & DNR with many clarifying questions
- DNR drafted response with FEMA input, but FEMA indecision on who would sign
- 1/20/2023 – DNR response based on understanding of FEMA’s positions
 - ✓ Township not considered floodplain zoning community unless they have a DNR-approved Floodplain Management ordinance (county is responsible)
 - ✓ Only Townships with DNR-approved ordinance are entitled to due process during mapping updates
 - ✓ Related discussion about only floodplain zoning townships are shown with boundaries & name on future FEMA maps.

Coordination with MAT and MACPZA on Floodplain Guidance for townships

- ✓ 4/6/2023 initial draft guidance to MAT attorney (used shoreland guidance lessons learned)
- ✓ 5/24/2023 DNR & MAT review; then DNR incorporates MAT input;
- ✓ ~~10/6/2023~~ 11/21/2023 MACPZA & DNR group review of draft guidance

Townships – Shoreland Authority

Olmsted letter prompts clarification

- 8/4/2022 - Letter from Olmsted County to DNR with many clarifying questions
- 9/13/2023 – DNR response to Olmsted County letter

Coordination with MAT and MACPZA on Shoreland Guidance for townships

2/9/2022 – DNR/MACPZA work group meeting

Many, many meetings with MAT, MACPZA board and MACPZA work group

9/6/2023 DNR & MACPZA workgroup meeting

9/15/2023 sent MAT draft #5 on Shoreland guidance

10/26/2023 – DNR check-in with MAT

12/8/2023 – DNR present guidance at MAT conference

Climate Trends Outreach Documents

10/13/2022 - DNR presentation at MACPZA conference “Effective Climate Messaging for Local Officials”

Over past year

- Internal agreement to produce fact sheets:
 1. Climate Trends Affecting Shoreline and Floodplains
 2. How Climate Trends Affect Shorelands and Lakes
 3. How Climate Trends Affect Floodplains
- July 2023 - Fact sheets 1 & 2 drafted & revised based on land use unit, climatology, lake specialists
- August 2023+ Working with DNR’s creative services design unit & web master on better graphics for fact sheets, and website design

Overview: Risk MAP



- Previous effort to modernize maps
- Result: digital flood data and digital maps for 92% of population
- Improved flood data quality
- Limited up-front coordination
- Scoping not mandatory

RiskMAP

Increasing Resilience Together

- Collaborative approach
- Goals: quality data, public awareness, action that reduces risk
- Watershed-oriented
- Focus on up-front coordination
- Discovery is mandatory

Watershed Discovery Process

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:

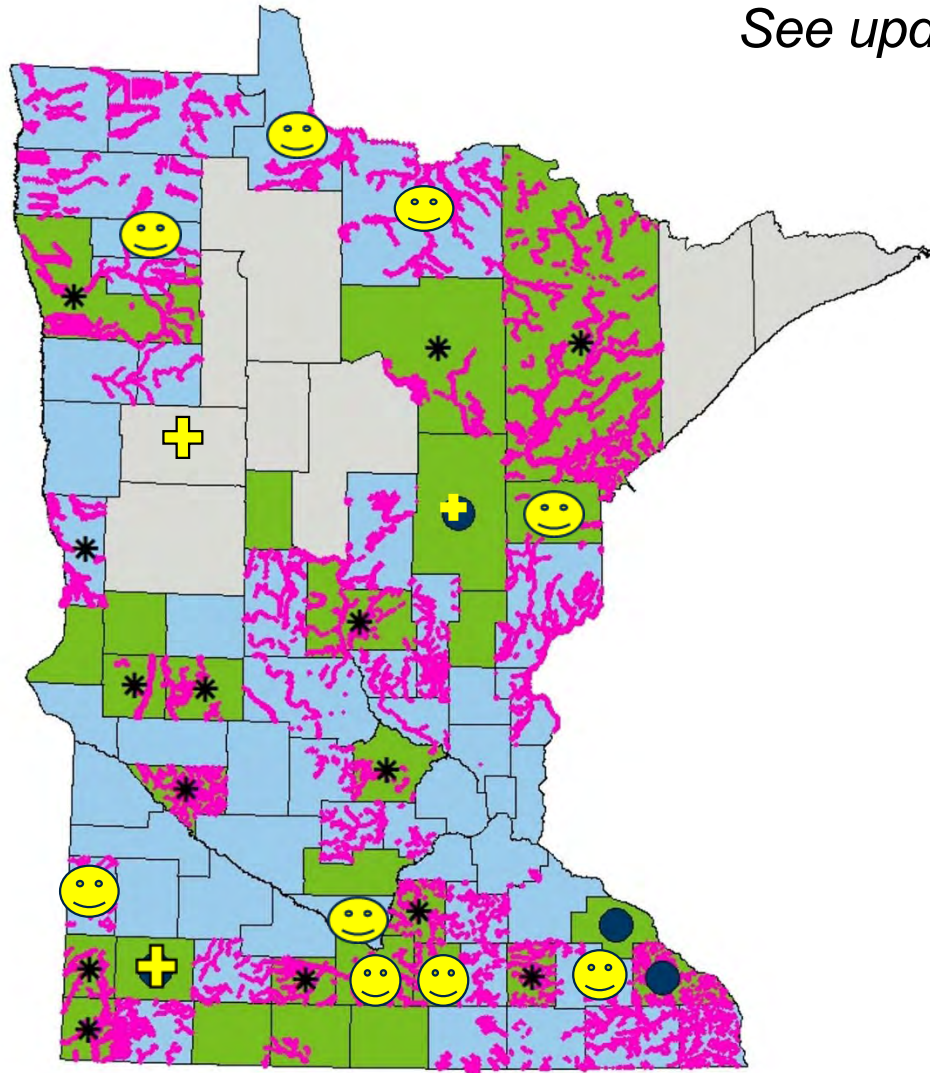
- Increases visibility of flood risk information, education, involvement
- Helps inform whether a Risk MAP project will occur in the watershed



Mapping Updates

Flood Insurance Rate Maps (FIRMs)

See updates of this map on DNR's [Find Flood Maps page](#)



😊 New DFIRM in Oct. 2022 to early 2024

DFIRM Counties

Paper Map Counties

Unmapped Counties

Estimated 1% Base Flood Elevations

⚙️ Preliminary DFIRMs Available

🌐 Countywide Modernization

+ Funded through Preliminary New Maps

New Mapping Update process

- HUC8 Watershed Discovery

- HUC8 Discovery Kickoff
 - Zone A modeling done
- HUC8 Discovery meeting

- Countywide update

- Countywide Kickoff
- Countywide preliminary new maps issued
- Local official meeting (“CCO”) & Public Open House
- 90-Day appeal period
- Letter of Final Determination (LFD)
 - Communities adopt new maps
- Effective new maps

~ 2 yrs

~ 2-3 years

~ 6 months

~ 6 months

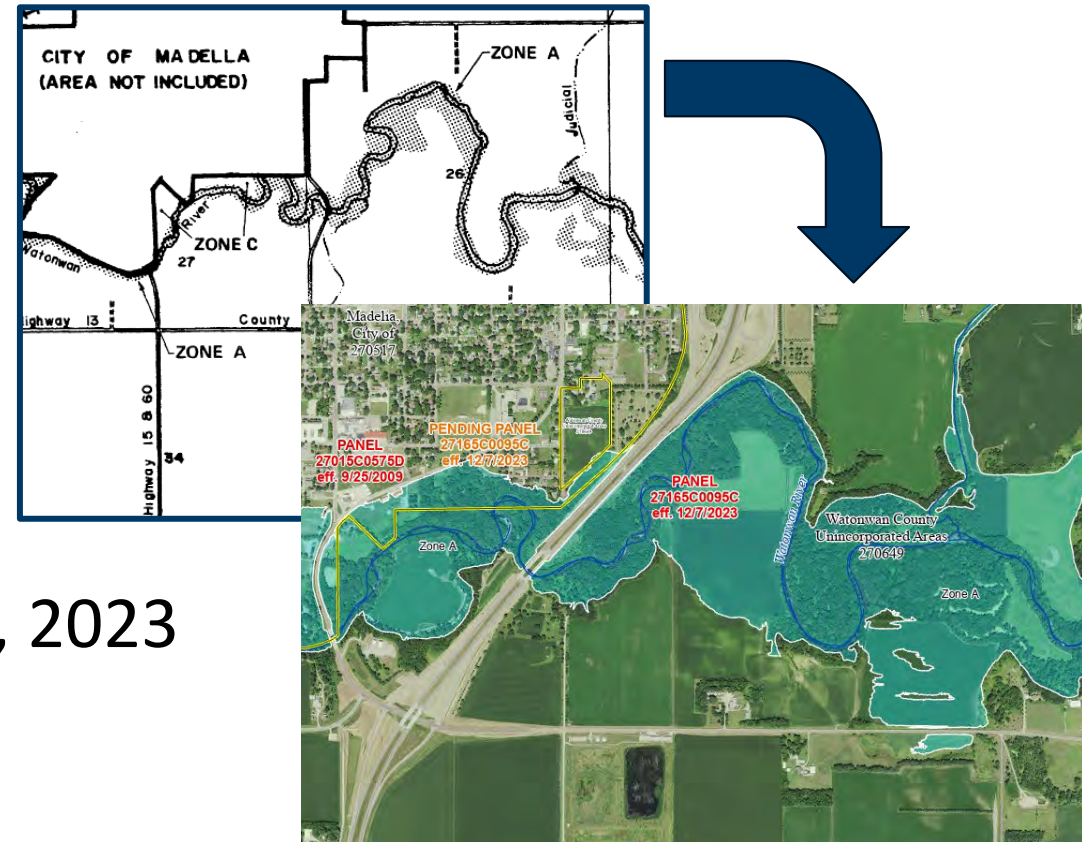
Firm 6 months

~ 4-5 yrs
(much longer if appeals, etc.)

New Effective & Scheduled to be Effective

New Effective Dates:

- Nicollet County – Oct 13, 2022
- Lake of the Woods County – Oct 27, 2022
- Koochiching County – Nov 17, 2022
- Pennington County – Dec 1, 2022
- Lincoln County – Sept. 7, 2023
- Olmsted (Zumbro HUC8 panels) – Sept. 21, 2023
- Watonwan County – Dec. 7, 2023*
- Blue Earth County – Feb. 22, 2024*
- Carlton County – March 13, 2024*
- Waseca County – March 27, 2024 *



* Letter of Final Determine issued

Anticipated LFDs & Preliminary New Maps (subject to change...)

Anticipated LFDs:

- Pipestone County – Oct. 25, 2023
- Le Sueur County – Nov. 22, 2023
- Pope County – Dec. 6, 2023
- Wright County – Dec. 20, 2023
- Wilkin County (panels) – Dec. 20, 2023

Anticipated Preliminary New Maps:

- Wabasha County – Oct. 18, 2023
- Olmsted (levee panels) – Dec. 20, 2023
- Winona County – Feb. 2024 (or later)

Future LFDs:

- Stevens County – Feb. 2024
- Morrison County – March 2024
- St. Louis County – by June 2024
- Dodge County – TBD
- Chippewa County – TBD
- Itasca County - TBD

Future Preliminary New Maps (funded):

- Murray County
- Aitkin County
- Rock County (revised in Luverne area)

Other Mapping Projects

Better Data Letters of Map Revisions (LOMRs)

- Cottonwood/Windom
 - ✓ Aug. 3, 2023 Flood Risk Review Meeting
 - ✓ Sept. 2023 submitted to FEMA
- Wilkin/Nashua
 - ✓ June 6, 2023 Flood Risk Review Meeting
 - ✓ July 2023 submitted to FEMA
- Rainy River
 - ✓ Oct. 4, 2023 Kickoff

Countywide level Discovery

- Becker County (outside of Otter Tail River HUC8) – starts in next few months

See Anticipated Map Update Timing

Estimated FEMA Map Modernization Status in Minnesota - by County

m1 DEPARTMENT OF NATURAL RESOURCES 12/27/2022

Note: Dates shown as Month-Year are estimates; Dates shown as MM/DD/YY are actual date

County	Status	Preliminary Map	Local Official / Open House	90-day starts	90-day ends	LFD*	Effective map date**
AITKIN	Co Modernization						NA
ANOKA	Effective	9/30/2011; rev 7/16/13	12/15/11	2/21/14	5/21/14	6/16/15	12/16/15
BECKER	No Map						NA
BELTRAMI	No Map						NA
BENTON	Effective	9/29/09	12/8/09	5/18/10	8/16/10	2/16/11	8/16/11
BIG STONE	Effective	10/01/04	2/16/05	6/21/05	9/21/05	10/17/05	4/17/06
BLUE EARTH	90-day ended	12/9/09; rev 4/20/11; 9/12/18; 8/28/20 (3 panels); Feb-23 (panels)	6/1/11; 11/7/18; 1/5/21; 6/10/21	9/21/11; 7/29/21; 11/10/21	12/20/11; 10/26/21; 2/8/22	2023	2024
BROWN	Effective	6/15/06	8/9/06	1/4/08	4/4/08	3/25/09	9/25/09
CARLTON	90-day ended	5/28/2021	8/19/21; 9/23/21	3/31/22; 6/24/22	6/29/22; 9/22/22	2023	2024
CARVER	Effective	9/30/11; rev 9/14/15 & 1/31/18	3/8/2012; 7/19/2016	12/29/16	3/29/17	6/21/18	12/21/18
CASS	No Map						NA
CHIPPEWA	Preliminary	12/20/22	2023	2023	2023		NA
CHISAGO	Effective	2/19/10	5/12/10	11/11/10	2/10/11	10/17/11	4/17/12
CLAY	Effective	2/13/09	6/3/09	1/4/10	4/4/10	10/17/11	4/17/12
CLEARWATER	No Map						NA
COOK	No Map						NA
COTTONWOOD	Effective	06/25/19	12/18/19	7/15/20	10/13/20	3/24/21	9/24/2021
CROW WING	Effective	5/27/2011; rev 6/30/11	9/28/11	11/5/15; 12/11/15	2/2/16; 3/9/16	2/15/17	8/15/17
DAKOTA	Effective	7/3/08	9/24/08	11/24/08; 11/17/10	2/22/09; 2/18/11	rescinded; reissue 6/2/11	12/02/11

[Link to Estimated Map Status Dates](#)

HUC 8 Watershed Discovery Projects

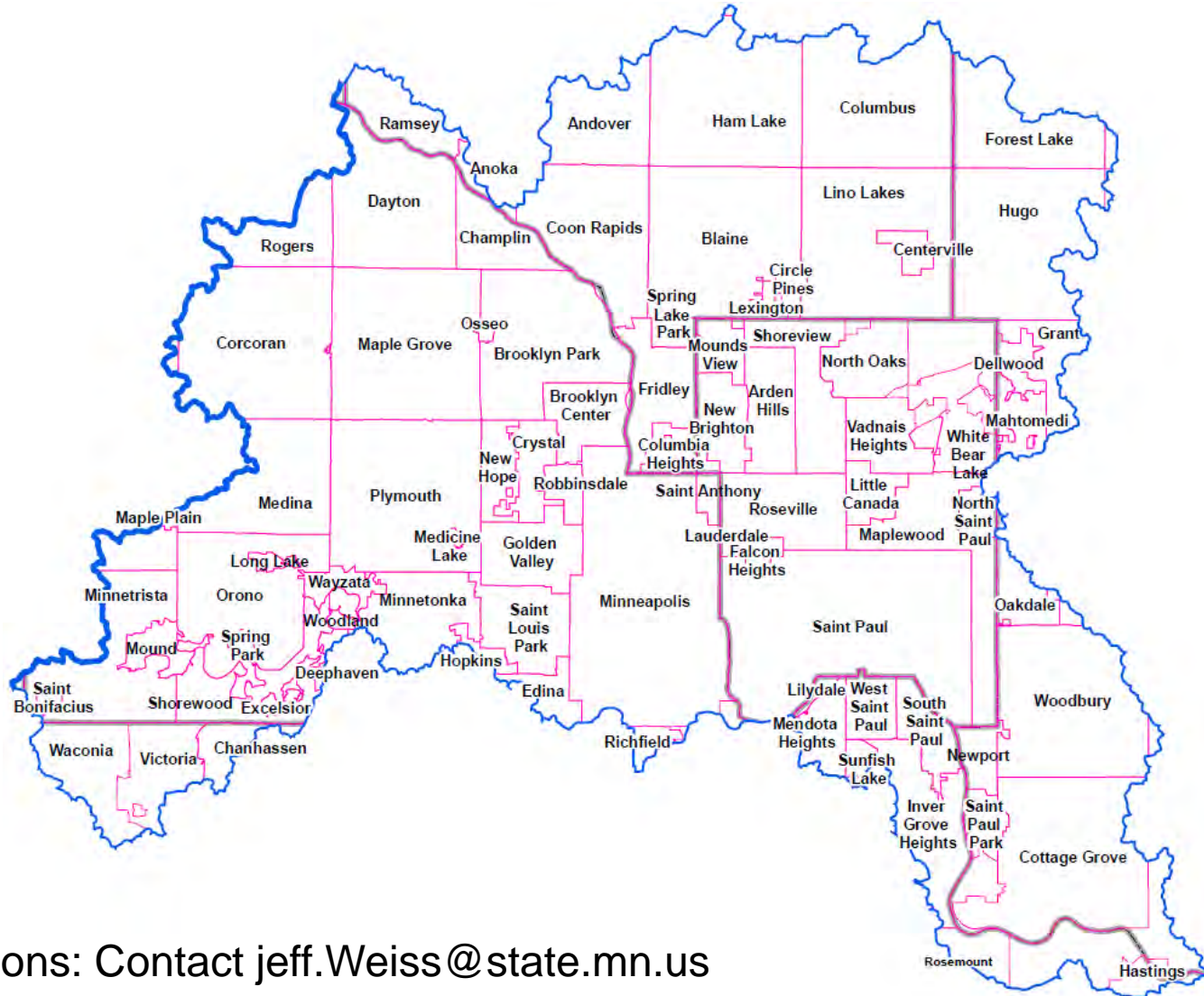
Completed Discovery Projects:

- Zumbro River Watershed
- Prairie-Willow Watershed
- St. Louis River Watershed
- Twin Cities Watershed: See next slide

Recent/Current Discovery Projects:

- Rum River Watershed (complete)
- Otter Tail River Watershed (complete)
- Snake River Watershed (had kickoff)
- Lower Minnesota River West Watershed (had kickoff)

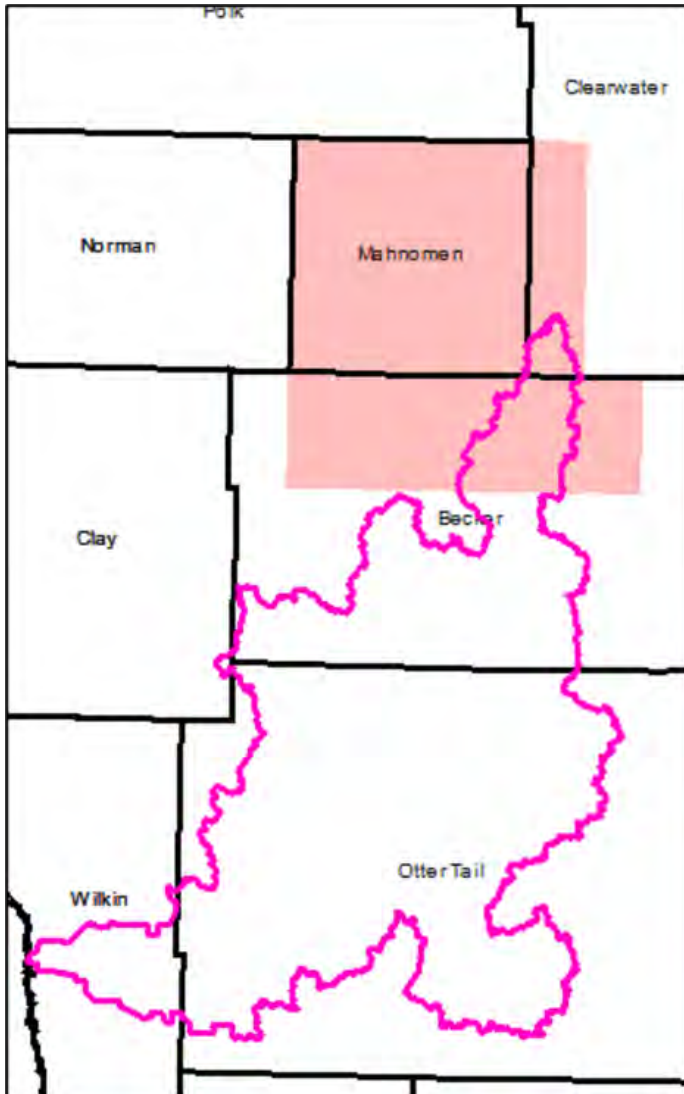
Twin Cities HUC-8 Data Development



- 2018 – 2025 (approx.)
- Getting supporting data for A zones
- Delineating A and AE Zones with LiDAR
- Working with several watershed districts to incorporate new AE hydrology & hydraulics

Questions: Contact jeff.Weiss@state.mn.us

Otter Tail River HUC-8 Discovery



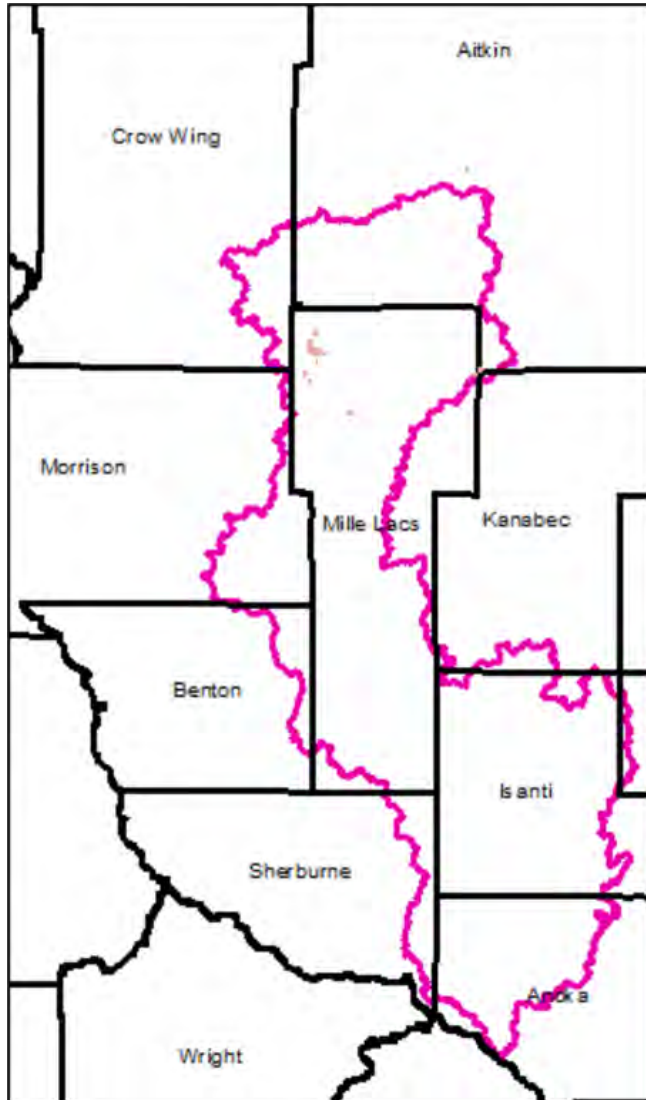
- Becker County
- Clay County
- Clearwater County
- Mahnomen County*
- Otter Tail County
- White Earth Tribal Reservation
- Wilkin County

*Extremely small portion

- BFE estimates for ~130 lakes
- A Zone modeling for several mapped cities
- Timing
 - ✓ March 30, 2022 - Kickoff
 - ✓ May 31, 2023 - Discovery
 - ✓ July 2023 - Final report

Questions: Contact
jeff.Weiss@state.mn.us

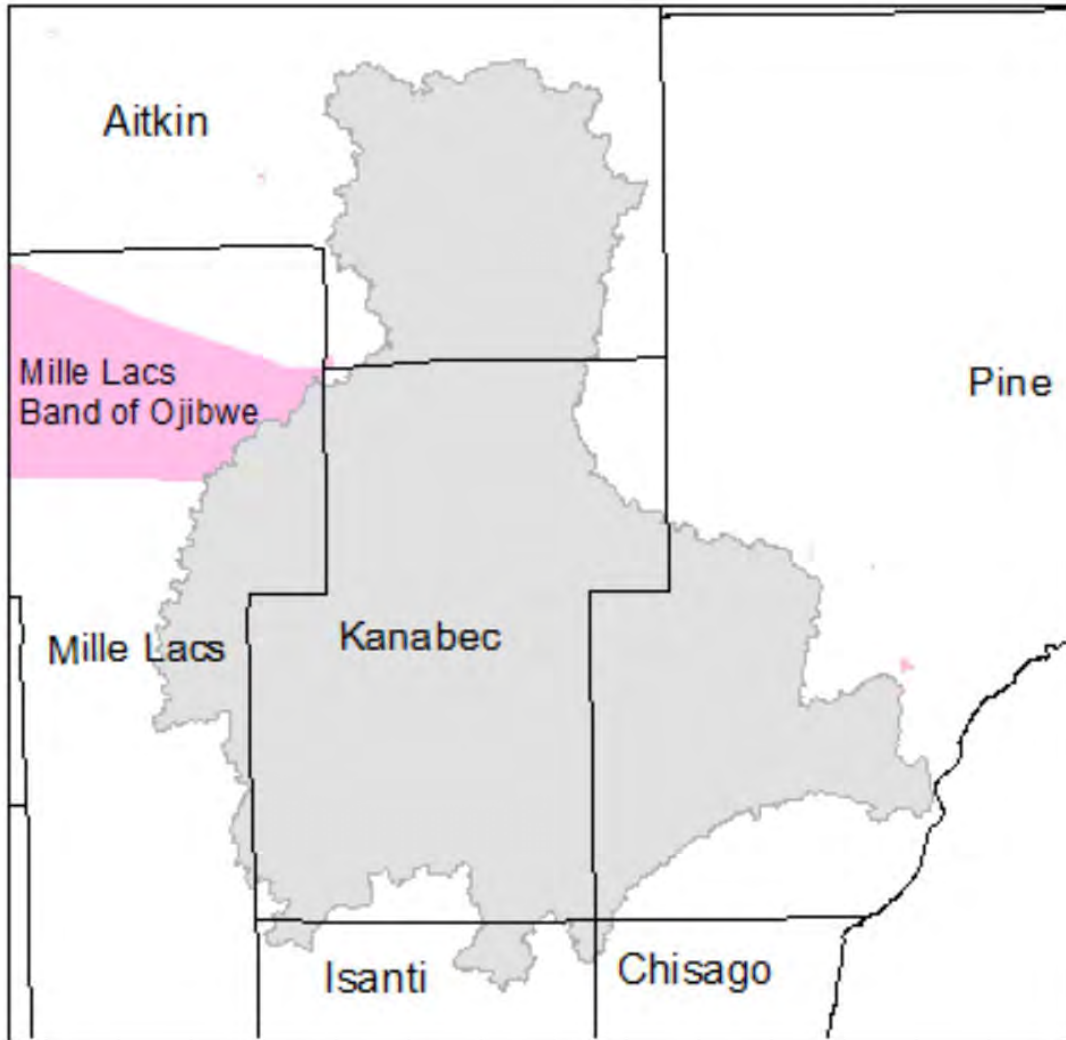
Rum River HUC-8 Discovery



- Aitkin County
- Anoka County
- Benton County
- Chisago County
- Crow Wing County
- Isanti County
- Kanabec County
- Mille Lacs County
- Mille Lacs Tribal Reservation
- Morrison County
- Sherburne County
- A Zone modeling for Isanti & Anoka
- Timing
 - ✓ March 31, 2022 - Kickoff
 - ✓ June 1, 2023 - Discovery
 - ✓ July 2023 - Final Report

Questions: Contact
jeff.Weiss@state.mn.us

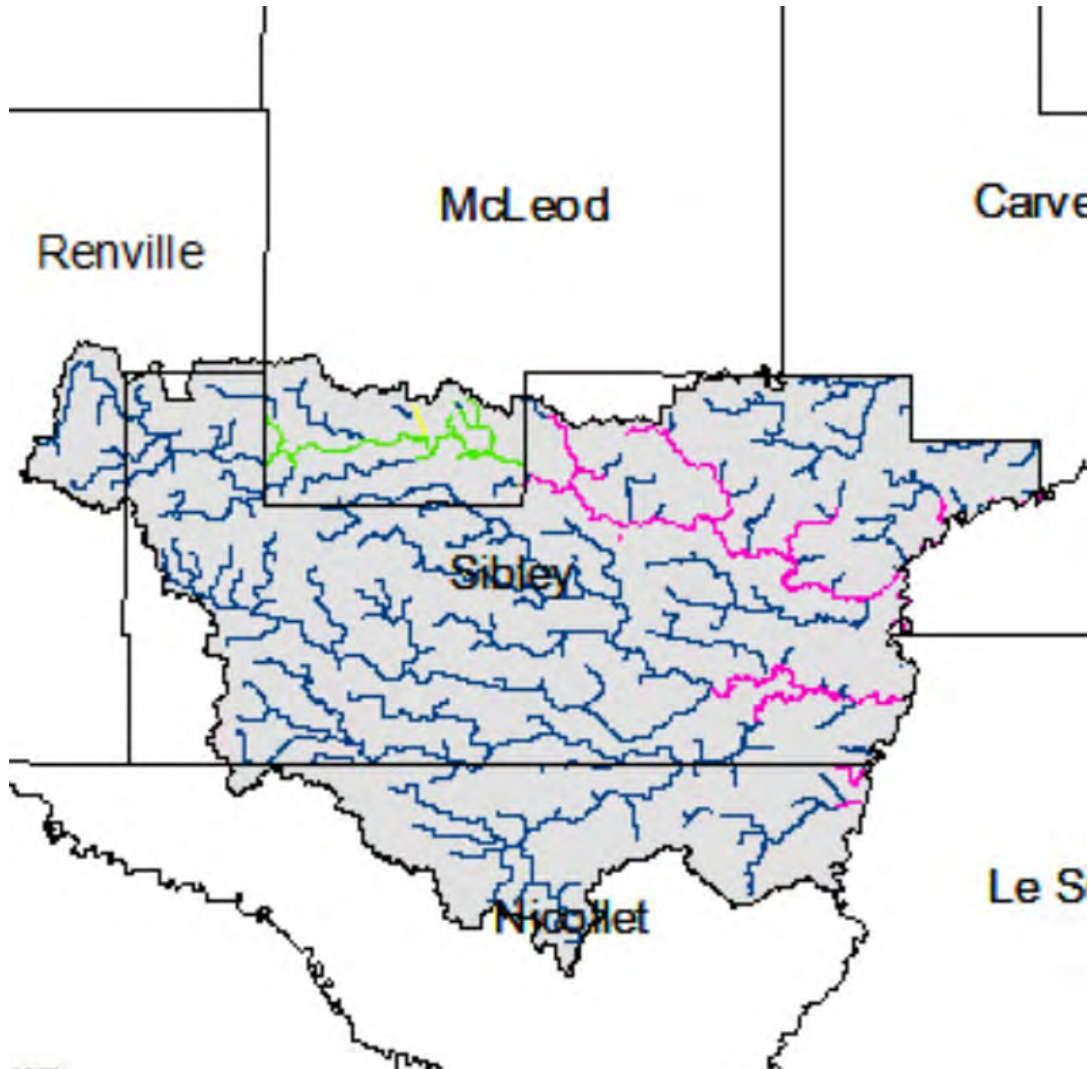
Snake River HUC-8 Discovery



- Most of Kanabec, parts of Aitkin, Isanti, Mille Lacs, Pine & Chisago (tiny)
- Getting supporting data for A zones in Kanabec & small area in Isanti
- Timing
 - ✓ Aug. 22, 2023 Kickoff
 - ✓ Summer 2024 Discovery

Questions: Contact jeff.Weiss@state.mn.us

Lower Minnesota River (West) HUC-8 Discovery



- Most of Sibley, parts of McLeod, Nicollet & Renville
- Getting supporting data for A zones in Sibley & Nicollet (pink lines in map to left)
- Timing
 - ✓ Aug. 23, 2023 Kickoff
 - ✓ Summer 2024 Discovery

Questions: Contact jeff.Weiss@state.mn.us

County Level Floodplain Map Viewers



[Home](#) > [Ecological and Water Resources](#) > [Water Management](#) > [Floodplain](#) >

Floodplain Management

[Main page](#)

[Floodplain Regulations](#)

[Maps and Technical
Resources](#)

[Flood Insurance](#)

[Preparation, Response
and Recovery](#)

[Training and Education](#)

[Flood Hazard Mitigation](#)

[Floodplain Management
History](#)

County Data and Map Viewers

The following counties have data and/or viewers available, in addition to the official FEMA maps on [FEMA's Maps Service Center](#) ↗.

- Anoka County
 - [County Supported Map Viewer](#) ↗ - includes features to help with Letter of Map Amendment applications
- Blue Earth County
 - [Preliminary New FEMA Map](#) ↗ (as of Aug. 28, 2020)
- Carlton County
 - [Preliminary New FEMA Map](#) ↗ (as of May 28, 2021)
- Chippewa County
 - [Chippewa Work Map Viewer](#) ↗
- Cottonwood County
 - [Pending New FEMA Map](#) ↗ (will be effective September 24, 2021)
- Goodhue County (part of county)
 - [Preliminary New FEMA Map](#) ↗ (as of Feb. 10, 2020)
- Hennepin County

National Flood Insurance Program (NFIP) Status

- Latest extension to Nov. 17, 2023
- Tends to be tied to continuing resolutions for budget

What happens if the NFIP expires?

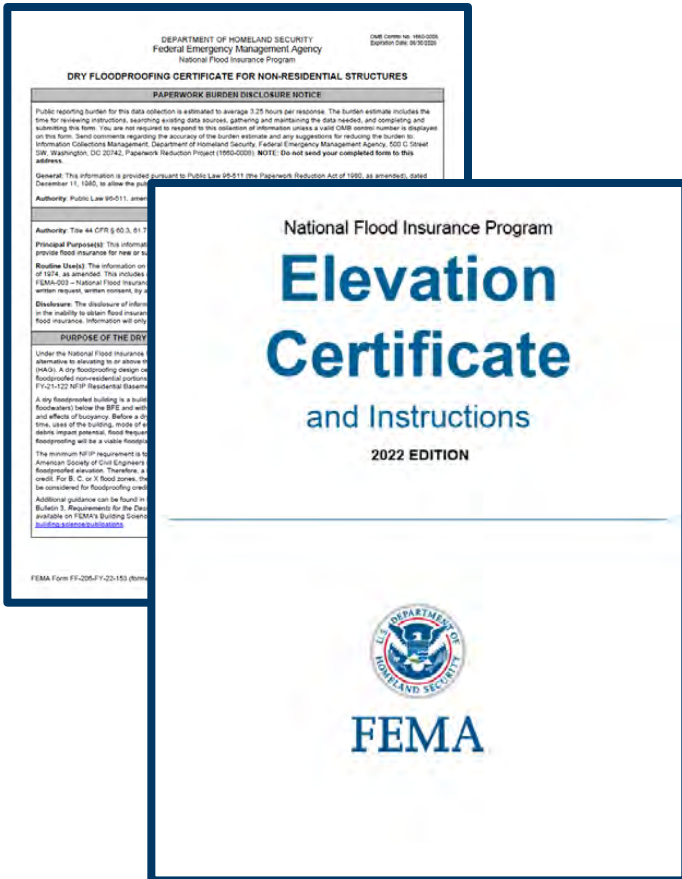
- No new flood insurance policies
- No renewals of flood insurance policies

Remember – A flood insurance policy is mandatory if:

1. any portion of the building is in or touching FEMA mapped Special Flood Hazard Areas (Zone A/AE or Zone V/VE)
2. The loan is federally backed (most mortgages & secured loans)



New FEMA Elevation Certificate & Floodproofing Certificate



Where to get the forms

- On FEMA site
 - ✓ Go to FEMA's National Flood Insurance Underwriting Forms page
 - ✓ Scroll down to “NFIP Dry Floodproofing Certificate for Non-Residential Structures” or “Elevation Certificate Form and Instructions” & download
 - ✓ Note: If you get a “please wait” error, right click on the download file and save to your PC
- Request from floodplain.dnr@state.mn.us

New FEMA Elevation Certificate

ELEVATION CERTIFICATE
IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON PAGES 9-19

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: _____
City: _____ State: _____ ZIP Code: _____

FOR INSURANCE COMPANY USE
Policy Number: _____
Company NAIC Number: _____

SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: Construction Drawings* Building Under Construction* Finished Construction
*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations – Zones A1–A30, AE, AH, AD, A (with BFE), VE, V1–V30, V (with BFE), AR, ARIA, ARI/AE, ARI/A1–A30, ARI/AH, ARI/AD, ARI/V, Complete Items C2.a–h below according to the Building Diagram specified in Item A7. In Puerto Rico only, enter meters.
Benchmark Utilized: _____ Vertical Datum: _____

Indicate elevation datum used for the elevations in items a) through h) below.
 NGVD 1929 NAVD 1988 Other: _____

Datum used for building elevations must be the same as that used for the BFE. Conversion factor used? Yes No
If Yes, describe the source of the conversion factor in the Section D Comments area. Check the measurement used:

a) Top of bottom floor (including basement, crawlspace, or enclosure floor): _____ feet meters
b) Top of the next higher floor (see Instructions): _____ feet meters
c) Bottom of the lowest horizontal structural member (see Instructions): _____ feet meters
d) Attached garage (top of slab): _____ feet meters
e) Lowest elevation of Machinery and Equipment (M&E) servicing the building (describe type of M&E and location in Section D Comments area): _____ feet meters
f) Lowest Adjacent Grade (LAG) next to building: Natural Finished _____ feet meters
g) Highest Adjacent Grade (HAG) next to building: Natural Finished _____ feet meters
h) Finished LAG at lowest elevation of attached deck or stairs, including structural support: _____ feet meters

SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by state law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

Were latitude and longitude in Section A provided by a licensed land surveyor? Yes No
 Check here if attachments and describe in the Comments area.

Certifier's Name: _____ License Number: _____
Title: _____
Company Name: _____
Address: _____
City: _____ State: _____ ZIP Code: _____
Signature: _____ Date: _____
Telephone: _____ Ext.: _____ Email: _____ Place Seal Here

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.
Comments (including source of conversion factor in C2; type of equipment and location per C2.e; and description of any attachments): _____

FEMA Form FF-208-FY-22-152 (formerly 088-0-33) (10/22) Page 3 of 19

When Used

- Required if Community Rating System (CRS), otherwise recommended
- Used to be required for rating flood insurance; still recommended (since usually get better rate)

Main Changes

- Updates expiration from 11/30/2022 to 6/30/2026
- Section C & D still only filled out by licensed surveyor or PE
- Photos now required for all ECs (was just required when using the EC to get a flood insurance policy)
- Lots of language clean up on the form and in instructions
- Added new section H

New FEMA Elevation Certificate

SECTION H – BUILDING'S FIRST FLOOR HEIGHT INFORMATION FOR ALL ZONES (SURVEY NOT REQUIRED) (FOR INSURANCE PURPOSES ONLY)

The property owner, owner's authorized representative, or local floodplain management official may complete Section H for all flood zones to determine the building's first floor height for insurance purposes. Sections A, B, and I must also be completed. Enter heights to the nearest tenth of a foot (nearest tenth of a meter in Puerto Rico). **Reference the *Foundation Type Diagrams* (at the end of Section H Instructions) and the appropriate *Building Diagrams* (at the end of Section I Instructions) to complete this section.**

H1. Provide the height of the top of the floor (as indicated in Foundation Type Diagrams) above the Lowest Adjacent Grade (LAG):

a) For Building Diagrams 1A, 1B, 3, and 5–9. Top of bottom floor (include above-grade floors only for buildings with subgrade crawlspaces or enclosure floors) is: feet meters above the LAG

b) For Building Diagrams 2A, 2B, 4, and 6–9. Top of next higher floor (i.e., the floor above basement, crawlspace, or enclosure floor) is: feet meters above the LAG

H2. Is all Machinery and Equipment servicing the building (as listed in Item H2 instructions) elevated to or above the floor indicated by the H2 arrow (shown in the Foundation Type Diagrams at end of Section H instructions) for the appropriate Building Diagram?

Yes No

Flood Insurance - Risk Rating 2.0 Is Here!

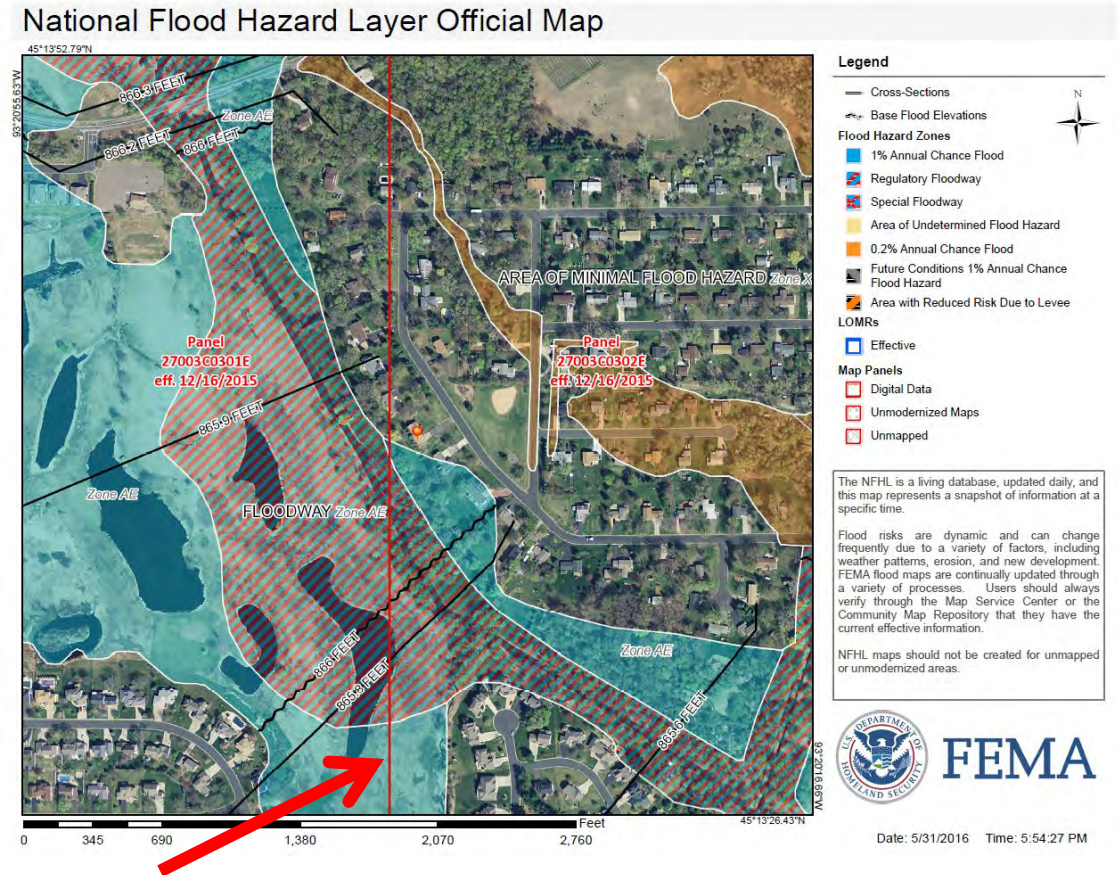
Since April 1, 2022:

- ✓ All new policies use new rating
- ✓ All policies subject to new ratings upon renewal, but there are caps for annual increase
 - ✓ 18% for primary residential
 - ✓ 25% for non-residential and 2nd homes

Remember

The following stays the same:

- Only those in communities participating in the National Flood Insurance Program are eligible to purchase the federally backed NFIP flood insurance
- FEMA's Flood Insurance Rate Maps will continue to be used to determine Mandatory Purchase requirements and for Floodplain Management (local floodplain management ordinances)



High Flood Risk (must require flood insurance and regulate)

Biggest Rating Changes – No Zones, Elevation Certificate not Required

RR 1.0:

In SFHA

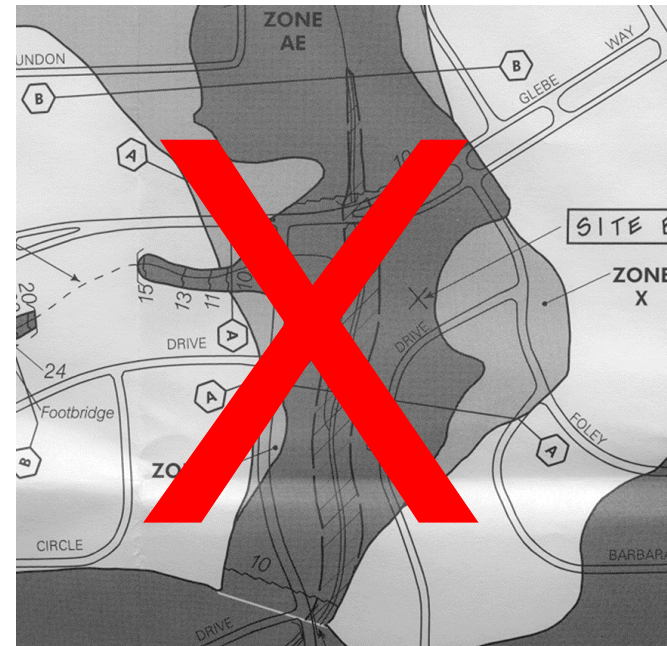
- ✓ Post FIRM: EC required; elevation rated
- ✓ Pre-FIRM: Separate Pre-FIRM table; elevation rated if cheaper

Outside SFHA (medium and low risk – X Zones)

- ✓ No EC; not elevation rated
- ✓ Discounted Preferred Risk Policy (PRP) rates (in most situations)

RR 2.0:

- ✓ All zones treated the same
- ✓ EC not required (but can be used if better rate)



Outside SFHA: Can still choose amount of coverage; lenders prerogative to require

In Recent Past, ~65% Preferred Risk Policies (PRPs) in MN Glide path to “Full Risk Rate” at 18% (or 25%) annually

**PRP TABLE 3A. PRP COVERAGE LIMITS AND BASE PREMIUMS
FOR PROPERTIES CURRENTLY MAPPED IN B, C, X, AR, OR A99 ZONES¹**

1-4 FAMILY RESIDENTIAL BUILDING AND CONTENTS COVERAGE COMBINATIONS

WITH BASEMENT OR ENCLOSURE ²			WITHOUT BASEMENT OR ENCLOSURE ³		
BUILDING	CONTENTS	PREMIUM	BUILDING	CONTENTS	PREMIUM
\$ 20,000	\$ 8,000	\$127	\$ 20,000	\$ 8,000	\$100
\$ 30,000	\$ 12,000	\$160	\$ 30,000	\$ 12,000	\$133
\$ 50,000	\$ 20,000	\$214	\$ 50,000	\$ 20,000	\$187
\$ 75,000	\$ 30,000	\$268	\$ 75,000	\$ 30,000	\$226
\$100,000	\$ 40,000	\$321	\$100,000	\$ 40,000	\$255
\$125,000	\$ 50,000	\$375	\$125,000	\$ 50,000	\$270
\$150,000	\$ 60,000	\$321	\$150,000	\$ 60,000	\$290
\$200,000	\$ 80,000	\$321	\$200,000	\$ 80,000	\$321
\$250,000	\$100,000	\$344	\$250,000	\$100,000	\$344

RESIDENTIAL CONTENTS COVERAGE

CONTENTS ABOVE GROUND LEVEL IN 1 FLOOR		ALL CONTENTS (BASEMENT-ONLY NOT ELIGIBLE)	
CONTENTS	PREMIUM	CONTENTS	PREMIUM
\$ 8,000	\$20	\$ 8,000	\$40
\$ 12,000	\$37	\$ 12,000	\$66
\$ 20,000	\$70	\$ 20,000	\$104

Oct 2018 fees –
Does not include:
ICC premium (\$5-\$6), Reserve
Fund Assessment
(15%), HFIAA
surcharge (\$25 or
\$250) or federal
policy fee (\$25)

Ranges from
~\$200 to \$700/yr

Reducing Complexity – Simplifying Info Needed

With Risk Rating 2.0, it's a much shorter list of "rating variables," but there are some changes in the variables.

- Distance to Flood Source & Flood Type
- Building Occupancy
- Construction Type
- Foundation Type
- Ground Elevation
- First Floor Height
- Number of Floors
- Prior Claims



NEW PRICING METHODOLOGY*

FEMA-SOURCED DATA

ADDITIONAL DATA SOURCES

• Federal government-source data, commercially available third-party

COST TO REBUILD

RATING VARIABLES

• Distance to Flooding Source & Flood Type
• Building Occupancy
• Construction Type
• Foundation Type
• Ground Elevation
• First Floor Height
• Number of Floors
• Prior Claims

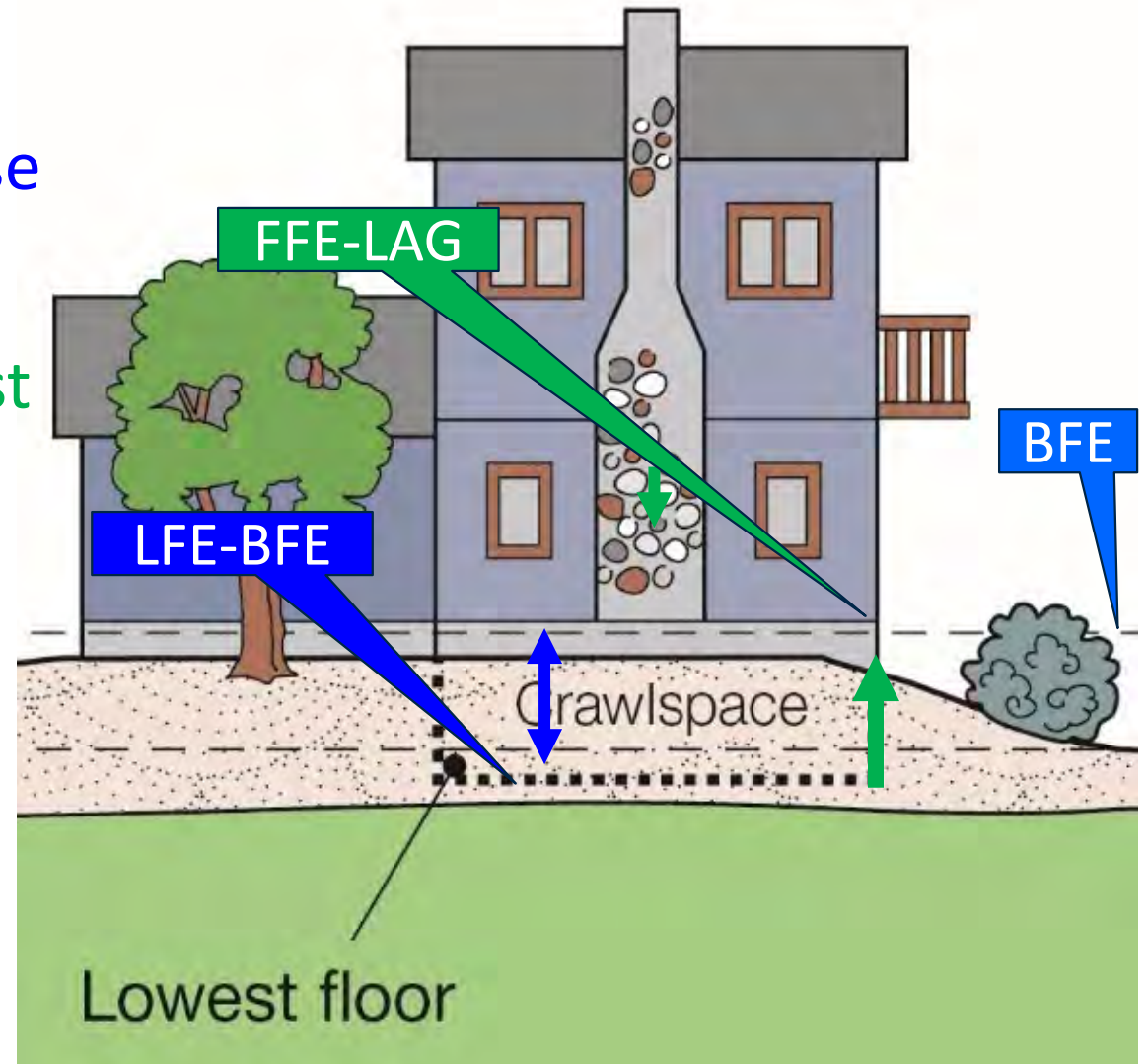
BROADER RANGE OF FLOOD FREQUENCIES

FEES AND SURCHARGES

Biggest Changes – Different Elevations are Key

Key elevations:

- RR 1.0: Lowest Floor Elevation (LFE) – Base Flood Elevation (BFE) (LFE – BFE)
- RR 2.0: First Floor Elevation (FFE) – Lowest Adjacent Grade (LAG) (FFE – LAG)



Look at FFE for all – not just Post FIRM in SFHA

Methods to Measure First Floor Height

Method 1: System Generated

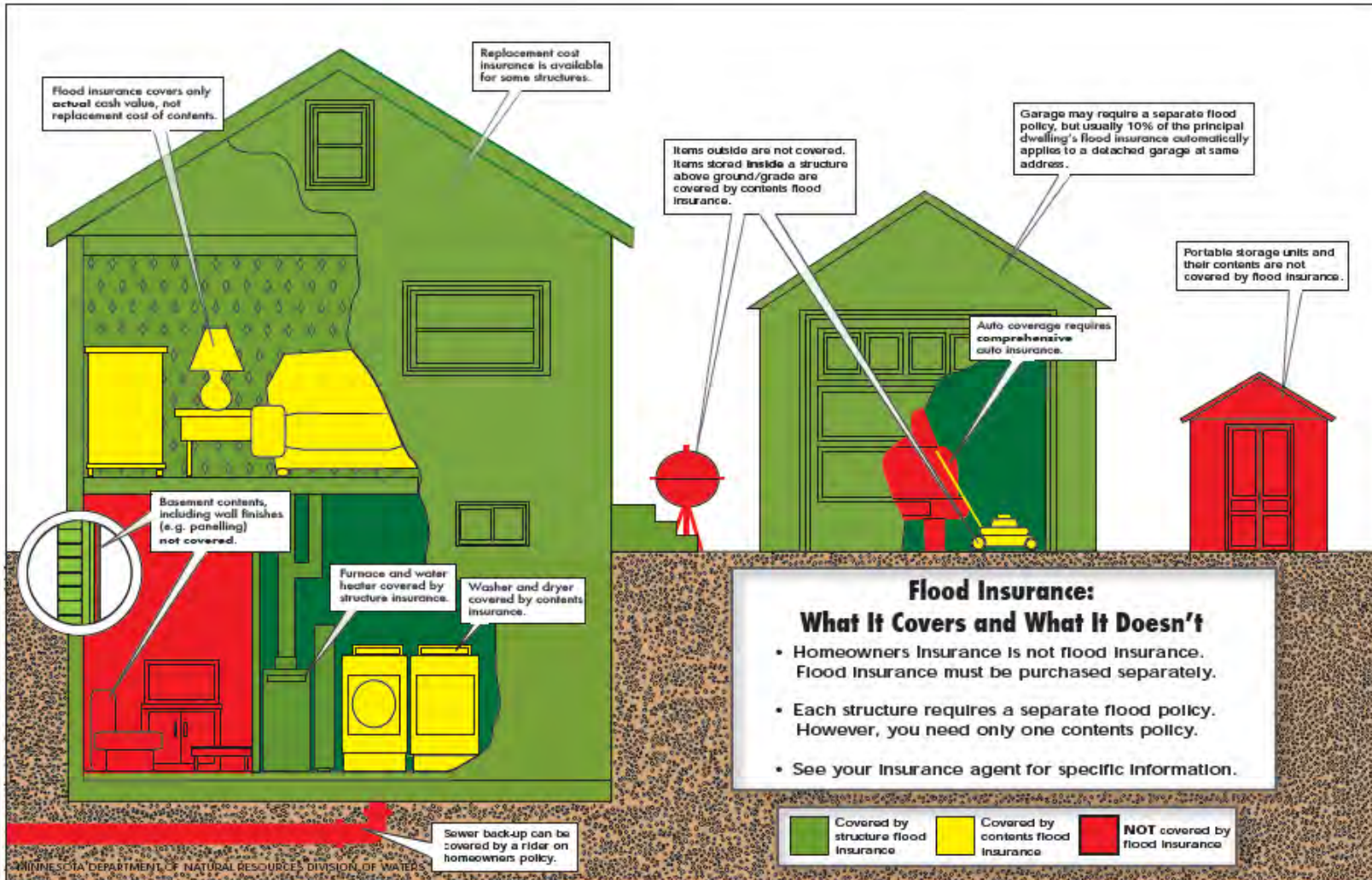
- Part of the new “rating engine”
- FEMA will determine a first floor height value using “informed assumptions, application information, and various datasets.”

Method 2: Elevation Certificate

- No longer required, but can be used
- Still required for Floodplain Management (or other elevation documentation)



What Flood Insurance Covers



Contents & Building coverage separate

Statutory Discounts & Caps

Discount Explanation Guide


Risk Rating 2.0: Equity in Action is FEMA's individualized approach to risk assessment, built on years of investment in flood hazard information.

By using current data, flood models, and technology, FEMA considers many risk factors for individual properties, including frequency of flooding, multiple flood types, distance to a flooding source, and property characteristics such as elevation and the cost to rebuild.

Mitigation efforts, community programs, and other discounts can help reduce flood damage and, potentially, the cost of flood insurance. This guide provides discount information on certain rating variables that are generally applied to the building and contents premium.

Foundation Type

Below are the six Foundation Types, which provide important information for rating buildings. Buildings Elevated with Enclosure Not on Posts, Piles, or Piers, or Buildings without Enclosure on Posts, Piles, Piers, if all rating variables are met.




First Floor Height

The First Floor Height (FFH), or the height of the building's first floor above adjacent grade, is a variable critical to understanding the flood risk. Generally, the higher the first floor is above adjacent grade, the lower the risk. The following chart shows the discount percentage based on the FFH. For example, a building with a first floor 1 foot above adjacent grade corresponds to a 22.1% discount on building and contents coverage. For FFHs above 9 feet, the discount for FFH is continuously provided. For example, a building with a grade foundation and FFH of 1.25 feet will receive a discount for 1 foot and 2 feet.

First Floor Height* (in Feet)	Slab on Grade	Basement	Crawlspace (Including Subgrade Crawlspace)
0	0.0%	0.0%	0.0%
1	-8.0%	-8.0%	-8.0%
2	-15.4%	-15.4%	-15.4%
3	-22.1%	-22.1%	-22.1%
4	-28.4%	-28.4%	-28.4%
5	-34.3%	-34.1%	-34.1%
6	-38.7%	-36.7%	-36.7%
7	-39.3%	-39.3%	-39.3%
8	-41.7%	-41.7%	-41.7%
9	-44.0%	-44.0%	-44.0%
10-14	-46.3% to -54.4%	-46.3% to -54.4%	-46.3% to -54.4%
15-25	-56.2% to -70.9%	-56.2% to -70.9%	-56.2% to -70.9%

*Although the table shows the discount for FFH in whole numbers, the discount for FFH is continuously provided. For example, a building with a grade foundation and FFH of 1.25 feet will receive a discount for 1 foot and 2 feet.



Statutory Discounts

FEMA provides statutory discounts on the first \$35,000 of coverage for buildings and \$10,000 of contents coverage for pre-Flood Insurance Rate Map (FIRM) primary residences and newly mapped properties, as well as those in the Emergency Program or located in the AR or A99 flood zone.

The table below shows the discount percentage that applies to the policy's first term of eligibility for the statutory discount. For subsequent renewal terms, the statutory annual increase cap applies.

Statutory Discount	Discount Percentage
Newly Mapped	70%
Pre-FIRM Discount	60%
Emergency Program	60%
AR Zone	60%

Discounts on first \$35,000 of building coverage and \$10,000 of contents coverage

- Newly Mapped 70%
- Pre-FIRM 60%

Subsequent year annual increases capped at:

- 18% primary residential
- 25% for non-residential or 2nd homes

[FEMA Discount Explanation Guide](#)

Questions? Priorities for New/Updated Information Sheets or Videos?



Thank You!

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