



Common Questions In and Along Shorelines

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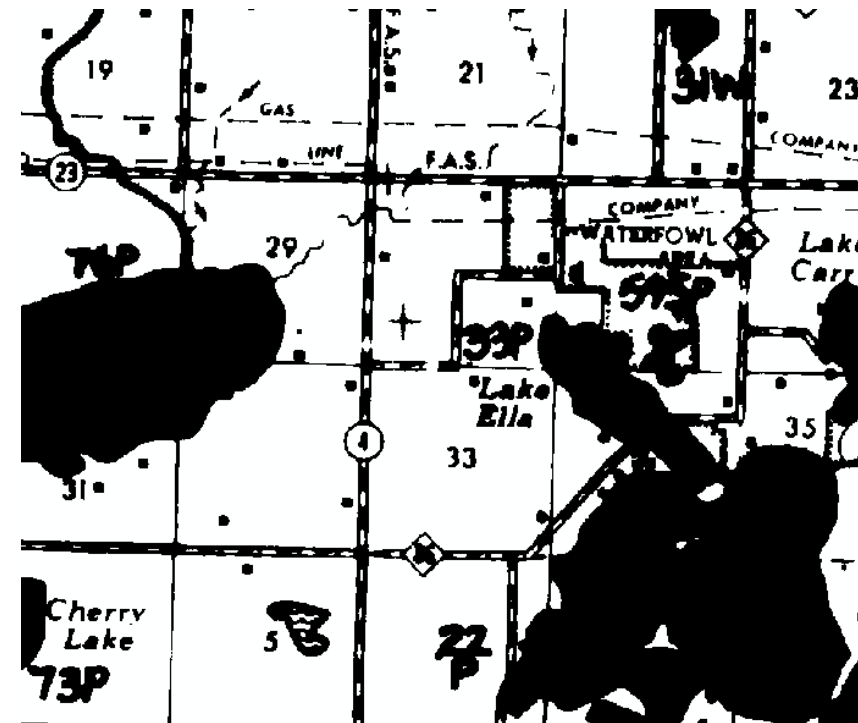
What we'll be talking about:

- **Key topics** – public waters, shorelands, floodplains
- **Answer common water-related and shoreline-related questions**
- **Provide online resources** you can point people to for answers to their questions
- **DNR contacts** for water-related and shoreline-related questions



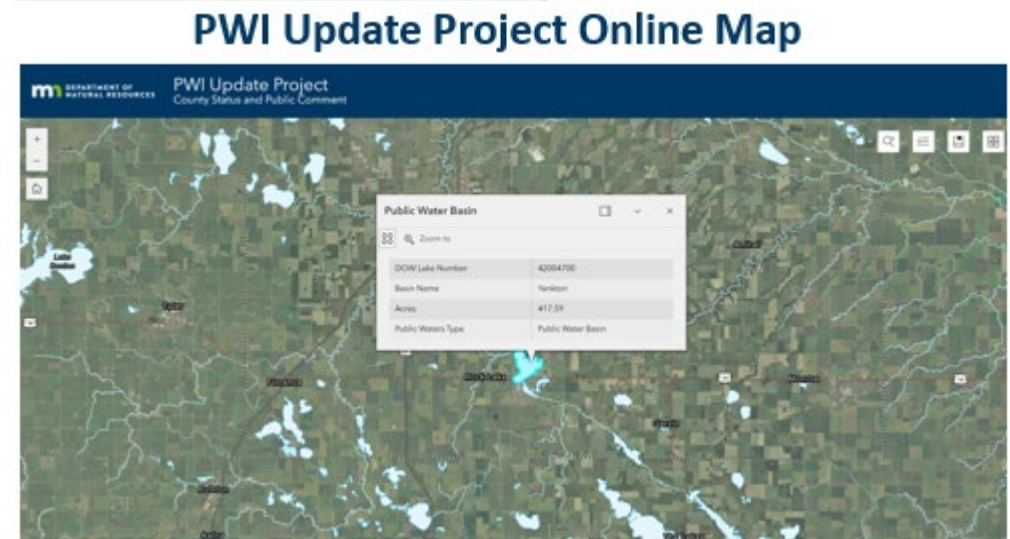
Public waters

- Public waters – The lakes, wetlands, rivers, and streams that are regulated by DNR under the public waters statutes and rules
 - Public waters are defined in [Minn. Statute 103G.005 subd. 15](#) and [subd. 15a](#) (public waters wetlands)
- Public Waters Inventory – PWI
 - Original County PWI maps: found on [DNR's PWI Maps webpage](#)
 - Original County PWI lists: found on [DNR's PWI Lists webpage](#)
 - Available at MN Geospatial Commons:
 - [PWI GIS layer](#) – Public waters basins and watercourses
 - [Statewide Raster Map of Original PWI maps](#)
- [PWI Update Project](#) – Multi-year project to complete a county-by-county update to the PWI



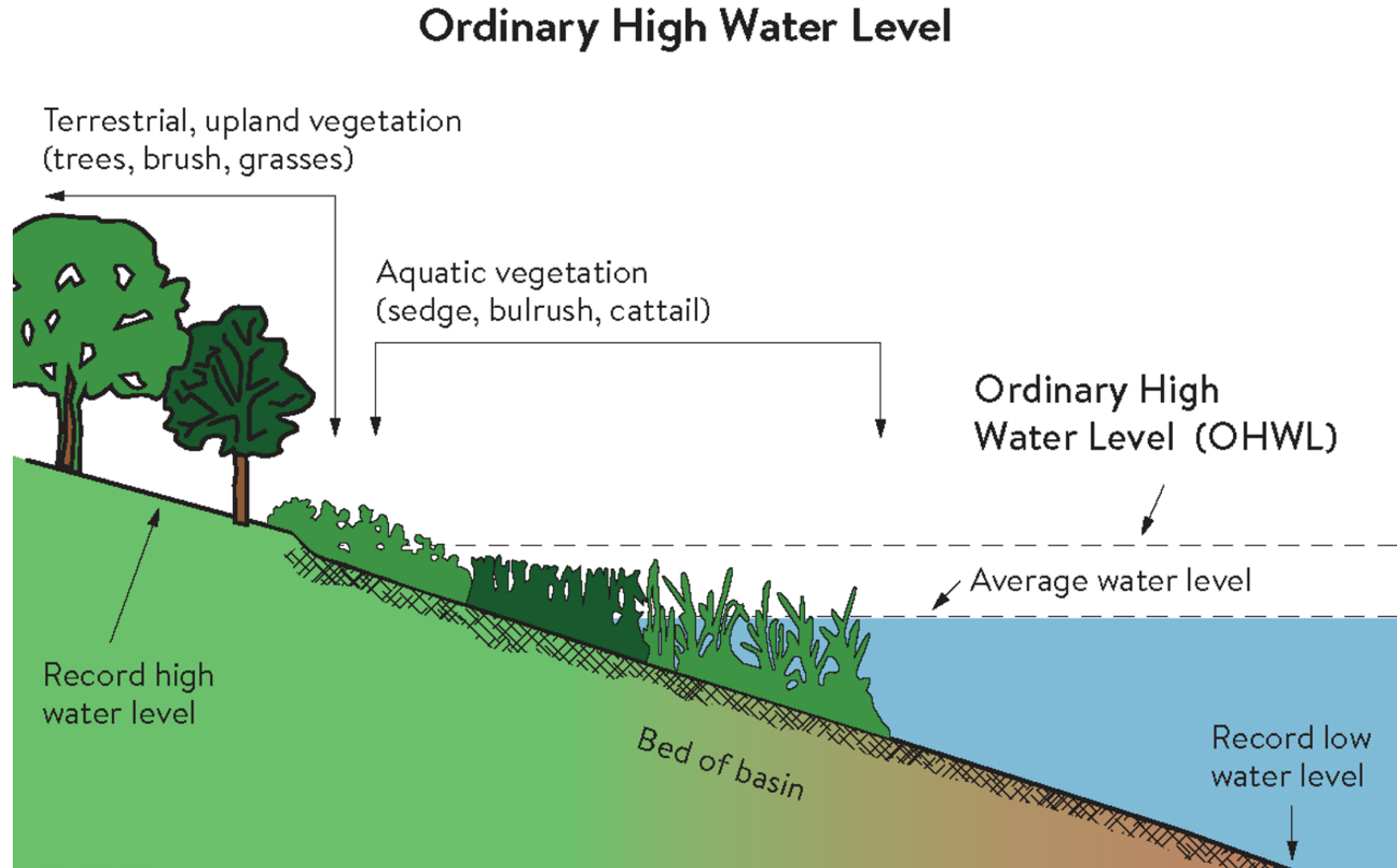
Is my lake/wetland/river/stream a public water?

- Location-based question
- County online GIS maps
- [DNR's NWI Wetland Finder](#) - Online map displays locations of wetlands and public waters
 - Can use search to find an address location
 - Map shows boundaries of public waters basins and wetlands as black diagonal lines over feature and watercourses as black lines
 - Basin ID and watercourse ID given, but not names of features
- [DNR's PWI Update Project Map](#) – Online map showing public waters, county status in update process and public comments
 - Can use search to find an address location
 - Public waters are displayed (basins, wetlands, watercourses)
 - When click on feature, see public water ID and feature name



Ordinary High Water Level - OHWL

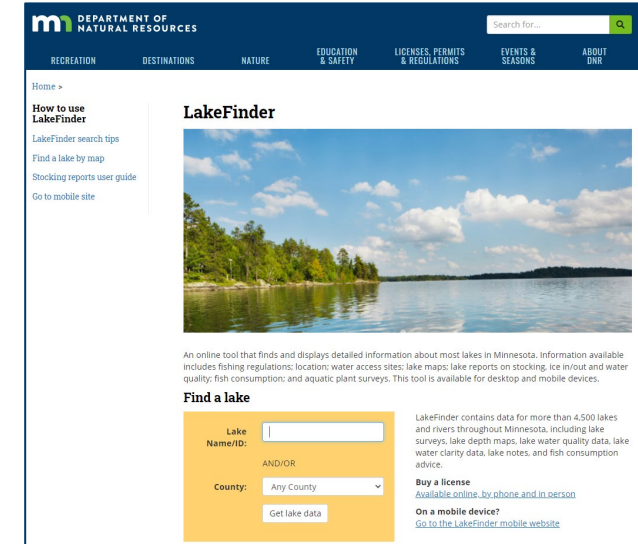
- **Definition of OHWL:** The highest water level that has been maintained for a sufficient period of time to leave evidence on the landscape, commonly the point where natural vegetation changes from predominantly aquatic to predominantly terrestrial
- [Guidelines for OHWL determinations](#) – Document that explains how the DNR surveys OHWLs



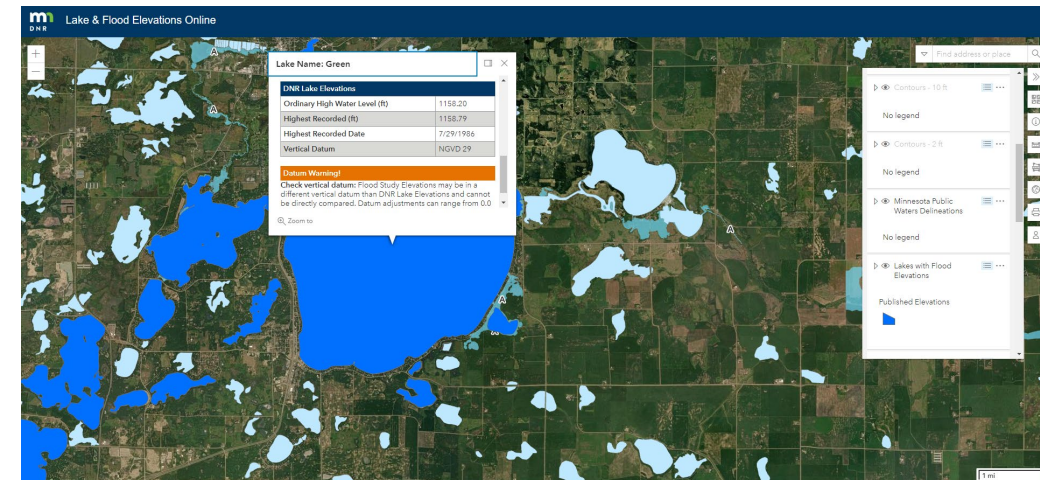
What is the OHWL for my lake/wetland?

- Location-based question
 - Why is the OHWL important?
 - The OHWL elevation is the boundary of DNR jurisdiction for a public water
 - **Work below the OHWL elevation (waterward of OHWL) is regulated by DNR**
 - **Work above the OHWL elevation (landward of OHWL) is regulated by local governments**
 - To find the OHWL elevation for a lake or wetland:
 - Look in [LakeFinder](#) first, under Water Levels
- OR**
- Look in [LFEO](#) (Lake and Flood Elevations Online) – Click on feature and scroll down to see OHWL
 - If not in LakeFinder or LFEO, **Area Hydrologist can help**

[LakeFinder](#)



[LFEO Online Map Application](#)



Common activities below the OHWL in public waters

- There are DNR fact sheets for these activities to help people figure out what they can do without a DNR permit:

- [Beach](#)
- [Boat ramp](#)
- [Dock](#)
- [Riprap](#)
- [Ice Ridges](#)
- [Temporary bridge and low-water crossings](#)

- Depending on scope, these activities may require a DNR public waters permit

- Can contact [Area Hydrologist](#) with questions

Docks and Access in Public Waters

What you should know about docks and other water access structures

Do I need a permit for my dock?

No permit is needed to install, construct, or reconstruct your dock on shoreline property you own if you comply with the following:

- A dock is a narrow platform or structure extending toward the water from the shoreline. A dock may provide access to seasonal waterfront or deeper water for swimming, fishing, and other recreation.
- The structure, other than a waterfront lift or waterfront canopy, is not more than 8 feet wide and is not connected with other similar structures so as to create a larger structure.
- The dock is no longer than needed to achieve its intended use, including reaching navigable water depth.
- The structure is not a hazard to navigation, health, or safety.
- The structure will allow the free flow of water beneath it.
- The structure is not used or intended as a marina.
- The structure is consistent with the guidelines of the local unit of government.
- Docks placed on rock-filled piles are limited only to waters where the bed is predominantly bedrock.

Restrictions on docks and other structures

You may not place a dock or other structure in public waters if the structure:

- obstructs navigation or creates a hazard;
- is determined to fish or wildlife habitat or placed in a general fish spawning area;
- is intended to be used for boating habitation;
- includes walls, a roof, or storage facilities; or
- is located on property you do not own or have rights to use.

If you have questions concerning the contents of this fact sheet, contact your DNR Area Hydrologist. See contact information on reverse side.

About an Inshore Permit: Chapter 61C.01 and 61C.02.

Docks and Access in Public Waters, February 2008, revised 12/2011

Water Access: Installing a Boat Ramp

What are the site considerations and requirements for public and private boat ramps?

Access to Minnesota waters is important because there are nearly 11,000 lakes and 80,000 miles of streams in the state. Almost 1,000 public access sites are available; about half of these are administered by the Department of Natural Resources (DNR). Local units of government may have additional dock rules related to public safety and other factors should be contacted.

The decision to install a private boat ramp should be made carefully because the site may be sensitive and construction requires and maintenance can be significant. Most private boat ramps serve access and campground, and a smaller number are constructed for individual lots where no public access is available. Among the questions to consider for a boat ramp is the following: Is the site suitable for a boat ramp?

Site considerations

Before a boat ramp construction project begins, the potential impacts of disturbing aquatic plants (i.e., fish and wildlife habitat) by construction and subsequent traffic should be considered. The bed of the lake or stream at the site should be capable of supporting the boat ramp without the use of pilings, dredging, or other special site preparations including riprap grading. A boat ramp should not be installed in high areas or where steep slopes would make the ramp hazardous or difficult to use. Steep slopes, wetlands, and shore adjacent areas are sensitive areas regulated by local units of government, which may preclude their use for a boat ramp site.

Areas adjacent to existing beaches or areas used by water skiers should be avoided. Also, wave-pounce areas may be subject to erosion or may be susceptible during windy conditions. Areas where offshore depths are shallow may be difficult to use during low-water conditions. Finally, the ramp must not obstruct flowing water (river) or prevent a hazard to navigation.

If a private ramp is necessary, a highly desirable solution would be the construction of a jointly agreed location for their construction use.

Minnesota's requirements for boat ramps

In some cases, a DNR permit is needed to install a private or public ramp. An aquatic plant permit may be needed from DNR Fisheries if aquatic plants will be removed. However, a public waters permit is not required from DNR Waters if the construction of a boat ramp that meets the criteria listed on this same page. Before authorizing any project, contact your DNR Area Hydrologist, see contact information on the back of this sheet. Local units of government and other agencies may require their own permit or a separate permit, or they may not even allow construction of the ramp.

Water Access: Installing a Boat Ramp August 2008 (revised March 2011) Page 1 of 2

Shoreline Alterations: Beach Blanket

Will a sand beach work on my shoreline?

One goal of DNR Ecological and Waters Resources is to least necessary and potentially damaging alterations to shorelines. Specifically, use of beach mats and other types of fill is limited in order to prevent damage to fish spawning areas, aquatic habitat, and water quality of Minnesota's lakes.

Although natural sand beaches can be found on many Minnesota lake shores, landowners often attempt to create them on shores where they do not naturally occur (i.e., a sandy bottom lake). If you are considering adding a beach blanket, you should know a few important things before installing your own:

- Beach blankets that erode into the lake may cost aquatic plant beds and fish spawning grounds, depriving fish and wildlife habitat and changing the water quality of your lake.
- Beach blankets must be clean and washed free of fine particles and must be of the appropriate grain size (coarse sand or larger) to stay in place under wave action. Placed material that migrates from your site may constitute a violation of water quality standards.
- To further minimize the risk of your beach migrating away from the site, maintain aquatic vegetation on both sides of your beach, like in the diagram on page two.
- The labeled material is capable of holding beach material in place. If the lake bottom is soft, the sand or gravel will sink into the sand and disappear.
- You may only allow to install sand or gravel twice in the same location without a permit.
- Vegetation will constantly emerge through the beach material, and additional plant control will be needed on the beach. If you plan to need by hand or apply herbicide, an aquatic plant management permit may be required from the DNR Division of Fisheries.
- Beach blankets may not be placed over emergent vegetation such as bulrush or cattails unless you obtain a permit from the Division of Fisheries.

Keep in mind that you are not allowed to install any glass fence or liner (e.g., blue fabric or plastic) underneath your constructed beach. If owning shoreline property with a sandy beach is a high priority for you, look for shoreline property where sandy beaches occur naturally before you make that investment purchase.

Beach blankets at shoreline.

Page 1 of 2

Riparian rights

- Basic info about riparian rights and key legal cases is on the [DNR's Water law basics webpage](#)
- Riparian rights are property rights arising from owning shoreland on waters of the state
- Includes right to:
 - Build a dock out to navigable depth
 - Take water for domestic and agricultural uses
 - Use land that is added or exposed naturally over time
 - Use water to boat, fish, hunt, swim, take ice, and other uses of water bodies
- Where the public is a riparian landowner, the public has riparian rights
- Once gain legal access to the surface of a water body, have right to make use of its entire surface
- Riparian duties – exercise rights reasonably; do not unreasonably interfere with the riparian rights of others
- It's a public nuisance and misdemeanor to “interfere with, obstruct, or render dangerous for passage waters used by the public” ([Minn. Stat. 609.74](#))



DNR permits

- [DNR's Do I need a permit? webpage](#) provides answers about water and shoreland-related permits for 40+ common activities people ask about
- MPARS – DNR's online permitting and reporting system
- Common types of DNR water-related permits:
 - **Public waters permit** – Apply through [MPARS](#); Contact area hydrologist
 - **Water appropriations permit** – Apply through [MPARS](#); Contact area hydrologist
 - **Lake aeration permit** – Apply through [MPARS](#); See [DNR's Lake Aeration Program webpage](#) for contacts
 - **Aquatic plant management (APM) permit** – Apply through [MPARS](#); [Contact APM permit staff in DNR Fisheries](#)
 - **Aquatic Invasive Species (AIS) permits** – [Infested Water Appropriation, Diversion, and Transport Permit Form](#); [Contact AIS staff](#)
 - **Utility crossing license for public waters** – Apply through Lands and Minerals' online [Utility License Application \(ULA\)](#) or use form on [DNR's Utility Crossing License webpage](#); [Contact Lands and Minerals Division staff](#)





Landowners ask a lot of questions about docks!

Common dock questions

- Do I need a permit for my dock?
- Where can I find information on dock regulations?
- Can I leave my dock in over the winter?
- What are the rules for putting a permanent dock in a lake?
- How far can my dock extend out into the water?
- How much shoreline do I need to put out a dock?
- How many docks can I have at my lake property?
- Can I have a dock at this property I might purchase?
- My neighbor put a dock over my property line as extended into the water and it obstructs my access, what do I do?
- How many boats can someone have at a dock?
- Is it legal for my neighbor to rent out his dock?
- If a dock is private, can I still fish there?

Permanent dock



Temporary dock



Do I need a permit for my dock?

No permit needed if meet the following:

- No area of dock is wider than 8 feet
- Dock is no longer than needed to reach navigable depth
- Cannot be a hazard to navigation, health, or safety
- Dock must allow for free flow of water beneath it
- Cutting aquatic vegetation for installation may require a APM permit
- Dock is not used as a marina



- Dock is not combined with other similar structures to create a larger structure
- See flyer for info on oversized dock platforms ([General Permit 2008-0401](#))
- Docks placed on rock-filled cribs can only be located only on waters where the lakebed is bedrock
- Dock is consistent with guidelines of the local government

Additional dock info

- DNR doesn't resolve disputes between landowners over docks (this is a civil matter).
- Floodplain considerations:
 - For permanent docks: In cases where no DNR permit was issued for a permanently constructed dock, then a local permit is needed for the structure.
 - If the permanently constructed dock is on a river in a mapped floodway, no-rise documentation is required.
- DNR online resources for docks and mooring facilities:
 - [DNR's Docks and Access in Public Waters](#) webpage
 - [DNR's Docks and Access in Public Waters](#) factsheet
 - [Permitting Mooring Facilities and Determining the Number of Mooring Spaces in Shorelands](#) factsheet

Docks and Access in Public Waters

What you should know about docks and other water access structures

Docks and watercraft lifts are commonly used access structures



Permitting Mooring Facilities & Determining the Number of Mooring Spaces in Shorelands

Purpose

The purpose of this document is to help local governments understand applicable permitting requirements and standards for mooring facilities, including marinas, consistent with local shoreland ordinances and state laws aimed at minimizing impacts to Minnesota's public waters. This includes determining the number of mooring spaces for residential and commercial uses as regulated under Minnesota's Shoreland Rules and Public Waters Rules. This document cites relevant rule provisions and assumes that local shoreland ordinances are consistent with the state shoreland rules.

Resource Concerns with Mooring Facilities & Too Many Mooring Spaces

Intensive shoreland development negatively affects lake and river ecosystems. Large docks and platforms with many mooring spaces shade out aquatic plants and eliminate habitat critical for fish spawning, feeding, and refuge from predators. Propellers in shallow areas also disturb





Do I need a permit to repair ice ridge damage along my shoreline?

Ice ridge removal

- Ice ridges are caused by the pushing of a lake's ice sheet against the shore
- Best solution – leave ice ridges in place
 - They have ecological benefits, and their presence help to stop additional ice ridge formation
- Landowners can remove an ice ridge without a public waters permit if:
 - Ice ridge formed in the last year
 - Project meets local permit requirements
 - Not more than 200 feet of ice ridge along shoreline is removed
 - Depending on ice ridge material from bed, it is either removed to an upland location (muck, clay, organic sediment) or graded to conform to original cross-section (sand and gravel)
 - No additional excavation or fill done at site
 - Exposed areas are stabilized to prevent erosion
 - Local zoning, watershed district and SWCD are given at least 7 days notice before start of project
 - Can't disturb aquatic emergent vegetation unless authorized by an APM permit
- Online info: [DNR factsheet on ice ridges](#)
- For questions, contact: [DNR Area Hydrologist](#)

Shoreline Alterations: Ice Ridges



What causes ice ridges and what can I do about them?

Property owners occasionally return to their cabins in the spring only to discover they are dealing with property damage caused by a phenomenon called "ice heaving" or "ice jacking". This powerful natural force forms a feature along the shoreline known as an "ice ridge". The result may include significant damage to retaining walls, docks and boat lifts, and sometimes even to the cabin itself.



Ice ridge formed along the shore of Shamineau Lake in Morrison County.

Is an individual permit required?

For most projects constructed *below* the ordinary high-water level* (OHWL) of public waters, an individual Public Waters Work Permit is required from the Minnesota Department of Natural Resources (DNR).

Ice ridges exception: An individual permit from the DNR is not required for the grading or removal of an ice ridge if the conditions outlined on this information sheet are followed.



Shoreline cross section

If you have questions concerning the contents of this information sheet, contact your local DNR Area Hydrologist. See contact information on reverse side.

Please note that local units of government and other agencies may require a permit for this project.

*For lakes and wetlands, the OHWL is the highest elevation that has been maintained as to leave evidence on the landscape. It is commonly that point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial. For watercourses, the OHWL is the top of the bank of the channel. For reservoirs and flowages, the OHWL is the operating elevation of the normal summer pool.

How do ice ridges form? Ice ridges are caused by the pushing action of a lake's ice sheet against the shore. Cracks form in the ice because of different contraction rates at the top and bottom of the ice sheet. This is especially true in years that the ice sheet lacks an insulating snow cover. Ice cracks also develop because the edges of the ice sheet are sometimes firmly attached to the shore. When water rises in the cracks and freezes, the ice sheet expands slightly. Rising air temperatures warm the ice, leading to additional expansion, which exerts a tremendous thrust against the shore. Alternate warming and cooling of the ice sheet leads to additional pushing action, causing the ice to creep shoreward and scrape, gouge, and push soil and rock into mounds (called "ice ridges", "ice pushes", or "ramparts").

What can be done about ice ridges after they form? Because ice ridges do provide ecological benefits (described below), the ideal reaction to the formation of an ice ridge would be to do nothing other than remove personal property from its zone of influence. However, this is often impractical. Ice ridges can impede use of the lake by a property owner or the users of public lakeshore facilities. Therefore, action may be taken to remedy the results of ice activity.



Can I remove a beaver dam from my property?

Beaver dam removal

- Beaver dam removal can impact other landowners; all adjacent landowners must give permission to remove dam
- If beaver dam is the outlet of a lake or wetland, limits on what can be done
 - Contact area hydrologist – Removal may require a public waters permit
 - Typically, only can remove dam to runout elevation
- Techniques for removal:
 - Remove incrementally by hand to minimize adverse impacts
 - After each drop in height, allow water level and sediment plume to stabilize
 - Use hands and hand tools to remove (less impact)
- Additional online information from the DNR:
 - [Do I need a permit? Beaver dams](#)
 - [Beaver dam removal methods](#)
- For questions, contact: [DNR Area Hydrologist](#)





Will the DNR remove a bog that has floated onto my shore?

Floating bog

- A floating bog is not land, it's a chunk of aquatic emergent vegetation (cattails) owned by the state
- If a floating bog is a nuisance, it's the responsibility of the landowner where the bog is grounded to move the bog to an acceptable location.
- When the DNR is the landowner, the DNR is responsible for moving a bog.
- To move a bog requires a DNR Aquatic Plant Management (APM) permit issued by DNR Fisheries.
- No fee for the permit
- For questions, contact: [DNR APM staff](#)





What are the surface use restrictions on my lake?

Surface water use restrictions

- Info is found in this [Summary of Lake and River Use Restrictions](#), listed by county and lake name.
- DNR approves local surface water use ordinances; regulated at local level.
 - DNR webpage on [Initiating Local Surface Use Zoning](#)
- For questions, contact: [Adam Block, DNR Boating Law Administrator](#)



Minnesota Lake and River Use Restriction Summary Minnesota Department of Natural Resources - as of April 30, 2025

This is a summary only and is subject to change - contact the specific local, state or federal agency for more information

Summary of Lake and River Use Restrictions

| County, Agency, City or Town | Lake or River | Restrictions | Effective Dates |
|------------------------------|----------------------|---|---|
| AITKIN | | | |
| Aitkin County | Various channels | Slow-no wake speed in marked areas in the channels noted below: 1. Prairie River (4,350 feet upstream and 900 feet downstream of Co. Rd. 14 bridge) 2. Ripple River (Farm Island Lake – Pine Lake and Hanging Kettle Lake to Diamond Lake) 3. Sandy River (Hwy 65 bridge area) 4. Big Sandy Lake (1-62) (bridge area of Bridge Road) 5. Big Sandy River (2,500 feet north of 232 bridge to 100 feet south of bridge) 6. Channel between Lake Minnewawa and Horseshoe Lake 7. The North channel between Cedar Lake and Bay Park Bay | 4/5/1996, 5/7/2003 and 10/21/2008 Amended 6/1/2011 |
| ANOKA | | | |
| Anoka County | Coon Lake (02-42) | Slow-no wake speed in the marked areas in the narrows on either side of the island in the center of the lake. | 7/28/2003 |
| Anoka, Andover and Ramsey | Rum River | Slow-no wake speed on the river from the Mississippi River to Mile 5.2. | 5/29/1990, 3/29/1999 and 8/15/2005 |
| Andover | Crooked Lake (20-84) | Slow-no wake speed restriction on the entire lake when water level reaches 861.6 feet. Restriction will be removed when water level subsides and remains below 861.6 feet for three consecutive days. (Joint resolution with Coon Rapids) | 12/3/2015 |
| Blaine | Loch Ness Lake (or | No motorboats. | 10/8/1974 |



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Boating

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[Public water access](#)

[River guides](#)

[Guide licensing \(PDF\)](#)

[Kids life jacket law](#)

[Water recreation safety](#)

Initiating local surface use zoning

Each year the Minnesota Department of Natural Resources (DNR) receives a number of questions regarding the placement of restrictions on lakes and rivers. With over 800,000 boats registered in Minnesota, some conflicts can be expected in the years to come. This information is designed to address the most frequently asked questions regarding this process - called "water surface use management" (WSUM) or "water surface use zoning." The goal of surface use management is to enhance the recreational use, safety, and enjoyment of lakes and rivers and to preserve them as natural resources of the state.

How do we start?

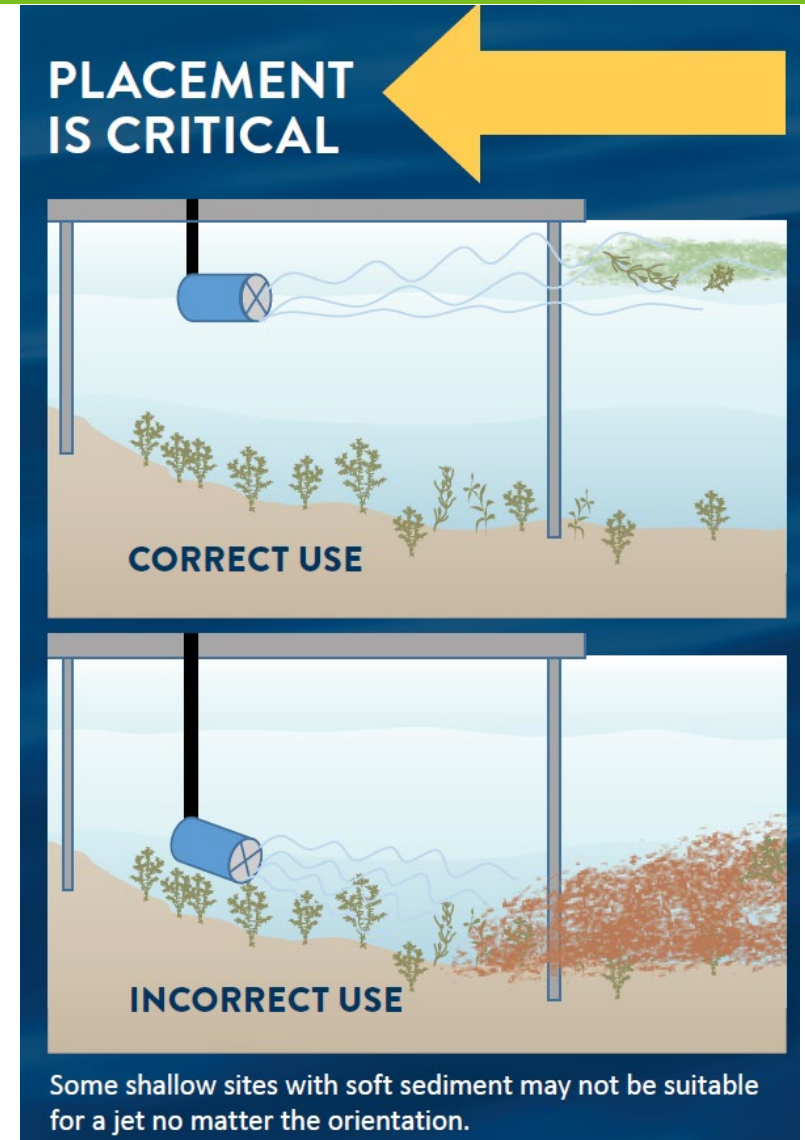
All water surface use management starts at the local unit of government - town, city or county, depending upon



Can I use a hydraulic jet to clear aquatic vegetation from around my dock?

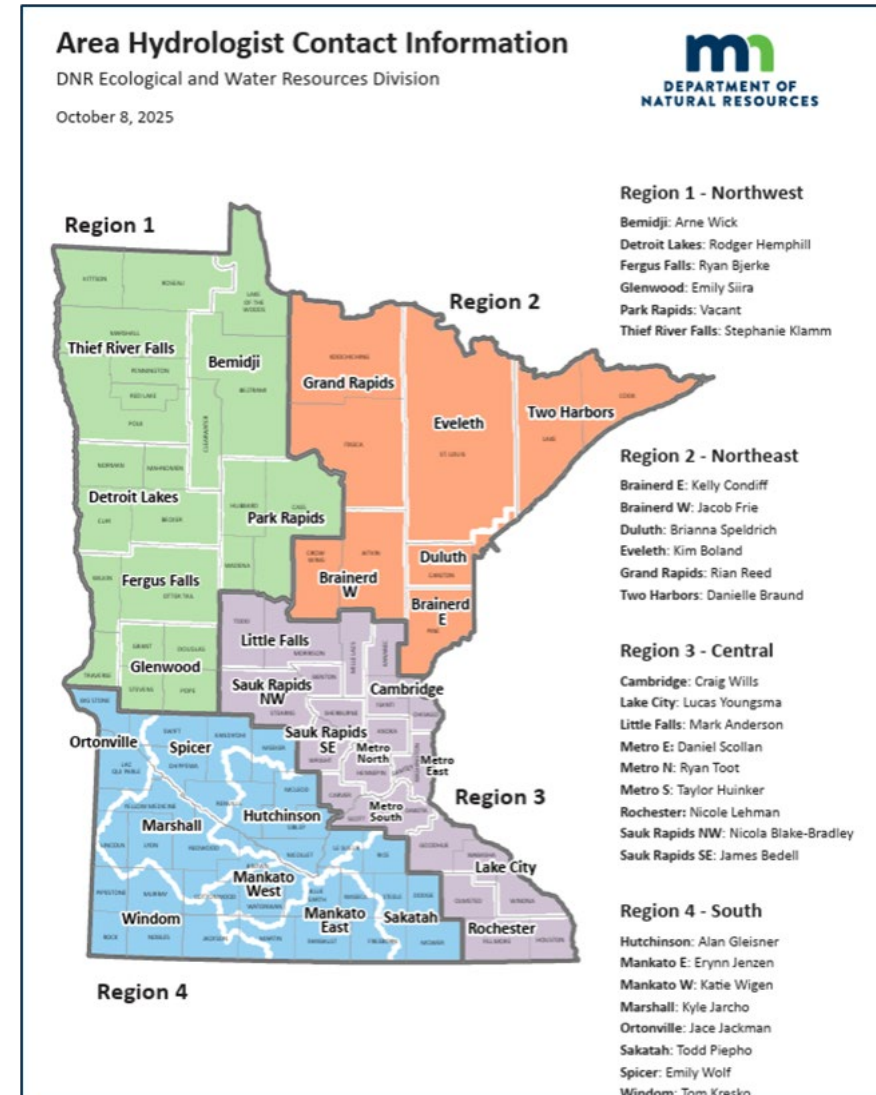
Use of hydraulic jets

- It's legal to use a hydraulic jet to blow away floating surface debris and algae, if the lake bottom is not disturbed
 - No DNR permit to use hydraulic jet if used correctly
- It is NOT legal to use a hydraulic in any way that it disturbs the lake bottom or uproots aquatic plants
 - Improper use can result in a citation and/or a DNR restoration order
- DNR info: [Considering a hydraulic jet?](#)
- For questions, contact:
 - [DNR APM staff](#)
 - [DNR Area Hydrologist](#)

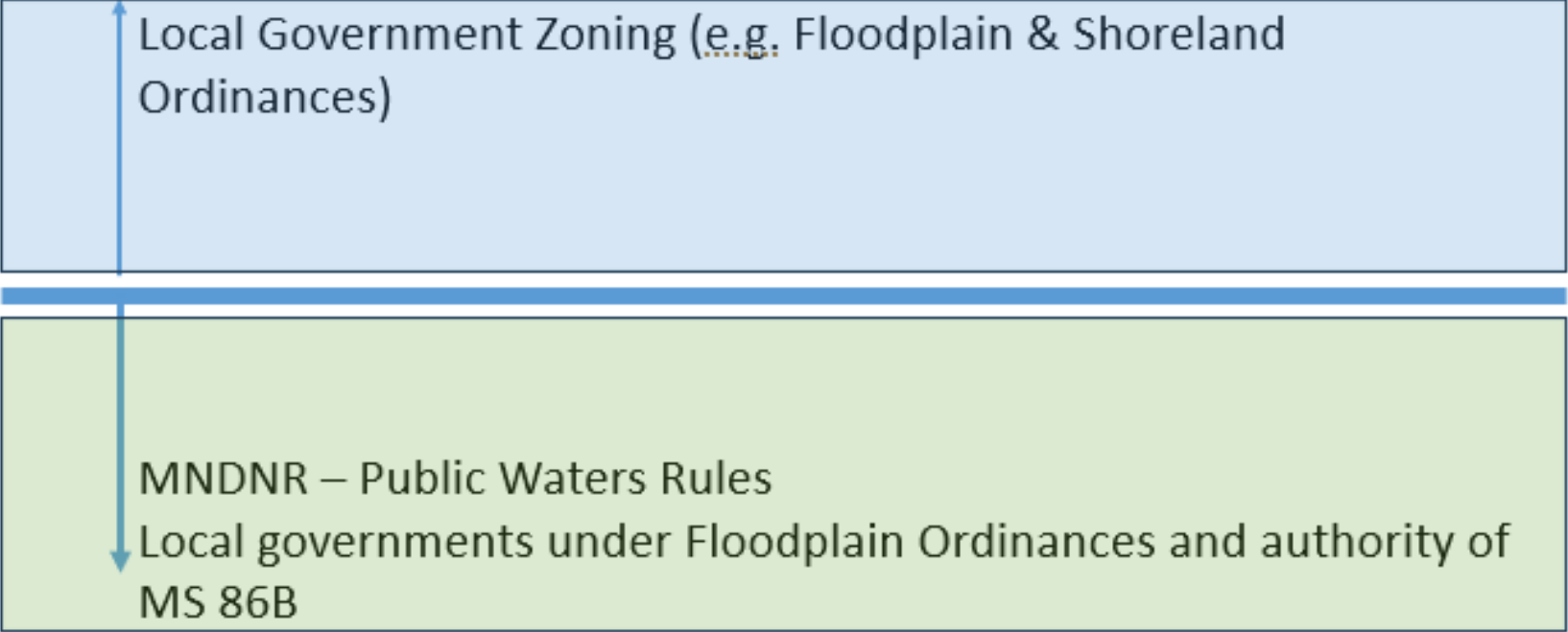


DNR contacts for water-related and shoreline-related questions

- [Area hydrologists](#): Cover areas by county; can answer many questions about work in public waters and shoreland and river-related land use programs
- [Public waters program](#): Jen Sorensen; Tom Hovey
- [Shoreland and river programs](#): Area hydrologists; Dan Petrik, Ricky Hoffman
- [State floodplain program](#): Ceil Strauss, Garry Bennett
- [Lake aeration permit program](#): Denise Elston
- [Local surface water use zoning](#): Adam Block
- [Aquatic Plant Management \(APM\) program](#): Shane McBride
- [Aquatic Invasive Species \(AIS\) program](#): Kelly Pennington; [List of DNR regional AIS specialists](#)
- [Utility crossing license](#): [Contact Lands and Minerals Division staff](#)



Jurisdiction for Riparian Activities





Can I alter land along my shoreline?

Land Alteration – Shoreland Standards

- Local permit required for moving more than:
 - 10 CY in SIZ, BIZ and steep slopes
 - 50 CY elsewhere in SL
- Local governments may have more restrictive standards



Need Permit from Local Zoning Authority if in Floodplain

If DNR permit is not required, **a local zoning authority permit is required** if in FEMA mapped floodplain for any “development” (manmade alterations):

- Riprap
- Any type of building or structure (i.e., WOAS, garage, shed, deck, stairs, gazebo, solar panels, pool, permanent docks, fences – except for “farm fences,” etc.)
- Any type of grading, filling or excavation (sand blanket, retaining walls, culverts/bridges, ice ridge alteration, etc.)
- Community must:
 - ✓ Verify project really meets No DNR Permit Required conditions if on public water
 - ✓ Require “No Rise” certification if proposed project is in floodway & require “Allowable Rise” certification if propose project in Zone A (where it is not mapped as flood fringe)



Riprap


Riprap – DNR’s No Permit Required Criteria

A DNR public waters work permit is not required if *all* the following apply (Minn. Rule 6115.0215, Subpart 4, item E):

- Not a designated trout stream or Lake Superior
- **Must be demonstrated need to prevent erosion**
- **Rock** appropriately sized for potential wave or current action (in no case rock <6” or >30” diameter)
- **Conforms to natural alignment of shoreline**
- **Slope not steeper than 3H:1V**
- **Not placed more than 6’ waterward of OHWL**
- Length not more than 200’ (lakes)
- Length not more than 5 times bankfull width (rivers)
- **Cannot cover emergent vegetation**
- Cannot obstruct navigation or water flow
- Must include geotextile or granular underlayment

DNR factsheet available online – [Shoreline Alterations: Riprap](#)

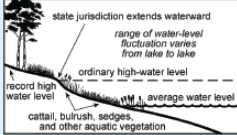
Shoreline Alterations: Riprap



Is an individual permit required?

For most projects constructed *below* the ordinary high-water level* (OHWL) of public waters, an individual Public Waters Work Permit is required by the Minnesota Department of Natural Resources (DNR).

Riprap exception: An individual permit from the DNR is not required for riprap placement if the conditions outlined in this information sheet are followed.



state jurisdiction extends waterward
range of water-level fluctuation varies from lake to lake
record high water level
ordinary high-water level
average water level
cattail, bulrush, sedges and other aquatic vegetation

Shoreline cross section.

If you have questions concerning the contents of this information sheet, contact your local DNR Area Hydrologist. See contact information on reverse side.

Please note that local units of government and other agencies may require a permit for this project.

*For lakes and wetlands, the OHWL is the highest elevation that has been maintained as to leave evidence on the landscape. It is commonly that point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial. For watercourses, the OHWL is the top of the bank of the channel. For reservoirs and flowages, the OHWL is the operating elevation of the normal summer pool.

What can I do to keep my shoreline from washing away?

If your shoreline is eroding, any of the following events may be destabilizing your soil, resulting in erosion: fluctuating water levels, increased wave or wake action, ice pushes, loss of natural vegetation, and human activity. Protecting your shoreline from erosion may not require you to replace natural shoreline with a high-cost, highly engineered retaining wall or riprap. There are affordable, low-impact methods to stabilize your shoreline and still protect property values, water quality, and habitat. The Minnesota Department of Natural Resources (DNR) encourages you to consider planting native vegetation to control shoreline erosion, enhance aesthetic values, and contribute to better water quality in your lake (see Lakescaping information sheet).



Both riprap and retaining walls can reduce erosion, but they can be expensive and negatively affect lakes by creating a barrier between upland areas and the shoreline environment. Riprap should only be used where necessary and never to replace a stable, naturally vegetated shoreline. Additionally, installing riprap on a stream or river bank is a special condition that may require professional advice to ensure that the structure will stand up to the fluctuations in water levels and flowing conditions.

Natural rock riprap consists of coarse stones randomly and loosely placed along the shoreline. You should consult your DNR Area Hydrologist to determine whether your shoreline needs riprap to stop erosion. If there is a demonstrated need, such as on steep slopes, you may want to consider placing riprap or a combination of riprap and vegetation. In most cases, vegetation planted in the rocks will stabilize the riprap and improve the appearance of your shoreline. Naturalizing your shoreline is the most important contribution you can make to enhance water quality, maintain fishery resources, and provide wildlife habitat.

Shoreline stabilized with riprap and enhanced with a vegetative buffer.

Riprap – DNR Permit Requirements

A DNR public waters work permit is required if the “no permit required criteria” are not met and work is not “prohibited work in public waters”

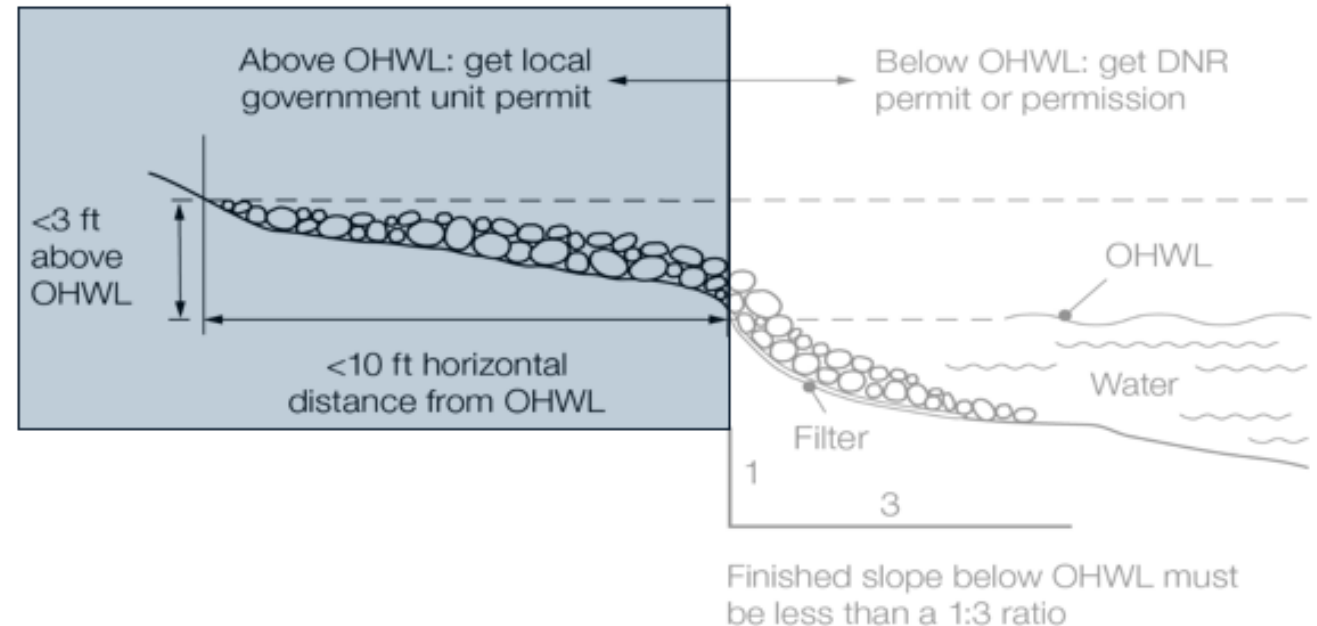
Additional Permit Requirements for Riprap Shore Protection (Minn. Rule 6115.0216, Subpart 2):

- Riprap placed with a minimum amount of space between larger rock, and the space between them must be filled with firmly seated smaller rock
- Site soils must be capable of supporting riprap
- Toe end of riprap must be installed in a trench excavated into bed of public water, when warranted by site conditions
- Adequate engineering studies done to certify adequacy of the design, if required by DNR



Riprap – Shoreland Standards

- Local permit required if movement of more than 10 cy of material:
 - Soil – grading to place riprap
 - Rock filter – placed under riprap
 - Rock riprap
- Dimensional standards:
 - Finished slope no greater than 3:1
 - No more than 3 ft above OHWL
 - No more than 10 ft landward
- Local governments may have more restrictive standards



Local Permit Required if in FEMA Mapped Floodplain and Project Meets DNR “No Permit Required”

Riprap

- Permit required since “development”!
- Verify it really meets DNR no permit requirements (e.g.):
 - ✓ Demonstrated need to stop existing erosion or restore eroded shoreline
 - ✓ Doesn't cover emergent vegetation
 - ✓ No steeper than 3:1 (horizontal to vertical)
 - ✓ Meet rock size requirements (Natural rock 6 to 30 inches)
- If in mapped floodway, must submit “No Rise” certification
- If in A Zone - on watercourse (or flowing area on lake), must submit “Allowable Rise” documentation





Can I cut trees along my shoreline?

Vegetation Management

- Intensive clearing in the SIZ, BIZ, and steep slopes is not allowed.
- Limited clearing is allowed for:
 - Stairways, access paths
 - Beaches
 - Picnic areas
 - Water-oriented accessory structures
 - Views
- Local governments may have more restrictive standards



Natural Shorelines

- Natural Shorelines:
 - Filter nutrients/prevent algae
 - Provide habitat
 - Visual screening





How can I restore my shoreline?

Shoreline Restoration

- Restoration Resources

- SWCD
- BWSR
- Blue Thumb
- WMOs



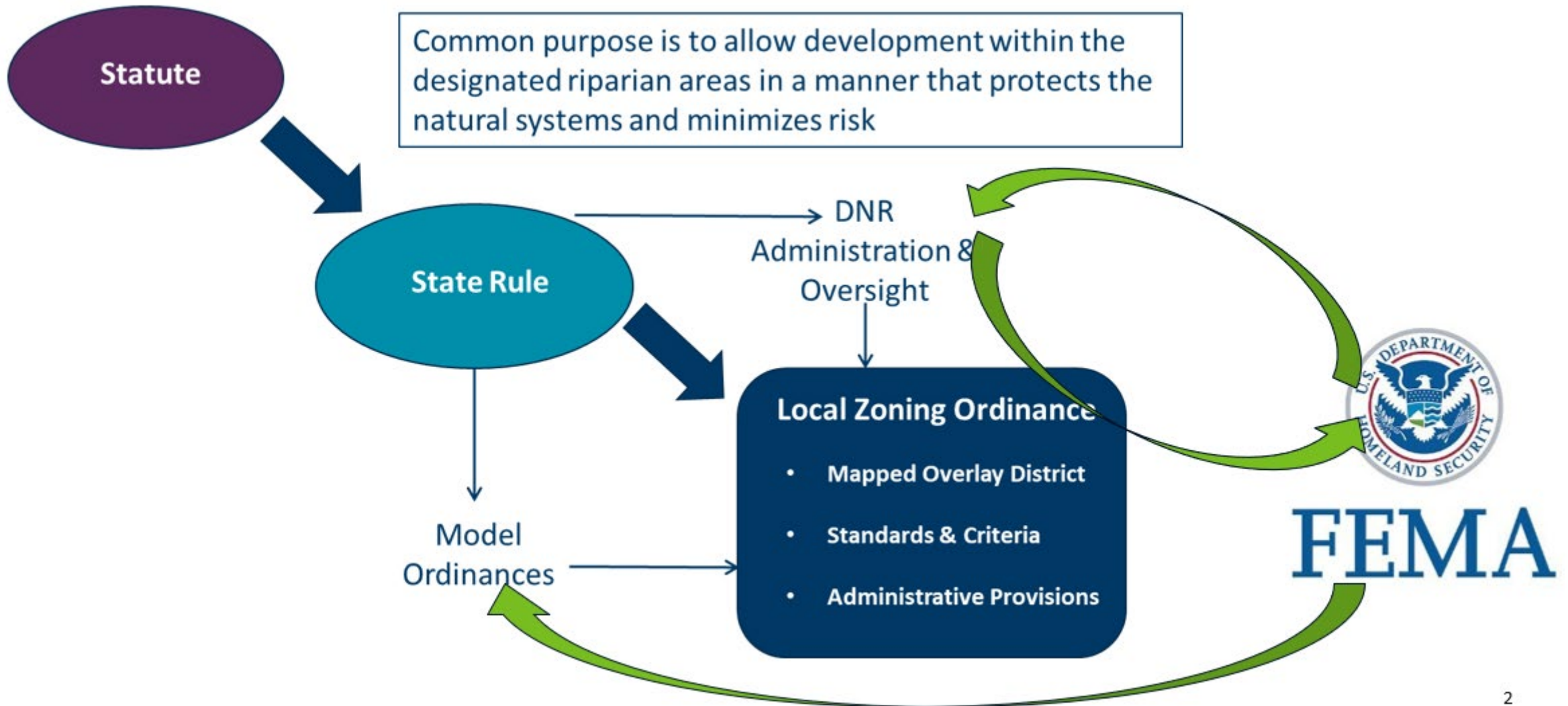
- DNR - [Natural shorelines | Minnesota DNR](#)



Common Questions In and Along Shorelines of Waters – Floodplain Focus

Ceil Strauss, Floodplain Program

How land use programs work



FEMA

FEMA = Federal Emergency Management Agency

Oversees National Flood Insurance Program (NFIP)

- Maps of high flood risk areas
- Federal and state standards are in local floodplain ordinances
- Flood insurance (federally backed) – contact local insurance agent
- Mitigation grants to reduce flood risk – State contact Kristy Dellwo, MN Department Public Safety (Kristen.Dellwo@state.mn.us)*

* [State Flood Hazard Mitigation grant program website](#)



FEMA

Am I in the Floodplain?

How to Find FEMA Maps & See Flood Zone

- Main resource sites:

- ✓ [FEMA Flood Map Service Center website](#)



- ➔ [DNR video – Is My House in the Floodplain? \(How to use FEMA Map Service Center site and print map\)](#)

- ✓ [FEMA National Flood Hazard Layer map viewer](#)

- ✓ [DNR's Lake & Flood Elevations Online \(LFEO\) map viewer](#)

<https://msc.fema.gov/portal/home>

The screenshot shows the FEMA Flood Map Service Center (MSC) homepage. On the left is a navigation menu with the FEMA logo and links for Navigation, Search, Languages, MSC Home, MSC Search by Address, MSC Search All Products, MSC Products and Tools (including Hazus, LOMC Batch Files, and Product Availability), MSC Frequently Asked Questions (FAQs), MSC Email Subscriptions, and Contact MSC Help. The main content area features a welcome message, a search bar for flood maps, and information about the FIRMette tool update. A small map thumbnail is visible on the right side of the page.

DNR Floodplain Web Site

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

Find Flood Maps

"Is My House in the Floodplain?" Video

Are you looking for the official FEMA floodplain map in your area? Has a lender told you flood insurance is mandatory? View the ["Is My House in the Floodplain?"](#) video. Learn how to:

- Check what type of FEMA floodplain map is available in your county (in Minnesota).
- Find and print the FEMA Flood Insurance Rate Map (FIRM) for your area.

What Flood Maps are Available in Each County?

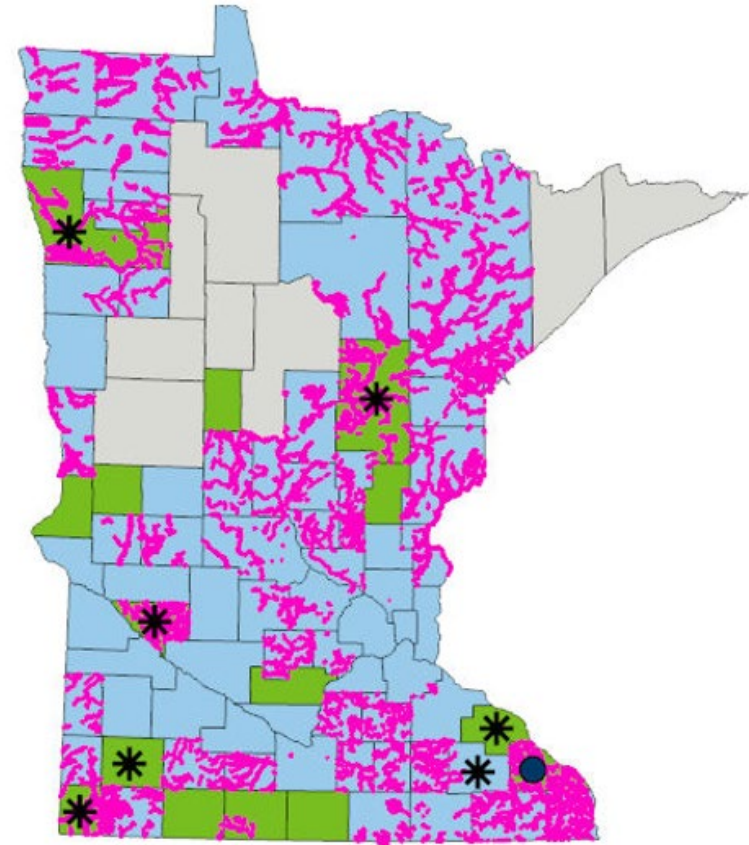
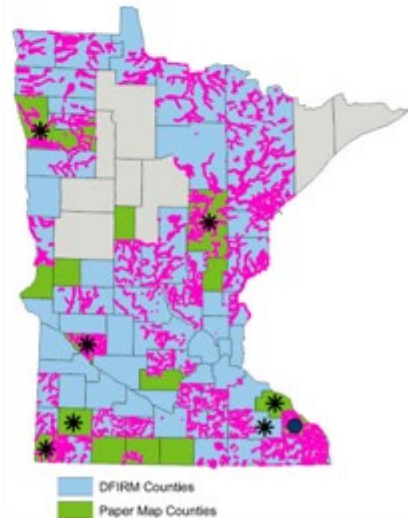
Find what flood maps and elevation information is available for your community using the map below.

DFIRM and Paper Map Counties: See more details below.

Other Map Legend notes:

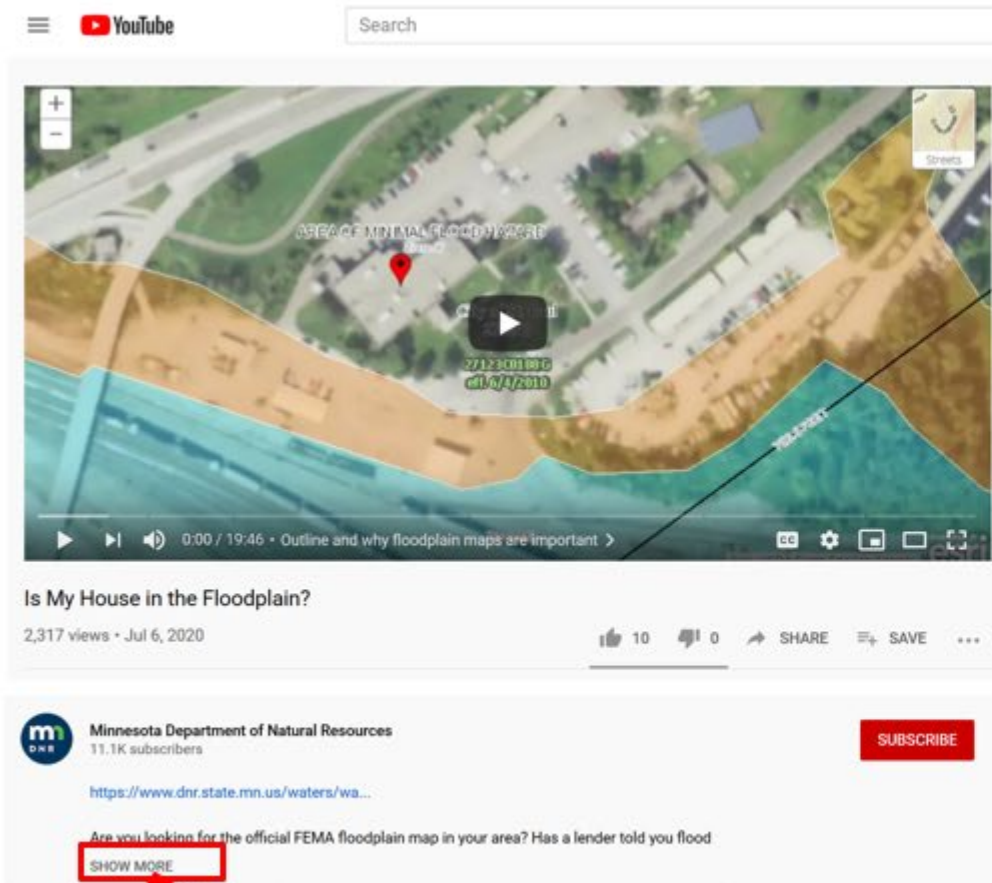
- **Estimated 1% Base Flood Elevations:** These Estimated 1% Base Flood Elevations can be viewed on the DNR's [Lake & Flood Elevations Online \(LFEQ\) viewer](#).
- **Preliminary DFIRMs Available:** See options to view preliminary DFIRMs in DFIRM or Paper counties resources below.
- **Countywide Modernization:** DNR and FEMA are currently working on getting better data and mapping. See latest on [FEMA map updates](#).

Click to enlarge



- DFIRM Counties
- Paper Map Counties
- Unmapped Counties
- Estimated 1% Base Flood Elevations
- Preliminary DFIRMs Available
- Countywide Modernization

Is My House in the Floodplain? Video



The video player shows an aerial view of a residential area with a floodplain map overlay. The floodplain is shaded in orange and yellow, while the water body is blue. A red pin marks a specific house. The video title is "Is My House in the Floodplain?" and the channel is "Minnesota Department of Natural Resources".

Are you looking for the official FEMA floodplain map in your area? Has a lender told you flood insurance is mandatory? This "Is My House in the Floodplain?" video shows how to:

- Check what type of FEMA floodplain map is available in your county (in Minnesota)
- Find and print the FEMA Flood Insurance Rate Map (FIRM) for your area

For more details, see the following time stamps:

- 00:00 Outline and why floodplain maps are important
- 02:19 Find what type of FEMA floodplain map is available in your county (in Minnesota)
- 04:06 Find and print FEMA Digital Flood Insurance Rate Map (DFIRM)
- 09:05 Find and print FEMA paper Flood Insurance Rate Map (FIRM)
- 14:04 How to verify and document if no FEMA map
- 17:28 Introduction to "MNTOP0" (Minnesota interactive map with 2-foot elevation contours)
- 19:31 Thanks and link to county contacts in Minnesota

Minnesota Department of Natural Resources
11.1K subscribers
<https://www.dnr.state.mn.us/waters/wa...>

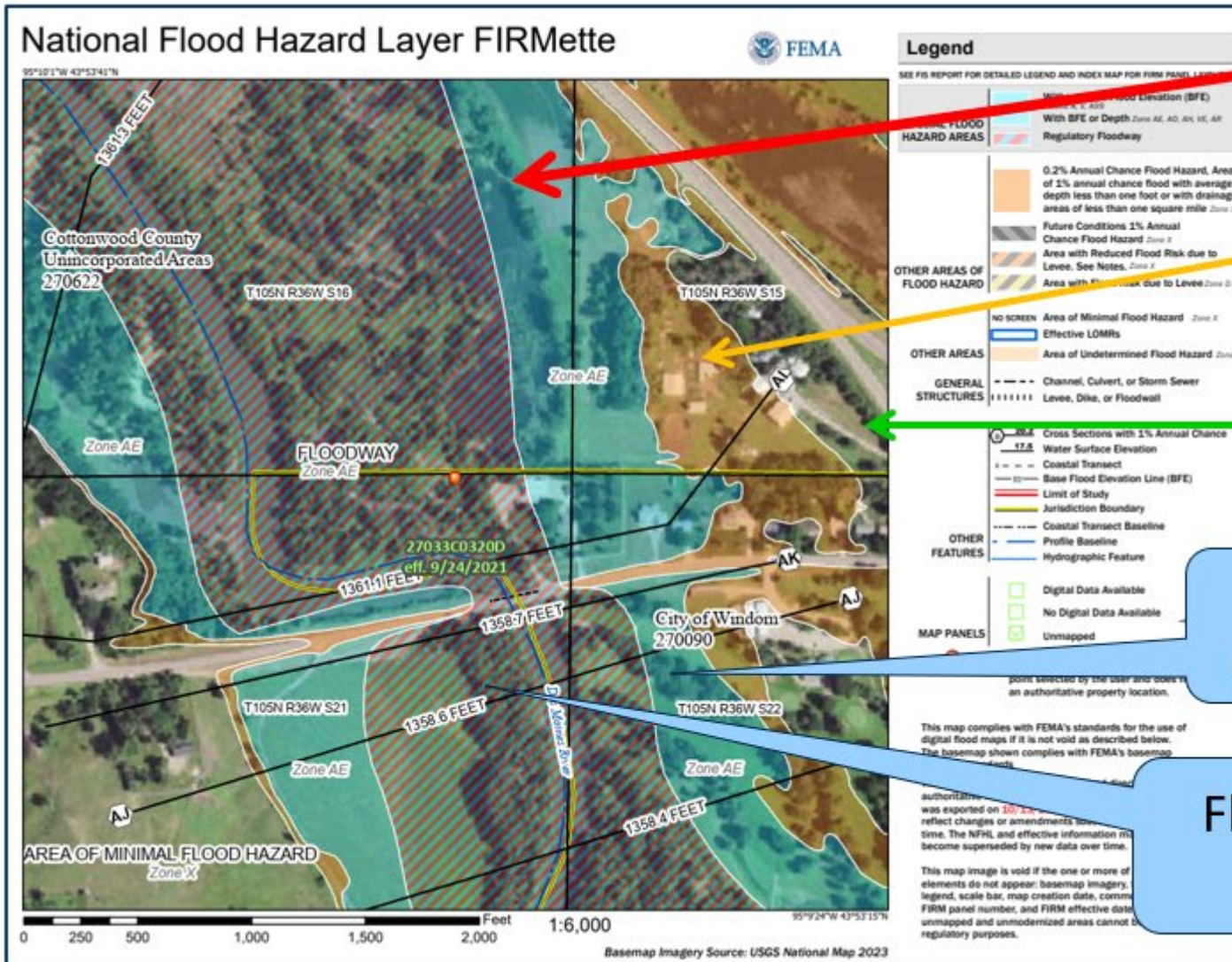
Are you looking for the official FEMA floodplain map in your area? Has a lender told you flood

SHOW MORE

SHOW MORE

What FEMA Flood Zone Am I In?

What FEMA Map Zone am I in? If FEMA Has Done a Detailed Study



Zone AE - High Flood Risk
(must require flood insurance and regulate)

Zone X (shaded) Medium Flood Risk

Zone X (unshaded) Low Flood Risk

Flood Fringe (blue overlay) – elevation/flood proofing standards

Floodway (red & blue hatched area) – very restrictive zoning

Zone A (no detailed study) Called General Floodplain in Local Floodplain Ordinance

National Flood Hazard Layer FIRMette



Legend

SEE FIR REPORT FOR DETAILED LEGEND AND FIRM MAP FOR FIRM PANELS OUT

SPECIAL FLOOD HAZARD AREAS

- Minimum Basic Flood Depth (BFD) Zone A 1.5-3.0
- High SF Elev Depth Zone A 4.0-6.0 VC 40
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 3% Annual Chance Flood with average flood that are less or with drainage areas of less than 500 acres mile Zone I
- Future Dam/Leak 3% Annual Chance Flood Hazard Zone I
- Area with Reduced Flood Risk due to Levee, See Note, Zone I
- Area with Flood Risk due to Divergence

OTHER AREAS

- Area of Minimal Flood Hazard Zone I
- Effective ID MRs
- Area of Unclassified Flood Hazard Zone I

GENERAL STRUCTURES

- Observed, Outlets, or Storm Sewer
- Levee, Dike, or Retention Wall

OTHER FEATURES

- 282 Cross Sections with 3% Annual Chance
- 324 Water Surface Boundary
- Observed Transverse
- Basic Flood Depth Area (BFD)
- Limit of Study
- Unshaded
- Observed Transverse, Boundary
- Profile Boundary
- Hydrographic Feature

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

The pin displayed on this map is an approximate point selected by the user and does not represent an authoritative mapping location.

This map complies with FEMA's standards for the use of digital flood maps of a 1:50,000 scale as described below. The base map shall comply with FEMA's base map accuracy standards.

The flood hazard information is derived directly from the authoritative NFI web services provided by FEMA. This map was updated on 4/12/2021 at 10:07 AM and does not reflect changes or amendments subsequently made and done. The NFI and effective information may change or become superseded by new data over time.

This map is only valid if the user is aware of the following map elements that are displayed: base map, legend, scale bar, map coordinate data, coordinate identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unshaded areas cannot be used for regulatory purposes.

Zone A - High Flood Risk
(must require flood insurance and regulate)

Zone X (Unshaded) - Low Flood Risk

Types of Flood Zones

Regulated zones (and subject to mandatory flood insurance):

- Zone AE or Zone A1-A30, AO, AH: Detailed engineering analysis supports BFEs shown on maps, profiles, floodway data tables
- Zone A: Approximate delineations without BFEs on the map and no profiles or data tables in the report
- Zone VE: Detailed engineering analysis in coastal zone supports BFEs shown on maps *(on St. Louis Countywide maps effective 3/25/2025)*

Non-Regulated zones (but local regulations can have higher standards):

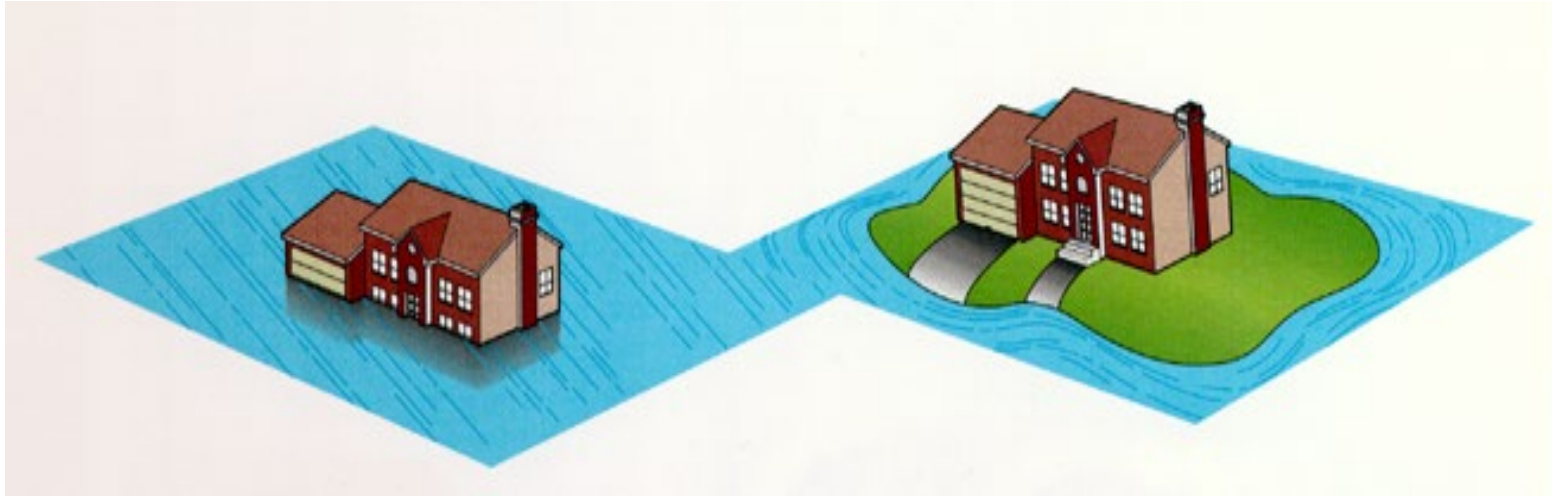
- Zone X (Shaded) – 500-year, areas protected by accredited flood control project,
- Zone X (Unshaded) – No flood risk mapped by FEMA; Still may be stormwater flood risk and other unmapped flood risk

How Do I Get My FEMA Map Zone Changed?
("How do I get out of paying flood insurance?")

How do I get my FEMA map zone changed (and get out of paying for flood insurance)?

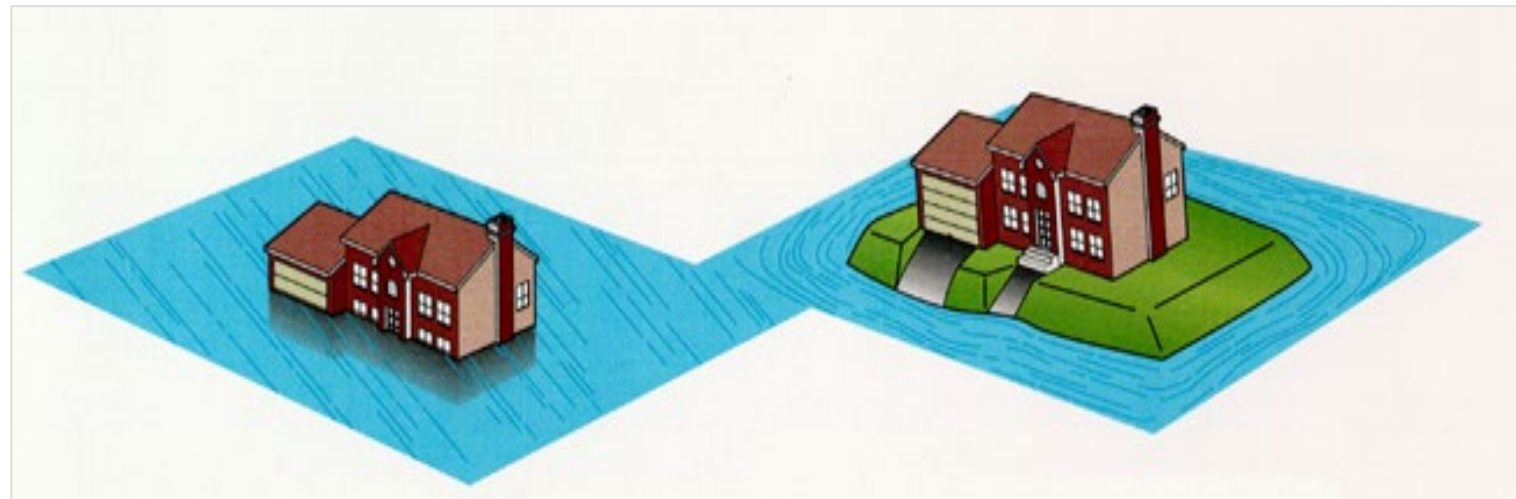
- ✓ If building is not in/touching the FEMA mapped floodplain, send the FEMA map to the lender
- ✓ If building is in/touching the FEMA mapped floodplain, see if eligible for a Letter of Map Amendment or Letter of Map Revision based on Fill (LOMR-F)
- ✓ See [DNR's FEMA Map Amendments and Revisions page](#)

FEMA Flood Zone Correction Options



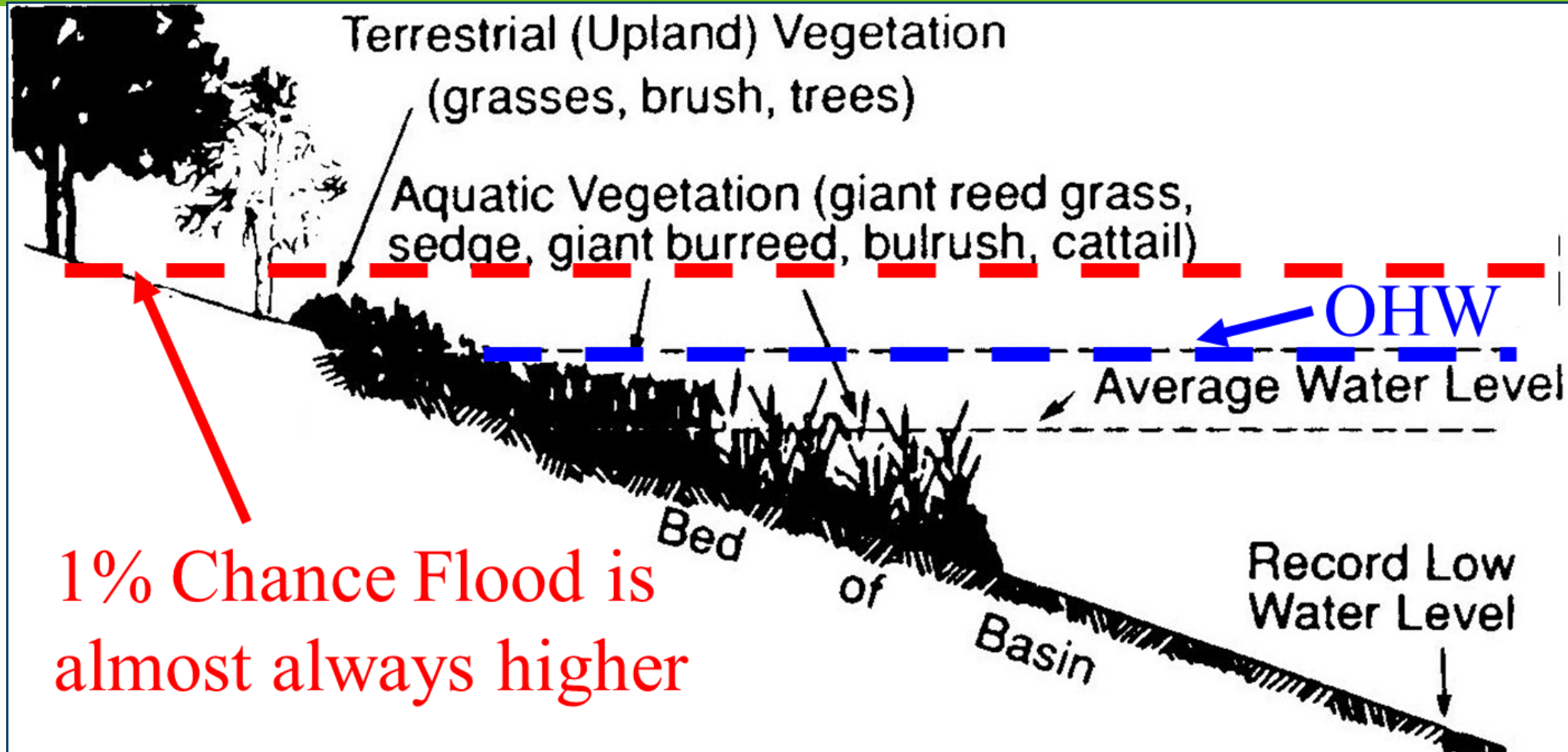
Letter of Map
Amendment (LOMA)

Letter of Map Revision
based on Fill (LOMR-F)



How Do I Find the Base Flood Elevation (BFE)?
(aka “100-year” or 1% annual chance flood elevation)

Location of 1% annual chance flood (100-year) line



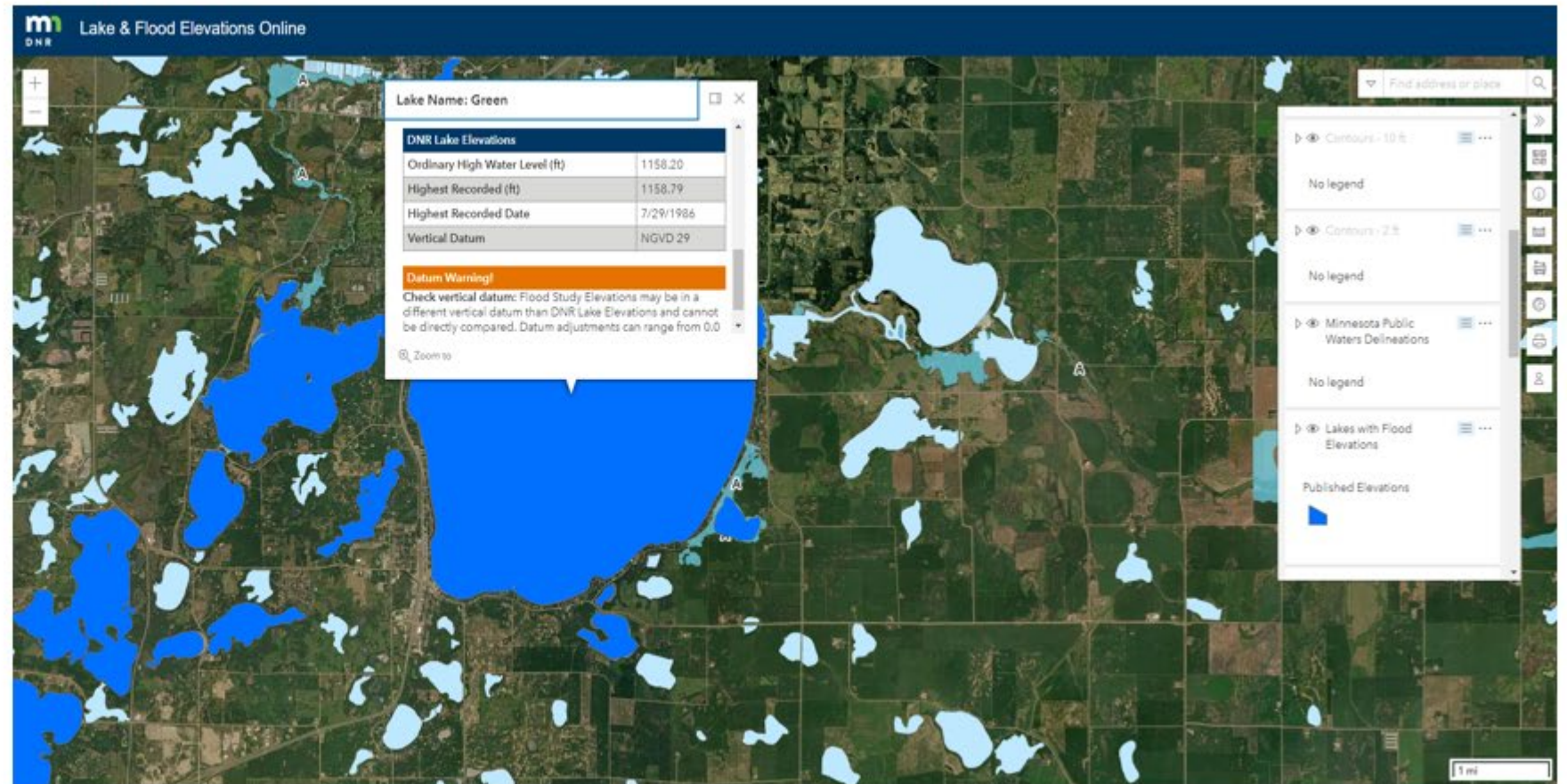
What is the Flood Elevation (1% annual chance or Base Flood Elevation – BFE) at my site?

Online resources:

- Community Flood Insurance Study (FIS) if detailed study
- DNR's LFEO site for many lakes and many watercourses

[Lake & Flood Elevations Online \(LFEO\) Map Application](#)

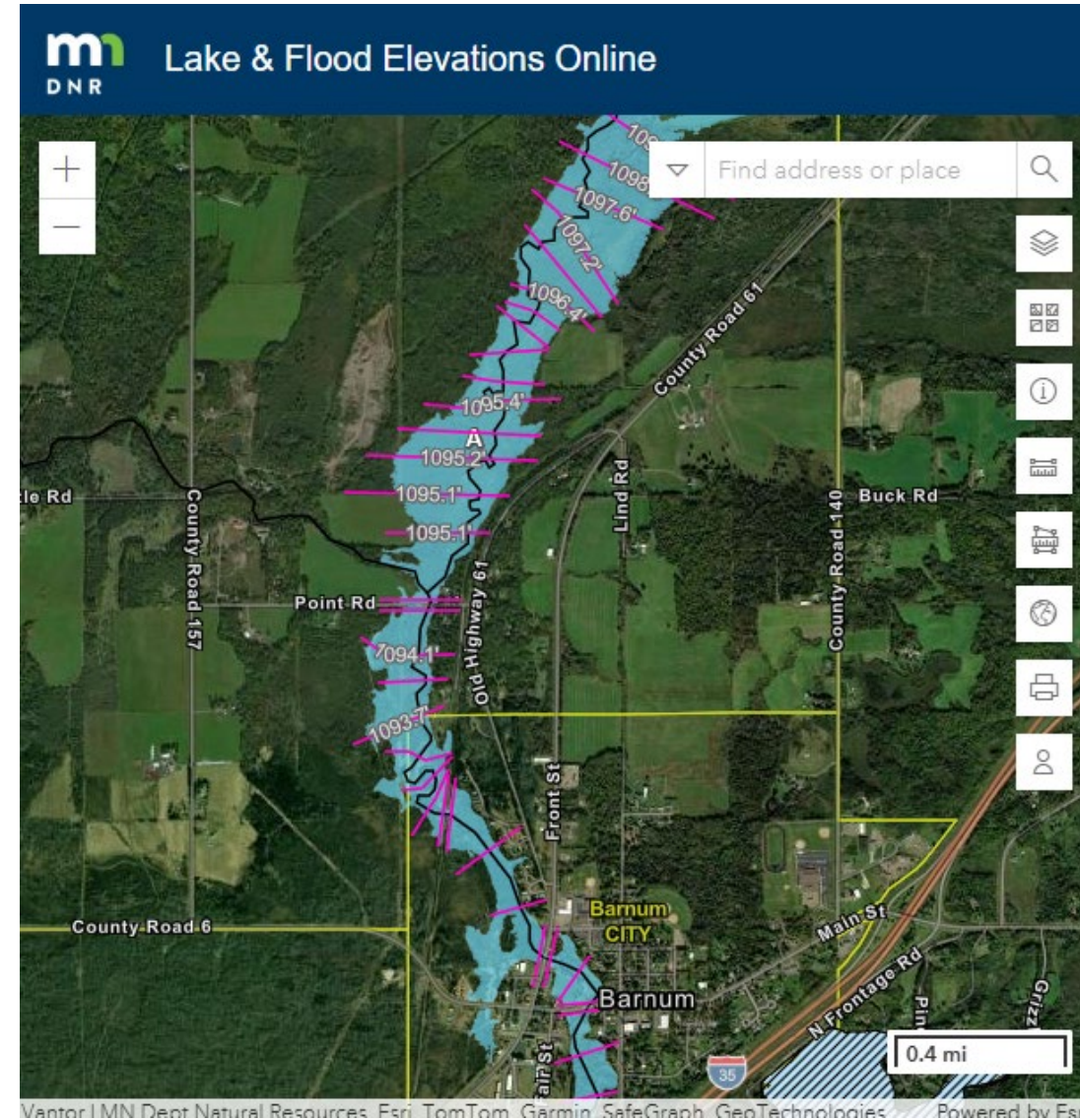
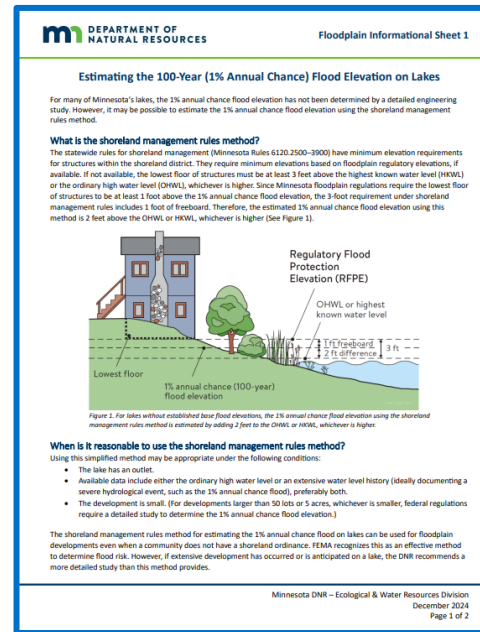
[Lake & Flood Elevations Online \(LFEO\) Map Application](#)



What is the Flood Elevation (1% annual chance or Base Flood Elevation – BFE) at my site?

Online resources:

- DNR's LFEO site for many lakes and many watercourses
- [Estimating the 100-Year \(1% Annual Chance\) Flood Elevation on Lakes](#)
- DNR working on Finding BFEs series of videos
 - ✓ Type of FEMA floodplain
 - ✓ BFEs for Detailed Study Lakes
 - ✓ BFEs for Detailed Study watercourses
 - ✓ BFEs for Approximate Study Lakes
 - ✓ BFEs for Approximate Study Watercourses



What Am I Allowed to do in the Floodplain?

What Am I Allowed to do in the Floodplain?

- Local governments have floodplain ordinances that meet state and federal minimum requirements
- Permitted activities based on type of flood zone (floodway, flood fringe or general floodplain districts)
- Minnesota communities in National Flood Insurance Program (NFIP)
 - [FEMA community status book for Minnesota communities](#)
- DNR assists local governments with questions
 - Citizen → Local Government → DNR → FEMA

Basic Floodplain Information Sheets

There are DNR information sheets for these activities to help citizens and local officials:

- [Floodplains and Floodplain Management](#) (what's floodplain, floodway versus flood fringe, etc.)
- [Residential Uses and Standards in the Floodplain](#)
- [Basements and Lowest Floors in the Flood Fringe of the Floodplain](#)

m3 DEPARTMENT OF NATURAL RESOURCES Floodplain Information Sheet 3

Residential Uses and Standards in the Floodplain

The floodplain is a higher risk area. If possible, build outside the floodplain with your lowest floor (including basement) above the Regulatory Flood Protection Elevation (RFPE). This reduces your risk of flooding, and you will not be required to buy flood insurance. If you must build in the floodplain, work with your community to ensure that all local regulations are addressed in your proposed building plan. These regulations can be very restrictive.

To determine what can be done on property in the floodplain, two key questions must be answered:

1. **Is the property in the floodway or flood fringe?** The types of development that are allowed as permitted or conditional uses depend on whether the property is in the floodway or flood fringe. Only limited uses are allowed in the floodway, whereas most land uses are allowed in the flood fringe if local floodplain standards are applied. (See [Floodplain Information Sheet 2, "What are the Floodway and Flood Fringe?"](#))
2. **What uses are allowed by the local zoning authority (i.e., city, township, or county)?** The standards discussed below are based on state and federal minimum standards. Your community may have more restrictive building standards than the state and federal minimums.

What uses are allowed in the floodway and flood fringe of the floodplain?

Floodway uses

- Open space uses, such as gardens, farming, parks, trails, parking lots, and golf courses may be allowed depending on your zoning district. Limited grading and earth-moving may also be allowed - with a permit - if it does not create an obstruction or cause any increase in flood levels.
- While new structures, additions to existing structures, and substantial improvements to existing structures are prohibited, most reworking uses are allowed. A nonconforming use is a structure your community's first Federal Emergency Management Agency (FEMA) Floodplain map called "grandfathered." Nonconforming uses in the floodway have the following conditions:
 - o A structure may continue to be used, repaired, and maintained, but no additional substantial damage. If a structure is damaged by any source by 50% or more, then the structure may not be reconstructed in the floodway.

Flood fringe uses

- The use must be allowed by the underlying zoning of the community.
- New structures and additions to existing structures must be properly elevated on fill.

Figure 1. A property elevated residential building in the flood fringe.

Figure 2. A property with a basement in the flood fringe.

Minnesota DNR - Ecological and Water Resources Division

Floodplains and Floodplain Management

What are floodplains?

Floodplains are areas susceptible to flooding that are adjacent to rivers, streams, and lakes. In the areas, the floodplain can extend more than a mile from the flooding source. Floodplains can also be the normally dry areas adjacent to wetlands, small ponds, or other low areas that cannot drain as quickly as the rain falls. A smaller area might be covered by floods every other year, on average (50 percent chance or 2-year floodplains), but a larger area will be covered by the flood that has a 2-percent chance of happening in a given year (the 100-year flood). The 1-percent chance (or 100-year) flood is the standard for Minnesota and federal minimum regulations. There is a 1-percent chance of this flood level being equaled or exceeded in any given year. The 100-year floodplain is the land adjoining lakes and rivers that would be covered by the 1-percent chance (or 100-year) flood.

Along large rivers, like the Mississippi River or Red River of the North, floodplains usually are flooded during spring after heavy snow seasons. On these and other floodplains, flooding can also result from intense rains. In fact, climatologists have seen a trend toward a greater percentage of the total annual precipitation coming during the intense rains that can cause flooding. In areas with small streams or ponds, flooding can occur within hours of the intense rain. On the larger rivers and lakes, there may be days of warning.

How are floodplains managed?

Local units of government identify permitted land uses through zoning regulations. Floodplain management regulations are also administered by local zoning authorities. If you want information about permitted land uses on a floodplain within the municipal boundary, check with your city zoning authority. If you are in a rural area, check with your county zoning office. DNR, Waters and Federal Emergency Management Agency (FEMA) staff may assist local officials, especially on complicated issues, but the permitting decisions are made locally.

If your community has a FEMA Flood Insurance Rate Map (FIRM) that shows flood-prone areas, your community should have enrolled in the National Flood Insurance Program (NFIP) and adopted zoning regulations to

Page 1 of 2

m3 DEPARTMENT OF NATURAL RESOURCES Floodplain Information Sheet 4

Basements and Lowest Floors in the Flood Fringe of the Floodplain

Development in the floodplain is regulated by the local zoning authority. Within the flood fringe, structures (i.e., buildings) must be designed, permitted, and built to meet the minimum elevation requirements for the "lowest floor." The lowest floor is the walking surface of the lowest enclosed area and includes basements and crawlspaces, where present. This information sheet provides a summary of the lowest floor standards for several common building types.

Lowest floor minimum requirements

New buildings are not allowed in the floodway but may be permitted in the flood fringe. When in the flood fringe, the top of the building's lowest floor must be elevated to or above the Regulatory Flood Protection Elevation (RFPE). After construction, the as-built elevation of the lowest floor must be certified by a professional engineer, surveyor or other qualified individual. These lowest floor requirements apply to all enclosed building spaces, including those that are not habitable, are unfinished or have low ceiling heights. To learn more about the RFPE, see the info box on Page 3.

Elevating the lowest floor on fill is a permitted use in the flood fringe. Examples are highlighted in Figures 1 and 2.

Figure 1. Top of finished first floor surface is lowest floor. A concrete walk on grade is permitted for a new house in the flood fringe if the top of the lowest floor is at or above the RFPE.

Figure 2. Top of basement or subgrade crawl space is lowest floor. This space is not permitted for a new house in the flood fringe because the basement or subgrade crawl space is the lowest floor and is below the RFPE.

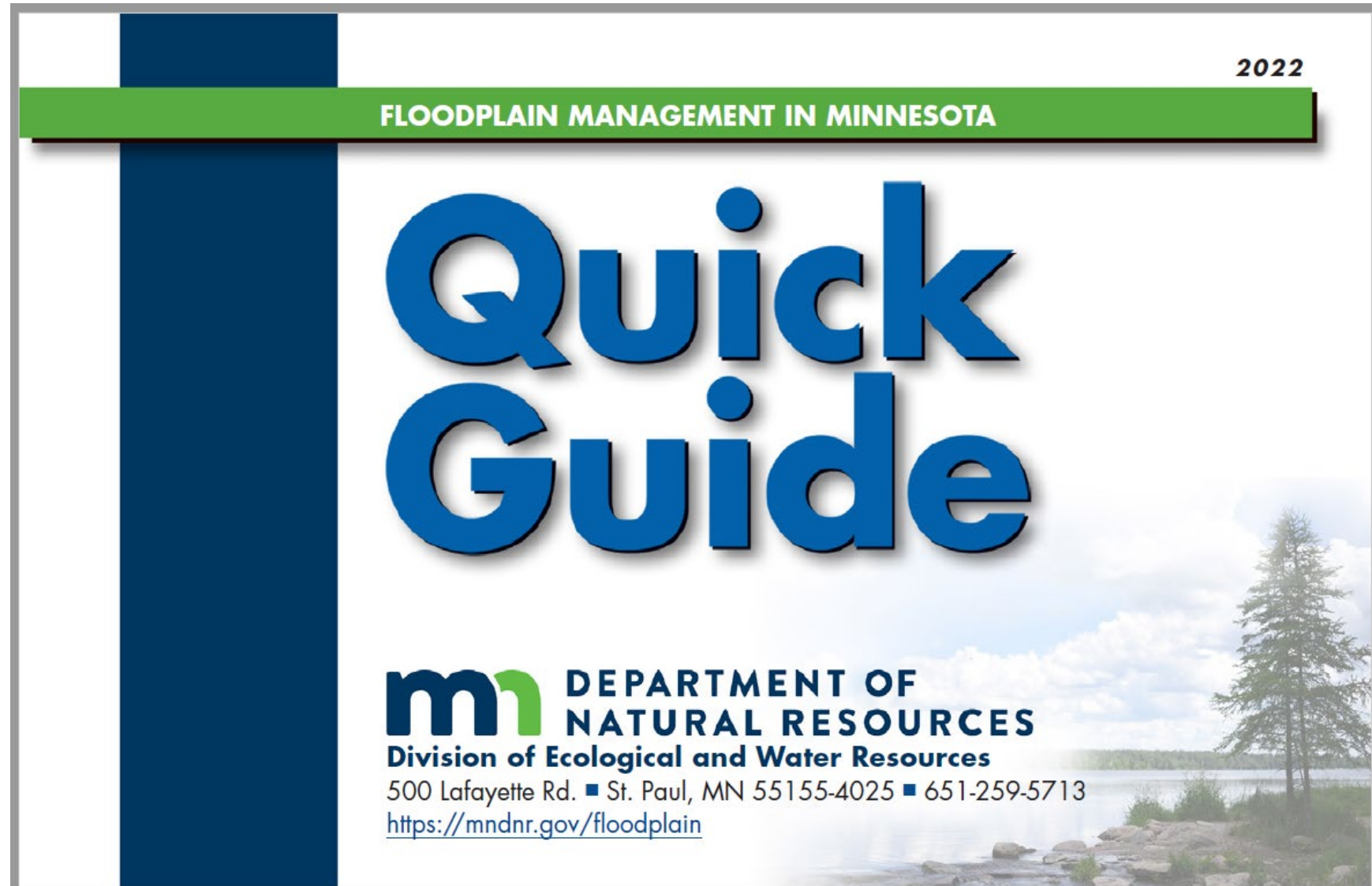
What is the flood fringe?

The flood fringe is that part of regulatory floodplain lying outside of the floodway, as shown on the Flood Insurance Rate Map (FIRM). This area is generally covered by shallow, slow-moving flood waters. Floodplains where the FIRM does not show the floodway and flood fringe must be treated as all floodway until a permit applicant has provided certain engineering information to verify a proposed building site is outside of the floodway. In some cases, an area may be considered flood fringe without engineering information if the community approves use of "standard engineering practices," which should also be approved by the DNR. Examples of standard engineering practices include sites that are obvious backwater areas, ineffective flow areas near bridge and culvert crossings, and using the Ordinary High Water Level (OHWL) on lakes and wetlands to mark the floodway boundary.

Minnesota DNR - Ecological and Water Resources Division
March 2026
Page 1 of 4

2022 Minnesota Floodplain Management Quick Guide

Answers to many
common questions
are in our
[Floodplain
Management Quick
Guide](#)



Contacts for local governments

- [DNR's county-by-county water-related permit contacts webpage](#) provides local, state, and federal contacts by county
- [MPCA's Metro Watershed Management Organizations webpage](#) provides links to Metro watershed organization websites and a link to the [Twin Cities Metro Area Watersheds interactive map](#)
 - Type in an address to figure out which watershed an address is located in
- City and County websites – staff directory

https://www.dnr.state.mn.us/permits/water/water_permit_contacts.html

The screenshot shows the Minnesota Department of Natural Resources (DNR) website. The header includes the DNR 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 corner. The main content area is titled 'Water-related Program Contacts' and includes a paragraph explaining that projects impacting Minnesota's water resources are regulated by various agencies. A dropdown menu labeled 'Choose a county:' is visible on the right side of the page. The left sidebar contains a list of links: Water permits, Main page, Do I need a permit?, Permitting and reporting system, Water-related program contacts (highlighted), Water appropriations permits, Public waters work permits, Lake aeration permits, Dam safety permits, Aquatic plant management permits, Fisheries permits, and Water Statutes and Rules.

Questions?

Tentative Upcoming LGU Forum Topics

Future dates (usually 3rd Wed):

- May 20, 2026 – Natural Streams and Less Impactful Crossings (working title)

Some topics in the works for winter/spring 2026:

- June 17, 2026 (tentative) Green Infrastructure
- July 15, 2026 (tentative) MN Versus Other States' Standards: Campgrounds & Evacuation Plans; Other higher standards
- Dealing with violations – LGU examples; intro to FEMA's National Violation Tracker
- Riprap
- Hazard Mitigation Planning
- Annual (based on poll): Riprap BMPs, Dealing with Violations, Bridge & Culvert Crossings

Since 2023 - LGU Page



Home > Ecological and Water Resources > Water Management >

Ecological and Water Resources Division

Climatology

Dam Safety

Ecological Resources

Environmental review

Floodplain management

Groundwater

Invasive species

Minnesota Biological
Survey

Nongame wildlife
program

Scientific & natural areas

Water Permits

Water resources

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).

“Secret” LGU page only
through [direct link](#).



2026 forums

[Click here to join scheduled meeting »](#)

- Jan. 21 | Topic: Statewide Clean Water Projects - [Agenda \(PDF\)](#)

Past forums

[Expand all sections](#)

— 2025 forums

- Jan. 15 | Topic: Bridge and Culvert Crossings: BMPs and Case Studies. - [Agenda \(PDF\)](#) | [Presentations \(PDF\)](#)
- Feb. 19 | Canceled
- March 19 | Topic: Public Waters Inventory History and Update - [Agenda \(PDF\)](#) | [Presentations \(PDF\)](#)
- April 16 | Shoreland Activity Survey: Riprap Results and Discussion - [Agenda \(PDF\)](#) | [Presentations \(PDF\)](#)
- May 14 | Topic: Utilities and Utility Crossings - [Agenda \(PDF\)](#) | [Presentations \(PDF\)](#)
- June 18 | Topic: Useful GIS/web-based tools you may not know about - [Agenda \(PDF\)](#) | [Resources \(PDF\)](#) | [Presentations \(PDF\)](#)
- July 16 | Topic: Flood Hazard Mitigation Grant Program and Community Success Stories - [Agenda \(PDF\)](#) | [Presentations \(PDF\)](#)
- Aug. 20 | Topic: Native Vegetation and Pollinators - [Recorded forum](#) | [Agenda \(PDF\)](#) | [Presentations \(PDF\)](#) | [Resources \(PDF\)](#) | [Carlton SWCD root systems and shoreline graphic \(PDF\)](#)
- Sept. 17 | Topic: Watershed Storage Options - [Agenda \(PDF\)](#) | [Presentations \(PDF\)](#)
- Oct. 8 | Topic: New and Future Floodplain Standards and Modeling | [Agenda \(PDF\)](#) | [Presentations \(PDF\)](#) | [Recorded Atlas 15](#) | [Recorded ASCE 24-24](#)
- Nov. 19 | CANCELED
- Dec. 17 | Topic: The Future of Flood Risk Mapping - [Agenda \(PDF\)](#) | [Presentations \(PDF\)](#)

+ 2024 forums

+ 2023 forums

Education & Training Web Updates

Separate pages for:

- Shoreland Training
- Floodplain Training
- Other Land Use Training
- Water Talk Newsletter
 - Past issues

[Link to Shoreland & Floodplain Educations and Training page](#)



Done for Winter series.
This is where to look for
future trainings.

Shoreland and Floodplain Education and Training Center

Register now for upcoming live trainings! October 2025 - March 2026

Register now for Shoreland and Floodplain Education and Training sessions. [View the course list »](#)



Shoreland and river-related training

Trainings in a variety of formats on various shoreland and river-related topics. Training content is generally applicable to local government administration of the Shoreland, Wild and Scenic Rivers, Lower St. Croix Riverway, and Mississippi River Corridor Critical Area programs. [Learn more »](#)



Floodplain training

Trainings on different floodplain topics are available in a variety of formats. Includes educational materials for local officials, professionals working with floodplain areas, and interested citizens/residents, as well as links to trainings and educational materials by partners, including MN Association of Floodplain Managers (MnAFPM) and FEMA. [Learn more »](#)



Other land use training

Training in a variety of topics related to shoreland and floodplain administration. [Learn more »](#)



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 »](#)

Floodplain Trainings Page

Recorded Virtual trainings:

- One-hour trainings Jan to April 2025 recordings available (and several from 2024, 2023 and 2022 that have not been repeated)
- LGU forum topics Atlas 15 and ASCE 24-24 - and 12/2025 Floodplain Basics and Floodplain Adm 101 - videos now on Floodplain Training page
- 7 other recent trainings to be online in next 1-2 weeks

Monthly Office Hours:

DNR/FEMA 10-11 am – 4th Thu (link on web site, in past Water Talk issues & in monthly LGU email updates)

- April 23, 2026
- May 28, 2026

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. A search bar is located in the top right. The main content area is titled "Floodplain Training and Education" and includes a sidebar with links to Floodplain Management, Regulations, Maps and Technical Resources, Flood Insurance, Preparation, Response and Recovery, Training and Education, Flood Hazard Mitigation, and Floodplain Management History. The main content features a "Water Talk Newsletter" section with a photo of a flooded area and a "Monthly Virtual Floodplain Management Office Hours" section with a list of upcoming office hours: 10-11 a.m. Friday, Oct. 28, 2022; 10-11 a.m. Wednesday, Nov. 23, 2022; and 10-11 a.m. Thursday, Dec. 22, 2022. There is also a "Recorded Training Courses" section with a photo of a house and a description of the "Floodplain Management Basics" course, and a "FEMA Map Basics" section with a photo of a map.

Thanks for Attending!

See you May 20th for:

Natural Streams and Less Impactful Crossings

(focus on stream stability, aquatic organism passage & crossings meeting geomorphic designs)



Questions?