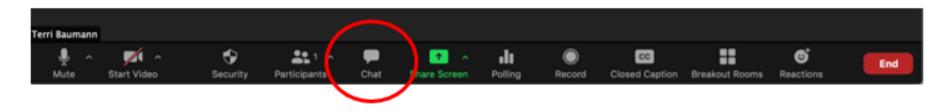
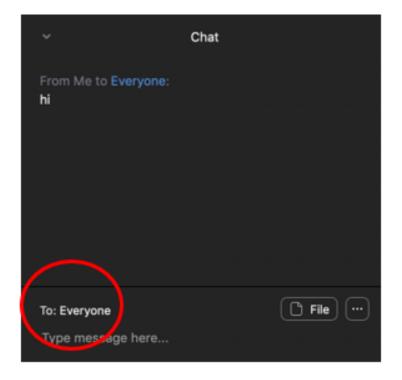


How to Zoom Chat





Floodplain Mapping Update: City of Three Forks





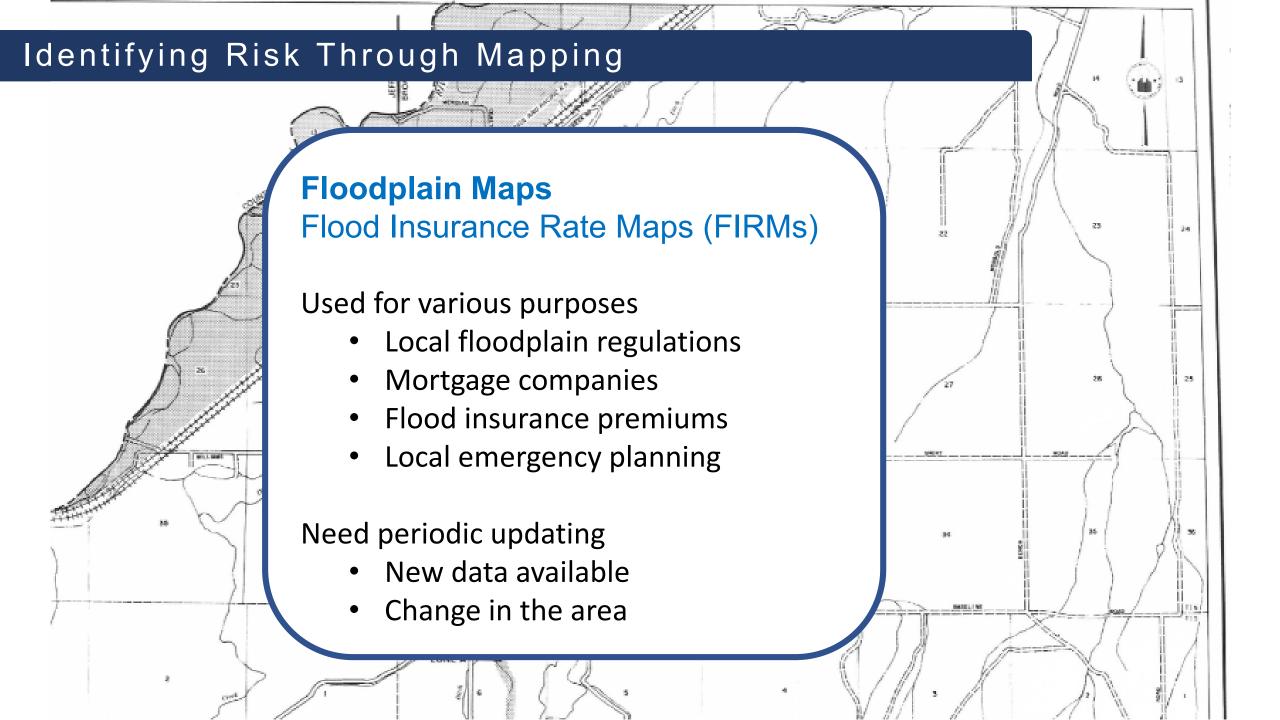
Floodplain Mapping Update: City of Three Forks Open House

January 6, 2021



Identifying Risk Through Mapping





City of Three Forks Floodplain Maps

- 1975 Flood Hazard Boundary Maps (by HUD)
- 1980 Initial study conducted FEMA FIRMs issued
- 2004- Small detailed study conducted
- 2011- Study from 2004 included in Gallatin County digitization

1975

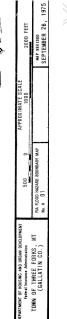
COMPORATE LIMITS

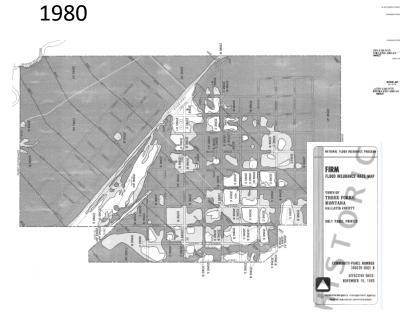
TONE A

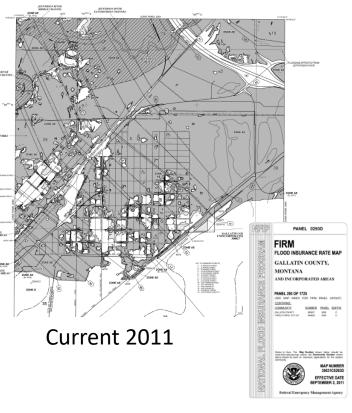
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TONE A

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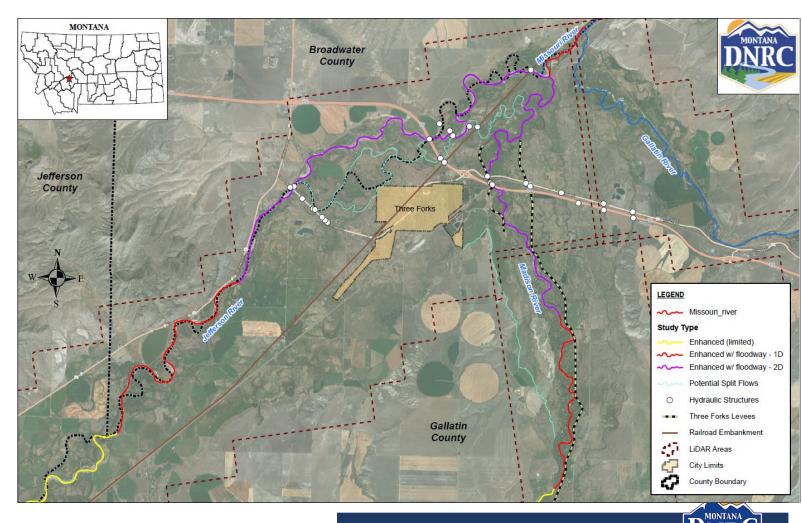






Gallatin County Madison County LEGEND Enhanced w/ floodway - 2D Hydraulic Structures Hydraulic Structures LiDAR Aquisition County Boundary FIGURE 1: Madison-Jefferson Watershed Study Extents Project: Madison-Jefferson Watershed Phase II Drawn By: NLD DATE: Checked By: SES June 2018

Flood study



Project Partners

Gallatin County



Three Forks



Madison County



Ennis



Sheridan



Twin Bridges



Jefferson County



Broadwater County



Federal Emergency Management Agency



Montana Department of Natural Resources and Conservation







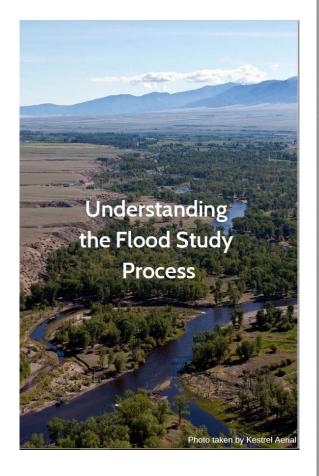












Flood Study Steps

Step 1 - Survey: measurements are made of the topography around the river, along with any culverts, bridges, and road crossings. LiDAR uses an airplane to collect ground elevation over a large area, and ground survey supplements the airborne data.

Limit Of Study

Step 2 - Hydrology: determines how much water there will be in the river during a flood event. Data from stream gages will tell how many cubic feet of water per second the river will carry during the flood.

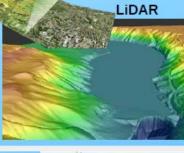
Step 3 - Hydraulics: once the first two steps are complete, calculations can show where the water will go during the flood. The elevation data is combined with the flood flow data to determine where the water will go when it overflows the channel.

Step 4 - Mapping (delineation): the results from step 3 are combined with the elevation data and official maps to see how far the water will spread out. The area shown to be underwater during the flood is the regulatory floodplain.

Step 1 - Survey: The type of the survey depends on the size of the study area and type of study.









Step 2 - Hydrology:

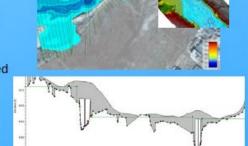
Stream gage stations are an important tool to determine flow rates. If nearby stream gages aren't available, gage data from a similar location is used to determine the flow rate.



Step 3 - Hydraulics:

5 main components to the model

- 1) Hydrology (stream flow data)
- 2) Cross Sections (measurements of the river bottom at key locations)
- 3) Roughness (thickness of vegetation, land cover, etc determined by surveyors)
- 4) Structures (road crossings, culverts, bridges, etc.)
- 5) Downstream conditions



Step 4 - Mapping (delineation):

The result will be the floodplain boundary and a depth grid identifying the shallower and deeper areas of flooding.

Tentative Project Schedule









Project Timeline

Madison, Ruby, & Jefferson Watershed Floodplain Maps Update

Completed in 2019	Summer 2020	Fall 2020 (est.)	2021 (est.)	2022 (est.)
Measurements are made of the topography around the river, along with any culverts, bridges, and road crossings. LiDAR uses an airplane to collect ground elevation over a large area, and ground survey supplements the airborne data. Flood flow data determines how much water there will be in a river during a flood event.	The elevation and survey data are combined with the flood flow data to determine where the water will go when it overflows the channel and how far it will spread out. The area shown to be underwater and at high risk is mapped as the regulatory floodplain.	Draft data is delivered to the communities. Public open houses will be conducted for landowners to review the information.	FEMA Preliminary Maps are produced and ready for public review and comment period. A second public open house is usually conducted to review the information. 90-day official comment & appeal period held.	FEMA Flood Insurance Rate Maps finalized.
Data gathering	Engineering and floodplain modeling	Draft Data available public review	Preliminary Data public comment and appeal period	Flood Insurance Rate Maps become effective
Flood Study Conducted 4 steps of a flood study. 1) Survey & LiDAR 3) Hydraulics (engineering) 2) Hydrology (flood flow) 4) Mapping (delineation)		Public Review 2 public open houses are usually held during this time. Once at draft map stage and again at preliminary map stage. During this time public comments are encouraged. There will be an official 90-day appeal period after the maps become preliminary.		Resiliency and Mitigation efforts Once new maps become effective the community can determine what mitigation efforts it would like to pursue to reduce flood risks

Project webpage

www.floodplain.mt.gov/madison

Madison-Ruby-Jefferson River Watersheds Flood Maps Update

by Nadene Wadsworth - last modified Nov 30, 2020 10:02 AM - History











Madison, Jefferson, Gallatin, and Broadwater Counties have been working with the Federal Emergency Management Agency (FEMA) and Montana Department of Natural Resources and Conservation (DNRC) to produce new floodplain maps for portions of the Madison, Ruby, Jefferson, Beaverhead and South Boulder Rivers, and Mill and Indian Creeks.

See project extents here.

Updated floodplain maps will depict the latest, most accurate flood risk data, and will eventually result in updated FEMA floodplain maps. Most of the existing FEMA floodplain maps and Madison County flood prone maps are based on data from the 1980s and 1990s.

To understand what goes into a new floodplain study click here.

View Draft Data

New floodplain maps from this project are not expected to be finalized for a while – draft maps will be available to start reviewing in late 2020, but the study and maps will need to go through a lengthy technical and public review process before they can be finalized. When finalized, new maps could have effects on some property owners in the mapped 100-year floodplains.

New floodplain studies involve collecting and analyzing data, including: topography, hydrology analyses and hydraulic

Draft Map Viewer

You can also view individual draft maps here:

View draft floodplain maps

Get more information on floodplain designations referenced on the maps, community meetings, and important information:

- ▼ Gallatin County and the City of Three Forks (Updated Meeting information as of 11/16/2020) [Show/Hide]
 - 100-Year Floodplain (1% Annual Chance Flood)
 - Floodway Area (within a 100-Year Floodplain)
 - 500 Year Floodplain

Meeting information:

- December 2, 2020 at 6pm Public open house meeting. To register for the virtual meeting please click here.
- January 6, 2021 Three Forks draft floodplain map public open house event. Please check back for more information on how to register for this event.
- . City of Three Forks elected officials meeting held November 10, 2020. To view the slides presented click here.

More Info

Maps and Technical Reports

Madison County

Alex Hogle

Floodplain Administrator/Planning Director (406) 843-5250

email

Town of Ennis Town of Twin Bridges

Jonathan Weaver Floodplain Administrator (406) 449-8627

email

Town of Sheridan

Bob Stump

Mayor/Floodplain Administrator (406) 842-5431

Gallatin County

Sean O'Callaghan Floodplain Administrator

(406) 582-3130

email

City of Three Forks

Kelly Smith

Floodplain Administrator (406) 285-3431

email

Jefferson County Megan Bullock

Floodplain Administrator (406) 225-4126

email

Broadwater County

Shawn Higley

Floodplain Administrator (406) 443-3962

email

DNRC Contacts

Nadene Wadsworth

DNRC Outreach Specialist (406) 444-6732



Jefferson River Watershed Hydrologic Analysis Gallatin and Madison Counties, MT

July 2018



Michael Baker



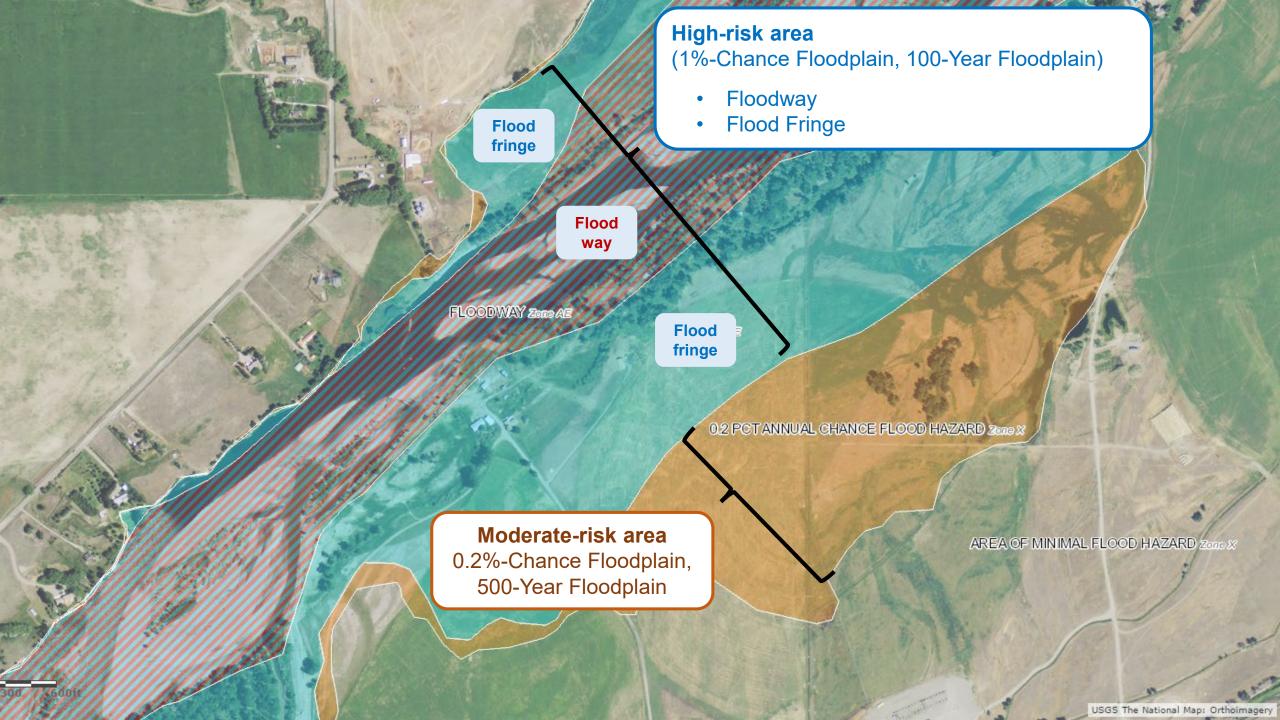
Three Forks

Enhanced Hydraulic Analysis and Floodplain Mapping Report Gallatin County, MT

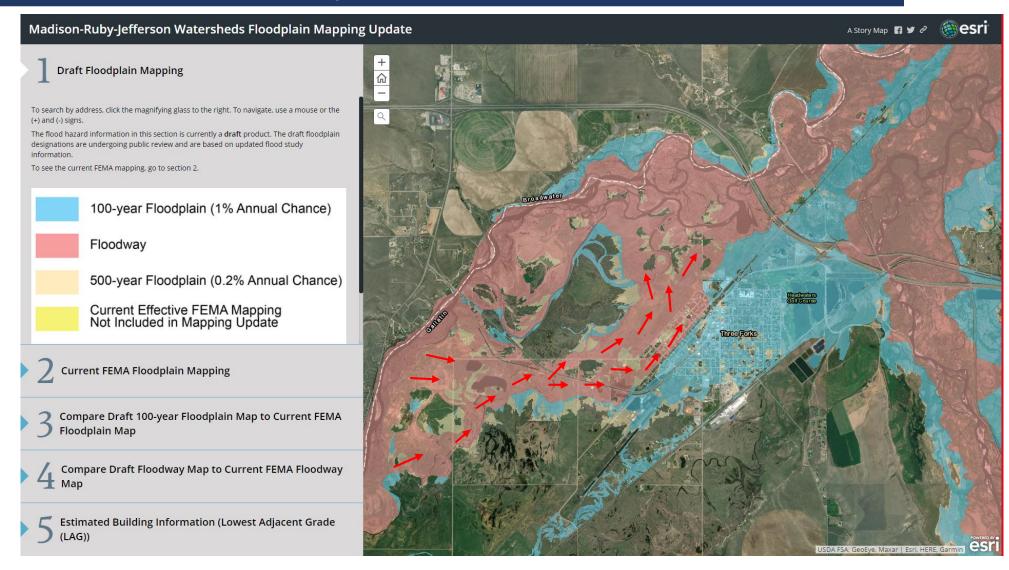
June 2020

Michael Baker

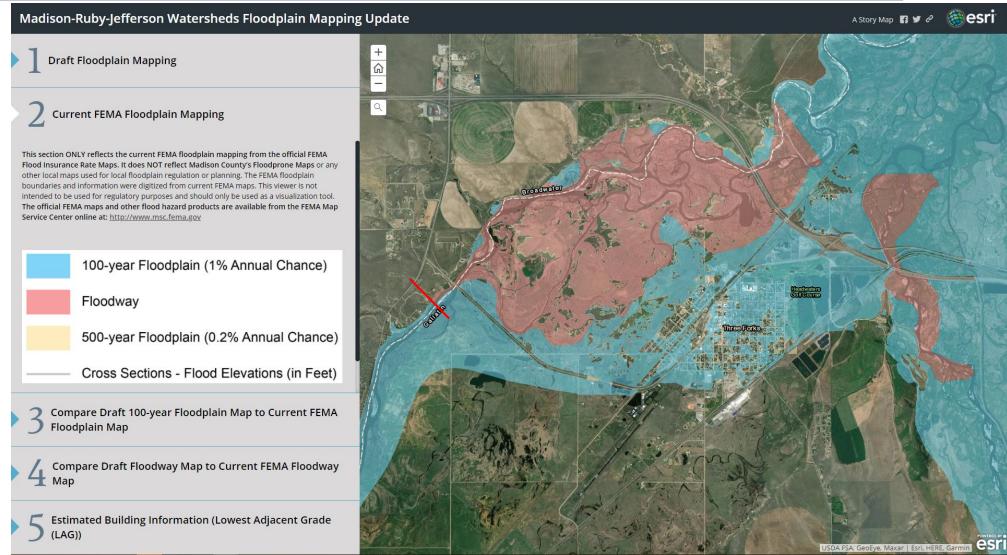




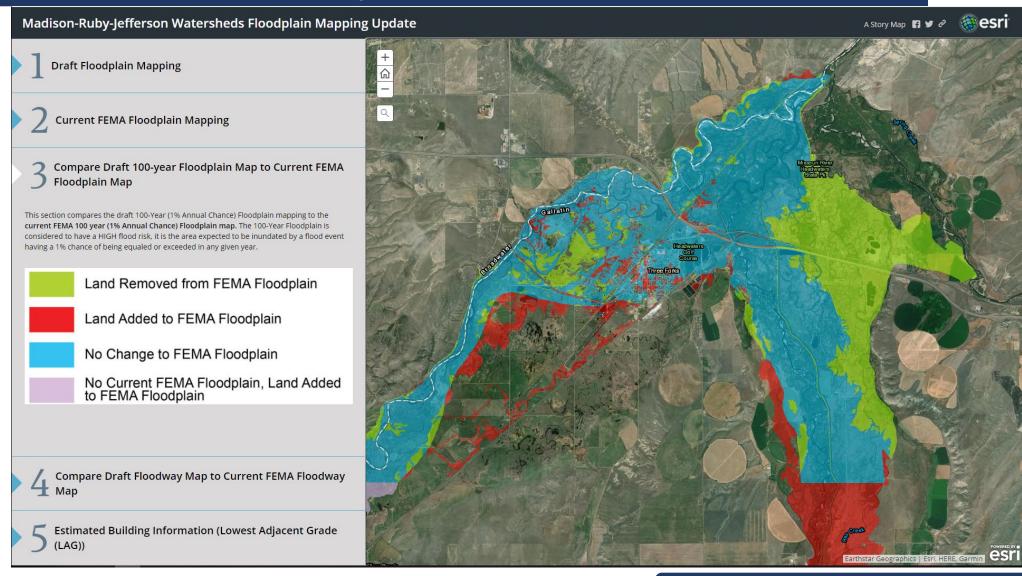
Map Viewer-Draft Floodplain



Map Viewer-Draft Floodplain



Map Viewer-Draft Floodplain



What about Elevation Certificates or Map Amendments?



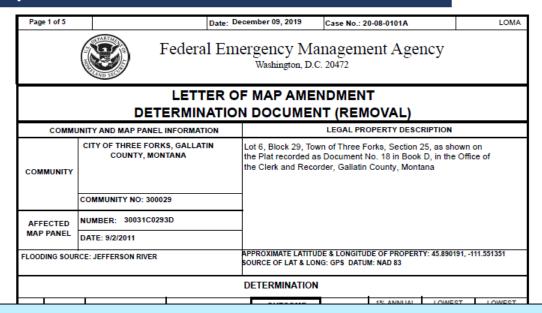
Letter of Map Amendment (LOMA)

is for when a flood map shows a building in the floodplain but it is actually on natural ground above the base flood elevation.



Lowest Adjacent Grade (LAG) is

the lowest point where the ground touches the building.



Existing Letter of Map Amendments:

- ✓ will be reviewed
- ✓ will be revalidated if building elevation is still above new proposed flood elevation



Public Outreach Materials

MADISON, RUBY, JEFFERSON RIVERS FLOOD MAP UPDATES

www.floodplain.mt.gov/madison

Owning property in a 100-YEAR FLOODPLAIN

A 100-YEAR FLOODPLAIN (1% Annual Chance Floodplain) is considered to have a HIGH flood risk. It is the area that is expected to be inundated by a 100-Year Flood, an event having a 1% chance of being equaled or exceeded in any given year. The 100-Year Flood is also referred to as a 1% Annual Chance Flood or a Base Flood.

DEVELOPMENT REGULATIONS

Gallatin County and the City of Three Forks require Floodplain Development Permits for development in the 100-Year Floodplain (1% Annual Chance Floodplain) to protect human life and property.

- New building construction must obtain a Floodplain Development Permit.
- New residential construction must be elevated 2 feet above the 100-Year Flood Elevation (Base Flood Elevation).
- Improvements to existing structures must obtain a Floodplain Development Permit. Improvements to
 an existing structure greater than 50% of structure's market value (a Substantial Improvement)
 require the entire structure to be brought into compliance with floodplain regulations.
- Other federal, state, and local regulations may apply.

Draft floodplain maps are going through review and are not yet effective. It is important to discuss your community's floodplain regulations with County, Town staff to understand the impacts of flood map updates on proposed construction projects in a mapped floodplain.

INSURANCE REQUIREMENT

If you own a building in an area that will be newly mapped into a 100-Year Floodplain, contact your insurance agent or lender as early as possible to start the discussion about flood insurance.

Lenders will typically reevaluate their loans to reassess flood risk when a new flood map or revision goes effective. When this happens, your lender will

require you to carry flood insurance if you own a building that is located in a mapped 100-Year Floodplain, unless you can prove that the building is above the flood elevation or outside of the 100-Year Floodplain. Your lender may also require building elevation information (an Elevation Certificate) at this time.

There are many cost-saving options available to those who are being newly mapped into the 100-Year Floodplain. In order to secure the lowest premium, you should purchase flood insurance either before or within 11 months of a new flood map or revision going effective (expected 2022). Contact your insurance agent or lender as early as possible to find the best flood insurance option available to you—ask for a comparison of Newly Mapped rates, Grandfathered rates, etc.

Sean O'Callahan

Gallatin County Floodplain Administrator sean.ocallaghan@gallatin.mt.gov 406.582.3130



Kelly Smith City of Three Forks Floodplain Administrator ksmith@threeforksmontana.us 406.285.3431



Floodplain Regulations

Your lender will require you

you have a federally backed loan and your building is

MADISON, RUBY, JEFFERSON RIVERS FLOOD MAP UPDATES

www.floodplain.mt.gov/madiso

Owning property in a FLOODWAY

A FLOODWAY is the area within a 100-Year Floodplain that must be kept free from new development so that the 100-Year Flood (1% Annual Chance Flood, Base Flood) can be carried without substantial increases in flood heights. The Floodway will usually see the highest water velocities and deepest inundation during a 100-Year Flood event.

DEVELOPMENT REGULATIONS

Gallatin County and the City of Three Forks strictly regulate development in Floodways to protect human life and property by ensuring that there are no increases in flood elevations.

In accordance with each community's Floodplain Regulations:

- New building construction is not permitted in the Floodway.
- Improvement to existing structures in a Floodway must obtain a Floodplain Development Permit.

INSURANCE REQUIREMENT

If you own a building in an area that will be newly mapped into a 100-Year Floodplain (including Floodway), contact your insurance agent or lender as early as possible to start the discussion about flood insurance.

Lenders will typically reevaluate their loans to reassess flood risk when a new flood map or revision goes effective. When this happens, your lender will require you to carry flood insurance if you own a building that is located in a mapped 100-Year Floodplain, unless you can prove that the building is above the flood elevation or outside of the 100-Year Floodplain. Your lender may also require building elevation information (an Elevation Certificate) at this time.

There are many cost-saving options available to those who are being newly mapped into the 100-Year Floodplain (including Floodway). In order to secure the lowest premium, you should purchase flood insurance either before or within 11 months of a new flood map or revision going effective (estimated 2022). Contact your insurance agent or lender as soon as possible to find the best flood insurance option available to you—ask for a comparison of Newly Mapped rates, Grandfathered rates, etc.

Sean O'Callaghan

Gallatin County Floodplain Administrator sean.ocallaghan@gallatin.mt.gov 406.582.3130



City of Three Forks Floodplain Administrator ksmith@threeforksmontana.us 406.285.3431



Floodplain Regulations require a

floodplain permit for any man-

made development in the 100-Year Floodplain (including

Floodway).

Your lender will require you to

carry flood insurance if you

have a federally backed loan

and your building is located in a

mapped 100-Year Floodplain

MADISON, RUBY, JEFFERSON RIVERS FLOOD MAP UPDATES

www.floodplain.mt.gov/madison

Owning property in a 500-YEAR FLOODPLAIN

A 500-YEAR FLOODPLAIN (0.2% Annual Chance Floodplain) is considered to have a MODERATE flood risk. It is an area that is expected to be inundated by a 500-Year Flood, a flood event having a 0.2% chance of being equaled or exceeded in any given year. The 500-Year Flood is also referred to as a 0.2% Annual Chance Flood.

DEVELOPMENT REGULATIONS

Gallatin County, and the City of Three Forks do not regulate development in the 500-Year Floodplain (0.2% Annual Chance Floodplain) although flooding is still possible in this area.

New construction and building improvements may occur in the 500-Year Floodplain without a Floodplain Development Permit. Other federal, state, and local regulations may apply.

Unlike in a 100-Year Floodplain, a Floodplain Development Permit is no required for developmen in a 500-Year Floodplain.

If your property has areas of both 100-Year and 500-Year Floodplain, proposed projects may require a Floodplain Development Permit depending on exactly where the development will occur. It is important to discuss the location of any development with County, City or Town staff to understand the impacts of the community's floodplain regulations and flood map updates on proposed projects in or near a mapped

INSURANCE REQUIREMENT

If you own a building in a 500-Year Floodplain (0.2% Annual Chance Floodplain), you are considered to be at a moderate risk of flooding. It is therefore recommended that you purchase flood insurance even if your lender does not require you to do so in order to protect your investment.

Your lender can require flood insurance for a building they are financing regardless of where the building is located.

Lenders will typically review their loans to reassess flood risk when a new flood map or revision goes effective. When this happens, if your building is located in a 500-Year Floodplain, your lender might choose to require you to carry flood insurance and/or provide building elevation documentation (an Elevation Certificate) to prove your building is above the flood elevation.

Some property owners may not see any insurance changes with this mapping update. Talk to your lender or insurance agent early if you are considering purchasing flood insurance in order to find the best option for you.

Sean O'Callaghan Gallatin County Floodplain Administrator sean.ocallaghan@gallatin.mt.gov 406.582.3130



Kelly Smith
City of Three Forks Floodplain Administrator
ksmith@threeforksmontana.us
406.285.3431







FLOODPLAIN REGULATIONS

City of Three Forks has floodplain regulations that regulate development within the 100-year floodplain.

Floodplain permits are required for any manmade activities including construction and modifications to existing structures.

New construction and additions- elevated 2' Improvements and additions to existing structures ≤ 50% of building's value, will require the entire structure to be brought into compliance.



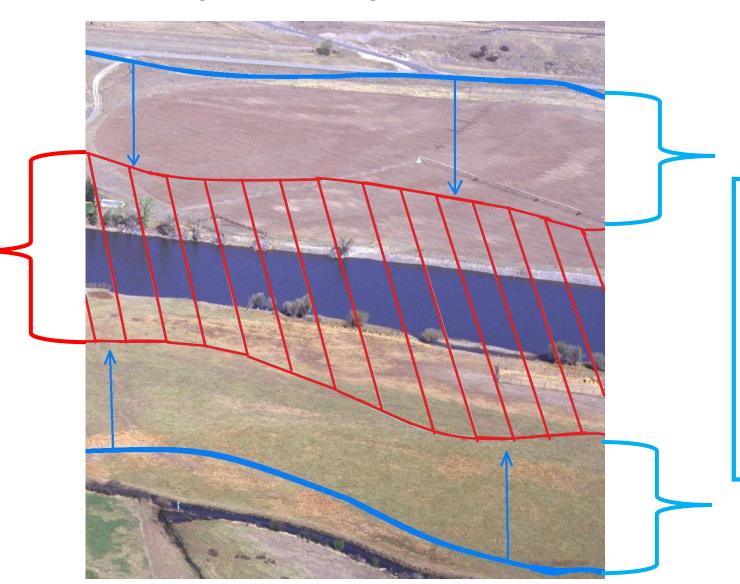


FLOODPLAIN REGULATIONS

Floodway vs 100-year floodplain

Floodway

The floodway is typically where the deepest and fastest moving waters are found. No new structures and limited development is allowed in a floodway.



100-year floodplain (flood fringe)

Development in this area is allowed but requires a floodplain permit prior to any construction.

FLOOD INSURANCE

Flood insurance is mandatory for buildings with a federally backed loan in a high-risk flood zone.

Flood insurance is not mandatory in a lower risk zone but is highly recommended.
Lenders can always require insurance in any zone.

Flood insurance is the best form of personal risk management and is an important form of economic protection against flooding.







PURCHASING FLOOD INSURANCE FOR NEWLY MAPPED BUILDINGS

During a Flood Insurance Rate Map update, draft floodplain maps may show that an area's risk of flooding will change. If draft floodplain maps show that a building is in an area being added to the existing 100-Year Floodplain (1% Annual Chance Floodplain), that building may be eligible for certain cost-saving insurance options when the new maps become effective due to the building's Newly Mapped status.

HOW DOES THE NEWLY MAPPED PROCEDURE WORK?

In order to relieve some of the financial burden associated with new flood insurance premiums, the Federal Emergency Management Agency (FEMA) offers cost-saving options for buildings newly mapped into a 100-Year Floodplain during a Flood Insurance Rate Map update or revision.

One cost-saving option FEMA offers for new flood insurance policies is the Newly Mapped procedure. When a building's flood insurance policy is under the Newly Mapped procedure, the policy will receive a subsidized insurance rate for the first 12 months following the Flood Insurance Rate Map update or revision. After the introductory year, the rate will begin to transition to a full-risk rate with annual rate increases of no more than 18% per year.

A policy under the Newly Mapped procedure will stay with the building even if there is a change in building ownership, use, or occupancy as long as federal flood insurance coverage is continuous. A building that loses eligibility for the Newly Mapped procedure either due to a gap in coverage or due to losses (i.e. too many claims) will be rated at its full-risk rate and, in most cases, will require an Elevation Certificate to be rated.

My building will be Newly Mapped into a 100-Year Floodplain. WHEN SHOULD I PURCHASE FLOOD INSURANCE?

Property owners who do not have flood insurance and find that their buildings are being newly mapped into a 100-Year Floodplain must purchase flood insurance within 11 months of the date that the new Flood Insurance Rate Maps become effective in order to be eligible for a policy under the Newly Mapped procedure.

Owners of newly mapped buildings are encouraged to purchase a flood insurance policy before the new Flood Insurance Rate Maps become effective. Not only is their risk higher than they thought (and potential flooding will not wait until the new maps become effective), but they also will be able to renew their policies at lower-cost rates during the first 12 months after the new maps become effective. In other words, they will gain almost an extra year at subsidized rates.

A lender must require flood insurance when a building carrying a federally backed loan is located in a mapped 100-Year Floodplain, unless it can be proven that the building is actually above the flood elevation or outside of the floodplain.

If you own a building in an area that will be newly mapped into a 100-Year Floodplain, contact your insurance agent as early as possible to start the discussion about the best flood insurance option for your building.

There are other cost-saving options for insurance policies on Newly Mapped buildings.

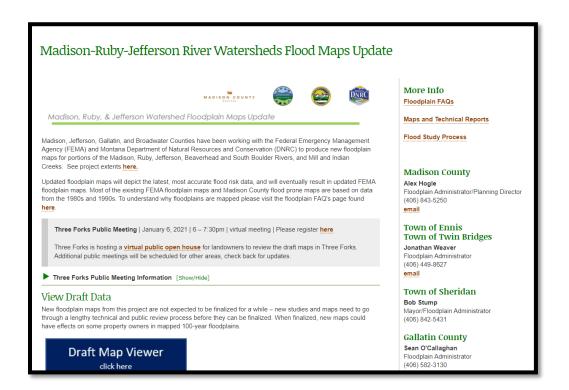
Always ask your insurance agent for a comparison of Newly Mapped rates, Grandfathered rates, etc.





Next steps

- Review draft maps and study information
- Provide feedback and other technical information



Madison Jefferson Floodplain Mapping Project Appeal and Comment Form

Appeal and Comment Form

We appreciate your review of the draft floodplain maps and study data for the Madison, Ruby, and Jefferson Watersheds project. Your review of the maps and study data is an important part of this process. Feedback submitted through this form may be used to help identify any:

- technical concerns with the data
- recent physical or topographic changes that may not have been incorporated

The draft floodplain maps were developed from study data and engineering standards. Supporting data and/or documentation is typically needed to affect draft mapping or study data results. If you have supporting documentation to accompany your description, please provide it directly to your community's floodplain administrator so it can be reviewed as part of this submittal. A more formal, official 90-day appeal period will be provided by FEMA when preliminary FEMA maps have been produced for this project (late 2021 or 2022).

Thank you for your early review and feedback at this time.

* Required



Website Tour

www.floodplain.mt.gov/madison





