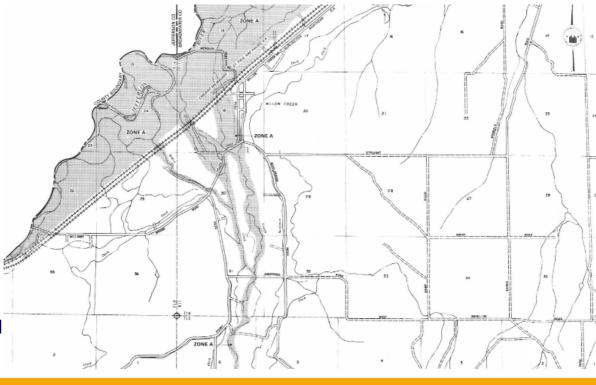




# **Agenda**

- Welcome & Introductions
- Meeting Overview
  - Review of Preliminary Maps
    - Changes from draft maps to preliminary maps
    - Review of Summary of Map Actions list
  - Review of FIS
    - Comments made by county
      - Incorporation into study
  - Flood study data
  - Affected landowners
    - notification
  - Review timeline and processes
    - Appeal period
  - Inclusion into mitigation planning
- Discussion
- Next Steps
  - Prepare for appeal period
  - Notification to affected landowners
  - DNRC provides templates to use for appeal period





# **Effective Jefferson and Madison River Maps**

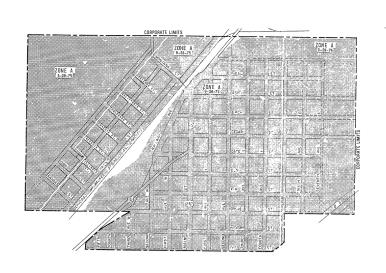
1975 Flood Hazard Boundary Maps (by HUD)

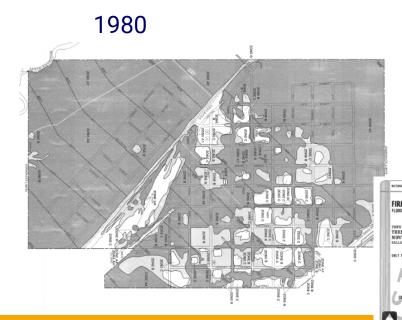
1980 – Initial study conducted FEMA FIRMs issued

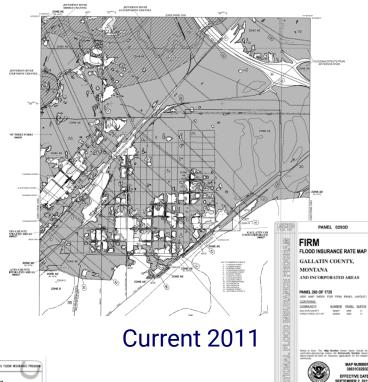
2004- Small detailed study conducted

2011- Study from 2004 included in

Gallatin County digitization







# **Flood Study**



#### GALLATIN COUNTY

311 West Main, Rm. 306 • Bozeman, MT 59715 commission@gallatin.mt.gov County Commission

Joe P. Skinner Steve White Donald F. Seifert

Phone (406) 582-3000 FAX (406) 582-3003

May, 23, 2018

Mr. Stephen Story Water Operations Bureau Chief MT DNRC PO Box 201601 1924 9th Avenue Helena MT 59620-1601

RE: Support for Grant Funding to complete Phase II of Jefferson and Madison River Floodplain Mapping projects

Dear Mr. Story,

Gallatin County supports DNRC's grant request to FEMA to complete Phase II of the Jefferson and Madison River floodplain mapping projects. We understand that Phase II would involve the necessary survey work, hydraulic engineering analyses, and production of updated floodplain maps.

In Gallatin County, the Jefferson River has a mix of approximate floodplain mapping, detailed floodplain mapping, and unmapped (undetermined flood risk - Zone D) areas. Jefferson County and Broadwater County have approximate mapping on the north side of the Jefferson River, directly across from our unmapped Zone D areas, creating inconsistency for landowners and floodplain administration. An updated flood study along the entire length of the Jefferson River would provide updated and consistent floodplain mapping for all counties and communities along the river.

The Madison River in Gallatin County is partially mapped as approximate, with a small section of detailed mapping near Three Forks. An updated flood study along the Madison River would provide landowners and our county with data to determine BFEs and floodplain boundaries for septic systems and building construction.

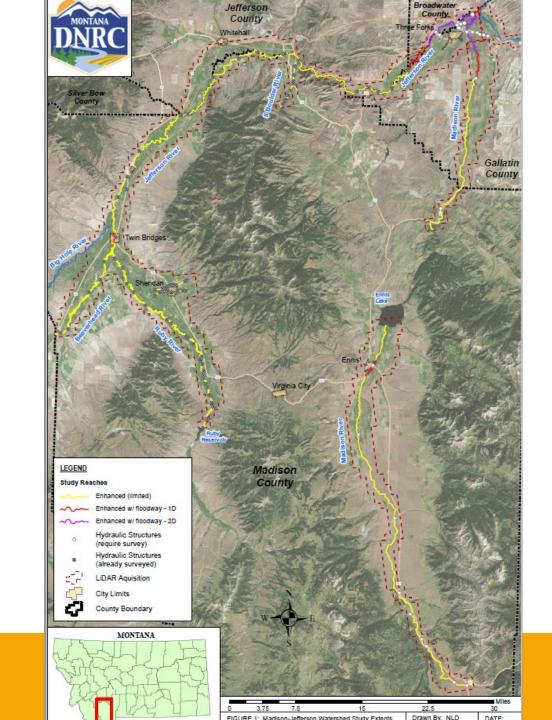
Updated information on the Jefferson and Madison Rivers will help us to better administer our floodplain program and provide cost saving measures for landowners.

We are committed to managing flood risks and participating in the National Flood Insurance Program. Better data upon which to base decisions would allow us to better manage flood risks on the Jefferson an Madison Rivers.

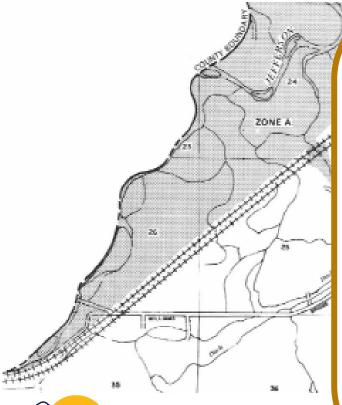
We can commit \$5,000 dollars towards this mapping project as a local match. Thank you for considering this grant application, it would provide valuable assistance to our county.







**Identifying Risk through Mapping** 



### Floodplain Maps

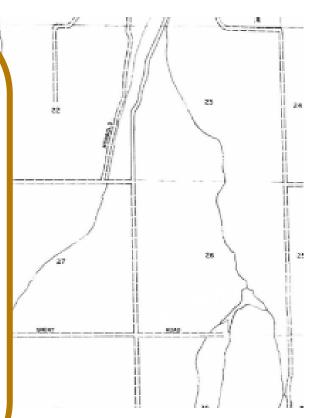
Flood Insurance Rate Maps (FIRMs)

Used for various purposes

- Local floodplain regulations
- Mortgage companies
- Flood insurance premiums
- Local emergency planning

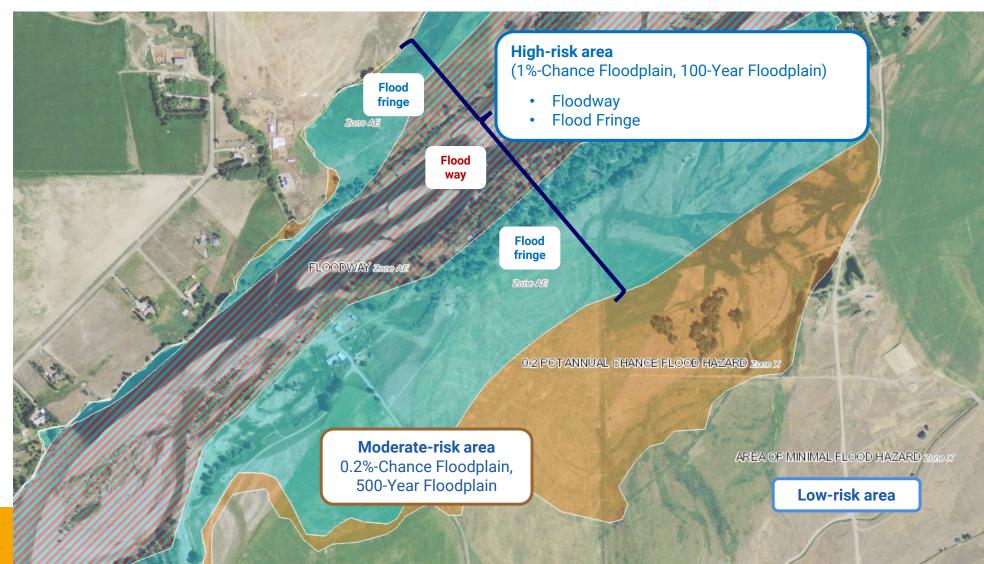
Need periodic updating

- New data available
- Change in the area



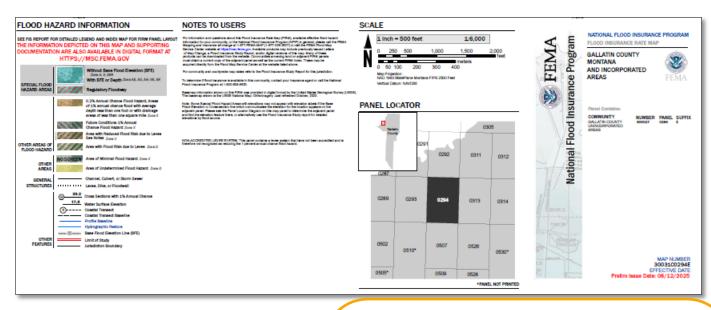


# **Flood Zones**



**Preliminary FIRMs and FIS** HUC8 10030 **Upper Miss** CITY-OF THREE FORKS 0305D 300029 HUC8 10020005 09/02/2011 **Jefferson** .0502E 0507E CITY OF THREE FORKS 0526E \*\*0535D \*0530E Prelim 09/02/2011 08/12/202 08/12/202 08/12/202 08/12/202 08/12/2025 300029 0483E 0484E 0528E 0509E Prelim 08/12/202 08/12/2025 HUC8 10020005 .0491E 0486E 0487E \*0540E \*\*0545D Prelim 08/12/2025 + 08/12/2025 09/02/2011 08/12/20 08/12/202 Jefferson 0287E \*0515E 0291E 0312E Prelim 0292E 08/12/2025 Prelim Prelim \*0470E \*0495E \*0490E 0311E 08/12/2025 08/12/2025 08/12/2025 **Prelim** Prelim Prelim 08/12/202 08/12/2025 08/12/2025 08/12/2025 08/12/2025 \*0700D \*0725E \*0750D 0707E Prelim 08/12/2025 09/02/2011 09/02/2011 0288E 0289E 0293E 0313E 0314E 08/12/2025 08/12/2025 08/12/2025 08/12/202 07,09E 08/12/2025 0716E 0717E 08/12/202 DN RIVE \*0718E 0719E Prelim 08/12/202 08/12/2025

# **Preliminary FIRMs and FIS**





### <u>Preliminary Flood Insurance Rate Maps</u> <u>and Flood Insurance Study:</u>

### Represent study results:

- 100-year Floodplain (1% annual chance)
- Floodway (within 100-year floodplain)
- 500-year Floodplain (0.2% annual chance)
- Flood Elevations (Base Flood Elevations)

Basis for 90-day Appeal & Comment Period



## **Preliminary FIRMs and FIS**

#### SOMA-1

#### PRELIMINARY SUMMARY OF MAPACTIONS

Community: GALLATIN COUNTY Comm

To assist your community in maintaining the Flood Insurance Rate Map (FIRM), we have summarized below the effect of the enclosed revised FIRM panel(s) on previously issued Letter of Map Change (LOMC) actions (i.e., Letters of Map Revision (LOMRs), Letter of Map Revision based on Fill (LOMR-Fs), and Letters of Map Amendment (LOMAs)).

#### 1. LOMCs Incorporated

The modifications effected by the LOMCs listed below have been reflected on the Preliminary copies of the revised FIRM panels. In addition, these LOMCs will remain in effect until the revised FIRM becomes effective.

LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
LOMR	23-08-0301P	9/18/2023	WEST GALLATIN RIVER PROFILE CORRECTION	*	*

LOMR 23-08-0301P included no revision to the FIRM. Only Profiles and Floodway Data Table were revised and incorporated.

#### 2. LOMCs Not Incorporated

The modifications effected by the LOMCs listed below are either not located on revised FIRM panels, or have not been reflected on the Preliminary copies of the revised FIRM panels because of scale limitations or because the LOMC issued had determined that the lot(s) or structure(s) involved were outside the Special Flood Hazard Area, as shown on the FIRM. These LOMCs will be revalidated free of charge 1 day after the revised FIRM becomes effective through a single revalidation letter that reaffirms the validity of the previous LOMCs.

#### 2A. LOMCs on Revised Panels

LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
LOMA	97-08-371A	10/02/1997	TRACT 2, (PROPOSED LOTS 2-4), PORTION OF SECTION 20, T2N, R2W, P.M.M.	3000270190B	30031C0311E 30031C0313E
LOMA	98-08-330A	06/29/1998	378 TRIDENT ROAD – A PORTION OF SECTIONS 20 & 29, T2N, R2W, P.M.M., TRACT 1	3000270190B	30031C0313E
LOMA	03-08-0075A	01/21/2003	69 FRONTAGE ROAD - COS 1633, TRACT A, PORTION OF SECTION 25, T2N, R1E, M.P.M.	3000270190B	30031C0293E
LOMR-F	06-08-B090A	02/01/2006	TRACT A-1, COS TRACT A-1 3455 PYFER ROAD	3000270190B	30031C0294E
LOMA	06-08-B697A	10/10/2006	TRACT 2 COS 1378 SECTION 29, T2N, R2E	3000270190B	30031C0294E 30031C0313E
LOMA	20-08-0568A	06/29/2020	CERTIFICATE OF SURVEY2816A, LOT 1A 2375 FRONTAGEROAD	30031C0315D	30031C0313E



### FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

**VOLUME 1 OF 5** 



### GALLATIN COUNTY, MONTANA

AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
BELGRADE, CITY OF	300105
BOZEMAN, CITY OF	300028
GALLATIN COUNTY, UNINCORPORATED AREAS	300027
MANHATTAN, TOWN OF*	300034
THREE FORKS, CITY OF	300029
WEST YELLOWSTONE, CITY OF*	300135

<sup>\*</sup>No Special Flood Hazard Areas Identified

PRELIMINARY 8/12/2025

#### REVISED:



FLOOD INSURANCE STUDY NUMBER 30031CV001C Version Number 2.8.5.6





## **Changes from Draft to Prelim**

#### Gallatin County, MT Project Decisions

23-08-0026S

In the 2025 Preliminary PMR study for Gallatin County, MT, there are a number of areas that may appear nonstandard to a third-party reviewer. Each approach has been discussed and approved by MT DNRC.

- 1.) Use of visible gutter lines to divide modeling effects is employed many places in the county. A few examples are shown below. All instances are according to MT DNRC preference.
- a. Panel 0288E, Jefferson River and Frontage Split. The mapping team and MT DNRC have discussed these areas in depth on the phone, confirmation is needed that this how the state would like the cross sections and floodplains shown on this panel. As delivered in floodplain mapping, there are separate WSEL elevations from separate modeling across the floodplain, with cross sections and s\_fld\_haz\_ar split by a visible gutter line.





### **Landowner list**

- Pulled from MT Cadastral
- Overlaid the floodplain layers to generate list
- Around 1015 parcels on the list
  - Some are newly mapped into the floodplain
  - Some were in the floodplain on the effective maps and are staying in the floodplain
  - Duplicate property owners on the list but for individual parcels



### **Timeline**

### Madison Jefferson Flood Study Project



This is an estimated timeline for project completion

Completed in 2019	Completed in 2020	Completed in 2020	Preliminary Maps issued 8/12/2025	Mid to late 2027
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 flood flow data to determine where the water will go 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 held to review the information. Public Open houses held January/ March 2021	FEMA Preliminary Maps are produced and ready for public review and comment period. 90-day official comment & appeal period early 2026.	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



#### Steps of a flood study.

- 1) Survey & LiDAR 3) Hydraulics (engineering)
- 2) Hydrology (flood flow)
- 4) Mapping (delineation)

#### **Public Review**

A public open house is held after draft data is available and before preliminary maps are released.

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 the flood study is completed the community can determine what mitigation efforts it would like to pursue to reduce flood risks.

#### Community Work

Update local floodplain ordinances.

Prepare initiatives to reduce flood risk.

### 90 Day Appeal & Comment Period

- 6-9 months from now
  - Must follow city public comment processes.
  - DNRC has templates that we will provide once we know the dates.
  - We post all appeal information on the project website.





# **Mitigation Planning**

- Next plan update make sure to include:
  - Include this study and future mapping projects.
  - Include the HMA flood mitigation project





# **Project website**

 https://dnrc.mt.gov/Water-Resources/Floodplains/Floodplain-Mapping-Updates/Madison-Ruby-Jefferson-Watersheds-Flood-Maps-

Update





\*UPDATE Gallatin County and Three Forks\*

Preliminary Flood Insurance Rate Maps will be issued by FEMA for the Jefferson and Madison Rivers on August 12, 2025.

Preliminary maps can be viewed here or on the viewer below. Preliminary maps and the flood insurance study data will also be available at the county and city offices.

Gallatin County and the City of Three Forks have been working with the Federal Emergency Management Agency (FEMA) and Montana Department of Natural

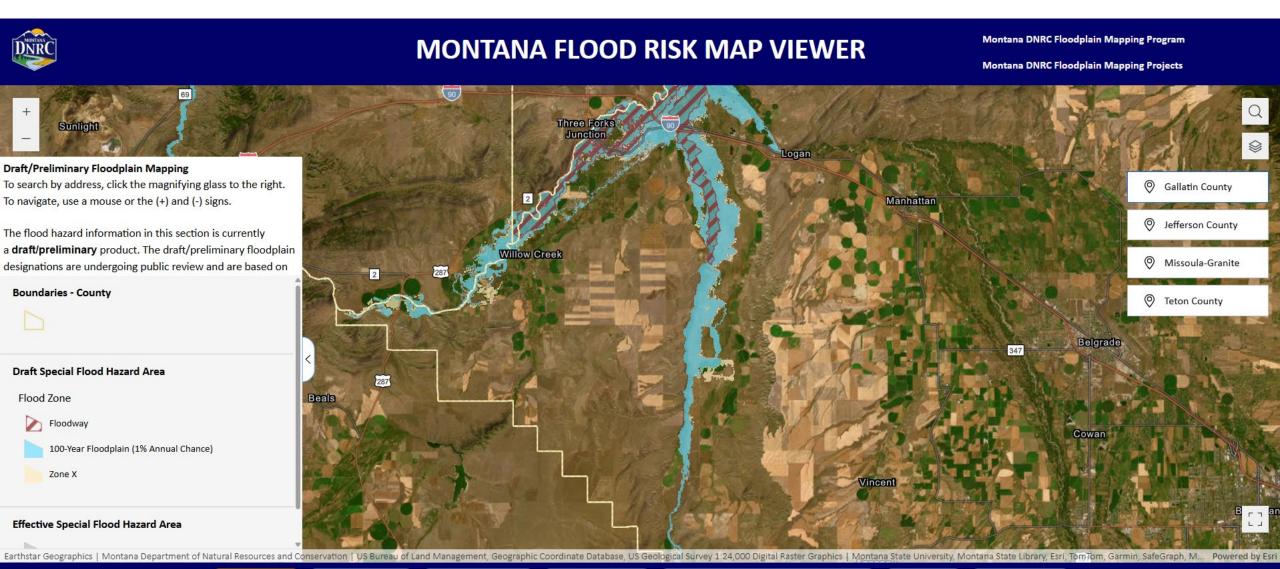
and Consequetion (DNDC) since 2010 to much use many floodulating many few montions of the Madison and Lefferson Divers

### **DNRC** flood hazard viewer

**Draft Mapping** 

**Effective Mapping** 

Floodplain Changes



Floodway Changes

**Estimated Ground Elevation for Buildings** 

Flood Depth

**Historic Flooding** 

### **Discussion**

