Floodplain 101 for Realtors:

the Good, the Bad, & the Ugly

….What Montana Real Estate Professionals Need to Know!

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MT DNRC Floodplain Program
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Thank you:

PayneWest INSURANCE

Opportunity Bank OF MONTANA

AMERICAN LAND TITLE COMPANY

Course Objective

- To provide MT REALTORS® with additional understanding of floodplain management and the National Flood Insurance Program (NFIP)

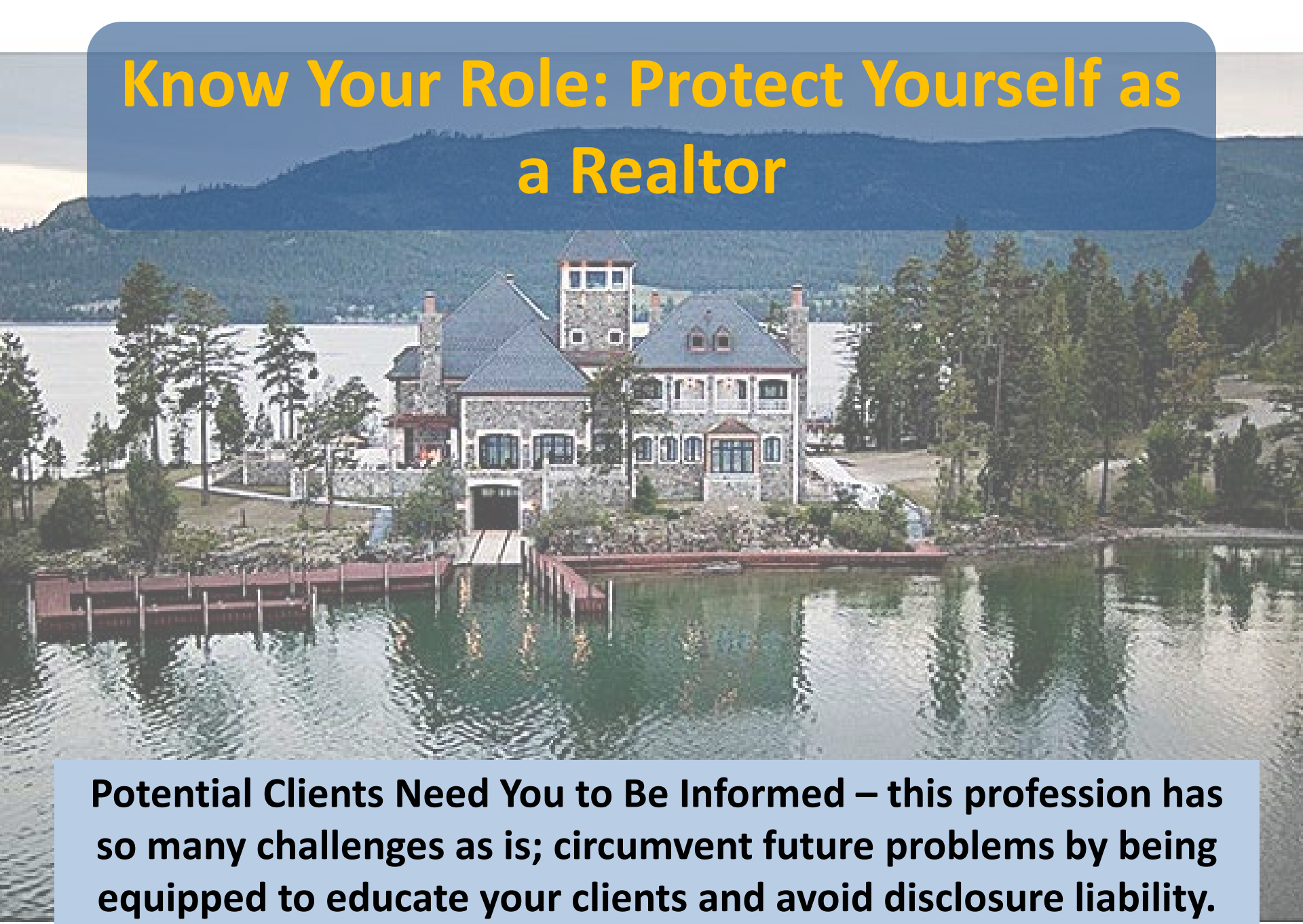
- Cover how local community NFIP participation can affect REALTORS® and potential purchasers of Montana floodplain property

Know Your Role: Protect Yourself as a Realtor

Why does this matter to Realtors?

MONTANA DNRC
MT DEPARTMENT OF NATURAL RESOURCES & CONSERVATION

Know Your Role: Protect Yourself as a Realtor



Potential Clients Need You to Be Informed – this profession has so many challenges as is; circumvent future problems by being equipped to educate your clients and avoid disclosure liability.

Private property rights are at the forefront in Montana – development in the floodplain comes with a higher level of personal responsibility.

People love to live near water – we are naturally drawn to it.

We can live near water if we follow an approach of risk reduction!

National Flood Insurance Program (NFIP)

Introduction

Demand for waterfront property……will continue to rise.

There will always be a demand for waterfront property and availability continues to be limited.

So does a floodplain designation on a property de-value the site?

National Flood Insurance Program (NFIP)

Waterfront property, purchased 1960:

Average cost of $2000-$5000 per acre.

Cost to purchase the same property in 2015:

NOT SO CHEAP!

National Flood Insurance Program (NFIP)

Why Manage Floodplain Development?

Local communities have to in order to maintain compliance with the NFIP and maintain eligibility for federal disaster relief funds and availability of Federal flood insurance.

Guide the development of the 100 year floodplain by insuring regulations balance the greatest public good with the least private injury (assure the actions of one landowner are not to the detriment of another landowner or the public).

National Flood Insurance Program (NFIP)

Why Manage Floodplain Development?

Identify lands unsuitable for certain development purposes due to hazards.

Minimize the need for rescue and relief efforts.

Identify property options that are located in areas with less specified hazards.

National Flood Insurance Program (NFIP)

Congress created the National Flood Insurance Program (NFIP) in 1968 as an alternative to taxpayer-funded disaster relief for flood victims.

The NFIP is administered by the Federal Emergency Management Agency (FEMA), coordinated by the State of Montana, and is regulated and enforced by the Community.

NATIONAL FLOOD INSURANCE PROGRAM

National Flood Insurance Program (NFIP)

NFIP offers flood insurance to homeowners, renters, and business owners in NFIP participating communities.

NFIP participating communities agree to adopt and enforce ordinances that meet or exceed FEMA requirements to reduce flood risk.

National Flood Insurance Program (NFIP)

The NFIP enables property owners and renters in participating communities to purchase flood insurance.

In exchange, the State and local communities adopt floodplain management regulations designed to reduce flood risks and future flood damage.

National Flood Insurance Program (NFIP)

What can I do to protect myself and help my clients?

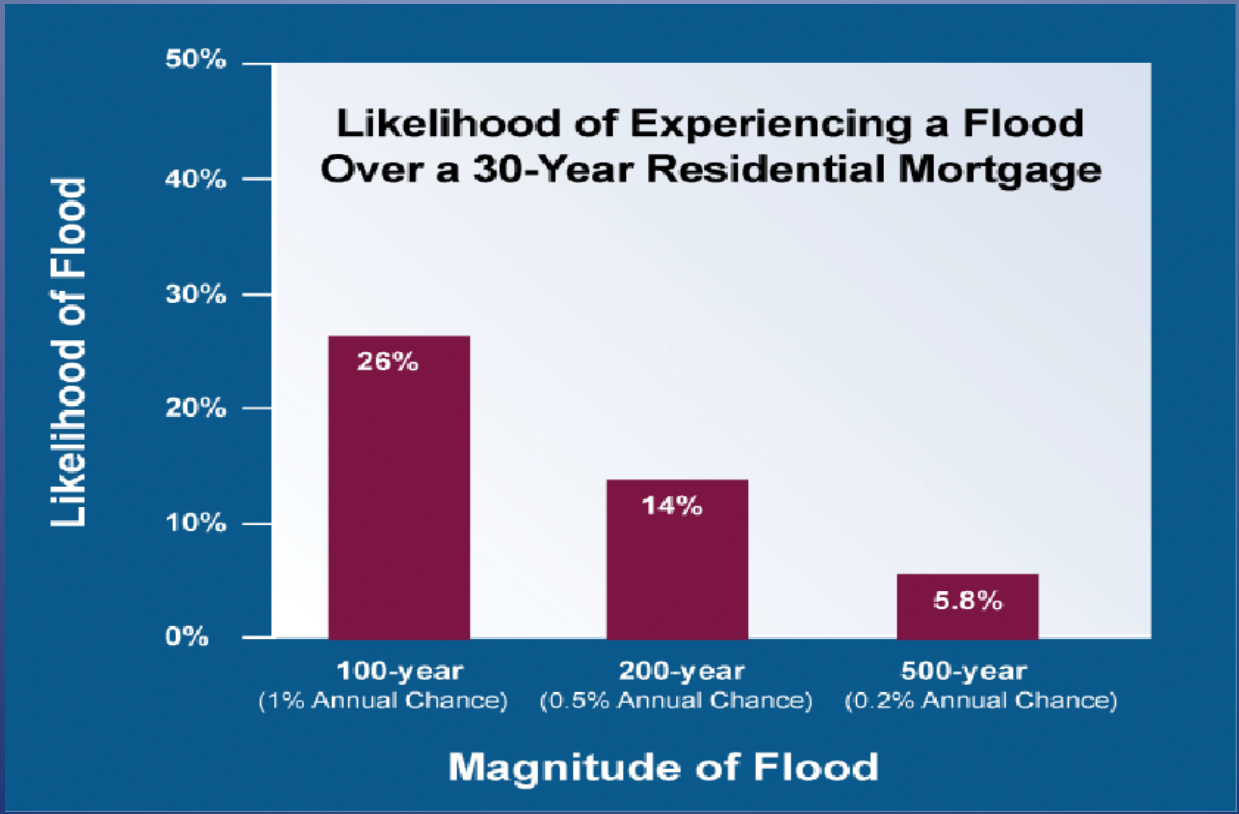
- Talk Floods Early and Often: Learn the Floodplain Language.
- Educate Clients so they Know and Understand Flood Risk

National Flood Insurance Program (NFIP)

Understand Flood Risk: 26% chance of flooding over a 30 year mortgage….

National Flood Insurance Program (NFIP)

Understand Flood Risk: 26% chance of flooding over a 30 year mortgage….



National Flood Insurance Program (NFIP)

Floodplain Terminology

BFE - Base Flood Elevation

CLOMR - Conditional Letter of Map Revision

DFIRM - Digital Flood Insurance Rate Map

FEMA - Federal Emergency Management Agency

National Flood Insurance Program (NFIP)

Floodplain Terminology

FIRM - Flood Insurance Rate Map

FIS - Flood Insurance Study

LOMA - Letter Of Map Amendment

LOMR - Letter of Map Revision

Base Flood – the flood having a 1% chance of being equaled or exceeded in any given year **= Regulatory Standard**

National Flood Insurance Program (NFIP)

Floodplain Terminology

Encroachment – development within the floodplain including fill, new construction, substantial improvements, bridges, channel crossings, and channel modifications that increase BFE's.

Freeboard – a margin of safety added to the base flood elevation to account for waves, debris, miscalculations, impacts from new development, or lack of data.

Freeboard can assist in significant savings on flood insurance premiums.

National Flood Insurance Program (NFIP)

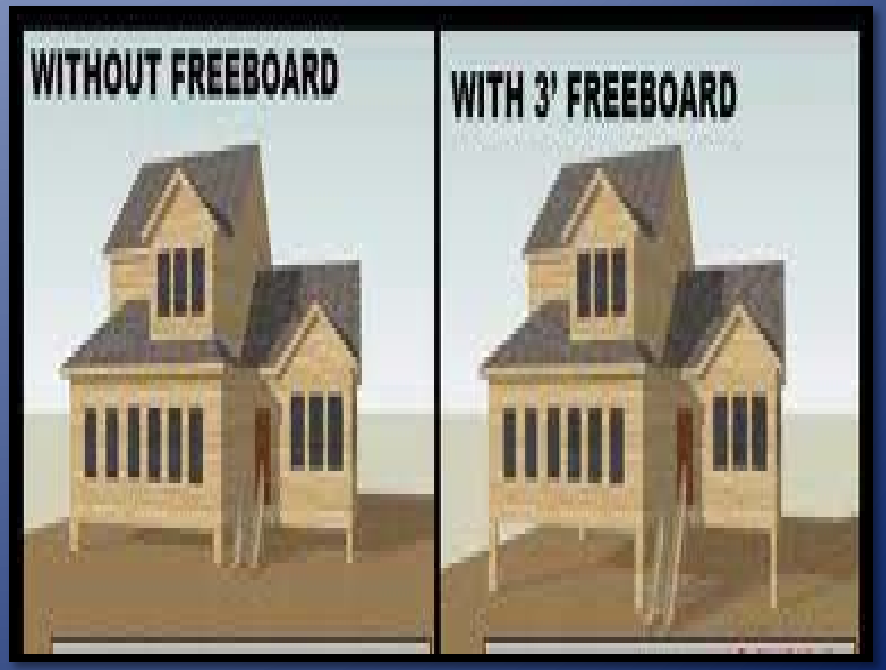
Floodplain Terminology

ENCROACHMENT

National Flood Insurance Program (NFIP)

Floodplain Terminology

FREEBOARD



National Flood Insurance Program (NFIP)

The Montana Rules vs. NFIP Minimum Requirements

Standard	Montana Administrative Rules	NFIP Minimum Requirements
Freeboard	2 Feet	No freeboard required
Floodway Standards	**1/2 foot Surcharge	**1 Foot Surcharge
Floodway Uses	Prohibits habitable structures with/in the floodway	Allows structures in Floodway with documentation of zero-rise
Mobile Home Applications	Requires all mobile homes to be elevated to the freeboard protection level.	Will allow for mobile home placed in an existing mobile home park to be elevated to 36" above the adjacent grade.

**With exhaustive CLOMR/LOMR processes

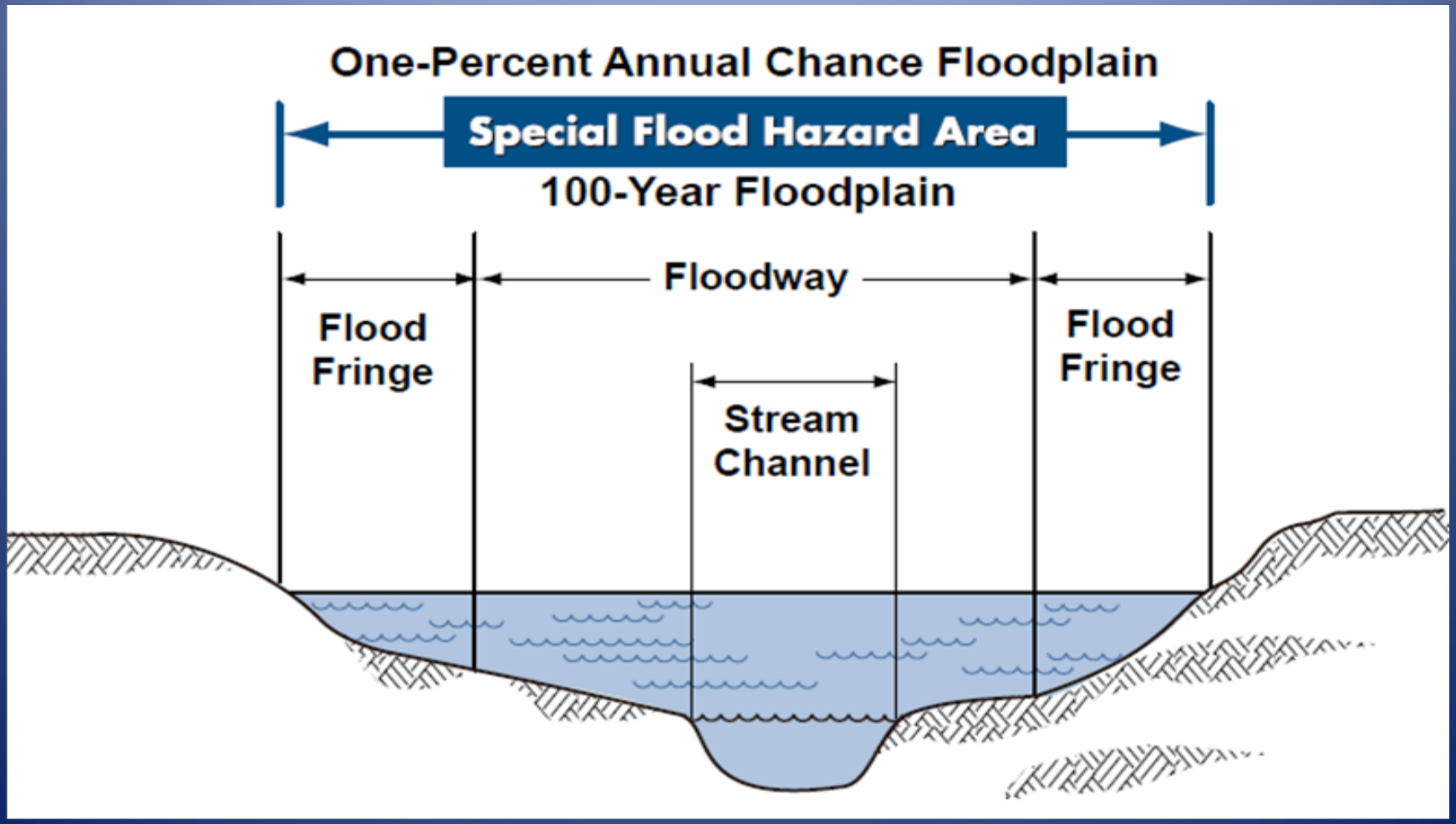
National Flood Insurance Program (NFIP)

Floodplain Terminology

Special Flood Hazard Area (SFHA):

- The area inundated by floodwaters of the Base Flood.
- The area where NFIP regulations must be enforced and where flood insurance is mandatory.

National Flood Insurance Program (NFIP)



National Flood Insurance Program (NFIP)

Floodplain Terminology

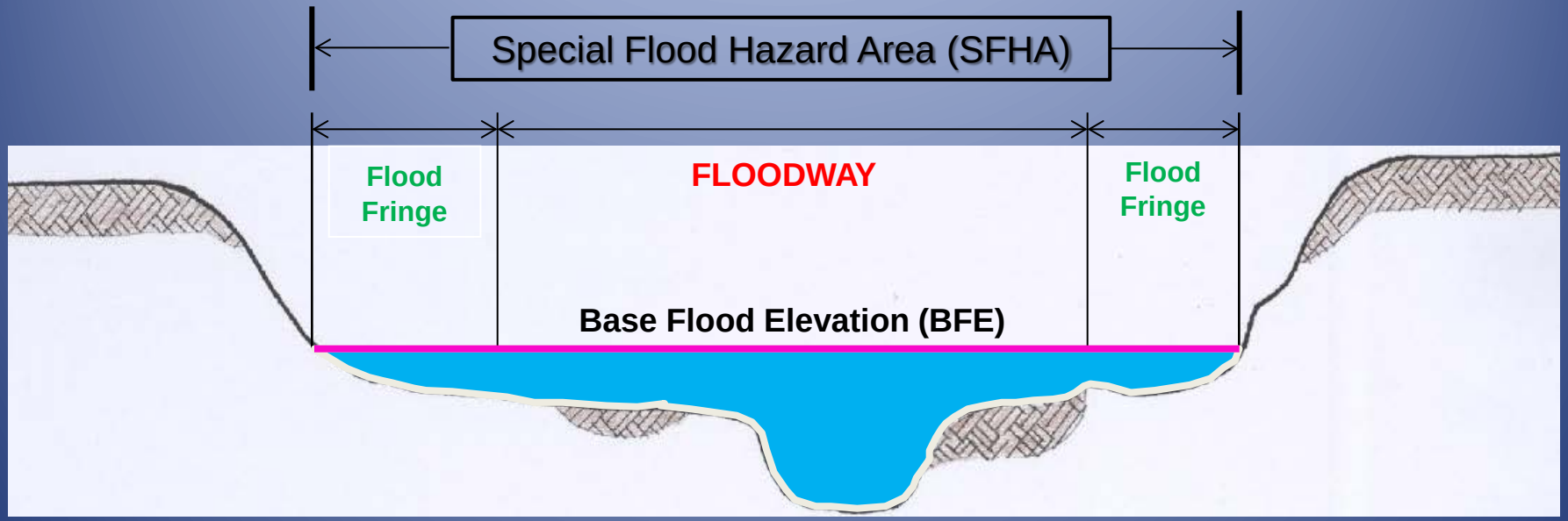
Floodway or Regulatory Floodway:

The Floodway is a regulatory measure to assist communities with protecting the river corridor where flows are most sensitive to encroachment. NOT a physical feature.

The Floodway is the river channel and that portion of the floodplain that must remain open to permit passage of the base flood. Floodwaters are generally deepest and swiftest in the floodway.

The channel of a river or watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height (= 0.5 ft in MT).

National Flood Insurance Program (NFIP)



Flood Fringe - Area of the Floodplain that could be encroached upon and used for development by raising the ground.

Encroachment cannot cause more than 0.5 ft. rise.

FLOODWAY – Regulatory Area Only - Limited Development and no Encroachment allowed – Not a Physical Feature.

Thank You

QUESTIONS?

National Flood Insurance Program (NFIP)

Federal Role

State Role

Community Role

National Flood Insurance Program (NFIP)

The Federal Role

Administer the NFIP through FEMA Regional Offices.

Provide assistance to State NFIP coordinating agencies.

Assess community compliance with the NFIP criteria.

Advise local officials responsible for administering floodplain development regulations.

Help review and adopt new maps and data.

National Flood Insurance Program (NFIP)

National Flood Insurance Program (NFIP)

The State Role

Ensure that communities have the legal authority necessary to adopt and enforce floodplain management regulations.

Establish minimum State regulatory requirements that meet or exceed the NFIP requirements.

Provide technical and specialized assistance, outreach, training, and floodplain resources to local governments.

Coordinate activities of various State agencies that effect the NFIP.

National Flood Insurance Program (NFIP)

MT DNRC Water Operations Bureau
Floodplain Program Program Staff

Laurence Siroky, Bureau Chief

Traci Sears, NFIP Coordinator – Unit Supervisor

- Vacant, Outreach Coordinator
- Vacant, Training Coordinator
- Tiffany Lyden, Regulations Specialist

Steve Story, Floodplain Engineer – Unit Supervisor

- Scott Pfahler, Civil Engineering Specialist
- Chad Hill, Civil Engineering Specialist

National Flood Insurance Program (NFIP)

MT DNRC Floodplain Program Provides:

- Floodplain Website
- General Technical Assistance
- Community Assistance Visits (CAV)
- Ordinance review and Assistance
- Mapping
- Training
- Outreach
- Floodplain Administrators Database

The Montana Department of Natural Resources & Conservation

DNRC Headquarters
1625 Eleventh Ave. Helena, MT 59601
Phone: (406) 444-2074 | Fax: (406) 444-2684
Questions? Email us

Floodplain Management

The Montana DNRC Floodplain Management Program promotes common sense planning for development in flood prone areas through education for the benefit of public health, safety and welfare.

SAVE THE DATE: JULY 20-24, 2015 -MT DNRC 7TH ANNUAL FLOODPLAIN RESOURCE SEMINAR

The **7th annual MT DNRC Floodplain Resource Seminar** is a week-long venue at UM Helena College, **July 20-24, 2015**, offering numerous free sessions related to Montana floodplain management.

The **Floodplain Resource Seminar** provides a unique opportunity to obtain important and beneficial tools and resources for local officials, city and county staff, floodplain administrators, attorneys, watershed committees, planners, sanitarians, realtors, insurance agents, state staff, engineers, students, and many others working in **Montana floodplain management and natural resources.**

Click the below links to access the week's agenda and to register. Check back often for session updates and new information!

AGENDA
REGISTRATION: https://app.mt.gov/cgi-bin/confreg2/index.cgi?CONFERENCE_ID=4683&ACTION=INTRO

2014 Model Floodplain Hazard Management Regulations – Development of the new model is now completed and available for use by communities to utilize and update or establish local regulations. Thanks to everyone that participated in the development process for the model regulations. View the new 2014 model as well as the specific comments and revisions. Inquiries can be made to Laurence Siroky at 406.444.6816.

Contacts

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www.mtfloodplain.mt.gov

Contacts

Insurance

NATIONAL FLOOD INSURANCE PROGRAM

Permitting and Regulations

Mapping and Technical Resources

Disaster and Recovery

Training

Outreach

Property Owner Resources

News and Announcements

Silver Jackets

SILVER JACKETS

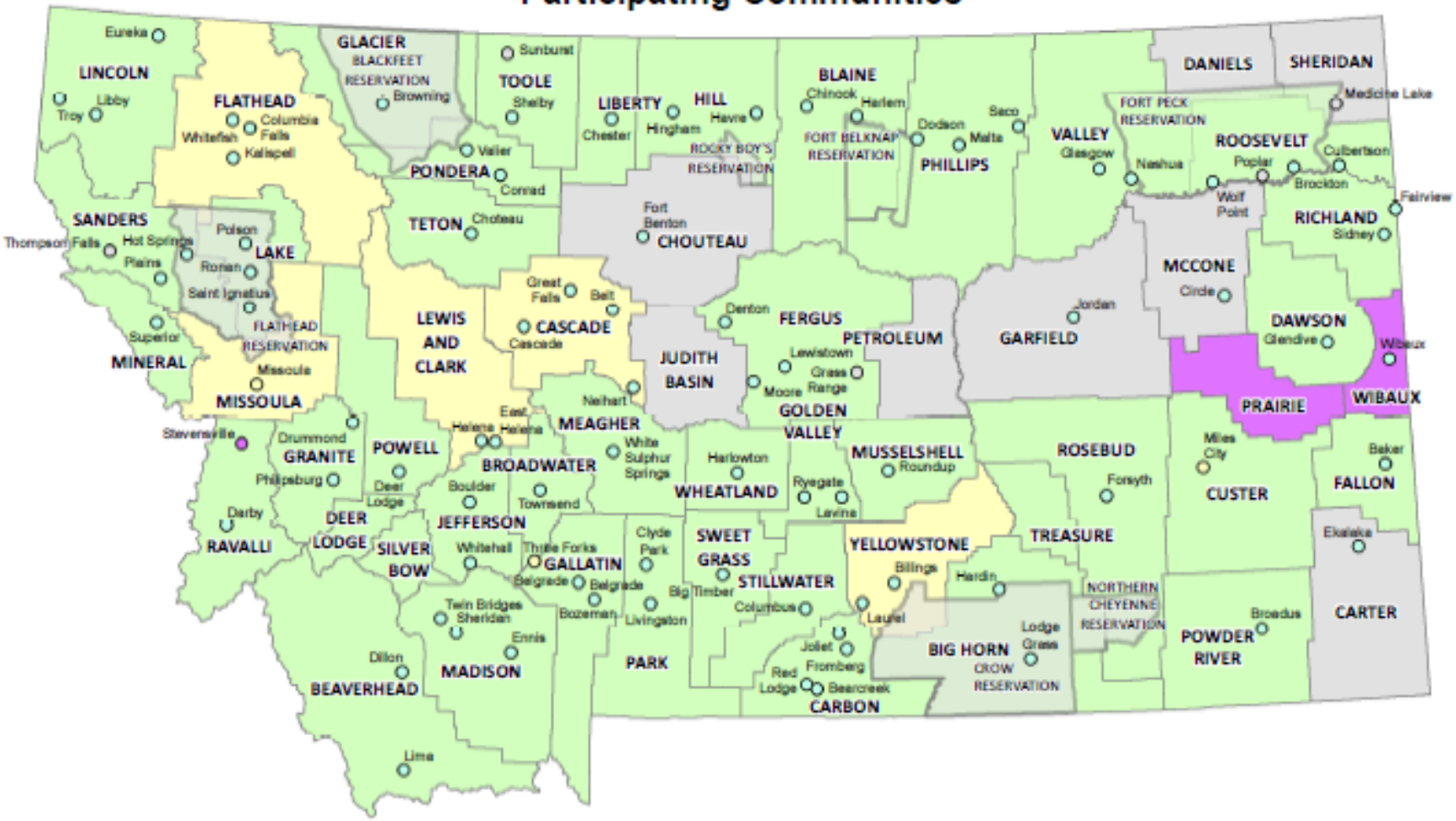
Cool Tools

RISK AHEAD

Big Hole Study Products

www.mtfloodplain.mt.gov

National Flood Insurance Program (NFIP)
Participating Communities



NFIP Community Status

- Community Rating System Participant
- Participating Community
- Community Not Participating
- Suspended Community

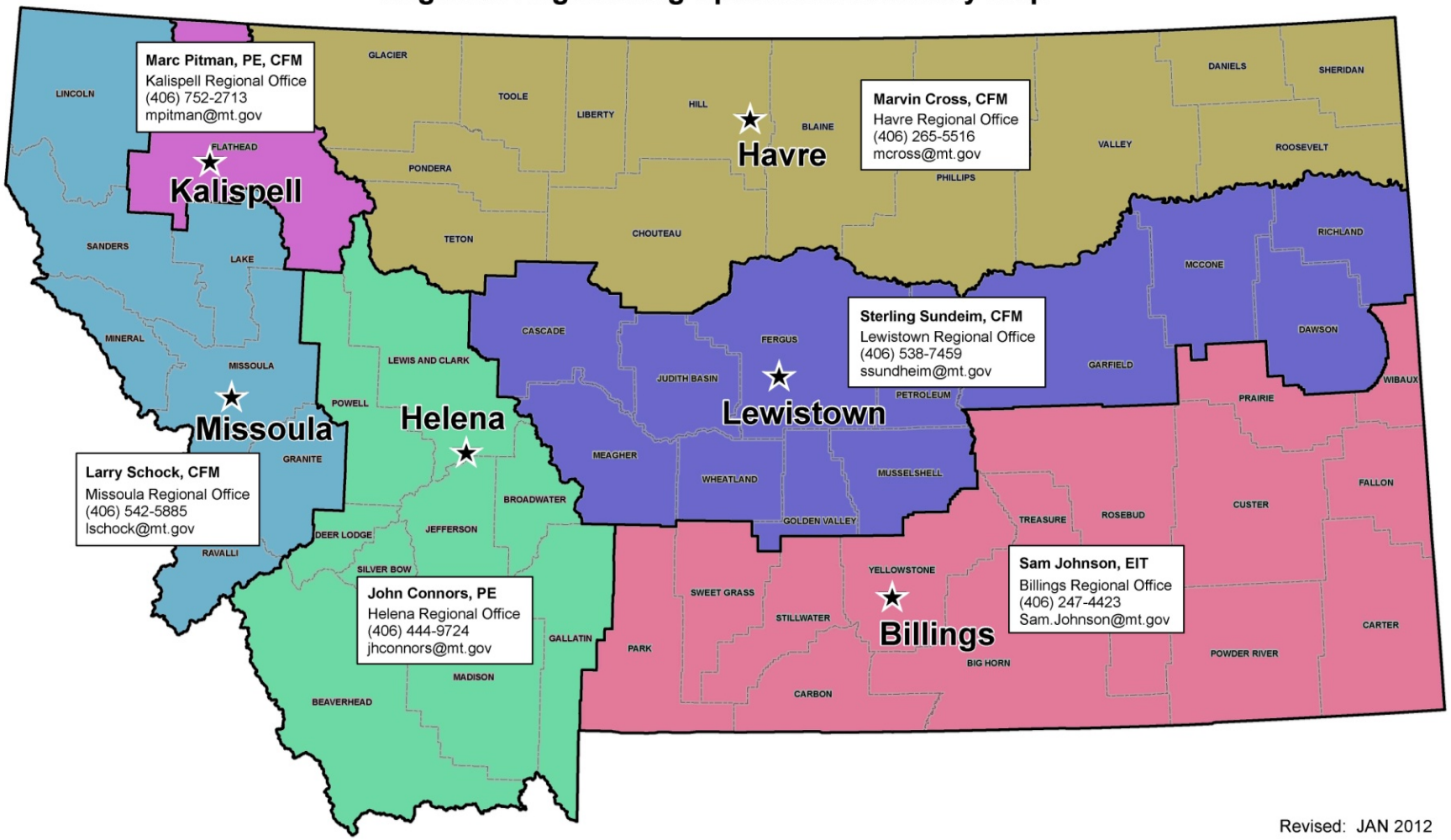
** CRS communities recieve discounted insurance premiums*

Number of Participating Communities

Counties	44
Municipalities	86
Reservations	2
Joint Municipality and County (Butte, Anaconda)	2
Total	134

September 2013

Requesting Assistance – DNRC Regional Engineers



National Flood Insurance Program (NFIP)

The Community's Role

National Flood Insurance Program (NFIP)

The Community's Role

Ensure that they establish the legal authority necessary to adopt and enforce floodplain management regulations.

Establish minimum Community regulatory requirements that meet or exceed the State floodplain regulations and the NFIP requirements.

Establish a floodplain permitting process for issuing or denying floodplain development permits.

Require additional Federal/State/local permits when applicable.

National Flood Insurance Program (NFIP)

The Community's Role

Inspect all development within the regulatory floodplain to assure compliance with the local regulations.

Assist in the preparation and revision of flood maps.

Maintain records of floodplain development.

Assist residents in obtaining information on flood hazards, map data, flood insurance, and proper construction measures.

Answer questions from design professionals and the public.

Thank You

QUESTIONS?

National Flood Insurance Program (NFIP)

3 Basic Parts to the NFIP

Regulations

Insurance

Mapping

Plus a Mitigation Component

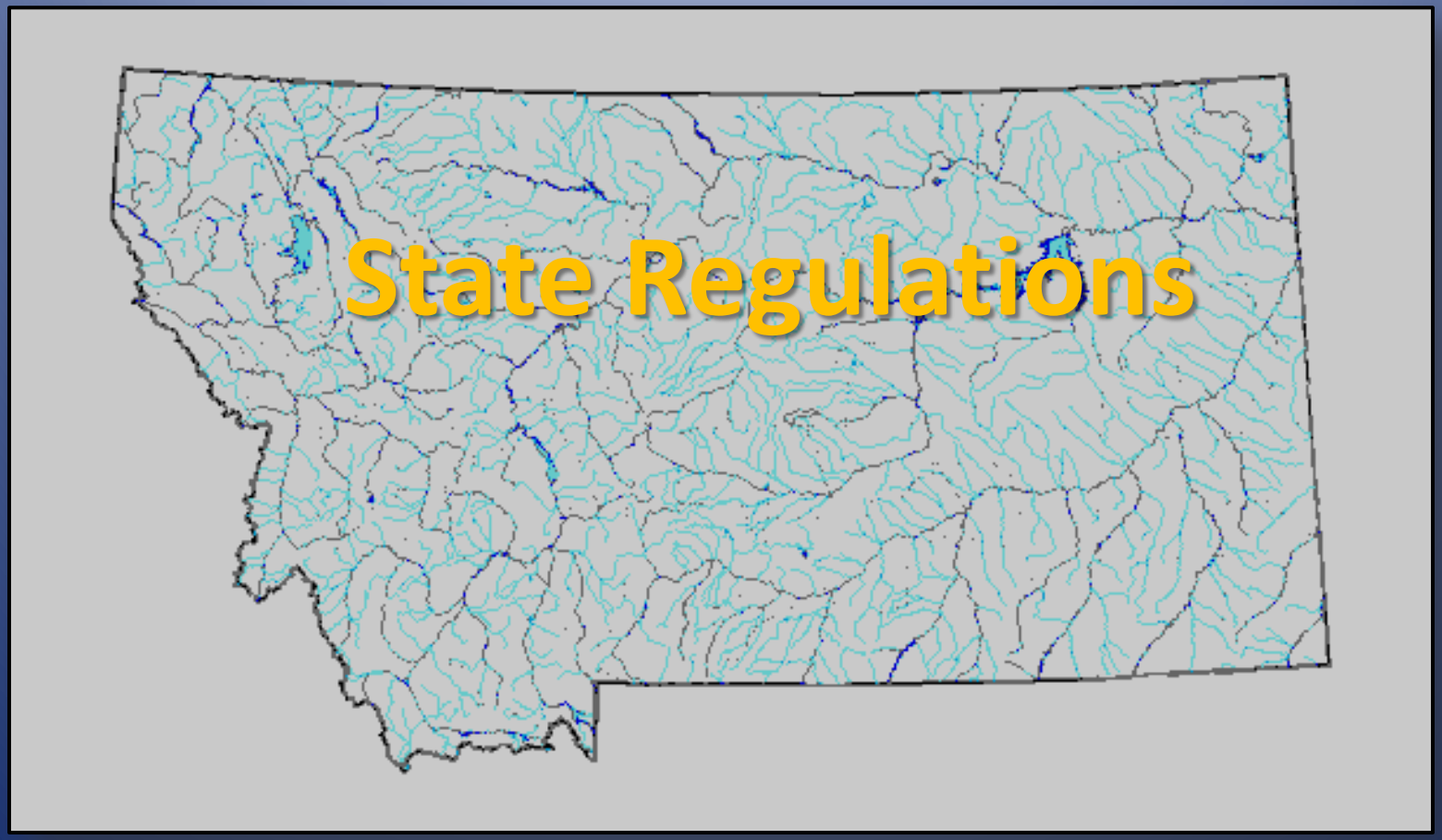
National Flood Insurance Program (NFIP)

Regulations

National Flood Insurance Program (NFIP)

In order to participate in the NFIP, the State, and the community must adopt and enforce floodplain management regulations that meet of exceed the requirements specified under Section 60.3, Title 44, of the Code of Federal Regulations (CFR).

National Flood Insurance Program (NFIP)



National Flood Insurance Program (NFIP)

State of Montana Regulations

The State of Montana has established regulations to direct floodplain management that meet or exceeds the requirements specified under Section 44 CFR 60.3.

Montana Floodplain and Floodway Management Act, MCA Title 76, Chapter 5. Effective 9/4/75

DNRC Floodplain Management Engineering Bureau adopted ARM Rule 36, Chapter 15 on 12/31/1989.

National Flood Insurance Program (NFIP)

The Montana Rules vs. NFIP Minimum Requirements

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National Flood Insurance Program (NFIP)

Community Ordinances

National Flood Insurance Program (NFIP)

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National Flood Insurance Program (NFIP)

Community Ordinances

The State established a model floodplain ordinance, based upon the CFR's, MCA's, and ARM's, that is available to provide guidance for the Communities in the adoption of their local regulations.

The majority of the local Community Floodplain Management programs within the State adopted the model ordinance.

Some Communities have also adopted ordinances that exceed both NFIP and State regulations.

- Missoula County only allows rip rap to be used for the protection of infrastructure and structures existing before 2001.

Thank You

QUESTIONS?

National Flood Insurance Program (NFIP)

FEMA Flood Hazard Mapping Program

Identifies flood hazards (rivers, lakes, drainages, etc.)

Assesses flood risks

Partners with States and local communities to provide accurate flood hazard and risk data

Flood Hazard Mapping is the basis of NFIP regulations and flood insurance requirements

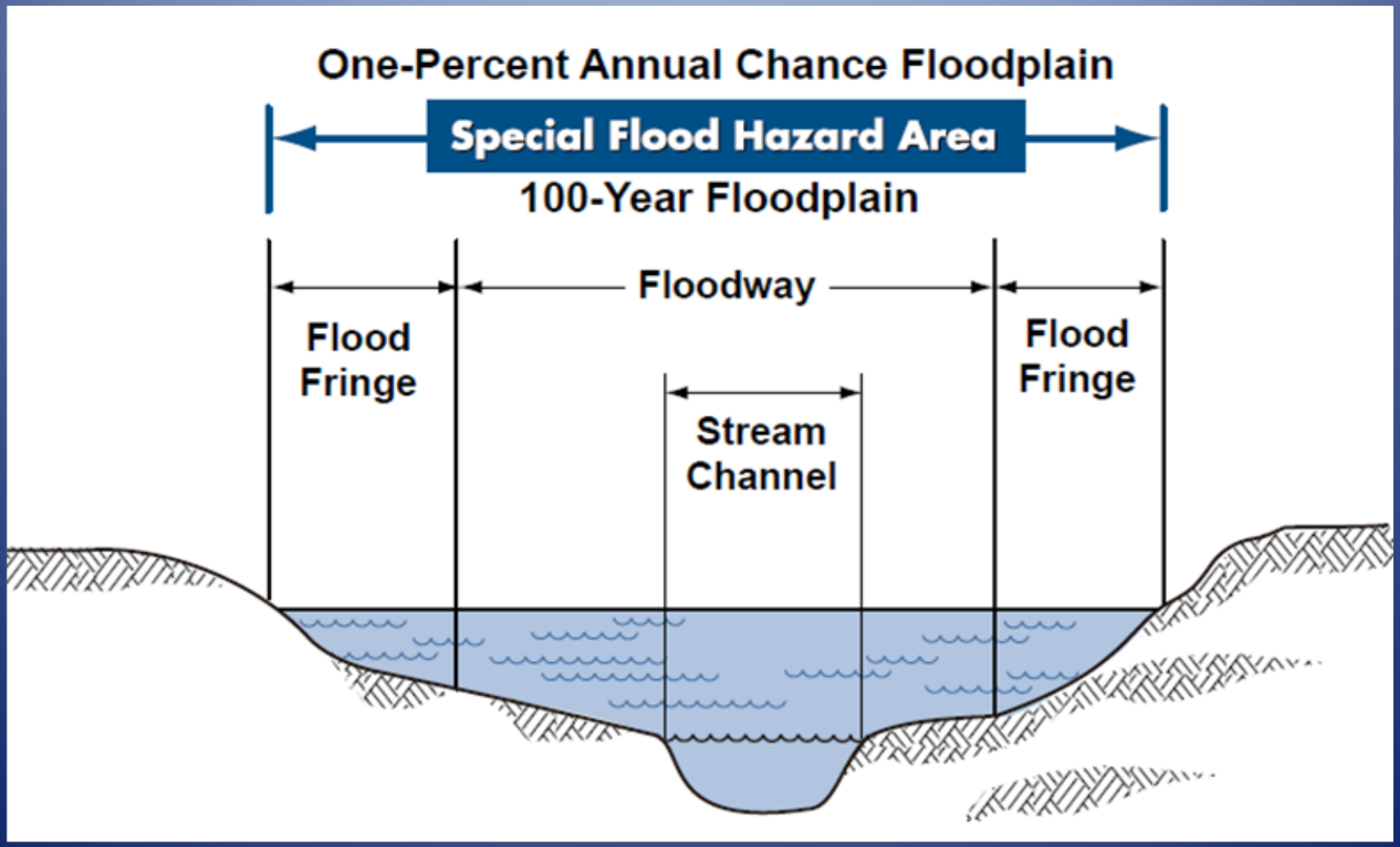
MONTANA DNRC

National Flood Insurance Program (NFIP)

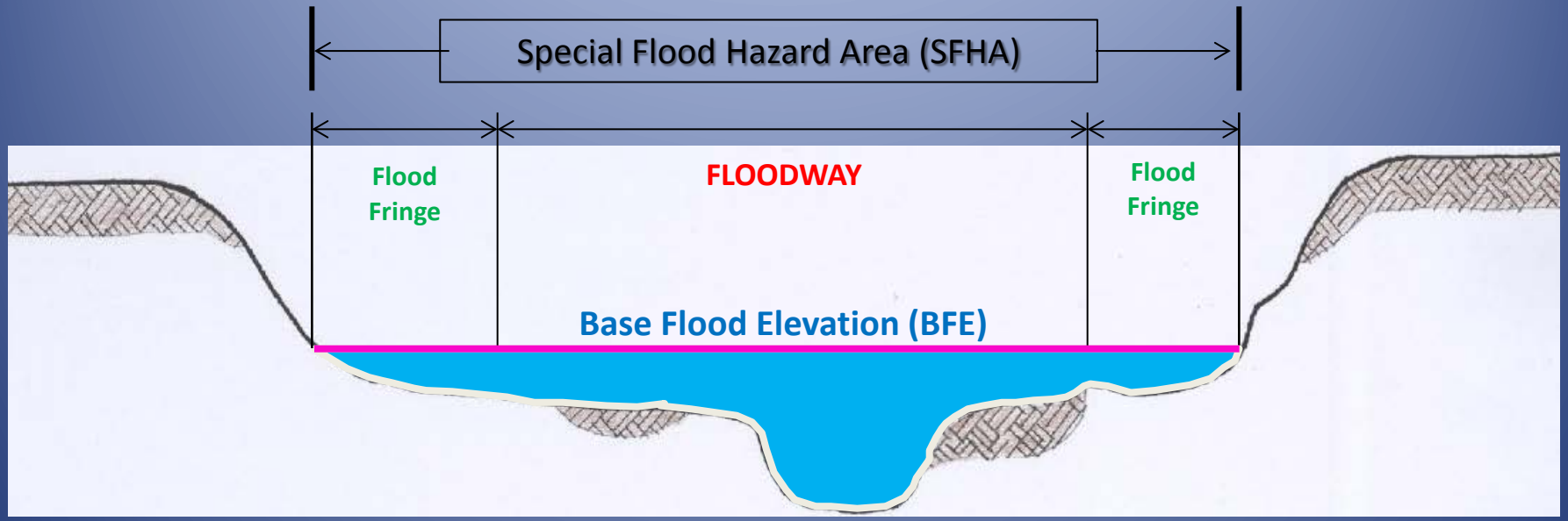
FEMA Flood Hazard Mapping Program

Understanding the processes behind the mapping is key to knowing what can and can't be done on property.

National Flood Insurance Program (NFIP) Basics of Mapping



National Flood Insurance Program (NFIP)
Basics of Mapping



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FLOODWAY – Regulatory Area Only - Limited Development and no Encroachment allowed – Not a Physical Feature.

National Flood Insurance Program (NFIP) Basics of Mapping

Floodway or Regulatory Floodway:

The Floodway is a regulatory measure to assist communities with protecting the river corridor where flows are most sensitive to encroachment. NOT a physical feature.

The Floodway is the river channel and that portion of the floodplain that must remain open to permit passage of the base flood. Floodwaters are generally deepest and swiftest in the floodway.

The channel of a river or watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height (= 0.5 ft in MT).

National Flood Insurance Program (NFIP)
Basics of Mapping

Floodway or Regulatory Floodway

The State of Montana has higher standards for identified floodways than the NFIP minimum standards.

Types of Floodplain Studies

Approximate Study (Zone A) - the SFHA is defined, but no BFEs or flood profiles.

Limited Detailed Study (AE) - SFHA defined and may include BFEs. Profiles and BFEs published in FIS. Study parameters may vary based on available data, budget, etc.

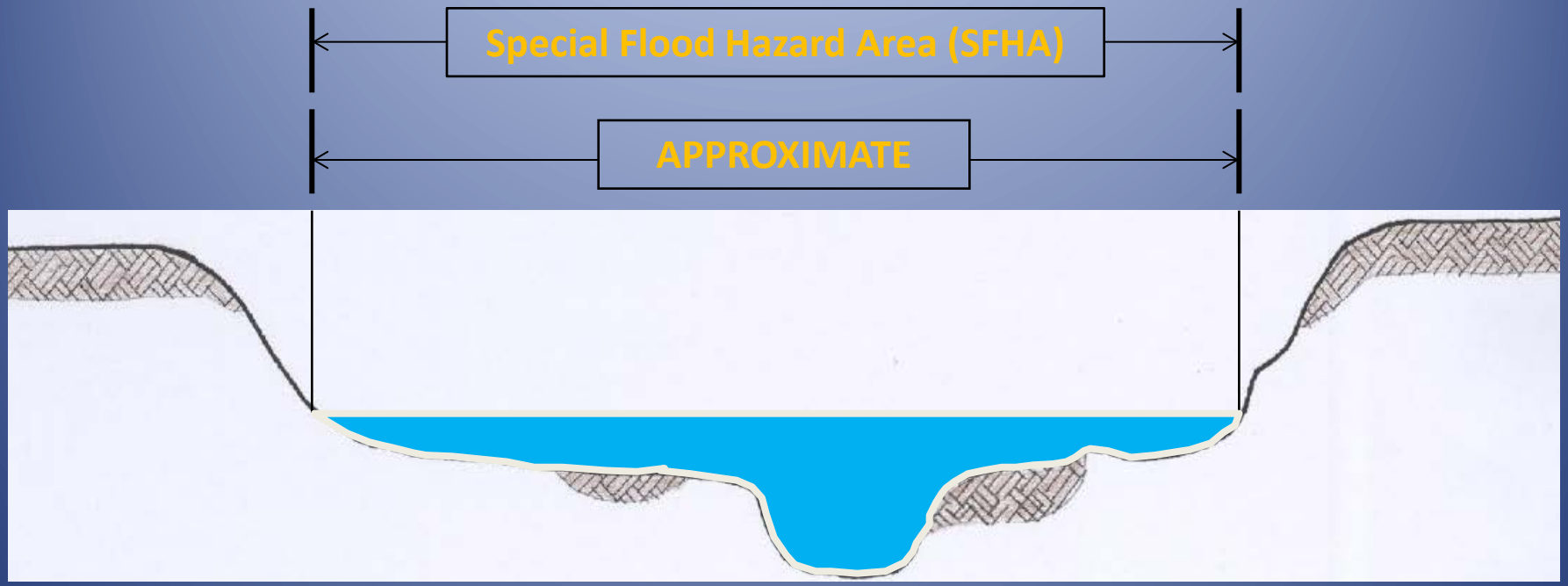
Detailed Study (AE) - the SFHA & 500-yr floodplains are defined, and BFEs are published in FIS. The 10-, 2-, 1-, & 0.2 % annual-chance flood discharges are estimated, and profiles are provided in FIS. Structure geometry from detailed field surveys. Floodway analysis typically performed.

Types of Floodplain Studies

Completed DRAFT Floodplain Study Reference Maps: Statistics (Mar, 2012)

	County	STREAM LENGTH (miles)			LAKE SHORELINE (mi)
		Approximate	Limited Detail	Detailed	Approximate
1	Anaconda Deerlodge	170	0	25	10
2	Beaverhead	30	0	25	0
3	Big Horn	225	20	0	38
4	Blaine	450	0	115	17
5	Broadwater	70	0	0	80
6	Carbon	350	0	50	10
7	Cascade	76	0	89	0
8	Custer	140	0	5	10
9	Fergus	50	0	35	0
10	Flathead	205	0	95	135
11	Gallatin	64	0	70	0
12	Granite	120	0	36	0
13	Jefferson	155	0	3	20
14	Lake	175	0	25	300
15	Lewis & Clark	82	0	50	1
16	Lincoln	450	0	115	17
17	Madison	2	0	3	0
18	Missoula	85	20	110	0
19	Mineral	150	0	0	0
20	Park	400	0	0	65
21	Phillips	455	0	12	145
22	Powell	90	0	20	0
23	Ravalli	0	0	65	0
24	Sanders	320	0	0	10
25	Silver Bow	90	0	34	0
26	Stillwater	113	0	110	0
27	Sweet Grass	98	0	15	0
28	Yellowstone	45	0	93	0
	TOTAL:	**4660**	**40**	**1200**	**858**
	TOTAL ALL:	**6,758**			

Types of Floodplain Studies



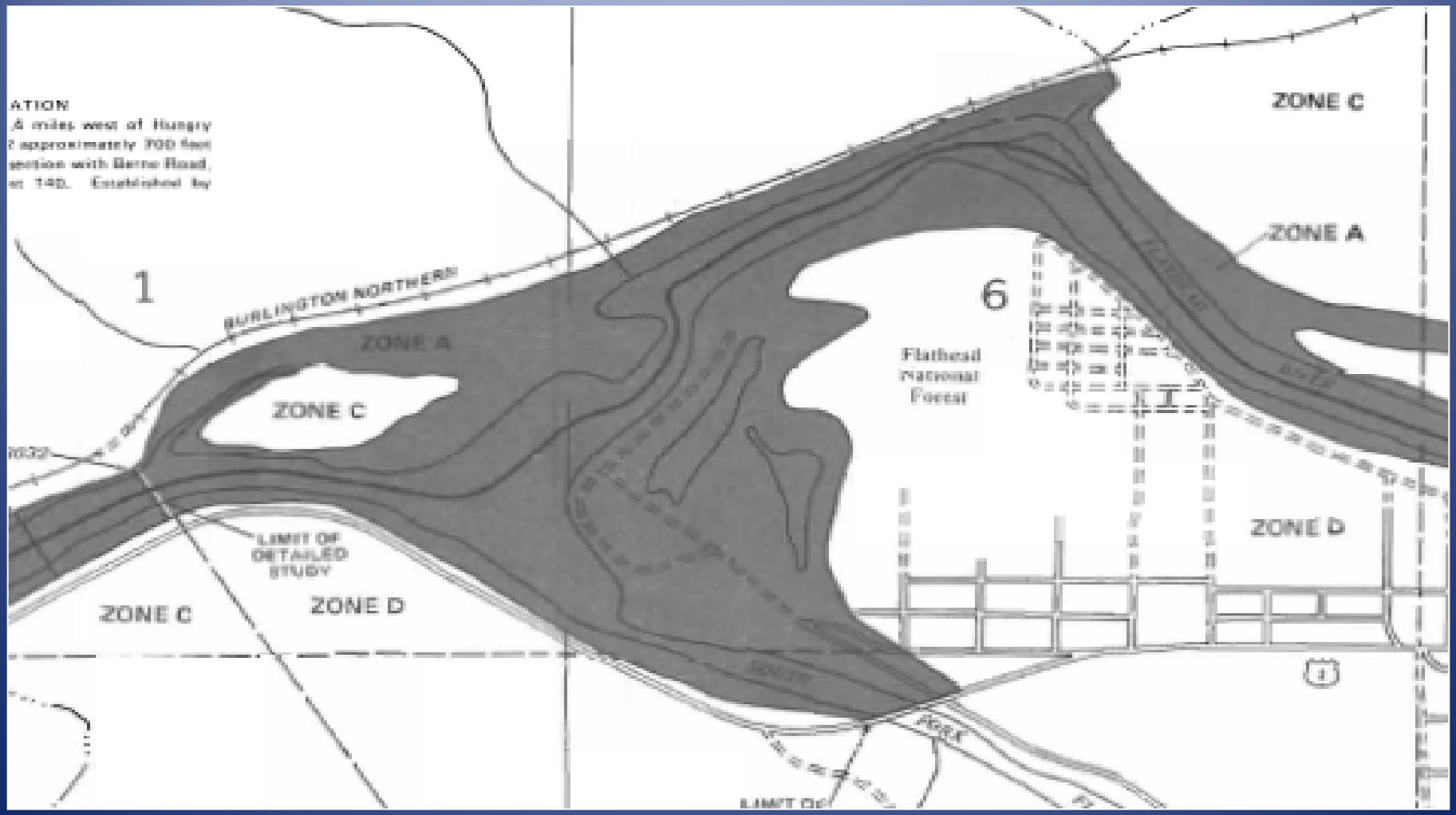
No Base Flood Elevations

No Hydrology

No Hydraulic Modeling

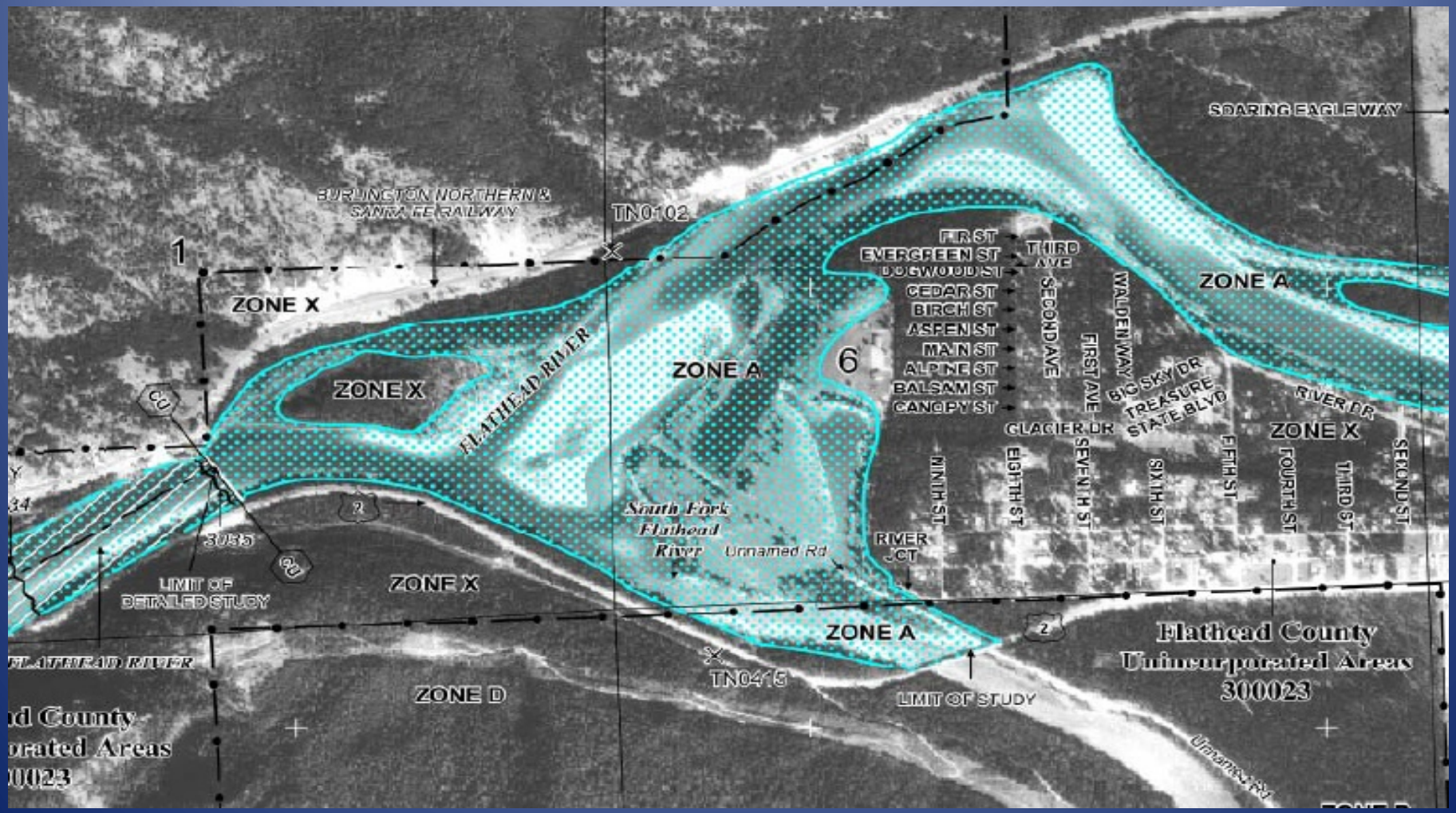
No Flood Profiles

Types of Floodplain Studies



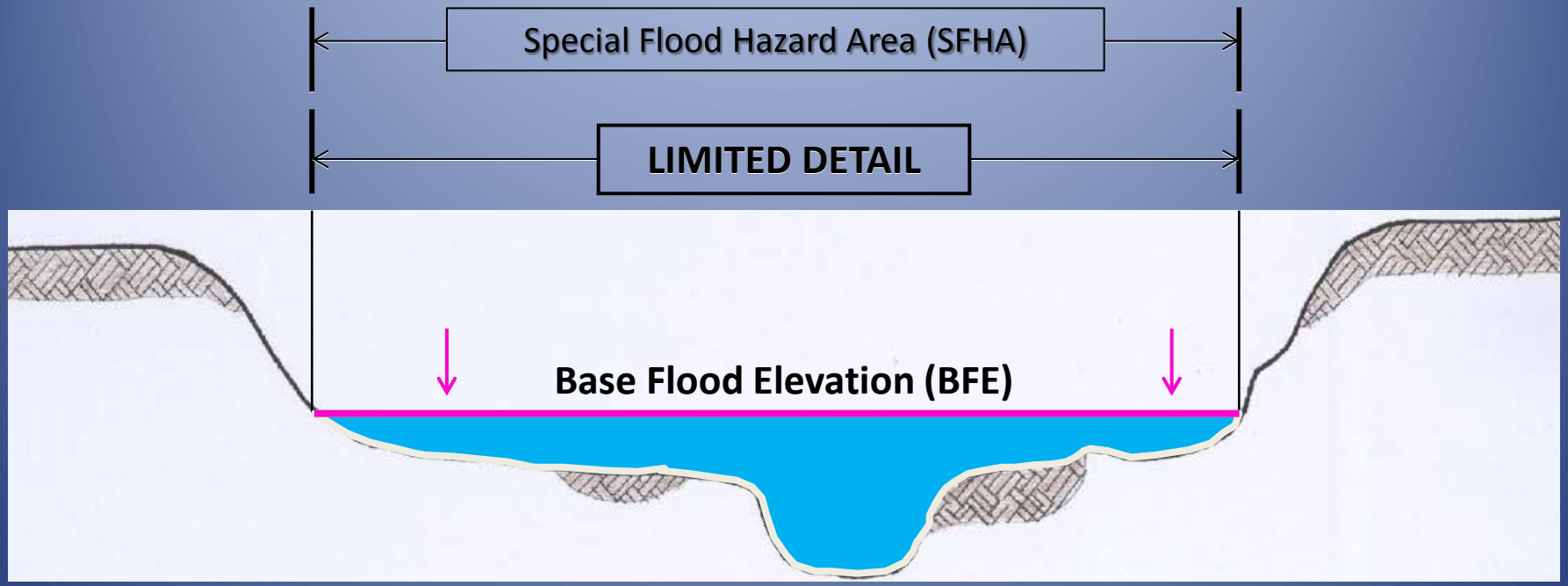
FEMA Flood Insurance Rate Map (FIRM) - **Approximate Study**

Types of Floodplain Studies



FEMA Digital Flood Insurance Rate Map (DFIRM) - **Approximate Study**

Types of Floodplain Studies

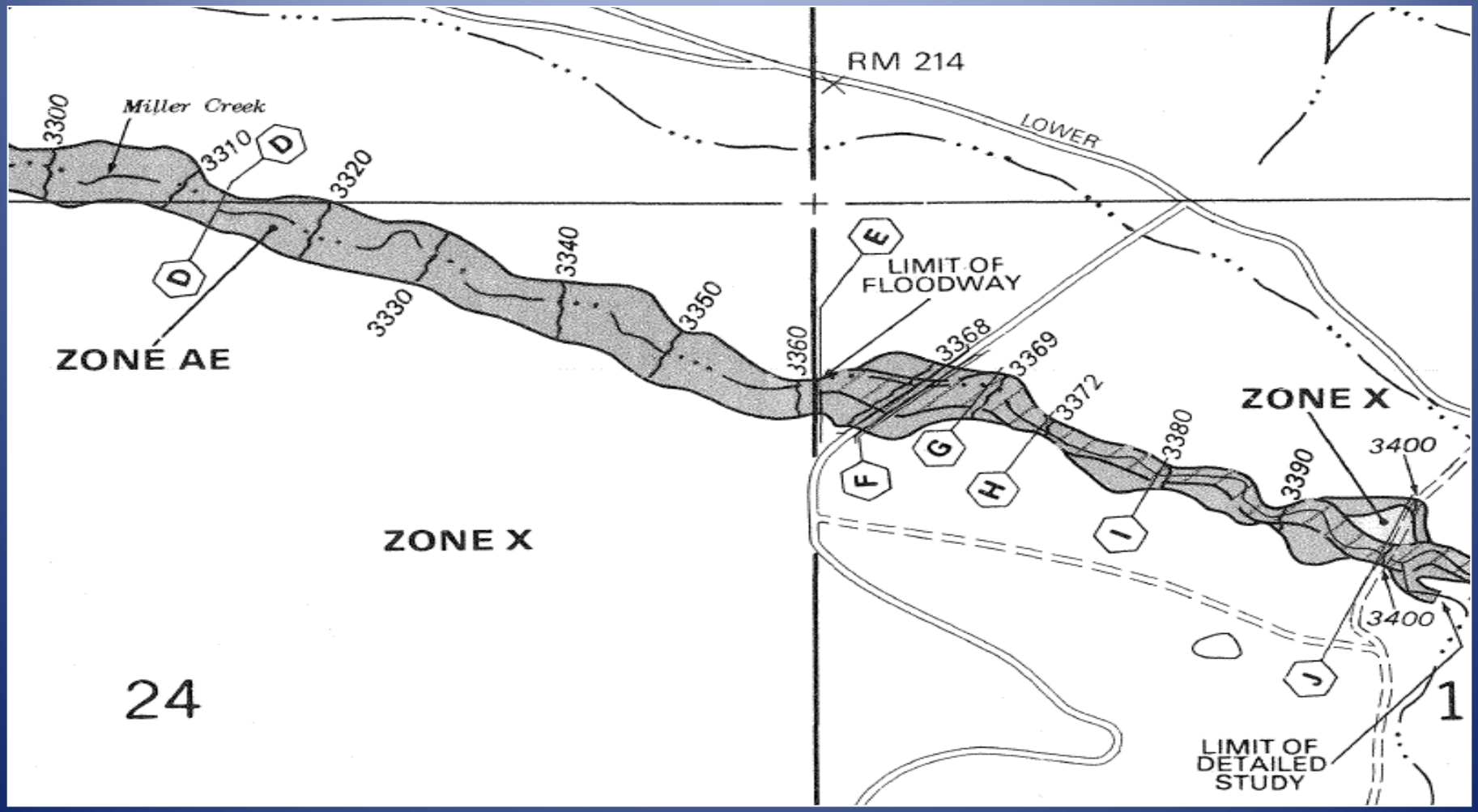


Flood Profiles and BFEs published in FIS.

Has limited Hydrology and Topographic Data

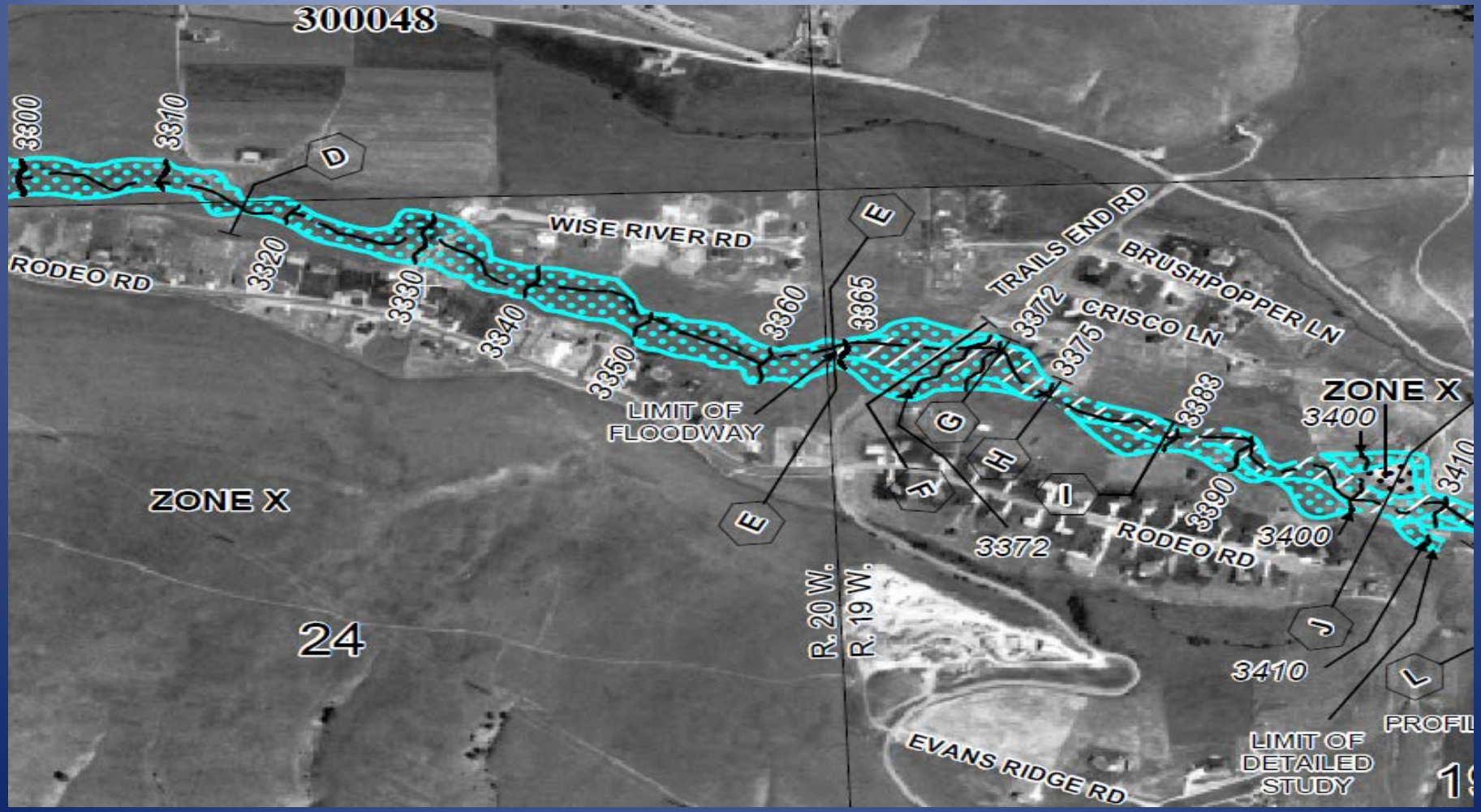
Has Limited Hydraulic Modeling at Bridges and Crossings

Types of Floodplain Studies



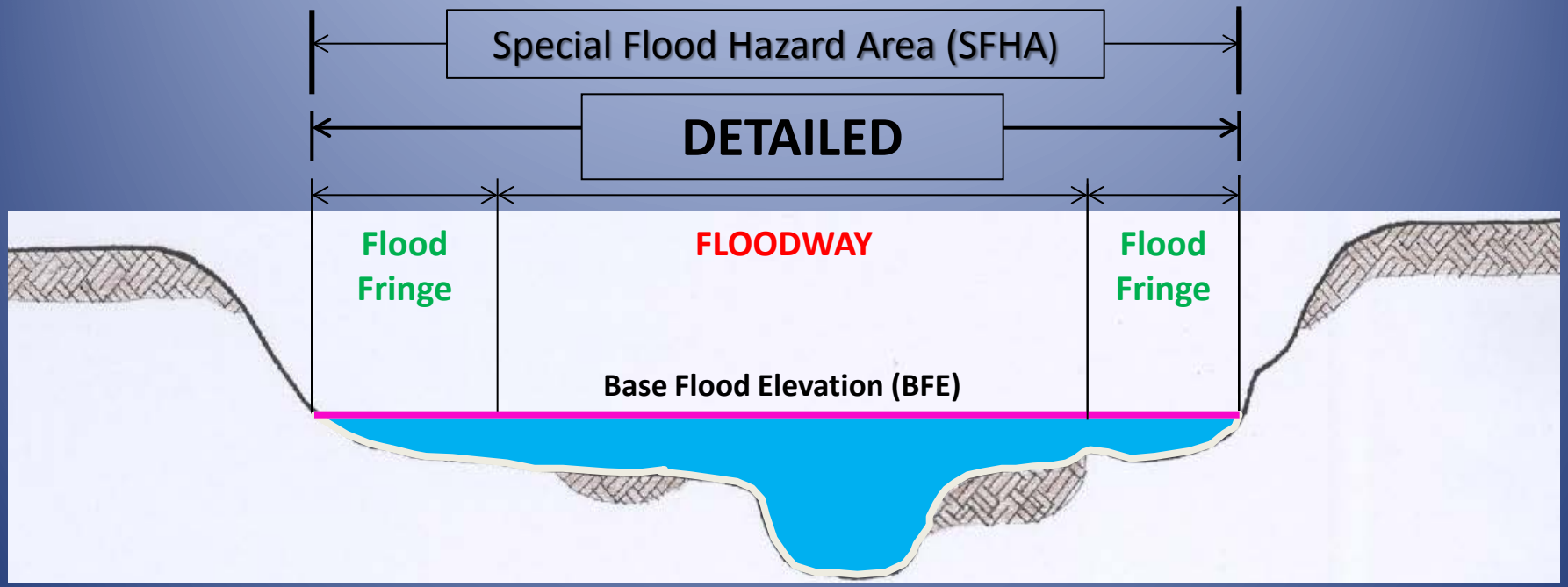
FEMA Digital Flood Insurance Rate Map (FIRM) – **Limited Detail Study**

Types of Floodplain Studies



FEMA Flood Insurance Rate Map (DFIRM) – **Limited Detail Study**

Types of Floodplain Studies



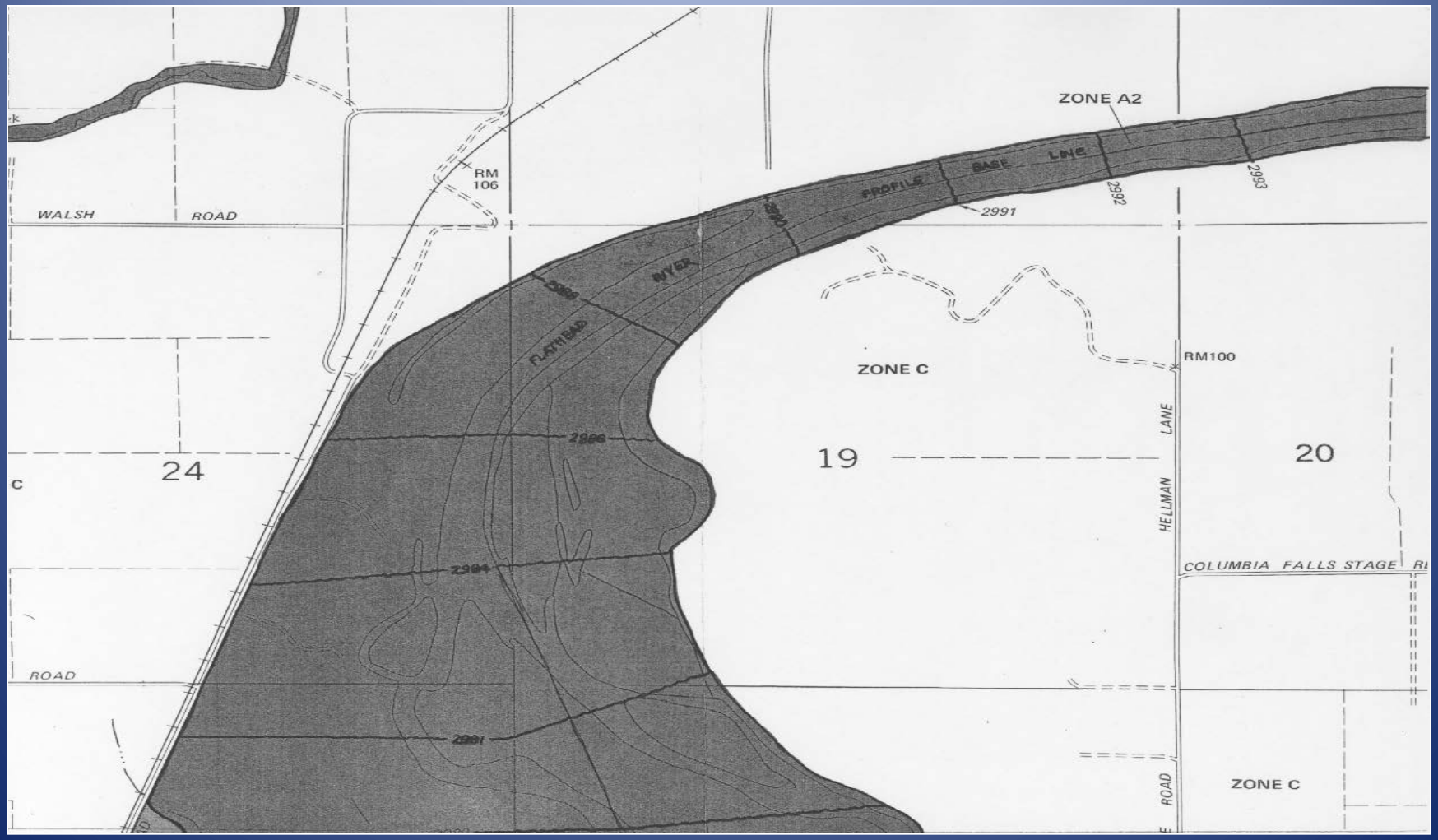
Flood Profiles and BFEs are published in FIS.

Based Upon Detailed Hydrology and Topographic data.

Based Upon Detailed Hydraulic Modeling.

Floodway Data Tables are published in the FIS.

Types of Floodplain Studies

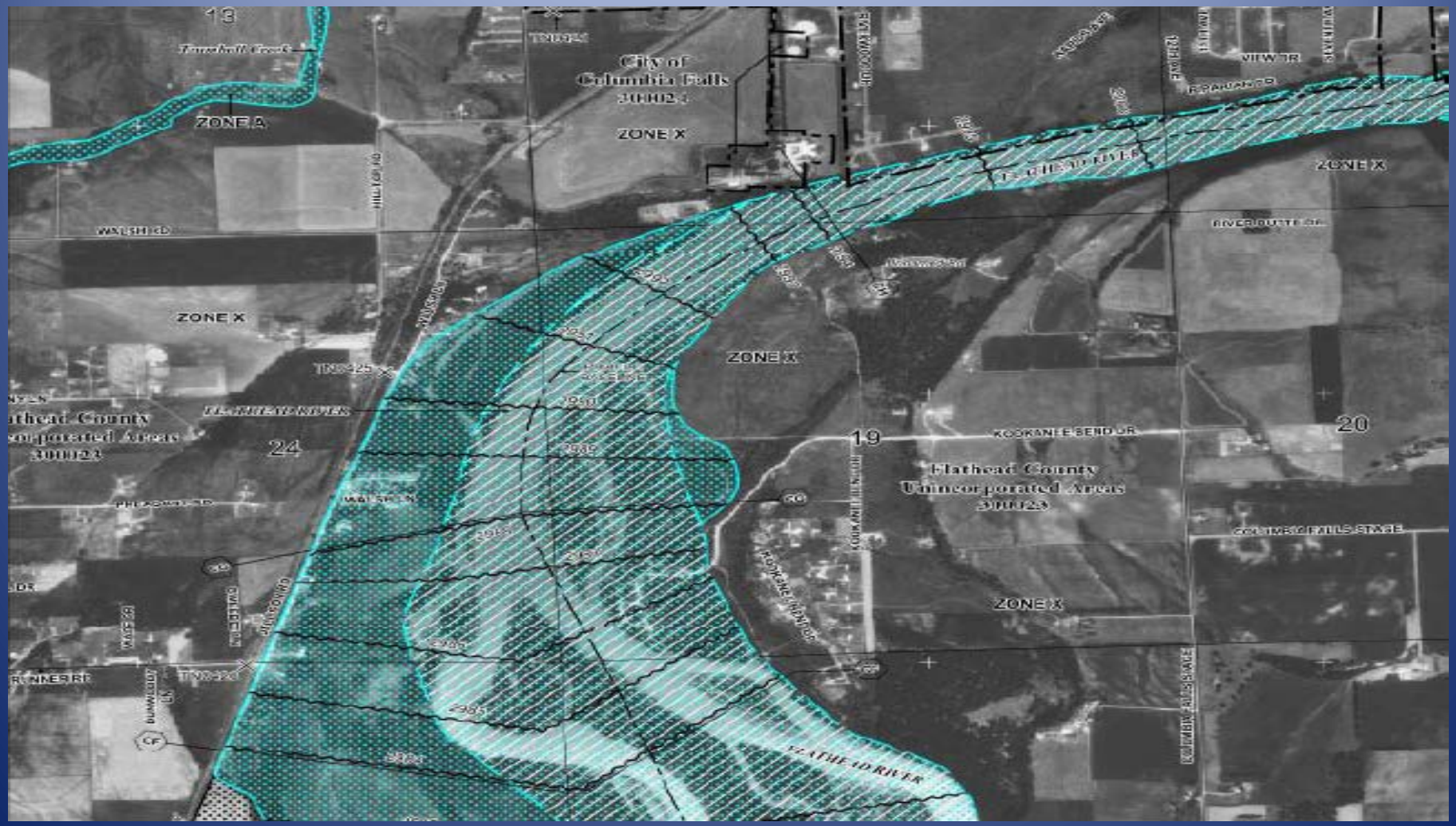


FEMA Flood Insurance Rate Map (FIRM) - **Detail Study**

Types of Floodplain Studies

FEMA Floodway Boundary Map - **Detail Study**

Types of Floodplain Studies



FEMA Digital Flood Insurance Rate Map (DFIRM) - **Detailed Study**

Types of Floodplain Studies

DFIRM Legend

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

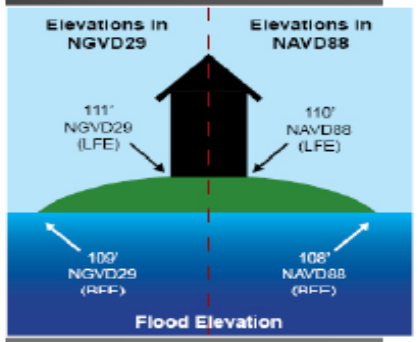
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

Types of Floodplain Studies

DFIRM Legend



	1% annual chance floodplain boundary
	0.2% annual chance floodplain boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

A — A	Cross section line
23 - - - - - 23	Transect line
45° 02' 08", 93° 02' 12"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
4989000m N	1000-meter Universal Transverse Mercator grid values, zone 11
4989000 FT	5000-foot grid ticks: Montana State Plane coordinate system, (FIPS Zone 2500), Transverse Mercator
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
• M1.5	River Mile

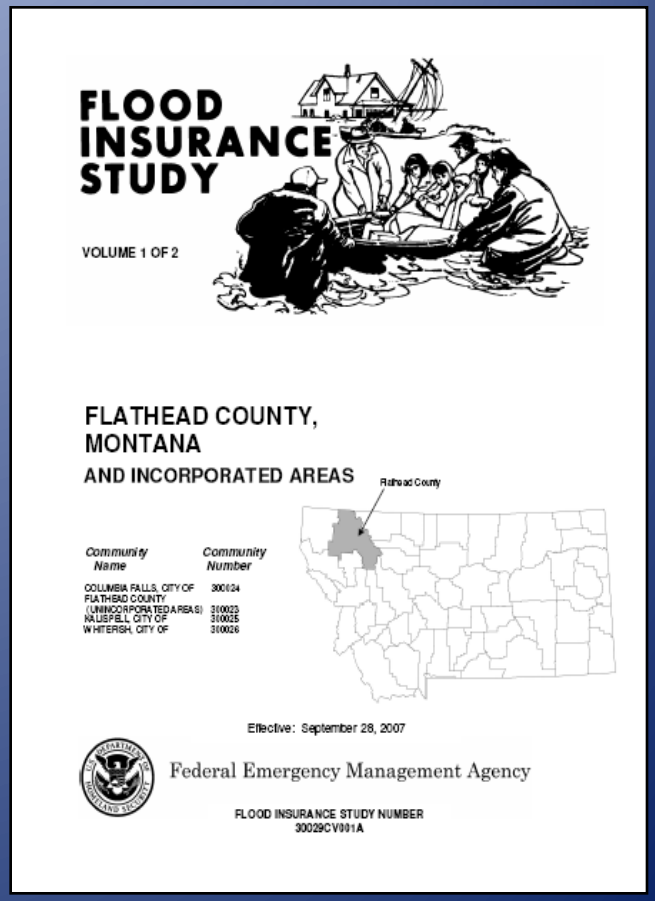
DATUM CONVERSION – NOAA"s VERTCON http://www.ngs.noaa.gov/PC_PROD/VERTCON/

Flood Insurance Study (FIS)

The FIS is a compilation and presentation of flood risk data for specific watercourses and lakes within a community.

The FIS report and associated maps delineate the SFHA, designate flood risk zones and establish BFE's.

The FIS serves as the basis for rating flood insurance, regulating floodplain development and carrying out floodplain management measures.



FLOOD INSURANCE STUDY

VOLUME 1 OF 2

FLATHEAD COUNTY, MONTANA

AND INCORPORATED AREAS

Flathead County

Community Name	Community Number
COLUMBIA FALLS, CITY OF	300024
FLATHEAD COUNTY (UNINCORPORATED AREAS)	300023
KALISPELL, CITY OF	300025
WHITEFISH, CITY OF	300026

Effective: September 28, 2007

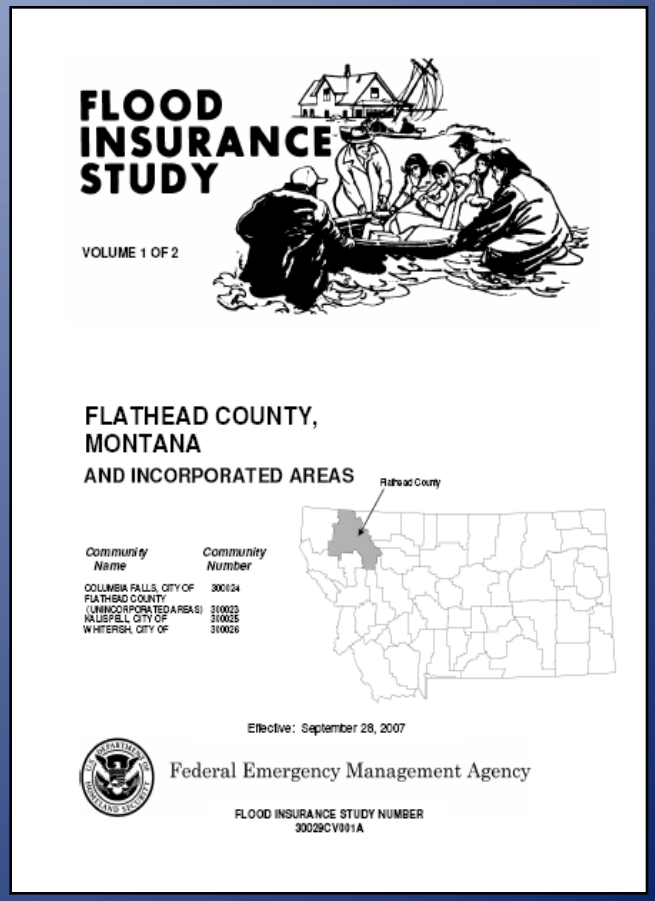
Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER 30029CV001A

Flood Insurance Study (FIS)

The FIS report has three components:

- *The Flood Insurance Study Report*
- *The FIRM or DFIRM's*
- *Prior to 1986, a separate Flood Boundary and Floodway Map (FBFM) was issued as a component of the FIS*



FLOOD INSURANCE STUDY

VOLUME 1 OF 2

FLATHEAD COUNTY, MONTANA

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WHITEFISH, CITY OF	300026

Effective: September 28, 2007

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER 30029CV001A

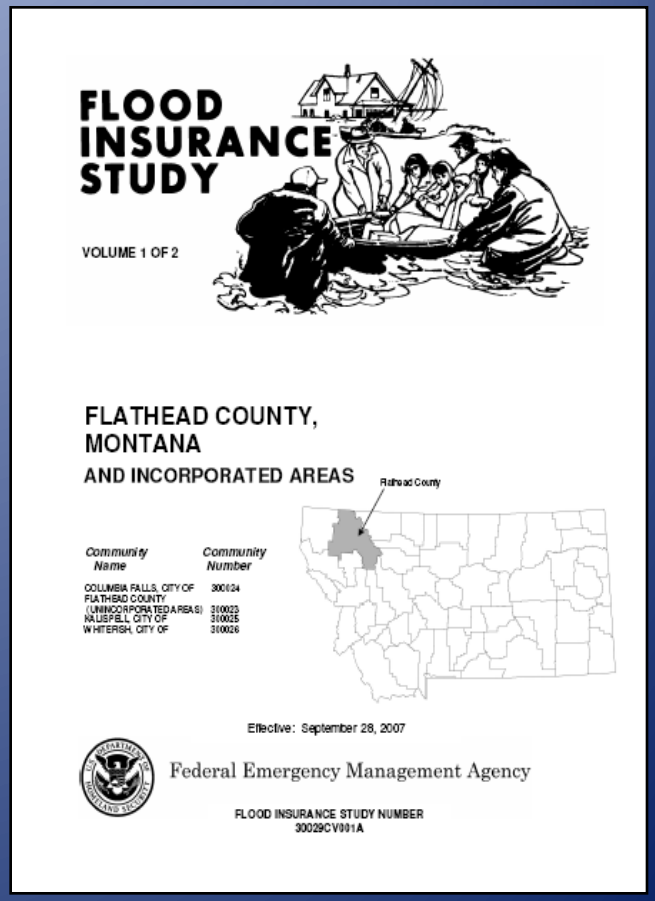
Flood Insurance Study (FIS)

The FIS report is an appraisal of the Community's flood hazards in a narrative that describes:

- *The purpose of the study*
- *Historic floods*
- *The area and flooding sources studied*
- *The engineering methods used*

Contains tables summarizing various flood hazard data.

Contains computed flood profiles.



FLOOD INSURANCE STUDY

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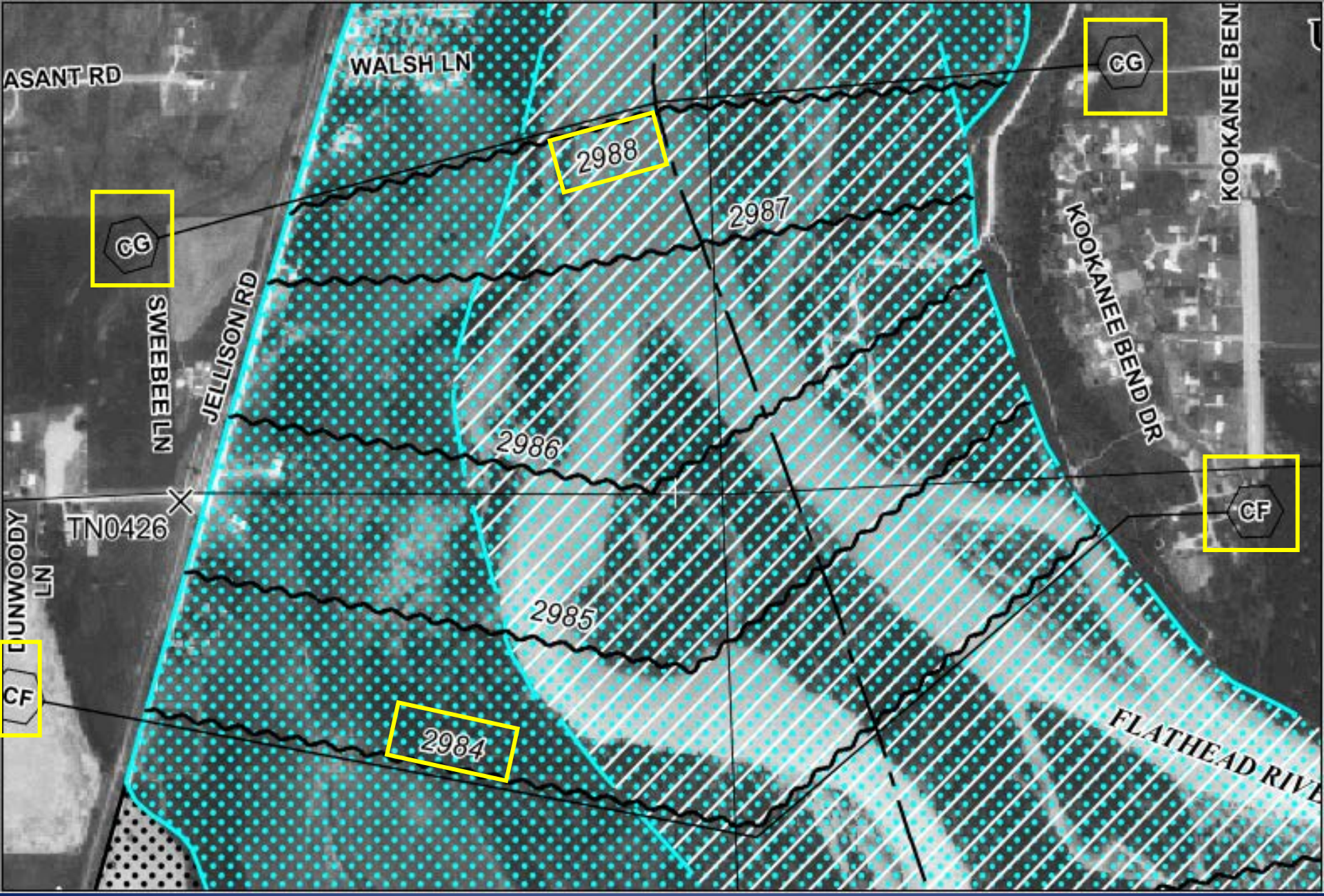


Example – DFIRM

FLOODING SOURCE		FLOODWAY			1-PERCENT ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
FLATHEAD RIVER (cont.)								
BO	145,150	3,251	18,754	4.5	2,933.7	2,933.7	2,934.0	0.3
BP	147,050	2,925	15,369	5.4	2,935.5	2,935.5	2,935.8	0.3
BQ	148,550	3,657	20,632	4.0	2,937.2	2,937.2	2,937.6	0.4
BR	151,050	3,931	9,143	9.1	2,940.7	2,940.7	2,940.7	0.0
BS	153,950	3,194	12,346	6.8	2,945.1	2,945.1	2,945.1	0.0
BT	156,550	2,604	18,187	4.6	2,947.3	2,947.3	2,947.3	0.0
BU	158,650	2,002	7,356	11.4	2,949.5	2,949.5	2,949.5	0.0
BV	160,350	1,252	10,087	8.3	2,953.2	2,953.2	2,953.2	0.0
BW	162,150	971	7,894	10.6	2,956.3	2,956.3	2,956.3	0.0
BX	163,700	1,750	14,184	5.9	2,957.9	2,957.9	2,957.9	0.0
BY	165,550	1,850	7,621	11.0	2,960.2	2,960.2	2,960.2	0.0
BZ	167,300	1,608	12,297	6.8	2,962.7	2,962.7	2,962.7	0.0
CA	170,100	2,013	12,744	6.5	2,966.7	2,966.7	2,966.7	0.0
CB	172,400	1,280	12,883	6.5	2,969.8	2,969.8	2,970.3	0.5
CC	174,500	1,377	12,545	6.6	2,972.7	2,972.7	2,973.2	0.5
CD	178,000	2,506	20,757	4.0	2,977.6	2,977.6	2,978.1	0.5
CE	180,700	2,416	17,097	4.9	2,980.9	2,980.9	2,981.4	0.5
CF	183,600	2,775	19,317	4.4	2,984.0	2,984.0	2,984.3	0.3
CG	186,700	2,125	15,714	5.4	2,988.0	2,988.0	2,988.5	0.5
CH	191,400	730	9,788	8.6	2,993.7	2,993.7	2,994.2	0.5
CI	197,900	469	8,694	9.7	2,997.8	2,997.8	2,998.3	0.5
CJ	200,070	1,181	12,310	7.7	3,004.1	3,004.1	3,004.3	0.2

[1]Feet above confluence with Flathead Lake

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

FLATHEAD COUNTY, MT
AND INCORPORATED AREAS

FLOODWAY DATA

FLATHEAD RIVER

Example – Floodway Data Table

FLOODING SOURCE		FLOODWAY			1-PERCENT ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
FLATHEAD RIVER (cont.)								
BO	[illegible]	[illegible]						
BP								
BQ								
BR								
BS								
BT								
BU	158,650	2						
BV	160,350	1						
BW	162,150	971	7,894	10.6	2,956.3	2,956.3	2,956.3	0.0
BX	163,700	1,750	14,184	5.9	2,957.9	2,957.9	2,957.9	0.0
BY	165,550	1,850	7,621	11.0	2,960.2	2,960.2	2,960.2	0.0
BZ	167,300	1,608	12,297	6.8	2,962.7	2,962.7	2,962.7	0.0
CA	170,100	2,013	12,744	6.5	2,966.7	2,966.7	2,966.7	0.0
CB	172,400	1,280	12,883	6.5	2,969.8	2,969.8	2,970.3	0.5
CC	174,500	1,377	12,545	6.6	2,972.7	2,972.7	2,973.2	0.5
CD	178,000	2,506	20,757	4.0	2,977.6	2,977.6	2,978.1	0.5
CE	180,700	2,416	17,097	4.9	2,980.9	2,980.9	2,981.4	0.5
CF	183,600	2,775	19,317	4.4	2,984.0	2,984.0	2,984.3	0.3
CG	186,700	2,125	15,714	5.4	2,988.0	2,988.0	2,988.5	0.5
CH	191,400	730	9,788	8.6	2,993.7	2,993.7	2,994.2	0.5
CI	197,900	469	8,694	9.7	2,997.8	2,997.8	2,998.3	0.5
CJ	200,070	1,181	12,310	7.7	3,004.1	3,004.1	3,004.3	0.2

[1]Feet above confluence with Flathead Lake

Cross S
Statior

Distance from the
the detailed stud
profile.

Floodway Data - Important data needed for determining floodway boundarys.

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

FLATHEAD COUNTY, MT
AND INCORPORATED AREAS

FLOODWAY DATA

FLATHEAD RIVER

Example – Floodway Data Table

FLOODING SOURCE		FLOODWAY			1-PERCENT ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
FLATHEAD RIVER (cont.)								
					2,933.7	2,933.7	2,934.0	0.3
					2,935.5	2,935.5	2,935.8	0.3
					2,937.2	2,937.2	2,937.6	0.4
					2,940.7	2,940.7	2,940.7	0.0
					2,945.1	2,945.1	2,945.1	0.0
BT	156,550	2,604	18,187	4.6	2,947.3	2,947.3	2,947.3	0.0
BU	158,650	2,002	7,356	11.4	2,949.5	2,949.5	2,949.5	0.0
BV	160,350	1,252	10,087	8.3	2,953.2	2,953.2	2,953.2	0.0
BW	162,150	971	7,894	10.6	2,956.3	2,956.3	2,956.3	0.0
BX	163,700	1,750	14,184	5.9	2,957.9	2,957.9	2,957.9	0.0
BY	165,550	1,850	7,621	11.0	2,960.2	2,960.2	2,960.2	0.0
BZ	167,300	1,608	12,297	6.8	2,962.7	2,962.7	2,962.7	0.0
CA	170,100	2,013	12,744	6.5	2,966.7	2,966.7	2,966.7	0.0
CB	172,400	1,280	12,883	6.5	2,969.8	2,969.8	2,970.3	0.5
CC	174,500	1,377	12,545	6.6	2,972.7	2,972.7	2,973.2	0.5
CD	178,000	2,506	20,757	4.0	2,977.6	2,977.6	2,978.1	0.5
CE	180,700	2,416	17,097	4.9	2,980.9	2,980.9	2,981.4	0.5
CF	183,600	2,775	19,317	4.4	2,984.0	2,984.0	2,984.3	0.3
CG	186,700	2,125	15,714	5.4	2,988.0	2,988.0	2,988.5	0.5
CH	191,400	730	9,788	8.6	2,993.7	2,993.7	2,994.2	0.5
CI	197,900	469	8,694	9.7	2,997.8	2,997.8	2,998.3	0.5
CJ	200,070	1,181	12,310	7.7	3,004.1	3,004.1	3,004.3	0.2

[1]Feet above confluence with Flathead Lake

This is the Regulatory BFE that must be used!

TABLE 6

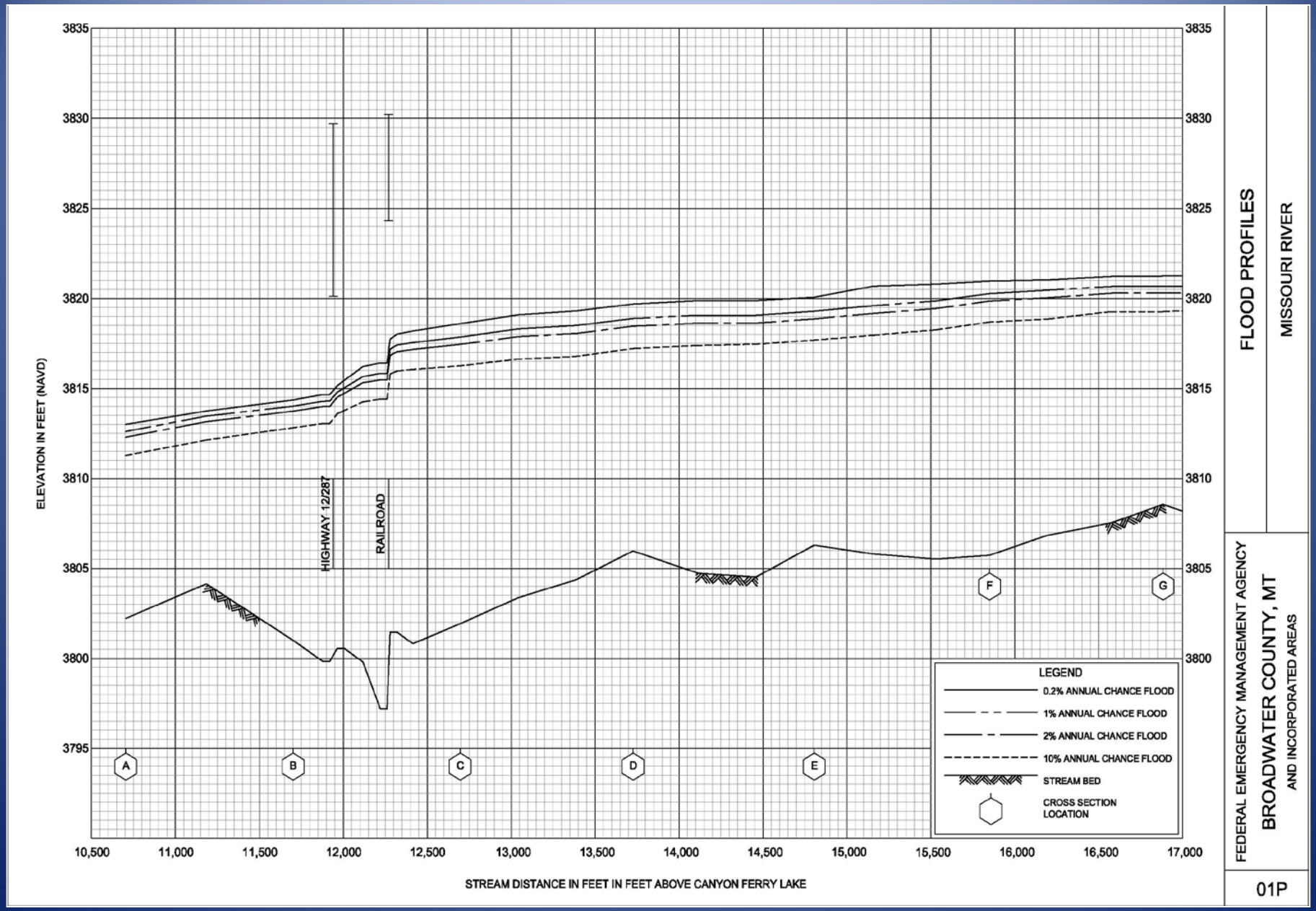
FEDERAL EMERGENCY MANAGEMENT AGENCY

FLATHEAD COUNTY, MT
AND INCORPORATED AREAS

FLOODWAY DATA

FLATHEAD RIVER

Example – *Floodway* Data Table



Example – Flood Profile Sheet

Flood Insurance Study (FIS)

Flood Profiles

In addition to the flood elevation lines, FIS profile sheets contain:

- A plot of the stream bed elevation,
- The locations of the cross sections used in the FIS and shown on the FIRM (a letter within a hexagon),
- The locations of roads,
- Culverts and bridges (usually depicted as a large “I”).

By reading the flood profile, you can determine the flood elevation at any point along the stream.

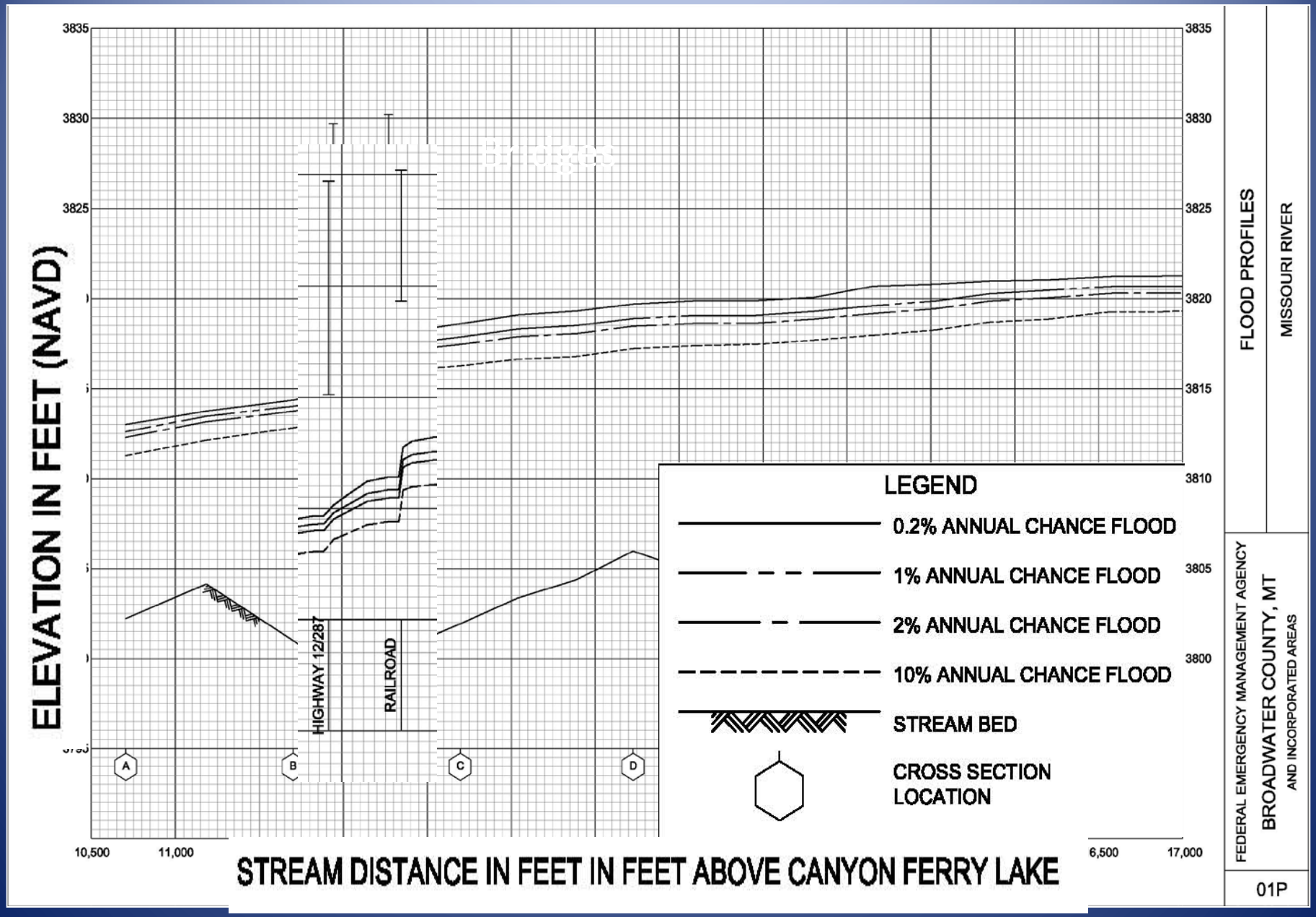
Flood Insurance Study (FIS)

Flood Profiles

The legend at the bottom right corner shows the symbol for each flood profile plotted and various features.

The bottom of the graph (the horizontal axis or x-axis) shows the distance along the stream, which is commonly called stationing. For stationing, you start at the mouth of a stream and work upstream.

The left and right vertical sides, or y-axis, shows the elevation in feet NAVD 88, or a different datum depending upon the effective date of the FIS.



Example – Flood Profile

Flood Insurance Study (FIS)

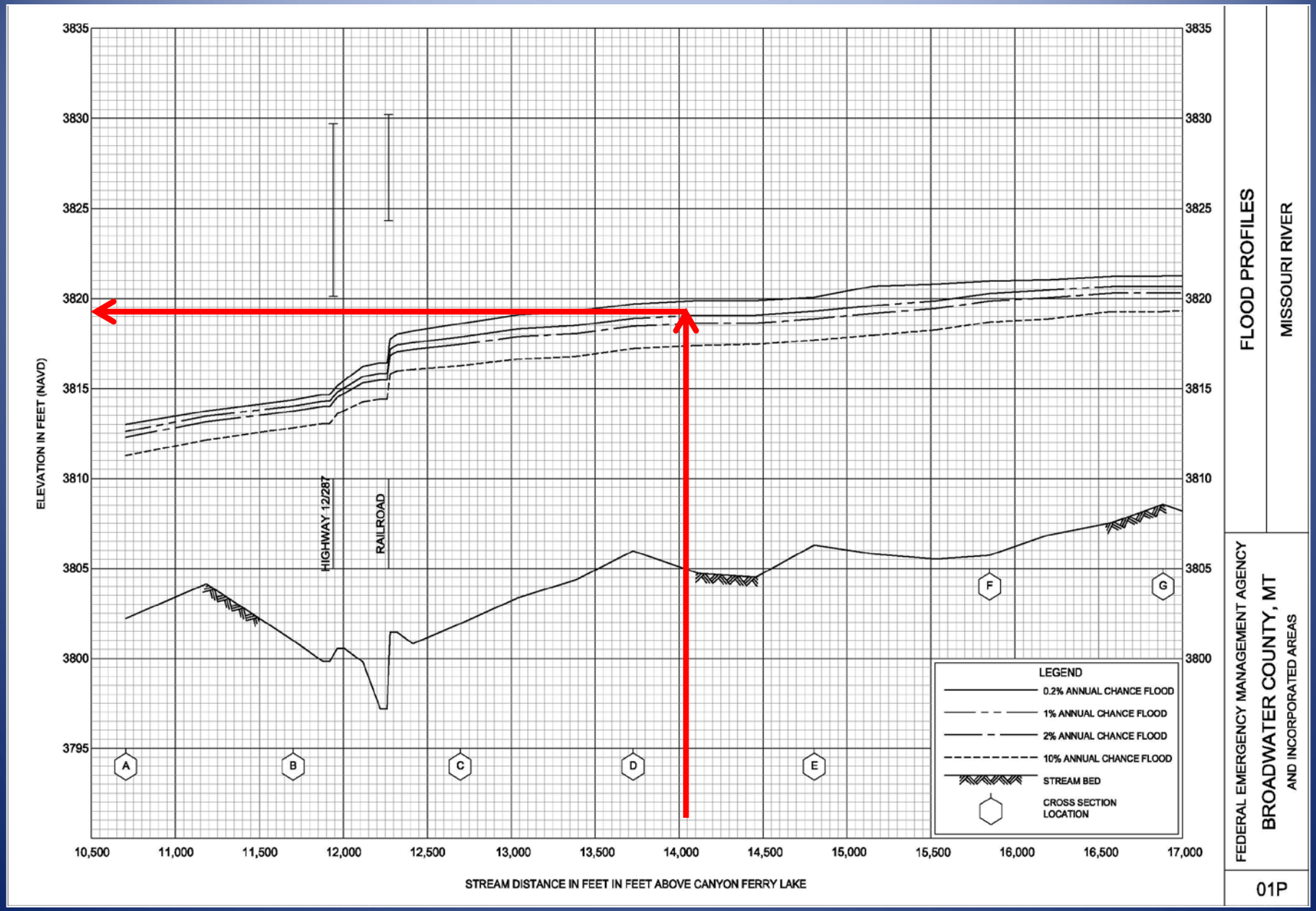
Flood Profiles

In order to identify the BFE at a development site, the stream stationing for the site must be determined.

Determine the site's distance from a cross section or other feature that appears on the profile.

Find the feature's stationing on the horizontal, or x-axis, and draw a vertical line upward until it intersects the appropriate flood profile.

Draw a horizontal straight line to the left or right edge of the graph and read the elevation on the y-axis.



Example – Flood Profile

Thank You

QUESTIONS?

The Elevation Certificate

The primary purpose of the Elevation Certificate (EC) is to rate a flood insurance policy.

HOWEVER, it has since become the primary form for documenting building compliance with floodplain regulations.

There are disconnects between insurance and compliance, which can often lead to problems in using this form as the sole documentation for building compliance.

The Elevation Certificate

General Flood Insurance Rating Concepts

Build outside the floodplain and flood insurance is very cheap (until you experience a flood loss)

Build in the floodplain and elevate the “living” or “finished floor” several feet above the BFE and insurance will be relatively cheap – the higher you go the cheaper it gets.

Structures in floodplain with a finished or enclosed floor below BFE - premiums will be very expensive.

If flood openings are missing or not sufficient and/or machinery/utilities are below BFE insurance will cost more.

The Elevation Certificate

Private Lender Determinations

Around 80% of all determinations are performed automatically using proprietary methods.

When USPS address cannot be found these automated determination methods may default to tax map parcel or even zip code.

A standard appeal process does not exist. Determination companies work for the lender and will only accept review requests from the lender.

The Elevation Certificate

The EC and the Community Rating System

Maintaining Elevation Certificates is a participatory prerequisite to the CRS Program

Maintaining EC's means all new construction/substantial improvements must have a completed EC.

The EC's must be correct and complete.

Failure to maintain EC's can result in a CRS Program class reduction

The Elevation Certificate

What Is The Elevation Certificate Used For?

The Elevation Certificate is an important administrative tool of the National Flood Insurance Program (NFIP).

Used by communities to verify and document building compliance with the community's floodplain management regulations.

Utilized to determine the proper flood insurance rate.

Used to support map amendments and revisions.

The Elevation Certificate

Who Needs An Elevation Certificate?

Anyone who will apply for insurance on a building that is located in or near a Special Flood Hazard Area (SFHA).

Anyone who is proposing to construct a new structure within a SFHA, or substantially improve an existing building within a SFHA.

Anyone who will apply for a LOMA, LOMR-F, CLOMA, or CLOMR-F.

The Elevation Certificate

Who Certifies Building Elevations?

In order to be rated properly for flood insurance, a State-licensed professional is required to certify the elevation information on the Elevation Certificate.

Surveyor

Engineer

Architect

The Elevation Certificate

What Happens if the EC is not Correct and Complete?

If the EC is incorrect, conflicting, or incomplete? The property owner gets the more conservative insurance rating (i.e. more expensive).

If the insurance company cannot accept the EC because of errors or inconsistency? The lender may "force place" insurance. Force place does not require an EC - however it is very expensive.

If the rating is wrong because of incomplete or incorrect EC data, the policy holder is ultimately held liable.

The Elevation Certificate

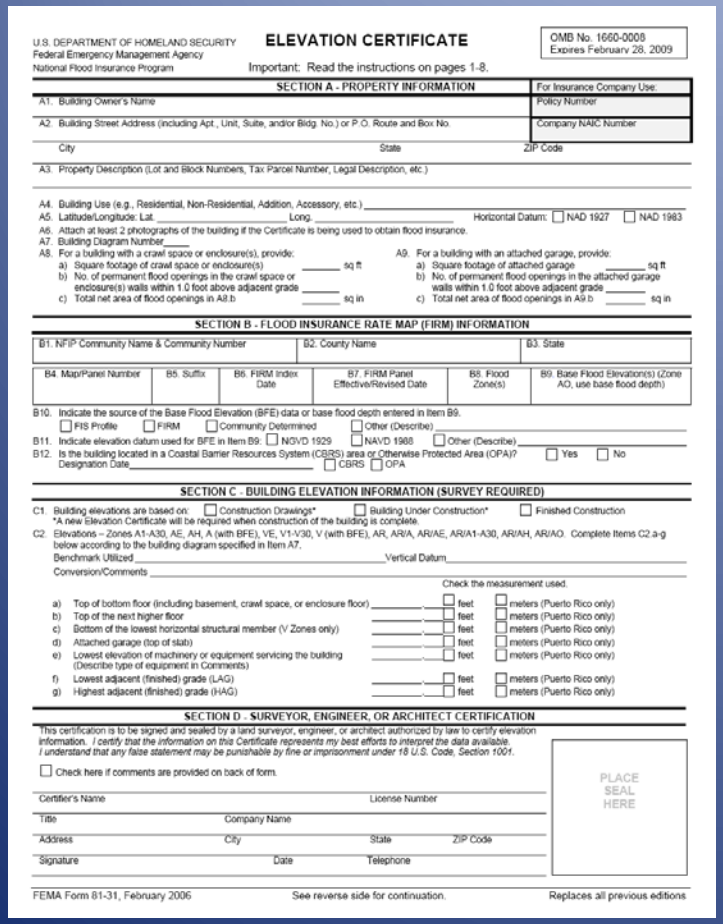
Roles and Responsibilities

It is the Surveyors/Engineers responsibility to read the instructions and ensure that the EC is correct and complete.

It is the Community's responsibility to review each form for completeness and accuracy. If the form is not complete and accurate, it should not be accepted.

It is the Property Owners responsibility to understand the process.

The Elevation Certificate



U.S. DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
National Flood Insurance Program

ELEVATION CERTIFICATE

OMB No. 1660-0008
Expires February 28, 2009

Important: Read the instructions on pages 1-8.

SECTION A - PROPERTY INFORMATION | For Insurance Company Use:

A1. Building Owner's Name | Policy Number

A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. | Company NAIC Number

City State ZIP Code

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)

A5. Latitude/Longitude: Lat. Long. Horizontal Datum: ☐ NAD 1927 ☐ NAD 1983

A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.

A7. Building Diagram Number

A8. For a building with a crawl space or enclosure(s), provide:
a) Square footage of crawl space or enclosure(s) sq ft
b) No. of permanent flood openings in the crawl space or enclosure(s) walls within 1.0 foot above adjacent grade
c) Total net area of flood openings in A8.b sq in

A9. For a building with an attached garage, provide:
a) Square footage of attached garage sq ft
b) No. of permanent flood openings in the attached garage walls within 1.0 foot above adjacent grade
c) Total net area of flood openings in A9.b sq in

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number	B2. County Name	B3. State

B4. Map/Panel Number	B5. Suffix	B6. FIRM Index Date	B7. FIRM Panel Effective/Revised Date	B8. Flood Zone(s)	B9. Base Flood Elevation(s) (Zone AO, use base flood depth)

B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9.
☐ FIS Profile ☐ FIRM ☐ Community Determined ☐ Other (Describe)

B11. Indicate elevation datum used for BFE in Item B9: ☐ NGVD 1929 ☐ NAVD 1988 ☐ Other (Describe)

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☐ No
Designation Date ☐ CBRS ☐ OPA

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

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

C2. Elevations – Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO. Complete Items C2.a-g below according to the building diagram specified in Item A7.
Benchmark Utilized Vertical Datum
Conversion/Comments

Check the measurement used.

a) Top of bottom floor (including basement, crawl space, or enclosure floor) ☐ feet ☐ meters (Puerto Rico only)
b) Top of the next higher floor ☐ feet ☐ meters (Puerto Rico only)
c) Bottom of the lowest horizontal structural member (V Zones only) ☐ feet ☐ meters (Puerto Rico only)
d) Attached garage (top of slab) ☐ feet ☐ meters (Puerto Rico only)
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment in Comments) ☐ feet ☐ meters (Puerto Rico only)
f) Lowest adjacent (finished) grade (LAG) ☐ feet ☐ meters (Puerto Rico only)
g) Highest adjacent (finished) grade (HAG) ☐ feet ☐ meters (Puerto Rico only)

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

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

☐ Check here if comments are provided on back of form.

Certifier's Name License Number

Title Company Name

Address City State ZIP Code

Signature Date Telephone

PLACE SEAL HERE

FEMA Form 81-31, February 2006 See reverse side for continuation. Replaces all previous editions

Can be downloaded at:

http://www.fema.gov/business/nfip/elvinst.shtm

FEMA

Thank You

QUESTIONS?

National Flood Insurance Program (NFIP)

FEMA Flood Zone Designations

FEMA Letter Of Map Change (LOMC)

Alterations and Changes to the Flood Insurance Rate Map through Letters of Map Change (LOMCS)

FEMA

FEMA Letter Of Map Change (LOMC)

What Is a LOMC

A LOMC is a letter which reflects an official revision to an effective DFIRM/FIRM or FHBM.

A LOMCs is issued in place of the physical revision and republication of the effective map.

A processed LOMC will change the current effective map (by letter) and thus may impact a floodplain administrators' regulatory requirements and also insurance requirements.

In some cases, communities are required to ensure the changed flood risk (either increased or decreased) information is reported to FEMA.

FEMA Letter Of Map Change (LOMC)

What is the Purpose of a LOMC

A process which allows a property owner, developer, or other entity to submit a record of site-specific floodplain alteration or changes to FEMA to officially change a DFIRM/FIRM or FHBM.

LOMAs and LOMR-F are voluntary.

LOMRs are required within 6 months of completion of project when BFEs are provided on the FIRM.

Possible option to get out of mandatory insurance requirements if there is a higher BFE.

FEMA Letter Of Map Change (LOMC)

What are Alterations or Changes to a Watercourse

Since all river and streams are dynamic systems, natural changes can and do occur on a regular basis.

If a natural change significantly affects the NFIP mapped Floodplain a LOMC is needed from the Community .

Manmade changes to a channel or floodplain is considered an Alteration. This includes development.

In some cases, communities are required to ensure the changed flood risk (either increased or decreased) information is reported to FEMA.

FEMA Letter Of Map Change (LOMC)

What is Development

Any man-made activity in the Special Flood Hazard Area (SFHA) to improved or unimproved real estate.

Including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation .

Including drilling operations for water wells, oil wells and directional drilling for utilities.

Also includes the storage of equipment or materials.

FEMA Letter Of Map Change (LOMC)

There are 6 kinds of LOMCs; LOMA, CLOMA, LOMR-F, CLOMR-F, LOMR, and CLOMR

There are 3 forms; MT-EZ, MT-1, and MT-2

Most cost money to submit, however a LOMA is FREE!!!

Some are voluntary actions; others are required

- LOMAs, LOMR-Fs are voluntary
- LOMRs are required when the project/property in question is in a reach that has defined BFEs that are changed.

FEMA Letter Of Map Change (LOMC)

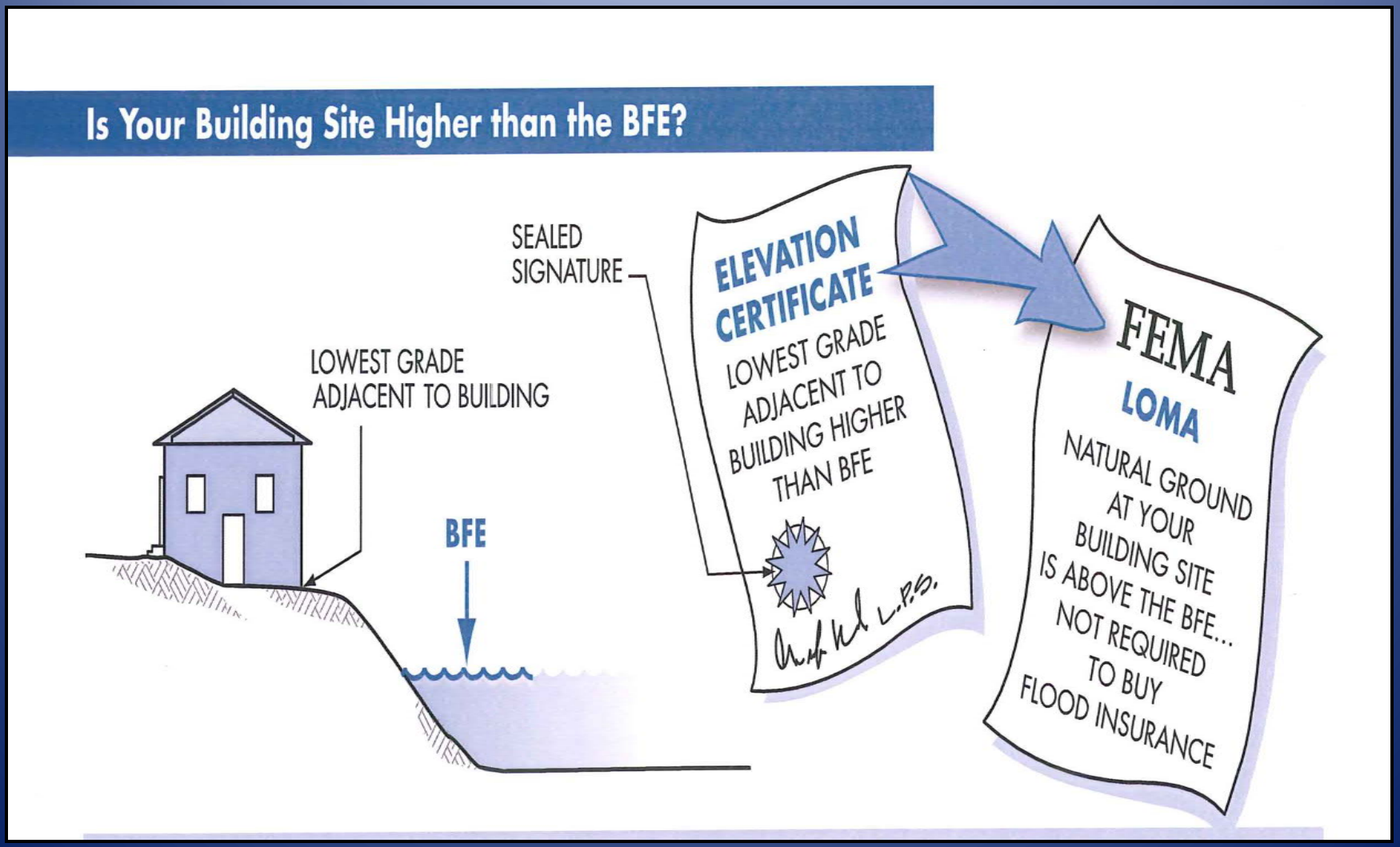
A Community Acknowledgement form is required for MT-1 and MT-2 forms.

This provides written assurance by the participating community that the applicant has complied with the appropriate minimum floodplain management requirements of 44 CFR 60.3(a)(3)

44 CFR 60.3(a)(3) – Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding (i.e. adequately anchored, constructed with materials resistant to flood damage, constructed to minimize flood damages).

FEMA Letter Of Map Change (LOMC)

What is a Letter Of Map Amendment (LOMA)



FEMA Letter Of Map Change (LOMC)

What is a Letter Of Map Amendment (LOMA)

Because of topography or limitations of (map) scale, small areas may be inadvertently shown within an SFHA on a FIRM even though the property is on natural ground and is at or above the elevation of the 1-percent-annual-chance flood.

Such cases are referred to as "inadvertent inclusions”

Recognizing that such situations of “inadvertent inclusion” occur, FEMA established administrative procedures to change the designation for these properties via the Letter of Map Amendment (LOMA) and the Letter of Map Revision Based on Fill, (LOMR-F) process.

FEMA Letter Of Map Change (LOMC)

What is a Letter Of Map Amendment (LOMA)

Through these processes, an individual who owns, rents, or leases property may submit certain mapping and survey information to FEMA and request that FEMA issue a document (not a map) that officially removes a property and/or structure from the SFHA.

In most cases, the applicant will need to hire a Licensed Land Surveyor or Registered Professional Engineer to prepare an Elevation Certificate or Elevation Form for the property.

Upon receiving a complete application forms package, FEMA will normally complete its review and issue its determination within 90 days.

FEMA Letter Of Map Change (LOMC)

What is a Letter Of Map Amendment (LOMA)

The LOMA process is only used for small scale changes.

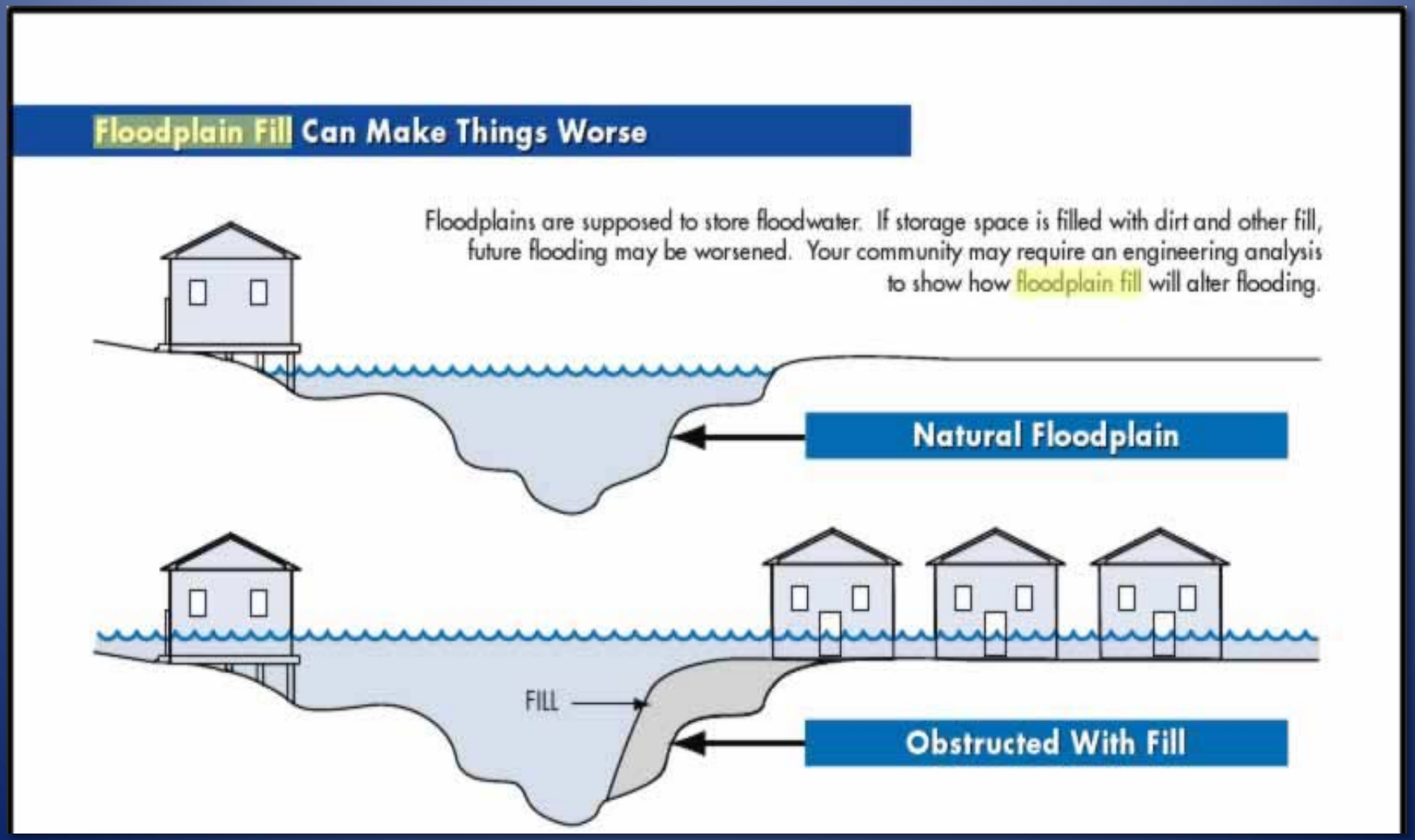
The applicant receives a letter from FEMA – the map is "modified" by the letter; a new map panel is NOT produced.

Used to remove a structure from the SFHA by comparing the BFE with the elevation of the Lowest Adjacent Grade (LAG) to the structure, (including attached decks, deck posts, stairs, window wells, or garages) from the SFHA, and thus remove mandatory purchase of flood insurance.

Used to remove the SFHA designation from a legally defined property or portion of property (Note: The elevation of the lowest ground on the property must be at or above the BFE).

FEMA Letter Of Map Change (LOMC)

Letter Of Map Amendment Based on Fill (LOMA-F)



FEMA Letter Of Map Change (LOMC)

Letter Of Map Amendment Based on Fill (LOMA-F)

The LOMA-F process is only used for small scale changes where fill has been placed to elevate land to at/above BFE.

If fill is placed in floodway, a no-rise certification must be approved by the regional office before the LOMR-F can be processed.

The applicant receives a letter from FEMA – the map is "modified" by the letter; a new map panel is NOT produced.

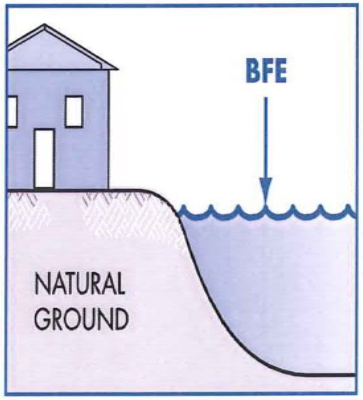
Used to remove the SFHA designation from a legally defined property or portion of property (Note: Fill can not be placed upon the property unless a structure is going to be built).

FEMA Letter Of Map Change (LOMC)

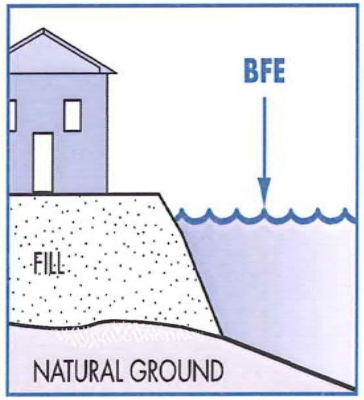
LOMA and LOMR-F

Flood Map Revisions: LOMAs and LOMR-Fs

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



Letter of Map Amendment (LOMA) is an official amendment to an effective FIRM that may be issued when a property owner provides additional technical information from a Florida licensed professional surveyor, such as ground elevation relative to the BFE. Lenders may waive the flood insurance requirement if the LOMA removes a building site from the SFHA because natural ground at the site is above the BFE.



Letter of Map Revision Based on Fill (LOMR-F) is an official revision to an effective FIRM that is issued to document FEMA's determination that a structure or parcel of land has been elevated by fill above the BFE, and therefore is no longer in the SFHA. Lenders may waive the insurance requirement if the LOMR-F removes a building site from the SFHA.

FEMA Letter Of Map Change (LOMC)

What is a Letter Of Map Revision (LOMR)

The LOMR process is used for large changes to the map, such as structural changes like bridge/culvert replacement, channelization, or other flood control projects .

Used to request a change to; the BFE, the SFHA, the regulatory floodway boundary delineation.

Used to request a change involving a BFE or the floodway boundary delineation involving property and/or structures that have been elevated by fill placed within the regulatory floodway.

FEMA Letter Of Map Change (LOMC)

What is a Letter Of Map Revision (LOMR)

In all cases, the applicant will need to hire a Registered Professional Engineer for H&H analysis and/or a Licensed Land Surveyor in order to obtain topographic data.

The applicant receives a letter from FEMA – the map is "modified" by the letter; a new map panel is NOT produced.

Used to remove a structure/property from the SFHA, and thus remove mandatory purchase of flood insurance.

LOMRs are required within 6 months of completion of project when BFEs are provided on the FIRM.

FEMA Letter Of Map Change (LOMC)

When is a Letter Of Map Revision (LOMR) Required

44 CFR 65.3

- A community's base flood elevation may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community shall notify the Administrator of the changes by submitting technical or scientific data in accordance with this part. *Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and flood plain management requirements will be based upon current data.*

FEMA Letter Of Map Change (LOMC)

What is a Conditional LOMC

A CLOMC is FEMA's comment on a proposed plan or project.

Used to ensure compliance of a proposed plan or project and it's changes to the SFHA.

Must be submitted and approved PRIOR TO CONSTRUCTION!

Conditional LOMCs do not remove the mandatory purchase of flood insurance requirement and do not revise or amend the map .

FEMA Letter Of Map Change (LOMC)

Types of Conditional LOMC's

Conditional Letter of Map Amendment (CLOMA) – Must be submitted PRE-CONSTRUCTION – Requires a fee to apply.

Conditional Letter of Map Revision Based on Fill (CLOMR-F) – Must be submitted PRE-CONSTRUCTION – Requires a fee, fee based upon scope of project.

Conditional Letter of Map Revision (CLOMR) – Must be submitted PRE-CONSTRUCTION – Requires a fee, fee based upon scope of project.

FEMA Letter Of Map Change (LOMC)

When is a Conditional Letter Of Map Revision (LOMR) Required

If BFEs provided on map and no floodway defined:

44 CFR 60.3 (c)(13)
If the community proposes to allow development that would result in more than a 1.0 foot increase in the BFE, a CLOMR *with detailed analysis* must first be obtained.

- **For Montana, the increase is 0.5 foot.**
- **Floodplain administrators should be requiring from the applicant a detailed analysis to demonstrate what, if any, rise to the BFE will occur.**
- **Do not approve permit before CLOMR is approved by FEMA!**

FEMA Letter Of Map Change (LOMC)

When is a Conditional Letter Of Map Revision (LOMR) Required

If BFE and floodway defined:

44 CFR 60.3 (d)(4)
If the community proposes to allow development totally or partially within the floodway that would result in any (greater than 0.0 foot) increase in the BFE, a CLOMR must be obtained.

- **<u>Even if there are to be no proposed changes</u>, as part of the permitting process, the applicant must still demonstrate through detailed analysis that the rise in the floodway is no more than 0.00 feet. (44 CFR 60.3 (d)(3)**

FEMA Letter Of Map Change (LOMC)

Timeline for LOMC Determinations

Upon receipt of a correct and complete application:

LOMAs	60 days
CLOMAs	90 days
LOMR-FS	90 days
CLOMR-Fs	90 days
LOMRs	90 days
CLOMRs	90 days

If additional data is needed to process the LOMC request, the applicant is provided 90 days to respond.

FEMA Letter Of Map Change (LOMC)

Where can I find copies of processed LOMCs?

- FEMA Map Service Center
  - www.msc.fema.gov
  - P.O. Box 3617 Oakton, Virginia 22124-9617
  - Phone: (877) 336-2627
- There are 3 ways to find a LOMC
  - By Case ID
  - By Map Panel
  - By State/County/Community
- STATUS OF LOMC CAN ALSO BE FOUND ON FEMA WEBSITE
  - Type "Status of Map Change Requests" in FEMA search engine

Thank You

QUESTIONS?

National Flood Insurance Program (NFIP)

When is Insurance Required?

FEMA

MONTANA DNRC

National Flood Insurance Program (NFIP)

When is Insurance Required

Residents of High Risk Areas (areas within the SFHA).

Homes and buildings in high risk flood areas with mortgages from federally regulated or insured lenders are required to have flood insurance.

A lender can require flood insurance even if the Homeowner does not want to carry it.

National Flood Insurance Program (NFIP)

When is Insurance Required

Residents of Moderate to Low Risk Areas

Homes and businesses in moderate to low risk areas with mortgages from federally regulated or insured lenders are typically NOT required to have flood insurance.

A lender can require flood insurance even if it is not federally required.

However, Flood Insurance is highly recommended for structures located outside of NFIP mapped floodplains, near other possible flood sources.

National Flood Insurance Program (NFIP)

General Flood Insurance Rating Concepts

Build outside the floodplain and flood insurance is very cheap (until you experience a flood loss)

Build in the floodplain and elevate the “living” or “finished floor” several feet above the BFE and insurance will be relatively cheap – the higher you go the cheaper it gets.

Structures in floodplain with a finished or enclosed floor below BFE - premiums will be very expensive.

If flood openings are missing or not sufficient and/or machinery/utilities are below BFE insurance will cost more.

National Flood Insurance Program (NFIP)

Flood Insurance Reform Act of 2012-HFIAA 2014

Congress passed this Act which calls on FEMA and other agencies to make a number of significant changes to the management of the NFIP.

Some changes have already occurred and others will be phased in.

National Flood Insurance Program (NFIP)

Flood Insurance Reform Act of 2012-HFIAA 2014: Key provisions

- Raise rates to reflect true flood risk.
- Make the program more financially stable.
- Change how FIRM updates impact policyholders.

National Flood Insurance Program (NFIP)

Flood Insurance Reform Act of 2012-HFIAA 2014: Key provisions

Owners of these properties were able to obtain insurance at lower, subsidized rates that did not accurately reflect the real risk.

As risk has been updated over the years, many homes and businesses in areas of revised risk were also allowed discounted insurance rates.

"Grandfathering" approach prevented rate increases for existing properties when the flood risk in these areas increased.

National Flood Insurance Program (NFIP)

Flood Insurance Reform Act of 2012-HFIAA 2014: Key provisions

- New law eliminates some artificially low rates and discounts which are no longer sustainable.
- Flood insurance rates will reflect full risk.
- Flood insurance rates will rise on some policies.

National Flood Insurance Program (NFIP)

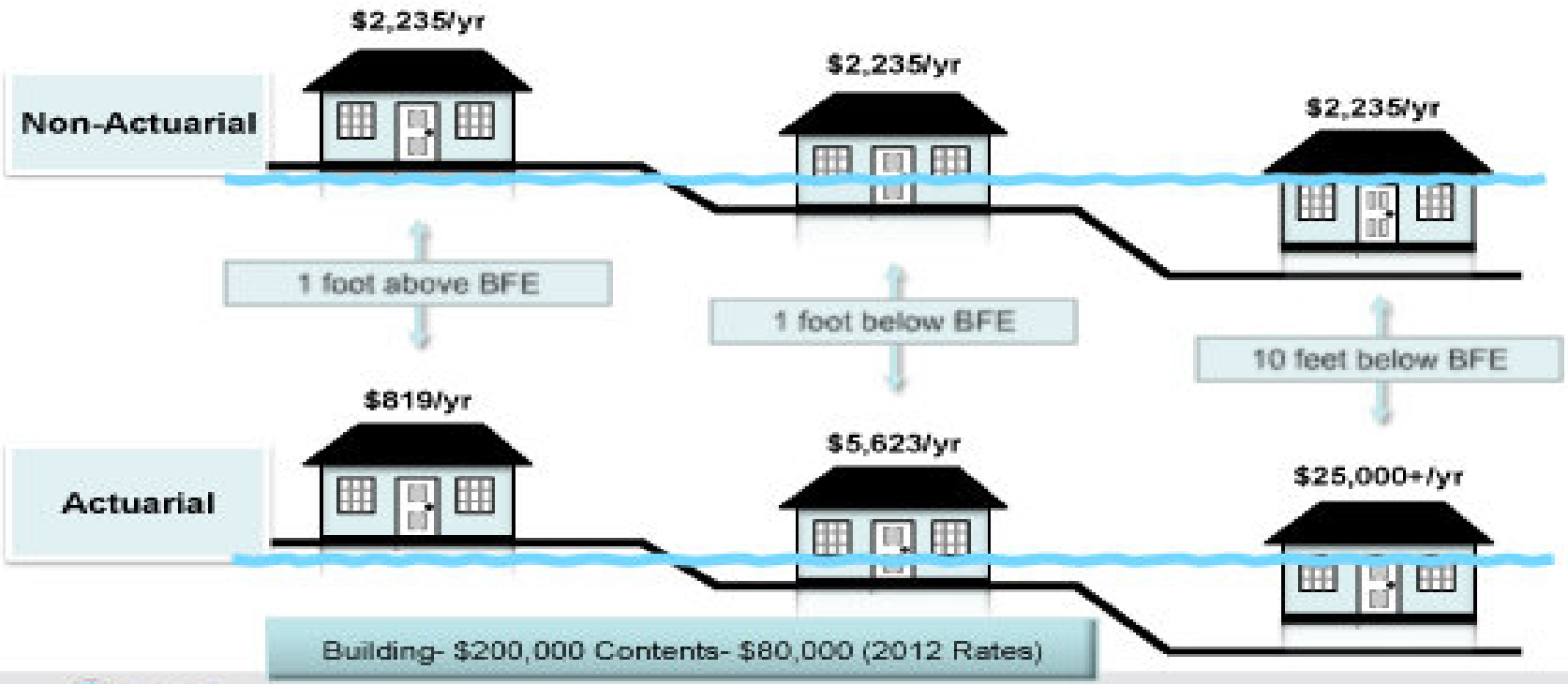
Flood Insurance Reform Act of 2012-HFIAA 2014: What Can Trigger Rate Changes

- Buying or selling a property.
- Allowing a flood insurance policy to lapse, or the purchase of a new policy.
- Suffer severe, repeated flood losses.

National Flood Insurance Program (NFIP)

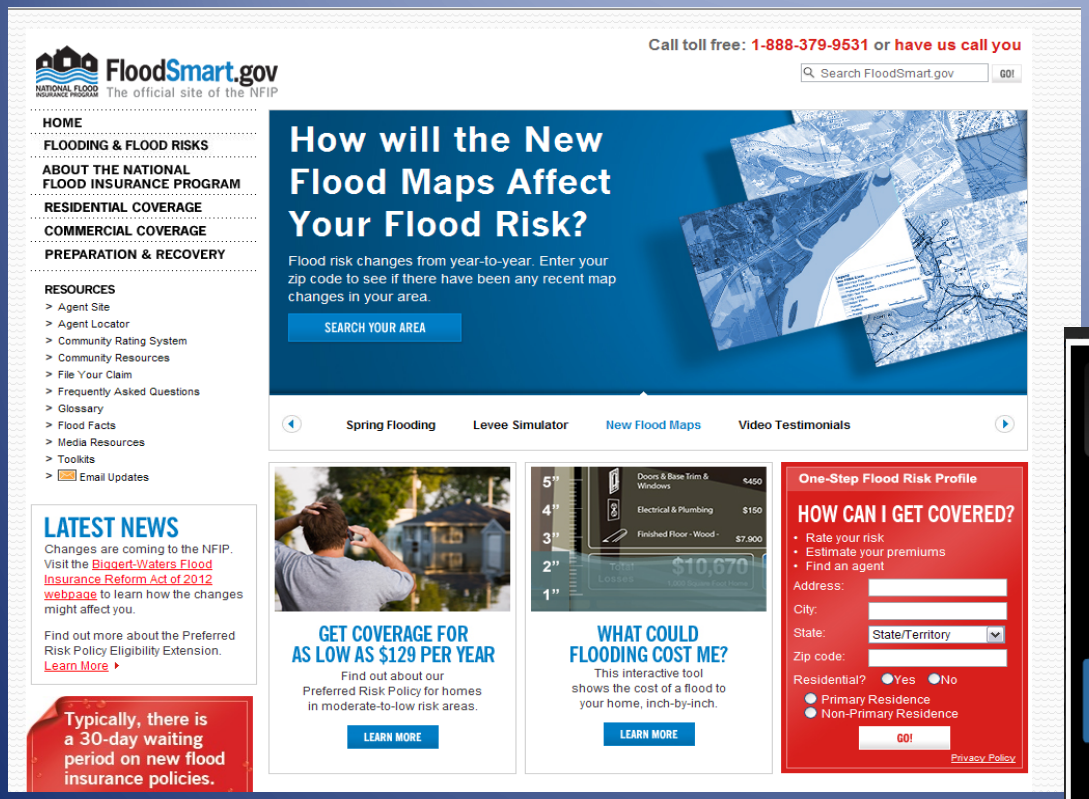
NFIP Rating Examples:
The Impact of Loss of Subsidies

Rate comparisons



FEMA

National Flood Insurance Program (NFIP)



www.floodsmart.gov

National Flood Insurance Program (NFIP)

Coverage

Building vs. Contents Coverage: What's Covered

Flood insurance protects two types of insurable property: Building and Contents.

The contents can be covered by a separate rider to the original structure policy.

National Flood Insurance Program (NFIP)

Coverage

Building Coverage:

- The insured building and its foundation.
- Electrical and plumbing system.
- Central air, furnaces, water heaters.
- Refrigerators, cooking stoves, dishwashers.
- Permanently installed carpet over unfinished flooring.

National Flood Insurance Program (NFIP)

Coverage

Contents Coverage

- Clothing, furniture, electronic equipment.
- Curtains.
- Portable and window air conditioners.
- Portable microwaves and dishwashers.
- Carpeting not already included in property coverage.
- Washers and dryers.

Thank You

QUESTIONS?

National Flood Insurance Program (NFIP)

Three Ways to Help With Higher Premium Costs:

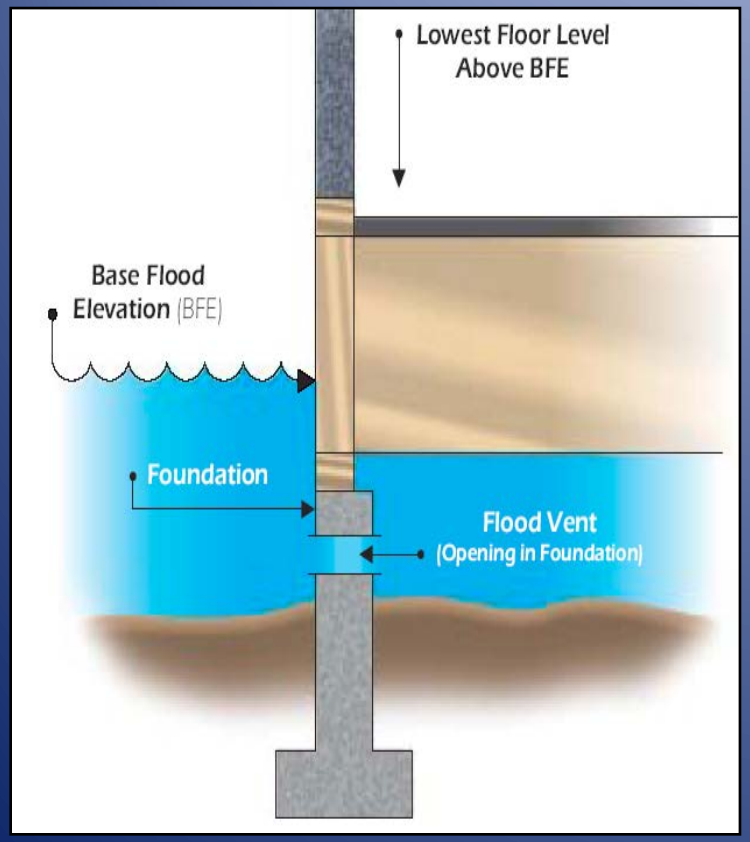
- New construction: build higher and meet local regulations.
- CRS Program.
- Mitigation.

National Flood Insurance Program (NFIP)

Decreasing Cost through Construction Standards

National Flood Insurance Program (NFIP)

Decreasing Cost through Construction Standards



- The NFIP minimum standards require buildings to be elevated to the BFE.
- Administrative Rules of Montana (36.15.702) requires 2 feet of freeboard
- Structures must meet FEMA approved, flood venting and/or wet flood proofing standards in order to receive the maximum insurance discounts.

National Flood Insurance Program (NFIP)

Decreasing Cost through Construction Standards

National Flood Insurance Program (NFIP)

Decreasing Cost through Construction Standards

National Flood Insurance Program (NFIP)

Decreasing Cost through Construction Standards

National Flood Insurance Program (NFIP)

Decreasing Cost through Construction Standards

National Flood Insurance Program (NFIP)

Decreasing Cost through Construction Standards

National Flood Insurance Program (NFIP)

Mitigation

MT Disaster & Emergency Services (DES)
Montana State Hazard Mitigation:
http://montanadma.org/montana-state-hazard-mitigation

http://letsmitigatemontana.com/

The Community Rating System

The Community Rating System (CRS) is a FEMA program that credits a community's activities that are above the minimum federal standard by providing insurance premium discounts.

The Community Rating System

Goals of the CRS

Reduce/avoid flood damage to insurable property

Strengthen/support the insurance aspects of the NFIP

Foster comprehensive floodplain management

The Community Rating System

The CRS is a Voluntary Program.

The CRS Program is a community based program, not an individual program.

The Community must submit a letter of interest and provide documentation of activities that meet the CRS requirements.

The Community must re-certify each year, and periodically they must undergo a “cycle verification visit”.

The Community Rating System

What are the Benefits

Insurance Premium Discounts

	SFHA Inside	SFHA Outside	Points
– CRS 10	-	-	<500
– CRS 9	5%	5%	500-999
– CRS 8	10%	5%	1000-1499
– CRS 7*	15%	5%	1500-1999
– CRS 6	20%	10%	2000-2499
– CRS 5	25%	10%	2500-2999
– CRS 4	30%	10%	3000-3499
– CRS 3	35%	10%	3500-3999
– CRS 2	40%	10%	4000-4499
– CRS 1	45%	10%	4500+

National Flood Insurance Program (NFIP)

Mitigation

Community wide mitigation steps can assist in lowering costs.

Rebuilding higher will lower risk and could reduce premiums.

There are opportunities for state grants which can distribute funds to help with mitigation and rebuilding.

National Flood Insurance Program (NFIP)

Mitigation

Helena 2011

National Flood Insurance Program (NFIP)

Mitigation

Helena 2011

National Flood Insurance Program (NFIP)

Mitigation

East Helena 2011

National Flood Insurance Program (NFIP)

Mitigation

East Helena 2011

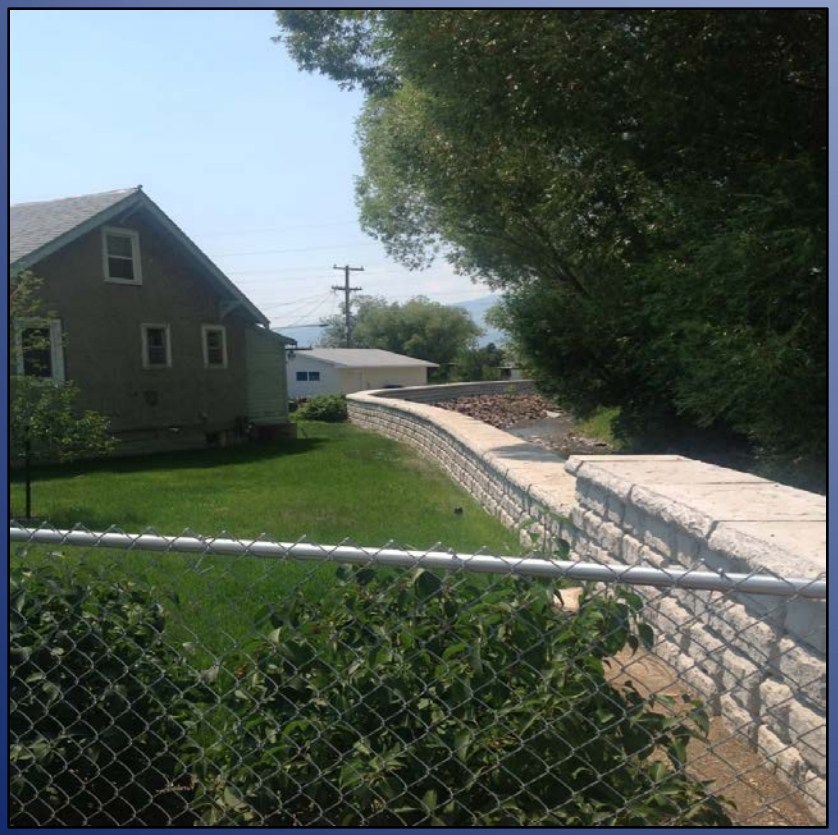
National Flood Insurance Program (NFIP)

Mitigation

Bozeman 2008

National Flood Insurance Program (NFIP)

Mitigation



Deerlodge 2013

Thank You

QUESTIONS?

Flooding In Montana: What's the Big Deal?

East Gallatin 2008

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East Gallatin 2008

Flooding In Montana: What's the Big Deal?

Yellowstone River, 2009

MONTANA DNRC
MT DEPARTMENT OF NATURAL RESOURCES & CONSERVATION

Flooding In Montana: What's the Big Deal?

Yellowstone River, HWY 59 Bridge, 2009

Flooding In Montana: What's the Big Deal?

Billings, 2010

Flooding In Montana: What's the Big Deal?

Billings, 2010

Flooding In Montana: What's the Big Deal?

Billings, 2010

Flooding In Montana: What's the Big Deal?

Billings, Lake Hills Subdivision, 2010

Flooding In Montana: What's the Big Deal?

Billings, Lake Hills Subdivision, 2010

Flooding In Montana: What's the Big Deal?

Downtown Billings, 2010

Flooding In Montana: What's the Big Deal?

Prickly Pear Creek, 2011

Lewis and Clark County

Flooding In Montana: What's the Big Deal?

Lewis and Clark County, 2011

Ten Mile Creek

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MT DEPARTMENT OF NATURAL RESOURCES & CONSERVATION

Flooding In Montana: What's the Big Deal?

Lewis and Clark County, 2011

Montana Law Enforcement Academy

Flooding In Montana: What's the Big Deal?

Yellowstone County, 2011

Flooding In Montana: What's the Big Deal?

Yellowstone County
2011

Flooding In Montana: What's the Big Deal?

Yellowstone County, 2011

Flooding In Montana: What's the Big Deal?

Yellowstone River,
2011

Flooding In Montana: What's the Big Deal?

Roundup, Musselshell County, 2011

Flooding In Montana: What's the Big Deal?

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Flooding In Montana: What's the Big Deal?

Roundup, Musselshell County, 2011

Flooding In Montana: What's the Big Deal?

Plains Montana 1996

Thank You

QUESTIONS?

Floodplain Permit Application

As the regulating authority, it is the local Floodplain Administrators responsibility to insure that the applicant fully understands the Floodplain Permit process. Not only will this help the applicant, it will also help insure that a better application is received and the process goes smoother.

MONTANA DNRC
MT DEPARTMENT OF NATURAL RESOURCES & CONSERVATION

Flood Permit Application

The Local Perspective

For proposed work in Special Flood Hazard Areas, NFIP participating communities require a floodplain development permit.

Local floodplain administrators play a crucial role in floodplain management.

Development activities are tied to the local community ordinance. The local ordinance should be carefully reviewed for specific development requirements.

Floodplain Permit Application

Local Floodplain Administrator Duties

Tasked with numerous and varied responsibilities including the local floodplain permitting process.

Ensure that permits are applied for and that applications are complete.

Process permit applications.

Coordinate with other agencies and programs for additional required permits.

Ensure all projects are built according to approved permits.

Floodplain Permit Application

Permitting Process

The DNRC recommends that the "**Joint Application for Proposed Work in Streams, Lakes, & Wetlands in Montana**" form be used.

One or more permits may be required for work on or near a Montana waterway.

Conservation Districts and other agencies developed a joint form intended to reduce the number of forms that must be completed and submitted to obtain necessary permits.

Intended to increase coordination and streamline the permitting process.

Floodplain Permit Application

Who Else Uses the Joint Application?

§ Conservation Districts – 310 permits

§ MT Fish, Wildlife, and Parks – SP 124 permits

§ US Army Corps of Engineers – Section 404/Section 10 permits

§ MT Department of Environmental Quality – 318 (turbidity) Authorizations

§ MT Department of Natural Resources & Conservation – navigable river land use licenses and easements

Floodplain Permit Application

The Application Process

1. First Contact
2. The Joint Application : A Breakdown
3. Application Received: The Review
4. Site Visits
5. Adjacent Landowner Notification
6. Requesting Assistance – DNRC Regional Engineers

Floodplain Permit Application

First Contact

No, not this kind of first contact….

Floodplain Permit Application

First Contact

First contact with a potential applicant can yield important details about a proposed project that may not necessarily come to light until the application has already been submitted.

Provides an opportunity to gather information, and advise the applicant about the Joint Application and its multi-agency use and implications.

FPA's should always recommend the applicant contact the agencies listed on the joint application to find out if other permits are required. Save considerable time and angst and pre-empt possible violations.

Floodplain Permit Application

First Contact

A successful first contact could turn this:

"My buds and I just bought some jet skis, and I want to put a dock and some rocks in. The Kawasaki rep told me to call you."

Floodplain Permit Application

First Contact

Into this:

"I am interested in constructing a boat dock on my property in addition to applying some bank protection measures to reduce bank erosion. I have already inquired about other permit from the USACE, the conservation district, DEQ, and FWP permits."

Floodplain Permit Application

The Application Process

As a regulator it is your responsibility to insure that the applicant fully understands the process. This will not only help the applicant it will also help insure that you get better applications.

If you only provide the applicant with the Joint Application you are setting yourself, and the applicant, up for a long and painful experience.

DNRC provides materials the can help you and the applicant with the Joint Application.

Floodplain Permit Application

The Joint Application

The Joint Application is the single most important form required for work in or near almost any water course or riparian area.

If you are the first point of contact for an applicant, always advise the applicant to contact all of the agencies listed on the Joint Application.

It is better to take the time to contact these agencies before you start a project and be told that you do not need their permit, than to have a project stopped because you are in violation.

Floodplain Permit Application

The Joint Application

Three key documents that you need to become familiar with.

- The Joint Application along with the "Information for Applicant" pages.
- The "Submittal Requirements For Floodplain Permit Application".
- The "Floodplain Administrator Permit Review Checklist".

Floodplain Permit Application

The Joint Application

Be sure to give the applicant the "INFORMATION FOR APPLICANT" pages that come with the Joint Application.

These three pages provide various contact information, review timelines, and general instructions for completing the Joint Application.

INFORMATION FOR APPLICANT

Instructions for filling out the Joint Application for Proposed Work in Montana's Streams, Wetlands, Floodplains, and Other Water Bodies

Please Read Carefully

This application form can be used to obtain permits from the local, state, and federal agencies listed in the box below. Use the box below to determine which permits you may need for your project (contact information is provided); to determine the number of copies of the application to send; to determine what additional information is needed; and to determine what fees, if any, apply.

After completing this form, send the required number of copies, with original signatures, to each applicable agency. Each agency issues separate permits. You must obtain individual authorizations or permits from each agency to which you apply before conducting your work.

For more information about permitting requirements, review "*A Guide to Stream Permitting in Montana*," available from all participating agencies or on line at www.dnrc.state.mt.us/permit.html. Please note: permits from agencies other than those listed on this application form may be required. You must apply to those agencies on separate forms if the law applies.

Do not submit fees with this application. Fees listed are for information only. The responsible agency will contact you when a fee applies.

√	PERMIT/ WHO MUST APPLY	AGENCY	AGENCY CONTACTS / ADDRESSES AND ADDITIONAL INFORMATION	REVIEW TIME	FEES – DO NOT SEND PAYMENT
	310 Permit Private citizens and companies working in or near perennial streams.	Local Conservation District	Submit three copies of application, maps, and plans to conservation district. To locate local office, call MT Assoc. of Conservation Districts (406) 443-5711 or Conservation Districts Bureau, DNRC (406) 444-6667; or visit www.dnrc.state.mt.us/conserve.html.	30 – 60 days	No fee
	SPA 124 Permit Governmental entities working in any stream.	Montana Department of Fish, Wildlife & Parks (DFWP)	Submit a set of preliminary plans or sketches with application. To locate appropriate office, call DFWP in Helena (406) 444-2449. For projects sponsored by DOT, send two sets of plans to Helena DFWP, Box 200701, Helena MT 59620-2701.	60 days	No fee
	Floodplain Permit Applicants proposing new construction within designated floodplains.	County Floodplain Administrator	Prior to submitting this application form, contact local floodplain administrator at the county office or locate appropriate office by calling DNRC Water Resources Division (406) 444-6601. Applicant may be required to hire a professional engineer.	60 days	Varies ($25 - $400)
	Section 404 Permit Applicants working in any stream and in wetlands. **Section 10 Permit** Applicants working on Yellowstone, Missouri, or Kootenai Rivers or their reservoirs.	U.S. Army Corps of Engineers (COE)	Submit one copy of application plus a set of construction plans or sketches of the proposed project, if available. See special signature requirements following "Information for Applicant". US Army Corps of Engineers, 10 West 15th Street Suite 2200, Helena MT 59626; (406) 441-1375.	30 – 120 days	Varies ($0 - $100) You will be contacted if fee applies.
	318 Authorization Activities that cause temporary turbidity in any state water.	Montana Department of Environmental Quality (DEQ)	Do not send this form directly to DEQ if applying for a 310 or 124 permit. You will be notified if you must apply on the 310 or 124 permit you receive. Dept. of Environmental Quality, Permitting and Compliance Division, Water Protection Bureau, Box 200901, Helena MT 59620-0901; (406) 444-3080.	30 days after application and fee are received.	$150
	Navigable Rivers Land Use License/ Easement – Projects in, on, under, or over navigable waters.	Montana Department of Natural Resources and Conservation (DNRC)	Additional fees, a land survey, and other information will be required. Contact the local DNRC land office for information. To locate appropriate Land Office, call Special Use Management Bureau at (406) 444-2074. To determine if your project is on a navigable waterway, visit: www.dnrc.state.mt.us/trust/tlmd/home.htm.	License – up to 60 days. Easements – up to 90 days.	License $25 Easement $50

Floodplain Permit Application

The Joint Application

The information sheets contain guidelines for completing the Joint Application.

The sections on the information sheet correspond with the headings on the Joint Application.

D. ADDITIONAL INFORMATION FOR SECTION 404, SECTION 10, AND FLOODPLAIN PERMITS

Information in Section D is specific to Section 404, Section 10, and Floodplain permits. Answer Questions 1-4 if you are applying for a Section 404 or Section 10 permit from the US Army Corps of Engineers. Answer Questions 4-6 if you are applying for a Floodplain Permit from the local floodplain administrator. (Question 4 is required for both.)

1. See definitions listed below for aquatic areas, wetlands, fill material, and how to calculate materials and impacted areas.
2. Indicate names and addresses and addresses of any nearby landowner(s) who may be affected by your project.
3. See definition of mitigation and compensatory mitigation below.
4. For floodplain permits, all permits must be in place before a floodplain permit can be issued.
5. If your project site is in a designated floodplain, the waterway will have a FEMA map number. Contact the county government in which your project will take place to obtain the number.
6. Check with the county government to see if there are special planning or zoning regulations.

Definitions:

- **Aquatic areas** include (but are not limited to) rivers, streams, creeks, lakes, reservoirs, wetlands, wet meadows, oxbows, and sloughs. Named and unnamed drainages that flow intermittently, as well as streams with perennial flow, are aquatic areas (waters of the United States).
- **Fill material** refers to rock, sand, dirt, or any material that replaces an aquatic area with dry land, or changes the bottom elevation of a water body. Prohibited fill material includes junk metal, car bodies, construction debris, trash, etc.
- **Mitigation** means avoiding and/or minimizing impacts to aquatic areas, and compensating for unavoidable impacts. **Compensatory mitigation** refers to replacing aquatic resources that have been lost, with similar aquatic resources. Compensatory mitigation may include creating new, restoring degraded, or enhancing existing aquatic areas.
- **Wetlands** include areas that are inundated or saturated with water long enough to support vegetation typically adapted for life in saturated conditions. Wetlands are generally determined on a site-by-site basis. If you are not sure whether a wetland will be impacted by your proposed project, contact the Corps of Engineers.
- **To calculate impacted area**, measure the length and width that the fill material will occupy. Length x width = area, usually expressed in square feet, square yards or acres. If your project involves a stream, measure the length of bank that will be affected on both sides of the stream.
- **To calculate the volume of material**, measure the length, width, and depth of the fill material. Length x width x depth = volume, usually stated in cubic feet or cubic yards.

SIGNATURE REQUIREMENTS FOR THE U.S. ARMY CORPS OF ENGINEERS
(Section 404 or Section 10 Permit Applications)

Applications submitted to the U.S. Army Corps of Engineers have certain signature/authorization requirements. On the signature portion of the application form, there are three signature lines. The Corps requires the signature of the applicant, landowner, and any agent acting on their behalf.

***If you are a landowner** submitting this application and proposing to undertake a project on your own behalf, please sign and date both the "Signature of Landowner" and "Signature of Applicant" lines.

***If you are a consultant/contractor** acting as an agent on behalf of a landowner, please sign and date only the line designated "Signature of Agent" and indicate your title. The landowner must sign and date the "Signature of Landowner" and "Signature of Applicant" lines to indicate authorization for you to act on his/her behalf.

***If a utility company submits this application**, a representative of the company should sign and date the "Signature of Applicant" line. Landowner signatures are not required.

Floodplain Permit Application

The Joint Application

The information sheets also indicate that additional information may be needed for projects that require additional permits such as the 404 and floodplain permits.

D. ADDITIONAL INFORMATION FOR SECTION 404, SECTION 10, AND FLOODPLAIN PERMITS

Information in Section D is specific to Section 404, Section 10, and Floodplain permits. Answer Questions 1-4 if you are applying for a Section 404 or Section 10 permit from the US Army Corps of Engineers. Answer Questions 4-6 if you are applying for a Floodplain Permit from the local floodplain administrator. (Question 4 is required for both.)

1. See definitions listed below for aquatic areas, wetlands, fill material, and how to calculate materials and impacted areas.
2. Indicate names and addresses and addresses of any nearby landowner(s) who may be affected by your project.
3. See definition of mitigation and compensatory mitigation below.
4. For floodplain permits, all permits must be in place before a floodplain permit can be issued.
5. If your project site is in a designated floodplain, the waterway will have a FEMA map number. Contact the county government in which your project will take place to obtain the number.
6. Check with the county government to see if there are special planning or zoning regulations.

Definitions:

- **Aquatic areas** include (but are not limited to) rivers, streams, creeks, lakes, reservoirs, wetlands, wet meadows, oxbows, and sloughs. Named and unnamed drainages that flow intermittently, as well as streams with perennial flow, are aquatic areas (waters of the United States).
- **Fill material** refers to rock, sand, dirt, or any material that replaces an aquatic area with dry land, or changes the bottom elevation of a water body. Prohibited fill material includes junk metal, car bodies, construction debris, trash, etc.
- **Mitigation** means avoiding and/or minimizing impacts to aquatic areas, and compensating for unavoidable impacts. **Compensatory mitigation** refers to replacing aquatic resources that have been lost, with similar aquatic resources. Compensatory mitigation may include creating new, restoring degraded, or enhancing existing aquatic areas.
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- **To calculate the volume of material**, measure the length, width, and depth of the fill material. Length x width x depth = volume, usually stated in cubic feet or cubic yards.

SIGNATURE REQUIREMENTS FOR THE U.S. ARMY CORPS OF ENGINEERS
(Section 404 or Section 10 Permit Applications)

Applications submitted to the U.S. Army Corps of Engineers have certain signature/authorization requirements. On the signature portion of the application form, there are three signature lines. The Corps requires the signature of the applicant, landowner, and any agent acting on their behalf.

***If you are a landowner** submitting this application and proposing to undertake a project on your own behalf, please sign and date both the "Signature of Landowner" and "Signature of Applicant" lines.

***If you are a consultant/contractor** acting as an agent on behalf of a landowner, please sign and date only the line designated "Signature of Agent" and indicate your title. The landowner must sign and date the "Signature of Landowner" and "Signature of Applicant" lines to indicate authorization for you to act on his/her behalf.

***If a utility company submits this application**, a representative of the company should sign and date the "Signature of Applicant" line. Landowner signatures are not required.

Floodplain Permit Application

Submittal Requirements for Floodplain Permit Application

SUBMITTAL REQUIREMENTS
FOR FLOODPLAIN PERMIT APPLICATION

To initiate the permit process, you will need to submit a copy of the following information to this office. These instructions apply to all construction/projects within any designated 100-year floodplain as delineated on the FHMB, FIRM, SCS/NRCS floodplain maps, COE floodplain maps, etc. You will need to submit a number of items listed below at a minimum.

1. **A list of adjacent property owners and their mailing addresses** *(You can get this information from the County GIS office or through a title company).*

2. **A letter from each property owner where the project will be completed authorizing the proposed work.**

3. **A detailed site plan, drawn to scale, showing the following:**
   - Property boundary lines of the subject property and those in the immediate vicinity of the project.
   - Approximate location of all floodplain boundaries in the vicinity of the project as depicted on the floodplain maps.
   - Location of existing improvements in the vicinity of the project, including driveways, roads, culverts, bridges, buildings, wells, septic systems, and other improvements
   - Location of all existing physical features in the vicinity of the project, including ponds, swales, streams, and irrigation ditches.
   - Location and dimensions of all proposed improvements, including driveways, roads, culverts, bridges, ponds, buildings, wells, and other structures
   - Location for all fill that will be brought into the floodplain

4. **A statement specifying the amount of fill that will be placed within the floodplain and supporting calculations.**

5. **For a house submit:**
   - The existing ground elevation at the location of the proposed house and the calculated height of the 100-year floodplain (will need to work with a surveyor to obtain this information)

   - Calculations for the amount of fill (in cubic yards) to be placed in the floodplain:
     Residential structures shall be constructed on suitable fill with a permanent foundation such that the lowest floor (including basement) level is two or more feet above the base flood elevation. The suitable fill shall be at a level no lower than the base flood elevation extending 15 feet at that elevation beyond the structure in all directions.

   - Specifications for the fill material (type, size, etc.)

6. **For any other building submit:**
   - Drawing of the building
   - Statement indicating which of the two development standards will apply:

     (a) If the structure is designed to allow internal flooding of the lowest floor, use of the floor shall be limited to such uses as parking, loading areas, and storage of equipment or materials not appreciably affected by flood water. Further, the floors and walls shall be designed and constructed of materials resistant to flooding up to an elevation of 2 or more feet above the elevation of the base flood. Structures designed to allow internal flooding shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the exit and entry of flood waters.

     (b) Structures whose lowest floors are used for purposes other than parking, loading or storage of materials resistant to flooding shall be flood proofed up to an elevation no lower than 2 feet above the elevation of the base flood. Flood proofing shall include impermeable membranes or materials for floors and walls and watertight enclosures for all windows, doors, and other openings. These structures shall be designed to withstand the hydrostatic pressures and hydrodynamic forces resulting from the base flood.

7. **For bank stabilization submit:**
   - Description of existing conditions
   - Historical overview of trends in the river movement; if any
   - Description of the problem
   - Description of the objectives of the project
   - Short description of design alternatives that were considered, if any, but rejected, and an explanation of why each was rejected
   - Typical cross-section (based on survey data) of the river from bank to bank, which shows the existing condition and proposed treatment and the height of the 100-year flood event, the base flow elevation, and the bank full elevation
   - Longitudinal profile of the river surface and bed in the project area
   - Plan view (using an aerial photograph as a base) of the project are which shows the beginning and ending points of the treatment and the various types of treatment
   - Specifications for the treatment material (type, size, quantities, etc.)
   - Calculations to show the proposed project will not raise the elevation of the 100-year floodplain more than 6 inches about the 100-year floodplain elevation as documented on the floodplain maps
   - Description of the project implementation (project phases, sediment control, staging area, cleanup, etc.)

8. **For a bridge submit:**
   - Drawings and specifications for the bridge as certified by a professional engineer
   - Calculations for the amount of fill to be placed in the floodplain
   - A cross-section at the location of the bridge which shows the existing condition and the elevation of the 100-year flood event

9. **For a pond submit:**
   - Description of existing conditions
   - Description of the objectives of the project
   - Calculations for the amount of material to be removed from the pond
   - Description of where the material will be placed outside the floodplain

10. **For road(s) submit:**
    - Description of existing conditions
    - Description of the objectives of the project
    - Calculations to show the culverts will be large enough to handle the expected flows.

Once your final application is received, it will be reviewed to make sure the information is sufficient. If it is not sufficient, you will receive a letter that explains the deficiencies. You should also be aware that as part of the review process, the adjoining property owners will be notified about the proposed work, and a legal notice placed in the paper containing a brief description of the application.

All floodplain application shall also include the following:

1. A definitive signed statement from a qualified engineer or individual with floodplain experience that the project can withstand a 100-year flood.
2. A definitive signed statement from a qualified engineer or individual with floodplain experience that the project will not adversely effect surrounding land owners upstream, downstream, across stream or adjacent to the proposed project area.
3. A definitive signed statement from a qualified engineer or individual with floodplain experience about the ability of this project to withstand the 100-year flood event and what effect this proposed project will have on the 100-year Base Flood Elevations.

Floodplain Permit Application

Submittal Requirements for Floodplain Permit Application

A list of adjacent property owners and their mailing addresses.

A signature or letter from each property owner where the project will be completed, authorizing the proposed work.

A statement, along with calculations, specifying the amount of fill that will be placed within the floodplain.

SUBMITTAL REQUIREMENTS
FOR FLOODPLAIN PERMIT APPLICATION

To initiate the permit process, you will need to submit a copy of the following information to this office. These instructions apply to all construction/projects within any designated 100-year floodplain as delineated on the FHMB, FIRM, SCS/NRCS floodplain maps, COE floodplain maps, etc. You will need to submit a number of items listed below at a minimum.

1. **A list of adjacent property owners and their mailing addresses** *(You can get this information from the County GIS office or through a title company).*

2. **A letter from each property owner where the project will be completed authorizing the proposed work.**

3. **A detailed site plan, drawn to scale, showing the following:**
   - Property boundary lines of the subject property and those in the immediate vicinity of the project.
   - Approximate location of all floodplain boundaries in the vicinity of the project as depicted on the floodplain maps.
   - Location of existing improvements in the vicinity of the project, including driveways, roads, culverts, bridges, buildings, wells, septic systems, and other improvements
   - Location of all existing physical features in the vicinity of the project, including ponds, swales, streams, and irrigation ditches.
   - Location and dimensions of all proposed improvements, including driveways, roads, culverts, bridges, ponds, buildings, wells, and other structures
   - Location for all fill that will be brought into the floodplain

4. **A statement specifying the amount of fill that will be placed within the floodplain and supporting calculations.**

5. **For a house submit:**
   - The existing ground elevation at the location of the proposed house and the calculated height of the 100-year floodplain (will need to work with a surveyor to obtain this information)
   - Calculations for the amount of fill (in cubic yards) to be placed in the floodplain:
     Residential structures shall be constructed on suitable fill with a permanent foundation such that the lowest floor (including basement) level is two or more feet above the base flood elevation. The suitable fill shall be at a level no lower than the base flood elevation extending 15 feet at that elevation beyond the structure in all directions.
   - Specifications for the fill material (type, size, etc.)

6. **For any other building submit:**
   - Drawing of the building
   - Statement indicating which of the two development standards will apply:

     (a) If the structure is designed to allow internal flooding of the lowest floor, use of the floor shall be limited to such uses as parking, loading areas, and storage of equipment or materials not appreciably affected by flood water. Further, the floors and walls shall be designed and constructed of materials resistant to flooding up to an elevation of 2 or more feet above the elevation of the base flood. Structures designed to allow internal flooding shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the exit and entry of flood waters.

     (b) Structures whose lowest floors are used for purposes other than parking, loading or storage of materials resistant to flooding shall be flood proofed up to an elevation no lower than 2 feet above the elevation of the base flood. Flood proofing shall include impermeable membranes or materials

Floodplain Permit Application

Submittal Requirements for Floodplain Permit Application

A detailed site plan, drawn to scale, showing all aspects of the existing conditions and the proposed project.

Items 5 & 6 discuss specific requirements for a residential structure and other structures.

Item 7 discusses specific requirements for bank stabilization projects.

SUBMITTAL REQUIREMENTS
FOR FLOODPLAIN PERMIT APPLICATION

To initiate the permit process, you will need to submit a copy of the following information to this office. These instructions apply to all construction/projects within any designated 100-year floodplain as delineated on the FHMB, FIRM, SCS/NRCS floodplain maps, COE floodplain maps, etc. You will need to submit a number of items listed below at a minimum.

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2. **A letter from each property owner where the project will be completed authorizing the proposed work.**

3. **A detailed site plan, drawn to scale, showing the following:**
   - Property boundary lines of the subject property and those in the immediate vicinity of the project.
   - Approximate location of all floodplain boundaries in the vicinity of the project as depicted on the floodplain maps.
   - Location of existing improvements in the vicinity of the project, including driveways, roads, culverts, bridges, buildings, wells, septic systems, and other improvements
   - Location of all existing physical features in the vicinity of the project, including ponds, swales, streams, and irrigation ditches.
   - Location and dimensions of all proposed improvements, including driveways, roads, culverts, bridges, ponds, buildings, wells, and other structures
   - Location for all fill that will be brought into the floodplain

4. **A statement specifying the amount of fill that will be placed within the floodplain and supporting calculations.**

5. **For a house submit:**
   - The existing ground elevation at the location of the proposed house and the calculated height of the 100-year floodplain (will need to work with a surveyor to obtain this information)
   - Calculations for the amount of fill (in cubic yards) to be placed in the floodplain:
     Residential structures shall be constructed on suitable fill with a permanent foundation such that the lowest floor (including basement) level is two or more feet above the base flood elevation. The suitable fill shall be at a level no lower than the base flood elevation extending 15 feet at that elevation beyond the structure in all directions.
   - Specifications for the fill material (type, size, etc.)

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   - Drawing of the building
   - Statement indicating which of the two development standards will apply:

     (a) If the structure is designed to allow internal flooding of the lowest floor, use of the floor shall be limited to such uses as parking, loading areas, and storage of equipment or materials not appreciably affected by flood water. Further, the floors and walls shall be designed and constructed of materials resistant to flooding up to an elevation of 2 or more feet above the elevation of the base flood. Structures designed to allow internal flooding shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the exit and entry of flood waters.

     (b) Structures whose lowest floors are used for purposes other than parking, loading or storage of materials resistant to flooding shall be flood proofed up to an elevation no lower than 2 feet above the elevation of the base flood. Flood proofing shall include impermeable membranes or materials

Floodplain Permit Application

Submittal Requirements for Floodplain Permit Application

Item 8 discusses specific requirements for bridges.

Item 9 discusses specific requirements for ponds.

Item 10 discusses specific requirements for roads.

SUBMITTAL REQUIREMENTS
FOR FLOODPLAIN PERMIT APPLICATION

To initiate the permit process, you will need to submit a copy of the following information to this office. These instructions apply to all construction/projects within any designated 100-year floodplain as delineated on the FHMB, FIRM, SCS/NRCS floodplain maps, COE floodplain maps, etc. You will need to submit a number of items listed below at a minimum.

1. **A list of adjacent property owners and their mailing addresses** *(You can get this information from the County GIS office or through a title company).*

2. **A letter from each property owner where the project will be completed authorizing the proposed work.**

3. **A detailed site plan, drawn to scale, showing the following:**
   - Property boundary lines of the subject property and those in the immediate vicinity of the project.
   - Approximate location of all floodplain boundaries in the vicinity of the project as depicted on the floodplain maps.
   - Location of existing improvements in the vicinity of the project, including driveways, roads, culverts, bridges, buildings, wells, septic systems, and other improvements
   - Location of all existing physical features in the vicinity of the project, including ponds, swales, streams, and irrigation ditches.
   - Location and dimensions of all proposed improvements, including driveways, roads, culverts, bridges, ponds, buildings, wells, and other structures
   - Location for all fill that will be brought into the floodplain

4. **A statement specifying the amount of fill that will be placed within the floodplain and supporting calculations.**

5. **For a house submit:**
   - The existing ground elevation at the location of the proposed house and the calculated height of the 100-year floodplain (will need to work with a surveyor to obtain this information)
   - Calculations for the amount of fill (in cubic yards) to be placed in the floodplain:
     Residential structures shall be constructed on suitable fill with a permanent foundation such that the lowest floor (including basement) level is two or more feet above the base flood elevation. The suitable fill shall be at a level no lower than the base flood elevation extending 15 feet at that elevation beyond the structure in all directions.
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   - Drawing of the building
   - Statement indicating which of the two development standards will apply:

     (a) If the structure is designed to allow internal flooding of the lowest floor, use of the floor shall be limited to such uses as parking, loading areas, and storage of equipment or materials not appreciably affected by flood water. Further, the floors and walls shall be designed and constructed of materials resistant to flooding up to an elevation of 2 or more feet above the elevation of the base flood. Structures designed to allow internal flooding shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the exit and entry of flood waters.

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Floodplain Permit Application

Submittal Requirements for Floodplain Permit Application

A definitive statement, signed by a qualified Professional Engineer that the project;

Can withstand a 100 yr. flood event.

Can withstand a 100 yr. flood event.

The project has been designed for the 100 yr. event.

Explaining any effects the project will have on the 100 yr. BFE's.

for floors and walls and watertight enclosures for all windows, doors, and other openings. These structures shall be designed to withstand the hydrostatic pressures and hydrodynamic forces resulting from the base flood.

7. For bank stabilization submit:

- Description of existing conditions
- Historical overview of trends in the river movement; if any
- Description of the problem
- Description of the objectives of the project
- Short description of design alternatives that were considered, if any, but rejected, and an explanation of why each was rejected
- Typical cross-section (based on survey data) of the river from bank to bank, which shows the existing condition and proposed treatment and the height of the 100-year flood event, the base flow elevation, and the bank full elevation
- Longitudinal profile of the river surface and bed in the project area
- Plan view (using an aerial photograph as a base) of the project are which shows the beginning and ending points of the treatment and the various types of treatment
- Specifications for the treatment material (type, size, quantities, etc.)
- Calculations to show the proposed project will not raise the elevation of the 100-year floodplain more than 6 inches about the 100-year floodplain elevation as documented on the floodplain maps
- Description of the project implementation (project phases, sediment control, staging area, cleanup, etc.)

8. For a bridge submit:

- Drawings and specifications for the bridge as certified by a professional engineer
- Calculations for the amount of fill to be placed in the floodplain
- A cross-section at the location of the bridge which shows the existing condition and the elevation of the 100-year flood event

9. For a pond submit:

- Description of existing conditions
- Description of the objectives of the project
- Calculations for the amount of material to be removed from the pond
- Description of where the material will be placed outside the floodplain

10. For road(s) submit:

- Description of existing conditions
- Description of the objectives of the project
- Calculations to show the culverts will be large enough to handle the expected flows.

Once your final application is received, it will be reviewed to make sure the information is sufficient. If it is not sufficient, you will receive a letter that explains the deficiencies. You should also be aware that as part of the review process, the adjoining property owners will be notified about the proposed work, and a legal notice placed in the paper containing a brief description of the application.

All floodplain application shall also include the following:

1. A definitive signed statement from a qualified engineer or individual with floodplain experience that the project can withstand a 100-year flood.
2. A definitive signed statement from a qualified engineer or individual with floodplain experience that the project will not adversely effect surrounding land owners upstream, downstream, across stream or adjacent to the proposed project area.
3. A definitive signed statement from a qualified engineer or individual with floodplain experience about the ability of this project to withstand the 100-year flood event and what effect this proposed project will have on the 100-year Base Flood Elevations.

Floodplain Permit Application

The Review Process

Once an FPA receives a **complete** application, the FPA will review and evaluate the application and shall approve, approve with conditions, or deny the application **within 60 days of receiving the correct and complete application**.

FPA's should communicate application deficiencies and recommendations for application modifications to the applicant and consultant in writing.

Floodplain Permit Application

The Review Process

If the applicant corrects the identified deficiencies and resubmits the application, the FPA shall notify the applicant whether the application contains all required elements.

This process is repeated until the applicant submits an application containing all required components, the application is withdrawn, or the application is denied.

Floodplain Permit Application

Floodplain Administrator Permit Review Checklist

FLOODPLAIN ADMINISTRATOR PERMIT REVIEW CHECK LIST
TO BE COMPLETED BY LOCAL FLOODPLAIN ADMINISTRATOR

THIS FORM WILL GUIDE YOU THROUGH THE STEPS NEEDED TO COMPLETE THE PERMIT PROCESS

Applicants name: _____ Application #_____

Project Location:
Name of stream/water body at location of activity _____

Location ___1/4___1/4___1/4 Section ____ Township ____ Range ____

The proposed development is in ____ Floodway ____ Floodway Fringe ____ Floodplain with no elevations

The base flood elevation at the project site is _____

PART A **CHECKLIST FOR APPLICATION**

1.____ Plans in duplicate drawn to scale (including dimensions) showing the nature, location, and elevation of the lot: existing and proposed structure locations; fill, storage, or materials site; flood-proofing measures; mean sea level elevation of lowest floor including basement or crawl space of proposed structures; location of the channel.

2.____ A plan view of the proposed development indicating external dimensions of structures, Street or road finished grade elevations, well locations, individual sewage treatment and disposal sites, excavation and/or fill quantity estimates, and site plan and/or construction Plans.

3.____ Specifications for flood-proofing, filling, excavating, grading, riprapping, storage of materials, and location of utilities.

4.____A professional engineers or registered architects design calculations and certification that the proposed activity has been designed to be in compliance with these regulations.

5._____ _____ (Date) Complete application was received.

6.____ A notice containing the facts pertinent to the application has been prepared and published at least once in a newspaper of general circulation in the area.

7.____ Notice has been sent by first class mail to adjacent property owners providing a reason able period of time for comments to be submitted. (15 days).

8.____ Notice has been sent to DNRC Floodplain Management Section.

PART B **REVIEW OF APPLICATION**
According to floodplain regulations, several criteria must be considered in deciding whether or not a permit is issued. They are listed below for your convenience.

_____ **a.** Proposed project meets minimum floodplain development criteria as outlined in the floodplain Management Ordinance.

_____**b.** the danger to life and property due to increased flood heights, increased flood water velocities or alterations in the pattern or flow caused by encroachments.

_____**c.** the proposed water supply and sanitation systems, if any, and the ability of these systems to prevent disease, contamination and unsanitary conditions.

_____**d.** The susceptibility of the proposed facility and its contents to flood damage and the effects of such damage on the individual owner.

_____**e.** The likelihood that the structure of building will be threatened due to its proximity to the stream or potential lateral movement of the stream.

_____**f.** The importance of the services provided by the facility to the community.

_____**g.** The requirement of the facility for waterfront location.

_____**h.** The availability of alternative locations not subject to flooding for the proposed use.

_____**i.** The compatibility of the proposed use with existing development and anticipated development in the foreseeable future.

_____**j.** The relationship of the proposed use to the floodplain management program for the area.

_____**k.** The safety of access to property in times of flooding for ordinary and emergency services.

_____**l.** Effect of the project on other properties.

_____**m.** The effects on water right.

_____**n.** The cumulative effect of the proposed project along with other existing projects.

_____**o.** Make sure all factors are in harmony with the proposes of the Montana Floodplain and Floodway Management act, and the National Flood Insurance Program.

_____**p.** The construction will not cause undue constriction on the channel.

_____**q.** The material on grade on watercourse banks will not cause erosion.

Once the application has been reviewed and the above criteria has been considered, the application should be either approved or denied within 60 days of receipt of completed application.

IF PERMIT IS DENIED:

____ Letter of explanation has been provided to the applicant stating reasons for denial.

____ Applicant has been notified of the following options:

____ Proposed development may be redesigned to meet required floodplain standards

____ Applicant may appeal the administrators decision to the local governing body.

____ If you feel the ordinance places an undue hardship on your property, you may request a variance to he ordinance.

IF PERMIT IS ISSUED:

9.____ Permit is issued with list of conditions included or attached.

10.____ For residential/commercial structures, a completed Elevation Certificate (FEMA Form #81-31) has been received.

11.____ The completed project has been inspected for compliance. Date _____

12.____ A complete set of documents pertaining to this development will be attached to the permit and kept on file.

13.____ A copy of the permit has been in to the DNRC in Helena.

Floodplain Permit Application

Floodplain Administrator Permit Review Checklist

The checklist is designed to help walk the local Floodplain Administrator through the floodplain review and permitting process.

It will also help serve as a good way to document the progress and status of the permit application.

FLOODPLAIN ADMINISTRATOR PERMIT REVIEW CHECK LIST
TO BE COMPLETED BY LOCAL FLOODPLAIN ADMINISTRATOR

THIS FORM WILL GUIDE YOU THROUGH THE STEPS NEEDED TO COMPLETE THE PERMIT PROCESS

Applicants name: _____ Application #_____

Project Location:
Name of stream/water body at location of activity _____

Location ___1/4___1/4___1/4 Section ____ Township ____ Range ____

The proposed development is in ____ Floodway ____ Floodway Fringe ____ Floodplain with no elevations

The base flood elevation at the project site is _____

PART A CHECKLIST FOR APPLICATION

1.____ Plans in duplicate drawn to scale (including dimensions) showing the nature, location, and elevation of the lot existing and proposed structure locations; fill, storage, or materials site; flood-proofing measures; mean sea level elevation of lowest floor including basement or crawl space of proposed structures; location of the channel.

2.____ A plan view of the proposed development indicating external dimensions of structures, Street or road finished grade elevations, well locations, individual sewage treatment and disposal sites, excavation and/or fill quantity estimates, and site plan and/or construction Plans.

3.____ Specifications for flood-proofing, filling, excavating, grading, riprapping, storage of materials, and location of utilities.

4.____ A professional engineers or registered architects design calculations and certification that the proposed activity has been designed to be in compliance with these regulations.

5.____ _____ (Date) Complete application was received.

6.____ A notice containing the facts pertinent to the application has been prepared and published at least once in a newspaper of general circulation in the area.

7.____ Notice has been sent by first class mail to adjacent property owners providing a reason able period of time for comments to be submitted. (15 days).

8.____ Notice has been sent to DNRC Floodplain Management Section.

PART B REVIEW OF APPLICATION
According to floodplain regulations, several criteria must be considered in deciding whether or not a permit is issued. They are listed below for your convenience.

____ a. Proposed project meets minimum floodplain development criteria as outlined in the floodplain Management Ordinance.

____b. the danger to life and property due to increased flood heights, increased flood water velocities or alterations in the pattern or flow caused by encroachments.

____c. the proposed water supply and sanitation systems, if any, and the ability of these systems to prevent disease, contamination and unsanitary conditions.

Floodplain Permit Application

Floodplain Administrator Permit Review Checklist

Part A of the checklist helps remind the reviewer of the specific types of information that is needed in an application, it documents when the complete application was received and insures that proper notice of the application was given.

Part B will help the reviewer evaluate the impacts of the project.

FLOODPLAIN ADMINISTRATOR PERMIT REVIEW CHECK LIST
TO BE COMPLETED BY LOCAL FLOODPLAIN ADMINISTRATOR

THIS FORM WILL GUIDE YOU THROUGH THE STEPS NEEDED TO COMPLETE THE PERMIT PROCESS

Applicants name: _____ Application #_____

Project Location:
Name of stream/water body at location of activity _____

Location ___1/4___1/4___1/4 Section ____ Township ____ Range ____

The proposed development is in ____ Floodway ____ Floodway Fringe ____ Floodplain with no elevations

The base flood elevation at the project site is _____

PART A CHECKLIST FOR APPLICATION

1.____ Plans in duplicate drawn to scale (including dimensions) showing the nature, location, and elevation of the lot existing and proposed structure locations; fill, storage, or materials site; flood-proofing measures; mean sea level elevation of lowest floor including basement or crawl space of proposed structures; location of the channel.

2.____ A plan view of the proposed development indicating external dimensions of structures, Street or road finished grade elevations, well locations, individual sewage treatment and disposal sites, excavation and/or fill quantity estimates, and site plan and/or construction Plans.

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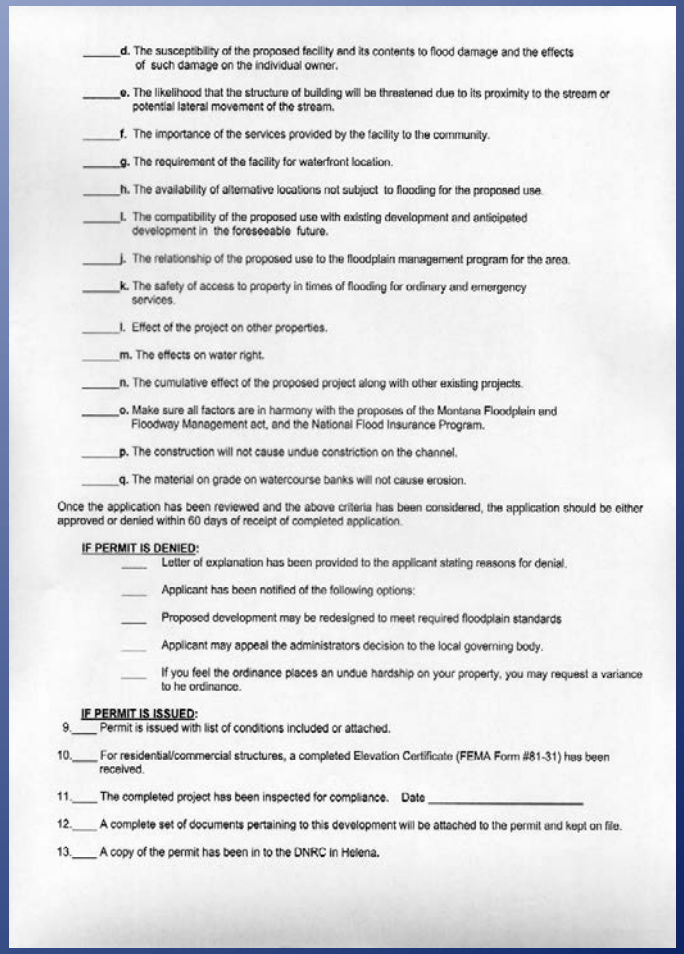
Floodplain Permit Application

Floodplain Administrator Permit Review Checklist

The last portion of the checklist will help document the status of the application, whether or not a permit was issued, if the permit had conditions that required further actions, and whether or not the project has been completed.



_____d. The susceptibility of the proposed facility and its contents to flood damage and the effects of such damage on the individual owner.

_____e. The likelihood that the structure of building will be threatened due to its proximity to the stream or potential lateral movement of the stream.

_____f. The importance of the services provided by the facility to the community.

_____g. The requirement of the facility for waterfront location.

_____h. The availability of alternative locations not subject to flooding for the proposed use.

_____i. The compatibility of the proposed use with existing development and anticipated development in the foreseeable future.

_____j. The relationship of the proposed use to the floodplain management program for the area.

_____k. The safety of access to property in times of flooding for ordinary and emergency services.

_____l. Effect of the project on other properties.

_____m. The effects on water right.

_____n. The cumulative effect of the proposed project along with other existing projects.

_____o. Make sure all factors are in harmony with the proposes of the Montana Floodplain and Floodway Management act, and the National Flood Insurance Program.

_____p. The construction will not cause undue constriction on the channel.

_____q. The material on grade on watercourse banks will not cause erosion.

Once the application has been reviewed and the above criteria has been considered, the application should be either approved or denied within 60 days of receipt of completed application.

IF PERMIT IS DENIED:

____ Letter of explanation has been provided to the applicant stating reasons for denial.

____ Applicant has been notified of the following options:

____ Proposed development may be redesigned to meet required floodplain standards

____ Applicant may appeal the administrators decision to the local governing body.

____ If you feel the ordinance places an undue hardship on your property, you may request a variance to he ordinance.

IF PERMIT IS ISSUED:

9.____ Permit is issued with list of conditions included or attached.

10.____ For residential/commercial structures, a completed Elevation Certificate (FEMA Form #81-31) has been received.

11.____ The completed project has been inspected for compliance. Date _____

12.____ A complete set of documents pertaining to this development will be attached to the permit and kept on file.

13.____ A copy of the permit has been in to the DNRC in Helena.

Floodplain Permit Application

The Site Visit

Site visits are crucial: may be necessary for the FPA to conduct more than one.

A site visit should be conducted as soon as the application is received and before the permit is issued, as well as when work has been completed to ensure compliance with the permit requirements.

If a structure is a project component, a site visit should be conducted once the foundation is poured. The FPA should coordinate with the property owner to coordinate site visits.

Floodplain Permit Application

The Application Process Goals

We want to turn this:

"I want to dump a couple of loads of rock along the bank to stop it from eroding."

Into:

"I will lay back 100 ft. of the existing bank on a 2:1 slope and place 30 cubic yards of 24 inch rip rap to stop the bank from eroding."

Floodplain Permit Application

The Application Process Goals

Since this process involves a public notice process, the floodplain application should contain enough information, plans, and data, so that member of the public should be able to walk into your office, pick up the application, and be able to understand the basic scope of the entire proposed project.

Floodplain Permit Application

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Floodplain Permit Application

Adjacent Landowner Notification

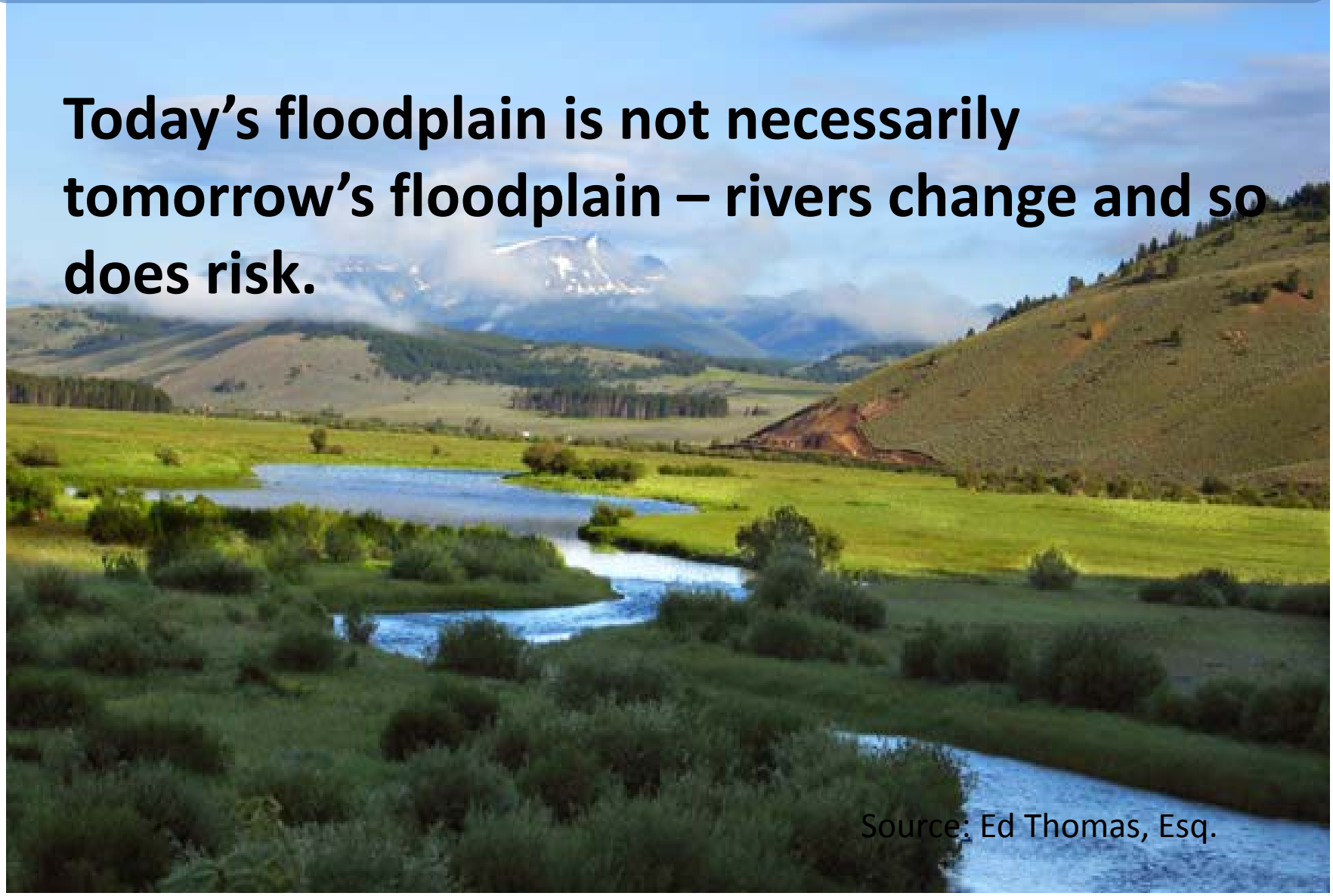
Local floodplain management ordinances specify notice requirements for floodplain permit applications.

A public notice should be prepared and publish at least once in a local newspaper. The notice should allow for a reasonable comment period (15 days or longer).

A public notice should be sent directly to adjacent property owners notice via first class mail, and also sent to the State NFIP Coordinator.

Questions?

Flooding In Montana: What's the Big Deal?



Today's floodplain is not necessarily tomorrow's floodplain – rivers change and so does risk.

Source: Ed Thomas, Esq.

Floods and Litigation

- When a property is damaged by the action of others, who pays?

- This is a fundamental question of Law.

Source: Ed Thomas, Esq.

Floods and Litigation

Fernley, Nevada
"Class action lawsuit updated in Fernley flood case"

- **"The lawsuit names the Truckee-Carson Irrigation District, Lyon County, the City of Fernley, and companies that built and sold homes in the area flooded when a storm swollen irrigation canal ruptured."**

Nevada Appeal, 1/26/2008

Source: Ed Thomas, Esq.

Floods and Litigation

Lincoln, Nebraska

Developer, engineer, and **realtor** settle with homeowners; City at first held liable; then wins in Nebraska Supreme Court– City "owed no duty to homeowners"

Photo: Lincoln Star Journal

Source: Ed Thomas, Esq.

Floods and Litigation

Take Away Message:

1. Many areas can flood
2. Uninsured victims will likely sue, if they can find someone to blame (they will find someone)
3. Fair harm prevention regulation helps everyone

Source: Ed Thomas, Esq.