

MONTANA FLOODPLAIN MAPPING
PROGRAM
AND
FEDERAL FUNDING

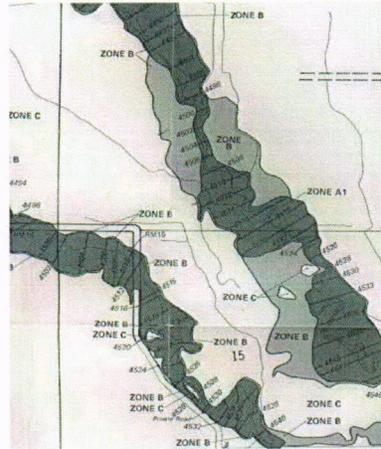
MONTANA FLOODPLAIN AND
FLOODWAY MANAGEMENT ACT OF
1971

- Authority for local governments to regulate development within flood prone areas
- A comprehensive program to identify specific flood prone areas



NATIONAL FLOOD INSURANCE PROGRAM

- Initiated in 1968 to make flood insurance available to individuals and businesses.
- Contingent upon local communities regulating development in specific flood prone areas.
- 134 NFIP Participating Communities, 2 Tribes, 44 Counties, and 88 Cities.
- National Flood Insurance rate maps.



Mapping Flood Prone Areas

- DNRC designated to initiate a comprehensive program for delineation of designated floodplains and designated floodways.
- Roughly 10,000 miles of streams designated.
- Designations based on engineering and mapping studies completed by FEMA, Corps of Engineers, U.S. Geological Survey, and Soil Conservation Service since 1971.
- Partnership with FEMA for flood insurance rate maps.

Montana Floodplain Designations 1971-2000

- 1970's - 20 stream designations/studies
 - 100 + U.S. Housing and Urban Development zone "A"'s
 - 1980's – 17 stream designations/studies
 - 1990's – 20 stream designations/studies
 - 2000's – 2 stream designations/studies
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- 15 studies by the Corps of Engineers
 - 25 studies by the Soil Conservation Service
 - 14 studies by the U.S. Geological Service
 - 5 studies by others

FEMA Digital Flood Insurance Rate Maps

The "NOW": Components of a DFIRM

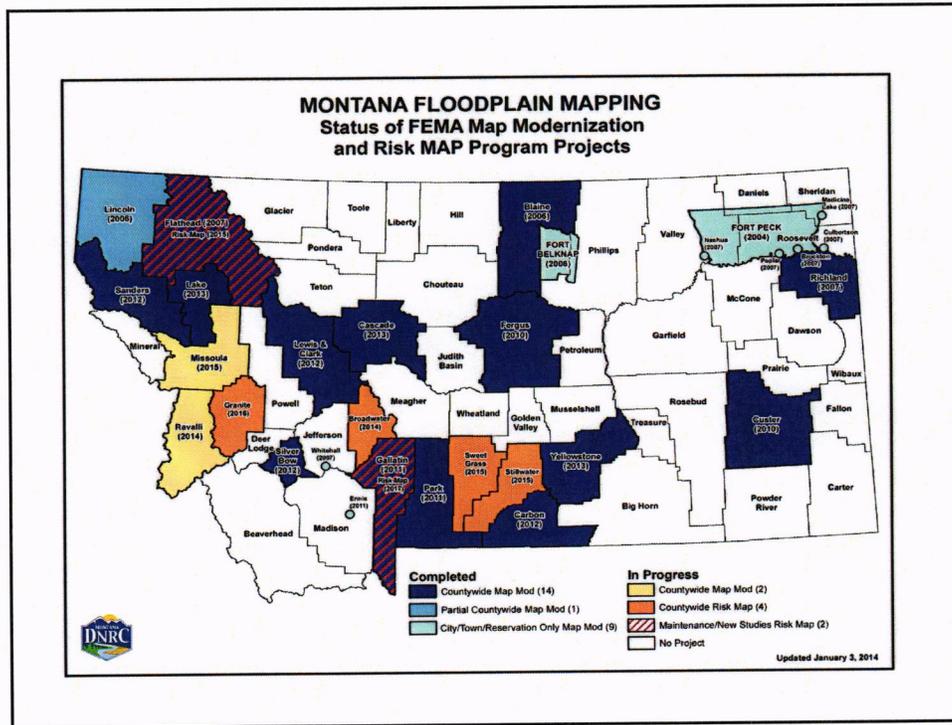


FEMA Flood Hazard Map Updates

- FY 2002 to 2008 FEMA Map Modernization program funded at \$350 million nationwide.
- FY 2009 to 2011 FEMA Risk MAP program funded at \$200 million nationwide.
 - Priority for coastal high population areas
 - Communities with 25% cost share
- FY 2012-\$99 million, FY 2013-\$100 million,
- FY 2014-\$84 million proposed.

Montana DFIRM 2003-2013

- Since 2003, FEMA provided \$7.6 million of funding for local and national engineering and mapping contractors.
- Since 2003, FEMA provided DNRC \$100,000 per year for local scoping, outreach and coordination and contract administration.
- No FFY 2013 funding for Montana projects



Floodplain Mapping In Montana

FUNDED	COUNTY	FEDERAL	STATE	FUNDED	COUNTY	FEDERAL	STATE
2000	Gallatin		\$100,000	2006	Carbon	\$377,000	
	Sanders		\$100,000		Yellowstone	\$361,000	\$2,682
2003	Blaine	?		2007	Cascade	\$391,000	
	Custer	\$63,000			Fergus	\$271,000	
	Gallatin	\$505,000		2008	Ravalli	\$180,000	LIDAR
	Lewis & Clark	\$442,000			Silver Bow	\$200,000	
	McCone	?		2009	Lake	\$750,000	LIDAR
	Park	\$317,000/COE			Sanders	\$490,000	
2004	Jefferson	\$272,000		2010	Stillwater	\$268,406/COE	\$13,500
	Lincoln	\$20,000			Sweet Grass	\$269,862/COE	\$1,000
	Madison	\$54,000	local	2011	Flathead	\$474,425	
	Sheridan	\$36,000			Granite	\$496,938	
	Roosevelt	\$54,000		2012	Gallatin	\$227,975	
	Valley	\$71,000			Missoula	\$87,378	
2005	Flathead	\$407,000	LIDAR	2013	Gallatin	\$0	\$20,000
	Missoula	\$483,000	LIDAR		Roundup+	LIDAR	\$100,000
				2014			\$100,000

DNRC FLOODPLAIN MAPPING PROGRAM

- Two positions- federal/state
- \$25,000 contracted services in SFY 2013
- \$ 50,000 contracted services in SFY 2014
- \$100,000 SFY 2013 OTO-contracted services
- \$100,000 SFY 2014 OTO-contracted services
- Floodplain mapping costs-\$1,000 to \$20,000 per mile for rural to urban settings.

Montana Flood Hazard Maps

- Half of the 44 Counties have had map updates since 2003
- Half of the 88 Cities have had map updates since 2003
- Remaining Counties and Cities are administering their floodplain management program on maps and data developed in the 1970's and 1980's.

National Flood Insurance

- Average premium in Montana is \$647/year.
- 5863 policies in Montana
- Insured value is \$1.045 billion.
- Annual total premium is \$3.7 million
- Insurance claims since 1978 is \$9.8 million.
 - \$3.1 million-Valley, Park, Yellowstone and Flathead
 - \$1.2 million-Miles City, Roundup, Billings, and Bozeman.

Montana Flood Risk

- 2012 Montana Multi-Hazard Mitigation Plan
 - \$84 million property flood losses since 1960 adjusted to 2012 dollars.
 - Custer, Musselshell and Flathead County property losses account for 25% of the losses.
 - \$7.9 billion flood damage exposure for 51,000 residential buildings in the 100-year floodplain.

FEDERAL FUNDING AND MONTANA FLOODPLAIN MAPPING PROGRAM

January 7, 2014

Legislative Policy and Statute

The Montana Legislature passed the Montana Floodplain and Floodway Management Act in 1971. The Act gives local governments the necessary authority to regulate development through adoption of local ordinances designed to minimize flood damage within ***specific areas identified by the state as prone to flood damage***. It prescribes the role of the state and local communities and is a joint effort to combat flood loss. The Act was specifically implemented to meet the new requirements for national flood insurance that first became available in 1968 to individuals and businesses as well as minimize recurrent flood damage and impacts to health, safety, and welfare in flood hazard areas.



National Flood Insurance Program

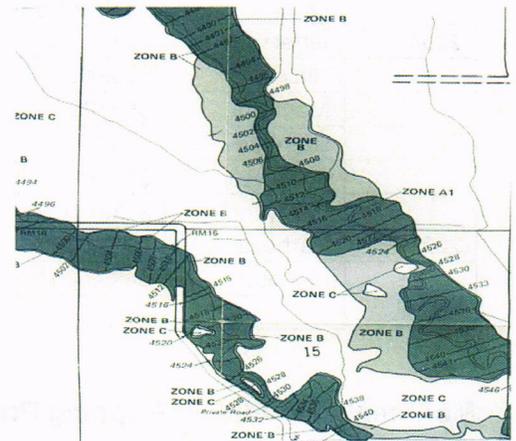
A total of 134 communities, including 2 Tribes, 44 Montana counties and 88 cities participate in the National Flood Insurance Program (NFIP). Flood insurance through the NFIP is available in these communities for individuals and business provided the community regulates development in the specific flood hazard areas.

The Montana Floodplain and Floodway Management Act give political subdivisions the authority to adopt floodplain regulations that meet or exceed state and federal standards. County or city floodplain regulations are adopted to minimize flood damage and impacts to health, safety and welfare. Local floodplain regulations require permits for certain development activities (e.g. construction, placement of fill, etc.) within all *regulated flood hazard areas*. Permits are issued by the city or county floodplain administrator.

Floodplain Mapping

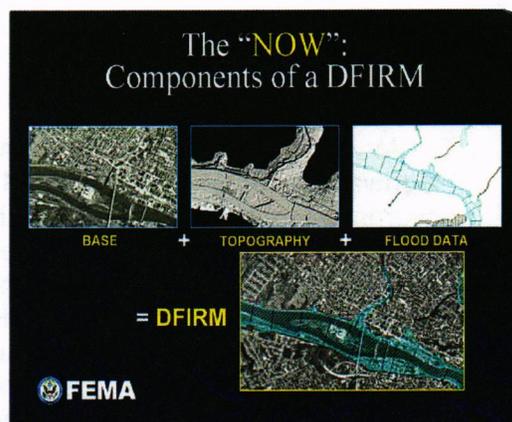
The DNRC is specified as the agency responsible for examining flood prone areas and delineating floodplains and floodways for the state's watercourses. The delineations of specific flood hazard areas establish local jurisdictional areas for their local flood hazard mitigation regulations. Often the mapping and technical studies are done in coordination with FEMA mapping efforts.

There has been an average of two specific study reaches of floodplain hazard area mapping completed per year since 1970 for 130 counties and cities that manage and regulate development. The Corps of Engineers, U.S. Geological and the Soil Conservation Service completed approximately 60 specific floodplain studies in Montana before year 2000, after which the funds since have been cut or redirected by those federal agencies. Approximately 10,000 miles of stream have had floodplain hazard mapping completed.



FEMA Digital Flood Insurance Rate Maps

Since 2003 FEMA has undertaken a program to update existing flood hazard maps to include digital data and information. Digital Flood Insurance Rate Maps (DFIRM) have been completed for the paper maps of Special Flood Hazard Areas for the counties of Broadwater, Carbon, Cascade, Custer, Fergus, Flathead, Gallatin, Jefferson, Lewis & Clark, Lake, Lincoln, Madison, McCone, Park, Ravalli, Richland, Roosevelt, Sheridan, Silver Bow, Valley and Yellowstone. Ongoing projects include Flathead, Missoula, Stillwater, Sweet Grass, Granite and Bozeman Creek. FEMA has provided \$7.6 million for local and national engineering and mapping contractors to complete the project and \$1.0 million to the DNRC for administering the contracting and coordinating the projects with local officials, landowners and businesses since 2003.



FEMA mapping program is funded by the combination of funds from premiums from the National Flood Insurance Program and federal general funds. Nationwide, funding has been trimmed to approximately \$200 million per year from \$350 million per year during 2002 to 2010. The primary federal focus for remapping for years 2011 to 2014 is for coastal high population areas and communities that can contribute 25% to the mapping effort. Montana projects have been funded annually for the amounts listed below. FEMA funding was decreased to zero funds for Montana in 2013.

FUNDED	COUNTY	FEDERAL	STATE	FUNDED	COUNTY	FEDERAL	STATE
2000	Gallatin		\$100,000	2006	Carbon	\$377,000	
	Sanders		\$100,000		Yellowstone	\$361,000	\$2,682
2003	Blaine	?		2007	Cascade	\$391,000	
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	Missoula	\$483,000	LIDAR	2013	Roundup+	LIDAR	\$100,000
				2014			\$100,000

Montana's Floodplain Mapping Program

Prior to 1985, one state funded position was allocated to the floodplain mapping program primarily to coordinate the ongoing federal floodplain mapping activities. The state funded position was not refilled since 1985 to meet vacancy savings goals but the function was reinstated in 2005 by moving a state funded dam safety position in order to assure Montana's technical aspects were incorporated into the FEMA mapping program.

State funding specifically for DNRC floodplain mapping activities was funded only intermittently. State funding of \$100,000 was provided for each two years prior to 2001, and \$100,000 for state fiscal year 2013 and 2014. Occasionally, communities such as Flathead, Lake, Missoula and Ravalli Counties procured grants from CARRD for aerial and topographic data that was for a combination of purposes including updating and revising existing floodplain maps in coordination with ongoing FEMA projects. A project for the Big Hole River was completed utilizing local, federal and state funds.

The cost of floodplain mapping is generally scaled to meet the needs of the community. Costs for floodplain mapping and supporting engineering as well as coordination with the local community for review and adoption range from \$20,000 per mile for urban areas with detailed mapping to \$1,000 per mile for rural areas with more approximate mapping.

Of the 134 communities that participate in the National Flood Insurance Program one third are counties and two thirds are cities. About half of the counties and half of the cities have had some sort of update to their mapped special flood hazard area since 2003, mostly due to the FEMA DFIRM program efforts in Montana. The remaining counties and cities are administering their floodplain management efforts on maps and data developed in the 1970's and 1980's.

National Flood Insurance

Flood insurance is available to renters, homeowners, and businesses for locations anywhere with the jurisdictional areas of the 134 NFIP participating communities. This includes areas outside of the specifically identified flood hazard areas. The average premium for structure and contents coverage is \$647 per year in Montana. Any mortgage or loan underwritten or secured by the federal government is required to have flood insurance.

The total insured value of the current structure coverage in Montana is \$1.045 billion represented by 5863 policies with an annual premium of \$3.7 million. The total paid out for insurance claims for flood damage since 1978 is \$9.8 million. The counties with the highest flood insurance claims were Valley, Park, Yellowstone and Flathead Counties for a combined total of \$3.1 million and for cities a combined total of \$1.2 million for Miles City and Roundup for the period of 1978 to 2012.



The National Flood Insurance estimating tool illustrates that a 6 inch flood in a 2000 square foot house on a slab is estimated to cause \$39,000 in content and structural damage. The estimated damage for a 2 foot depth is \$63,000.

The 2012 Montana Multi-Hazard Mitigation Plan and Statewide Hazard Assessment reports property flood losses of \$84 million since 1960 adjusted to 2012 dollars. The top three counties with property flood losses are Custer, Musselshell and Flathead and accounts for 25% of the total. The report lists flood exposure for 51,000 residential buildings in Montana at \$7.9 billion from a 1% chance flood.