

Montana Flood Risk Map Program

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State of Montana

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Montana Department of Natural Resources and Conservation

Floodplain Resource Seminar July 2012

Program Outline

What is the State Flood Risk Program?

What is Risk Map?

Who is involved and who funds it?

What have we done so far?

What is left to do?

REGION 8 - DFIRM PROJECT STATUS

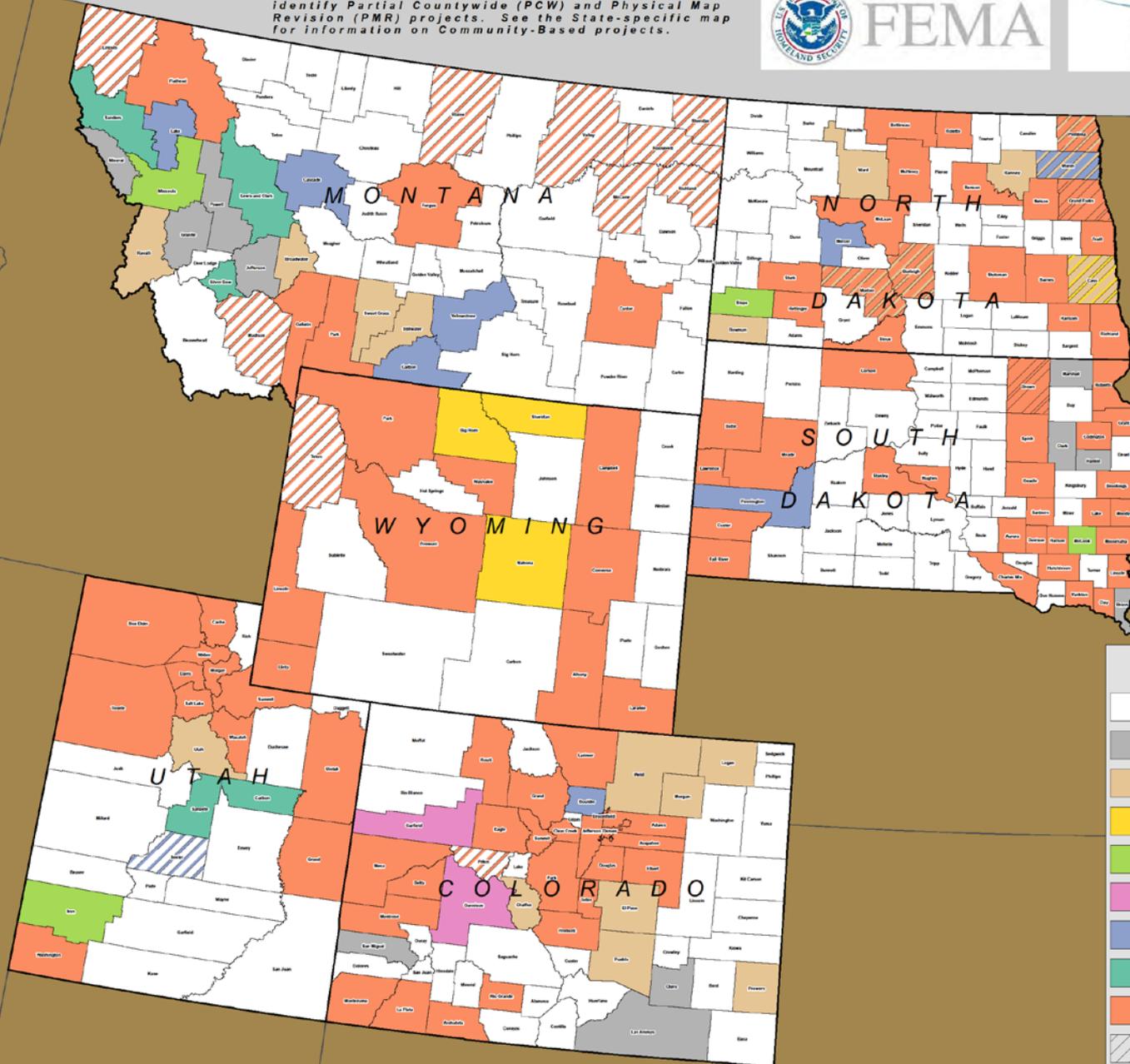
Note: This map shows the status of all projects (except Community-Based) completed or underway. A solid fill represents a Countywide project. Hatching is used to identify Partial Countywide (PCW) and Physical Map Revision (PMR) projects. See the State-specific map for information on Community-Based projects.



FEMA



RSC8

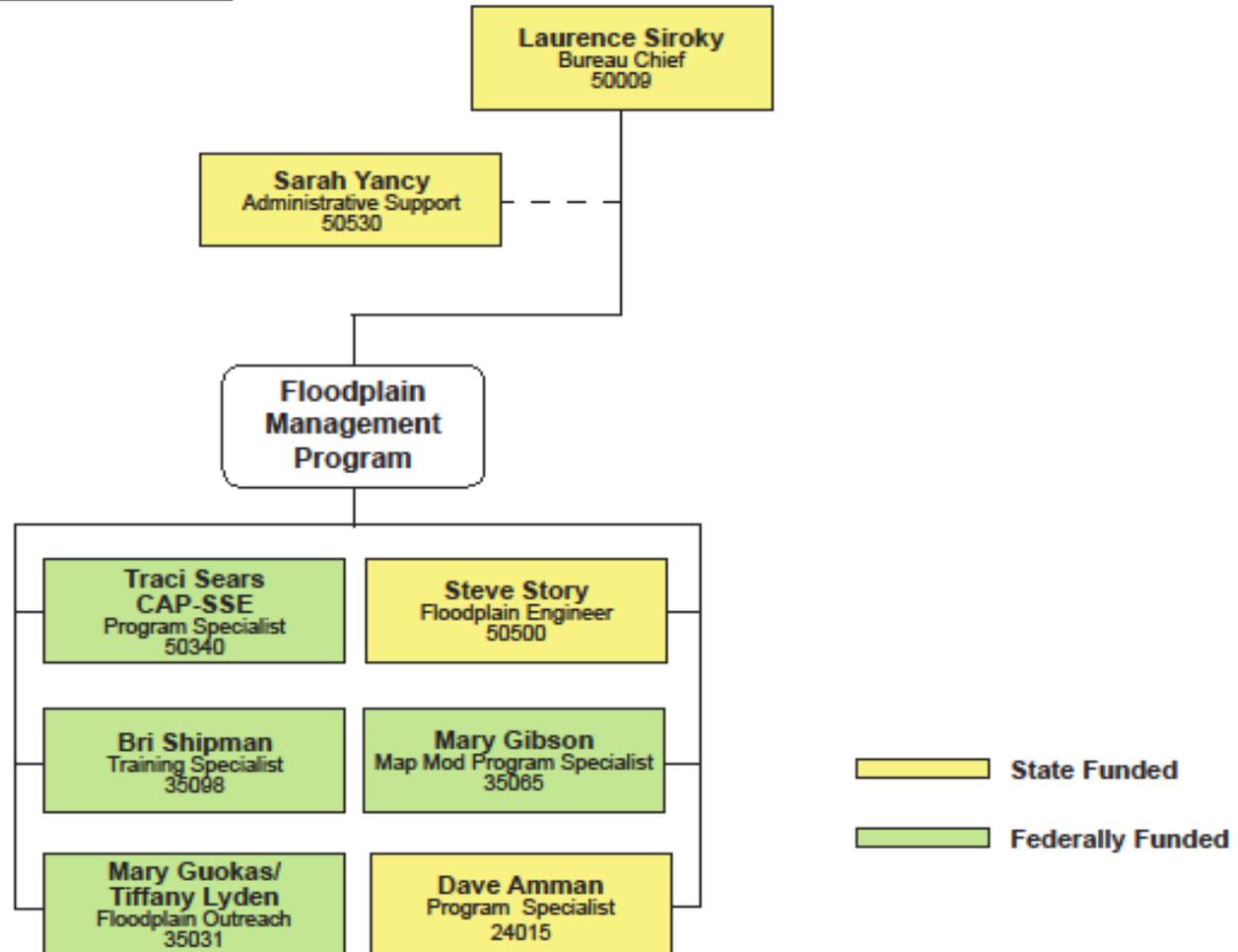


LEGEND	
	Not Started
	Scoped
	Data Development
	Preliminary
	Final Mtg Held
	In Appeal
	Appeal Over
	LFD Issued
	Effective
	PCW/PMR



Water Operations Bureau

Revised: July 2012



Montana Flood Risk Map Program

FEMA Map Modernization Program 2004-2009

Purposes:

- Convert paper flood insurance rate maps to digital maps
- Produce electronically accessible GIS based maps
- Incorporate existing data studies
- Increase map accuracy in mapping floodplain boundary
- Update engineering analysis – hydrologic and hydraulic
- Perform new mapping studies to address mapping issues or lack of mapping

Montana Flood Risk Map Program

FEMA Risk Map Program Purpose 2010 Forward

- Convert paper maps to digital format
- Perform new studies to address areas with mapping issues or no mapping
 - Incorporate mitigation planning
- Produce non-regulatory flood risk information for communities

Montana Flood Risk Map Program

Advantages of Digital Flood Insurance Rate Maps

- Accurate flood hazard data is available in GIS format
 - As new data becomes available, revision process is simplified
- A tool for local analysis and decision making as flood hazard GIS layer can be put on top of other GIS layers

Montana Flood Risk Map Program

Risk Map GIS data products

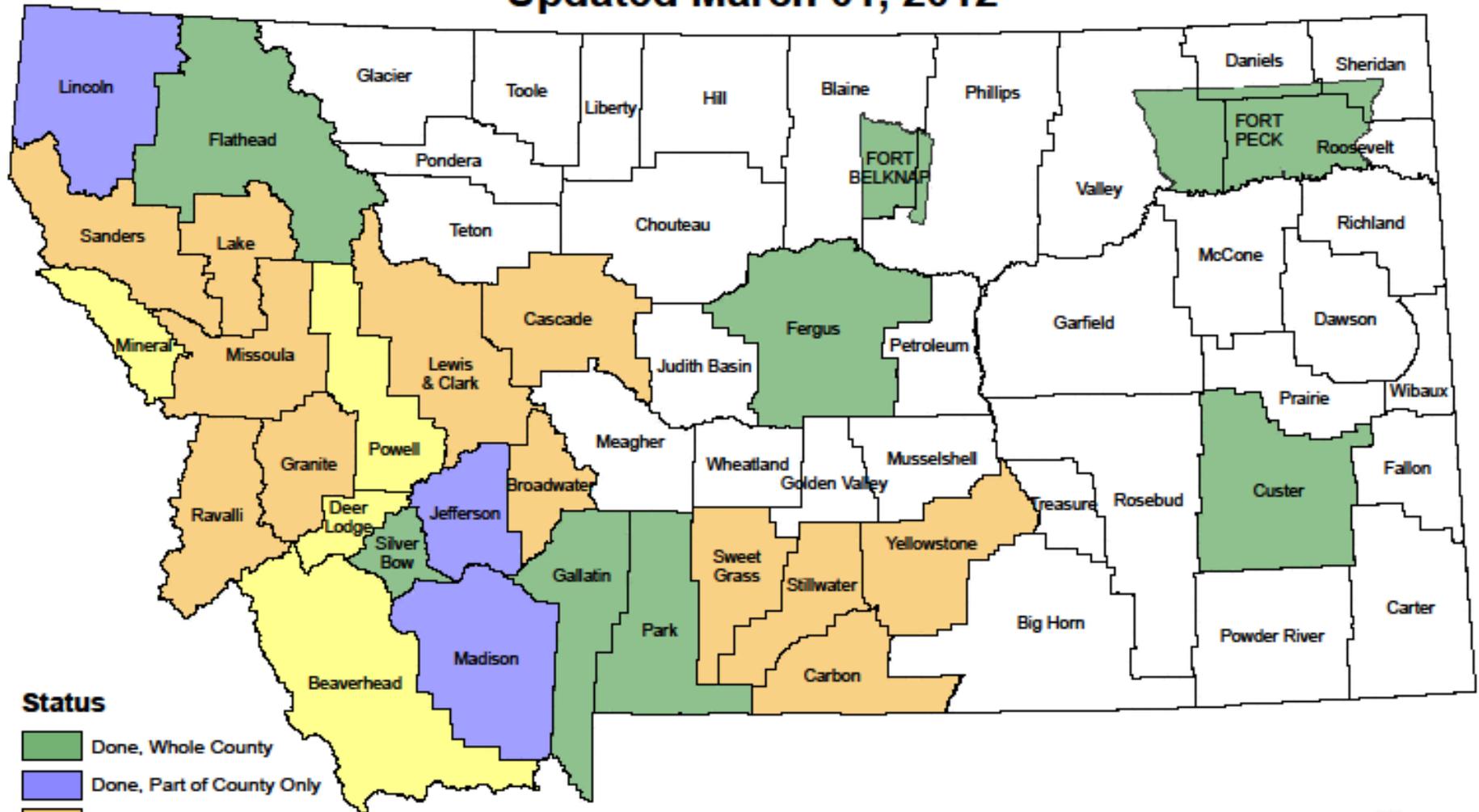
- Geo-referenced flood layer
- Base map information: roads, streams, water bodies, community political boundaries
- Aerial imagery

Montana Flood Risk Map Program

History

- Montana has participated since 2004
- Awarded 1-2 million a year
- Undertaken 23 projects
- Completed 9
- Mapped 10,000 miles of rivers and streams

Montana Map Modernization & Risk MAP Project Status Updated March 01, 2012



Status

- Done, Whole County
- Done, Part of County Only
- In Progress, Whole County
- Project being considered for future
- No Project



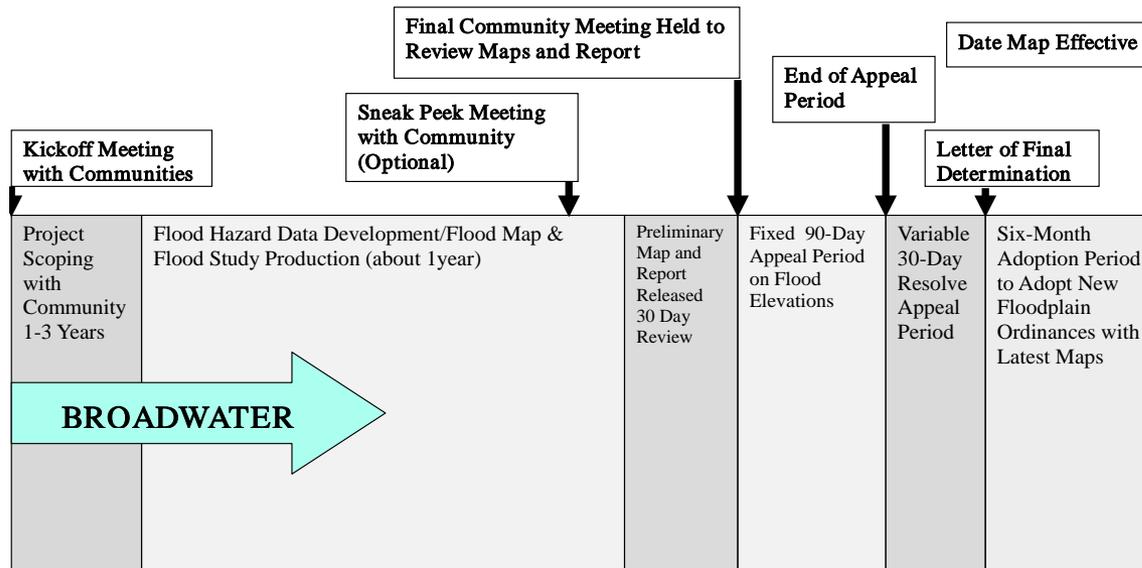
Montana Flood Risk Map Program

Current Projects in order of progress toward completion	Start Date
• Lewis & Clark	2007
• Evergreen/Flathead	2008
• Cascade	2007
• Carbon	2006
• Lake	2009
• Ravalli	2008
• Broadwater	2010
• Stillwater	2010
• Sweet Grass	2010
• Granite	2011
• Flathead / Lake	2011
• Missoula	2005
• Yellowstone	2006

Current Projects



FEMA Digital Flood Insurance Rate Map (DFIRM) Conversion Process

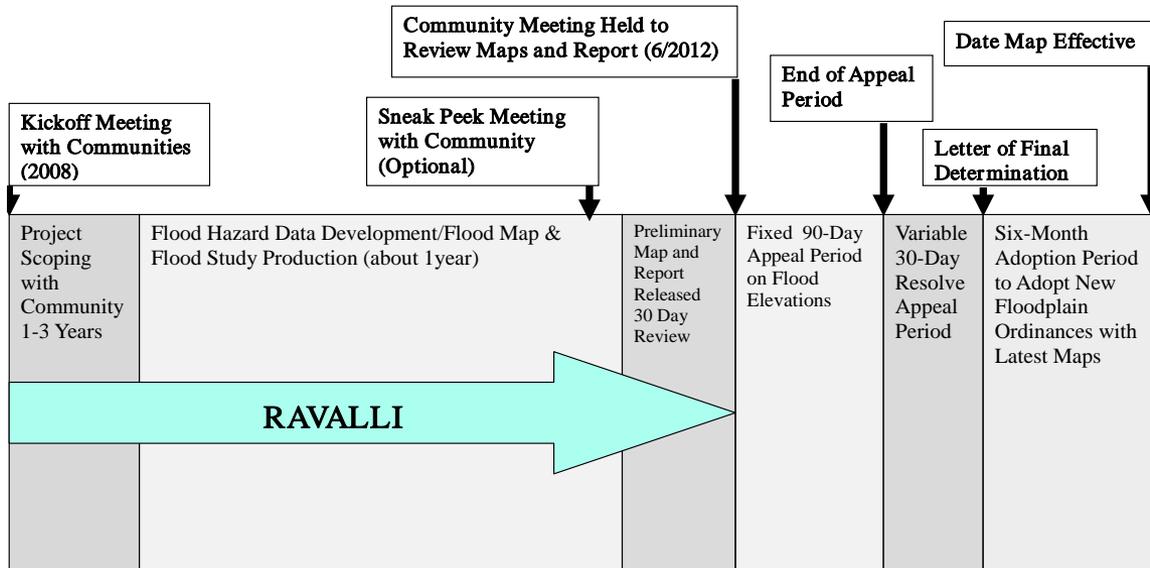


Notes:

Current Projects



FEMA Digital Flood Insurance Rate Map (DFIRM) Conversion Process

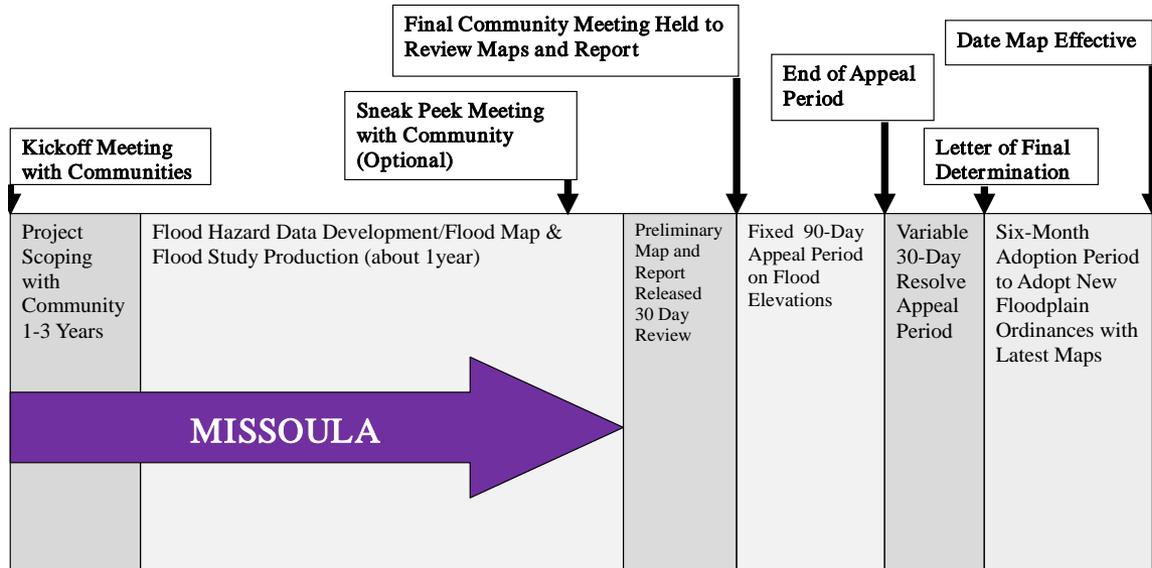


Notes:

Current Projects



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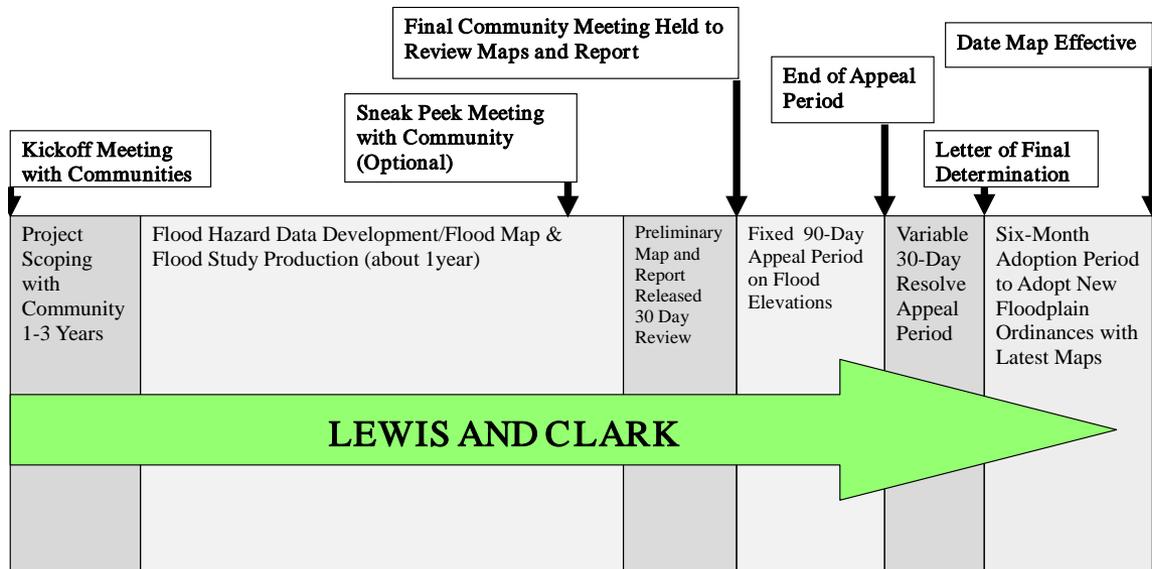


Notes:

Current Projects



FEMA Digital Flood Insurance Rate Map (DFIRM) Conversion Process



Notes:

Montana Flood Risk Map Program

Community Mapping Process

- Identify community mapping need
- Talk to community, get letters of support
- Address FEMA funding priorities and mapping metrics
- Submit grant application
- Let contract to perform mapping work
- Charter team

Montana Flood Risk Map Program Project Team

- FEMA
- State DNRC
- Contractor
- Community

Montana Flood Risk Map Program Process Steps

- Start mapping program work and hold kickoff meeting with community
- Mapping work and FEMA quality control checks 1, 2 or 3 years
- Release preliminary maps for community review
- Map corrections process begins

Montana Flood Risk Map Program

Process Steps

- Hold community meeting on maps
- Appeals and map corrections process continues
- Appeals and map corrections process is completed
- Maps are finalized and FEMA sends community a letter notifying of six month deadline to adopt
- Maps become effective after six months
- Community must adopt and comply

Montana Flood Risk Map Program

What is next?

- FEMA funding cuts 60%, Region XIII more
- Montana project funding 180K in FFY 2012
- Funding for a first phase of a new Bozeman/Gallatin project and the last phase of Missoula
- Next year funding level uncertain

Montana Flood Risk Map Program

What is next?

- 3-4 county projects will be completed this year
- Remaining areas don't support FEMA metrics
- Looking to State funding options
- Have a priority list

State of Montana
RiskMAP
Increasing Resilience Together
Business Plan - 2012



2011 Flood Roundup, Musselshell County

Prepared For:

**The Federal Emergency Management Agency
United States Department of Homeland Security**

April 2012



Montana Flood Risk Map Program Business Plan Objectives

Identifies the need for updated flood hazard maps

Prioritizes the State's needs

Demonstrates how the DNRC manages the effort

Details a strategy for producing new maps

Outlines performance goals, project tracking and
management tools

Montana Flood Risk Map Program

- Three major watersheds – feeding Pacific, Gulf and Hudson Bay
- 77 named mountain ranges
- Estimated 200,000 miles of rivers – Headwaters State
- Largest fresh-water lake in the western US - Flathead
- Riverine and ice jam flooding
- 2011 bad flood year in Montana



Montana Risk Map Business Plan 2012

Townsend Ice Jam Flood Broadwater County 2012 Photo Credit: Steve Story MTDNRC

Montana Flood Risk Map Program

- 1% of Montana's rivers and streams have established Base Flood Elevations
- On rivers with BFE's communities require building 2 feet above the Base Flood Elevation
- In the 15 years, 400 homes were built in the floodplain, adding to the 3,800 homes already in the floodplain
- Development pressure near water bodies continues to grow as Montana's population grows







Montana Flood Risk Map Program

Preventing flood loss most effective when mapping occurs first, prior to development

State program strives to:

- Reduce flood losses
- Reduce unregulated development floodplains
- Make those developing in or near floodplains aware of the risk

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