Big Horn County/City of Hardin/ Town of Lodge Grass

Floodplain Mapping Update

Project Kickoff Meeting

September 14, 2021
Agenda

- Floodplain Maps review
- Flood Study Steps
- Project overview and project team
  - Community coordination
  - Community contribution
  - Estimated timeline
- Project website
- Mitigation planning
- Questions & Discussion
Identifying Risk Through Mapping

**Floodplain Mapping:** Identifies flood risk and in turn helps keep people and property out of harm’s way.

Flooding on Fly Creek 2019
Photo compliments of the Big Horn County News
Floodplain Maps

- Indicate areas of flood risk
- Used for
  - Floodplain regulations
  - Planning/Environmental Health
  - Emergency planning
- Coarse, general mapping
  - challenge for county/landowners
- Opportunity to upgrade/replace
Big Horn County Floodplain Maps

- 1978 Flood Hazard Boundary Maps
- 1981 Flood Insurance Rate Maps (no new study)
City of Hardin
Floodplain Maps
Town of Lodge Grass
Floodplain Maps

- 1978 Flood Hazard Boundary Maps
- 1981 Flood Insurance Rate Maps, Map updated with new study conducted
Flood Study Steps

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

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

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

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

**Step 4 - Mapping (delineation):** The result will be the floodplain boundary and a depth grid identifying the shallower and deeper areas of flooding.
Proposed study
Project Team

- DNRC Floodplain Staff — Tiffany Lyden, Nadene Wadsworth, Steve Story, Peri Turk, Katie Shank, Doug Brugger, Traci Sears, Shaye Bodine

- Treasure County

- FEMA Region VIII

- DNRC Contractors:
  - Topography/LiDAR — aero-graphics
  - Survey Work — DOWL
  - Hydrology — USGS
  - Hydraulic Analysis and Floodplain Mapping — Morrison Maierle
Community Coordination

- Landowner notifications survey work
  - DNRC contractors will send letters

- Work in floodplain during new study
  - Work with DNRC to update contractors

- Historic flood information sharing
  - Photos, data collected
Estimated Project Schedule

Topographic (LiDAR) Done can be accessed from state library
Survey Work- Fall 2021
Hydrology- Fall 2021
Hydraulics – mid- late 2022
Draft Maps – late 2022 to early 2023
Public review of draft maps – early 2023
FEMA Map Production/
  Preliminary Maps - late 2023 (est.)
Public review of preliminary maps – 2024 (est.)
FEMA maps finalized – 2025 (est.)
Community Contribution

Dear Landowners,

The City of Dillon has been working with FEMA and the Montana Department of Natural Resources & Conservation (DNRC) to conduct new flood studies and update floodplain maps for Blacktail Deer Creek and the Beaverhead River. The new maps are intended to provide more reliable and detailed information about flood-prone areas along these waterways.

You are receiving this notification because proposed floodplain mapping changes could affect your property.

Visit this website www.floodplain.mt.gov/beaverhead to view the draft floodplain maps.

Attend one of our public open houses to get more information about this project and learn how it may affect your property:

- **Thursday, May 9th** 5:00 – 7:00pm
  - Department of Natural Resources
  - 840 N. Montana St
  - Dillon, MT

- **Monday, May 13th** 5:00 – 7:00pm
  - Lima Town Hall
  - 5 W Section Corner
  - Lima, MT

Staff from the DNRC Floodplain Program and the City will be on hand during the open houses to answer questions and provide an overview of the project. We look forward to seeing you there!

For more information about the overall project, or the draft maps, feel free to contact us directly:

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Carbon County, Montana is working with MT DNRC and FEMA to update flood studies and floodplain maps for the Clark Fork of the Yellowstone, Rock Creek, and Indigenous. Updated floodplain maps will depict the latest, most accurate flood risk data, and will be used to eventually replace some of the existing FEMA floodplain maps in Carbon County.

For more information, see: Background on existing floodplain maps and Flood Study Process.

DNRC held project kick-off meetings on October 3rd and 4th, 2019 with Carbon County, Joliet, Red Lodge, Bear Creek, and Foothills. To view the slides that were presented, click here.

Below is the tentative project timeline. Click here to view the project timeline.
Mitigation Planning

• Status of plan?
  • Include floodplain mapping project in plan
Mitigation Technical Assistance

In process of developing

May be able to provide engineered mitigation actions as a result of updated flood risk
Discussion

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