

Teton County City of Choteau Mapping Project Update

February 21, 2024, 2:00 – 3:30 PM

Agenda

- 2:00 – 2:10 **Introductions**
- 2:10 – 2:20 **Overview**
- 2:20 – 3:10 **Updates for Community**
 - 2:20 – 2:30 **Hydrology**
 - 2:30 – 2:50 **Hydraulics & Mapping**
 - 2:50 – 3:00 **Mitigation**
 - 3:00 – 3:10 **Open House**
- 3:10 – 3:30 **Discussion & Next Steps**

INTRODUCTIONS 2:00 – 2:10

- DNRC
- FEMA
- City of Choteau
- Teton County
- Additional Attendees

OVERVIEW 2:10 – 2:20

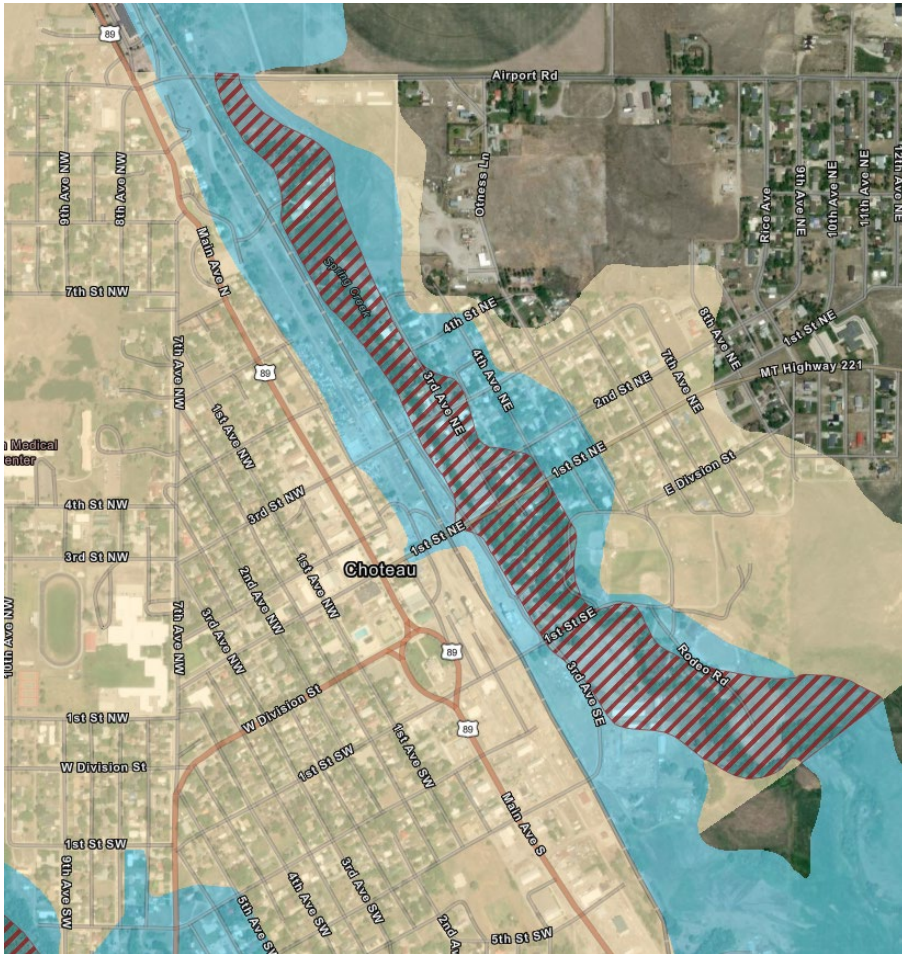


Project Timeline Teton County Floodplain Maps Update

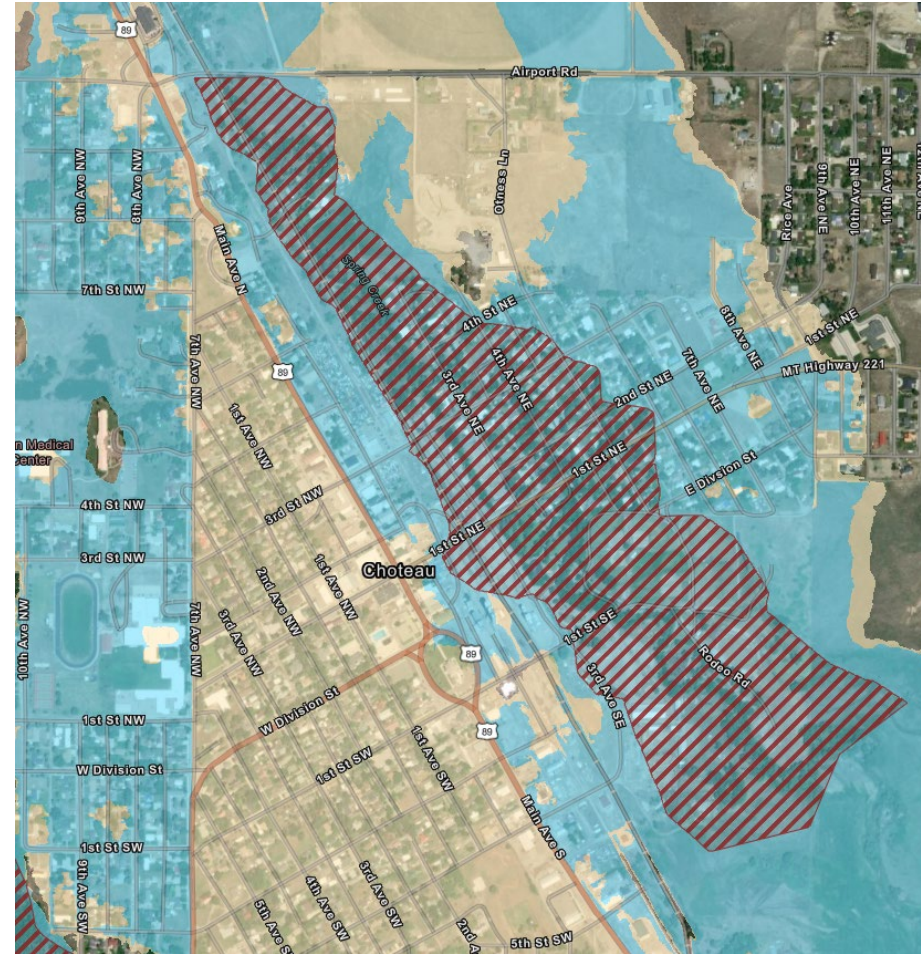
Estimated Completion date

Completed 2021	Completed 2023	Late 2023 Draft data Open Houses Spring 2024	Mid- 2024 (est.) preliminary Late 2024-Early 2025 (est.) appeal period	Mid 2026-Late 2026 (est.)
Measurements are made of the topography around the river, along with any culverts, bridges, and road crossings. LiDAR uses an airplane to collect ground elevation over a large area, and ground survey supplements the airborne data. Flood flow data determine how much water there will be in a river during a flood event.	The elevation and survey data are combined with the flood flow data to determine where the water will go when it overflows the channel and how far it will spread out. The area shown to be underwater and at high risk is mapped as the regulatory floodplain.	Draft data is delivered to the communities. Public open houses will be conducted for landowners to review the information Spring of 2024.	FEMA Preliminary Maps are produced and ready for public review and comment period. A second public open house is usually conducted to review the information. 90-day official comment & appeal period held.	FEMA Flood Insurance Rate Maps finalized.
Data gathering	Engineering and floodplain modeling	Draft Data available public review	Preliminary Data public comment and appeal period	Flood Insurance Rate Maps become effective

Significant Expansion of Floodplain and Floodway



Current Maps



New Study Results

Community Letters to FEMA

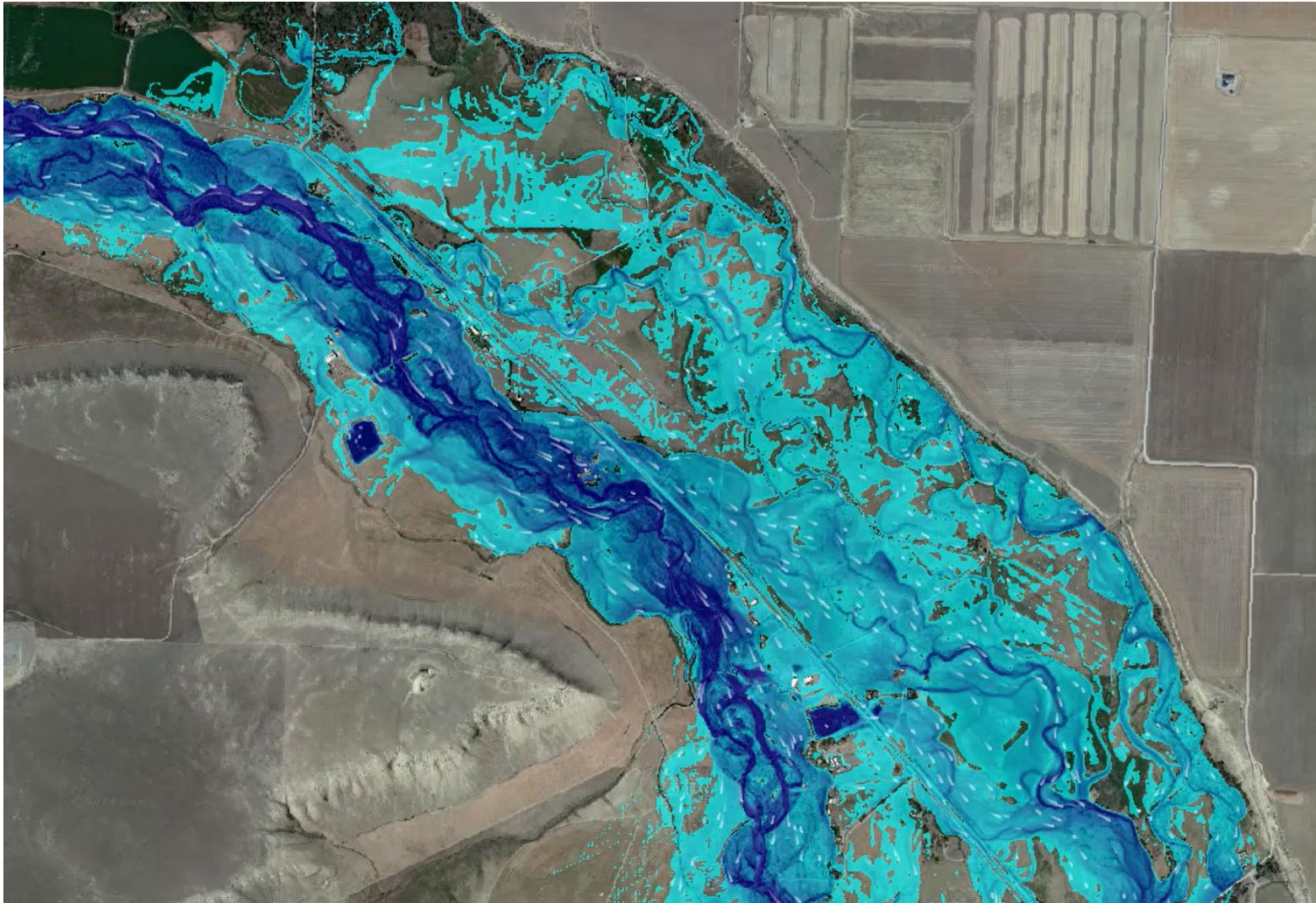
- Senator Daines
- Mayor
- First Bank
- Four additional letters from residents, including a petition with signatures
- Hearing the community's concerns is appreciated and we take these concerns seriously
- We've responded directly via mail or email for letters with contact information available
- We'll address mitigation options later in the presentation

- Substantial increase in 100-year flow used for maps, from around 15,000 cubic feet per second (cfs) to over 20,000 cfs.
- The new study flows are based on USGS Gages on the Teton River both above and below Choteau. This is generally considered the best possible source of information for calculating the 100-year flow.
- The 100-year flows at the USGS gages are 23,000 cfs upstream and 26,800 cfs downstream. The flow at Choteau is interpolated between these.

- The new study flows have received additional review by DNRC, USGS, and project contractors.
- No errors were found, and no alternative approaches would supersede the results that are based on USGS gage data.
- The new study flows will remain as the basis for the new regulatory maps, unless appealed after Preliminary Flood Insurance Rate Maps are released.

Communicating about flood flows

- 100-year floods are extreme events that most people don't have much personal experience with. It is a difficult topic to communicate in an intuitive way.
 - Typical Teton River peaks less than 1,000 cfs, peak flow was 570 cfs in 2023
 - Flows absorbed into groundwater
 - High events are driven by short bursts of extreme rain, often bringing snowmelt
 - Example: comparing Teton River to Missouri River.
 - A typical spring peak in the Missouri River may be around 25,000 cfs. How can that same flow come from the much smaller watershed of the Teton River?
 - A 100-year on the Missouri is around 70,000 cfs near Great Falls. Floods on the Missouri also last longer, and are caused by high statewide snowpack instead of a single intense storm like on the Teton River.
- DNRC will provide some additional plain-language material to share with the public via the project website.



- Videos of model results

- Additional survey underway to confirm that there are no errors in the elevation data and that the mapped floodplain extents are reasonable.
- Should have the survey results to share in about 6 weeks, as well as initial mitigation results discussed later in the presentation.
- The maps don't typically show small elevated islands around individual homes. Some homes may be higher than the 100-year flood elevation but are mapped in the new floodplain. Those homes could be eligible for Letters of Map Amendment (LOMAs) through FEMA.

Floodways

- We are exploring options for reducing the floodway on Spring Creek. Similarly looking into removing new floodway on split flow south of Choteau.
- This might require a larger floodway on the Teton River in both cases. Any proposed changes would be presented to the community to assess before moving forward.
- Floodway changes may not be possible if surcharge requirements can't be met, which would mean no changes to the maps that the community has been reviewing.

- DNRC Mitigation Technical Assistance Memo
 - Options being considered include impacts of Highway 89 changes and increased conveyance through existing roads
 - DNRC will set up a meeting in about 6 weeks to discuss these results and the survey results. That is when we'll also be looking for input about any additional options to consider.
 - If a feasible mitigation project is found that could reduce the mapped risk in the community, these maps in progress would likely become regulatory before the project would be finished. The maps would be revised after the project is complete.
- FEMA – Additional Comments on Mitigation Support
 - Continued Mitigation Technical Assistance beyond scope and lifetime of the DNRC project
 - BRIC DTA Program

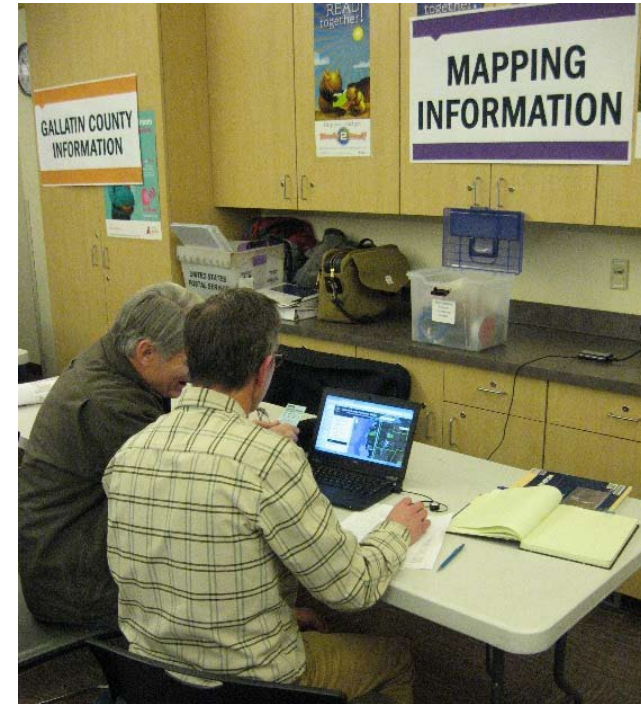
- State-level Support - Montana Disaster Emergency Services (MT DES)
 - FEMA Funded Mitigation Projects
 - HMGP, BRIC, FMA. Etc.

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OPEN HOUSE UPDATE 3:00 – 3:10

- To Be Determined – Mid May at the earliest
 - Would like to include any floodway changes, will update community soon
 - Feedback – City
 - Feedback – County
- Press release option in lieu of open house



Discussion



Choteau, June 11, 1964 – Great Falls Tribune File Photo