

# Middle Lefthand Creek Flood Hazard Mapping

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Community Meeting  
November 30, 2023



# Introductions

- Kelly Watson, Boulder County
- Kevin Doyle, Michael Baker Intl.
- Christine Gaynes, FEMA
- Terri Fead and Marta Blanco-Castano, CWCB
- David Sutley and Kurt Roblyer, STARR II
- KC Robinson, AECOM
- Additional support staff

**\*Please sign in on the attendance sheet\***



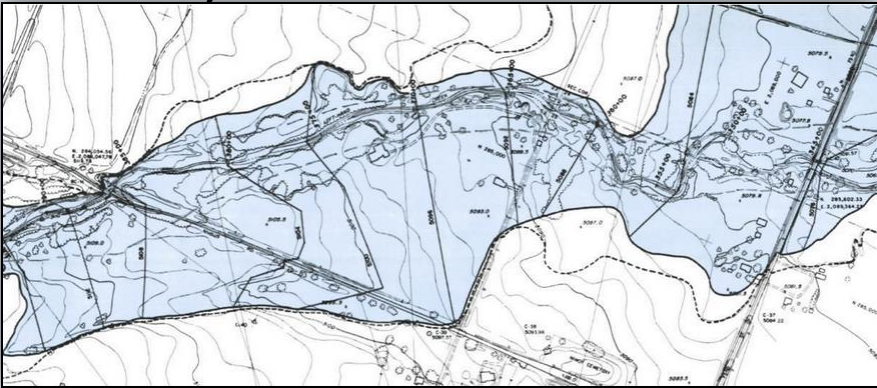


# Meeting Goals

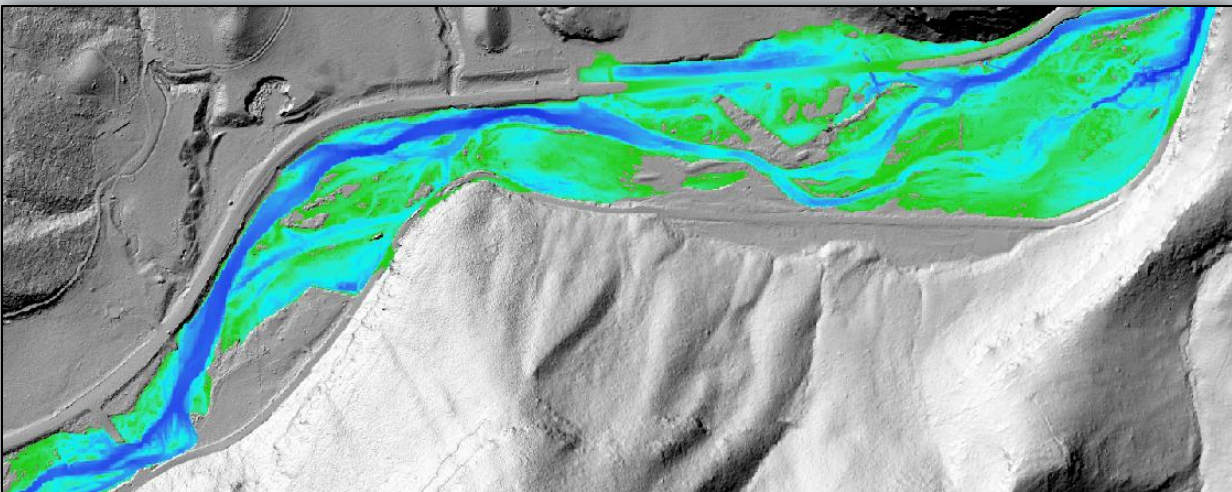
- Inform residents, landowners, community members (you!) of the remapping process
  - Current status
  - Future study
- Provide opportunity for public comment before Planning Commission and Board of County Commissioners hearings
  - [FloodplainAdmin@bouldercounty.gov](mailto:FloodplainAdmin@bouldercounty.gov)
- Have a fair & open dialogue

# Introduction

1981 study:



CHAMP:



- Flood hazards are a risk to life, health, safety and property
- The National Flood Insurance Program (NFIP) requires communities to update flood risk information—risk is not static
- CWCB and local communities partner to identify and communicate new risk information
- Updating flood risk information promotes community resiliency





# NFIP Overview

- Voluntary Federal Program
  - Overseen by FEMA
  - Managed by Communities
  - Enforced by Lenders
- Requires participating communities to regulate development
- Provides homeowners/renters with option to purchase insurance
- Provides federal assistance for mitigating risks
- Local engineers determine flood risk after extensive analysis



# Colorado Hazard Mapping Program (CHAMP)

- Why was this study conducted?
  - Hazards change
  - Floodplain delineations are often outdated
  - Maps regularly updated across the country by FEMA, States, Communities
  - The State of CO initiated CHAMP after the 2013 Flood
    - Changes to flooding characteristics
    - Changes to understanding of rainfall
- Why does it impact you?
  - Know your flood hazard risk
  - Flood Insurance Rate Maps (FIRMs) will change
  - Regulation of development based on flood zone / floodway

# CHAMP Roles

## Ongoing Partnership

### FEMA



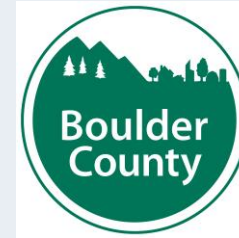
- Provides funding for new flood risk studies
- Oversees NFIP

### State (CWCB)



- Respond to community requests for updated risk information
- Initiate flood risk identification projects
- Support community
- FEMA partner

### Community Officials



- Administer NFIP
- Communicate risk
- Manage development
- Flood risk mitigation
- Enforce regulations
- Identify new risk

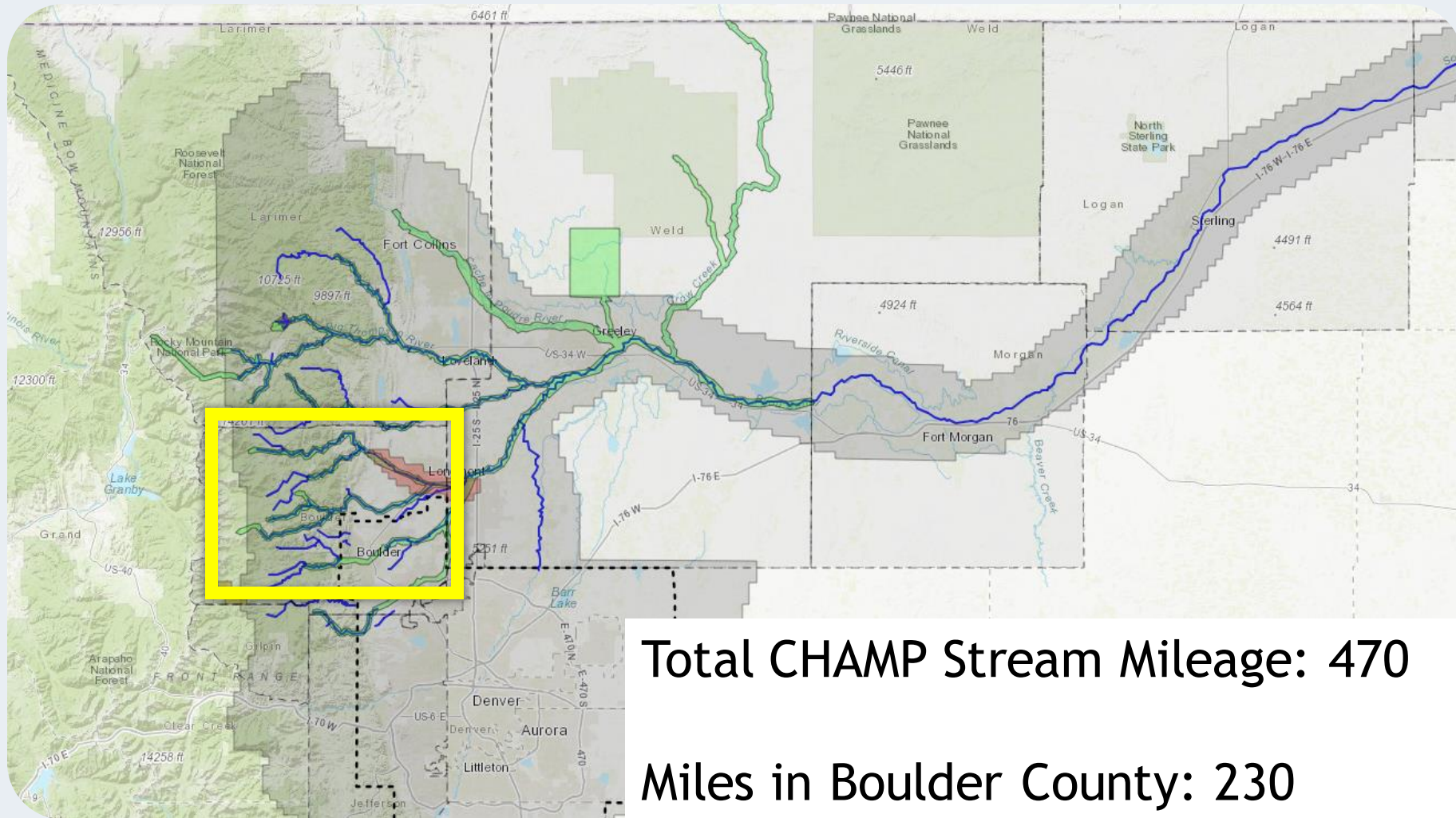
### Private Stakeholders



- Residents, landowners, community members
- Local engineers partner with government to update flood risk information

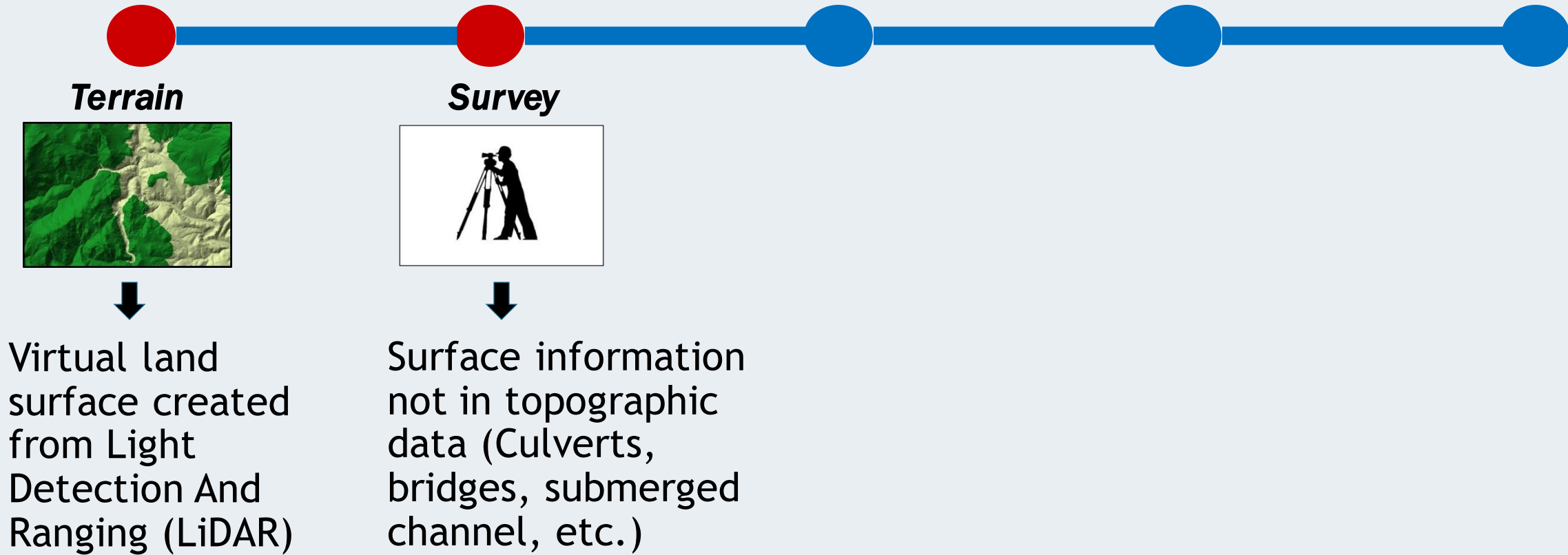


# CHAMP Study Area

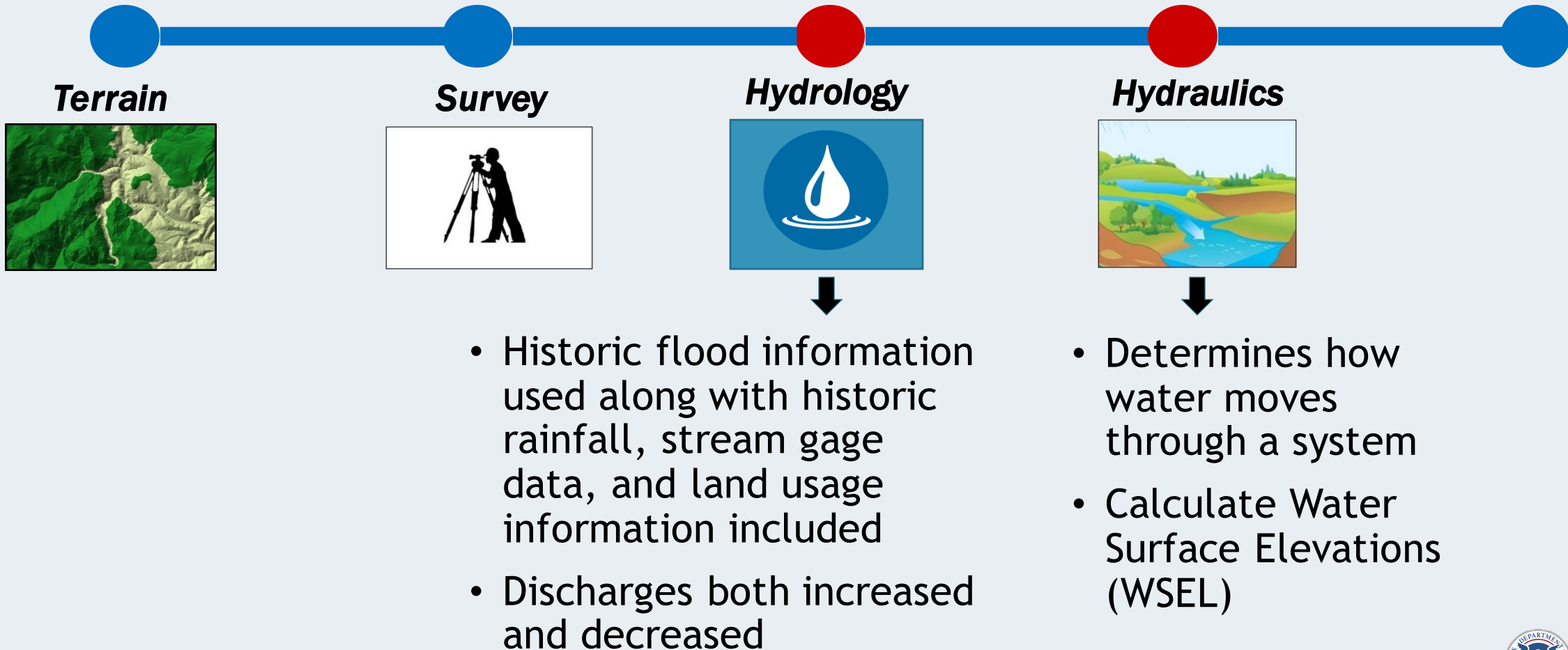




# Flood Study Details

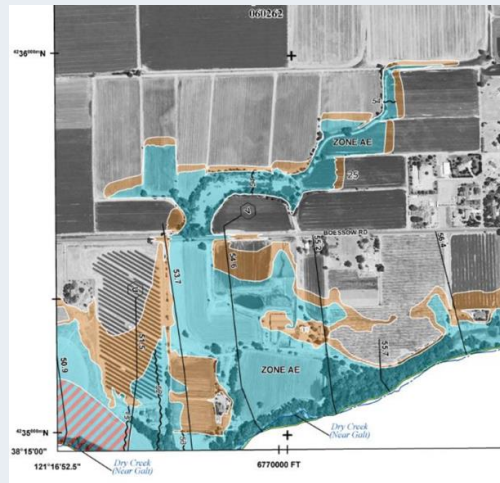
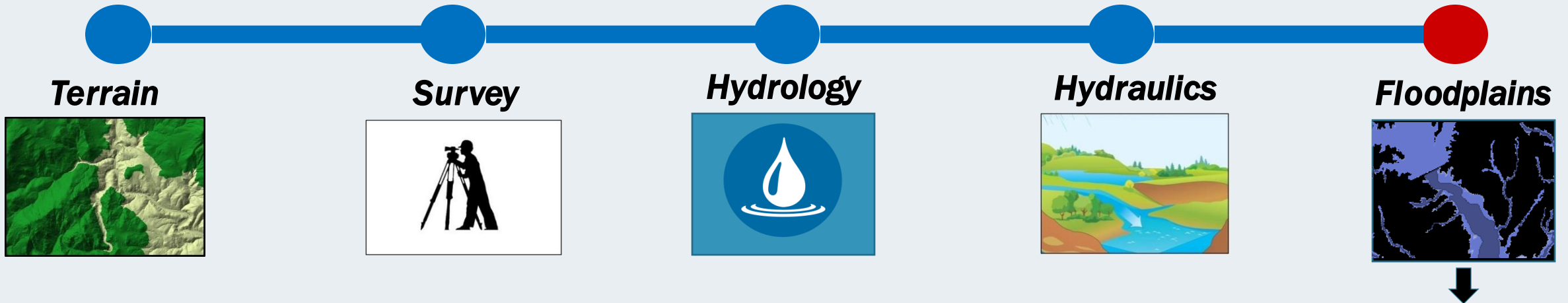


# Flood Study Details





# Flood Study Details



- Results are mapped for ease of use
- Description of results:
  - Zone A & AE
  - Cross Sections
  - Base Flood Elevation (BFE)
  - Floodway

# Are the Results Accurate?

- Every flood is different
  - Dam failures, Bridge/culvert clogging, Debris, Fires
- Models are a snapshot in time
  - Post-flood topographic and survey data
  - Best available data at the time
- Floodplain maps do not re-create a specific event
- Quality Control
  - Multiple engineers review data and results at various checkpoints
  - Community officials and members reviewed and provided input
  - FEMA contractors support quality control



# CHAMP Timeline

2015

- CHAMP initiated
- Survey

2016

- Phase I H&H, draft mapping

2017

- Phase I outreach meetings, local adoption in May
- Phase I sent to FEMA for review
- Phase II H&H, draft mapping

2018

- Phase II outreach meetings, location adoption in July
- Phase II sent to FEMA for review

2019

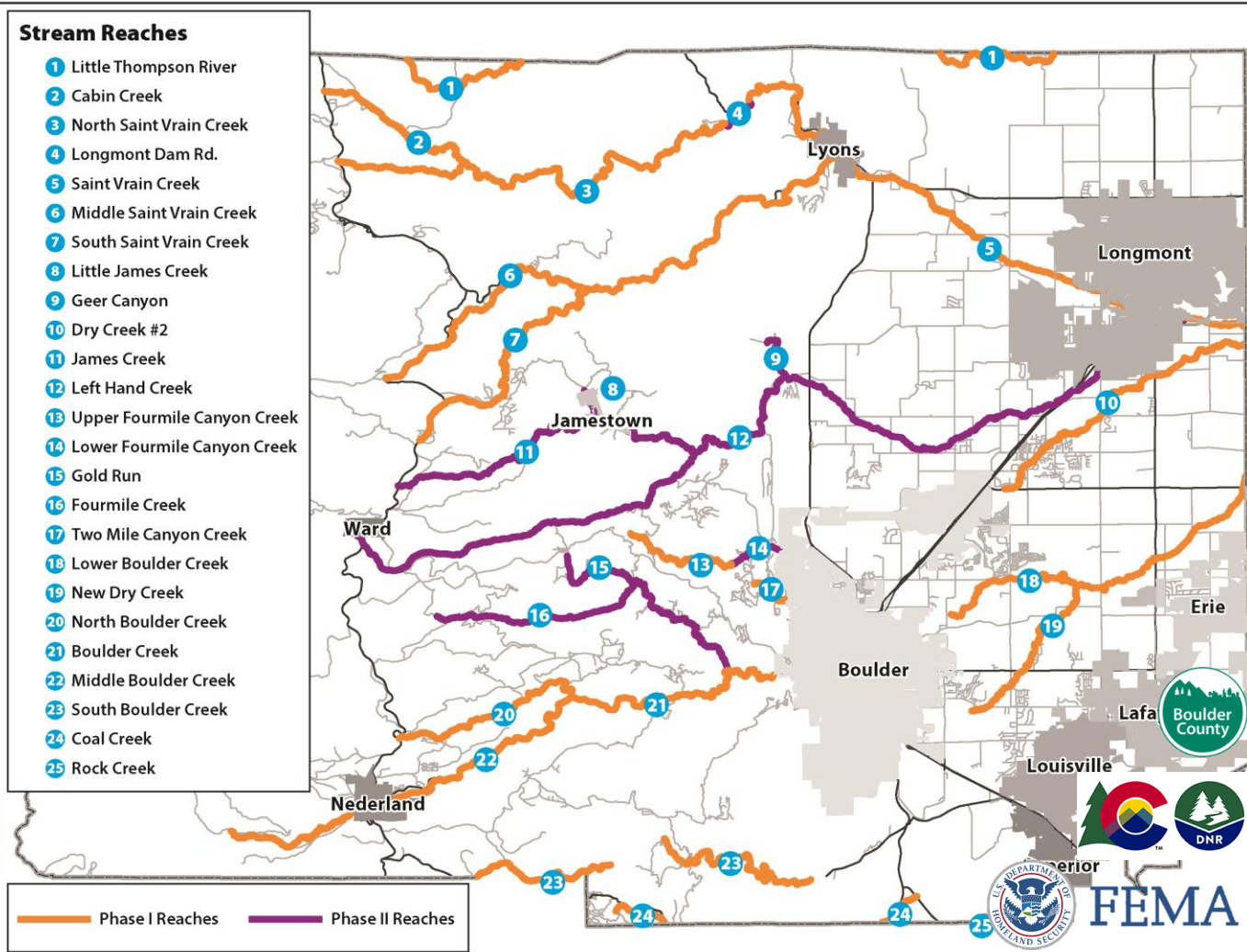
- FEMA review
- Preliminary FIRMs released

2020

- Preliminary FIRM local adoption and outreach meetings in January

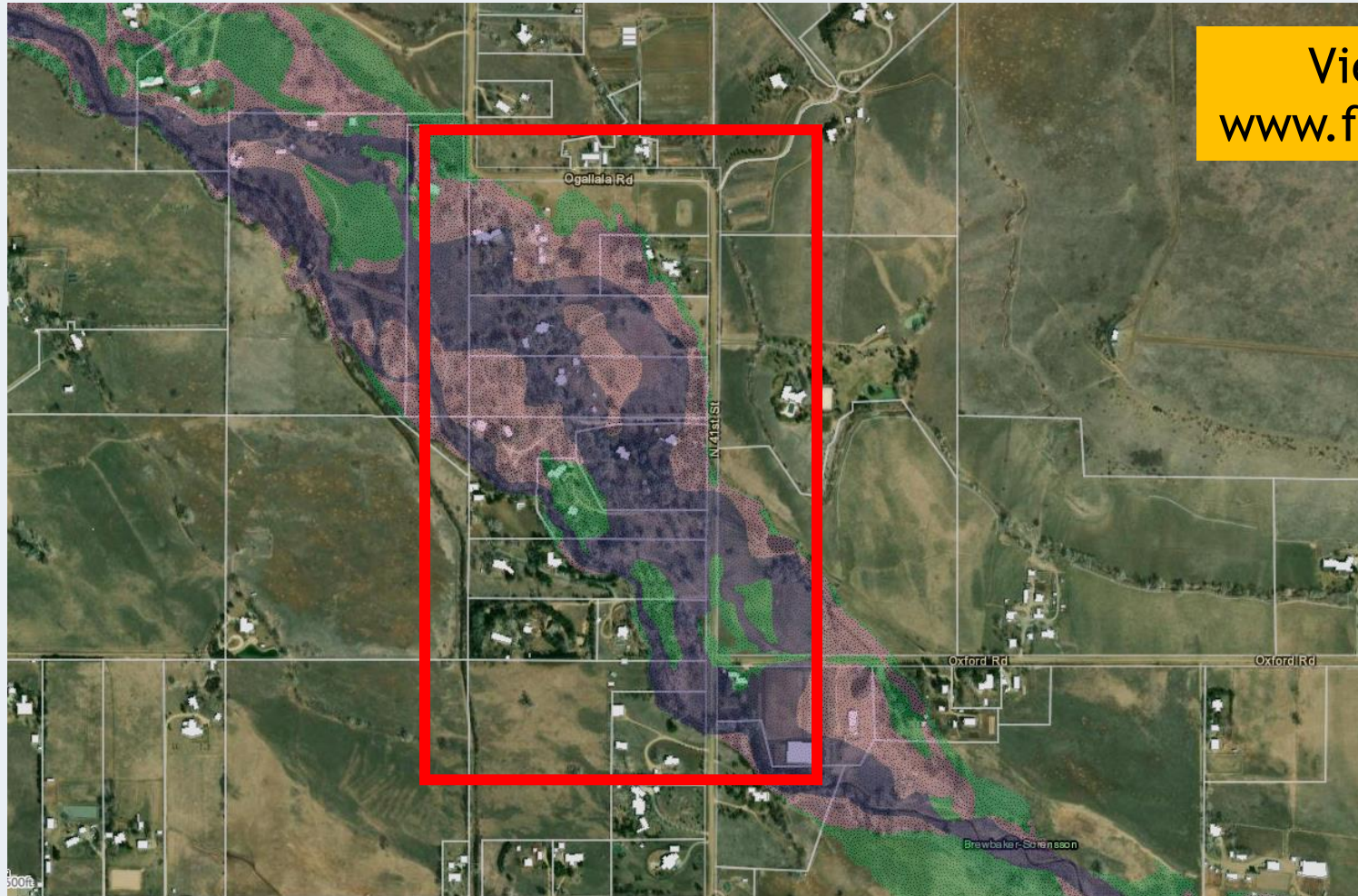
## Stream Reaches

- 1 Little Thompson River
- 2 Cabin Creek
- 3 North Saint Vrain Creek
- 4 Longmont Dam Rd.
- 5 Saint Vrain Creek
- 6 Middle Saint Vrain Creek
- 7 South Saint Vrain Creek
- 8 Little James Creek
- 9 Geer Canyon
- 10 Dry Creek #2
- 11 James Creek
- 12 Left Hand Creek
- 13 Upper Fourmile Canyon Creek
- 14 Lower Fourmile Canyon Creek
- 15 Gold Run
- 16 Fourmile Creek
- 17 Two Mile Canyon Creek
- 18 Lower Boulder Creek
- 19 New Dry Creek
- 20 North Boulder Creek
- 21 Boulder Creek
- 22 Middle Boulder Creek
- 23 South Boulder Creek
- 24 Coal Creek
- 25 Rock Creek





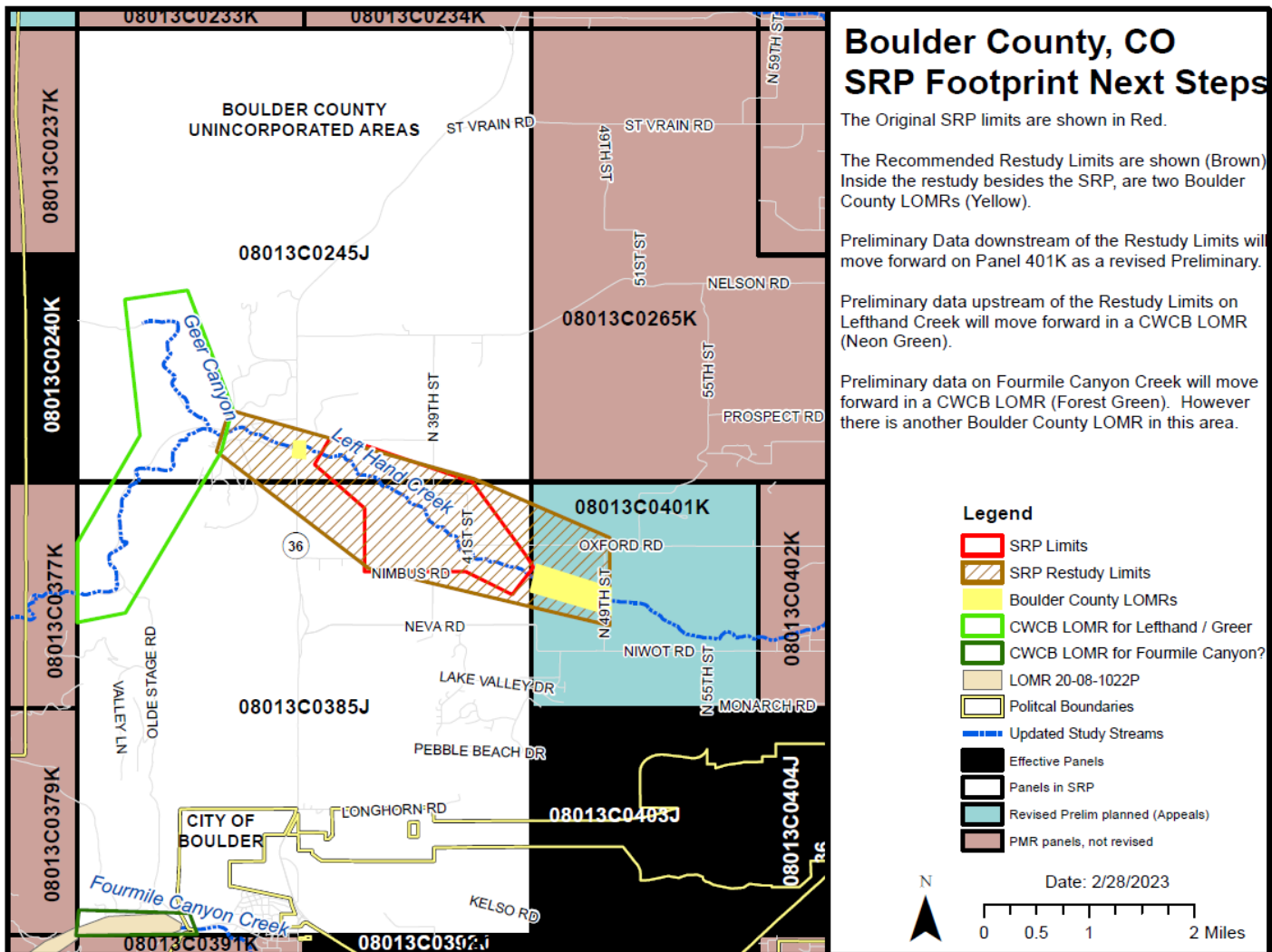
# Lefthand Creek Appeal & Scientific Resolution Panel



View the report at  
[www.floodsrp.org/panels/](http://www.floodsrp.org/panels/)

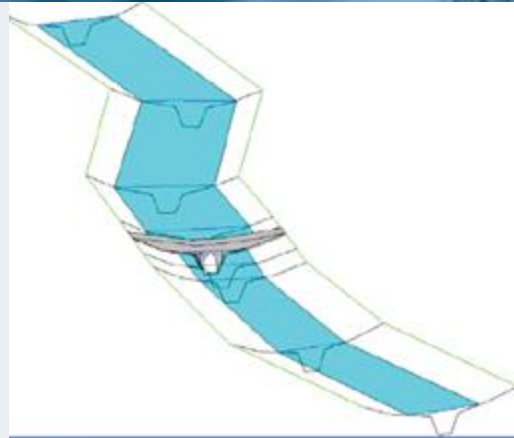


# Future Study of Lefthand Creek

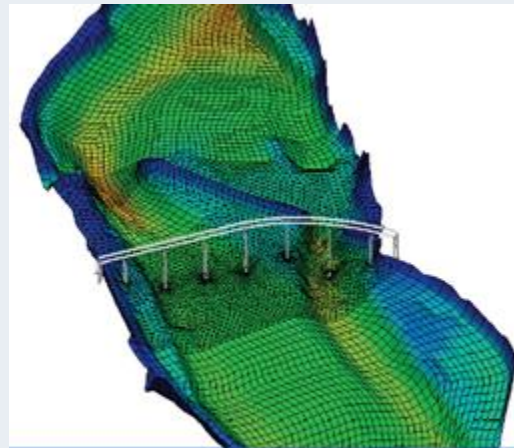


- As a result of Scientific Resolution Panel (SRP) decision, FEMA will re-study the middle portion of Lefthand Creek
- Re-study will use 2D modeling instead of 1D

# 1D vs 2D



1D Model



2D Model

- One-dimensional (1D) -
  - Uses traditional cross sections and profiles
  - Long history of use
  - Fast run times
  - Simplifies flow patterns
  - Averages results at each cross section
- Two-dimensional (2D)
  - Uses much more topographic data
  - Can model complex flows and splits easier
  - Datasets can be large
  - Longer run times



# FEMA Next Steps

- For Middle Lefthand Creek (Geer Canyon to 49<sup>th</sup> St)
  - No change to the effective FIRMs for now
  - Re-study to begin next year
- For the rest of Boulder County:
  - Revised Preliminary FIRMs become effective FIRMs
  - Additional Letter of Map Revision (LOMR) incorporation

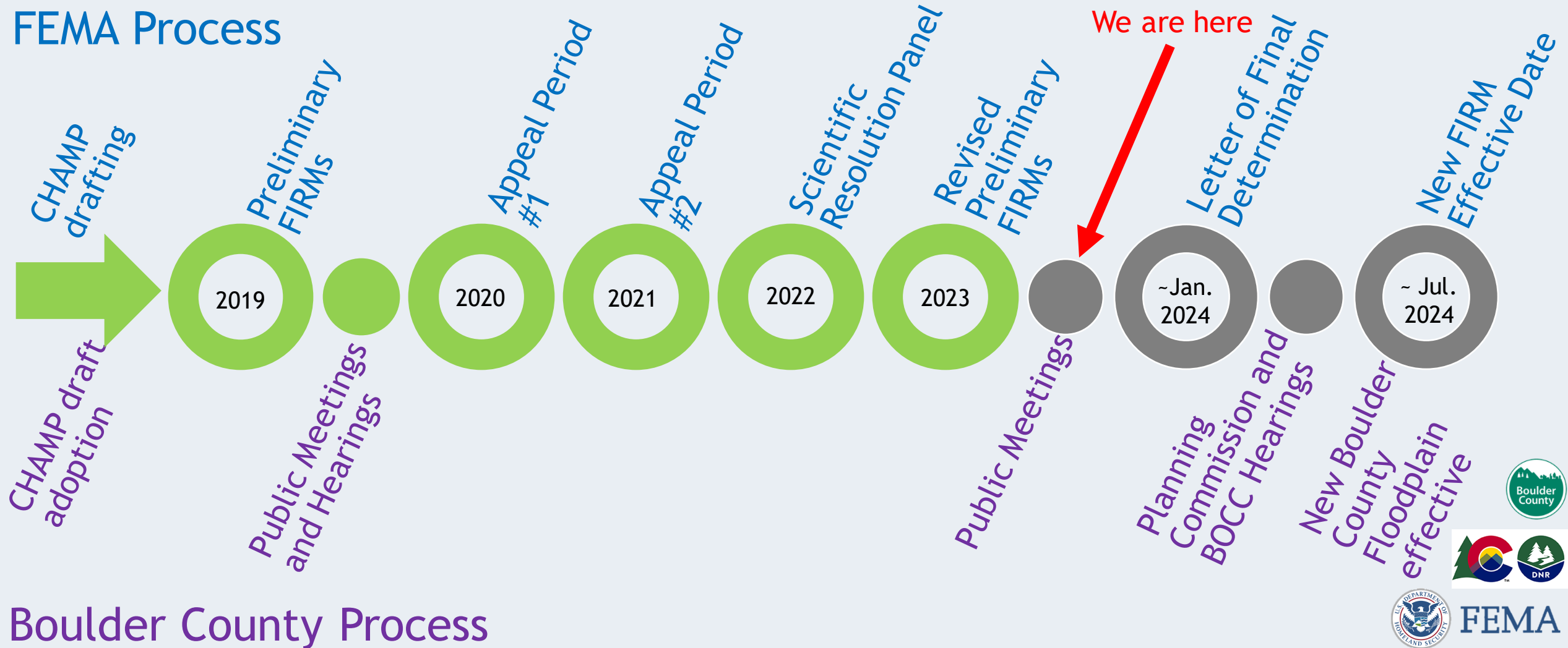
# Boulder County Next Steps

- Staff propose removing Boulder County Floodplain for CHAMP-studied reaches
  - Planning Commission hearing as soon as January 2024
  - Board of County Commissioners hearing
- Comments accepted through January 2<sup>nd</sup>
  - [FloodplainAdmin@bouldercounty.gov](mailto:FloodplainAdmin@bouldercounty.gov)
- After the FEMA maps change, the FEMA FIRM will be the one effective map in most places



# Timeline Going Forward

## FEMA Process



# Using the County's Online Map

[www.boco.org/FloodplainRemapping](http://www.boco.org/FloodplainRemapping)



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**FLOODPLAIN REMAPPING PROJECT** [Public Works - Roads, Buildings, and Resource Conservation / Floodplain Remapping Project](#)

**Information:** The Boulder County Community Planning & Permitting physical office at 2045 13th St., Boulder is open to the public for walk-ins on Monday, Wednesday, and Thursday from 8 a.m. to 3 p.m., and on Tuesday from 10 a.m. to 3 p.m. Appointments are available on Tuesday but are not required. We are virtually available to assist the public on Monday, Wednesday, Thursday, and Friday from 8 a.m. to 4:30 p.m. and on Tuesdays from 10 a.m. to 4:30 p.m. [Schedule an appointment](#)

## Floodplain Remapping Project

### View Maps and Provide Feedback

[Official Floodplain Map](#)

The interactive web map (use the button above) shows detailed flood risk zones and related FEMA map amendments that are currently regulated throughout unincorporated Boulder County as Floodplain Overlay Zoning District. This map will update as new FEMA maps become effective throughout Boulder County and as the Boulder County Board of County Commissioners (BOCC) adopts best available information.

The Boulder County Regulatory Flood Risk Zones were updated on Jan. 10, 2020, to reflect changes to the Floodplain Overlay District based on FEMA's Preliminary Flood Insurance Rate Maps (FIRMs) for stream reaches studied by the Colorado Hazard Mapping Program (CHAMP). The Preliminary FIRMs were adopted by the BOCC via

[View Preliminary FIRMS](#)

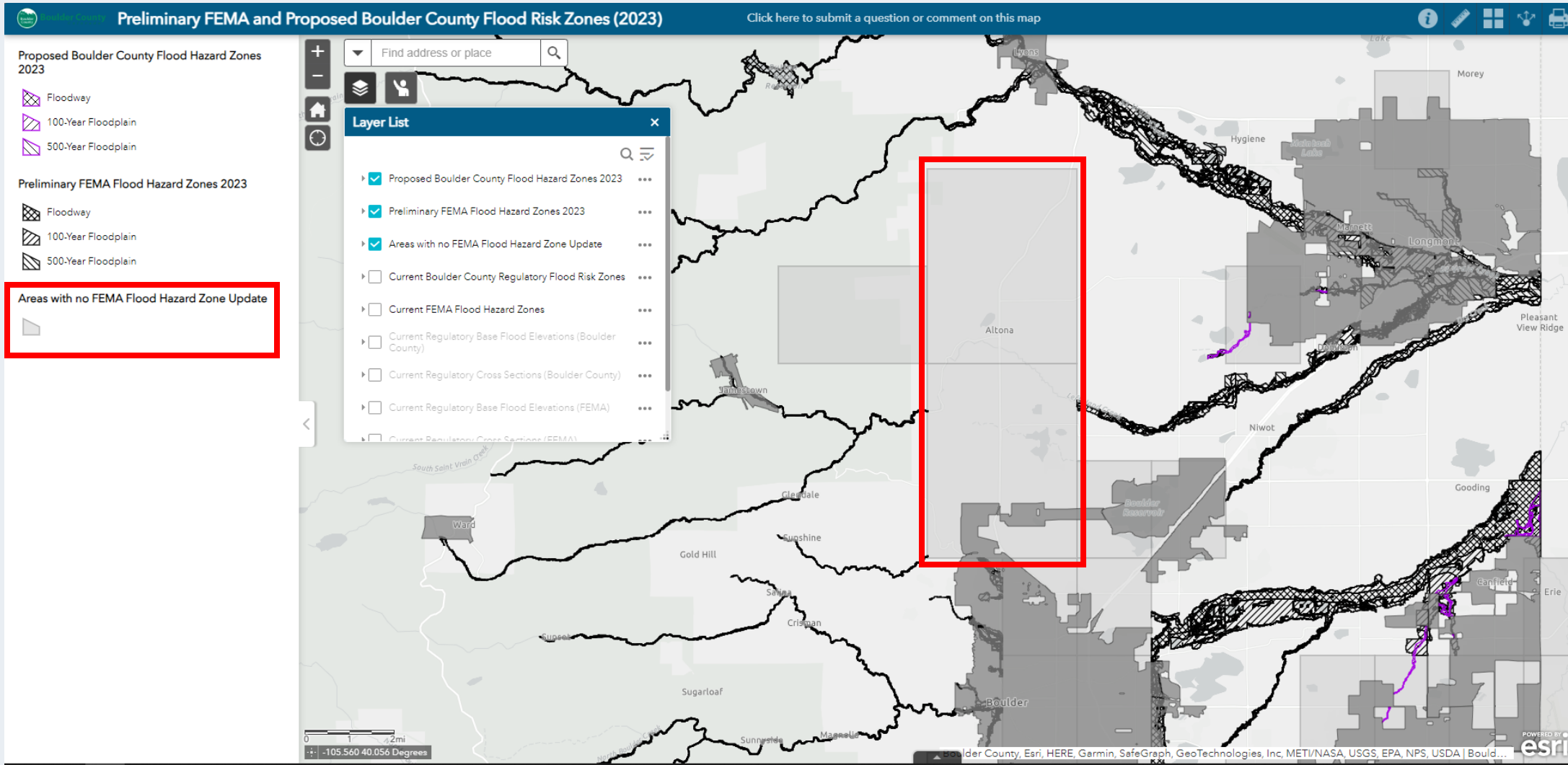
### Floodplain Mapping Links

- Floodplain Remapping Project
- Floodplain Mapping Process
- Floodplain Mapping - How to Stay Informed
- Floodplain Mapping - FEMA Appeals
- Floodplain Information
- Colorado Hazard Mapping Program (CHAMP)
- National Flood Insurance Program (NFIP)
- Floodplain Remapping Project Frequently Asked Questions

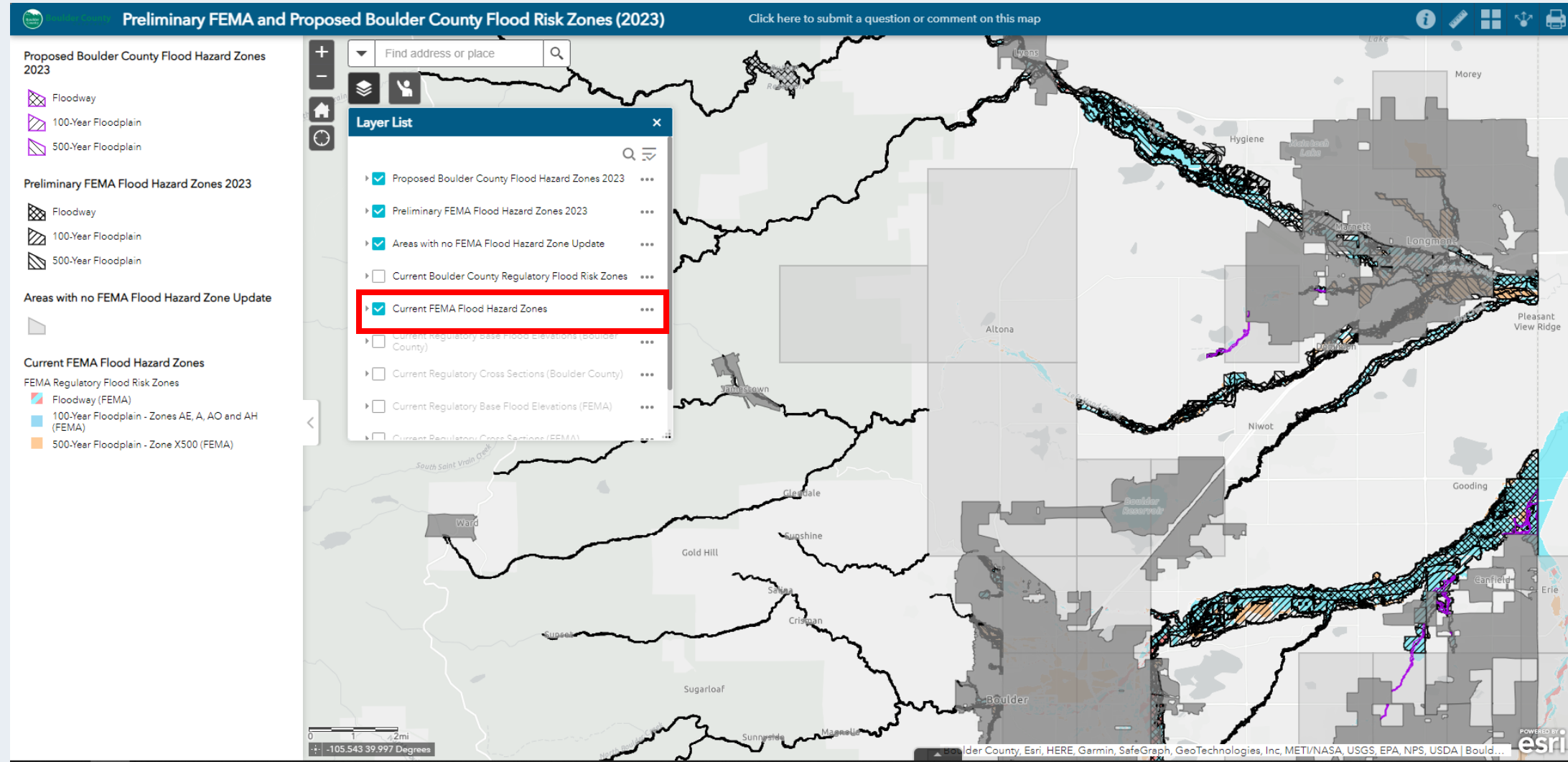




# Using the County's Online Map



# Using the County's Online Map





# Flood Insurance

- Everyone can purchase flood insurance (homeowners and renters), even those not in a mapped floodplain
- Insurance is required for federally backed mortgages in Special Flood Hazard Areas (SFHAs)
  - Zone A, AE, AH, AO
- But... lenders can require insurance anywhere
- Insurance Questions? Talk to Christine Gaynes

# Development in Floodplains

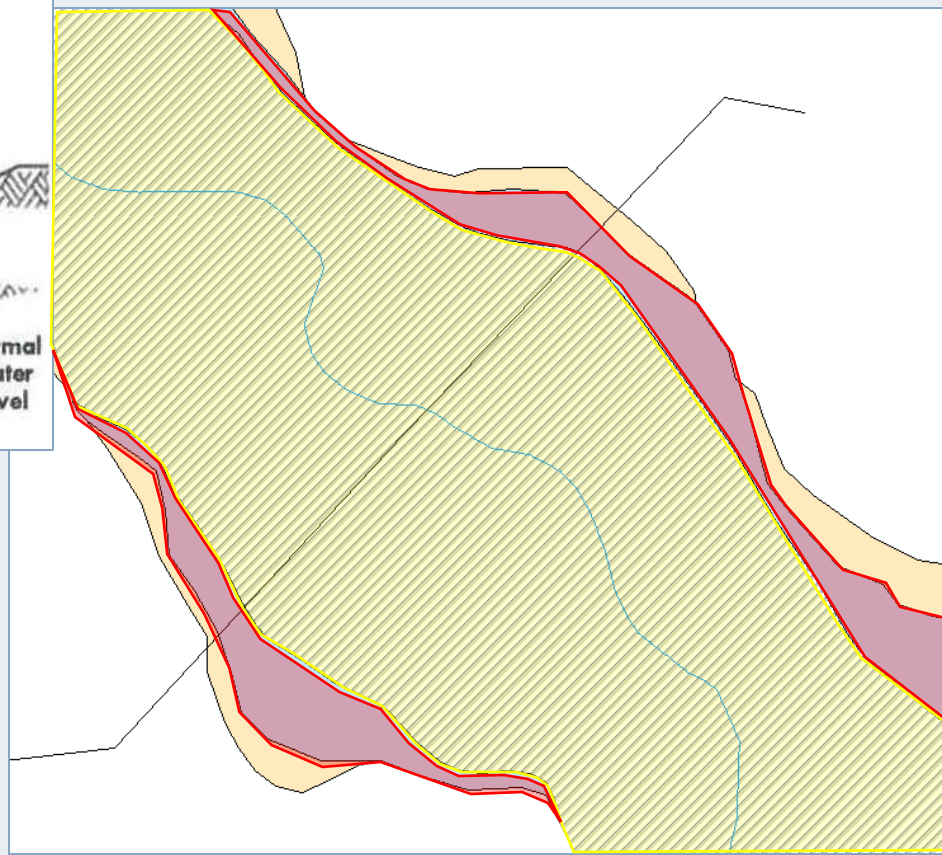
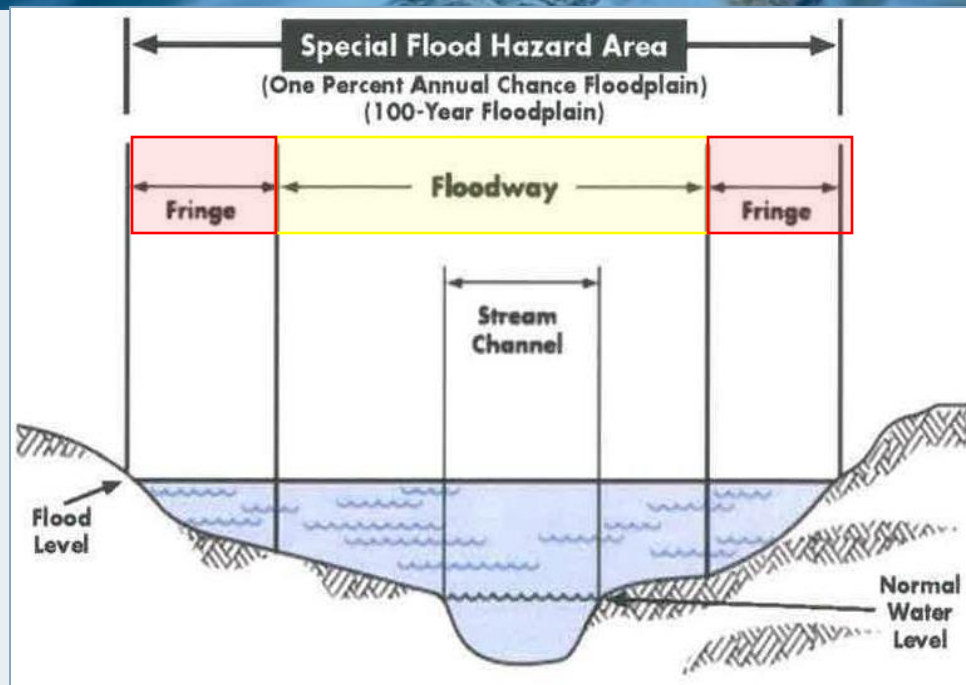
- Requirements are found in the Boulder County Land Use Code (Article 4-400)
- Different requirements in the Floodway vs. “flood fringe”
- Questions? Contact [FloodplainAdmin@bouldercounty.gov](mailto:FloodplainAdmin@bouldercounty.gov)



FEMA



# Floodways



FEMA



# Current FEMA FIRM





# Can Results Be Changed?

- Appeal period is over - no new appeals
- Letter of Map Revision (LOMR)
  - e.g., for construction projects not included in Preliminary FIRMs
- Letter of Map Amendment (LOMA)
  - Applies to individual structures or properties
  - Requires Survey data (Elevation Certificate)
  - Can be submitted online
  - Should be submitted 30-60 days prior to effective date

# Final Thoughts

- Where it rains, it floods!
- We know there is unmapped flood risk
- For Middle Lefthand Creek, we are back to where we were after 2013
- Questions?



FEMA



# Contacts and Resources

## Kelly Watson

*Boulder County Floodplain Management*

[FloodplainAdmin@bouldercounty.gov](mailto:FloodplainAdmin@bouldercounty.gov)

720-564-2652

[www.boco.org/FloodplainRemapping](http://www.boco.org/FloodplainRemapping)

## Terri Fead

*CWCB Floodplain Mapping Coordinator*

[Terri.Fead@state.co.us](mailto:Terri.Fead@state.co.us)

[www.ColoradoHazardMapping.com](http://www.ColoradoHazardMapping.com)

>Click “Flood Hazard”

>Click “Boulder”

## Christine Gaynes

*FEMA Specialist*

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[www.floodsmart.gov](http://www.floodsmart.gov)

