

# Public Review of Draft Boulder County Floodplain Maps

April 12, 2018

Boulder County Parks & Open Space

## Middle & Lower Left Hand Creek



# HOUSEKEEPING

- Sign-in sheet
- Newsletters & Flyers
- Snacks, restrooms, etc.



# Tonight's Agenda

1. Introductions
2. Meeting Goals
3. Program Overview
4. Data Overview
5. Online Resources
6. To the Tables!



# Introductions

- Erin Cooper, Boulder County
- Varda Blum, Boulder County
- Geoff Uhlemann, AECOM (CWCB)
- Kevin Doyle, Michael Baker Intl.
- Erin May, FEMA
- Additional Boulder County Support Staff



# Meeting goals:

1. Inform residents & landowners (you!) of the remapping process
2. Provide opportunity for public comment before the FEMA appeal period
3. Have a fair & open discussion





# Colorado Hazard Mapping Program (CHAMP)

## Why is this study being conducted?

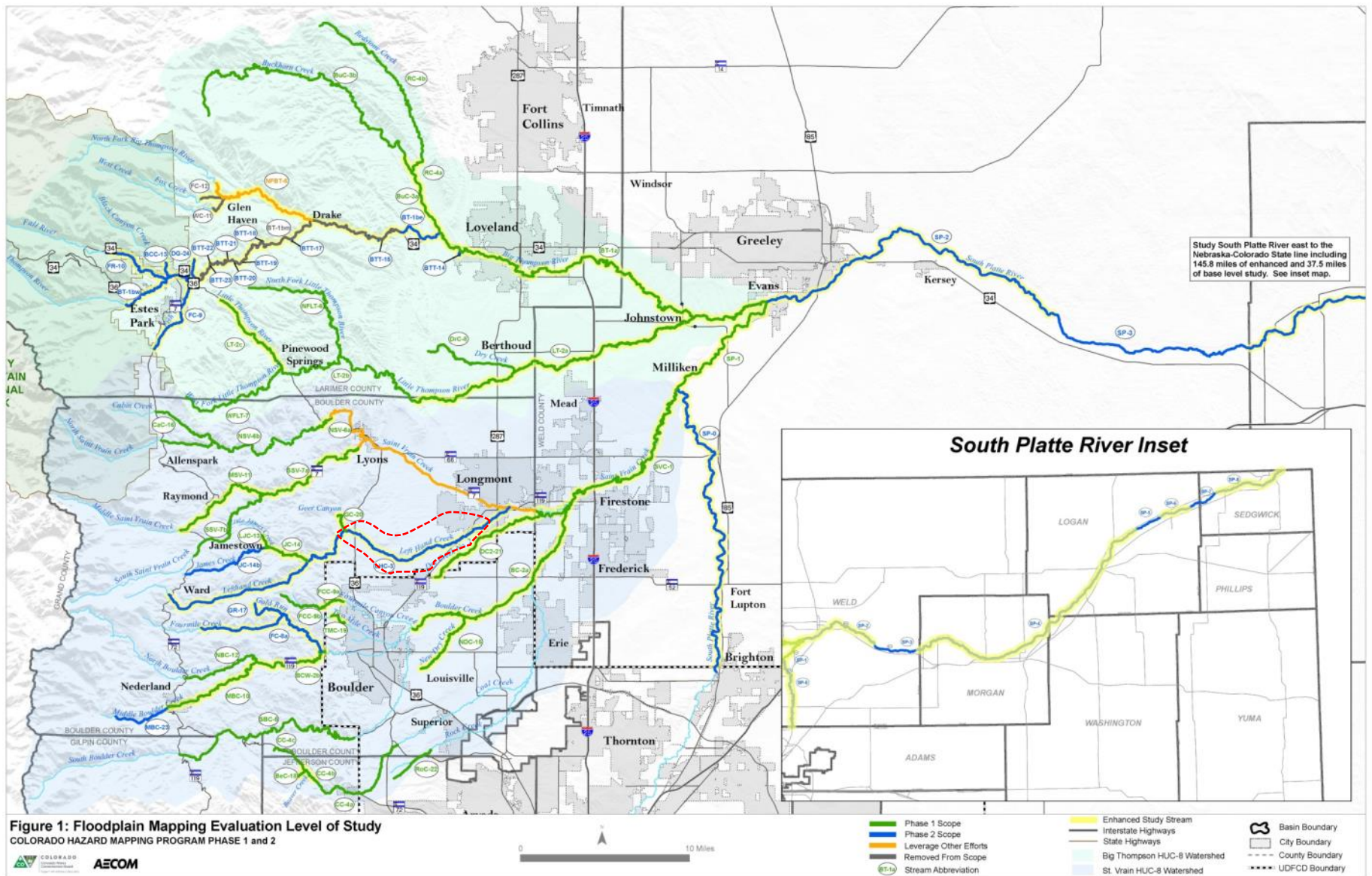
- Hazards change
- Floodplain delineations are often outdated
- Maps regularly updated across the country by FEMA, States, Communities
- The State of CO initiated CHAMP after the Flood of 2013
  - Changes to flooding characteristics
  - Changes to understanding of rainfall

## Why does it impact you?

- Know if you are at risk for flood hazards
- Will revise Flood Insurance Rate Maps that impact insurance rates (based on risk)
- Regulation is related to flood zone/floodway

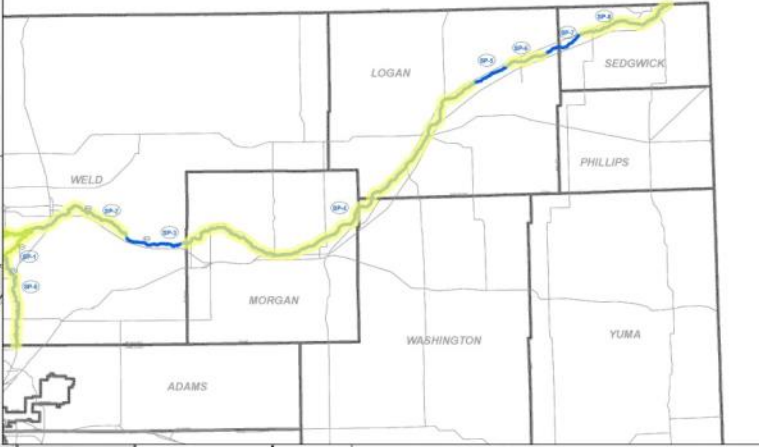
## Where will there be changes?





Study South Platte River east to the Nebraska-Colorado State line including 145.8 miles of enhanced and 37.5 miles of base level study. See inset map.

### South Platte River Inset



# Floodplain Mapping CO Hazard Mapping Program [change ▾](#)

This page is dedicated to showing the latest news and information regarding the CO Hazard Mapping Program Floodplain Mapping.

## About the Project

Following the September 2013 flood disaster, Colorado has taken steps toward long-term planning and resiliency efforts for flooding and other natural hazards. In early 2015, Colorado's Legislature passed a funding bill for the Colorado Hazard Mapping Program, which aims to provide a mitigation and land use framework in areas likely to be affected by future flooding, erosion, and debris flow events.

The Colorado Hazard Mapping Program is to prepare updated hazard information for the streams most affected by the September 2013 flooding, beginning in the Big Thompson & St. Vrain watersheds as well as the South Platte River. The work includes field reconnaissance and survey, creating terrain models from updated topographic datasets, evaluating hydrology (flows), and modeling to produce flood hazard area limits reflecting the changed conditions. Community leaders will use the updated hazard information to assess risk and identify mitigation opportunities in their community. The updated information is also intended to eventually be used to update Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), which are used to determine flood insurance requirements.

The Colorado Water Conservation Board (CWCB) is the lead agency coordinating the Colorado Hazard Mapping Program. CWCB is working with AECOM, a nationally-recognized engineering firm, to conduct the technical work.



## Project News and Events

### Boulder County Floodplain Mapping Public Meeting Community Meeting Scheduled

12/13/2016 – Boulder County Transportation and the State of Colorado will host a public meeting to present recently updated draft floodplain maps from the Federal Emergency Management Agency (FEMA) and the Colorado Hazard Mapping Program (CHAMP). This initial meeting will review map information for North and South St. Vrain creeks and St. Vrain Creek from Longmont Dam Road and Red Gulch Road to Lyons and from Lyons east toward Airport Road in unincorporated Boulder County. Residents along these creek stretches and other interested parties are invited to attend a public presentation that will be followed by an interactive map review session with state and county staff. [View the meeting](#)

### December 2016 CHAMP Newsletter

New Document Available

12/08/2016 – December 2016 Newsletter for the CHAMP Project. [Download the document](#)

### December 2016 Newsletter Posted

12/08/2016 – The [December 2016 CHAMP Newsletter](#) has been posted. [Read more](#)

### Flood Risk Review - Gilpin & Jefferson Counties Community Meeting Scheduled

12/01/2016 – These FRR meetings will give community officials the chance to review and provide early feedback on draft versions of the floodplains prior to



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






## Map Floodplain Mapping

[Layers](#) [Documents](#)

☒ Project Streams

Show: Level of Study 

- Base Level Study (Zone A)
- Enhanced Level Study (Zone AE)

☒ UDFCD Boundary

- UDFCD Boundary

☒ Year 1 Surveyed Locations

- Bridge
- Cross Section
- Culvert
- Drop/Divert/Dam
- Not for Survey
- Other Feature

☒ Year 2 Surveyed Locations

- Bridge
- Cross Section
- Culvert
- Drop/Divert/Dam
- Not for Survey
- Other Feature

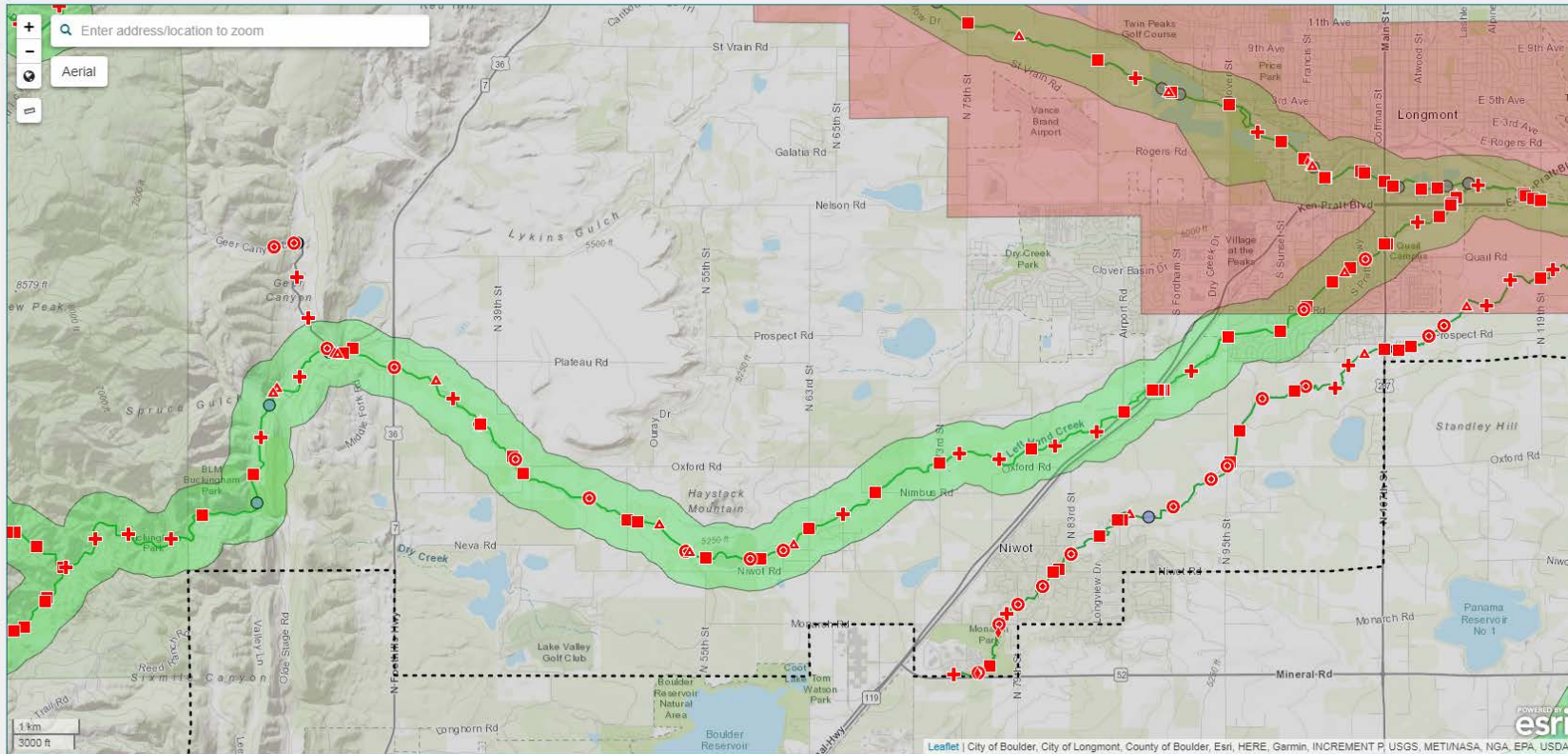
☒ Hydrology Flow Changes

- Flow Change Locations

☐ Project Counties

☒ Lidar Extents

- 2012
- 2013 USGS
- 2014 USACE



# Colorado Hazard Mapping Program

## What happens next?

- There are still multiple reviews that will occur, so data is subject to change
- Boulder County being proactive to bring this information to you in draft form
- This is a first look for you to get your input well in advance of data finalization

## When will changes go into effect?

- CHAMP team will review comments
- FEMA will review data in spring/summer 2018
- Data will be put onto preliminary Flood insurance Rate Maps late 2018/early 2019
- A formal 90 day appeal period will commence where anyone can appeal maps with technical data
- Once resolved, maps will be released as final (effective), likely 2021



# Modeled Flows

## Updated vs. Effective Discharges of the 100-yr Flood Event

**Left Hand Creek** (@ Hover Rd)

- Updated– 5,810 cfs (26% increase)
- Effective FEMA – 4,610 cfs

**Left Hand Creek** (@ Hwy 119)

- Updated – 6,037 cfs (31% increase)
- Effective FEMA – 4,610 cfs

**Left Hand Creek** (@ N 73<sup>rd</sup> St)

- Updated – 6,037 cfs (5% decrease)
- Effective FEMA – 6,330 cfs

**Left Hand Creek**(@ N 63<sup>rd</sup> St)

- Updated – 5,994 cfs (5% decrease)
- Effective FEMA – 6,330 cfs

**Left Hand Creek** (@ Hwy 36)

- Updated – 5,794 cfs (14% decrease)
- Effective FEMA – 6,700 cfs



# Experienced Flows

## Estimated Peak Discharges Experienced in 2013 Flood

Left Hand Creek (@ Hwy 119)	8,700 cfs (100-500 yr event)
Left Hand Creek (@ N 63 <sup>rd</sup> St)	7,000 cfs (100-500 yr event)
Left Hand Creek (@ Old Stage Rd)	3,520 cfs (50-100 yr event)

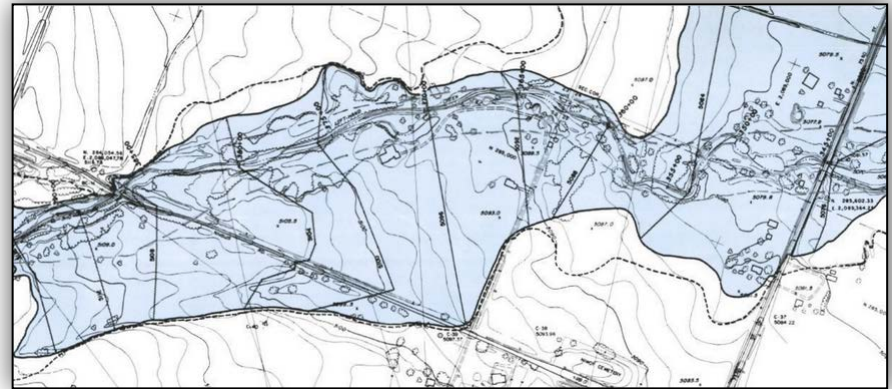




# *Why & how* are the maps changing?

- Current maps from 1981
- Improved technologies in model development
- More data available

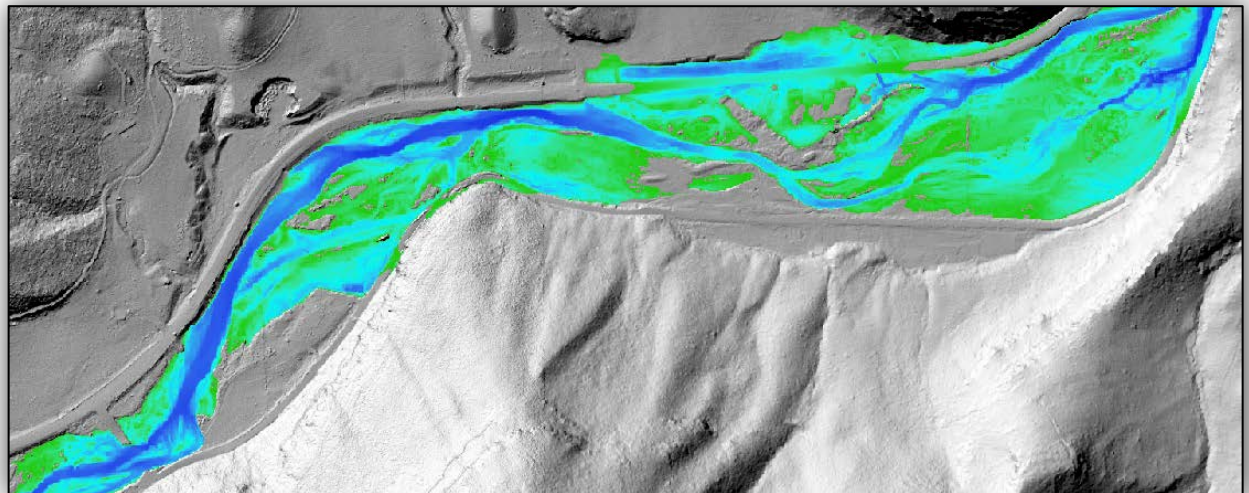
1981 study:



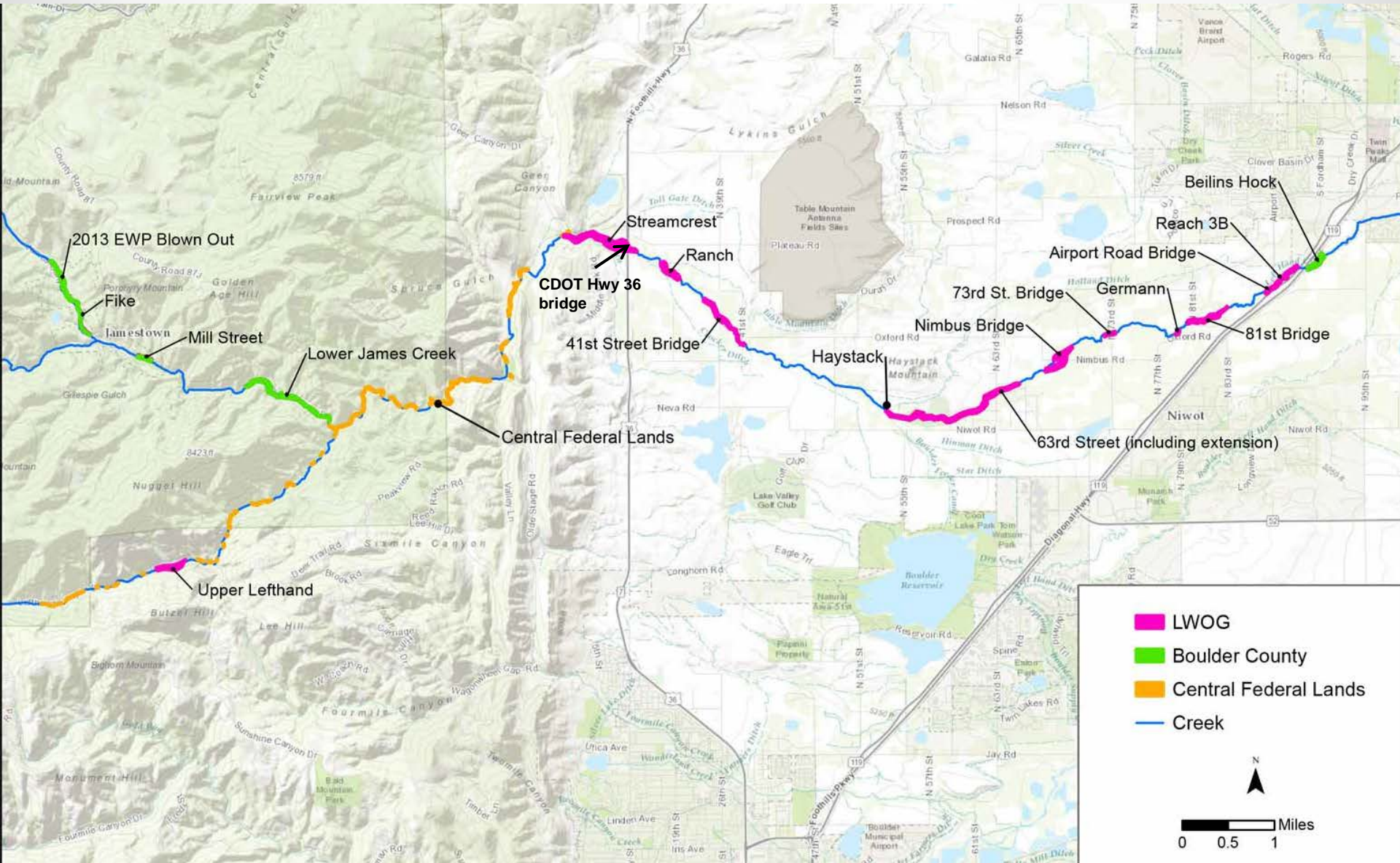
What's not in the maps?

- Debris
- Ditches

CHAMP:



# Left Hand Creek Projects





# Roles and Responsibilities

## Federal Role (FEMA)

- Flood Risk Mapping
- Flood Risk Management
- Flood Insurance – available to anyone in Boulder County

## State Role (CWCB)

- Community assistance
- Flood Risk Mapping

## Local Role (Boulder County)

- Adoption of floodplain mapping and code
- Flood risk mapping participation

*Ultimate Goal – Protect Life, Health, & Safety*



# Timeline revisited

## PHASE II ESTIMATED TIMELINE:

Early 2018  
Phase II Drafts for  
Community Review

Mid 2018  
Phase II Drafts  
to FEMA

Late 2018  
Phase II Local  
Adoption

Early 2019  
Phase II  
Preliminary FIRMs

2019  
Phase II FEMA  
Appeals Period

2021+  
Effective FIRMs

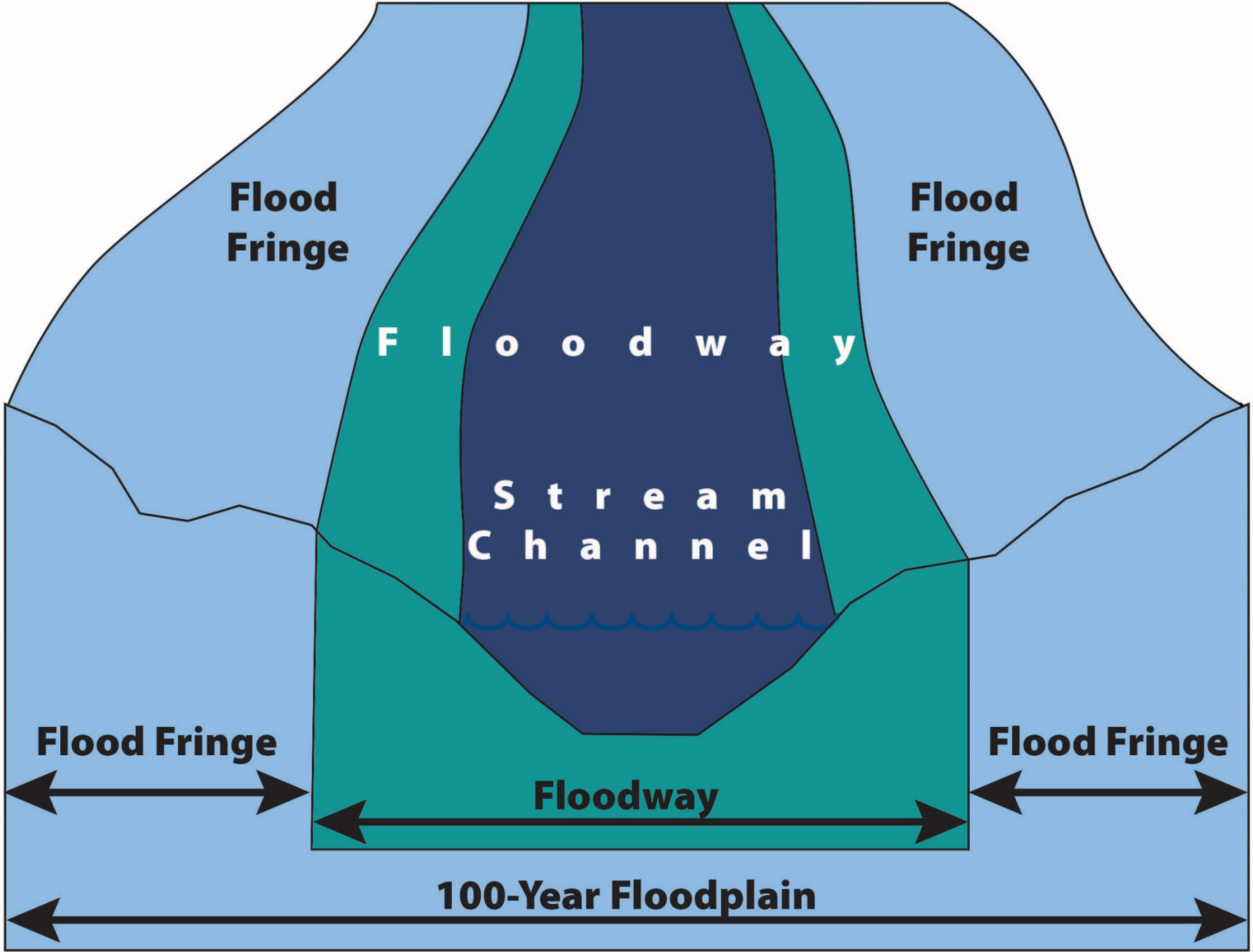


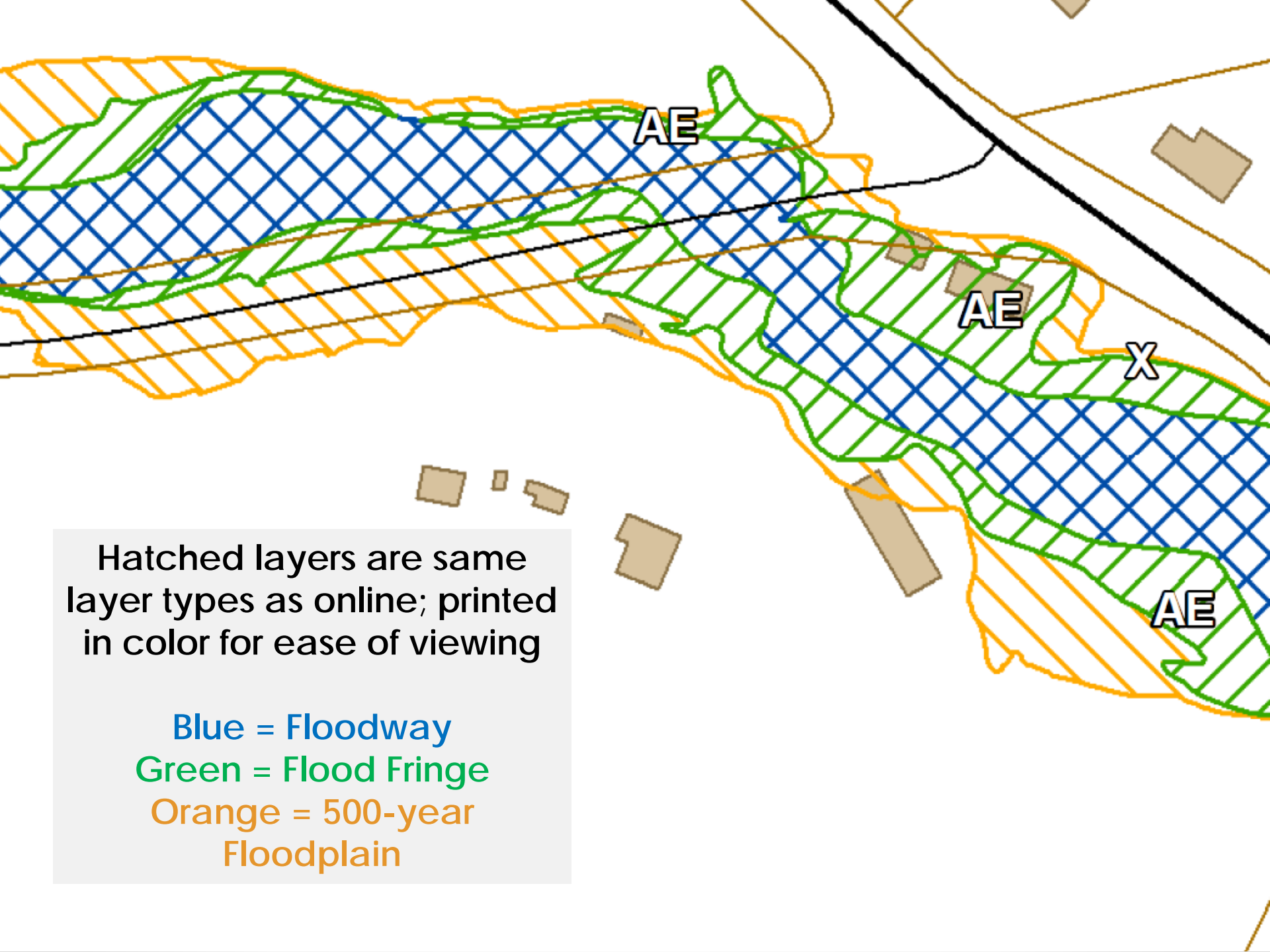
Now	Boulder County is reviewing the CHAMP hydraulics and floodplain mapping
Summer 2018	<ul style="list-style-type: none"><li>FEMA will review the CHAMP hydraulics and floodplain mapping</li><li><b>Boulder County to adopt CHAMP floodplain as "best available data"</b></li></ul>
Early 2019	CHAMP Preliminary Flood Insurance Rate Maps issued
2019	FEMA Appeals Period for CHAMP mapping
2021	FEMA Flood Insurance Rate Maps become effective

*all dates subject to change*



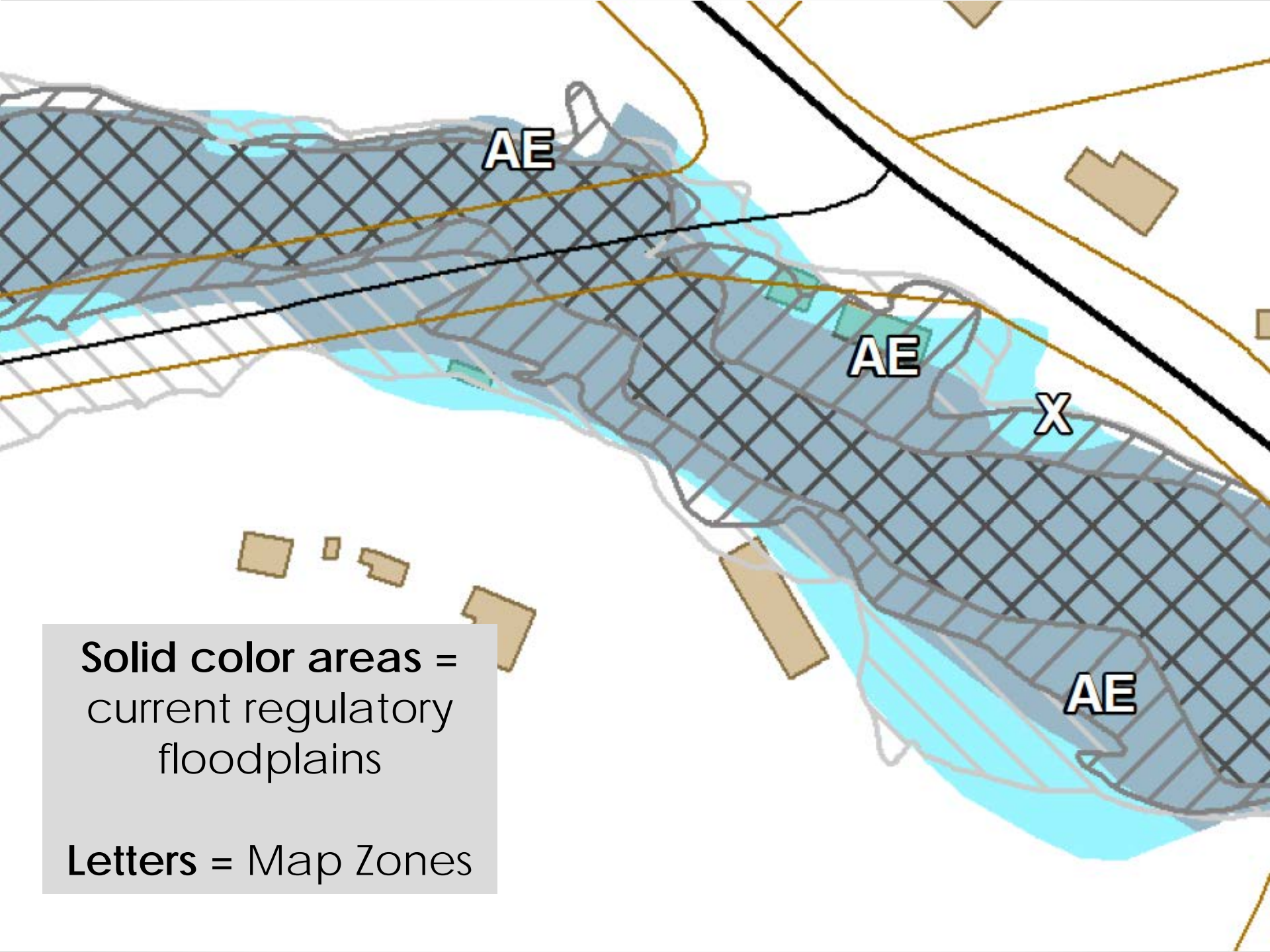






Hatched layers are same  
layer types as online; printed  
in color for ease of viewing

Blue = Floodway  
Green = Flood Fringe  
Orange = 500-year  
Floodplain



**Solid color areas =**  
current regulatory  
floodplains

**Letters = Map Zones**



# County Floodplain Remapping

[Property Search](#)[Jobs](#)[Volunteer](#)[Elections](#)[County Government](#)[Departments](#)[Contact](#)[Select Language](#) ▼[FAMILIES  
& ADULTS](#)[OPEN SPACE  
& RECREATION](#)[PROPERTY  
& LAND](#)[ROADS  
& TRANSPORTATION](#)[ENVIRONMENT  
& SUSTAINABILITY](#)[SAFETY  
& LAW](#)[LICENSES, PERMITS  
& RECORDS](#)

## FLOODPLAIN REMAPPING PROJECT

[Home](#) / [Roads & Transportation](#) / Floodplain Remapping Project

### Floodplain Remapping Project

#### VIEW MAPS & PROVIDE FEEDBACK

[OFFICIAL FLOODPLAIN MAP](#) ↗

The interactive webmap (use the button above) is meant to show detailed flood risk zones and related FEMA map amendments or revisions that are currently regulated throughout unincorporated Boulder County. (Data updated on June 1, 2017 to reflect **adopted changes** to the 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) receives and reviews new information on maps below)

[REVIEW DRAFT FLOODPLAIN MAPS](#) ↗

DRAFT floodplain maps are now available for stream reaches in Phase II of the Colorado Hazard Mapping Program (CHAMP) study. **Visit the interactive webmap (by using the button above) to review and provide comments on the draft flood risk zones that are currently under review by Boulder County.**

#### Floodplain Mapping Links

[Floodplain Remapping Project](#)[Floodplain Mapping – How to Stay Informed](#)[Floodplain Information](#)[Colorado Hazard Mapping Program \(CHAMP\)](#)[National Flood Insurance Program \(NFIP\)](#)[Floodplain Mapping and Code Amendments](#)[Floodplain Remapping Project Frequently Asked Questions](#)

<http://BoCoFloodplainRemapping.com>





# Using the Map Review Website

## HOW TO COMMENT ON THE WEB MAP

During the draft floodplain remapping phase of the Colorado Hazard Mapping Program (CHAMP) study, Boulder County has created an online, interactive web map where residents and interested community members can place comments and provide information that will be reviewed by Boulder County staff and the CHAMP engineering team.

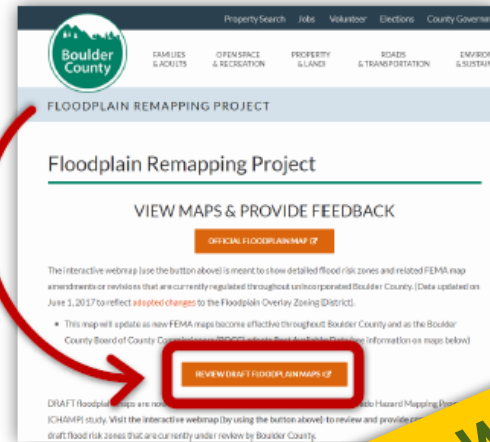
### ACCESSING THE WEB MAP

From the [bouldercounty.org](http://bouldercounty.org) homepage, find 'Property & Land' in the main heading and then go to 'Floodplain Management' in the drop-down window that appears. You'll see a link for the 'Floodplain Remapping Project.' Click that link to visit the project homepage.

OR visit [www.bocofloodplainremapping.com](http://www.bocofloodplainremapping.com) to access the draft floodplain web map and learn more about the Floodplain Remapping Project.

The draft floodplain map is linked to on the second orange button on the project homepage.

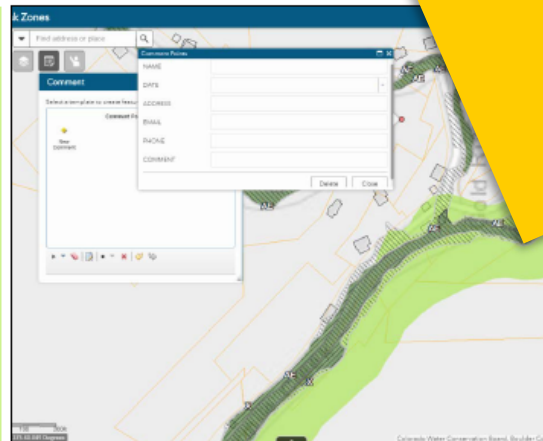
Now you're ready to view the map & comment!



## STEPS TO PLACE A COMMENT

### FOLLOW THESE STEPS:

- ◆ Zoom in on map to the area of concern
- ◆ Click on the 'New Comment' symbol (yellow diamond)
- ◆ Move cursor out of Comment Window and place point by clicking where you would like to place the comment
- ◆ The point will be placed (temporary indicator dot) and an Information Window will pop up
- ◆ Fill in the rows with your information (Name, Date, Address, Email, Phone, and Comment)
- ◆ Click 'Close' to save your Comment Point
  - If you accidentally created a point or placed it in the wrong location, you can delete it by clicking on it in the map, scrolling down to the bottom of the information window, and clicking 'Delete.'
  - You can also select the point and move it.



Web map updates coming next week!

*Still having trouble?* Please reach out to Boulder County staff if you have any questions, would like some assistance using this tool, or would like to speak with staff directly about your map comment. Erin Cooper is the Floodplain Remapping Project lead and can be reached at 720-564-2866 or [escooper@bouldercounty.org](mailto:escooper@bouldercounty.org).



# Draft Maps at the Tables

What we'd like to learn from your review:

- Structure locations – accurate?
- Planned work?
- Topographic details
- Impacts to water flow

Comments!

- Please include *name & contact info* on maps
- Use comment forms
- If you think the map needs revision, tell us WHY

**DEADLINE for comments for this area: MAY 6<sup>th</sup>**

Remapping Point of Contact: Erin Cooper  
[floodplainmapscomment@bouldercounty.org](mailto:floodplainmapscomment@bouldercounty.org)

