



FEMA

# Cherokee County, KS Flood Risk Review Meeting

**Hybrid Meeting**

March 6, 2023

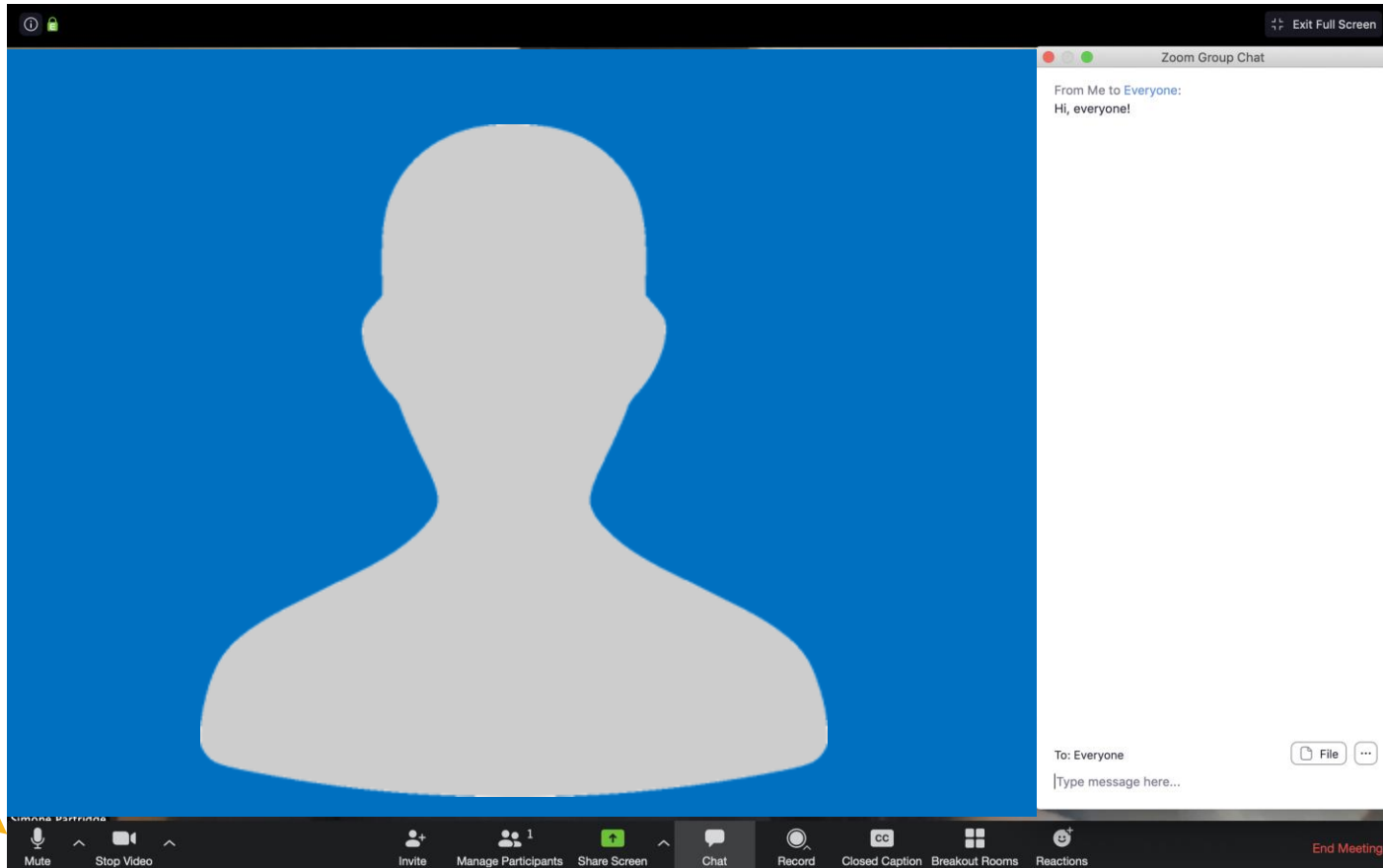
*While we are waiting, please enter your name and community in the chat box!*

# THANK YOU!

*We appreciate the time you are giving to this work  
and we want to use it wisely.*

*Your feedback at this point in the project is **very important**.*

# Zoom Features



*Mute /  
Unmute*

*Start your Video*

*Use the Chat  
Feature*

*Reactions*



# Rules of the Road

- Attendees joining on Zoom will be muted during the presentation to help eliminate background noise.
- Use the chat to ask questions during the presentation! We will pause for questions at various stopping points.
- If you want to share your video, please do!
- For technical difficulties, send a private chat to William Pace; or email [William.Pace@ks.gov](mailto:William.Pace@ks.gov)
- We'll be recording this webinar for those who aren't able to attend today.

# Intros

## Kansas Department of Agriculture

**Joanna Rohlf, CFM, GISP**  
Floodplain Mapping Coordinator

**William Pace, CFM**  
Floodplain Mapping Specialist

**Patrick Bonine**  
Floodplain Mapping Specialist

**Tara Lanzrath, CFM**  
State NFIP Coordinator

**Cheyenne Sun Eagle, CFM**  
NFIP Specialist

## FEMA – Region VII

**Dawn Livingston** – Regional Project Officer



## WSP USA Environment & Infrastructure Inc.

**Larry Sample, PE** - Project Manager

**Lisa Tuckwin, GISP, CFM** – Lead GIS Analyst



# Why We Are Here





# Today's Goals

- Review how we developed your flood risk data
- Get your feedback on the flood risk data
- Review future steps

**Main Takeaway:** We want your feedback while your map is still in draft form and there is time to incorporate feedback

# First, a brief recap



Over the past 30 years, flooding has been more dangerous in the U.S. than any other weather-related problem. To minimize flood damage, we must first understand where the risk is.



# Why Have Floodplain Maps?

- Understand the risk so you can make informed planning decisions and avoid future flood damage in your community.
- Determine where flood insurance is needed and rate its cost.
  - Flood Insurance Rate Map (FIRM)
- Provide the basis for updating community floodplain management ordinances.
  - These ordinances are your tool for reducing your community's vulnerability to flood risk.

# FEMA Floodplain Mapping Program



- Risk Mapping Assessment and Planning (Risk MAP)
- Supports the National Flood Insurance Program (NFIP); performed on a watershed basis.
- Consists of both Regulatory and Non-Regulatory Products.
- Through Risk MAP, we provide updated floodplain maps, as well as other (free!) data and tools that can help you plan to reduce your community's risk.

**RiskMAP**  
Increasing Resilience Together



# National Flood Insurance Program



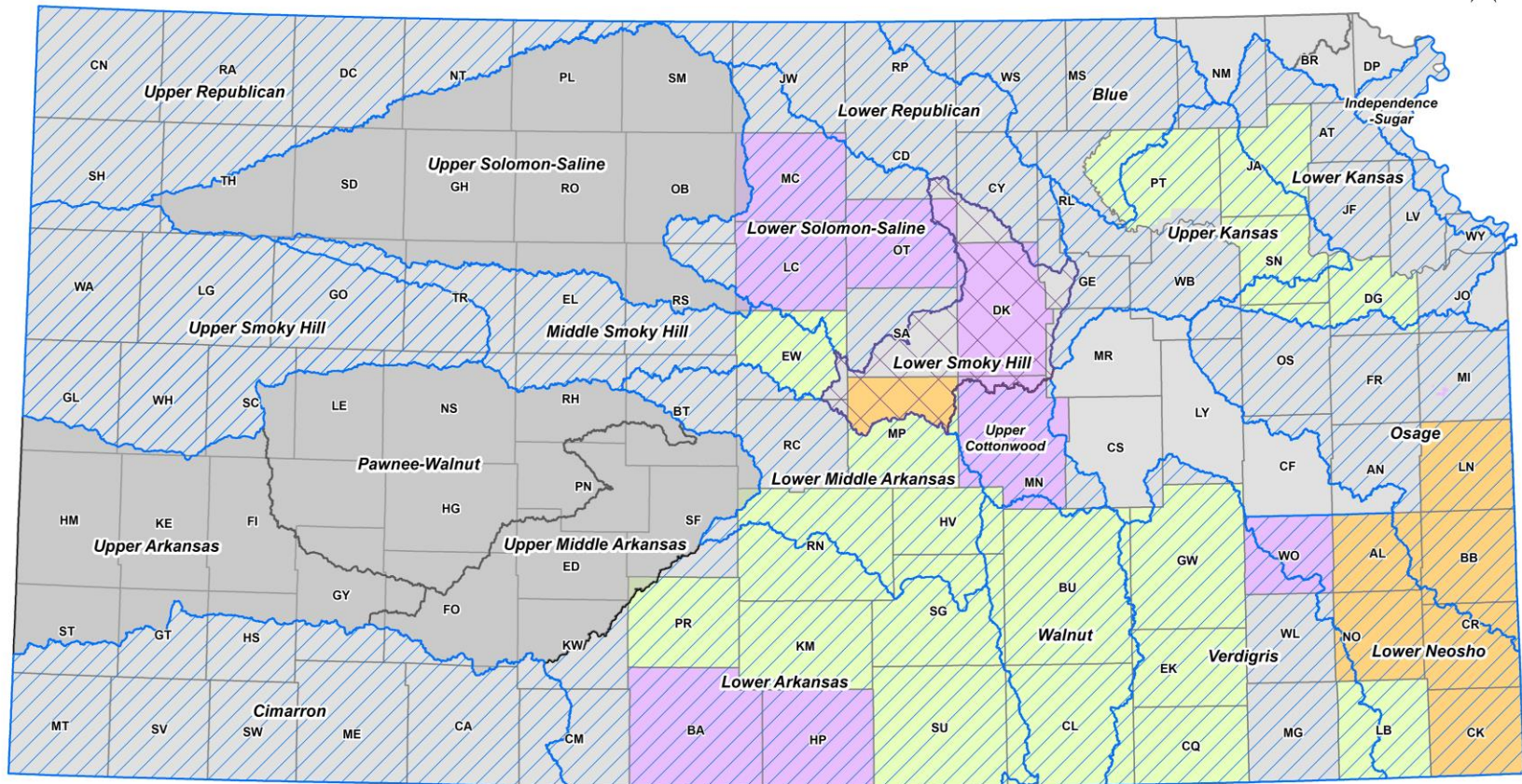
## Benefits of the NFIP

- Property owners would be able to insure against flood losses
- Qualify for federal grants or loans for development
- Qualify for federal disaster assistance for damages caused by a flood
- Adoption of a floodplain management ordinance leads to smart development against flood risk

*Any questions?*

# We Do This Work Across Kansas

## Current Floodplain Mapping Projects and Custom Watersheds



February 22, 2023

### Project Status

- In Development
- Draft
- Preliminary
- LFD

### Watershed Projects

- Custom Watersheds (labeled)
- BLE Projects - In Progress
- BLE Projects - Data Available
- BLE Project - Planned

\*Not all watershed areas will be included.  
Please check with KDA for details.





# How Did We Get Here?

- Base Level Engineering (BLE) - 2020
  - Gives us early insight into your flood risk
  - Lower Neosho Upper DD Watershed BLE Project
    - Kickoff Meeting held on November 19, 2019
    - Discovery and Initial Map Review Meeting held April 15, 2020
- Cherokee County Effective Mapping is dated November 2008
- Through Discovery and conversations with County stakeholders, it was determined that updated modeling and mapping would benefit Cherokee County.








# How Did We Get Here?

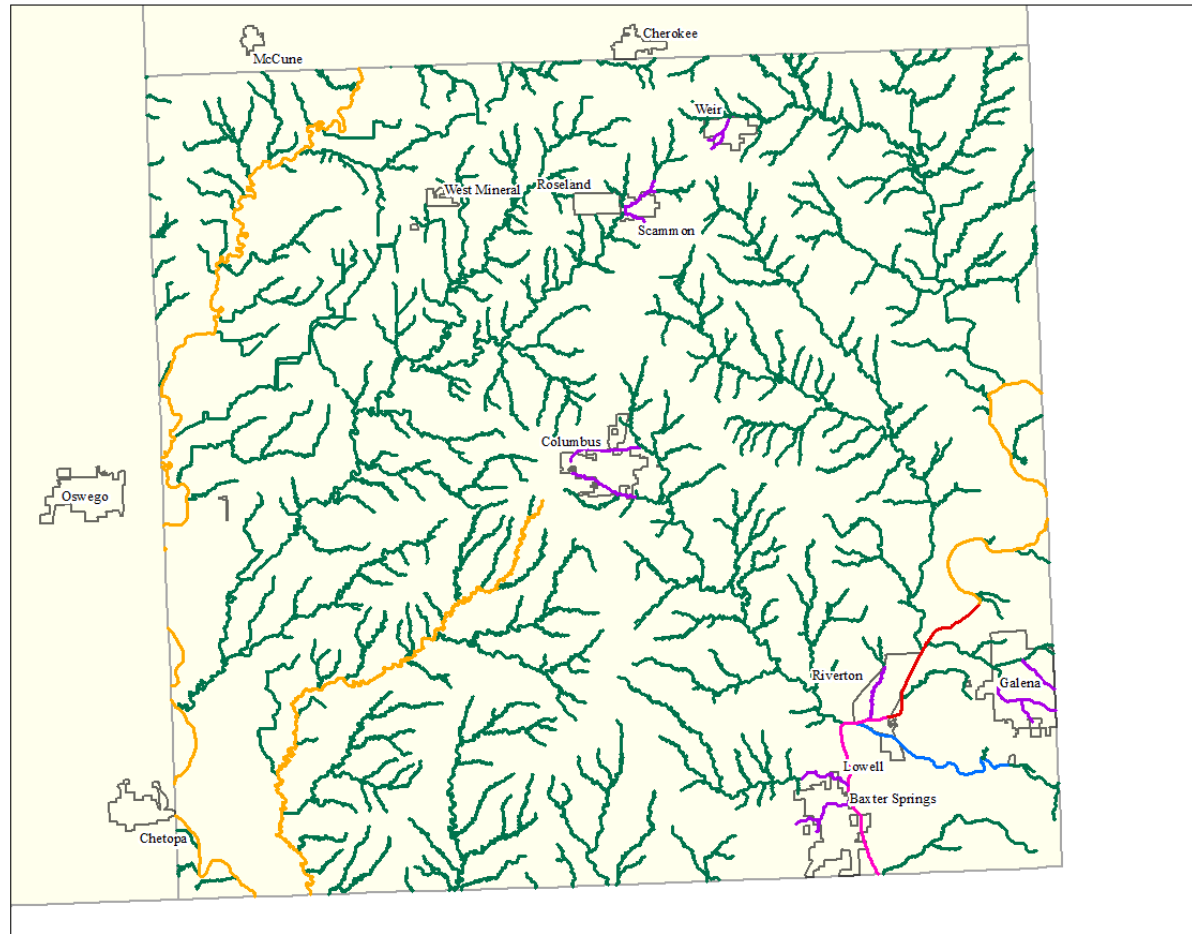
- Data Development – 2021- 2023
  - Kickoff Meeting held on July 15, 2021
    - Discussed Project Scope & Modeling Methods
      - Enhance the engineering analysis
      - Develop regulatory draft floodplain maps
      - Develop Flood Insurance Study
      - Develop flood risk data tools for your community

# Cherokee County- Mapping Update

## Cherokee County 2021 Proposed Mapping Updates

### Scoped Studies

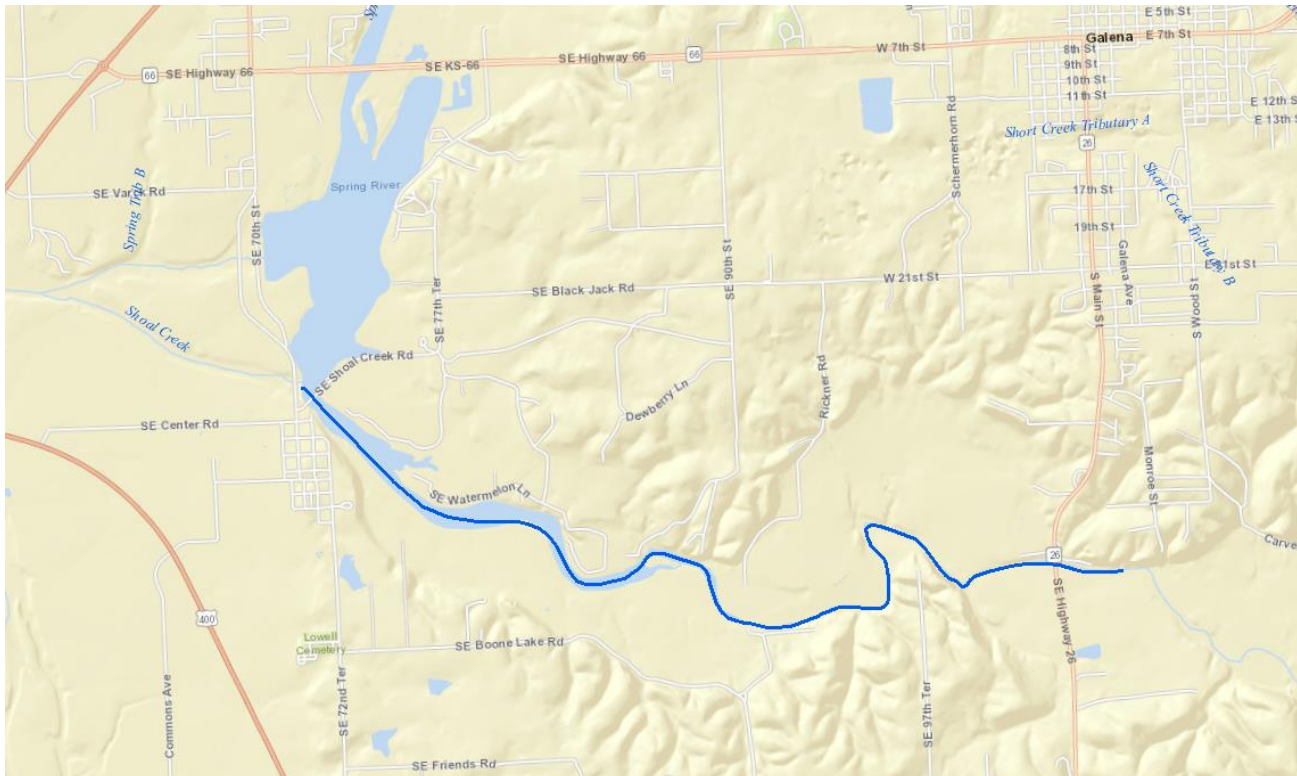
-  **New Zone A - Gage Analysis**  
New Zone A studies will be developed for these streams using 2D "excess rainfall-on grid" hydrology calibrated to Gage Analysis Flows, and 2D Hec-Ras hydraulics.
-  **New Zone A - Excess Rainfall on Grid**  
New Zone A studies will be developed for these streams using 2D "excess rainfall-on grid" hydrology and 2D Hec-Ras hydraulics.
-  **New Enhanced Zone A - Excess Rainfall on Grid**  
New Enhanced Zone A studies will be developed for these streams using 2D "excess rainfall-on grid" hydrology and 2D Hec-Ras hydraulics. Floodways will not be developed. Field measured structure data will be incorporated into the modeling.
-  **New Enhanced Zone A -Gage Analysis**  
New Enhanced Zone A studies will be developed for these streams using 2D "excess rainfall-on grid" hydrology calibrated to Gage Analysis Flows, and 2D Hec-Ras hydraulics. Floodways will not be developed. Field measured structure data will be incorporated into the modeling.
-  **New Zone AE with Floodway - Excess Rainfall on Grid**  
New Zone AE studies will be developed for these streams using 2D "excess rainfall-on grid" hydrology and 2D Hec-Ras hydraulics. Floodways will be developed. Field measured structure data will be incorporated into the modeling. BFEs will be shown on the maps.
-  **New Zone AE - Excess Rainfall on Grid**  
New Zone AE studies will be developed for these streams using 2D "excess rainfall-on grid" hydrology and 2D Hec-Ras hydraulics. Field measured structure data will be incorporated into the modeling. Floodways will not be developed. BFEs will be shown on the maps.
-  **New Zone AE - Gage Analysis**  
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# Cherokee County- Mapping Update

**Zone AE with Floodway** - one-dimensional (1D) model utilizing excess rainfall on grid hydrology and the inclusion of field measured structures.

- Shoal Creek near Galena

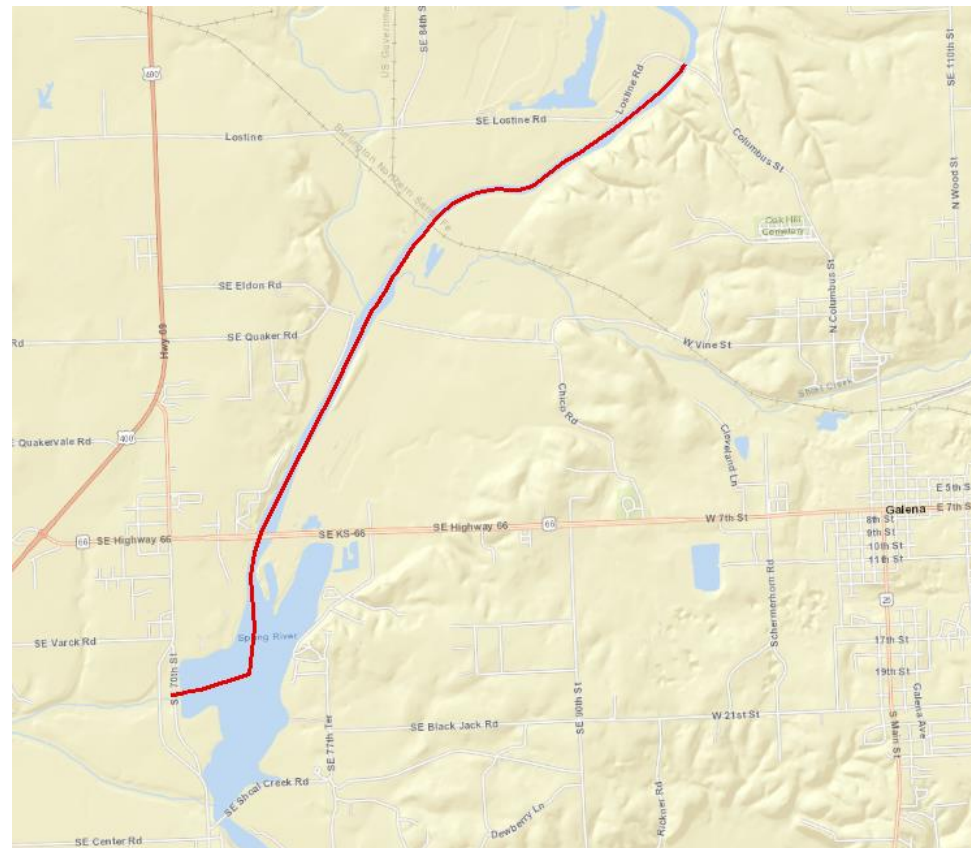




# Cherokee County- Mapping Update

**Zone AE without Floodway** – two-dimensional (2D) model utilizing excess rainfall on grid hydrology and the inclusion of field measured structures

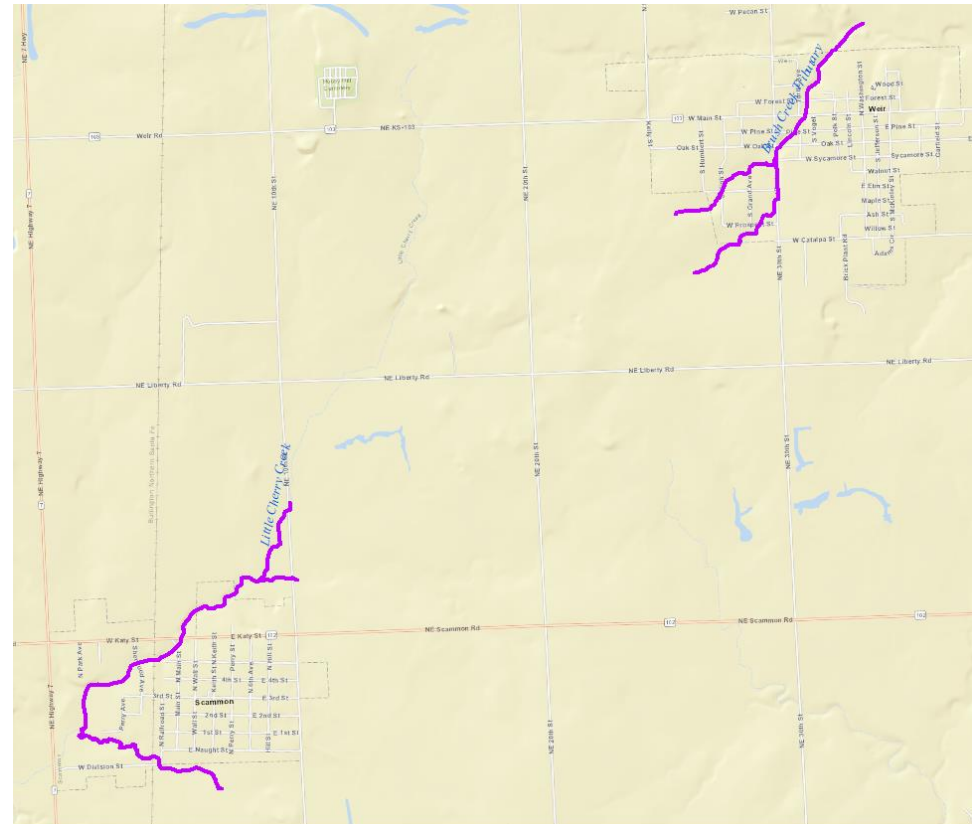
- Spring River near Galena



# Cherokee County- Mapping Update

**Enhanced Zone A** - two-dimensional (2D) models utilizing excess rainfall on grid hydrology and the inclusion of field measured structures

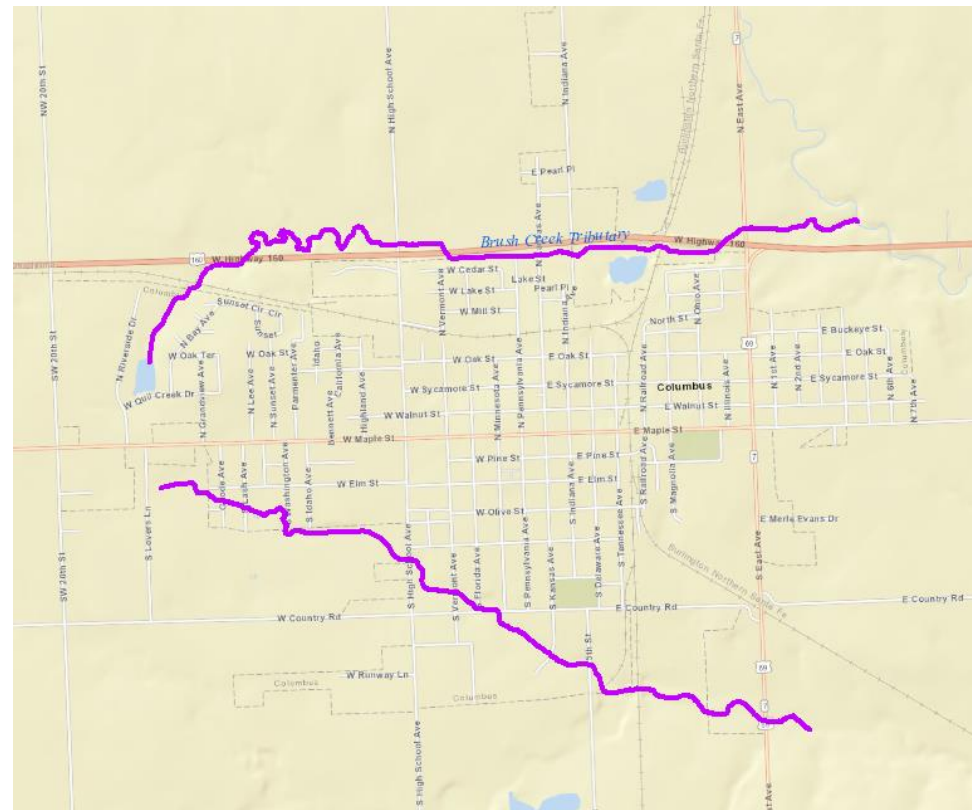
- Little Cherry Creek and 2 Tributaries near Scammon
- 2 Tributaries to Brush Creek near Weir



# Cherokee County- Mapping Update

**Enhanced Zone A** - two-dimensional (2D) models utilizing excess rainfall on grid hydrology and the inclusion of field measured structures

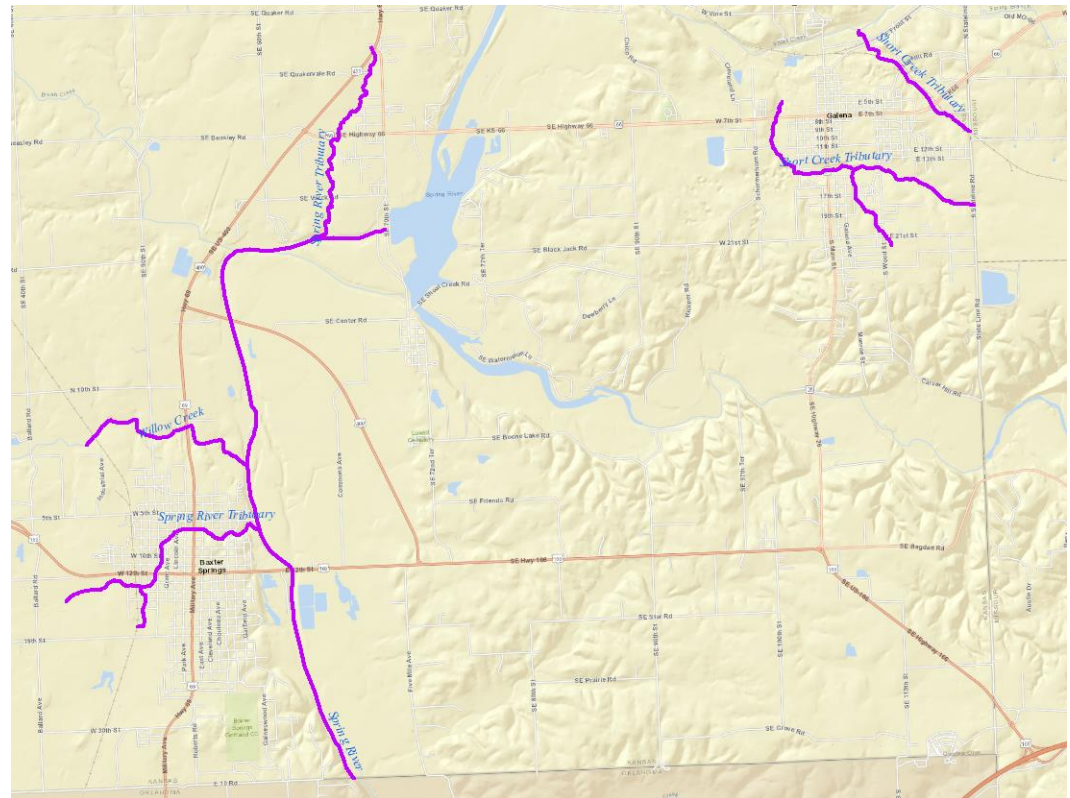
- 2 Tributaries to Brush Creek near Columbus



# Cherokee County- Mapping Update

**Enhanced Zone A** - two-dimensional (2D) models utilizing excess rainfall on grid hydrology and the inclusion of field measured structures

- Spring River and 3 Tributaries and Willow Creek near Baxter Springs
- 3 Tributaries to Short Creek near Galena

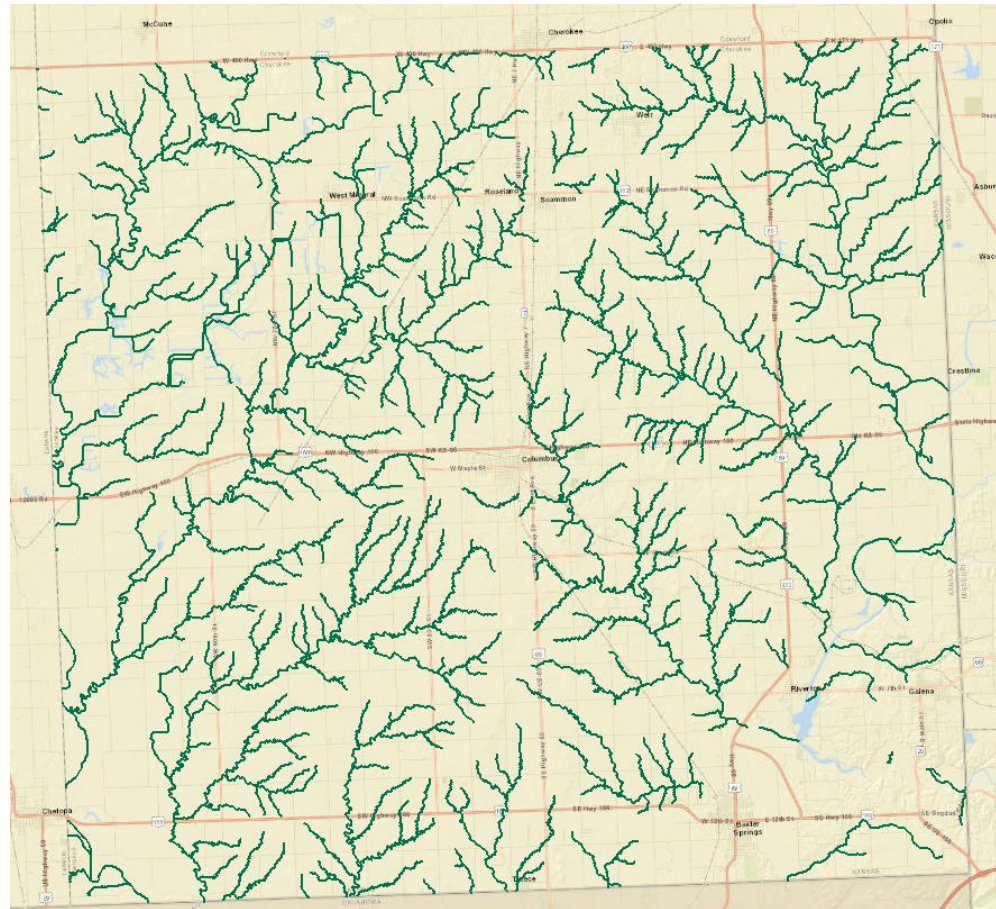




# Cherokee County- Mapping Update

**Zone A** - Base Level 2D Hydrology and Hydraulic models utilizing excess rainfall on grid hydrology

- Remainder of County



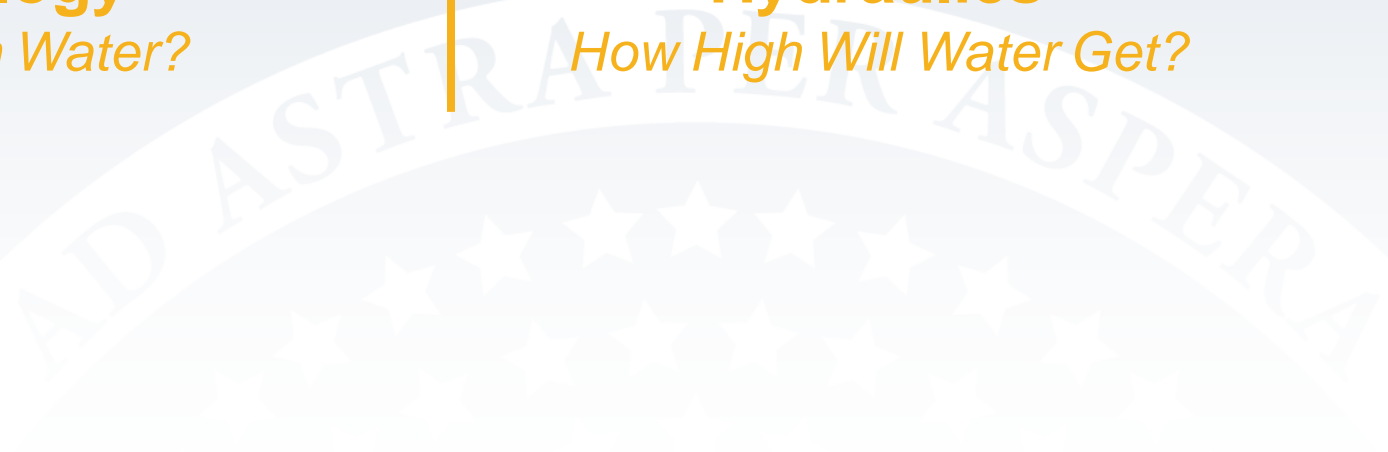
# Definitions



**Hydrology**  
*How Much Water?*



**Hydraulics**  
*How High Will Water Get?*





# Data Gathered

- Information gathered during the BLE Phase of the project was incorporated and/or used for validation of modeling
- Survey and as-built plan information was gathered for bridge and culvert openings for enhanced areas



# LiDAR Data

- Updated digital floodplain maps will be developed on the 2012 acquired LiDAR
- 2018 LiDAR recently became available
- Comparison between the 2018 and 2012 LiDAR was performed
- Did not result in enough change in ground elevation to significantly impact the floodplain boundaries



# Levees

- There are 6 non-accredited agricultural levees in the county.
  - LCK-0006 – Neosho River
  - LCK-0031 – Cherry Creek
  - LCK-0032 – Cherry Creek
  - LCK-0034 – Cherry Creek
  - LCK-0048 – Fly Creek
  - LLB-0005 – Neosho Creek
- These levees are overtopped for the 1% annual chance storm and are considered hydraulically insignificant.
- The new mapping is based on a Natural Valley Procedure which reflects the levee geometry in the hydraulic model but allows water to flow on either side of the levee.



# Example of Zone AE with Floodway





# Example of Zone A



# Changes Since Last FIRM

## Compares the Draft Floodplains to the Current Effective Floodplains



Proposed to be out of (removed from) the Floodplain



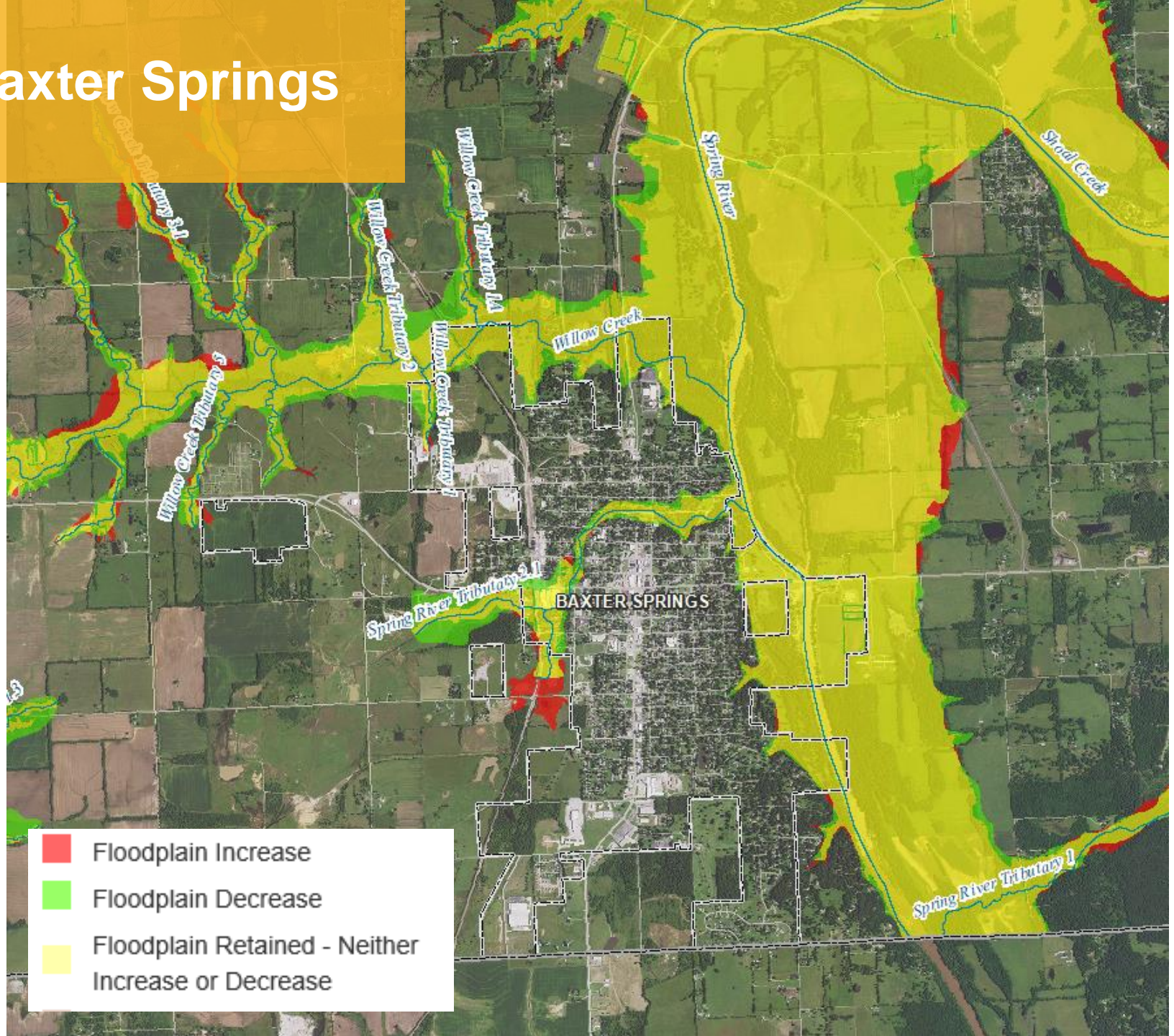
Proposed to remain in the Floodplain






Proposed to be in (added to) the Floodplain






# Baxter Springs

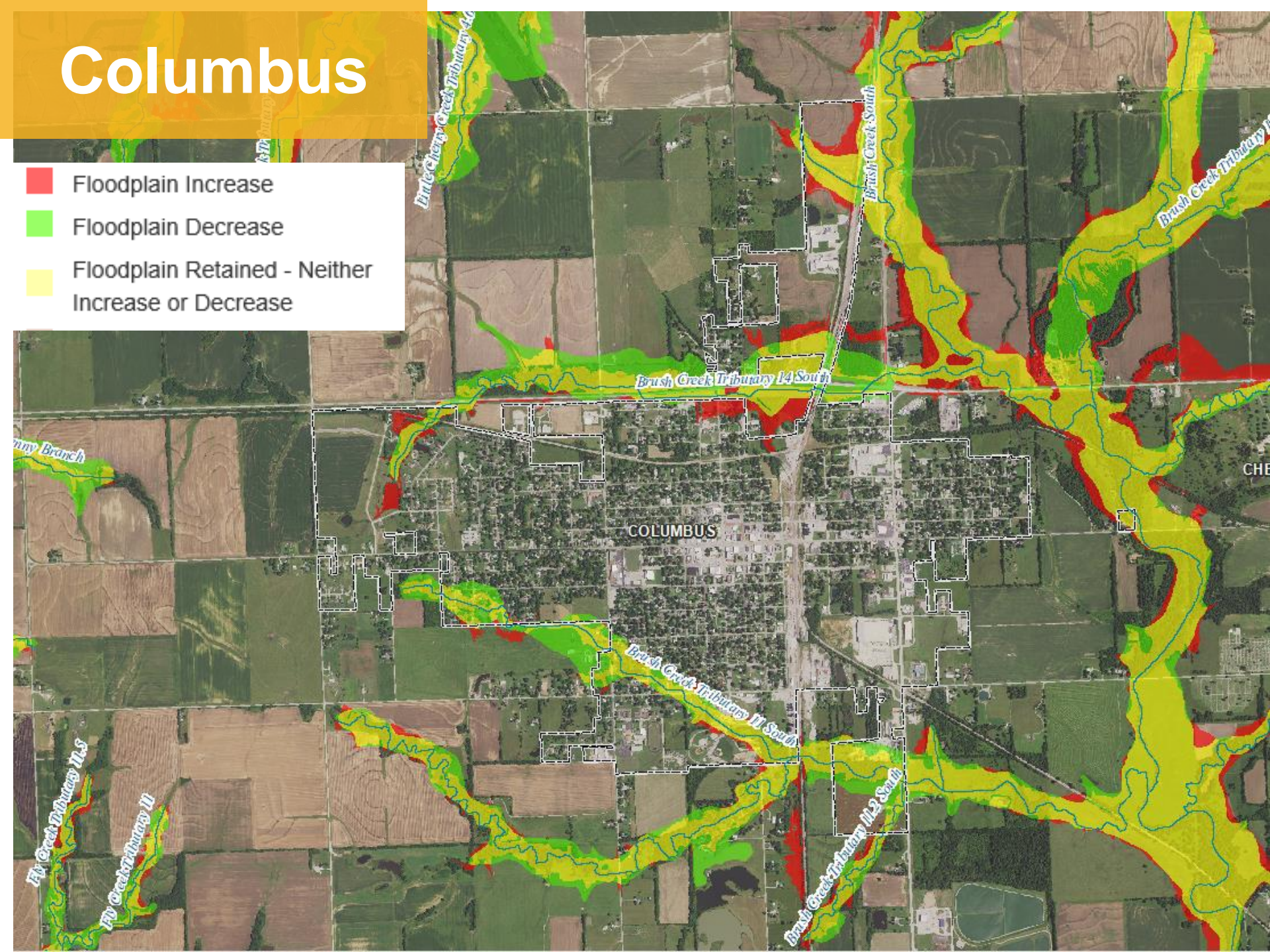


-  Floodplain Increase
-  Floodplain Decrease
-  Floodplain Retained - Neither Increase or Decrease

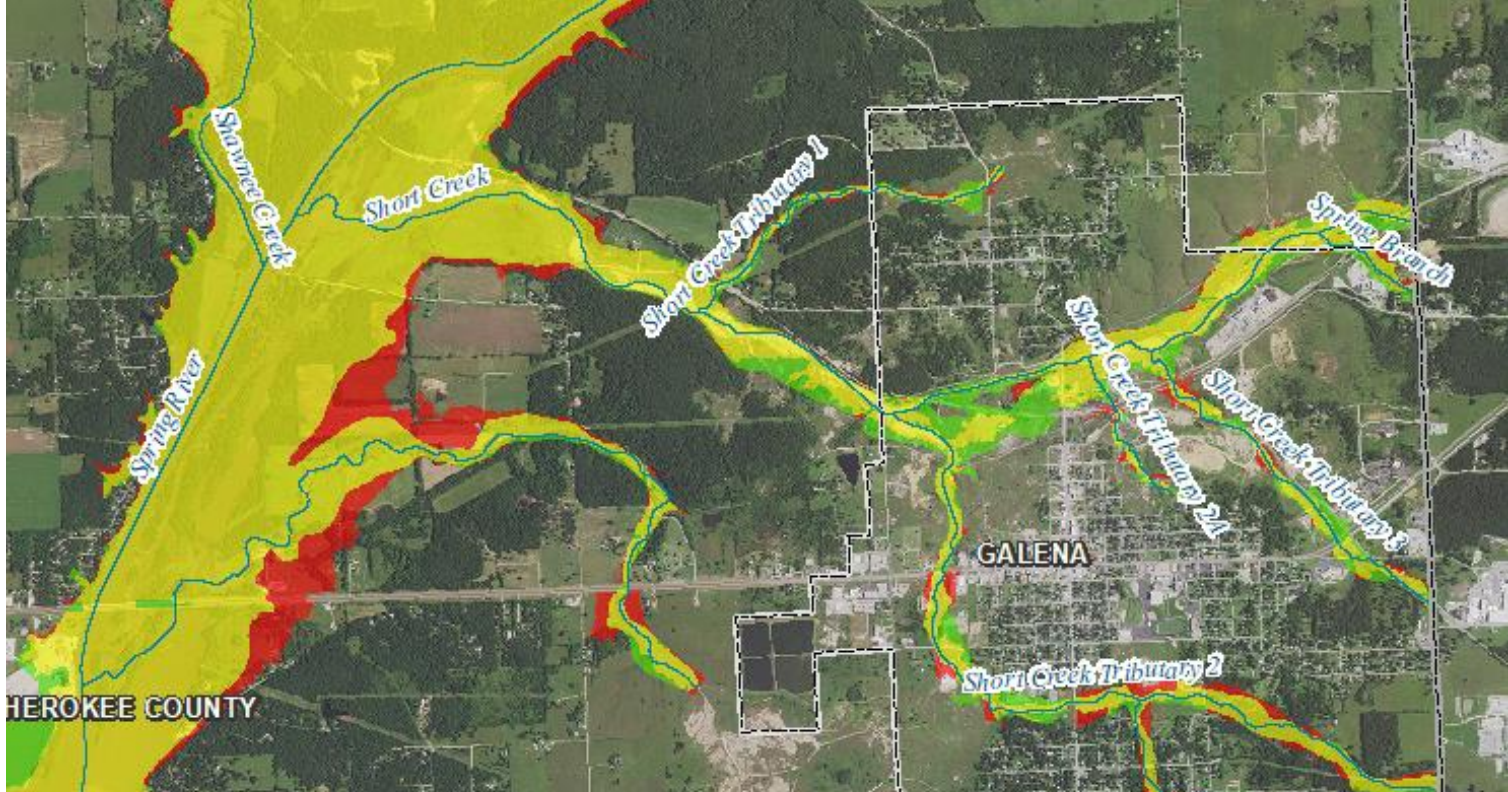


# Columbus

-  Floodplain Increase
-  Floodplain Decrease
-  Floodplain Retained - Neither Increase or Decrease






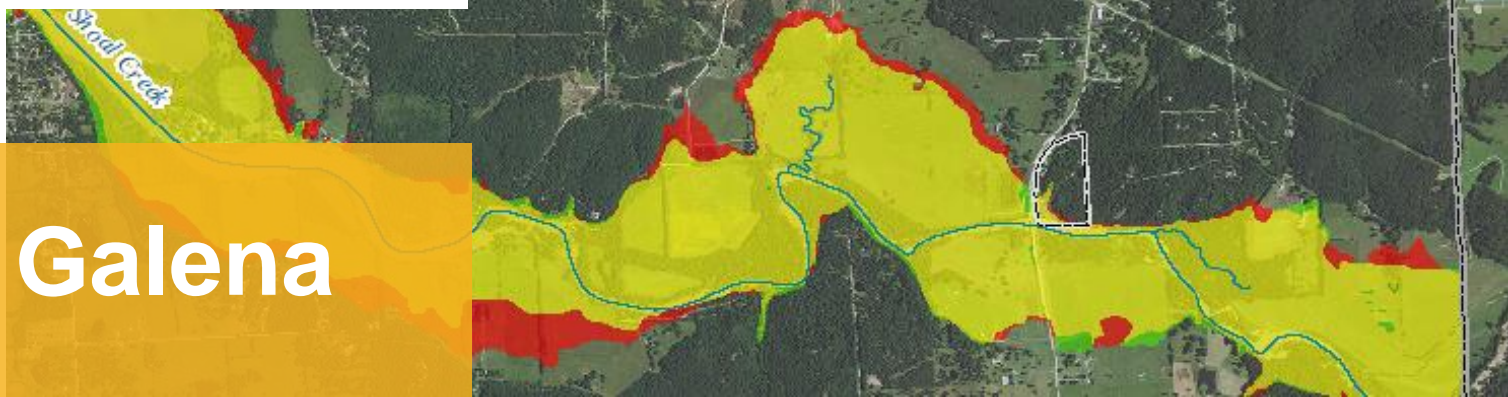




HEROKEE COUNTY

GALENA

-  Floodplain Increase
-  Floodplain Decrease
-  Floodplain Retained - Neither Increase or Decrease



Galena



# Roseland




CHEROKEE COUNTY

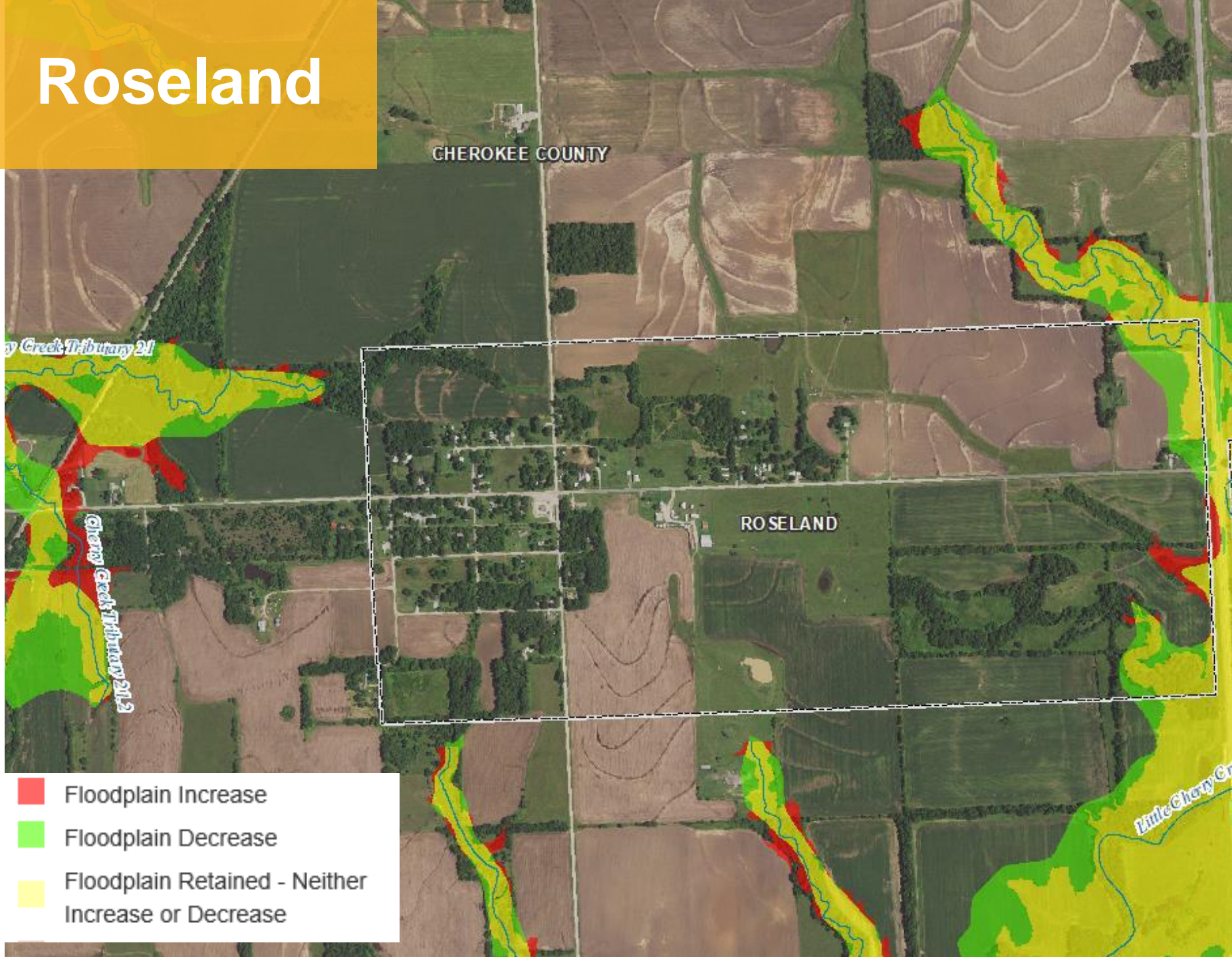
Cherry Creek Tributary 21

Cherry Creek Tributary 21.2

ROSELAND

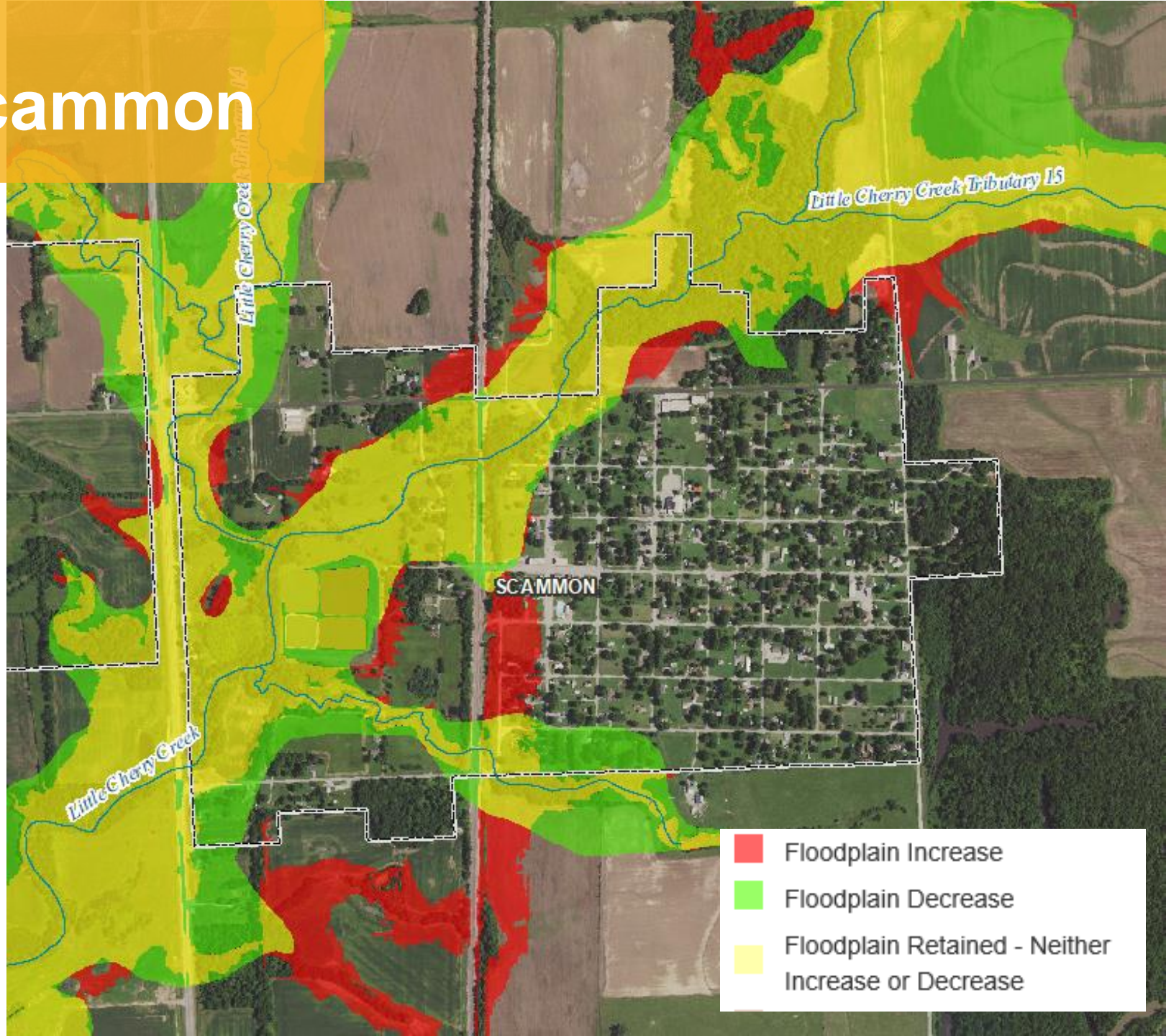
Little Cherry Cr

-  Floodplain Increase
-  Floodplain Decrease
-  Floodplain Retained - Neither Increase or Decrease



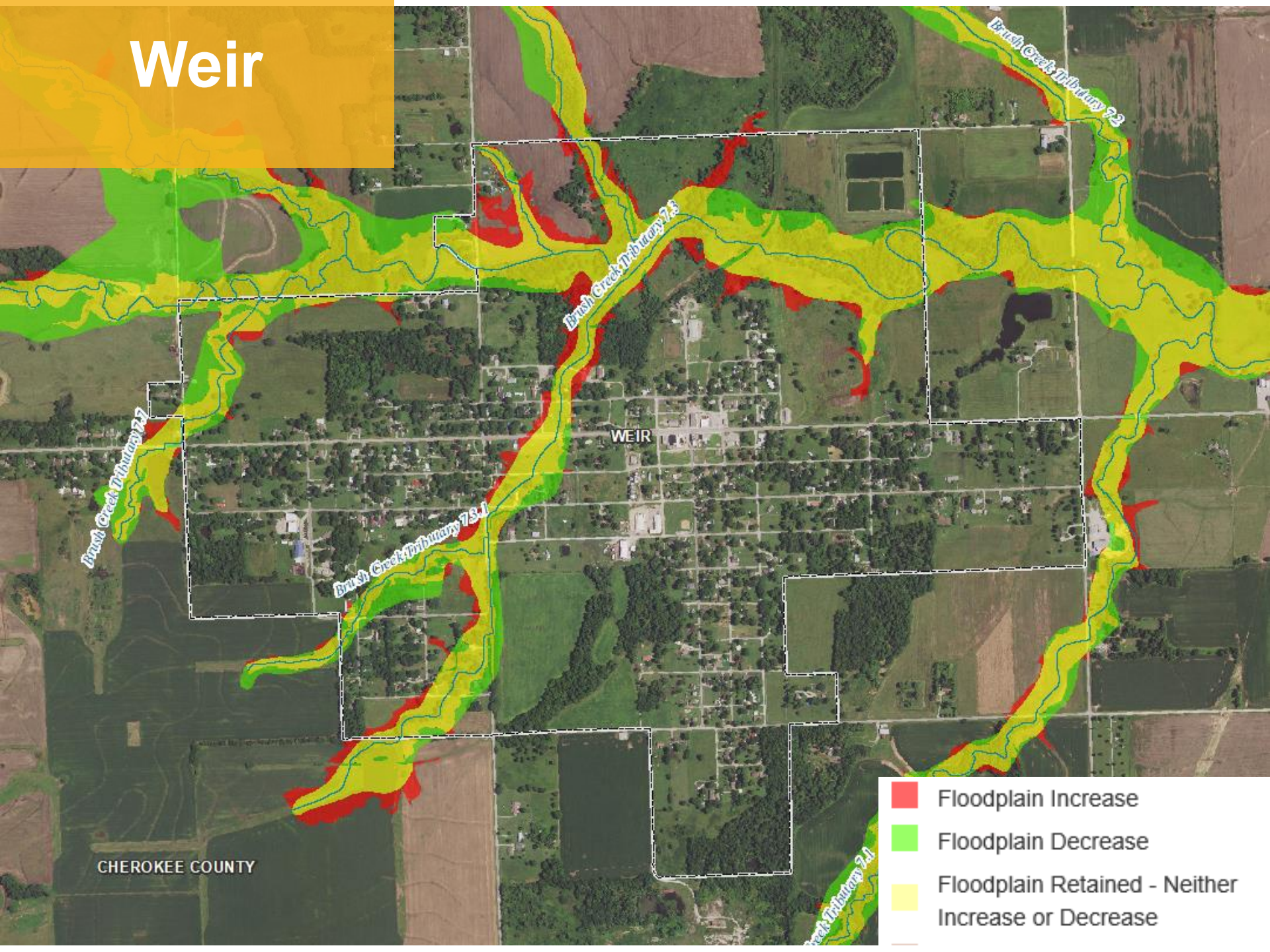


# Scammon





# Weir






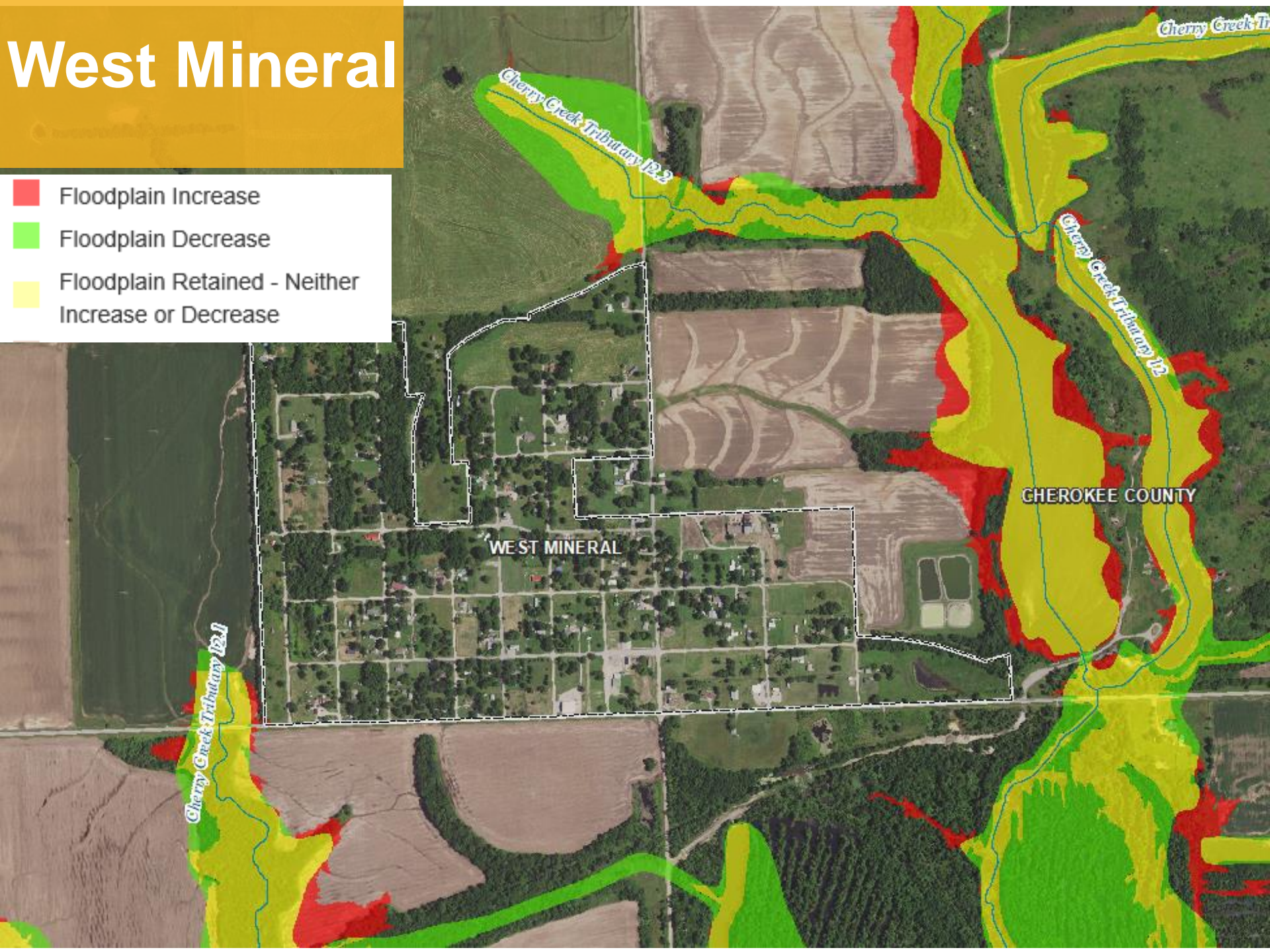
- Floodplain Increase
- Floodplain Decrease
- Floodplain Retained - Neither Increase or Decrease

CHEROKEE COUNTY

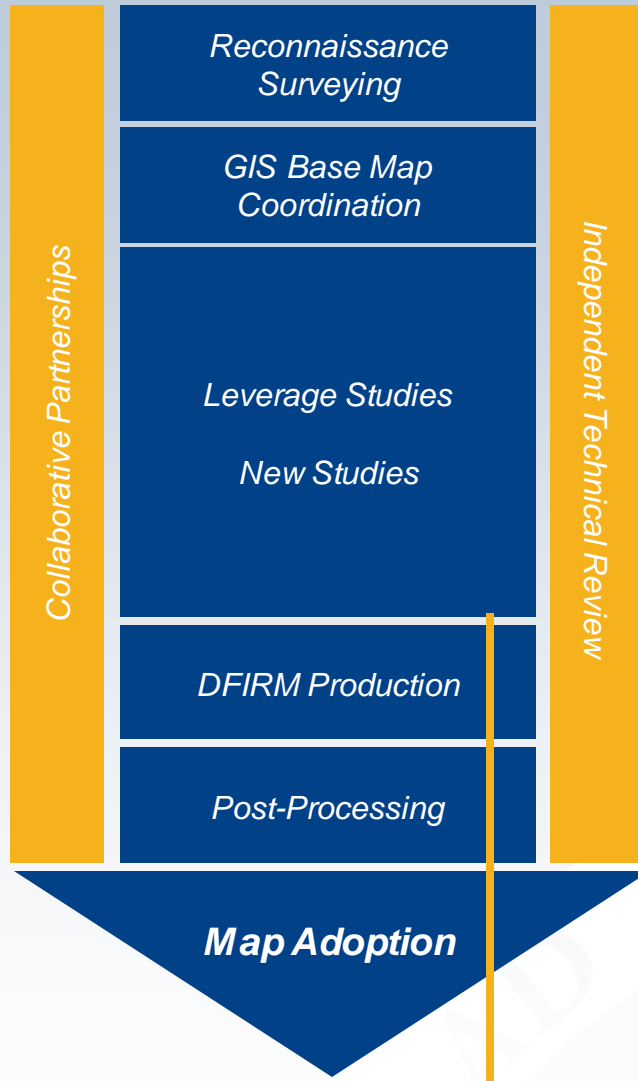


# West Mineral

-  Floodplain Increase
-  Floodplain Decrease
-  Floodplain Retained - Neither Increase or Decrease







## Project Tasks

1. Discovery
2. Base Map Preparation
3. Survey and Topography
4. New Studies
5. DFIRM and FIS Production
6. Post-Preliminary

Finishing this phase: data development

# Your Maps Undergo Significant Review



- WSP USA
  - Engineering reviewed by separate WSP USA office
- Independent Technical Review (ITR)
  - Third party review of engineering
  - AECOM
- KDA Review
  - Visual review
  - Eye test
  - Identify impact of the map
- FEMA Review
  - Formal quality review process of regulatory products
- Your Review!
  - Community Review
  - Public Review

# Community Map Review



ASPERA

# Your Map Review



## This is your opportunity to have an impact!

- We want to agree on what your map looks like before Preliminary Status
  - That's when we enter the regulatory map-making phase, and it's harder to change things
- A web map has been provided for review  
<https://gis2.kda.ks.gov/gis/cherokee/>
- This is where **YOU** look out for **YOU: please provide your comments by April 6, 2023**





# Cherokee County Floodplain Mapping

Draft Floodplain Mapping updated 2/28/2023. To request a Base Flood Elevation, please use the [BFE Portal](#).

Enter an address or place

## Legend

### Floodplain Data

Draft Special Flood Hazard Area - 2/28/2023

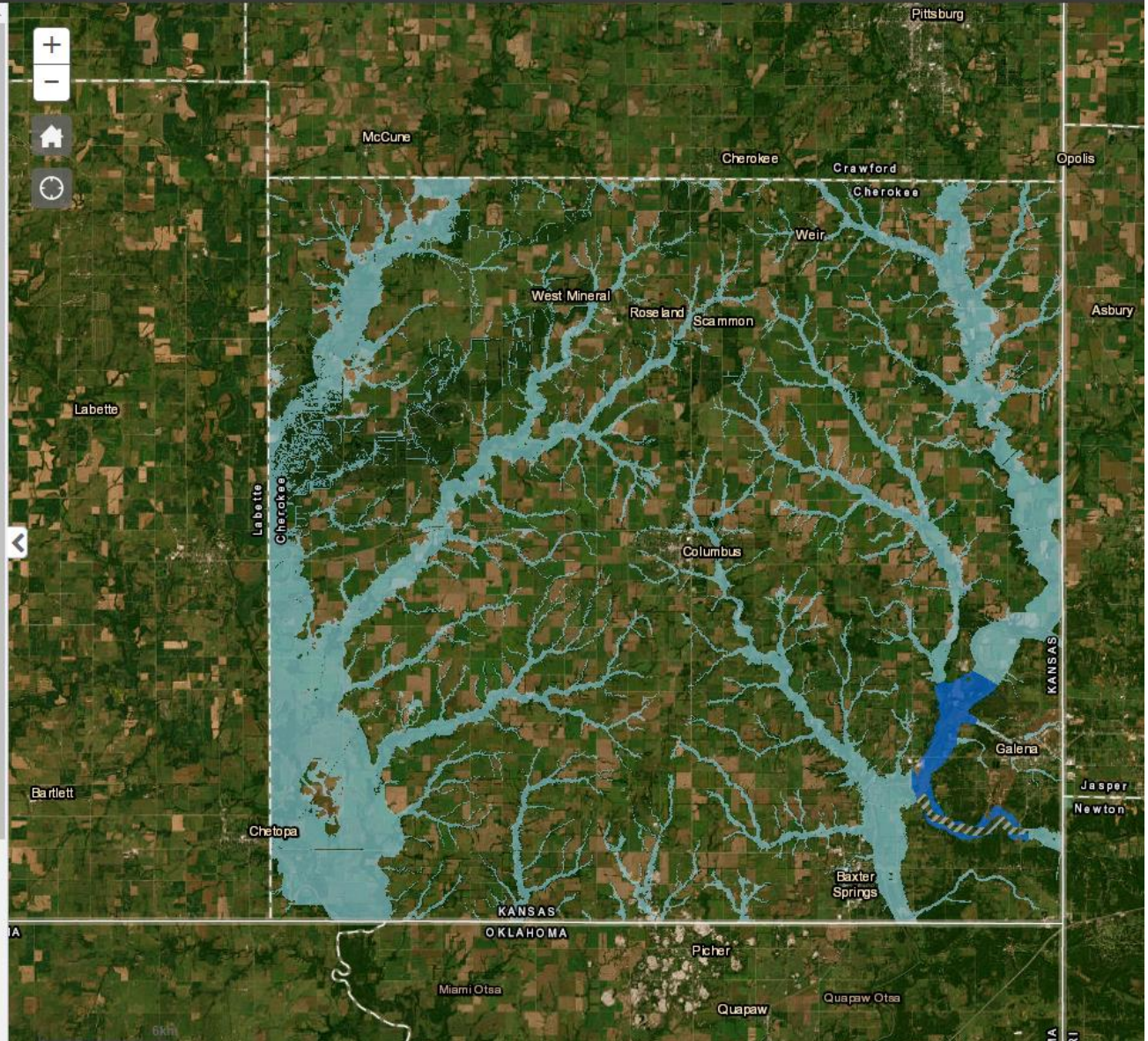
- Zone A
- Zone AE
- Zone AE with Floodway

## Layers (Click to expand)

- Comments
- Floodplain Data
  - Community Boundaries
  - Streams
  - Levee
  - Draft Base Flood Approximate (BFA) - 2/28/2023
  - Draft Whole Foot Base Flood Elevation (BFE) - 2/28/2023
  - Draft Lettered Cross-sections - 2/28/2023
  - Draft Unlettered Cross-section - 2/28/2023
  - Draft Changes Since Last FIRM - 2/28/2023
  - Draft Special Flood Hazard Area - 2/28/2023
  - Draft Advisory Floodplains
- BLE Data
- Current Effective Floodplain Data
- NG911

## Editor

Leave Comment





# Your Map Review



Recent construction (e.g., a new building development that incorporated fill or changes to roadways, bridges, or culverts)



High Water Marks showing past flooding impacts



Floodplain boundaries that align with your experience of large-scale flooding



Model stream extents (where floodplains begin and end)



Political boundaries, especially if there is a recent annexation



FEMA

***IMPORTANT STEP:*** All community comments will be addressed/reviewed before doing a public review

# Your Residents Also Have the Opportunity to Review the Draft Data

- Can review and comment online, using same Review Web Map
- Will run for at least 30 days
- We will also hold an Open House
  - Typically consists of computer stations where public can discuss draft floodplains with KDA, engineers, mapping experts, and insurance specialists
- We'll need your help notifying your residents and finding location
- Tentatively scheduled for July 2023





# Open Discussion

**Zoom attendants unmute  
your phones and let's talk  
about this.**

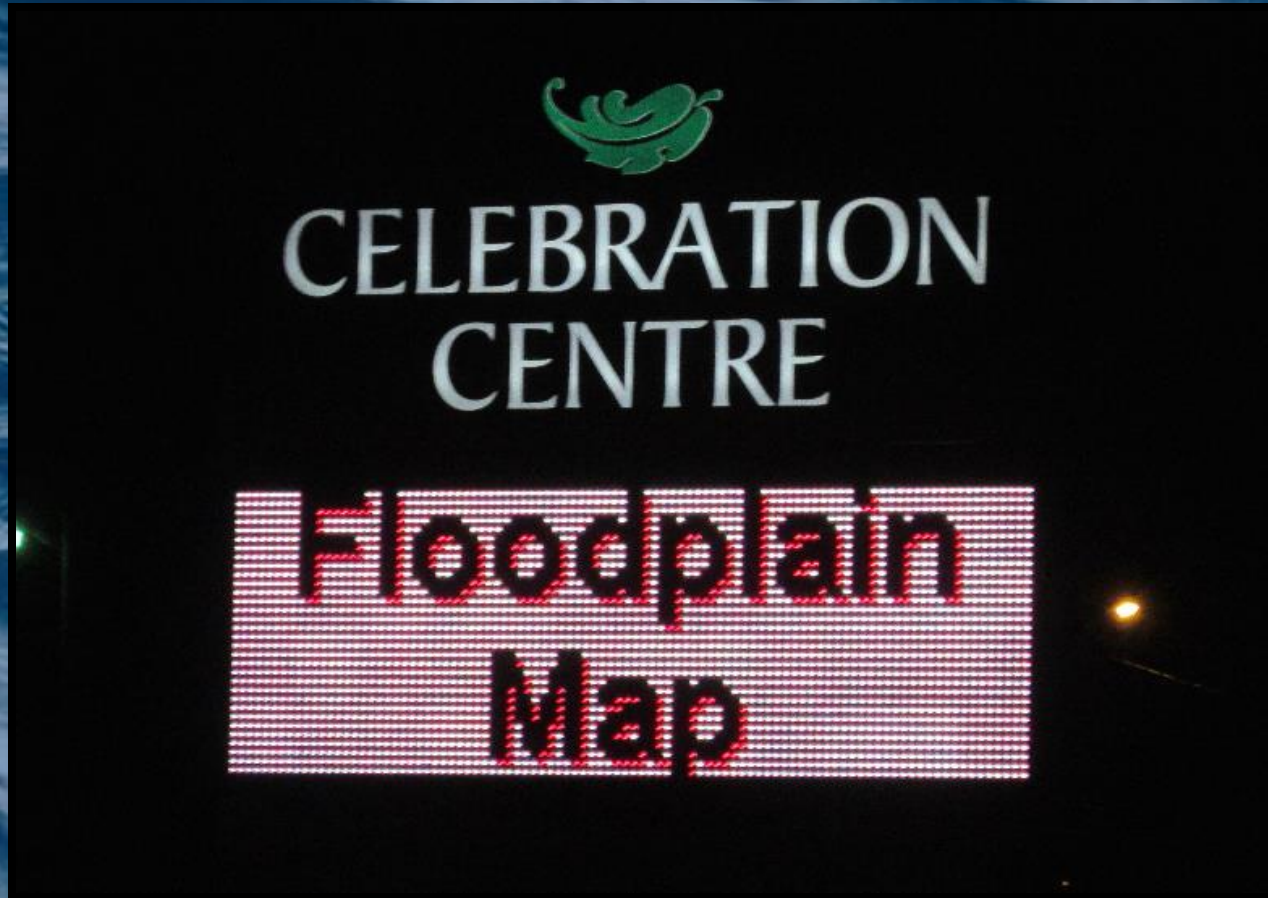
## **Our questions:**

- What location should we hold the Open House?
- Could you help promote an Open House?
- If so, how would you do that? Social media? Newsletters? Website posting? Direct mail?

***What are your questions?  
We know you have some...***



# Next Steps






# Timeline Review

- Your Review
  - Please get comments in by April 6, 2024
- Public Open House
  - Estimated: July 2023
- Preliminary Map Distribution
  - Estimated: January 2024
- Preliminary DFIRM Community Coordination Meeting
  - Estimated: February 2024
- Appeal Period
  - Estimated: May-August 2024
- Letter of Final Determination
  - Estimated: December 2024
- Effective Maps
  - Estimated: June 2025



**Where we still have flexibility to change the data**



**Where you have to follow a more formal process (with higher effort) to request any changes to the data**

# Your Next Steps

**Review your community's maps and comment on areas of concern AND/OR areas that look right.**

*There are a few ways to do this:*



**Lead the public outreach for your community**

We can help you target who most needs to know;  
but will need your help to lead the outreach effort

***Let us know if you need help or have any remaining questions!***



# Key Take-aways

*Floodplain Mapping Projects take time*

*Your involvement in this process will result in better flood information for your community*

*Get it right before Preliminary!*

***DON'T HESITATE TO CALL,  
WE ARE HERE TO HELP***



*Where to go for...*

INFEED



# Online Project Information

- **Project Website**

- <https://agriculture.ks.gov/divisions-programs/dwr/floodplain/mapping/mapping-projects/lists/mapping-projects/lower-neosho>
- Scoping Maps, Project Timeline, Meeting Presentations, Newsletters, Technical Reports, Web Review Map

- **Web Review Map**

- <https://gis2.kda.ks.gov/gis/choerokee/>
- Draft Floodplain Review

- **Story Maps**

- Project Info
- “Floodplain Current”: Mapping Process ‘Nuts and Bolts’

# Base Flood Elevation Portal



## Kansas Base Flood Elevation Portal

[Home](#)

[About](#)

[Help](#)

### Portal Registration

First Name

Last Name

User name

Title

Phone

Email Address

Address

City

Zip

State

[Register](#)

**For Zone A floodplains, you can request BFE Data. Keep in mind that the data is still subject to change.**



# Contact Information



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NFIP Specialist

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Regional Project Officer



FEMA

***And now...***

*We are going to show you how  
to make comments and review  
your community's map*

***Any questions first?***