



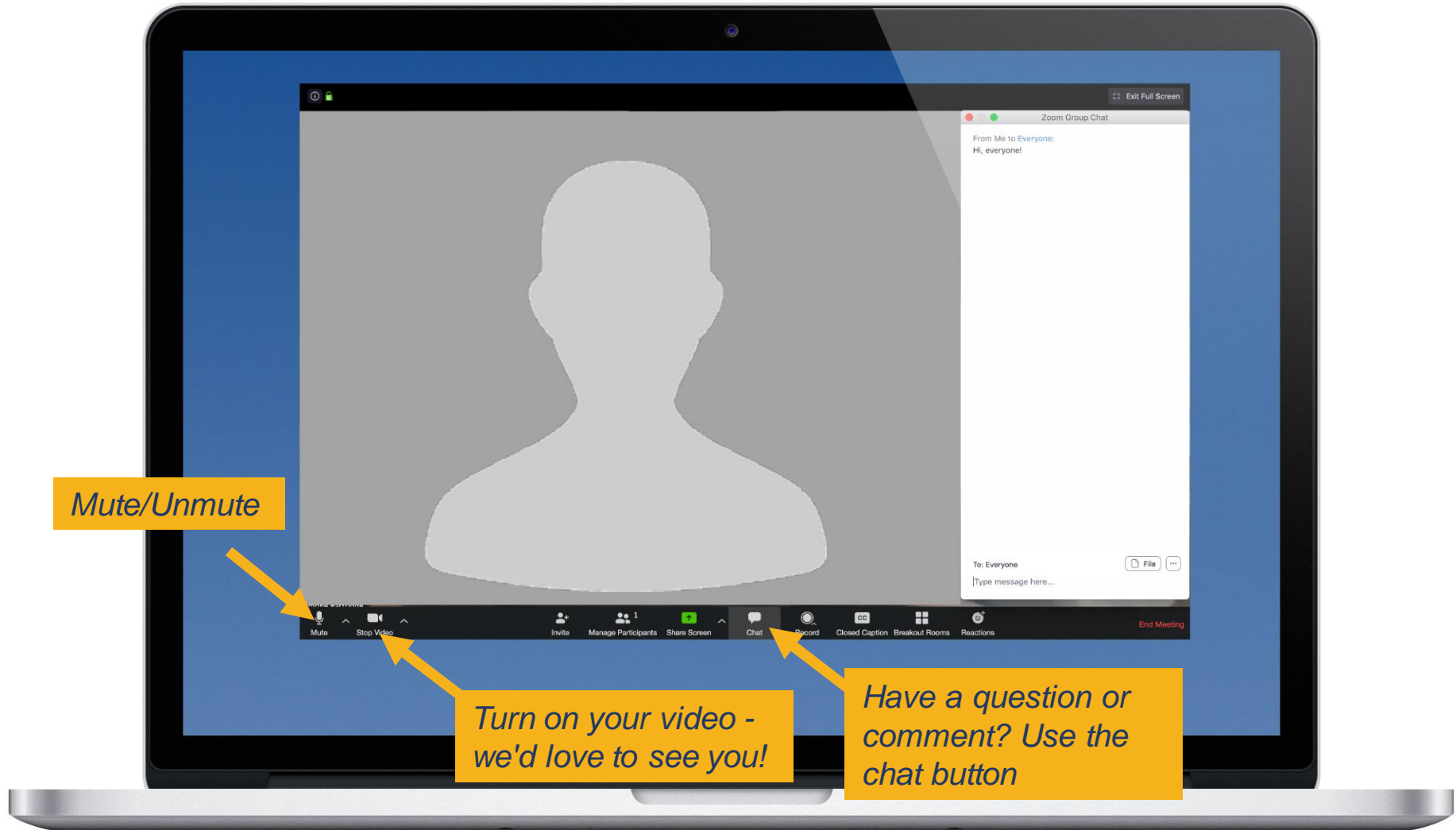
# National Flood Insurance Program (NFIP):

Preliminary Digital Flood Insurance Rate Map (DFIRM) Final Consultation  
Coordination Officer (CCO) Meeting for Bourbon County, KS

August 14, 2023

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

# How to use Zoom



# Rules of the Road



- Attendees will be muted during the presentation, to help eliminate background noise.
- Check out the chat to ask questions during the presentation! Or feel free to “raise your hand.” We will pause for questions at various stopping points, and we have several poll questions.
- If you want to share your video, please do!
- For technical difficulties, send a private chat to Bill 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.

# Welcome & Introductions



## FEMA – Region VII

- **Bryan Murdie**– *Risk Analysis Branch Chief*
- **Dawn Livingston**– *Regional Project Officer*
- **Chris Parsons** - *Insurance Program Specialist*

## Cooperating Technical Partner – CTP

- **Tara Lanzrath, CFM**– *State NFIP Coordinator*
- **Joanna Rohlf, CFM, GISP** – *Floodplain Mapping Coordinator*
- **William Pace, CFM** – *Floodplain Mapping Specialist*
- **Patrick Bonine**– *Floodplain Mapping Specialist*
- **Cheyenne Sun Eagle, CFM**- *NFIP Specialist*

## WSP – Mapping Contractor

- **Larry Sample, P.E.** – Sr. Water Resources Engineer
- **Lisa Tuckwin, CFM, GISP** – Project Manager
- **Erika Stanley** – Post-Preliminary Specialist

*Today we will focus on the regulatory component of this work and how this affects your community.*

*But remember that the ultimate goal is to understand your flood risk so you can better protect your community.*



# Today's Goals

*Coming out of this meeting, we want you to understand:*

1

The NFIP requirements related to this work and how we got to where we are today

2

Your flood map, what it means, and a property owner's options for a closer look  
(i.e. LOMC!)

3

The appeals and map adoption process and what your role is

4

The importance of community outreach and flood insurance



*Provide an overview of the NFIP requirements related to this work*

# Goal 1



FIRST ALERT WEATHER

HIGH WATER CLOSING ROADS  
BOURBON COUNTY

LIVE

WKYT

6:05 | 61°

WKYT FIRST ALERT

WEATHER DAY

Flash Flood Watch effective until 9:00 AM Thursday for the counties of L FLASH FLOOD WARNING

# What is the NFIP?



FEMA

- The National Flood Insurance Program (NFIP) enables property owners in participating communities to purchase insurance to protect themselves from losses associated with flooding.
- Participation in the NFIP is voluntary, based on an agreement between a community and the Federal government: if a community will **adopt and enforce a floodplain management ordinance** to reduce future flood risks to new construction, the Federal government will make flood insurance available within the community.



# NFIP Goals



FEMA

Reduce the loss of life and property caused by flooding

Reduce rising disaster relief costs caused by flooding

Provide flood insurance (short-range goal)

Encourage wise use of the floodplain (long-range goal)



# Accomplishing NFIP Goals



- Publish maps that identify flood risk
- Educate the public about its risk
- Provide federally backed flood insurance to reduce financial risk
- Encourage development away from flood prone areas

**FLOOD INSURANCE STUDY**  
FEDERAL EMERGENCY MANAGEMENT AGENCY  
VOLUME 1 OF 1

**BOURBON COUNTY, KANSAS**  
AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
BOURBON COUNTY, UNINCORPORATED AREAS	200022
BRONSON, CITY OF	200393
FORT SCOTT, CITY OF	200023
FULTON, CITY OF	200024
MAPLETON, CITY OF	200624
REDFIELD, CITY OF	200025
UNIONTOWN, CITY OF *	200371

\*No Special Flood Hazard Areas Identified

**FEMA**

**REVISÉD:**  
TBD

FLOOD INSURANCE STUDY NUMBER  
20011CV000C  
Version Number: 2.8.5.6

**Preliminary**  
06/12/2023

The map shows a portion of Bourbon County, Kansas, with various flood hazard areas shaded in different colors (e.g., light blue for 100-year flood, dark blue for 500-year flood). A legend at the bottom left explains the symbols and colors used on the map. A scale bar and north arrow are also present. A panel locator map at the bottom right shows the location of this study within the larger context of Bourbon County.

# Status Update

The Kansas Homeland Security Region H Hazard Mitigation Plan was updated in 2019.



**14,493**

*Population Based On 2022 U.S. Census Estimate*



**\$ 2,438,761**

*Total Losses Paid Since 1978*



**6 NFIP PARTICIPANTS:**  
Cities of Bronson, Fort Scott, Fulton, Redfield, Uniontown, and Bourbon County



In the last 20 years, there have been 15 Presidential Disaster Declarations for flooding in Region H.

**6,767**

HOUSING UNITS



**17**

Number of Flood Insurance Policies



**\$ 4,899,000**

*Flood Insurance Coverage*

# Goal 1

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*Review how we got to where we are today*



# Bourbon County- Mapping Update



- **New Enhanced Zone A** – rainfall run-off or gage hydrology with 2D HEC-RAS hydraulic
  - 1 Tributary to the Marmaton River near Bronson: Model includes field measured structures
  - 1 Tributary to the Marmaton River near Redfield: Model includes field measured structures
- **New Static Zone AE**— HEC-HMS
  - Lake Fort Scott
- **New Zone A** – rain on mesh hydrology and 2D HECRAS hydraulics
  - Remaining streams in the county



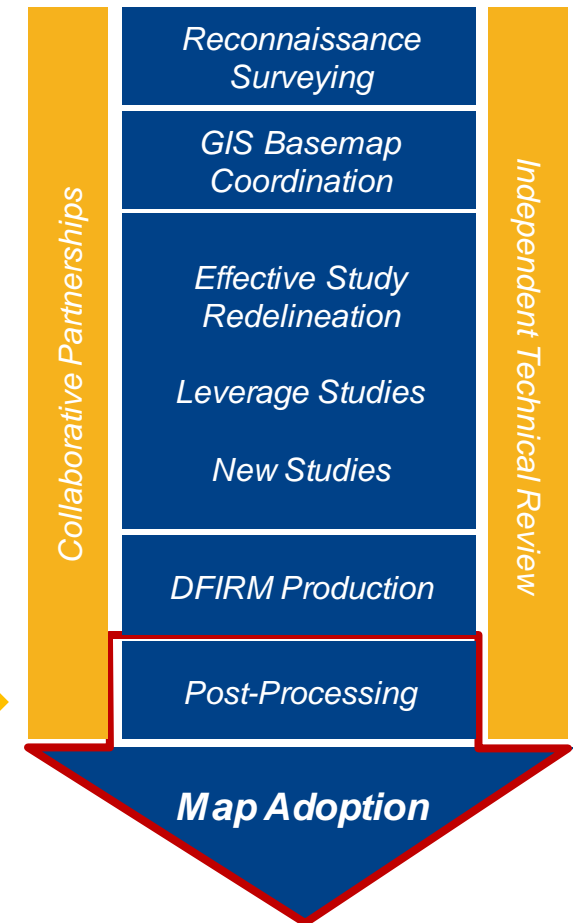
## Existing Zone AE

- Incorporate Zone AE with Floodway detailed modeling from the March 2016 Physical Map Revision for the City of Fort Scott.
  - Buck Run
  - Buck Run East Fork
  - Buck Run Tributary
  - East Creek
  - Marmaton River
  - Mill Creek
  - Rock Creek

# Project Tasks

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

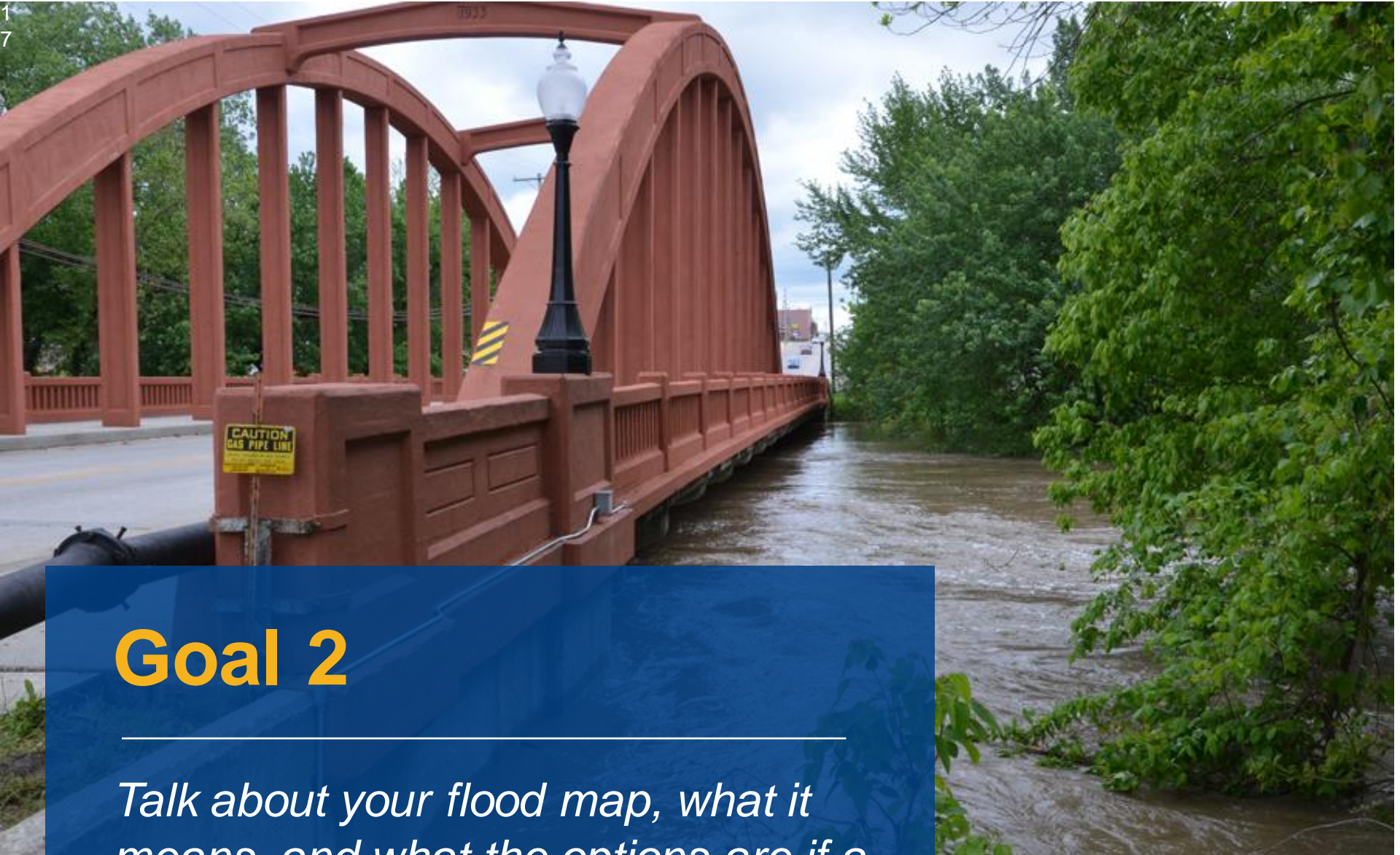
*Entering this Phase* →



# Background

- *Osage Custom Watershed Discovery Meeting*
  - *February 5, 2020*
- *Project Kick-Off Meeting*
  - *July 22, 2021*
- Map Production
  - *2021-2023*
- Flood Risk Review (FRR) Meeting
  - *July 13, 2022*
- Public Open House
  - *November 30, 2022*
- Preliminary Map Distribution
  - *June 12, 2023*
- Preliminary DFIRM Community Coordination Meeting
  - *August 14, 2023*





## Goal 2

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*Talk about your flood map, what it means, and what the options are if a property owners disagrees with what they see for their structure*

# Determining Your Flood Risk



Nearly everyone is at risk of flooding. Your map characterizes the degree of that risk.

## High Risk

Identified as Zone A or Zone AE, a Special Flood Hazard Area (SFHA) on flood maps

## Medium Risk

Shaded Zone X areas on maps. This means you still have flood risk we want you to know about, but you aren't required to purchase flood insurance

## Low Risk

Unshaded Zone X areas on maps



# High Risk Areas

## *What You Need to Know*

- Where there is a 1% chance of flooding any given year
- Mandatory flood insurance requirements for mortgages from federally-backed lenders when the floodplain touches the structure
- If your community participates in the NFIP, you are required to obtain a floodplain development permit from the community. Regardless of participation, you may be required to get a permit from the State DWR.

## **Zones AE and A**



*Please visit with Tara Lanzrath, the State NFIP Coordinator,  
for more information*

# Enhanced Studies

*What You Need To Know*



## Zone AE

- We performed detailed engineering on streams for certain areas of higher population and/or areas that were previously detailed studies
- These areas on the map include:
  - Floodways and 1%-annual-chance (100-year) flood zones – HIGH RISK
  - 0.2%-annual-chance (500-year) flood zones identified
  - Base Flood Elevations (BFEs), which show the elevation of the 1%-annual-chance flood
  - Delineated floodplains using LiDAR data

# Base Studies

## *What You Need to Know*



## Zone A

- Updated modeling was performed for these streams using standard methods.
- For these areas, the map includes:
  - The 1%-annual-chance (100-year) flood zone (Zone A)
- The map does NOT include:
  - Floodways
  - BFEs

However, BFEs are on the KDA web map and specific BFEs can be requested via KDA's Base Flood Elevation Portal

Note that the delineated floodplains use LiDAR data

# Medium Risk Areas

## *What You Need To Know*



## **Shaded Zone X**

- Shaded Zone X provides important information on:
  - Areas of the 0.2%-annual-chance (500-year) flood,
    - where we are seeing flooding here more and more
  - Areas adjacent to levees
    - where you still really want to keep an eye on flood risk, should the levee fail
  - Areas that will likely be future 1% floodplains, and therefore not ideal for future development

*While there are no mandatory flood insurance purchase requirements in this zone, flood insurance is encouraged*

# Low Risk Areas – Unshaded Zone X

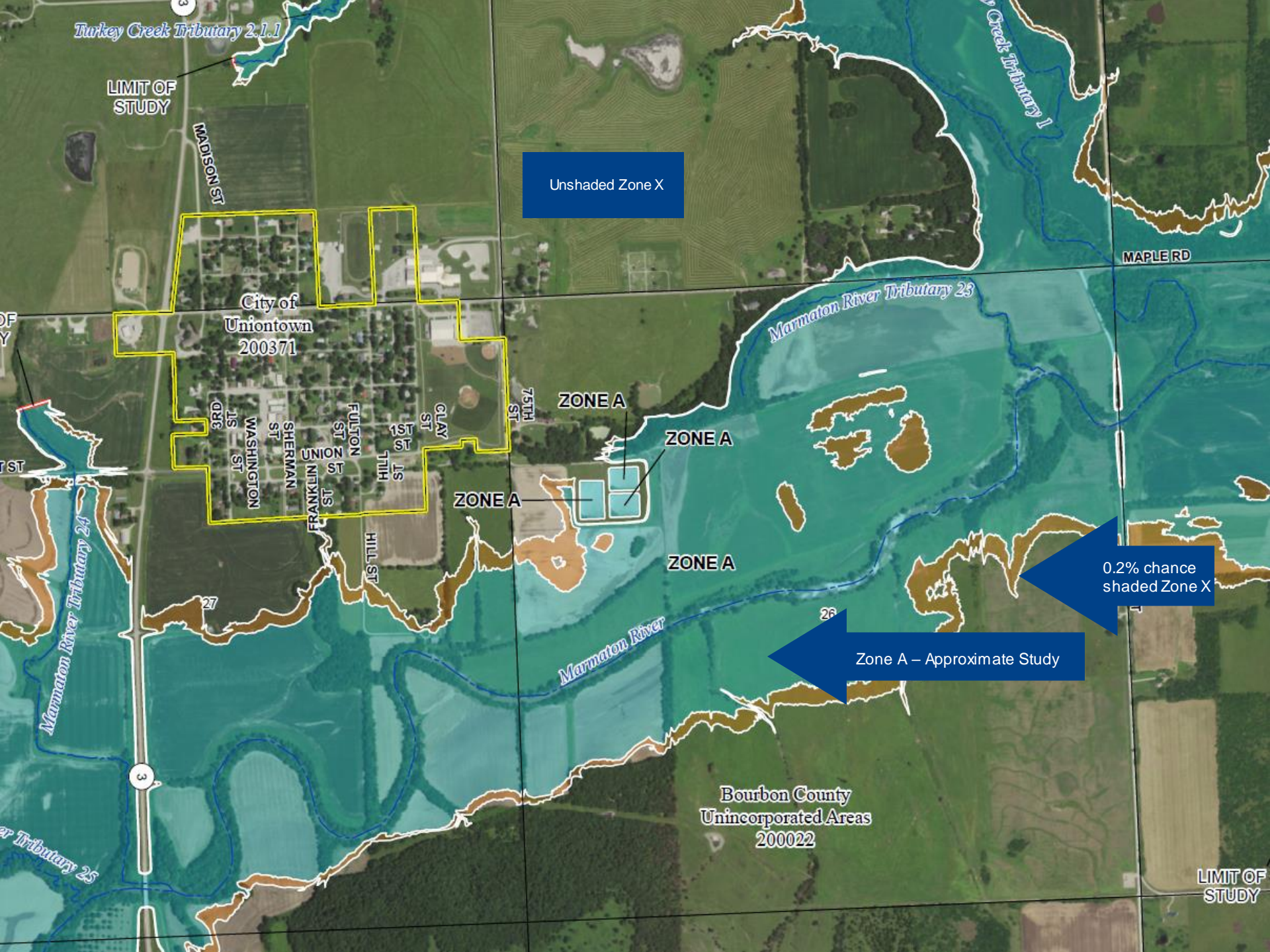


- Areas outside the 1%- and 0.2%-annual-chance flood zones
- No mandatory flood insurance purchase requirements









Turkey Creek Tributary 2.1.1

LIMIT OF STUDY

WASHINGTON ST

Unshaded Zone X

MAPLE RD

City of Uniontown 200371

Marmaton River Tributary 23

ZONE A

ZONE A

ZONE A

ZONE A

0.2% chance shaded Zone X

Zone A - Approximate Study

27

26

Marmaton River

Bourbon County Unincorporated Areas 200022

LIMIT OF STUDY

3

Marmaton River Tributary 25

# 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

*Here's where you can  
request BFE data for  
Zone A floodplains.*

*[http://maps.kgs.ku.edu/  
fpm\\_bfe/](http://maps.kgs.ku.edu/fpm_bfe/)*

PER ASPERA





# Options for Property Owners



# Letters of Map Change

- Due to scale limitations, flood maps cannot reflect every rise and fall in terrain. A building may be shown in an SFHA even though it is above the BFE.
- To remedy this, FEMA uses the Letter of Map Change process
- This process allows property owners to submit information about the site and elevation of their structure when they believe that it has been inadvertently included in a designated flood zone



LOMA Candidate



## **LOMA (Letter of Map Amendment)**

A letter from FEMA stating that an existing lot or structure that has not been elevated by fill would not be inundated by the 1%-annual-chance (100-year) flood

## **LOMA (Out As Shown)**

A letter from FEMA stating that an existing structure is located outside the 1%-annual-chance (100-year) floodplain, even if portions of the property are within it

## **LOMR-F (Letter of Map Revision, based on Fill)**

A letter from FEMA stating that an existing structure or parcel of land that has been elevated by fill would not be inundated by the 1%-annual-chance flood



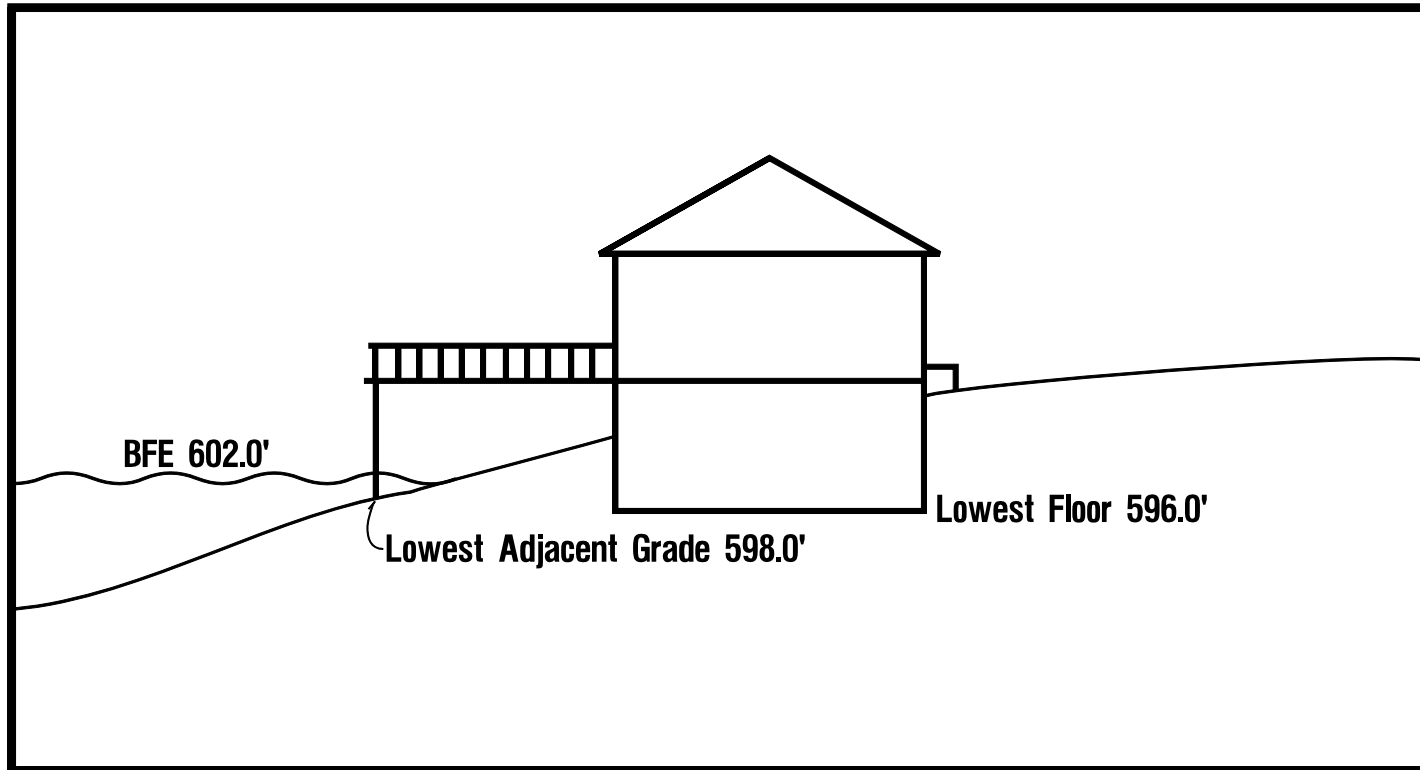
LOMA OAS

# LOMA (Letter of Map Amendment): Natural Ground



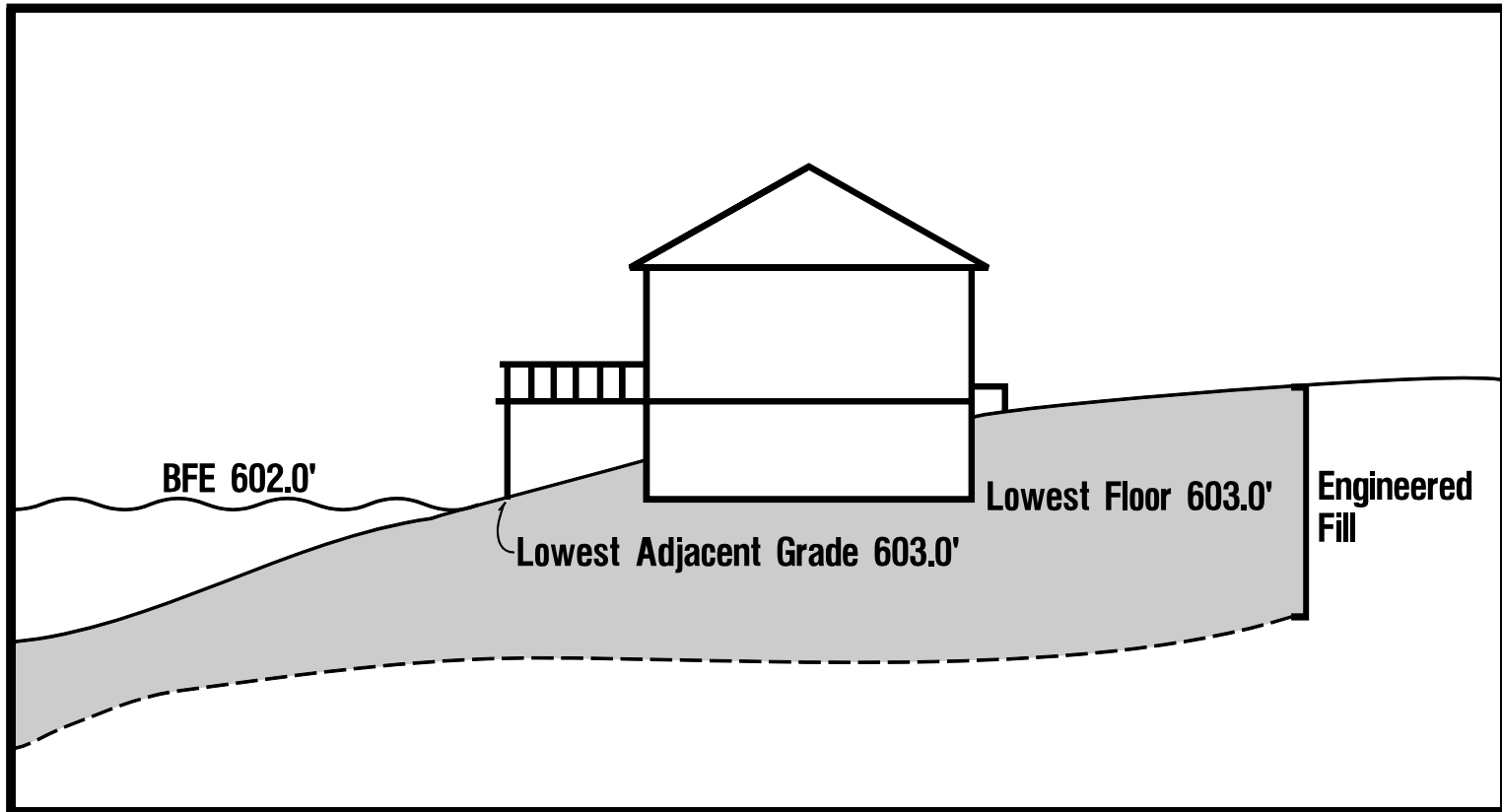
*Part 70 of the NFIP regulations requires that the lowest ground touching the structure be equal to or higher than the Base Flood Elevation (BFE) for the 1%-annual-chance flood*

# LOMA Request: Cross-Sectional View



*The Lowest Adjacent Grade (LAG) must be at or above the BFE for a LOMA request to be granted. The LAG is measured at the lowest point the ground touches the structure, including all attached structures, such as decks or garages.*

# LOMR-F Request: Cross-Sectional View



## **LOMR (Letter of Map Revision)**

A letter from FEMA officially revising the current National Flood Insurance Program map to show changes to floodplains, floodways, or flood elevations

Used when there are significant changes to the flood zone or flooding characteristics (e.g. hydrology, bridges, stream channelization, retention/detention basins)

## **CLOMR (Conditional Letter of Map Revision)**

A letter from FEMA commenting on whether a proposed project, if built as proposed, would justify a map revision (LOMR), or proposed hydrology changes

- Should be filed when a proposed project will, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source.

# SOMA (Summary of Map Actions)



The SOMA is a document produced by FEMA's Mapping Information Portal that describes how the previously issued Letters of Map Change (LOMCs) will be affected by the revised DFIRM.

PRELIMINARY SUMMARY OF MAP ACTIONS					
Community: BOURBON COUNTY			Community No: 200022		
2A. LOMCs on Revised Panels					
LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
LOMA	03-07-1012A	09/24/2003	T25S, R24E OF THE 6TH P.M., SE 1/4 SECTION 24; 1332 215TH STREET	2000220006B	20011C0327F
LOMA	04-07-250A	02/04/2004	SECTION 11, T25S, R24E; 2027 OVERBROOK ROAD	2000220006B	20011C0225F
LOMA	05-07-0206A	01/27/2005	PORTION OF SECTION 11, T27S, R25E, 6TH P.M.	2000220009B	20011C0475F
LOMA	05-07-1191A	11/01/2005	2020 WAGON ROAD -- PORTION OF SECTION 2, T24S, R24E, 6TH P.M.	2000220003B	20011C0225F
LOMA	08-07-0777A	06/24/2008	SECTION 15, T25S, R25E -- 2521 NATIVE ROAD	2000220006B	20011C0335F
LOMA	09-07-1226A	08/18/2009	SECTION 9, T24S, R25E, 6TH PM -- 2160 NORTH 245TH STREET	20011C0225D	20011C0225F
LOMA	09-07-1609A	11/03/2009	Scott, KS. NW1/2 Tr N Sec-12 Twp-25 Ang-24 Beg528'	20011C0225D	20011C0225F
LOMA	11-07-1445A	03/29/2011	SECTION 14, TOWNSHIP 27 SOUTH, RANGE 25 EAST, 6TH P.M. -- 2574 CAVALRY ROAD	20011C0475D	20011C0475F
LOMA	11-07-2193A	08/23/2011	SECTION 21, TOWNSHIP 25 SOUTH, RANGE 25 EAST -- 1339 235TH STREET	20011C0335D	20011C0335F
LOMA	12-07-3093A	09/13/2012	LOT 4, BLOCK W-2, LAKE FORT SCOTT -- 773 190TH STREET	20011C0325D	20011C0320F
LOMA	16-07-1935A	09/23/2016	SECTION 21, T23, R24 -- 1762 YELLOWSTONE ROAD	20011C0075D	20011C0075F
LOMA	19-07-0817A	03/14/2019	SECTION 36, T24S, R24E -- 1764 215TH STREET	20011C0225D	20011C0225F
LOMA	19-07-1559A	07/24/2019	1161 50th Street	20011C0275D	20011C0275F
LOMA	20-07-1326A	09/29/2020	SECTION 33, T25S, R25E -- 1185 240TH STREET	20011C0335E	20011C0335F
LOMA	23-07-0193A	01/11/2023	SECTION 14, T25S, R24E -- 1453 195TH STREET	20011C0326E	20011C0325F
LOMA	23-07-0330A	03/10/2023	TOWN OF EASTWOOD, BLOCK 5, LOTS 1-3 -- 1574 QUIVIRA ROAD	20011C0200D	20011C0200F



## **Incorporated LOMCs**

This means that the existing LOMC has been reflected on the new FIRM and will remain in effect until the revised FIRM becomes effective.

## **Not Incorporated LOMCs (Valid)**

This means that the LOMC will not be reflected on the new FIRM due to scale limitations or because lot(s) or structure(s) involved in the existing LOMC are now outside of the SFHA.

## **Superseded LOMCs (no longer valid)**

This means that the LOMC will not be reflected on the new FIRM because the new detailed flood hazard information or the information available was not sufficient to make a determination. These LOMCs will no longer be in effect when the revised FIRM becomes effective.

## **To Be Redetermined LOMCs**

FEMA will review the data previously submitted for the LOMC and issue a new determination for the affected properties after the effective date of the revised FIRM.

# SOMA Status in Bourbon County



## LOMCs Incorporated

- None

## LOMCs Not Incorporated

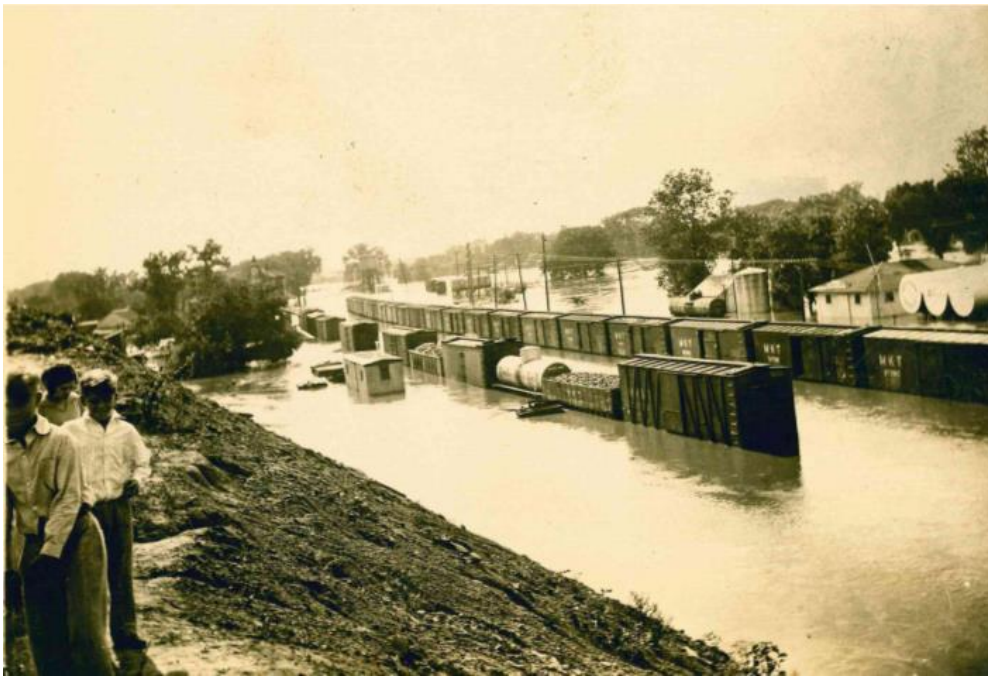
- Bronson - 1
- Fort Scott - 8
- Bourbon Co. - 16

## LOMCs Superseded

- None

## LOMCs to be Redetermined

- None



## Goal 3

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*Review the appeals and map adoption process and learn about your role*



# Comments & Appeals

- To ensure due process, FEMA has devised procedures for local governments, organizations, and citizens to submit comments and appeals regarding the proposed flood maps
- A **90-day** comments/appeals period is initiated for the entire study area.
  - *The comments/appeals period for **Bourbon County & Incorporated Areas** begins after the Proposed Flood Hazard Determinations Notice is published in the Federal Register. It is expected to be published within the next couple of months.*
  - *The **90-Days** will begin on the second publication of a notice run in your local paper. The appeal period is estimated to occur from **November to January**.*
  - *Comments and appeals are currently being accepted and will continue to be until the end of the 90-days.*

# Comments & Appeals

- Which newspaper(s) should we use to publish notice of the appeals period?
- Community Map Repository- what is it and where is it? Is it correct in the preliminary FIS?



**Table 30: Map Repositories**

Community	Address	City	State	Zip Code
Bourbon County, Unincorporated Areas	Bourbon County Courthouse 210 South National Avenue	Fort Scott	KS	66701
Bronson, City of	City Hall 505 Clay Street	Bronson	KS	66716
Fort Scott, City of	City Hall 123 South Main Street	Fort Scott	KS	66701
Fulton, City of	City Hall 214 West Osage Street	Fulton	KS	66738
Mapleton, City of	Bourbon County Courthouse 210 South National Avenue	Fort Scott	KS	66701
Redfield, City of	City Hall 312 North Pine Street	Redfield	KS	66769
Uniontown, City of <sup>1</sup>	City Hall 206 Sherman Street	Uniontown	KS	66779

<sup>1</sup> No Special Flood Hazard Areas Identified



# Comments

- Comments are generally based on non-technical errors or oversights, or cosmetic changes to the map (e.g. corporate limits, road names, and floodplain boundaries in some instances)
- Please submit comments to Joanna Rohlf with KDA.
- Comments need to be submitted before the end of the 90-day appeal period.

# Appeals

- The statutory requirement for an appeal is outlined in **44 CFR 67**
- Further guidance is provided in the **Criteria for Appeals of Flood Insurance Rate Maps**
- Appellants who contend that the flood hazard determinations (FHDs) are incorrect because better methodologies or data could have been used **must provide an** alternative analysis that incorporates such methodologies, assumptions, or data and that quantifies their effect on the FHDs
- All appeals must be submitted in writing to the community CEO for initial processing. The CEO will forward all appeals, with a written opinion, to FEMA.

# When to Submit an Appeal



- Appeals about SFHA boundaries must be for those areas on your map with **new** detailed or basic studies.
  - Base Flood Elevations, base flood depths, Special Flood Hazard Zone designations
- Appeals can show:
  - Scientifically incorrect information (requires an engineering analysis), AND/OR
  - Technically incorrect information (no engineering analysis required but supporting documentation to show information is incorrect is helpful)
- Appeals involving topographic data also have technical requirements in order to be accepted

***NOTE: The appendix of this presentation has more information on these qualifications.***



***If you are planning to submit an appeal, contact KDA and we can help you through that process!***



## Submit Comments To:

Joanna Rohlf

KDA Division of Water Resources  
Topeka Field Office  
1131 SW Winding Road, Suite 400  
Topeka, KS 66615  
(785) 296-7769  
[joanna.rohlf@ks.gov](mailto:joanna.rohlf@ks.gov)

## Submit Appeals To:

Dawn Livingston

FEMA Region VII  
Risk Analysis Branch  
11224 Holmes Road  
Kansas City, MO 64131  
(816) 283-7055  
[Dawn.livingston@fema.dhs.gov](mailto:Dawn.livingston@fema.dhs.gov)

AD ASTRA PER ASPERA



# Resolving Appeals & Comments



*Appeals and comments will be resolved by the following procedures:*

Written acknowledgement by FEMA of the receipt of an appeal

Acknowledge the receipt of comments

*– Either in writing, or documented phone conversation*

FEMA or the mapping partner will evaluate any scientific or technical data submitted

FEMA or the mapping partner will request any additional scientific or technical data required to properly review the appeal

FEMA or the mapping partner will make a recommendation to FEMA on the resolution of the appeal or comment

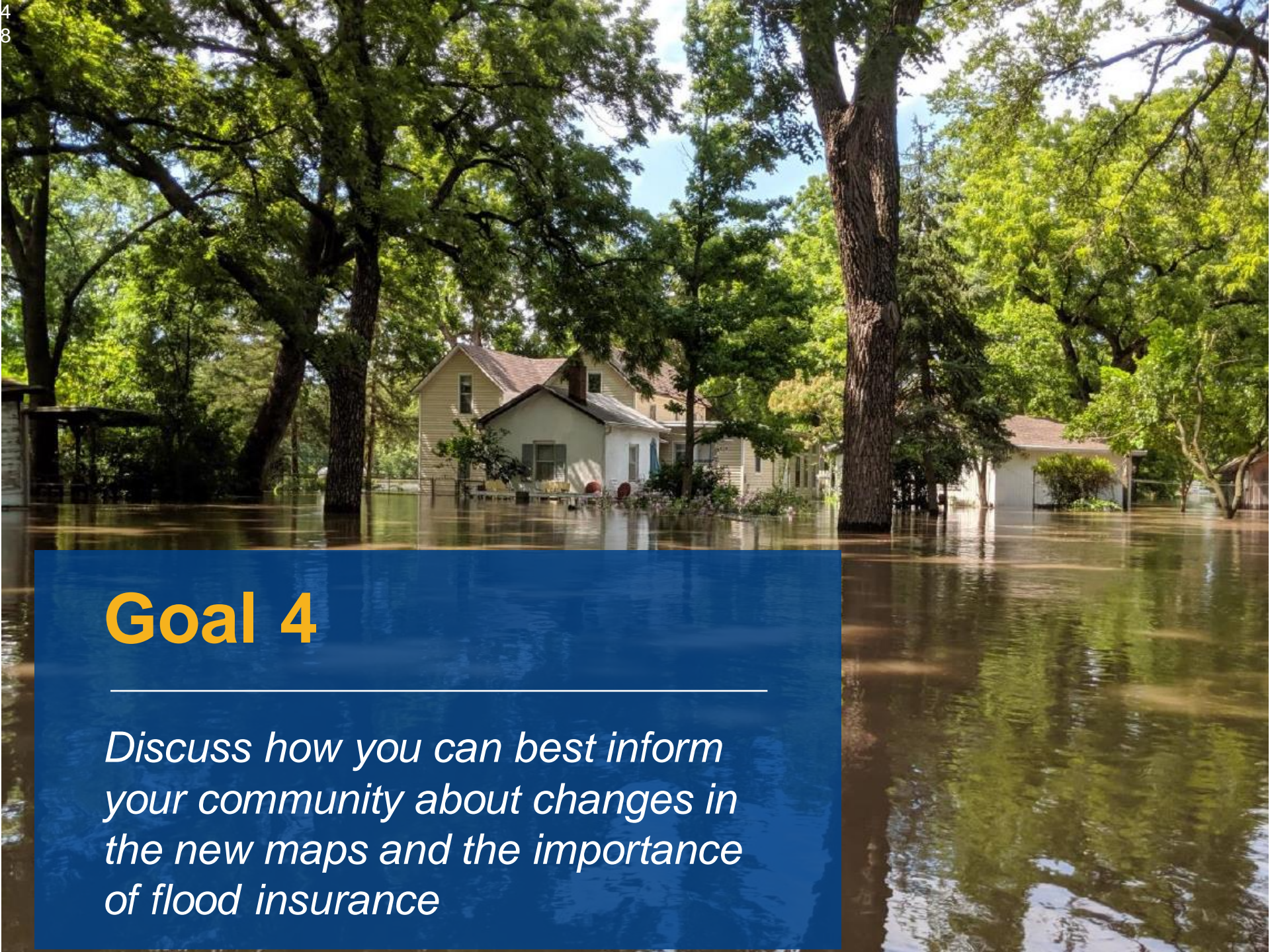
FEMA or the mapping partner will draft an appeal resolution letter *(if all the criteria for an appeal are met)*.



# A Critical Step

- After any appeals and comments are resolved, a Letter of Final Determination (LFD) is issued to communities indicating final BFEs and the date their new map will go into effect
- The LFD is issued 6-months before the new maps become effective
  - Bourbon County's estimated LFD date is **April 2024**
  - Bourbon County's estimated effective FIRM Date is **October 2024**





## Goal 4

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*Discuss how you can best inform your community about changes in the new maps and the importance of flood insurance*



# Educating Landowners



Risk Rating 2.0 - came into effect October 1, 2021

- Ratings no longer use FEMA Flood Zone and FEMA Base Flood Elevation as the main criteria for calculating a premium.
- The FEMA floodplain maps will still determine whether flood insurance is required as a condition of a mortgage.
- New ratings use nationally available datasets based on the building's geographic and physical characteristics. Factors include; distance from and height above flood source, replacement value, building and foundation type, number of floors, first floor height and ground elevation.

***How should this information be given to the landowners in Bourbon County?***



# Educating Landowners

Important Information for those properties newly identified as being within an SFHA (Newly Mapped Procedure)

- If your community participates in the NFIP, newly mapped properties may be eligible for a discount if the policy effective date is within 12 months of the effective FIRM revision date.
- An Elevation Certificate (EC) can be submitted to provide better data on First Floor Height (FFH) above Lowest Adjacent Grade (LAG). This may result in a lower insurance premium should the Risk Rating 2.0 engine have an error in the calculation.



# Educating Landowners



- There are automatic discounts to flood insurance if your community has signed up for the Community Rating System (CRS) with FEMA. CRS discounts are uniformly applied regardless of zones.
- Mitigation actions may reduce the insurance premium. Most common examples include; elevating a home, floodproofing measures, installing proper flood openings in a crawlspace, and elevating machinery/equipment.

***Are there ways insurance premiums can be reduced in Bourbon County?***

# How Will You Get the Word Out?

***KDA can provide information to help you inform your residents!***

## Things to consider:

- Social Media
- Press Releases
- Newspaper Articles / Radio Interviews
- Literature / Fact Sheets
- Signs? Mailers? Booth at the Fair?



***We can assist you in informing your communities!***

# Map Adoption & Ordinance Questions



## Tara Lanzrath

KDA Division of Water Resources  
Topeka Field Office  
1131 SW Winding Road, Suite 400  
Topeka, KS 66615  
(785) 296-2513  
[tara.lanzrath@ks.gov](mailto:tara.lanzrath@ks.gov)

## *Permit Contact Info*

(785) 564-6654  
[KDA.WaterStructures@ks.gov](mailto:KDA.WaterStructures@ks.gov)

## FEMA

Region VII  
Map adoption & Ordinances  
[FEMA-R7-Floodplain@fema.dhs.gov](mailto:FEMA-R7-Floodplain@fema.dhs.gov)



# *Questions?*





# Appeals

- Scientifically incorrect BFEs, base flood depths, SFHA zone designations, or regulatory floodways
- New hydrologic analysis based on alternative methodology and if applicable, updated hydraulic/floodway analyses based on the updated discharge values;
- New hydraulic/floodway analysis based on alternative methodology and proposed flood discharge values (if the appeal does not involve the hydrologic analysis);
- Explanation for superiority of alternative methodology;
- As applicable, revised Summary of Discharges Table, Flood Profiles, and Floodway Data Table; and
- Revised SFHA zone boundaries and, if applicable, regulatory floodway boundary delineations.

# Appeals

- Technically Incorrect BFEs, Base Flood Depths, SFHA Zone Designations, or Regulatory Floodways
  - The methodology was not applied correctly
  - The methodology was based on insufficient or poor-quality data
  - The application of the methodology included indisputable mathematical or measurement errors.
  - The methodology did not account for the effects of natural physical changes that have occurred in the floodplain

# Appeals

- Appeals to SFHA Boundaries
- Flooding sources studied by enhanced methods
  - Results in a Zone AE, AO, AH
  - Topographic data and the revised SFHA zone boundaries
  - Must reflect existing conditions
- Flooding sources studied by basic methods
  - Results in a Zone A
  - Published flood maps that are more recent or more detailed than those used by FEMA
  - Analyses that are more detailed than those performed by FEMA or that are based on more detailed data than those used by FEMA
  - Topographic data and resulting updated SFHA boundaries

# Appeals



- Submittals Involving Topographic Data
- The data must be more detailed/accurate, and/or reflect more recent topographic conditions, and be in a digital Geographic Information System (GIS) format;
  - Identify the flooding sources appealed based on the updated topographic data;
  - Updated SFHA boundary delineations that reflect the submitted topographic data;
  - All topographic data submitted must adhere to FEMA's current data capture standards for such data;
  - If necessary, a data sharing agreement must be provided.
  - Certified by a Registered Professional Engineer or a Licensed Land Surveyor; or
  - Prepared by an authoritative source (USACE, USGS, State DOT)