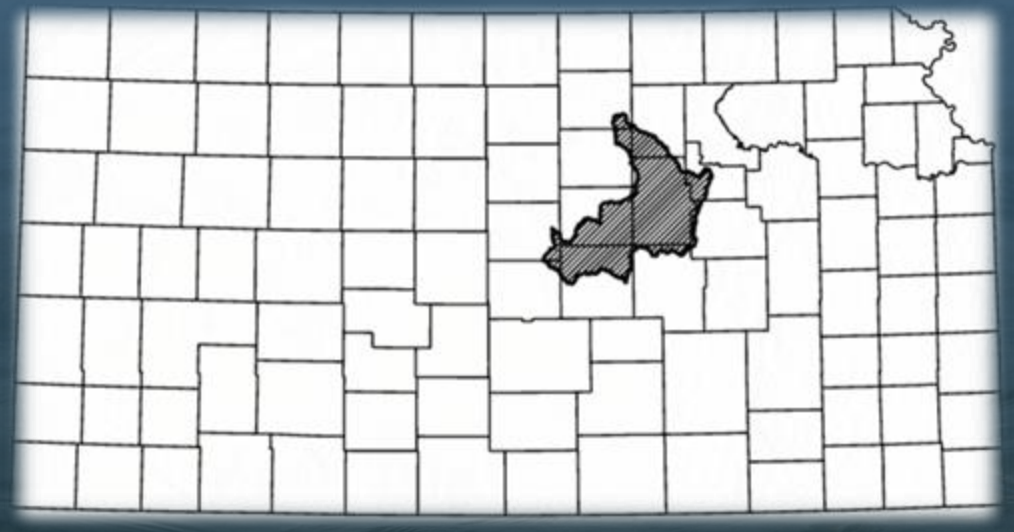
Lower Smoky Hill Watershed
Discovery Meeting



October 22, 2024

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

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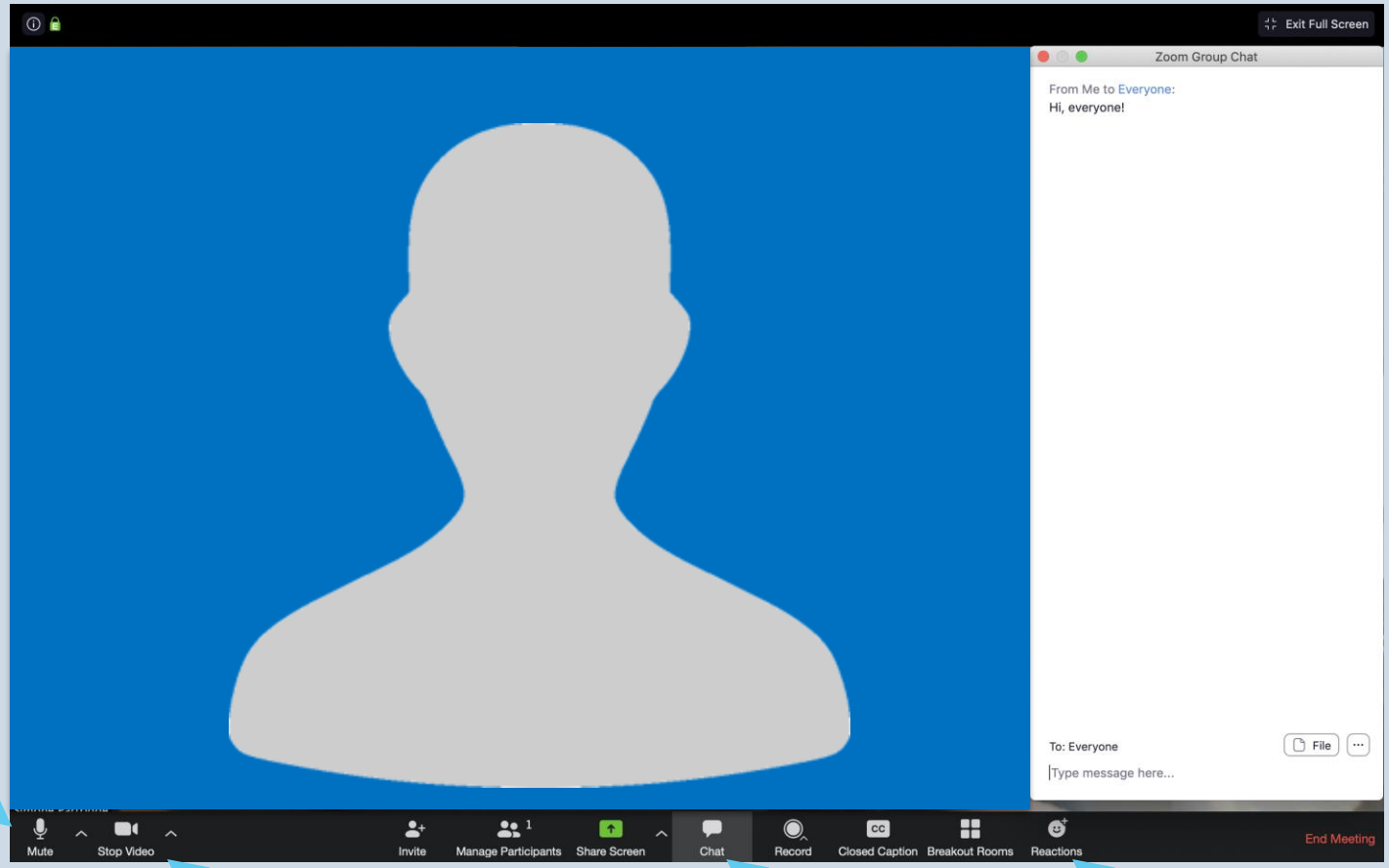
Thank you for joining us today!

Your input is very important to this work.

Zoom Features



Mute / Unmute

Start your Video

Use the Chat Feature

Reactions

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3

Rules of the Road

- Attendees may 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 and unmute the lines at various stopping points.
- For technical difficulties: send a private chat to Keegan Schwartz or email *keegan.schwartz@ks.gov*.
- We’ll be recording this webinar for those who aren’t able to attend today.

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Introductions

Kansas Department of Agriculture

Joanna Rohlf, *GISP, CFM*
Floodplain Mapping Coordinator

William Pace, *CFM*
Floodplain Mapping Specialist

Cheyenne Sun Eagle, *CFM*
NFIP Coordinator

Keegan Schwartz
Floodplain Outreach Specialist

Kaitlyn Rowell
NFIP Specialist

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Tom Morey, RS, CFM
Project Manager

Binay Sapkota
Engineer

FEMA Region VII

Kari Sorg, *Regional Project Officer*

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Today's Goals

Review	Review WHY WE DO THIS WORK
Share	Share WHERE WE ARE NOW & what the data is telling us about flood risk
Discuss	Discuss how WE CAN HELP
Preview	Preview the PLANNED WORK AHEAD and how we propose doing it.
Next Steps	Discuss Next Steps and YOUR ROLE in the Process

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Why We Do This Work

FEMA Floodplain Mapping Program

- Risk Mapping, Assessment, and Planning (Risk MAP).
- Performed on a watershed basis.
- Consists of both Regulatory & 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

Planning: The "P" in Risk MAP

- The flood risk data from this work can – and should – inform your regional Hazard Mitigation Plan (HMP).
  - Region F: Clay, Cloud, Dickinson, Ellsworth and Saline Counties
  - Region G: McPherson County
  - Region I: Geary and Morris Counties

- Common themes in the regional plans:
  - Some communities are prone to flash flooding during heavy rainfall.
  - Study drainage issues in flood prone areas and make recommendations for flood control measures, flood management procedures, and low-water crossing improvements.
  - Evacuation Routes
  - Severe storms

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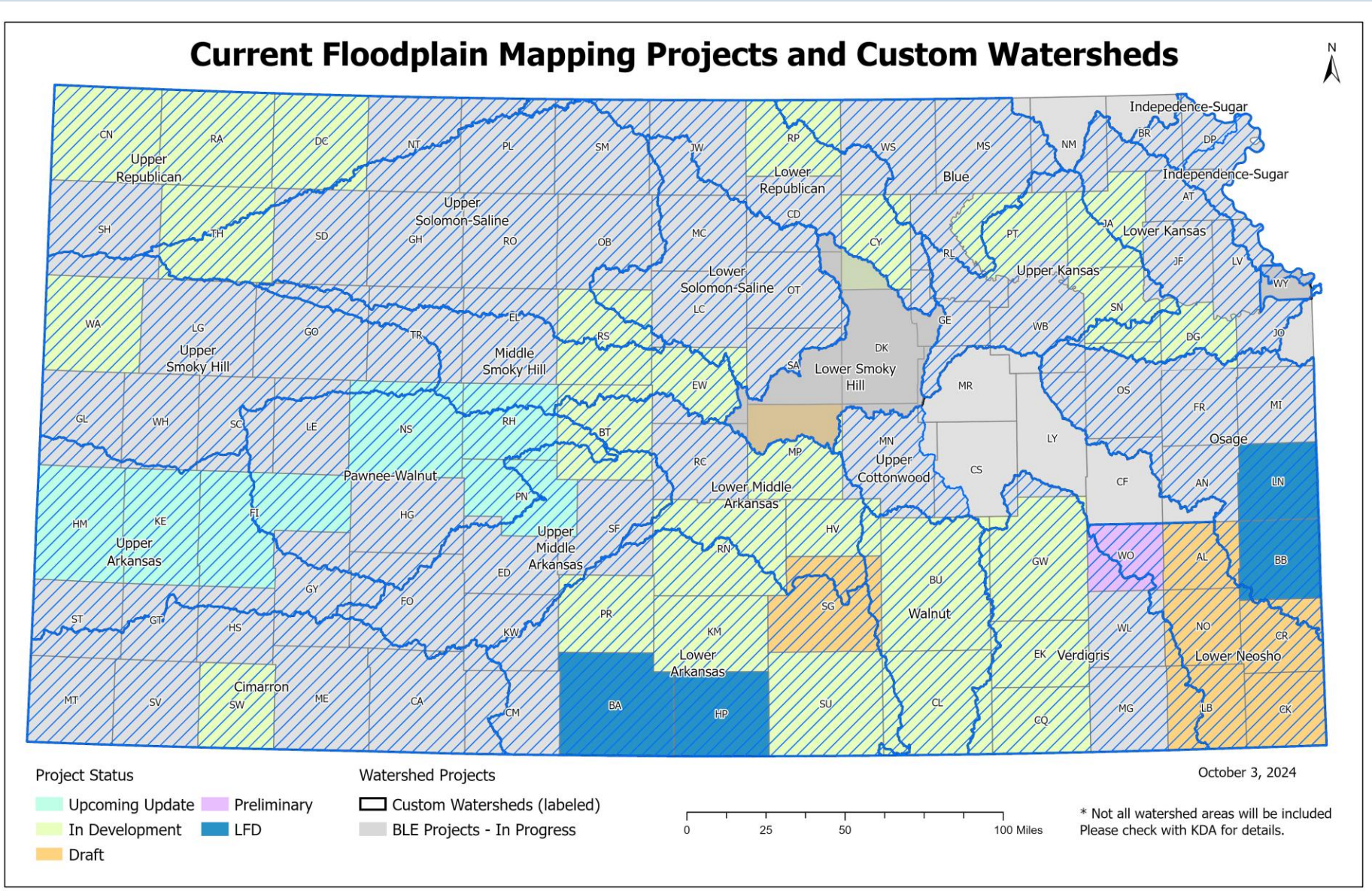
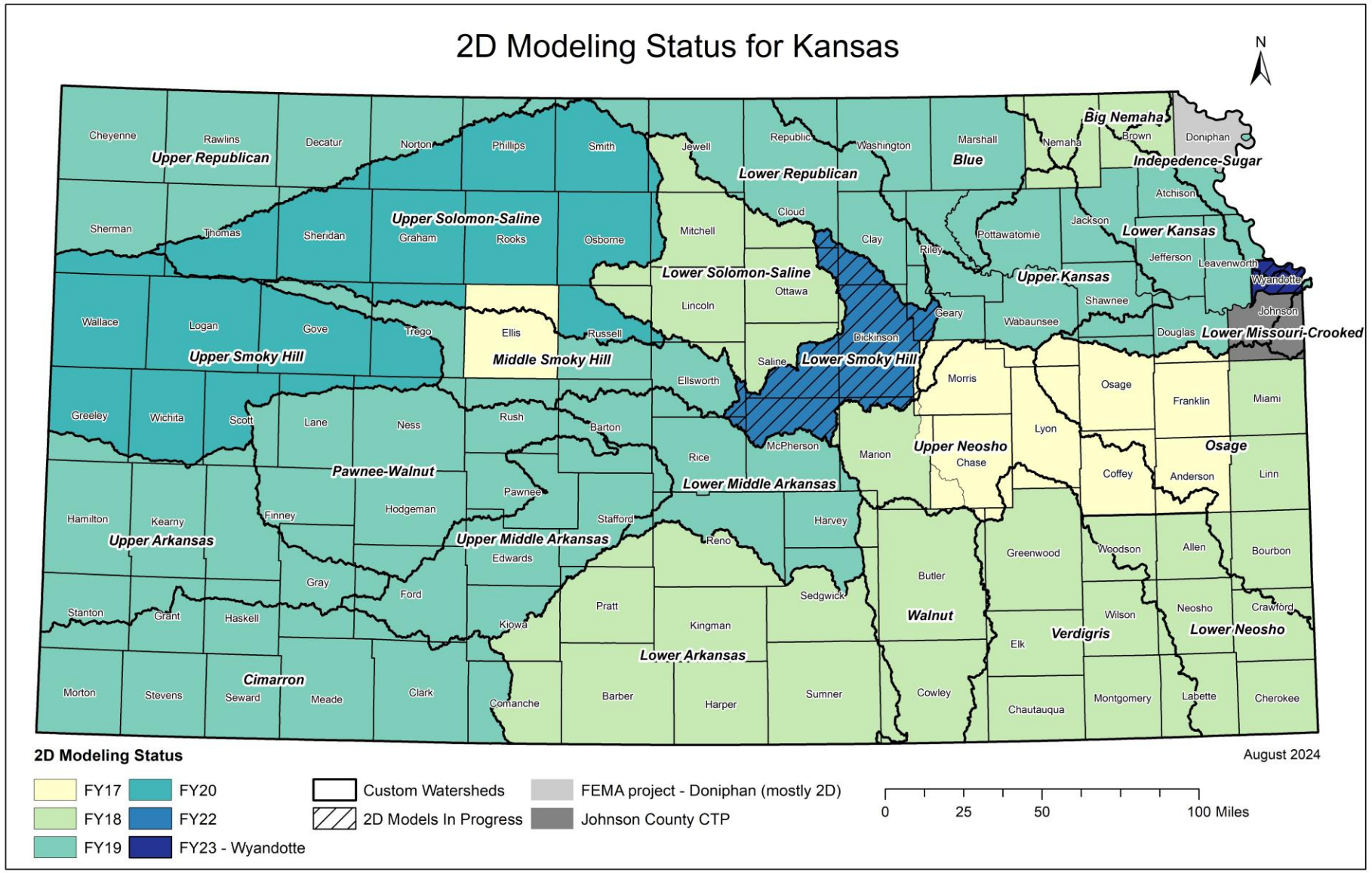
We Can Help with Technical Assistance!

We are doing this work across Kansas…



We are doing this work across Kansas…



Participation in the National Flood Insurance Program (NFIP)

- Brown = Participates Red = Not Participating

- Cities of Abilene, Assaria, Chapman, Enterprise, Grandview Plaza, Gypsum, Herington, Junction City, Lindsborg, Manchester, Miltonvale, Oak Hill, Ramona, Salina, Solomon, Vining, Woodbine

- Clay, Cloud, Dickinson, Ellsworth, Geary, Marion, McPherson, Morris and Ottawa Counties

Source: FEMA Community Status Book

Benefits of joining the NFIP!

- Property owners would be able to insure against flood losses (in or outside of the regulatory SFHA)
- 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

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NFIP Participation Requirements

- Adopt and enforce all applicable NFIP regulations
- Require permits for ALL development in the Special Flood Hazard Area (SFHA)
- Obtain proof of compliance with local floodplain management ordinance for all permits
- Maintain Floodplain Management Records
- Helping residents obtain information on flood hazards, floodplain map data, flood insurance and proper construction measures

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Number of Flood Insurance Policies

- Clay County – 20
  - Oak Hill – NP
  - Vining - NP
- Cloud County – 5
  - Miltonvale - 0
- Dickinson County – 10
  - Abilene – 13
  - Enterprise – 1
  - Herigton – 1
  - Manchester – NP
  - Solomon – 6
  - Woodbine - NP
- Ellsworth County – 3
- Geary County – 4
  - Grandview Plaza – 0
  - Junction City – 29
- Marion County – 9
- McPherson County – 22
  - Lindsborg – 14
- Marion County – 9
  - Ramona - NP
- McPherson County – 22
- Morris County – 0
- Ottawa County – 8
- Rice County – 12
- Saline County – 47
  - Assaria – 6
  - Gypsum – 0
  - Salina – 71
  - Smolan – NP

Where We Are Now & What the Early Flood Risk Data is Telling Us

Base Level Engineering (BLE) is Complete

- BLE is an engineering approach that provides an initial high-level (or "base line") understanding of flood hazards, with enough information for us to draft initial floodplain designations.
- We're starting to develop and share this initial data because we've learned that the earlier we start partnering with you, the more accurate the map.
- The BLE data is **not regulatory** but could lead to regulatory maps if that path is pursued.

FLOODPLAIN: On the maps we create, the floodplains, also known as Special Flood Hazard Areas (SFHAs), are areas with high flood risk – where a flood of a certain level has a 1-percent chance of happening each year.

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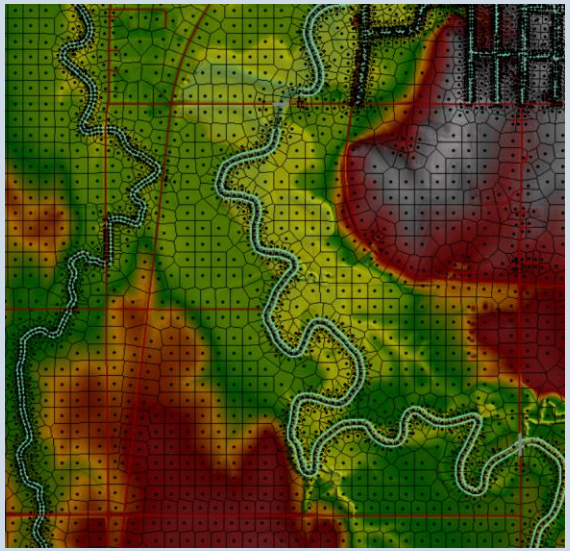
We Use 2D Hydraulic Modeling and LIDAR in our BLE

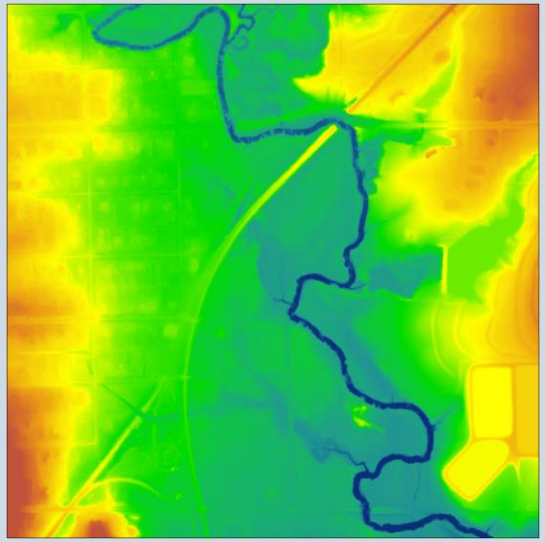
- Most effective maps in Kansas were modeled in one dimension (1D) and are based on 10-meter Digital Elevation Model

- Two-dimensional (2D) modeling and LiDAR- enhanced maps provide greater resolution and the ability to analyze how water moves across land using elevations and depth grids

2D



LiDAR



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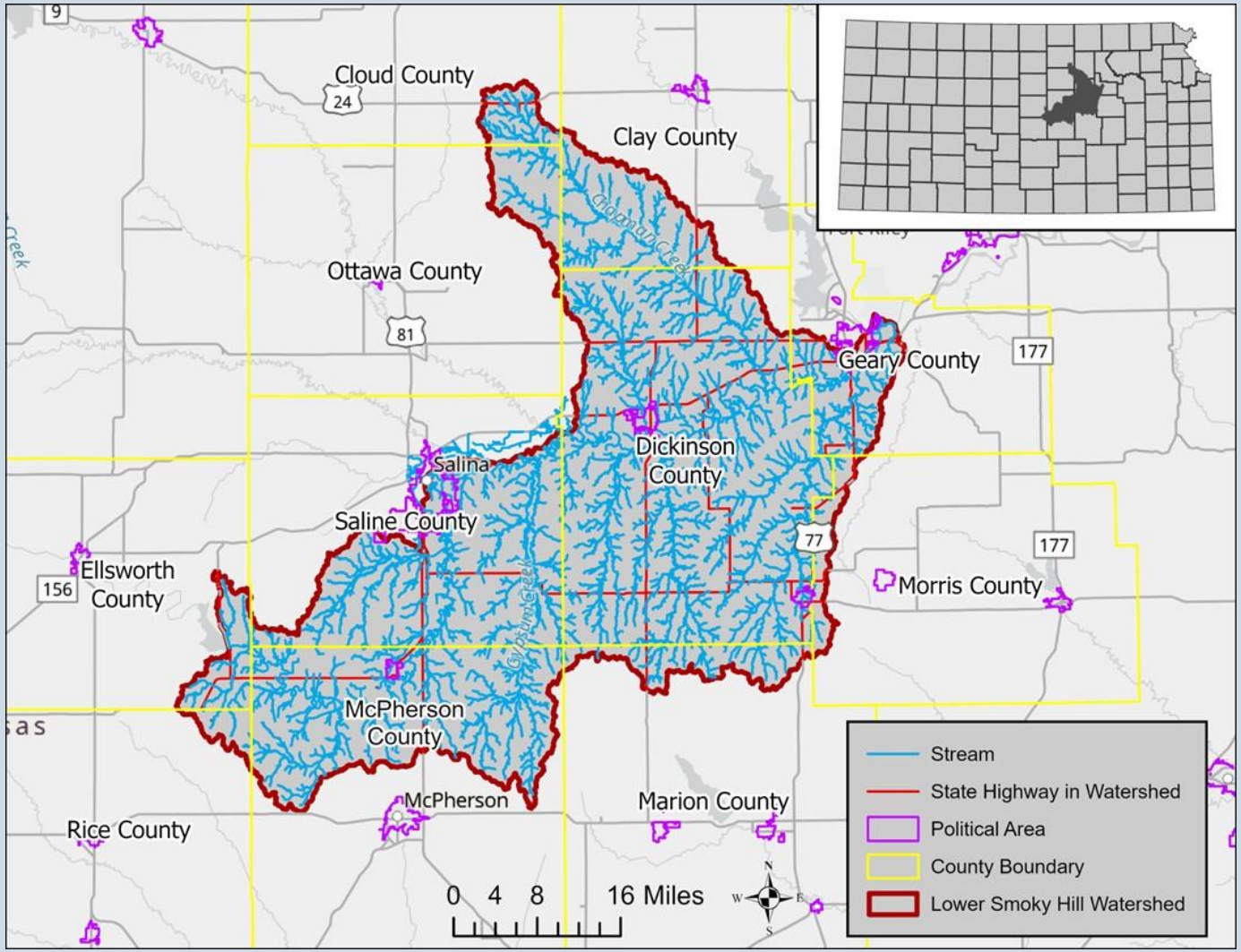
BLE Study Area



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BLE floodplains are complete for this study area

Where We Are Now: DISCOVERY

This is one of the most important phases of our work, where we:

- Review the flood risk information together and get your feedback;
- Identify interest in moving forward with regulatory mapping and what data we might need to accurately update your flood risk; and
- Determine, with you, where mitigation (taking steps to reduce risk) makes sense for your community.

Repetitive Loss Structures

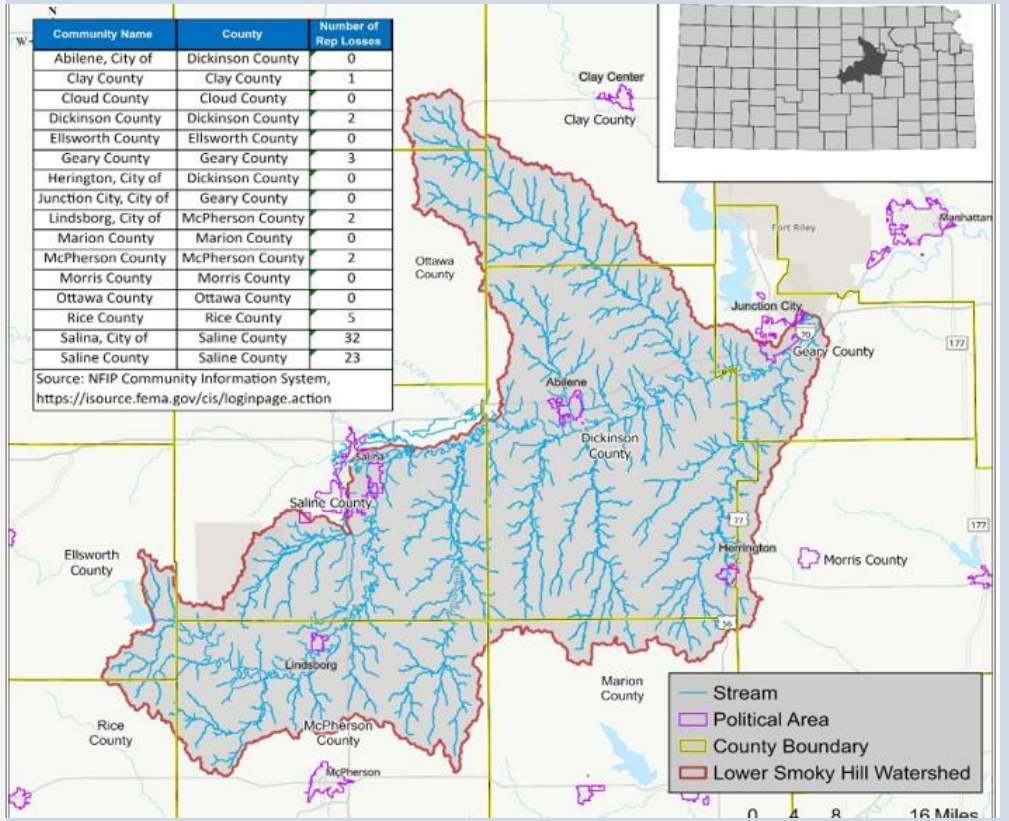
Insurable buildings for which the NFIP paid 2 or more claims of more than $1,000 in a 10-year period.

- 32 Repetitive Loss properties in Salina
- 23 Repetitive Loss properties in Saline County
- 1 Repetitive Loss property in Clay County
- 2 Repetitive Loss properties in Dickinson County
- 3 Repetitive Loss properties in Geary County
- 2 Repetitive Loss properties in McPherson County
- 2 Repetitive Loss properties in Lindsborg

NOTE: if you have an area where structures have been repeatedly damaged, we want to know! It's worth taking a closer look, and we might be able to help.

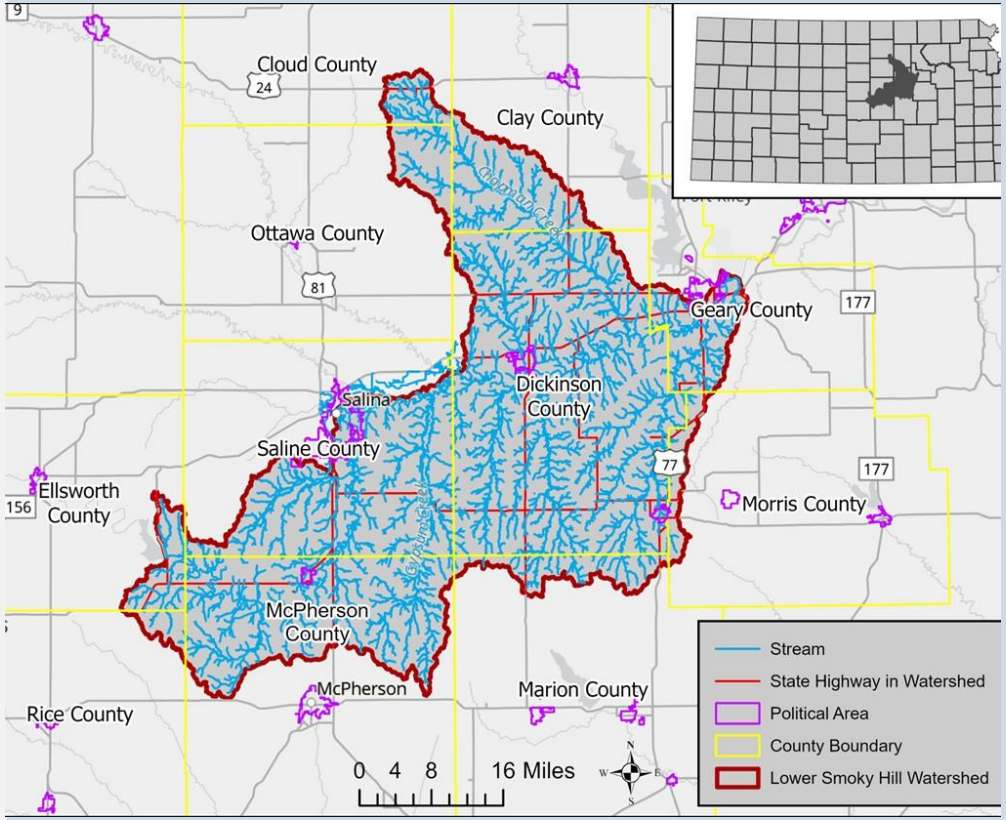
Community Name	County	Number of Rep Losses
Abilene, City of	Dickinson County	0
Clay County	Clay County	1
Cloud County	Cloud County	0
Dickinson County	Dickinson County	2
Ellsworth County	Ellsworth County	0
Geary County	Geary County	3
Herington, City of	Dickinson County	0
Junction City, City of	Geary County	0
Lindsborg, City of	McPherson County	2
Marion County	Marion County	0
McPherson County	McPherson County	2
Morris County	Morris County	0
Ottawa County	Ottawa County	0
Rice County	Rice County	5
Salina, City of	Saline County	32
Saline County	Saline County	23

Source: NFIP Community Information System, https://isource.fema.gov/cis/loginpage.action

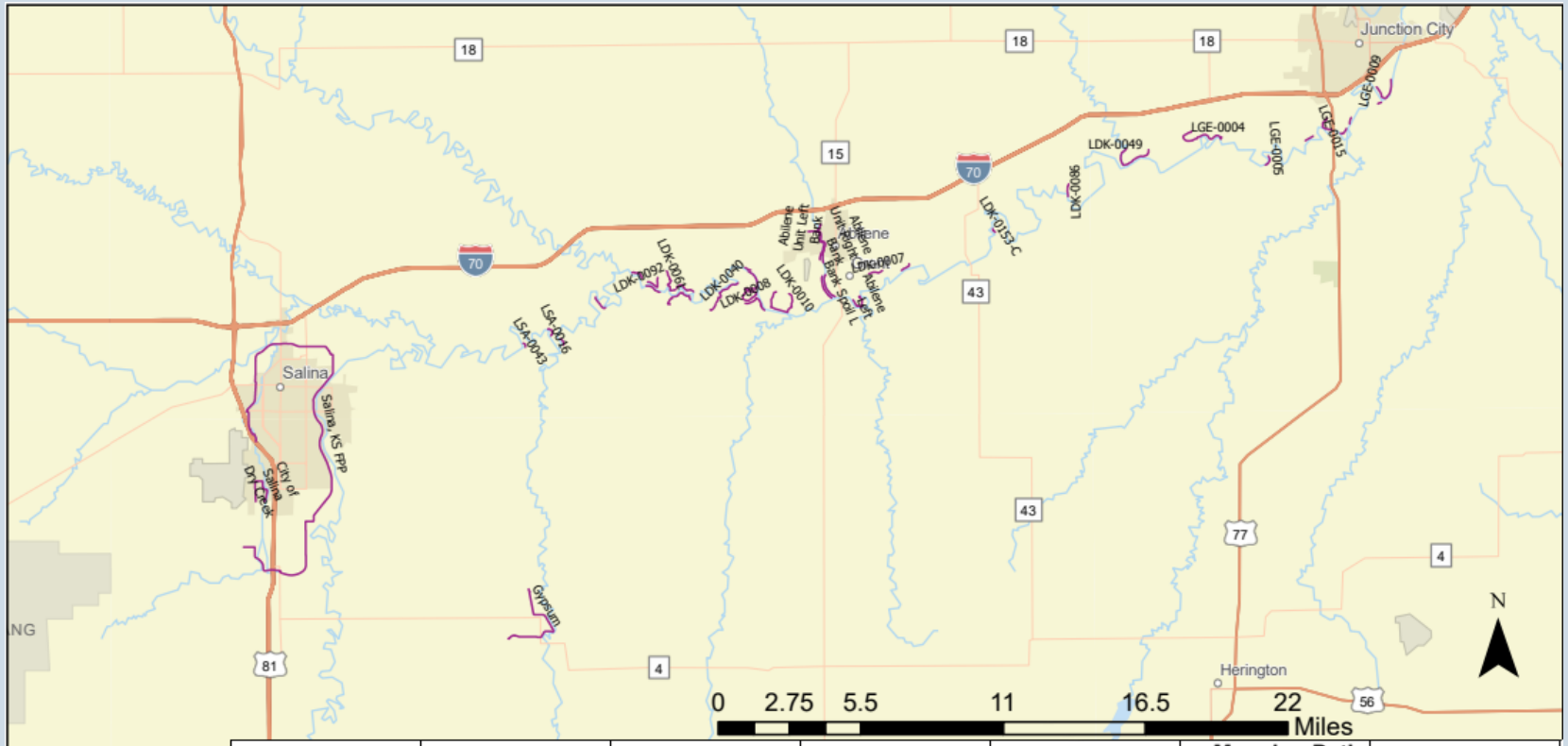


Effective Mapping

County	Effective FEMA Floodplains
Clay County	5/5/2014
Cloud County	7/16/2014
Dickinson County	3/13/2024
Ellsworth County	8/18/2009
Geary County	4/5/2016
Marion County	3/17/2011
McPherson County	1/16/2009
Morris County	7/19/2022
Ottawa County	7/12/2022
Rice County	5/17/2022
Saline County	4/18/2018



Levee Status



System ID	System Name	FIRM Status	Accreditation Note	Mapping Issue	Mapping Path Forward	Counties
3605000224	Abilene Left Bank Spo Levee	Non-Accredited Levee System	None: Non-Accredited c FIRM (pre-LAMP)	No Mapping Issue	Map Revision - Natura Valley	Dickinson
3605000225	Abilene Right Bank Spo Levee	Non-Accredited Levee System	None: Non-Accredited c FIRM (pre-LAMP)	No Mapping Issue	Map Revision - Natura Valley	Dickinson
3605000096	Abilene Unit Left Bank	Non-Accredited Levee System	None: Non-Accredited c FIRM - BFE is below t	Mapping Issue Resolved	No Mapping Issue	Dickinson
3605000220	Abilene Unit Right Bank	Non-Accredited Levee System	None: Non-Accredited c FIRM - BFE is below t	Mapping Issue Resolved	No Mapping Issue	Dickinson
1705000245	City of Salina Dry Cree Levee	Non-Accredited Levee System	None: Non-Accredited c FIRM (pre-LAMP)	Mapping Issue Resolved	No Mapping Issue	Saline
3605000099	**Gypsum**	**Accredited Levee System**	**Seclusion Note Still c FIRM**	**Seclusion**	**LAMP Initiation and Planning - LAMP Pha 1-3**	Saline
3605000048	Salina, KS FPP	Accredited Levee System	Accredited on FIRM	Mapping Issue Resolved	No Mapping Issue	Saline

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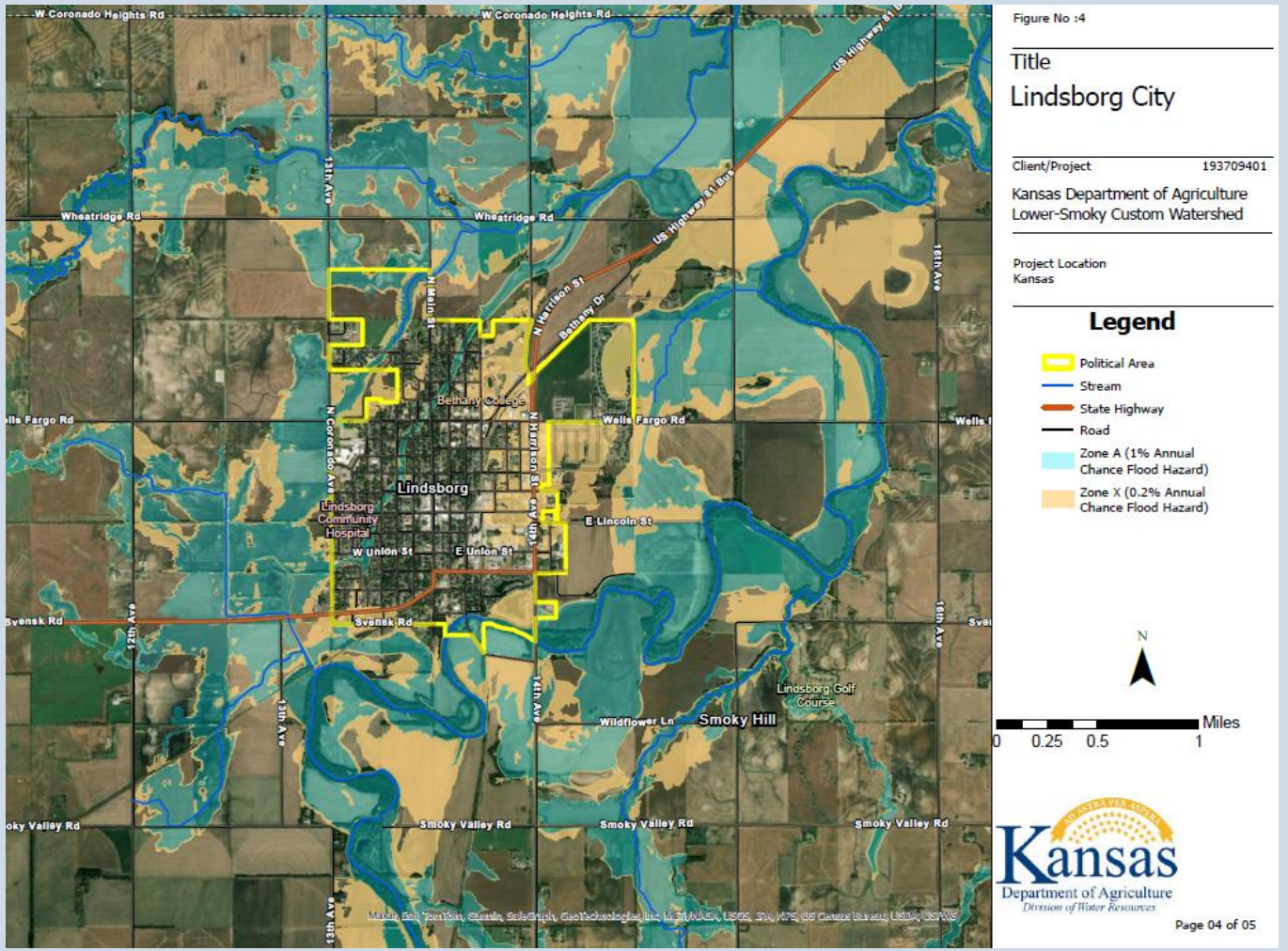
Draft Floodplains



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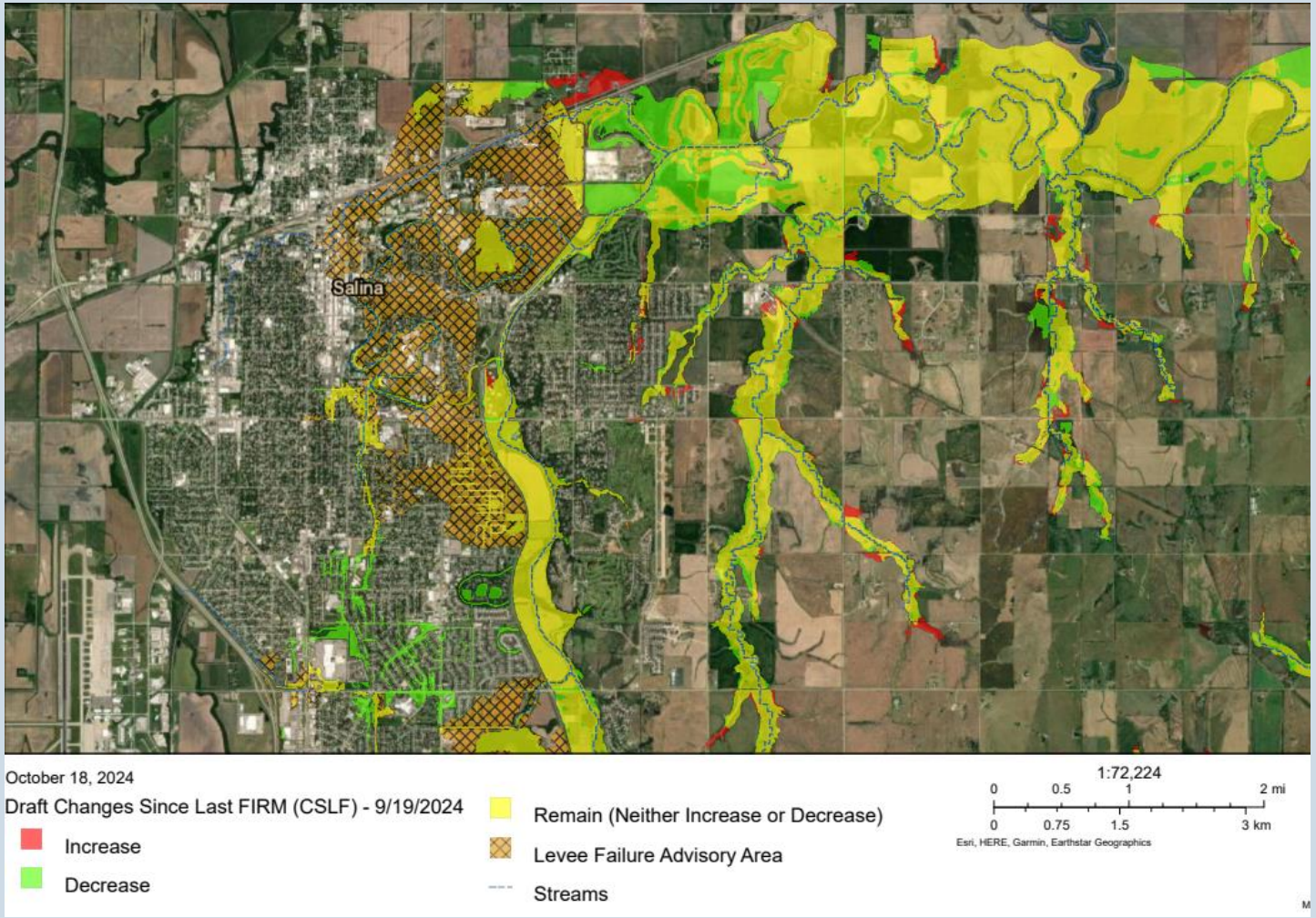
Changes Since Last Flood Insurance Rate Map (FIRM)

BLE Floodplain compared to Current Effective Floodplain



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How We Can Help

"Mitigation Technical Assistance"

Some Ways We Can Help

- Provide ideas on how to reduce flooding in trouble spots.
- Provide risk assessments for structures in your community, to help property owners understand the need for flood insurance, or to help you protect important public buildings.
- Use engineering analysis to show you what types of projects could reduce the impacts in floodprone areas.
- Assist with the Benefit-Cost Analysis if you are putting together a grant application.
- Support your participation in the Community Rating System.
- Help you explain flood risk and what it means to your community members.

You can visit the KDA website for more information, including a link to a fillable request form:

https://www.agriculture.ks.gov/divisions-programs/division-of-water-resources/water-structures/floodplain-management/mapping/technical-assistance

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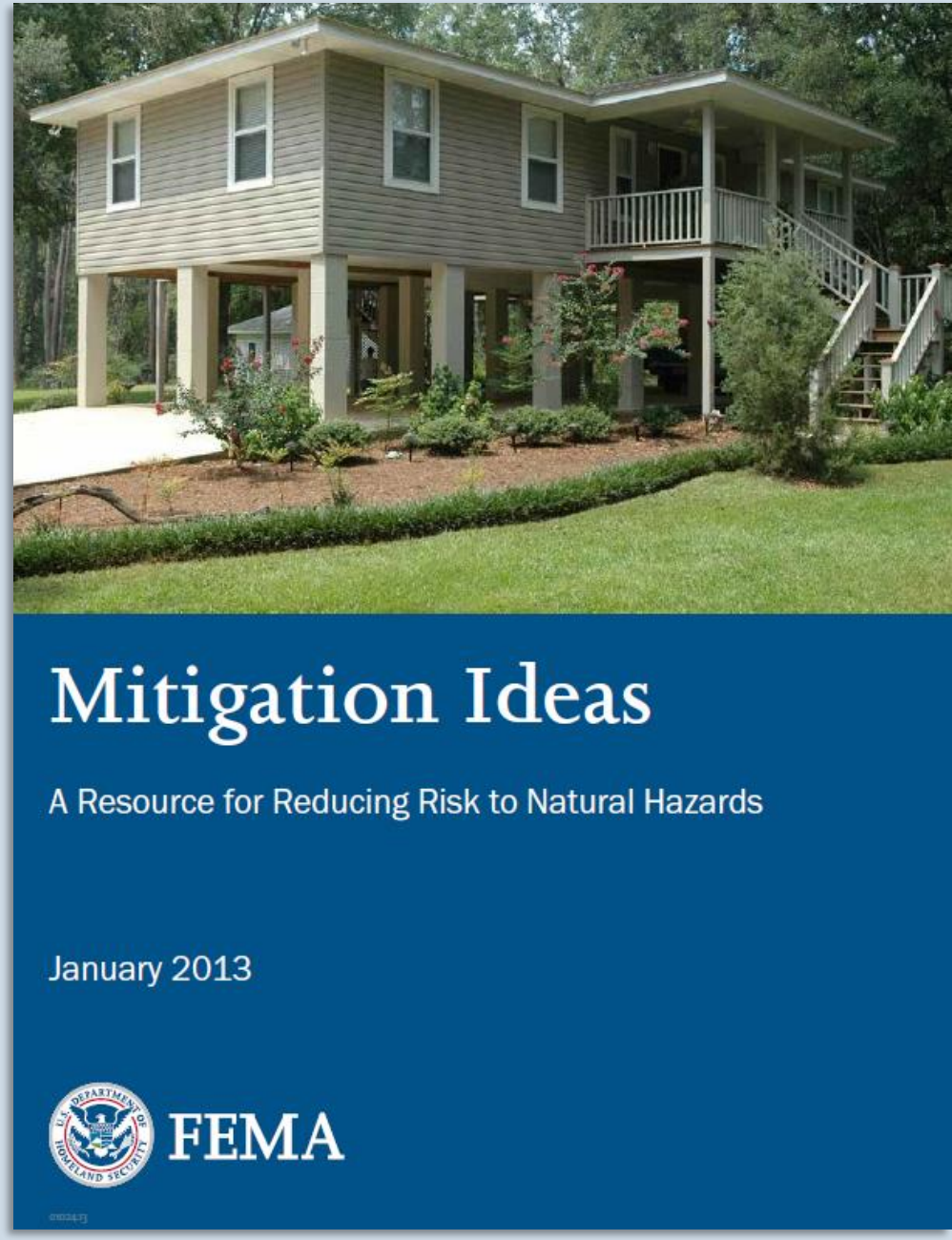
Mitigation Technical Assistance

Examples:

- Nature Based Solutions
- Roadway Overtopping frequency
- Bridge/Culvert Modifications
- Diversion Channels
- Dams and Detention Ponds
- Watershed Mitigation Strategies



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Technical Assistance Project: Nature Based Solutions

- Mitigation projects which include Nature Based Solutions often times receive additional priority
- Can be included in projects to provide secondary benefits
- Range of solutions developed that are applicable in various regions and communities in Kansas

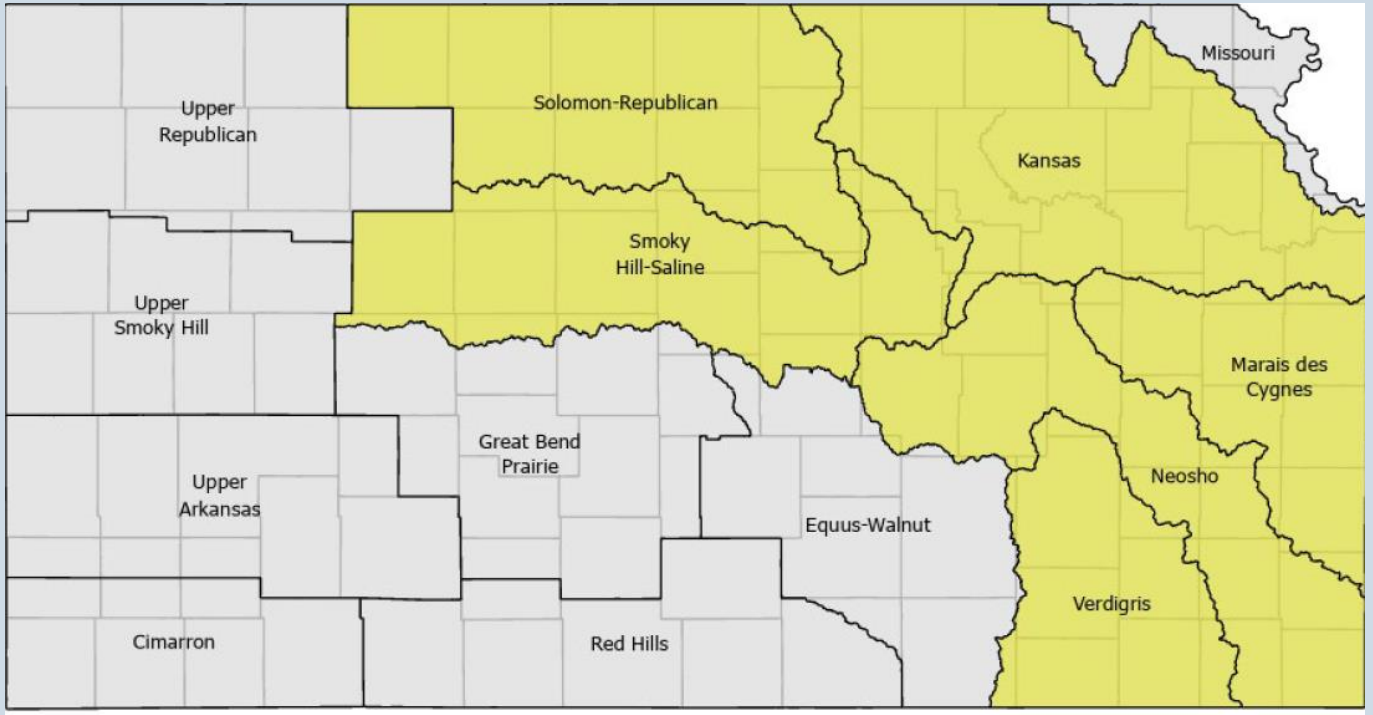

Figure 1: Stream Restoration Priority Regional Planning Areas in Kansas

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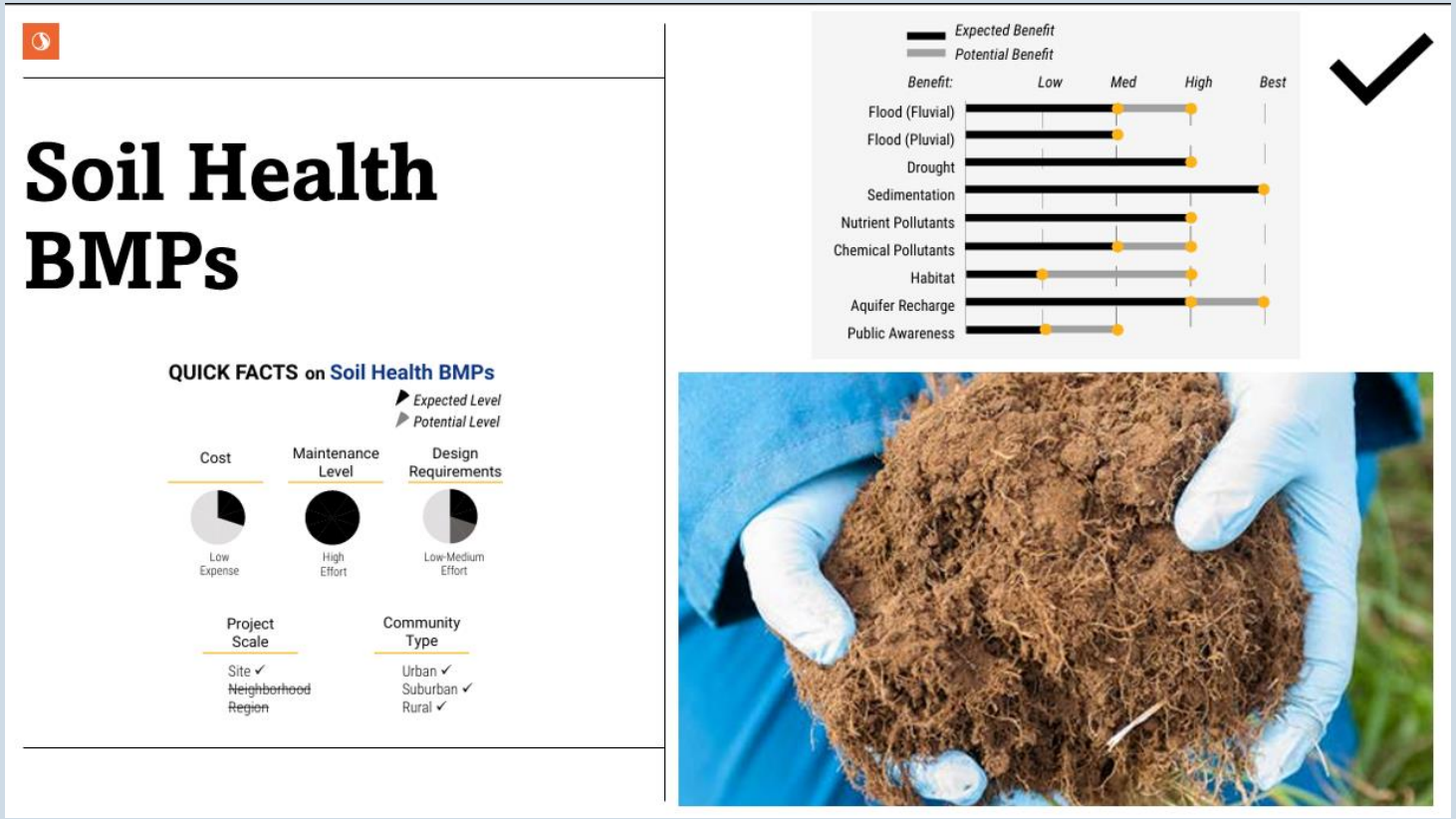
Nature Based Solutions

- Defined as sustainable planning, design, environmental management and engineering practices that weave natural features of processes into the built environment
- To help communities be more resilient
- Being promoted by multiple agencies both federally and at the state level
- 10 strategies developed



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Preview of the Planned Work

Which We Call Our Data Development Scope

BLE Data is Best Available data in this Watershed

- Current Effective Zone A digital maps exist in Barton, Ford and Edwards Counties
- This BLE Data can be used to determine Base Flood Elevations (BFE's) that supersede previous Zone A floodplains
- You can request BFE data from the BFE Portal. Keep in mind, BLE data is subject to change if a regulatory project is decided to move forward.

https://maps.kgs.ku.edu/fpm_bfe/login.cfm

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Data Development Scope

No specific projects have been proposed at this time for updated regulatory projects in the watershed.

Proposed scope if a county projects moves forward with data development and regulatory maps

For most of the countywide footprint…

Zone A

- Developed from 2D BLE Models and Mapping updated with Feedback from Discovery
- No Base Flood Elevations (BFEs) on the regulatory map, but available
- Water Surface Elevation and Depth Grids generated
- 2D Zone A BLE is easily scalable to enhanced Zone AE.

For specific areas identified as needing more detail…

Zone AE

- Culvert and bridge openings are included in the modeling
- Added detail to breaklines and land cover data in the modeling
- Additional Hydrology Calibration
- May have a floodway
- Base Flood Elevations (BFEs) will be shown on the regulatory map
- Water Surface Elevation and Depth Grids will be generated

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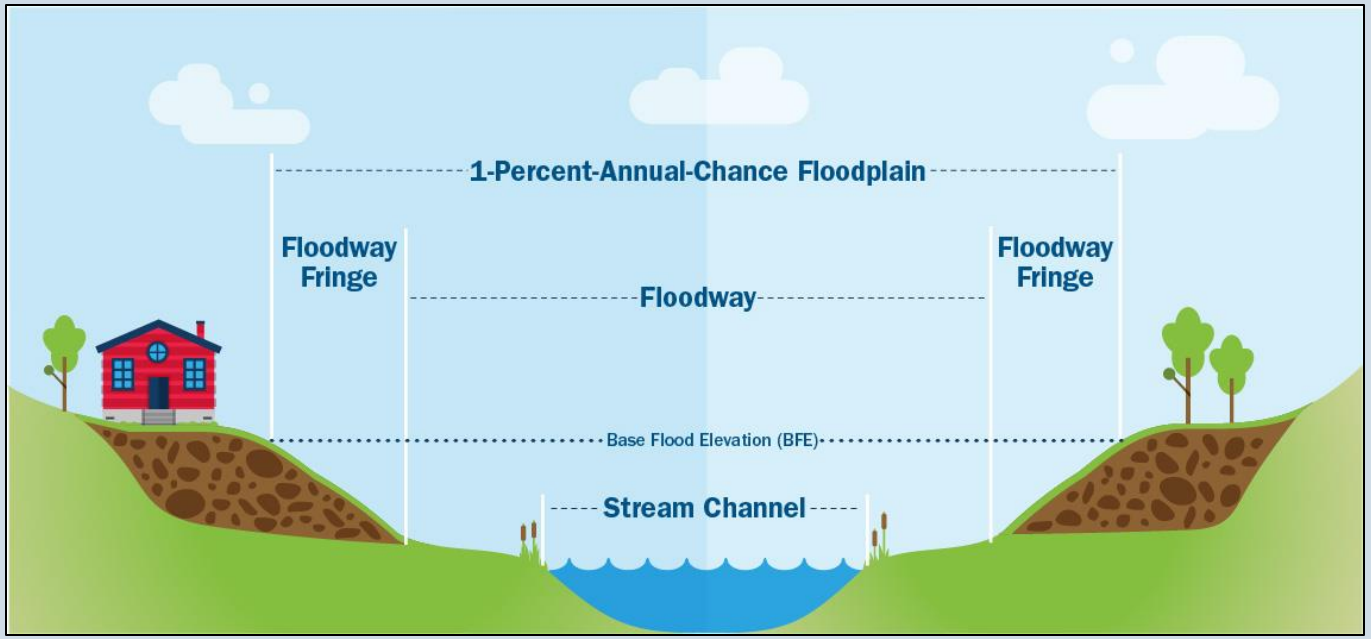
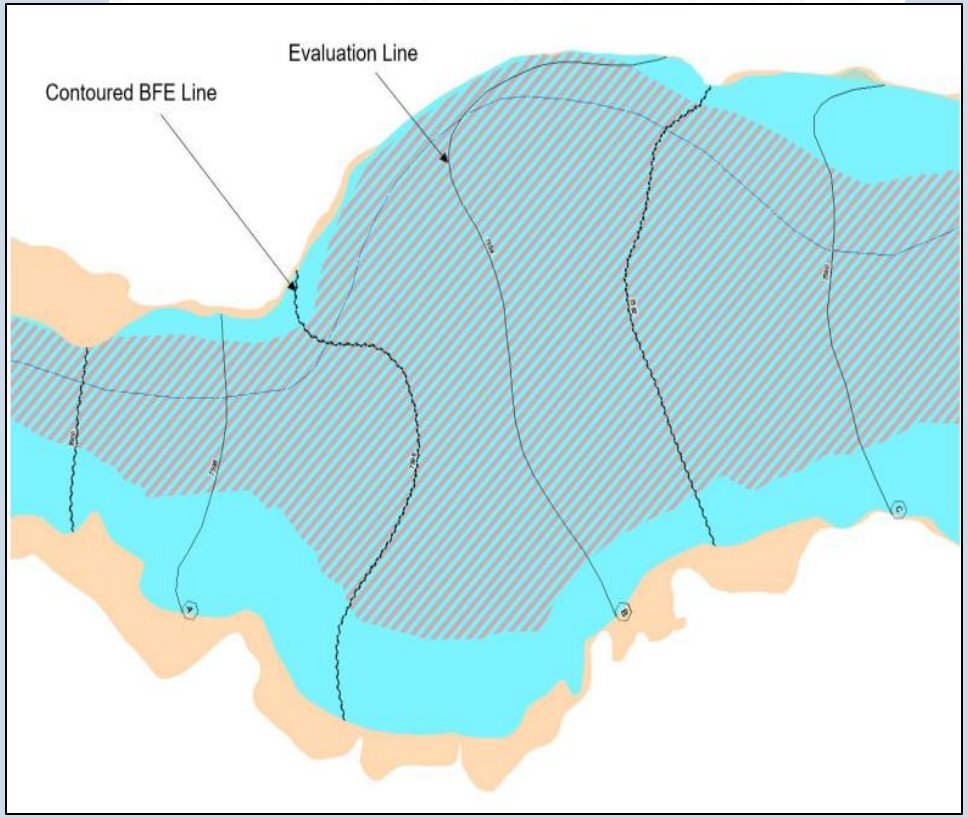
What is a Floodway?

- Zone AE: with or without a floodway
  - If there is a floodway on the current map, the new map must have a floodway
  - If there is not a current floodway, a floodway is optional





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Next Steps and Your Role in the Process

Project Timeline

Discovery Meeting: Today!

- *What data could contribute to making the map as accurate as possible?*
- *Revisit what flood risk reduction steps you are considering and how we can help!*
- *Provide feedback on data development scope, and mapping needs*

Data Development Work: TBD

Your **review and feedback** on the draft maps

Project Timeline, continued

Once **feedback is received,** there is a public review of the draft maps

- *We'll need your help in getting the word out to your residents*

Preliminary Map Products

Post-Preliminary Processing

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STEP ONE: Provide Feedback on the BLE Maps

We want to incorporate your feedback into our work ahead.

** Updates to the BLE Maps will only be made if a county project is taken through data development and regulatory mapping.*

This could include:

- Review BLE floodplains and comment
- Review stream extents and comment
- Provide information on community needs or areas of specific concern.
  - Intersections that often flood and stop traffic
  - Drainage problems
  - Parts of town where homes or businesses have flooded

How?

- Provide comments directly on the map (we'll show you how in a minute)
- Email this team
- Call one of us!

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STEP TWO: Provide Insight and Data

Provide information that would be useful for our mapping team to be aware of.

- Are there areas of recent construction/development?
- Are there plans for new construction/development?
- Are there tricky areas that may require a closer look?
- Do you have projects underway, related to flooding, that we could help with?
- Do you have information you have about past flooding, such as high water marks?
- Do you have updated Aerial Imagery (We typically use the latest imagery from NAIP)?
- Do you have survey or as-built plan information (culverts, bridge openings, channel geometry)?
- Are there any revision approved for your previous map (Letters of Map Revision or Amendments)?

STEP THREE: Review Modeling Approach

Provide input on what proposed approach for the Data Development might be necessary that will inform your regulatory map (also known as your Flood Insurance Rate Map, or FIRM)

- Comment period goes until 11/31/2023 (More time can be provided if needed)

Key Takeaways

- 2D BLE and Discovery projects are nearing the completion of the timeline
- If the regulatory project is selected to move forward, the full process is going to take time.
- Your involvement will help us produce better maps!
  - Get the word out and encourage participation in this project.
  - Review information as it becomes available.

DON’T HESITATE TO CALL; WE ARE AVAILABLE.

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Stay Informed

- Email List
  - Get us names, addresses, and titles
  - Will be main source of project updates

- Project Updates
  - When important milestones are reached
  - When action is necessary (reminders)

- Meetings
  - Five planned meetings
    - **For BLE/Discovery:** Kickoff (**DONE**), Discovery Meeting (**Today!)**
    - **For Regulatory Updates:** Flood Risk Review, Open House, Post-Preliminary CCO meeting
  - Others, as needed

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Resources and Contact Information

Online Project Information

- **Project Website**
  - Project Information, Meeting Presentations
  - https://www.agriculture.ks.gov/divisions-programs/division-of-water-resources/water-structures/floodplain-management/mapping/mapping-projects
- **Web Review Map**
  - Review of BLE data
  - https://gis2.kda.ks.gov/gis/lower_smokyhill_ble/
  - This link will not be public facing until the project has been through Data Development

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Regional Project Officer

Any Questions?

Interactive Map Review and Discussion

Web Map Link: https://gis2.kda.ks.gov/gis/lower_smokyhill_ble/