



# Upper Solomon-Saline Custom Watershed




**FEMA**

*Floodplain Mapping Project  
Kickoff Meeting*

*June 9, 2022*

**wood.**

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



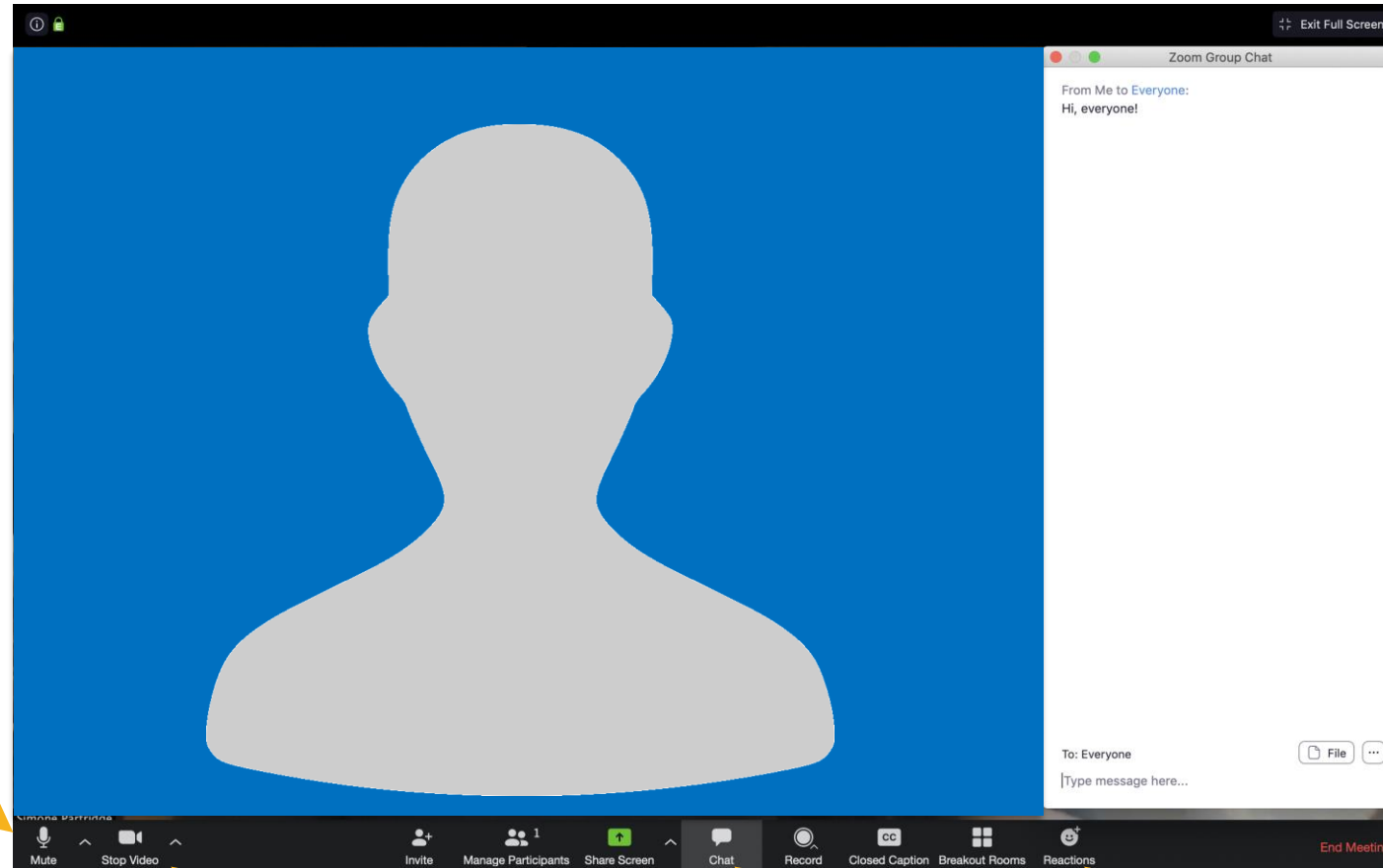
***Your engagement  
in this process is  
important to the  
success of this  
project, so thank  
you for taking the  
time to be here  
today!***



**THANK  
YOU**

# Zoom Features

**Mute /  
Unmute**



**Start your Video**

**Use the Chat  
Feature**

**Reactions**



## ***Rules of the Road***

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- Attendees 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 and have several poll questions.
- If you want to share your video, please do!
- For technical difficulties, send a private chat to Bill Pace or by email at [william.pace@ks.gov](mailto:william.pace@ks.gov)
- We'll be recording this webinar for those who aren't able to attend today.



# Introductions

## Kansas Department of Agriculture

**Tara Lanzrath, CFM**  
*Floodplain Mapping  
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**Joanna Rohlf, GISP,  
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*Floodplain Mapping  
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**William Pace, CFM**  
*Floodplain Mapping  
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**Steve Samuelson, CFM**  
*State NFIP Coordinator*

**Cheyenne Sun Eagle**  
*NFIP Specialist*

## FEMA – Region VII

**Dawn Livingston**  
*Regional Project Officer*

## Wood Environment & Infrastructure Solutions

**Ben Rufenacht,  
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*Project Manager*

**Lisa Tuckwin,  
GISP, CFM**  
*Sr. GIS Analyst*



***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.***



# *Overview*

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## *Why We're Here: The Big Picture*



The flood risk information in portions of the Upper Solomon-Saline Watershed is outdated and warrant updating.

We want to develop a complete, current picture of your flood hazards and risks.

The ultimate goal is to help you better:

*Plan for how to  
reduce your  
flood risk*

*Communicate  
the risk to your  
citizens*

*Take action to  
protect your  
communities*



# ***FEMA Floodplain Mapping Program***

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- 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 new or updated floodplain maps, as well as other (free!) data and tools that can help you plan to reduce your community's risk.



# Flood Maps Affect Important Decisions

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**To  
Identify  
Flood Risk**



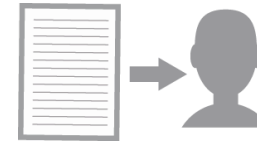
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**To  
Determine  
Where Flood  
Insurance is  
Required**



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**To  
Determine  
Land Use &  
Update  
Ordinances**



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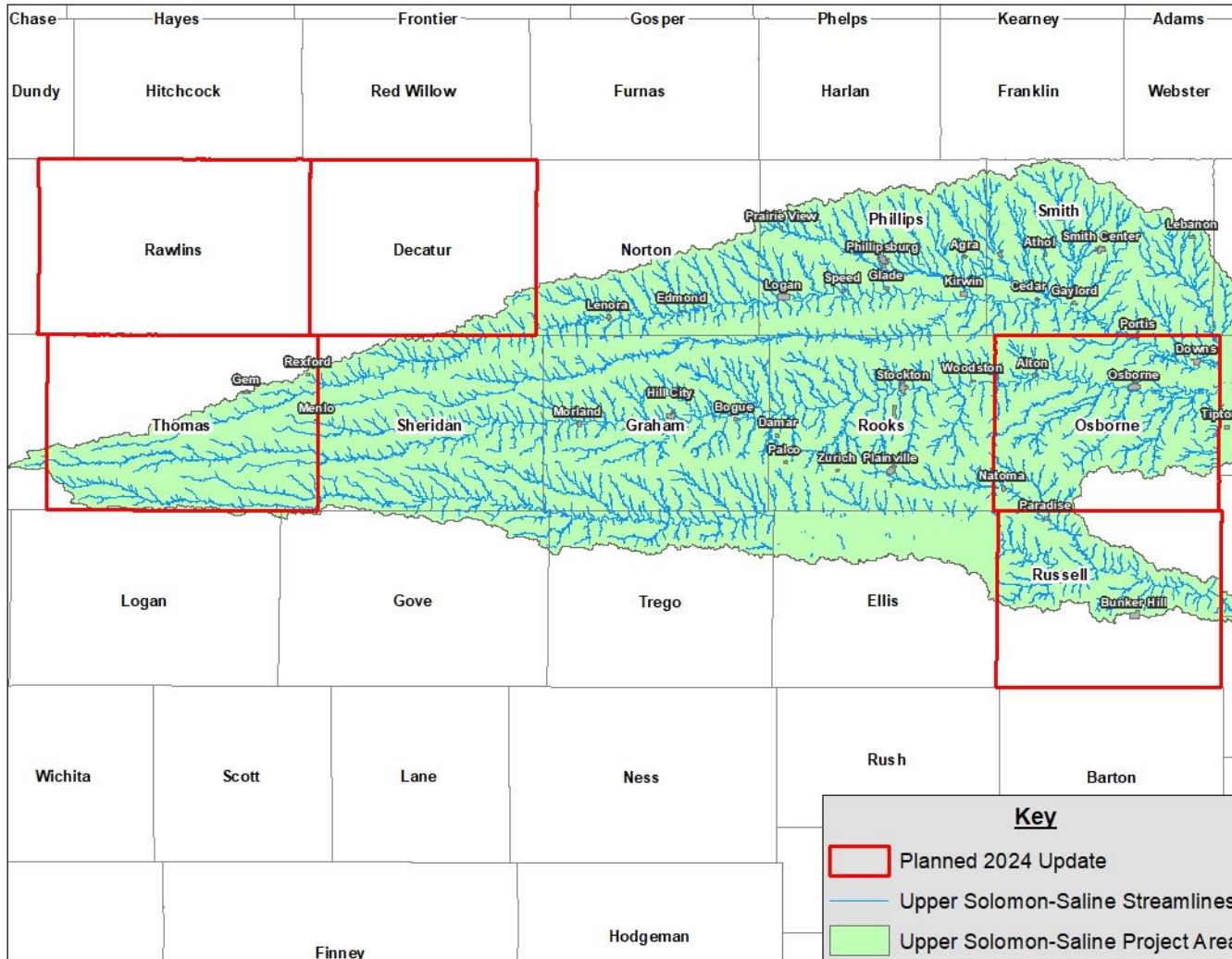
**To Inform  
Engineers  
and  
Developers**



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**To Equip  
Emergency  
Managers**

# Overview of Watershed



Decatur County  
 • Planned for 2024

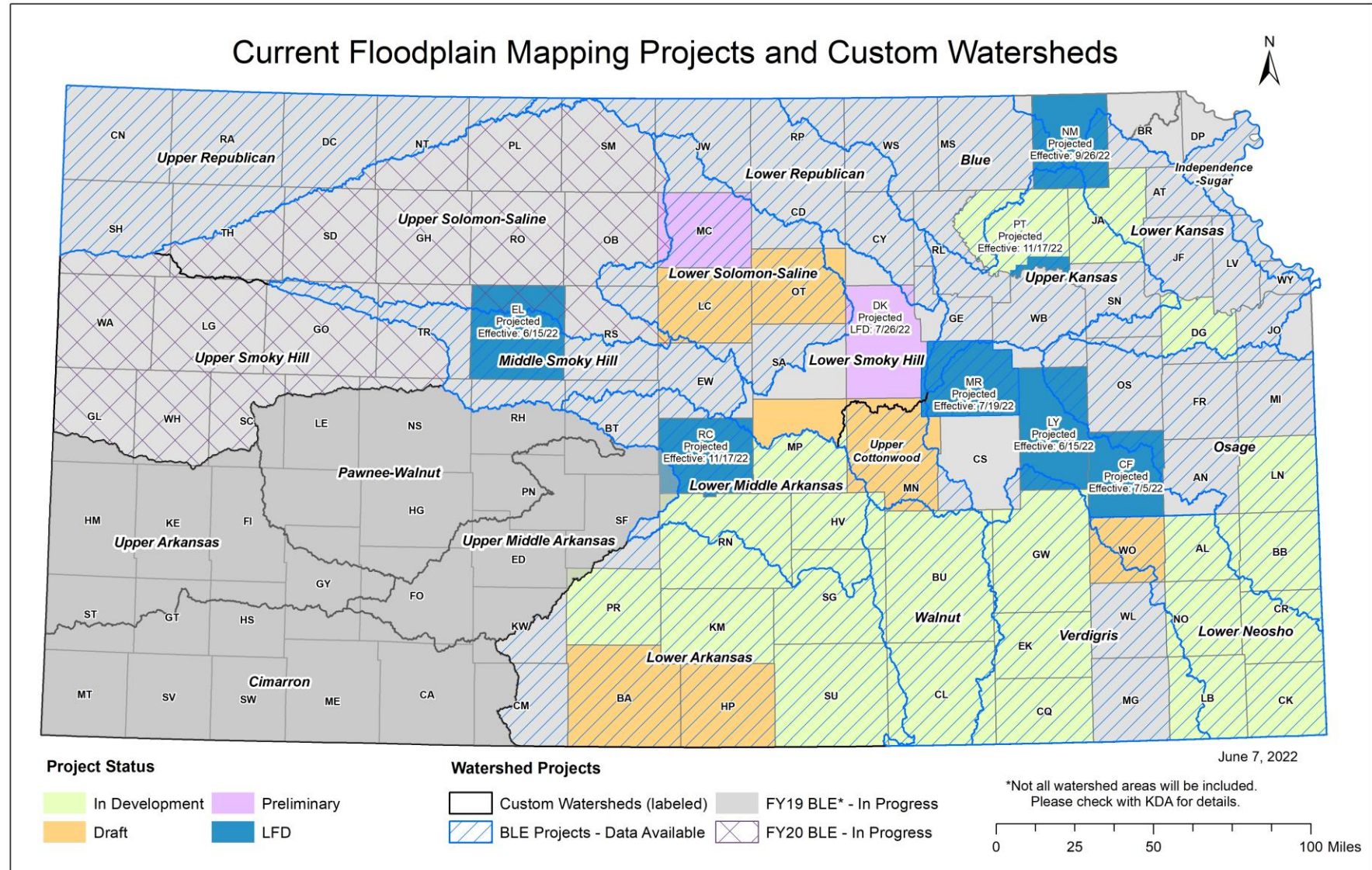
Thomas County  
 • Planned for 2024

Osborne County  
 • Planned for 2024

Russell County  
 • Planned for 2024

Other counties?  
 • TBD

# We are doing this work across Kansas...



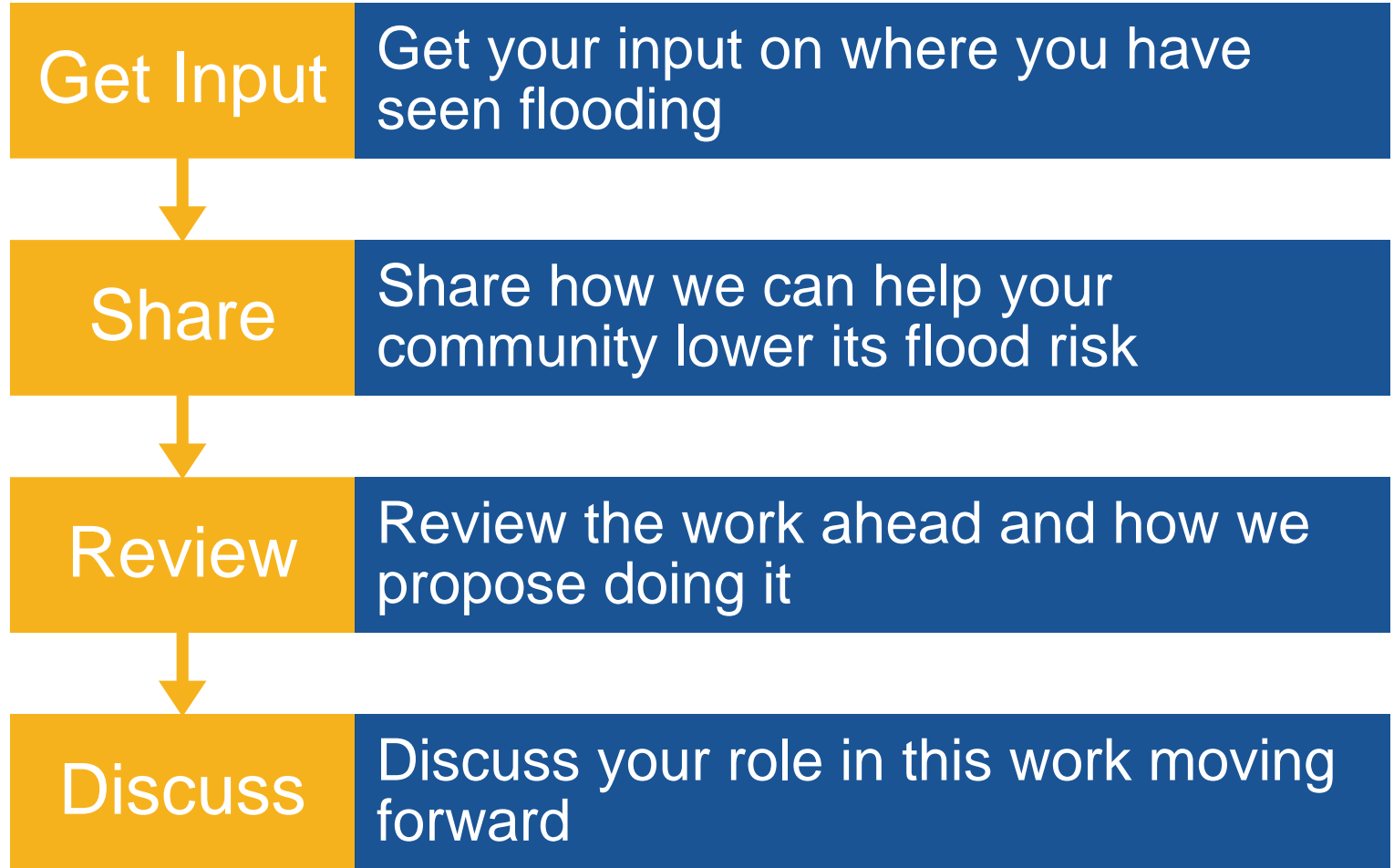
# *Today's Goals*

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## Today's Goals

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## Your Role

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- Tell us where you've seen flooding in your community.
- Share where and how we can help lower your flood risk.
- Ask questions as we review the work ahead – we'd like your input.
- *NOTE: if there are others in your community who might have input about your community's flooding concerns and our approach to this work, PLEASE put their name, community, and email into the chat, or email Joanna so we can make sure to connect with them.*

***We Need Your Input:***  
***Where has your community  
experienced flooding?***

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***How are your  
community's  
daily activities  
impacted when  
it floods?***

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***As We Review  
Your Floodplain  
Maps, We Want  
to Hear from  
You:***

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Where are you experiencing flooding?

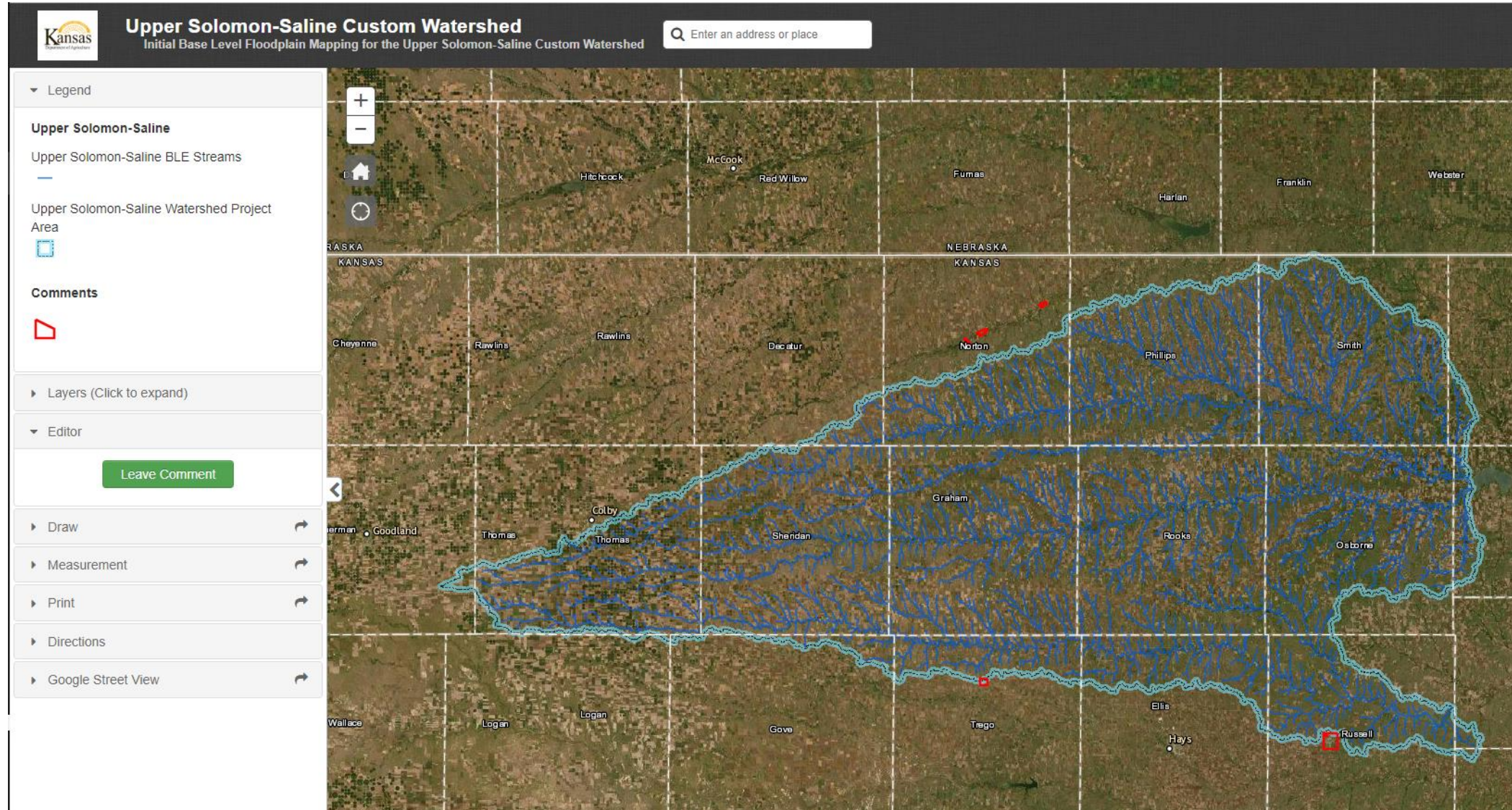
- Intersections that often flood and stop traffic?
- Drainage areas that cause problems?
- Any parts of town where homes or businesses have flooded?

Are there areas where there has been recent construction/development? Or, where there are plans to build?

Are there any tricky areas to take a closer look at?

Do you have projects related to flooding underway that we could help with?

# Image of Web Map



# *How We Can Help*

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*“Mitigation Technical Assistance”*



***We are asking  
this question  
for two  
reasons:***

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*If you've had flooding, we want to know **WHERE**. This helps truth-test the engineering analysis we will be doing.*



*Depending on how and where your community is being impacted by flooding, we might be able to help.*



# How We Can Help

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## STEP 1:



*Explain what you need help with.*

## STEP 2:



*We determine if it's something we can support.*

## STEP 3:



*If we can support it, we'll work with you to put together a plan and a timeline.*



## ***Guidelines:***

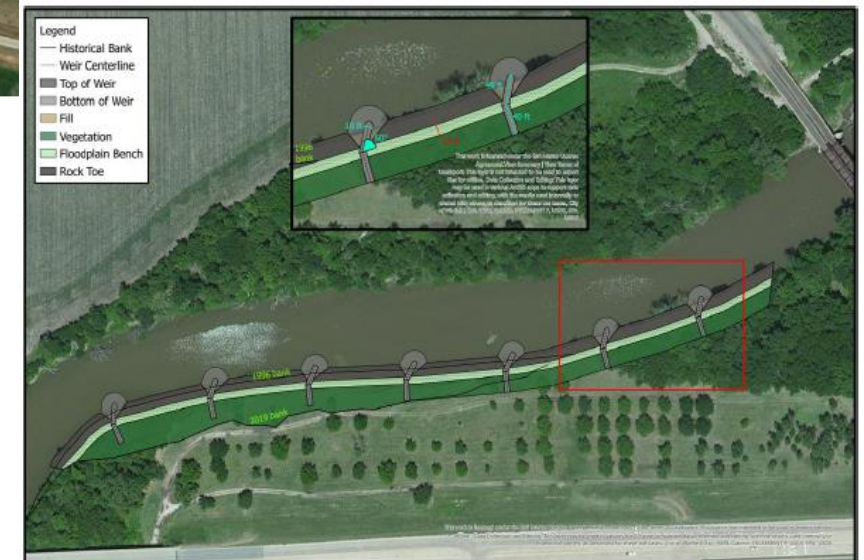
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- We want to identify what help is needed now, so we can plan accordingly.
- The work will be done over the next 1-3 years.
- We can't pay for "the thing" itself (e.g., the installation of a new culvert or retention basin), but **we can help you move a project forward by developing technical information.**
- Your community must be invested in moving a project forward.



# Some Ways We Can Help:

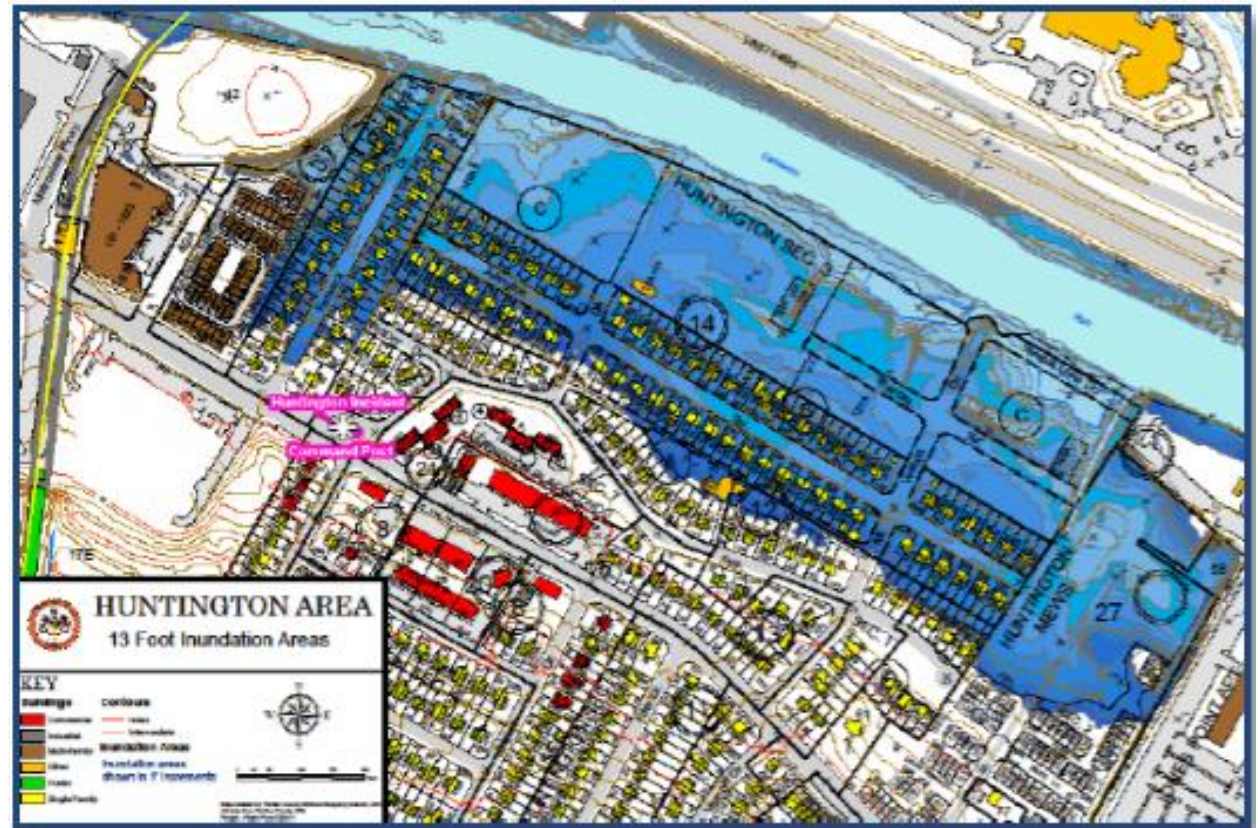
- Present potential flood mitigation alternatives, streambank stabilization solutions, and internal drainage solutions in your community





## Some Ways We Can Help:

- Analyze flooding impacts from blockages at culverts
- Support participation in the Community Rating System (CRS) Program.



# Some Ways We Can Help:

- To help better understand and reduce flooding issues by performing peak flow and volume sensitivity analysis to justify volume control requirements.

Figure 11: Volume Sensitivity for North Topeka

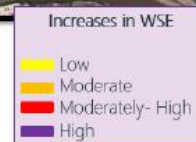
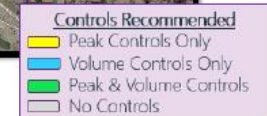
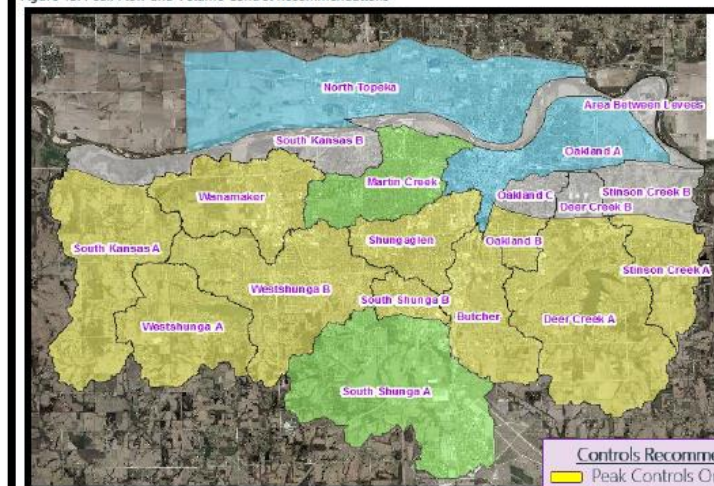


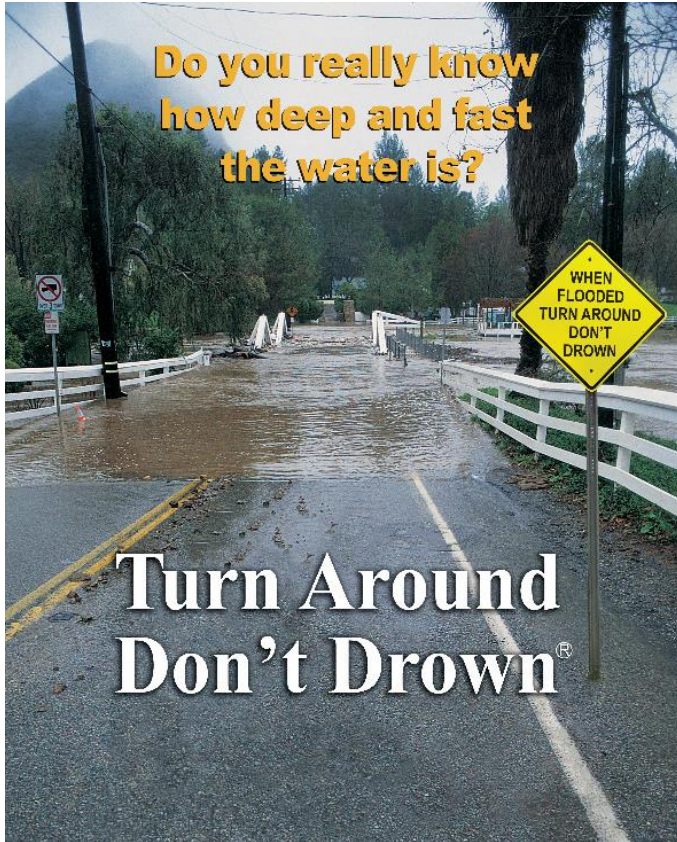
Figure 13: Peak Flow and Volume Control Recommendations





## Some Ways We Can Help:

- Provide training for staff on how to use flood risk products.
- Support Education and Outreach



***Any Ideas?***

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# *Review of the Work Ahead and How We Propose Doing It*

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## *To Note*

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A lot of our work is technical and it's likely that not everyone in the (virtual) room is an engineer.

***That's OK!***



## ***Our Next Steps:***

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1. Generate early flood risk data with Base Level Engineering (BLE)
2. Gather additional data from you that will inform us of mapping needs and assist us in our analysis for any new floodplain maps
  - We will ask for this during a future Discovery meeting with you
3. Complete data development for specific areas of watershed as part of future regulatory updates

*Throughout this work, we will share the emerging picture of flood risk with you to get your feedback.*



## **Base Level Engineering: What is it?**

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BLE is an engineering approach that provides an initial (or “base” line) understanding of flood hazards, providing enough information for us to draft initial floodplains.

*\*Provides flood hazard information for areas that currently have no information, little information, or outdated information.*

**FLOODPLAIN:** On the maps we create, the floodplains, which are areas with high flood risk – where a flood has a 1-percent chance of happening each year.

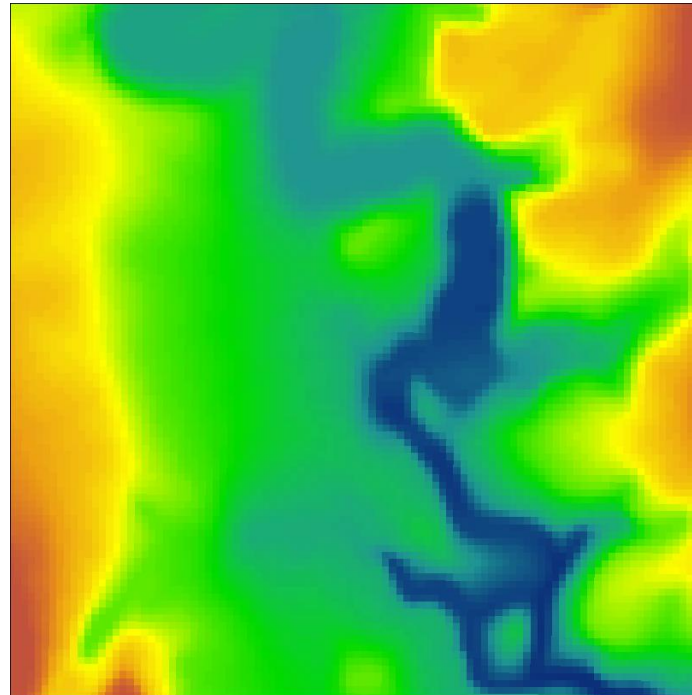




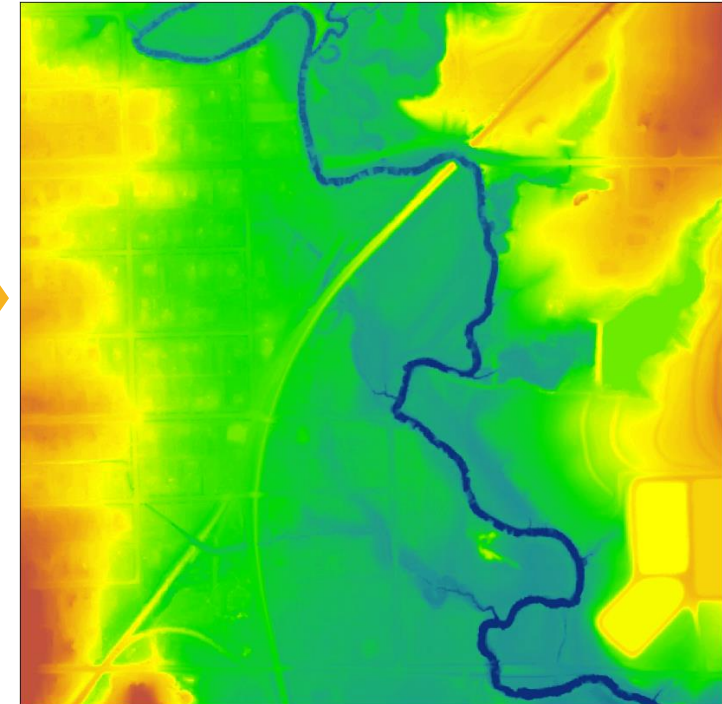
***We Use LIDAR  
in our Base  
Level  
Engineering***

Some of your current maps are based on a 10-meter Digital Elevation Model. Updated LiDAR Topography will be used in the new modeling.

10m DEM



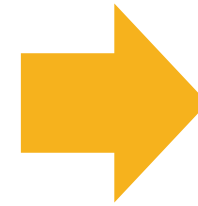
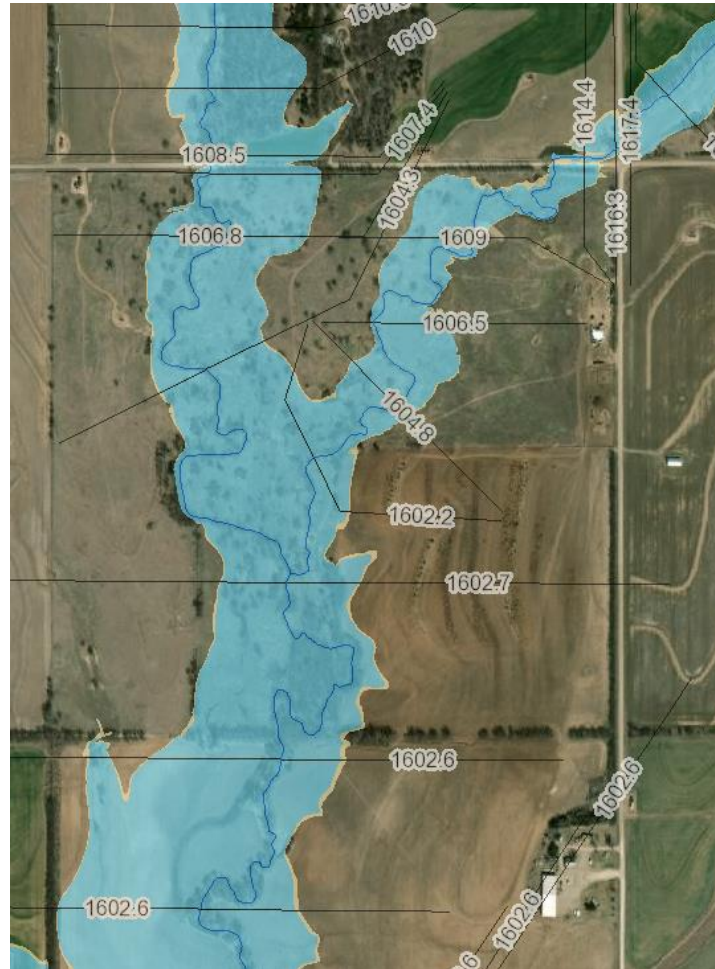
LiDAR



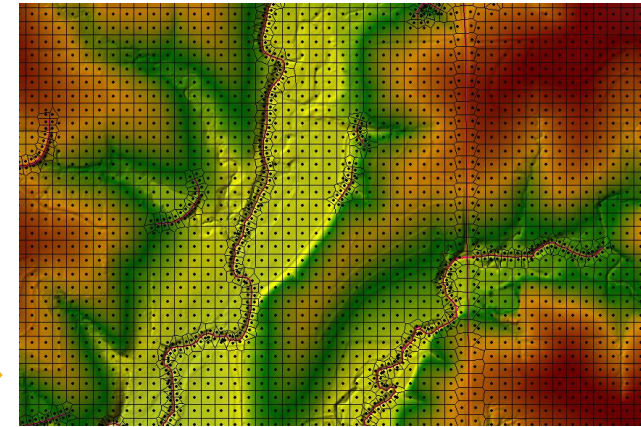
*\*Bare-Earth*

**We Use 2D  
Hydraulic  
Modeling in our  
Base Level  
Engineering**

The current maps are done with one-dimensional (1D) modeling. Two-dimensional (2D) modeling will be used for the new modeling.

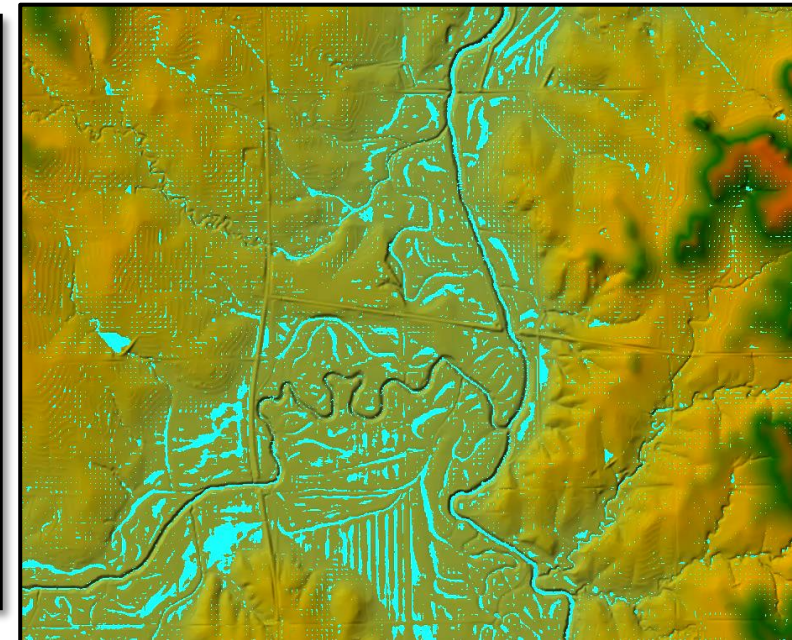
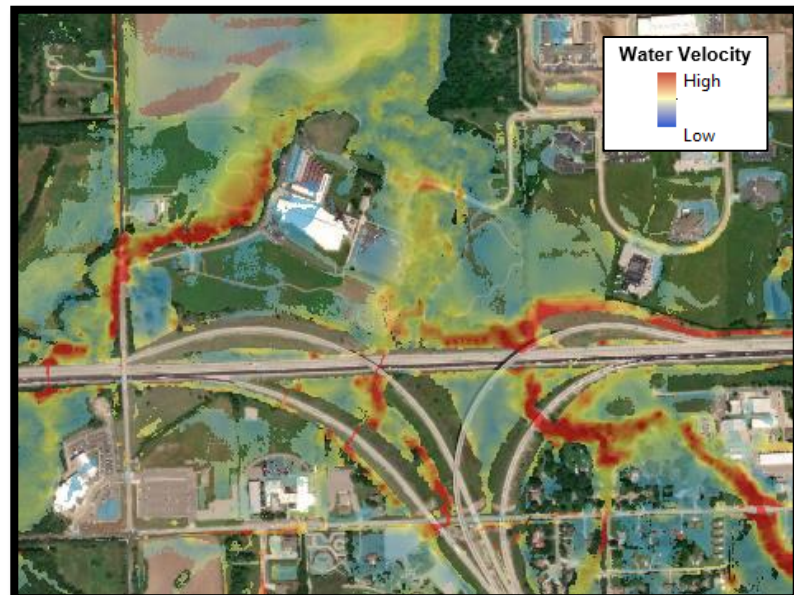
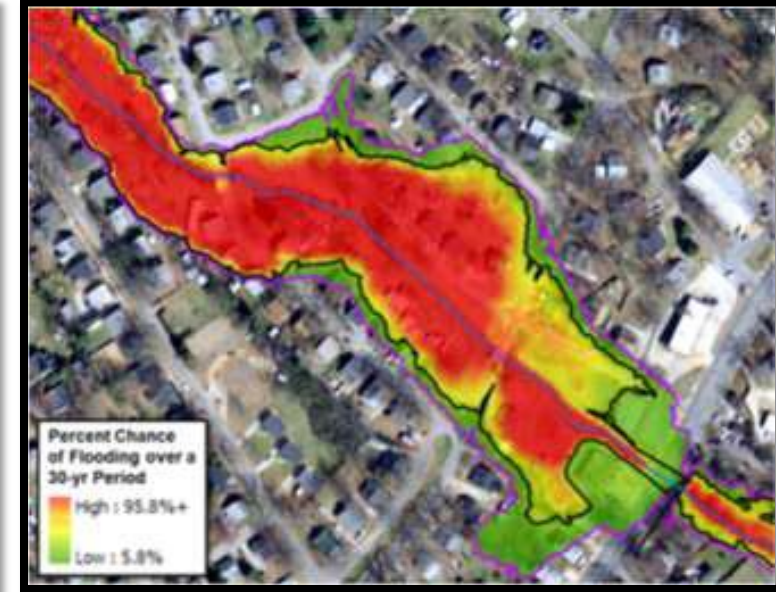
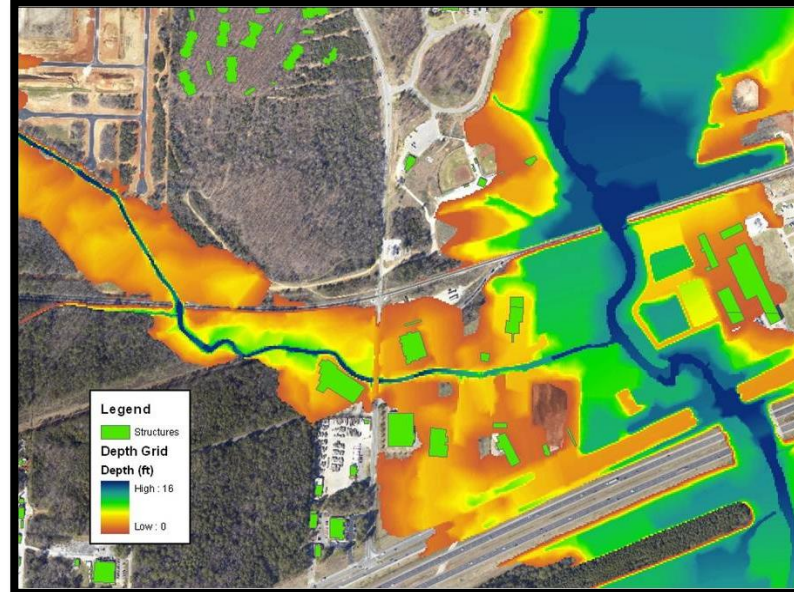


1-D 2-D





*More precise data  
and modeling  
methods gives  
you more  
information about  
flood risk*





## ***Key Takeaways for BLE***

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**1**

Uses highly advanced engineering techniques

**2**

Provides early insight into community flood risk

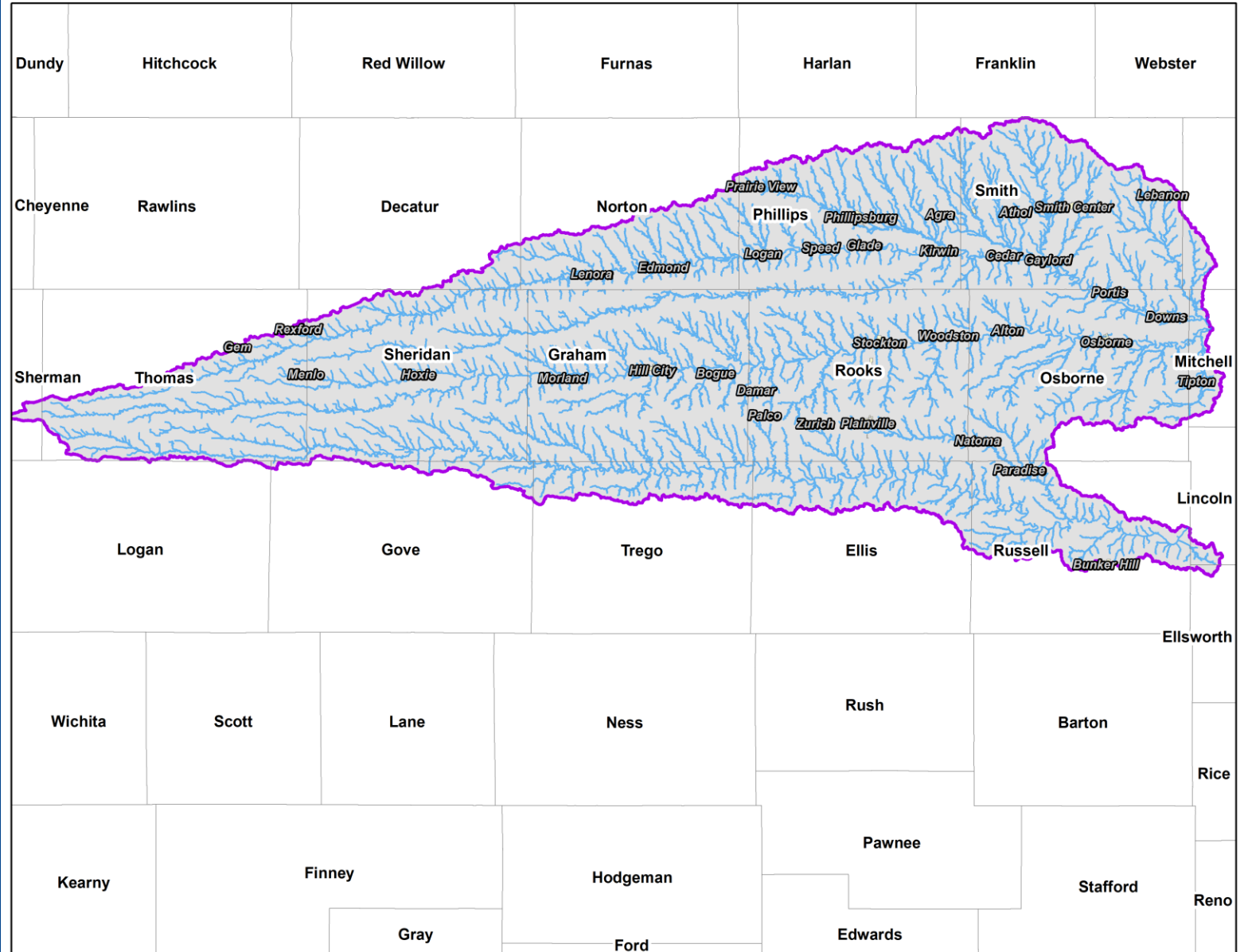
**3**

It's an important step in our partnership to get the data right



*The BLUE lines show the streams we plan to analyze*

*We will generate BLE floodplains for this area:*





## ***What Happens During Data Development***

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- We take additional information gathered and enhance the engineering analysis.
- We develop your regulatory draft floodplain maps.
  - Also known as your Flood Insurance Rate Map (FIRM)
- We develop a Flood Insurance Study.
  - This is a compilation of flood hazard data and analysis for streams, lakes, and hazard areas in your community.
- We also develop flood risk data tools for your community to use in its planning.

**FREE DATA!!!**

# *Next Steps and Your Role*

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# Project Timeline



**Kick-off Meeting and Initial Community Feedback:**  
[TODAY!]

**Discovery Meeting:**  
[~ Fall 2022]

*Provide feedback on mapping needs?*

- *What flood data do you have available?*
- *Revisit flood risk reduction steps you are considering and how we can help!*

**Data Development Work:**

- *Decatur, Osborne, Russell, Thomas (~2024)*
- *Other Counties TBD*



# Project Timeline, continued (following Data Development)

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

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

**Preliminary Map Products**

**Post-Preliminary Processing**





## ***What Should You Do Next?***

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### ***Initial Feedback on Flooding***

- Provide locations of known flooding issues on the web map.
- If there are others in your community who you think we should talk to about historical flooding, please let us know.

### ***Project Kickoff Survey***

You will receive this in a follow-up email, please fill out and return.

### ***Consider Flood Risk Reduction Projects***

If you have any additional needs or concerns, please let us know! If possible, we'd like to help.



## ***Key Takeaways***

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*Floodplain Mapping Projects take time*

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

*While we are working in your community, we also want to help you with your work to reduce flood risk*

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



***We Will Keep  
You Informed:***

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Project updates will come by email

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

Future Meetings:

- As Part of this BLE Project
  - Discovery
- As Part of Data Development Project (*Mapping Update*)
  - Flood Risk Review
  - Public Open House (for you and your residents)
  - Post-Preliminary Consultation Coordination Officer meeting (for community officials who need to know the regulatory adoption steps for the map)
  - Others, as needed

# *Resources*

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# Online Project Information

## Project Website

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

## Web Review Map

- Provide comments on areas impacted by past floods, community needs, etc.
- Review of BLE data, once available
- This link will not be public facing until the project has been through Data Development

## Story Maps

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



## BFE Portal

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For Zone A floodplains, you can request BFE data. Keep in mind, BFE data is subject to change.

A screenshot of the "Kansas Base Flood Elevation Portal" registration form. The page header includes the Kansas Department of Agriculture logo and the title "Kansas Base Flood Elevation Portal". Below the header are three navigation buttons: "Home", "About", and "Help". The main content area is titled "Portal Registration" and contains a series of input fields for user information: "First Name", "Last Name", "User name", "Title", "Phone", "Email Address", "Address", "City", "Zip", and "State". The "State" field is a dropdown menu currently set to "Kansas". At the bottom right of the form is a yellow "Register" button.

**Kansas** Department of Agriculture  
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



## ***KDA - Contact Information***

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## **Wood - Contact Information**

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*Sr. GIS Analyst*



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*Regional Project Officer*

***Any Questions?***

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# *Interactive Map Review and Discussion*

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**Web Map Link:**  
[https://gis2.kda.ks.gov/gis/upper\\_solomon\\_saline/](https://gis2.kda.ks.gov/gis/upper_solomon_saline/)