



# Sedgwick County

*Floodplain Mapping Project  
Data Development Kickoff Meeting*


*June 29, 2021*



**FEMA**

**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**



# Introductions

## Kansas Department of Agriculture

**Tara Lanzrath, CFM**  
*Floodplain Mapping  
Coordinator*

**Joanna Rohlf, CFM**  
*Floodplain Mapping  
Specialist*

**William Pace, CFM**  
*Floodplain Mapping  
Specialist*

**Steve Samuelson, CFM**  
*State NFIP Coordinator*

**Cheyenne Sun Eagle**  
*NFIP Specialist*

## FEMA – Region VII

**Andy Megrail**  
*Regional Project Officer*

## Wood Environment & Infrastructure Solutions

**Joe File, PE, CFM**  
*Senior Associate /  
Program Manager*

**John Covey PE, CFM**  
*Project Manager*





## *Today's Goals*

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*Share details on the mapping project*

*Get initial feedback on modeling methods*

*Review future steps*

# *Background*

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# Background

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- Walnut Custom Watershed BLE Project
  - *Kick-off Meeting: December 12, 2019*
  - *Discovery Meeting: March 4, 2020*
- Lower Arkansas Custom Watershed BLE Project
  - *Kick-off Meeting: March 5-6, 2019*
  - *Discovery Meeting: February 26-27, 2020*
- Lower Middle Arkansas Custom Watershed BLE Project
  - *Kick-off Meeting: October 27, 2020*
  - *Discovery Meeting: January 12 and 13, 2021*

# Background



- Sedgwick County Effective Mapping
  - Dated December 22, 2016
  - Through Discovery and conversations with County stakeholders, it was determined that certain streams in Sedgwick County warranted new modeling.
    - This led to the need for a Physical Map Revision (PMR) project

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

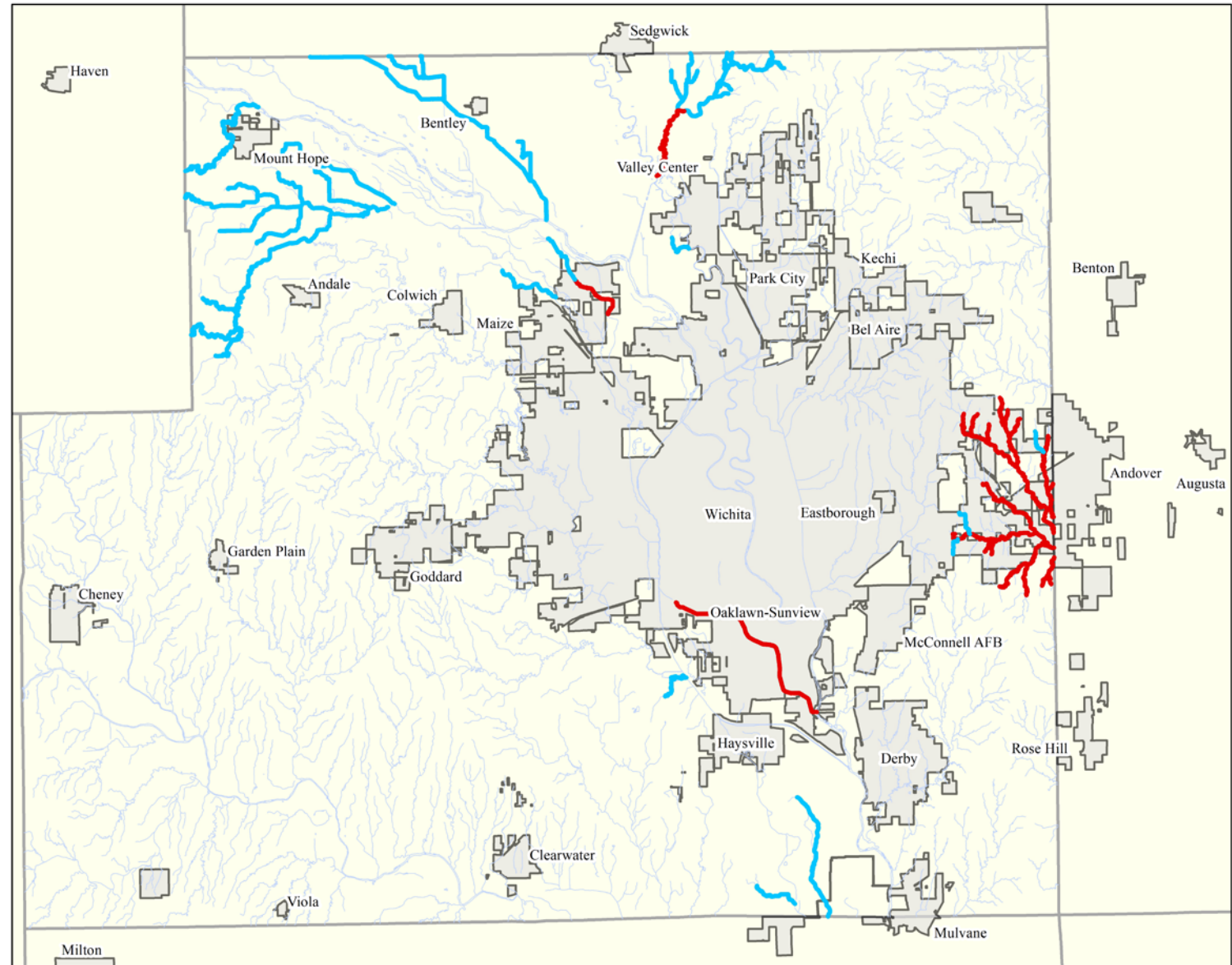
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# Sedgwick County 2021 Proposed Mapping Updates

## Scoped Studies

- **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 Zone AE with Floodway - HEC-HMS**  
 New Zone AE studies will be developed for these streams using 1D or 2D Hec-Ras hydraulics and hydrology calibrated to HEC-HMS model flows. Floodways will be developed. Field measured structure data will be incorporated into the modeling. BFEs will be shown on the maps.
- **No New Studies will be performed for these streams.**





## ***New Zone AE with Floodway***

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- Big Slough South
- Brookhaven Creek
- Fourmile Creek and 2 Tributaries
- Jester Creek
- Little Slough
- Pawnee Creek and 1 Tributary
- Spring Branch and 6 Tributaries
- Terradyne Fork
- West Branch Fourmile Creek and 2 Tributaries



## ***New Zone A***

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- 1 Tributary to the Arkansas River
- Arvidson Creek
- Big Slough North and 1 Tributary
- 1 Tributary to Brookhaven Creek
- Carrier Creek
- 2 Tributaries to Cowskin Creek South
- Eagle Drainage Ditch and 3 Tributaries
- Gooseberry Creek and 1 Tributary
- Jennings Creek
- Jester Creek and 6 Tributaries
- Lindebak Creek
- 1 Tributary to Little Arkansas River
- Little Slough
- 1 Tributary to Lower Wichita Valley
- Mitchell Creek
- Scholfield Creek Lower
- Scholfield Creek Upper
- South Fork Big Slough
- 2 Tributaries to Spring Branch
- Weber Creek
- Wilton Creek



- There will be no impacts to levee certifications as part of this mapping update.

## Levees

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# Definitions

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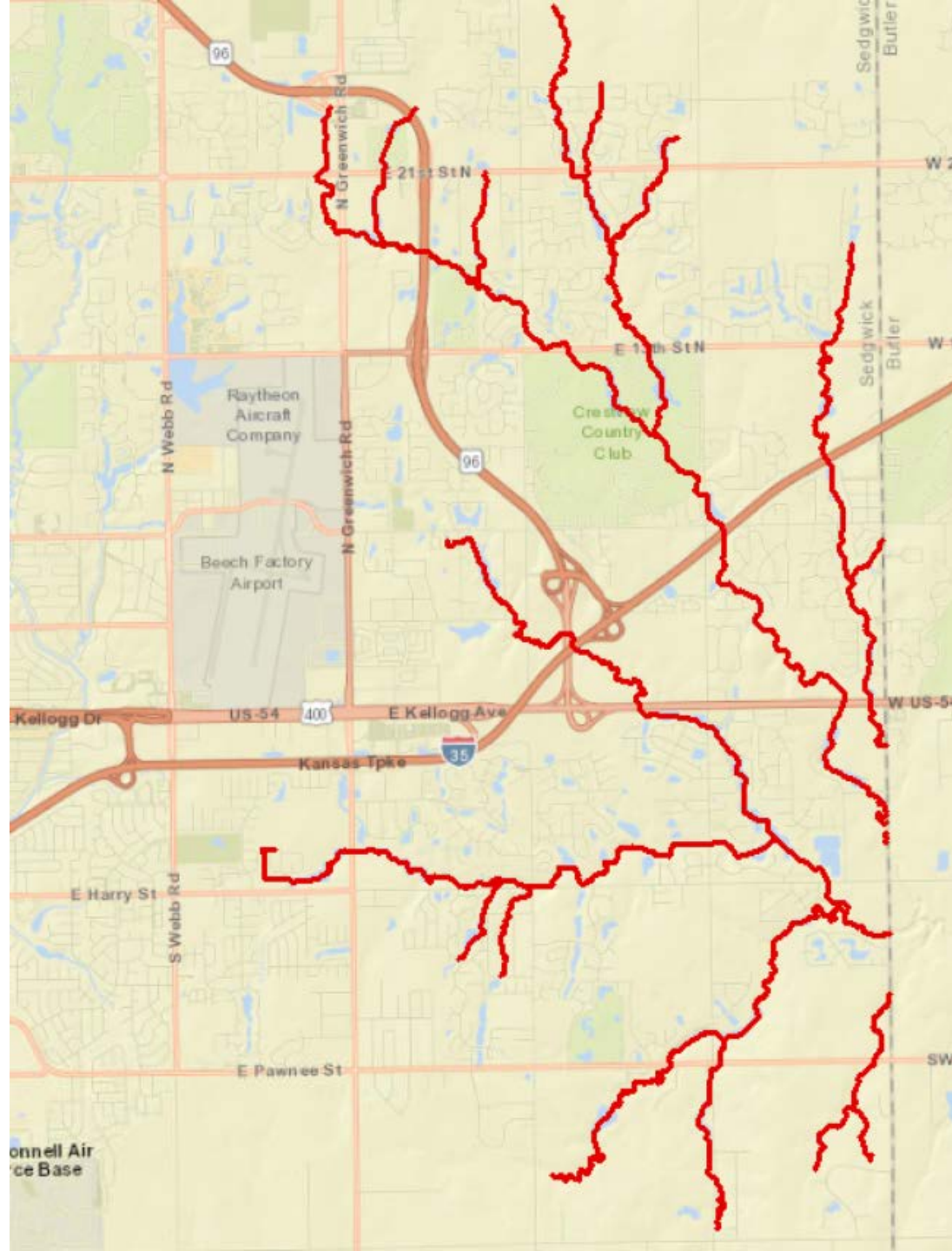


**Hydrology**  
*How Much Water?*



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

# Fourmile Creek Watershed Updates





## ***Fourmile Creek Watershed Updates***

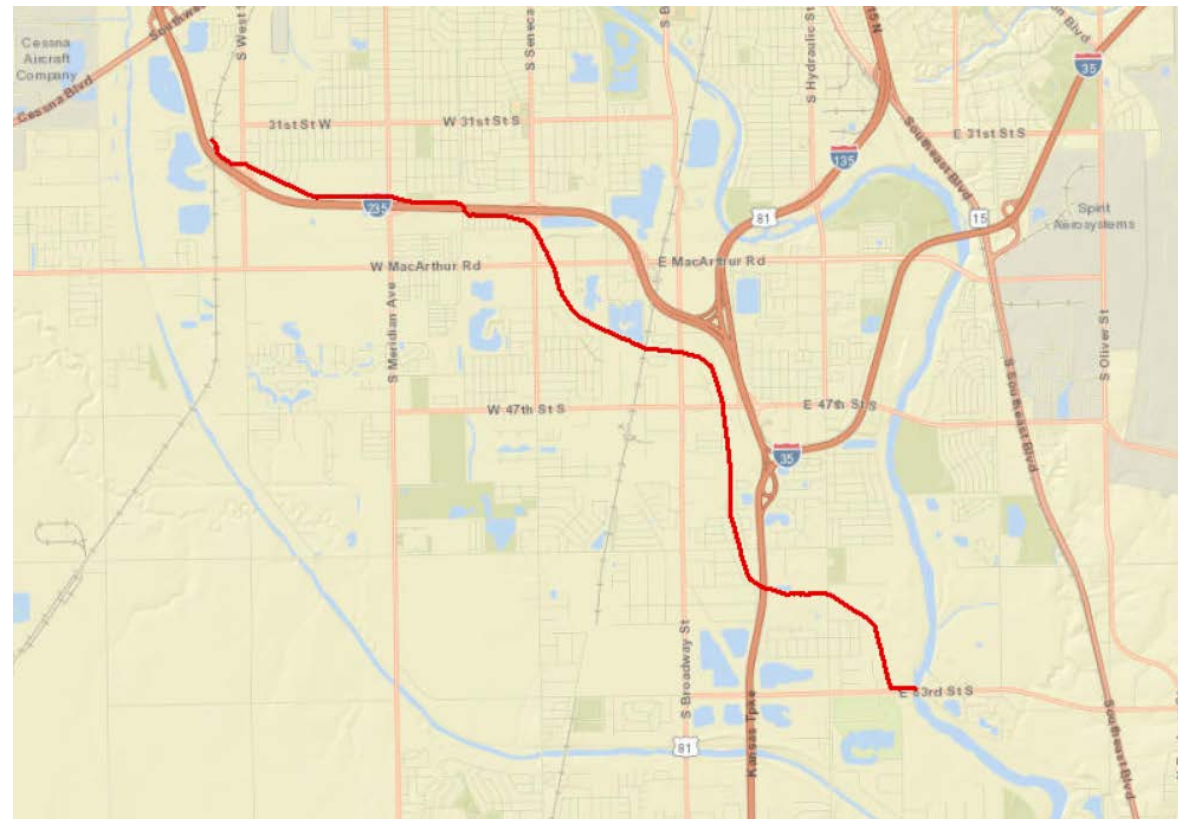
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- The Walnut Custom Watershed BLE modeling will be enhanced and utilized as the hydrology (flows) for the updated models.
- The existing 1D hydraulic models will be updated with structure information and new flows.
- The new Lidar data (flown in 2018) will be evaluated against the previous Lidar data
  - Updates to topography will be made in the 1D models as needed
- New floodplains, floodways, BFEs, profiles, and floodway data tables will be generated



- Enhancements will be made to the existing 1D model to reflect recent development at S Seneca Street and I-235.
- New floodplains, floodways, BFEs, profiles, and floodway data tables will be generated.

## Big Slough South Updates







## ***Zone A Updates***

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- Enhancements will be made to the 2D BLE modeling that was already performed
  - Comments made and additional information gathered during the Discovery phase will be used to enhance the modeling
- The modeling will utilize the 2018 LiDAR data set
  - USGS is currently awaiting corrections for data approval



## *Little Slough and Jester Creek Updates*

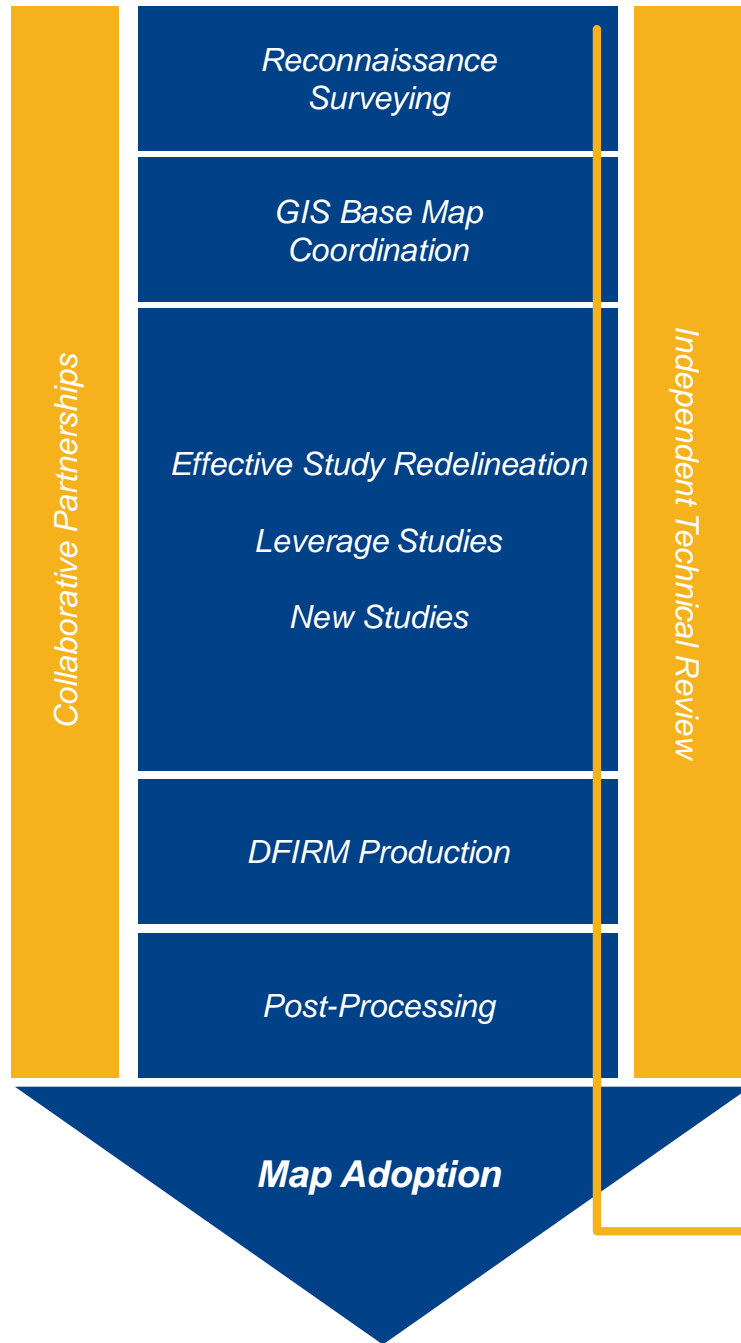
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- Enhancements will be made to the 2D BLE modeling that was already performed
  - Comments made and additional information gathered during the Discovery phase will be used to enhance the modeling
  - Structures will be incorporated into the modeling
- 1D models will be developed, calibrated to the 2D modeling, and used for the floodway analysis.
- New floodplains, floodways, BFEs, profiles, and floodway data tables will be generated.



# *Next Steps*

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## Project Tasks

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

We are at the beginning of data development



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

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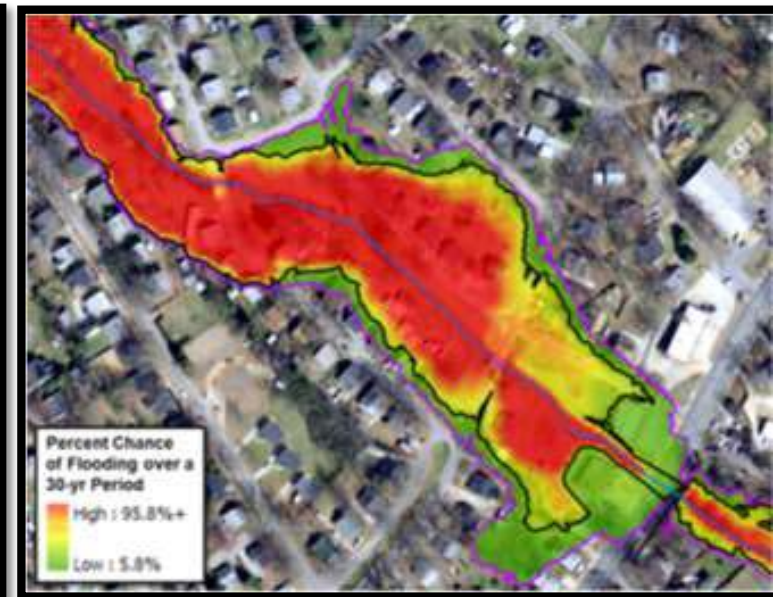
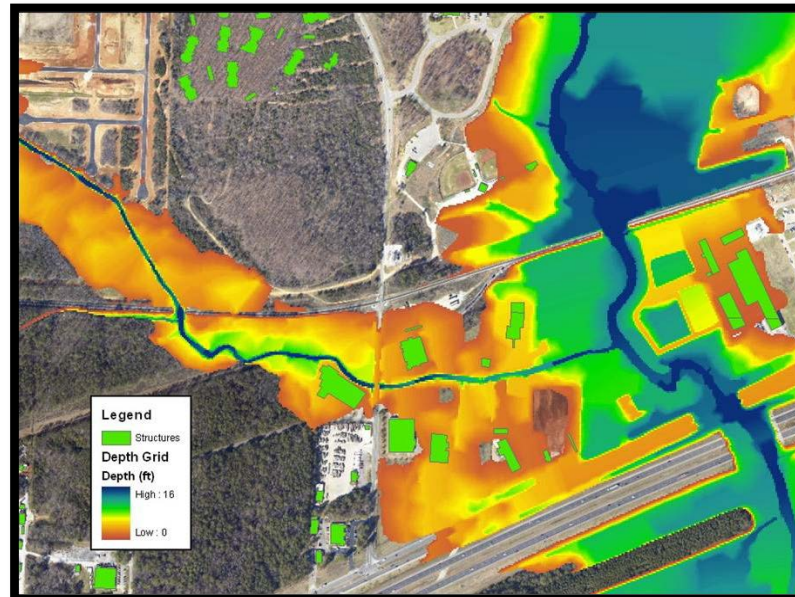
- We will complete the engineering analysis
- We will develop your draft regulatory floodplain maps.
  - Also known as your Flood Insurance Rate Map (FIRM)
- We will develop your draft Flood Insurance Study (FIS).
- We will have a community review period and a public review period



## Our Next Steps:

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- We will also be developing flood risk products for all of Sedgwick County as part of this project.
  - Will use previous data for streams not included in the mapping update
  - Will use new data for streams included in the mapping update



# Project Timeline



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

**Data Development Work:**  
[Now until early 2022]

- *Base Map*
- *Topographic Data*
- *Field Survey*
- *Develop Hydrologic and Hydraulic Models*
- *Floodplain Mapping*

**Flood Risk Review Meeting:**

[~February 2022]

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

## Project Timeline, continued

Community  
**comments** will  
be **addressed**

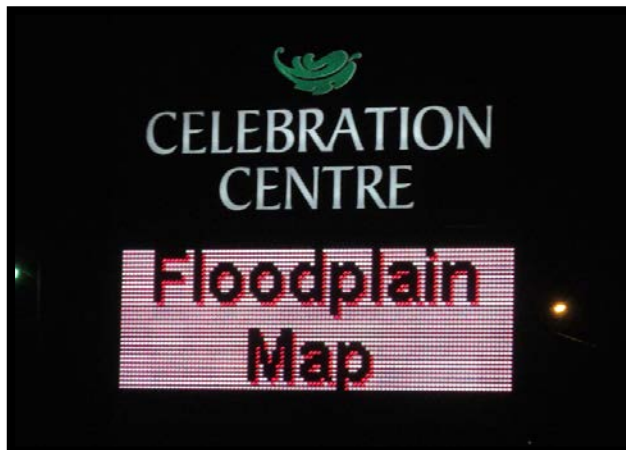
**Public review** of  
the draft maps

- *Includes Public  
Open House*

**Preliminary Map  
Products**

- *Preliminary DFIRM  
Community  
Coordination Meeting*

**Post-  
Preliminary  
Processing**







## ***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***

# *Resources*

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# Online Project Information

## Project Website

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

## Web Review Map

- Provide comments on areas impacted by past floods, community needs, etc.
- Review of floodplain data

## Story Maps

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

***Any Questions?***

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