



Jackson County



FEMA

*Floodplain Mapping Project
Data Development Kickoff Meeting*

June 16, 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**



Introductions

Kansas Department of Agriculture

Tara Lanzrath, CFM
*Floodplain Mapping
Coordinator*

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

William Pace, CFM
*Floodplain Mapping
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Wood Environment & Infrastructure Solutions

Matt Long, PE, CFM
Project Manager

Steve Samuelson, CFM
State NFIP Coordinator

Cheyenne Sun Eagle
NFIP Specialist

FEMA – Region VII

Dawn Livingston
Regional Project Officer

Erika Stanley
Sr. GIS Analyst





Today's Goals

Share details on the mapping project

Get initial feedback on modeling methods

Review future steps

Background

Background

- Lower Kansas Custom Watershed BLE Project
 - *Kick-off Meeting: May 2021*
 - *Discovery Meetings and BLE Review: September 2021*
- Upper Kansas Custom Watershed BLE Project
 - *Kick-off Meeting: February 2021*
 - *Discovery Meeting: September 2021*
- *Prairie Band Potawatomi Meeting November 18, 2020*

Discovery Report
 Lower Kansas Custom Watershed
 HUCS 10270102, 10270103, 10270104

Cities of Atchison, Auburn, Baldwin, Baschor, Bonner Springs, Carbondale, Circleville, Denison, Easton, Effingham, Eudora, Holton, Huron, Lancaster, Lawrence, Lecompton, Linwood, Mayetta, McLouth, Meriden, Muscotah, Netawaka, Nortonville, Oskaloosa, Overbrook, Ozawkie, Perry, Tonganoxie, Topeka, Valley Falls, Wakarusa, Whiting, Winchester

Atchison, Douglas, Jackson, Jefferson, Leavenworth, Osage, Shawnee, and Wabaunsee Counties

Prairie Band Potawatomi Nation

Report Number 01



Discovery Report
 Upper Kansas Custom Watershed
 HUCS 10270101, 10270102, 10270205

Cities of Alma, Alta Vista, Belvue, Delia, Emmett, Fort Riley, Grandview Plaza, Grantville, Havensville, Hoyt, Louisville, Manhattan, Maple Hill, Mayetta, McFarland, Meriden, Ogden, Onaga, Paxico, Riley, Rossville, Silver Lake, Soldier, St. George, St. Marys, Topeka, Wamego, Westmoreland, Wheaton, Willard

Douglas, Geary, Jackson, Jefferson, Pottawatomie, Riley, Shawnee, Wabaunsee Counties

Prairie Band Potawatomi Nation

Report Number 01



Background



- Current Effective Mapping for Jackson County is dated May 3, 2010.
- Through Discovery and conversations with county stakeholders, it was determined that updated modeling and mapping for the Jackson County using newer Lidar and 2D modeling techniques, would be beneficial.

Review of the Work Ahead and How We Propose Doing It

Definitions

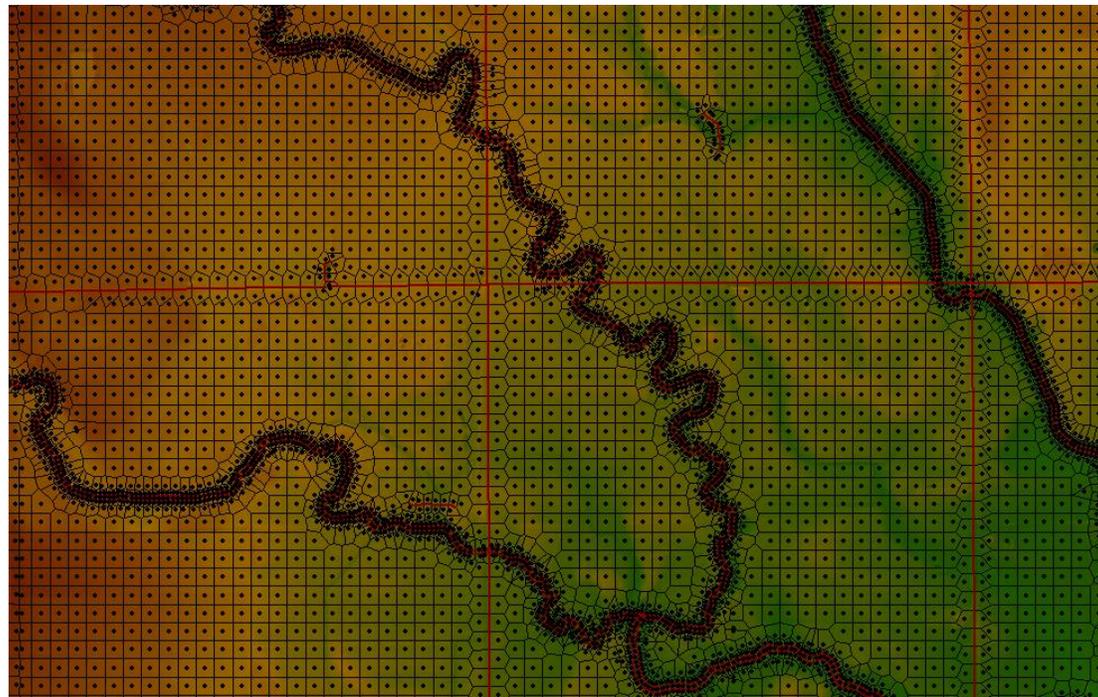


Hydrology
How Much Water?



Hydraulics
How High Will Water Get?

2D Modeling is being used





Model Enhancements

- Enhancements will be made to the BLE modeling that was performed.
 - New Lidar, flown in 2018, will be incorporated. 2012 Lidar will still be used in Prairie Band Potawatomi Nation area.
 - Comments made and additional information gathered during the Discovery phase will be used to enhance the modeling.
 - Additional review/refinement of mesh will be done to improve accuracy of modeling.
 - Enhanced Zone A and Zone AE streams will include field measured structure data, as-built survey plan and additional landuse refinements.

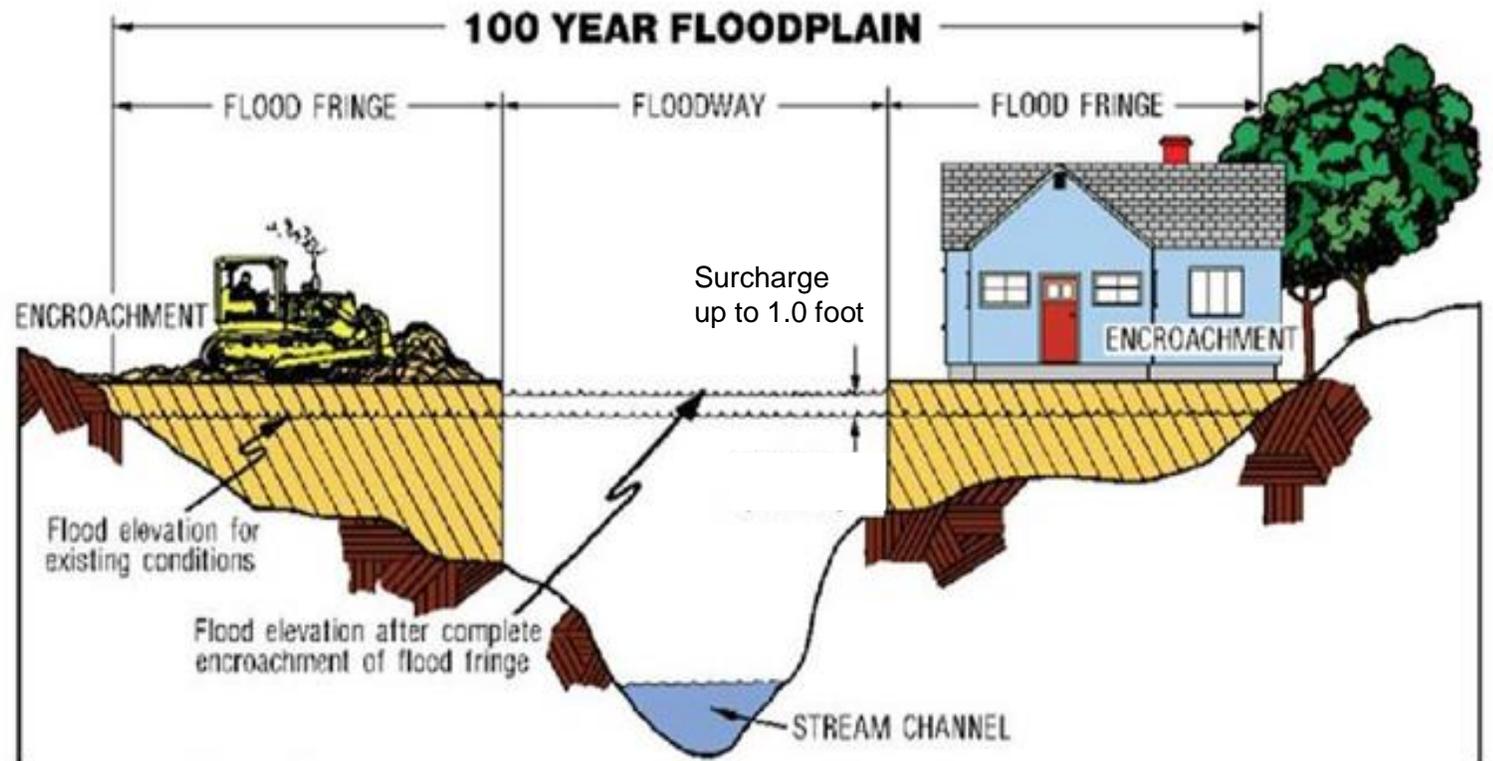


Model Enhancements

- The hydrology is built into the RAS modeling platform using excess rainfall-on-grid methodology.
- This will be calibrated to statistical gage analysis and HEC-HMS (rainfall-runoff) model flows, developed as part of this project

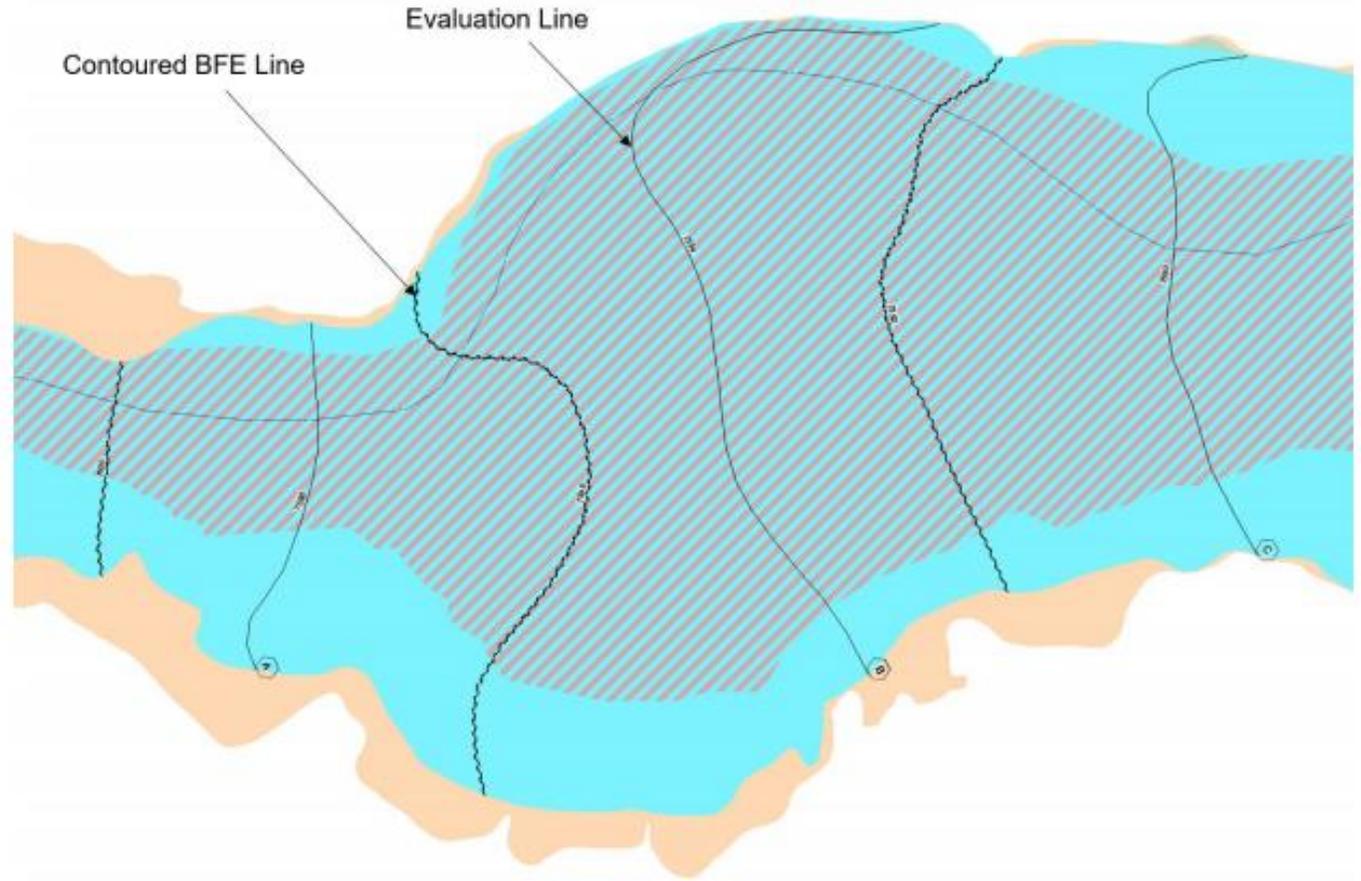
A portion of the Zone AE modeling includes the development of a floodway

A Floodway is the area within the floodplain that must be reserved in order to discharge the base flood without cumulatively increasing the WSE by more than 1.0 foot.



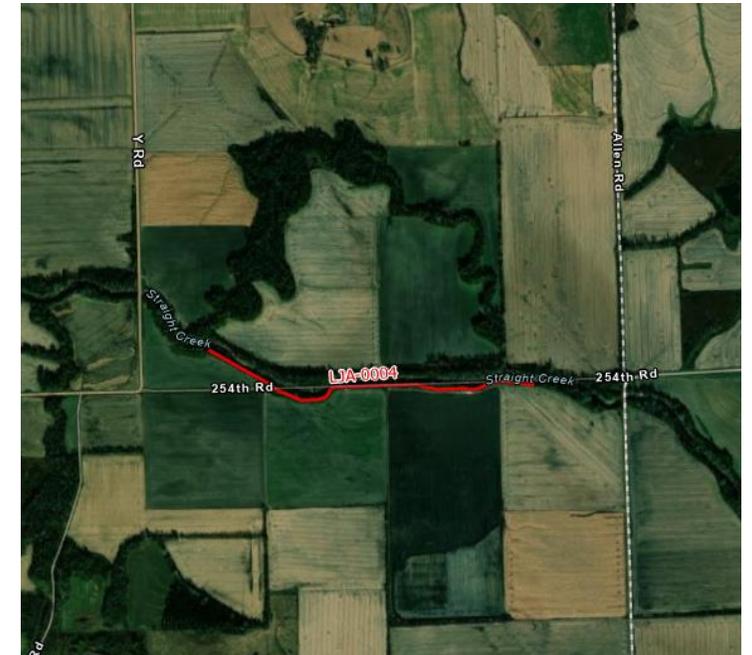
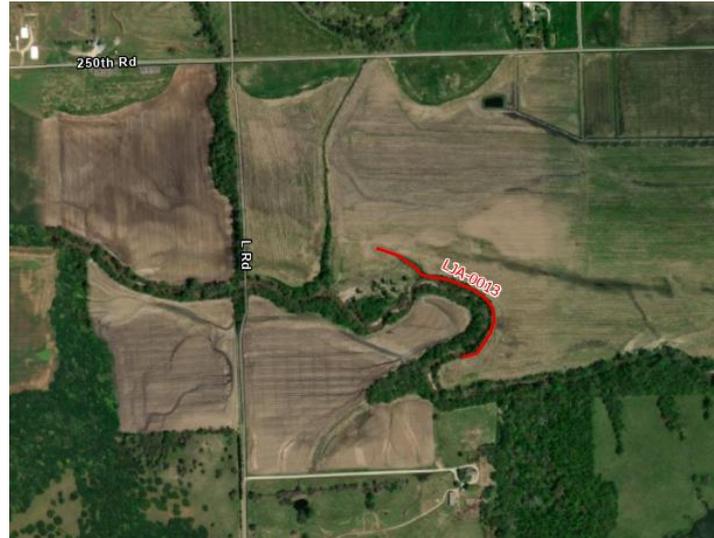


2D Floodways will be developed





There are 2 non-accredited levees in the project area. These levees will be considered hydraulically insignificant.



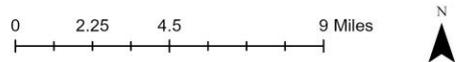
Levees

Data Development Scope

Jackson County 2022 Proposed Mapping Updates

Scoped Studies

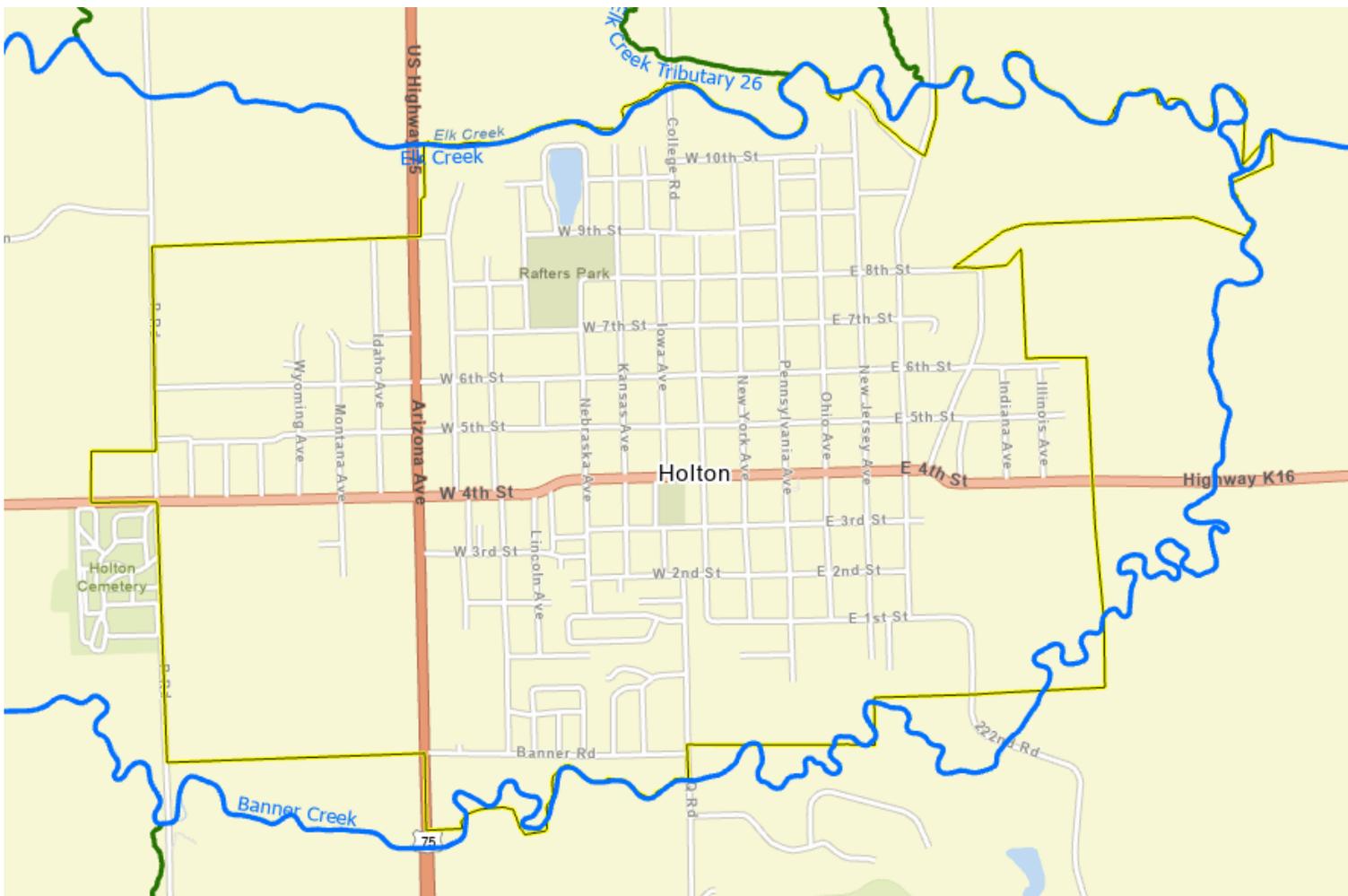
- **New Zone A - Gage Analysis**
 New Zone A studies will be developed for these streams using 2D "excess rainfall-on grid" hydrology calibrated to Gage Analysis Flows, and 2D Hec-Ras hydraulics.
- **New Zone A - Excess Rainfall on Grid**
 New Zone A studies will be developed for these streams using 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 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 with Floodway - Gage Analysis**
 New Zone AE 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 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 Static Zone AE**
 New Static Zone AE studies will be developed for these streams using statistical frequency analysis.





New Zone AE with Floodway

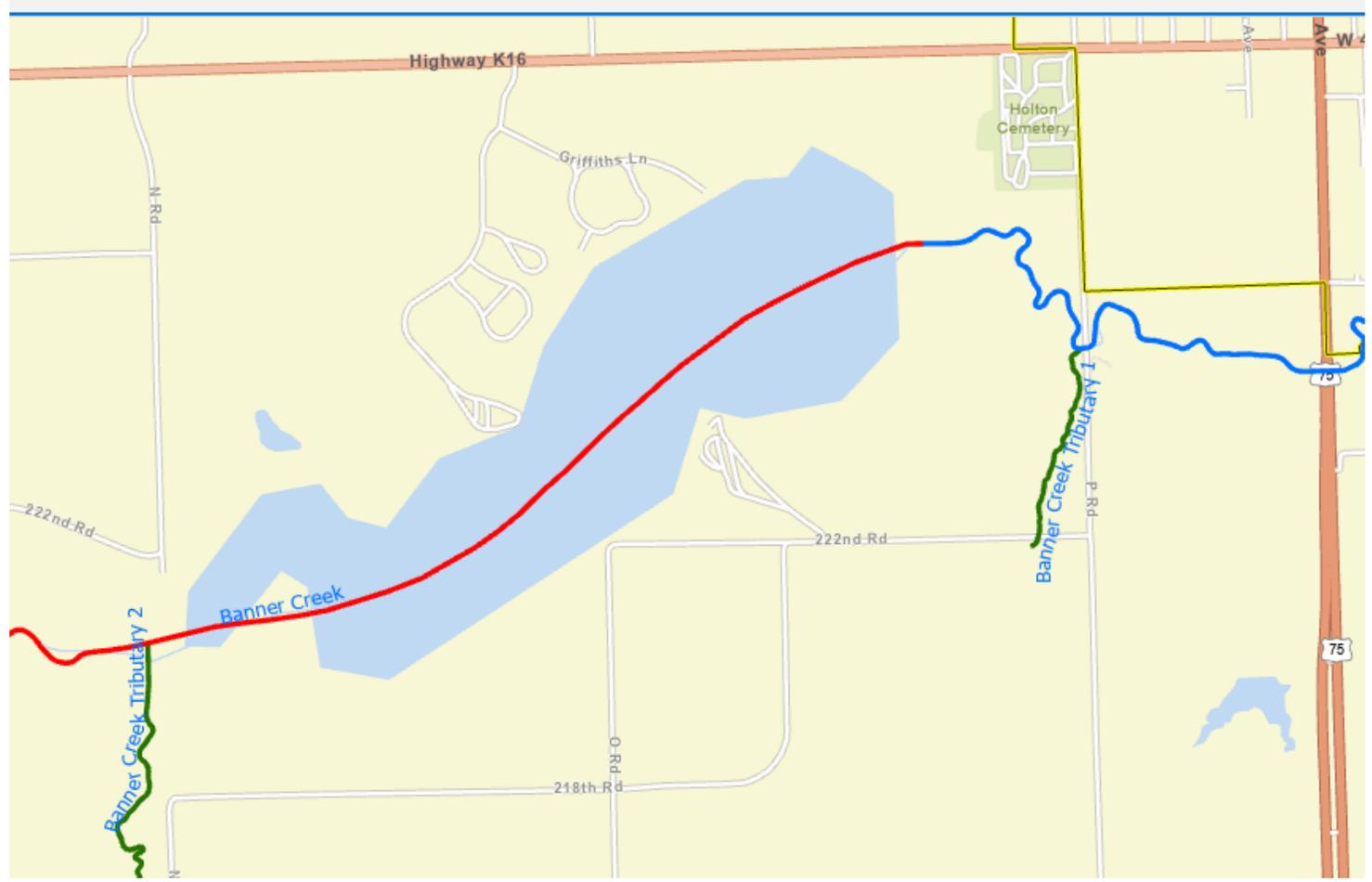
- Holton:
 - Banner Creek
 - Elk Creek





New Static AE

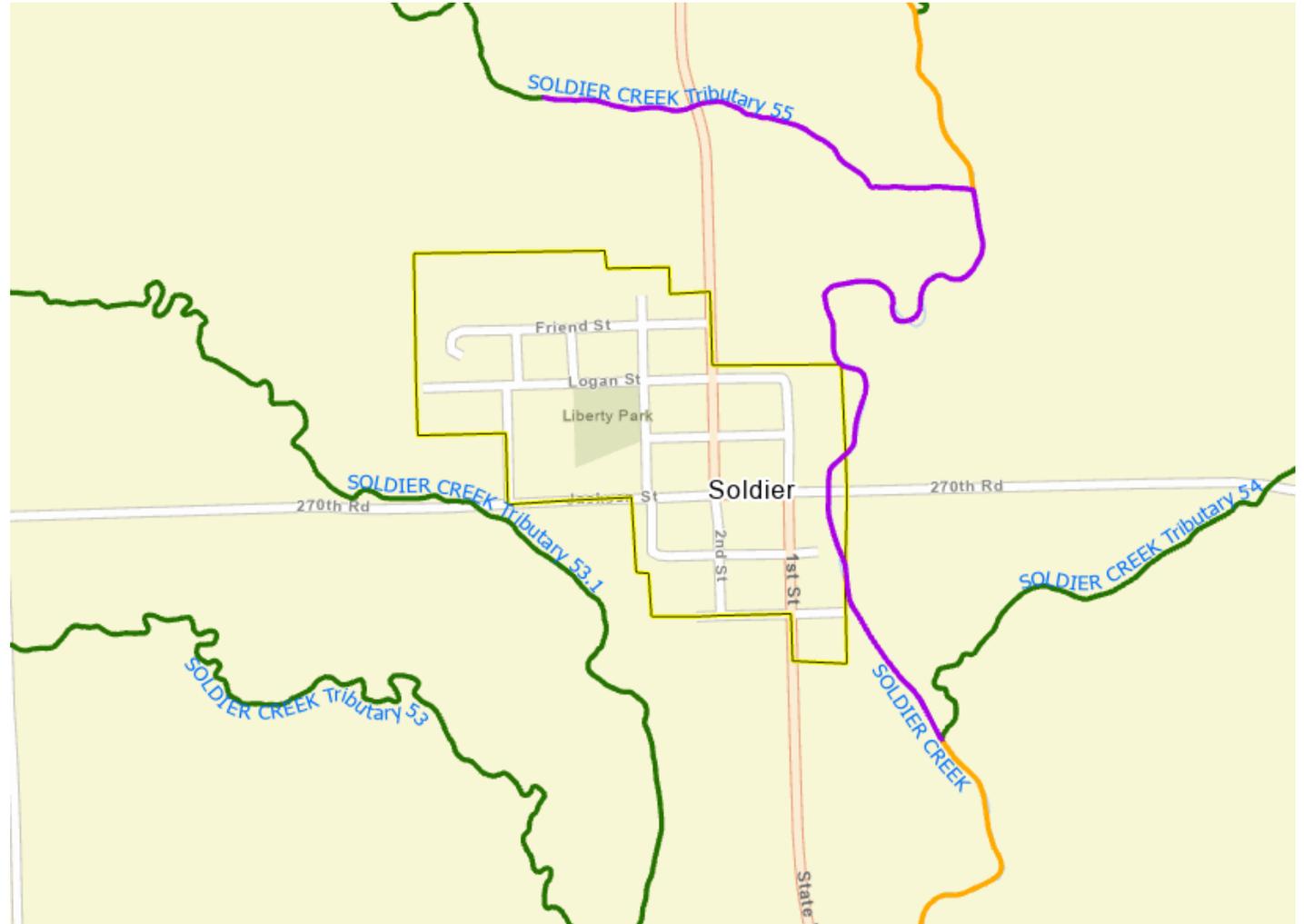
- Banner Creek Lake





New Enhanced Zone A

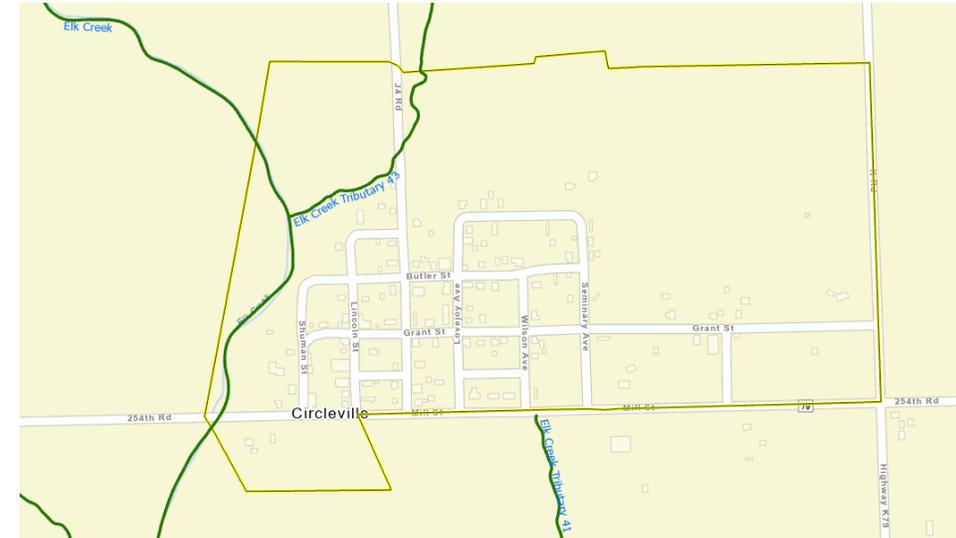
- Soldier:
 - Soldier Creek
 - Soldier Creek Tributary 55



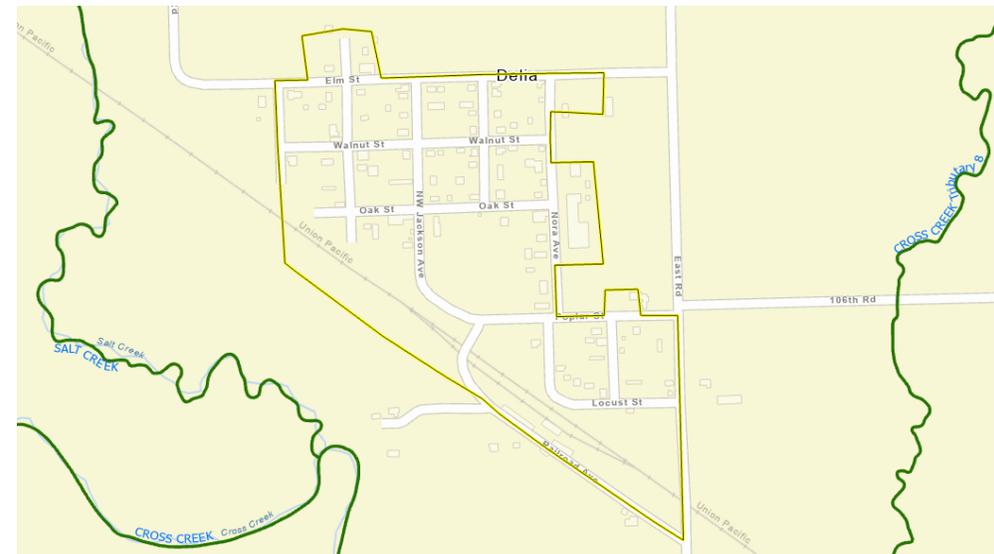


New Zone A

- Circleville:



- Delia:



New Zone A

- Denison:



- Hoyt:



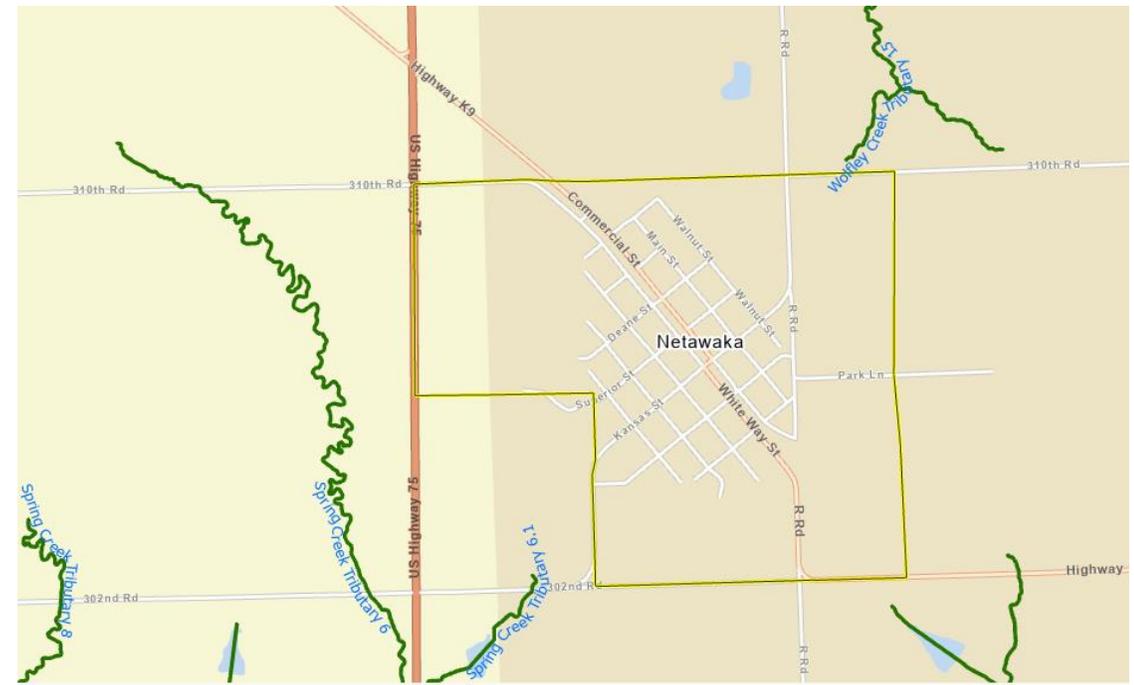


New Zone A

- Mayetta:



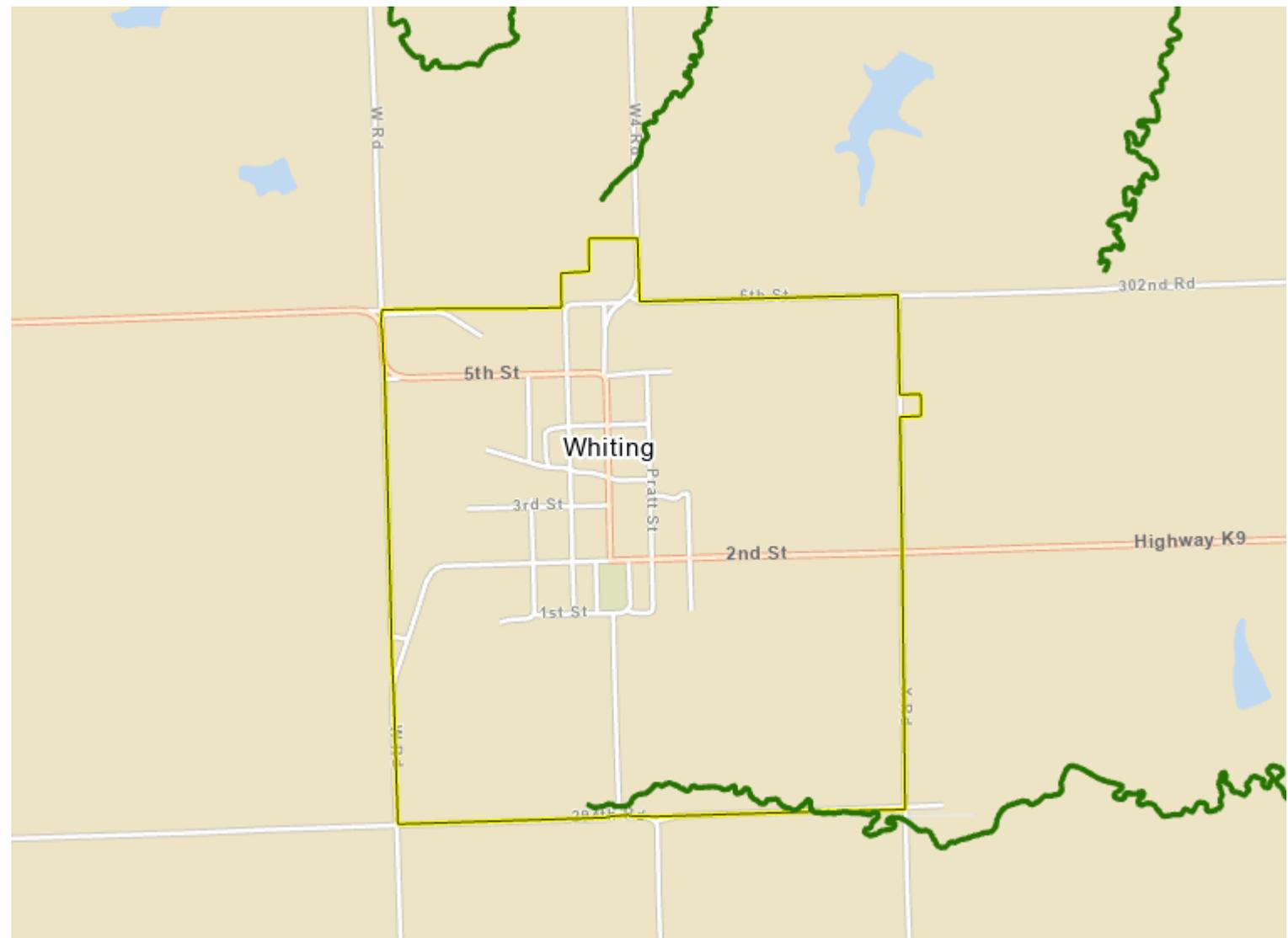
- Netawaka:



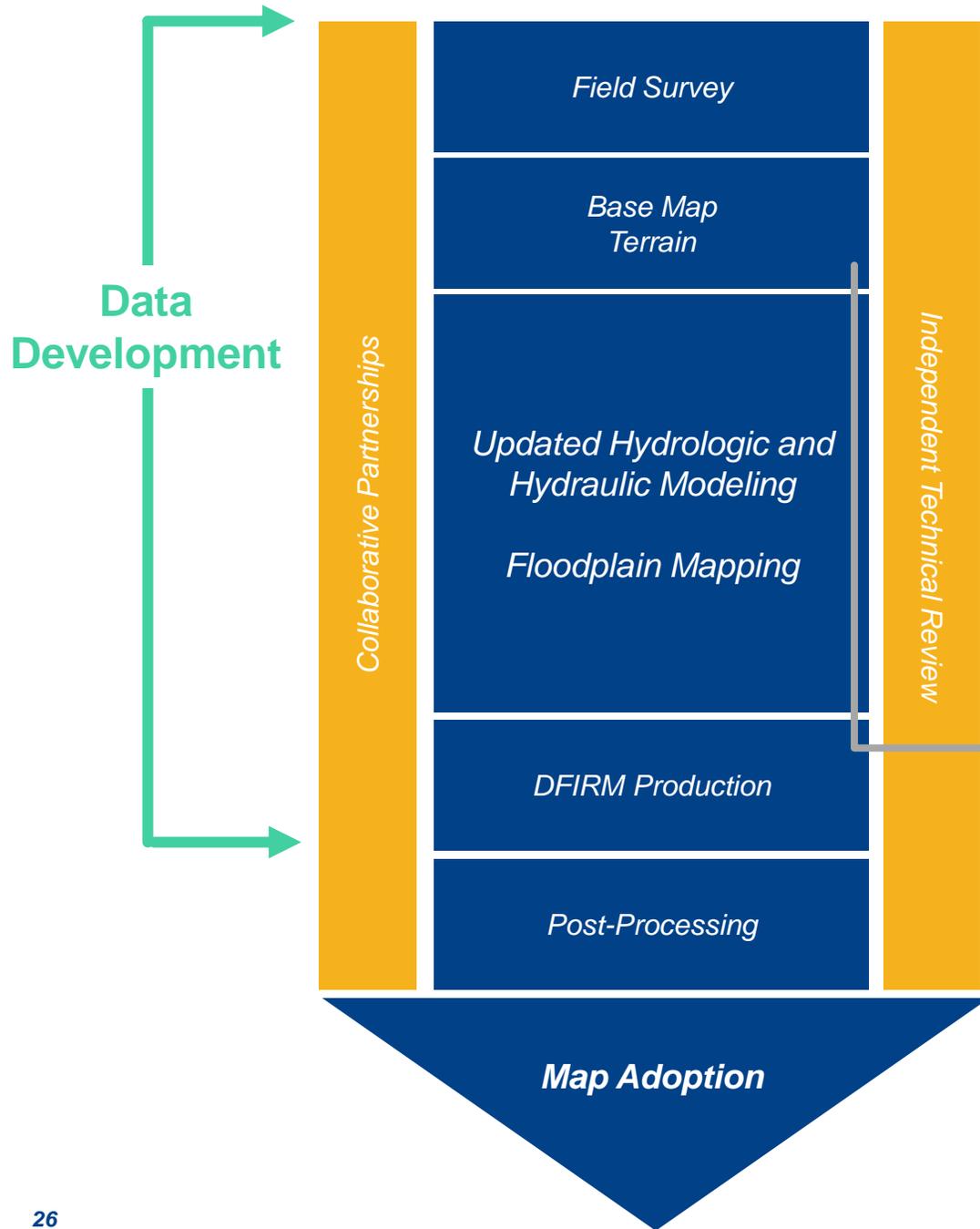


New Zone A

- Whiting:



Next Steps



Project Tasks

1. Field Survey
2. Base Map and Topography Preparation
3. Hydrologic and Hydraulic Modeling
4. Floodplain Mapping
5. DFIRM and FIS Production
6. Post-Preliminary

We are about to begin the modeling task



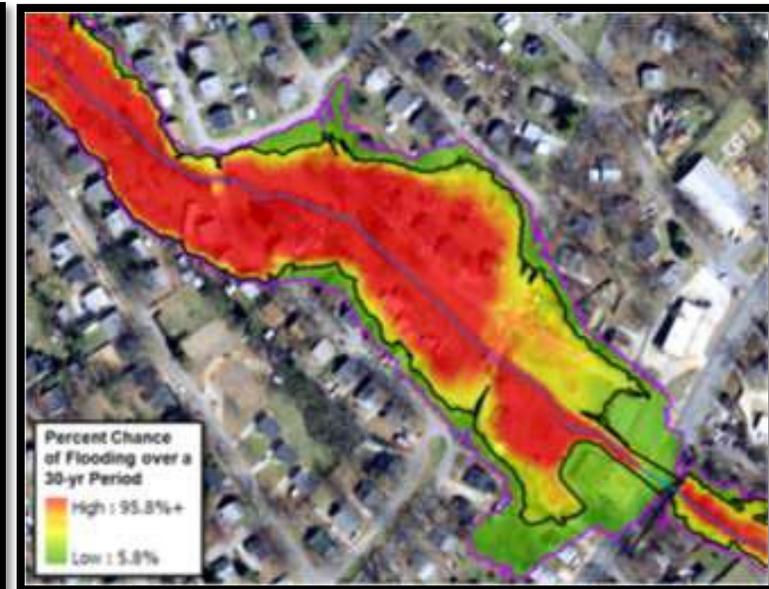
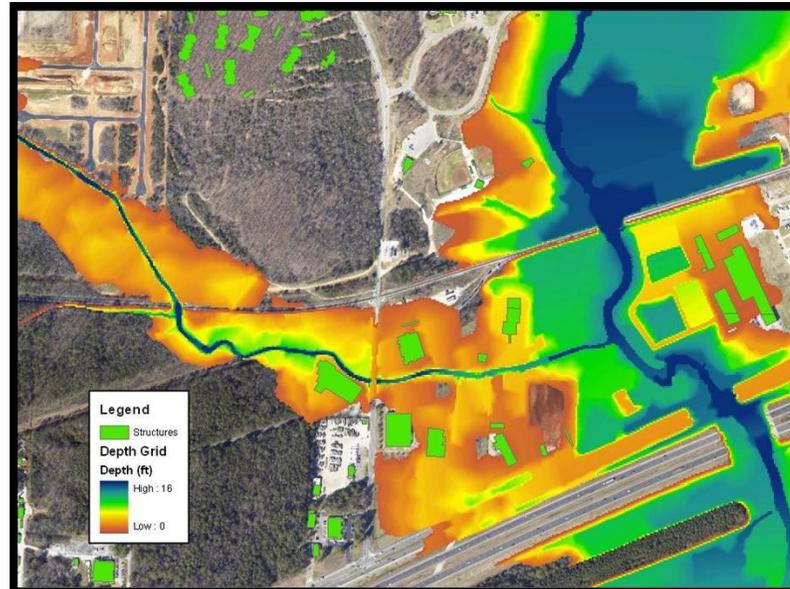
Our Next Steps:

- We will complete the engineering analysis previously described.
- Several rounds of reviews will be completed.
- 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:

- We will also be developing flood risk products for Jackson County as part of this project.



Project Timeline



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

Data Development Work:
[Now until the end of 2022]

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

**Flood Risk Review
Meeting:**

[~January 2023]

- *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

Floodplain Mapping Projects take time

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

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

Resources

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 floodplain data

Story Maps

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

Any Questions?
