



Dodge City, KS
Levee Physical Map Revision

Flood Risk Review

January 4, 2023



Agenda

1 Introductions

2 Project Overview

3 Mapping Review

4 Projected Timeline

5 Open Discussion



USGS, 2015

Introductions

FEMA Region VII

- Dawn Livingston, Project Manager
- Rick Nusz, Regional Engineer

Kansas Department of Agriculture-Div. of Water Resources

- Joanna Rohlf, Floodplain Mapping Coordinator
- Tara Lanzrath, NFIP Coordinator
- Bill Pace, Floodplain Mapping Specialist
- Patrick Bonine, Floodplain Mapping Specialist

Stantec

- Lori Schrader, Project Manager
- Will Zung, Levee Subject Matter Expert
- Matt Lurtz, Engineer



Meeting Objectives

- Review the draft flood hazard maps, to:
 - Communicate Dodge City's and Ford County's flood risk.
 - Show how KDA's and FEMA's engineering analysis is being applied.
 - This is the community's opportunity to identify any technical and non-technical issues they see on the maps that need additional review.
 - Understand options and decisions that need to be made by the community
- Outline next steps in this process and answer any questions about the timeline.

Project Review

Levee Physical Map Revision Project



Source: USGS, https://waterdata.usgs.gov/nwis/uv?site_no=07139500

Project Overview

- 2008 – Dodge City Levees Provisional Accreditation (PAL)
- 2009 – USACE produces new gage analysis for Arkansas River
- 2009 – New FIRM showing Dodge City Levees as Provisionally Accredited
- 2010 – PAL Expired
- 2013 – CTP produces new hydraulic analysis for the Arkansas River
- 2015 – LLPT Meeting
- 2016 – LAMP Plan complete with Natural Valley mapping (if no additional engineering/construction provided by City and/or County)
- 2019 – KDA initiates FY18 FIRM update study to incorporate the USACE hydrology study and CTP hydraulics study, implement the LAMP Plan of Natural Valley, and produce new FIRM panels

Project Overview

- 2020 – FRR Meeting to discuss results of FY18 Study and appropriateness of 2009 USACE Hydrology Study
- 2020 – KDA initiates a technical assistance project to develop an alternative hydrologic analysis for gages in Western Kansas with low and zero flow years
- 2021 – Technical Assistance results are shared with stakeholders determining a Mixed Distribution analysis is most appropriate for gages in Western Kansas with low and zero flows
- 2022 – KDA initiates FY21 FIRM update study to incorporate the Mixed Distribution hydrology study and update the hydraulics study, implement the LAMP Plan of Natural Valley, and produce new DFIRM

Analysis	1% Annual Chance Flow (cfs)	Difference
Effective FIS	49,900	NA
2009 USACE Study	33,190	-33.5%
Mixed Distribution	23,694	-52.5%

What's New in the Draft Data

- **Arkansas River**
 - Hydrology - Updated based on 2020 Mixed Distribution Hydrologic Analysis
 - Hydraulics - Updated based on Dodge City provided channel excavation and new hydrology
 - base flood elevations
 - floodway
 - floodplain boundaries
- **Natural Valley Analysis**
 - Dodge City Levee North and South Side (2D)
 - LFO-0006 (downstream of Dodge City)

Next Step

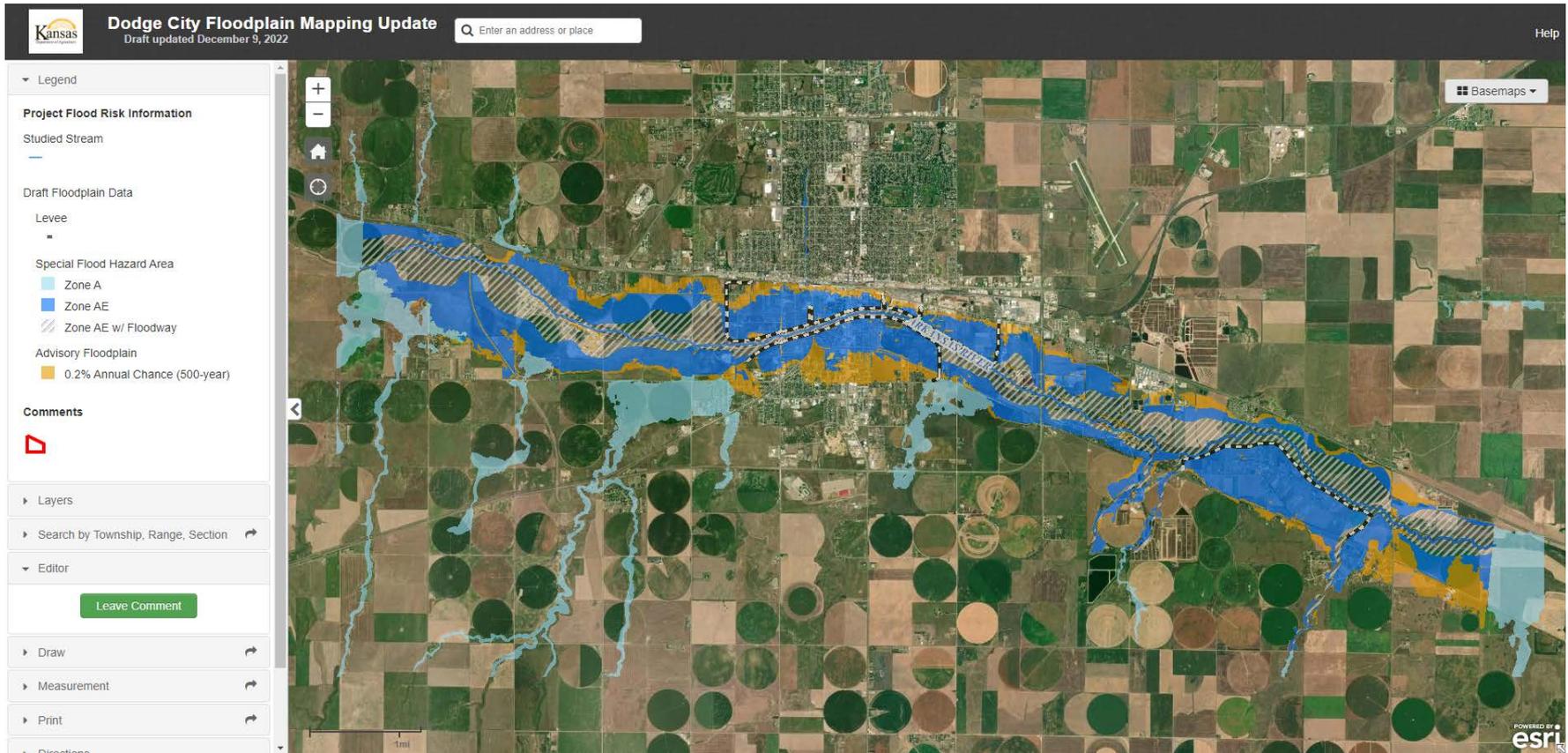
Review Draft Flood Hazard Maps

Review the Draft Flood Hazard Maps

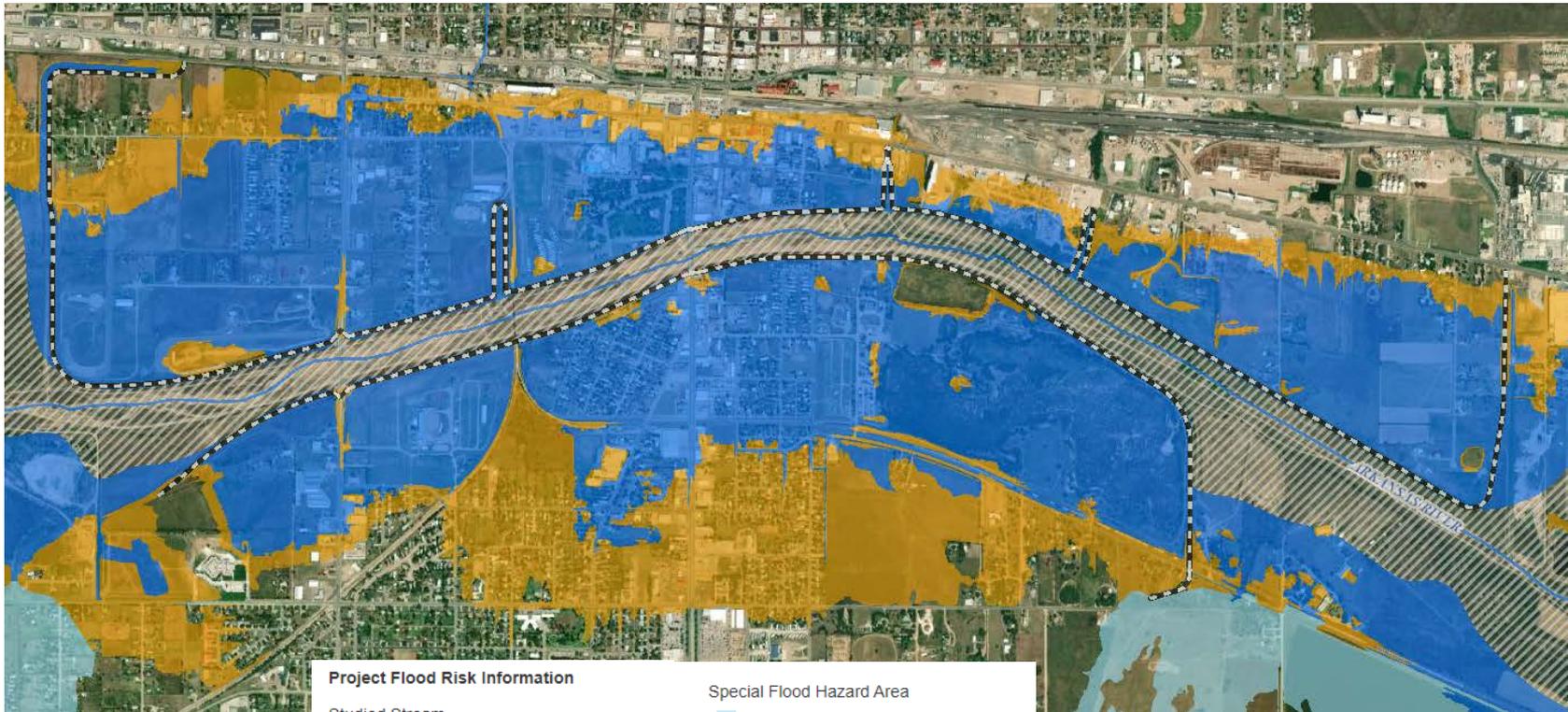
- This is the community's opportunity to review the proposed maps. Potential certification of data for the levee system will impact the timing of the project and final floodplain boundaries.
- Questions to consider:
 - What are the potential scenarios for the new floodplain boundaries?
 - What is the timeline for certification?
 - What data is available with the mapping?
 - How can elevations be determined?
 - Where can the maps be viewed?

Proposed Floodplain Mapping

KDA Web Map Viewer: <https://gis2.kda.ks.gov/gis/dodgecity/>



Proposed Natural Valley Mapping Dodge City North and South Levees



Project Flood Risk Information

Studied Stream



Draft Floodplain Data

Levee



Special Flood Hazard Area

Zone A

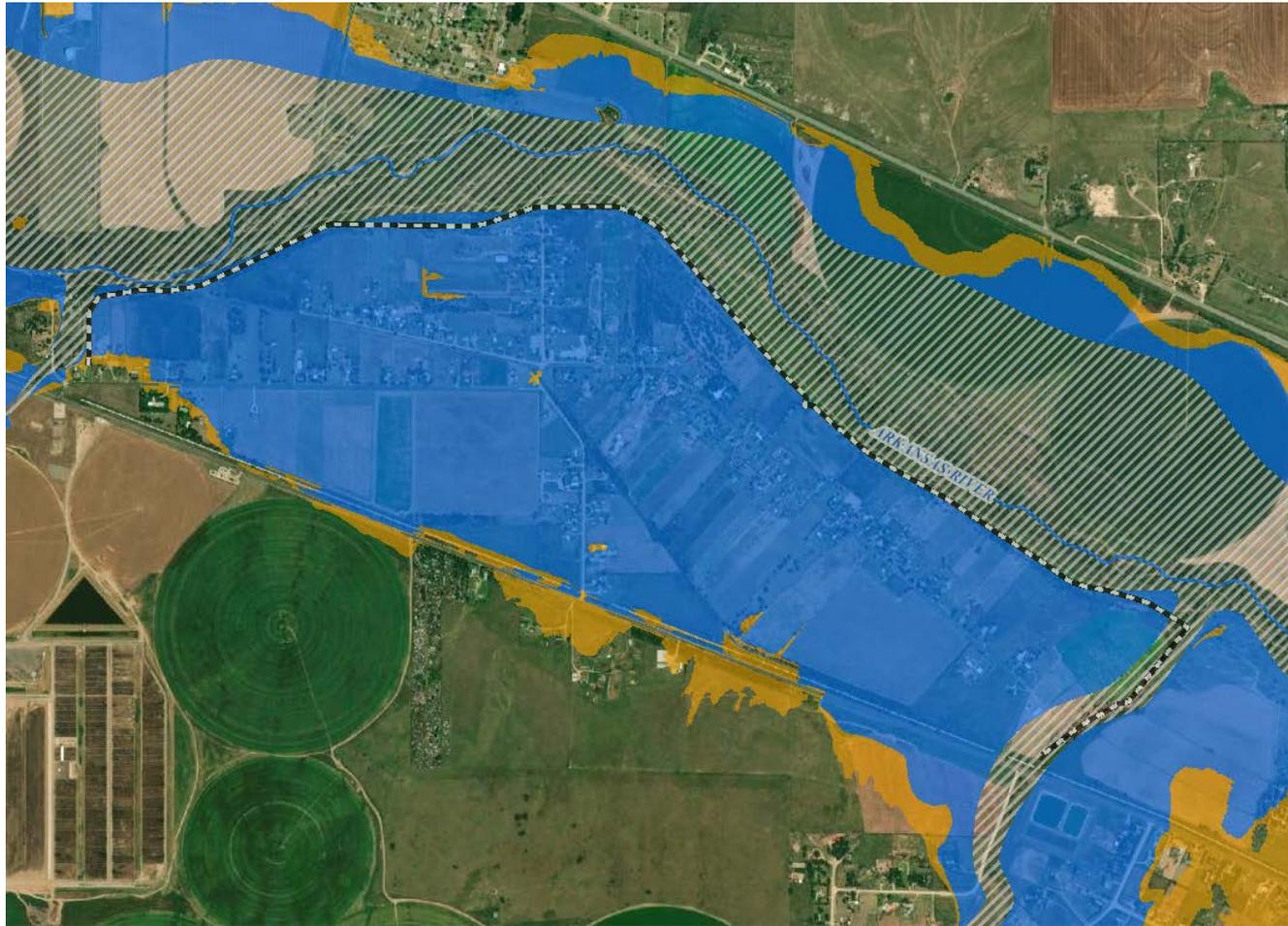
Zone AE

Zone AE w/ Floodway

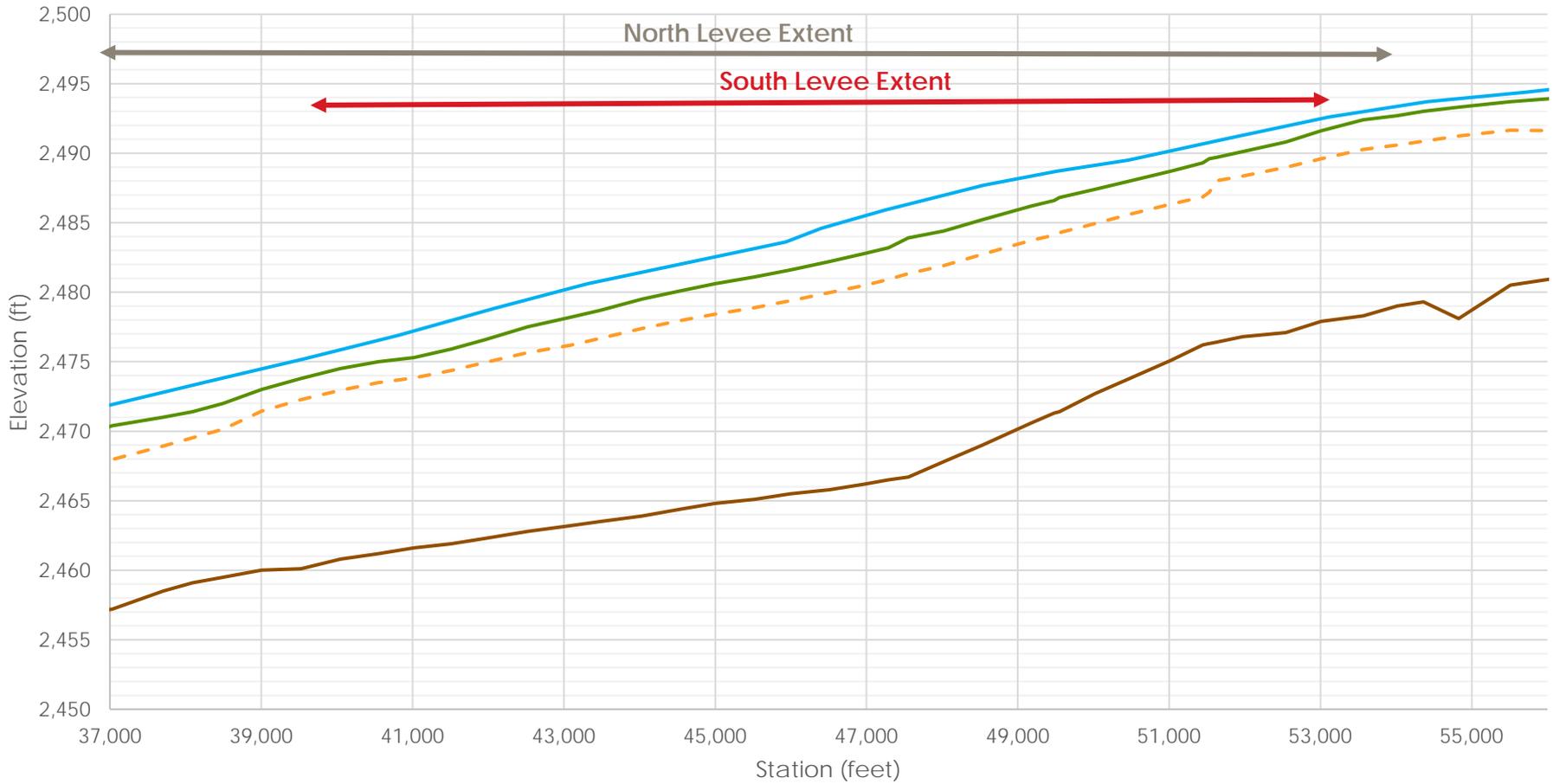
Advisory Floodplain

0.2% Annual Chance (500-year)

Proposed Natural Valley Mapping Downstream Non-accredited Levee (LFO-0006)



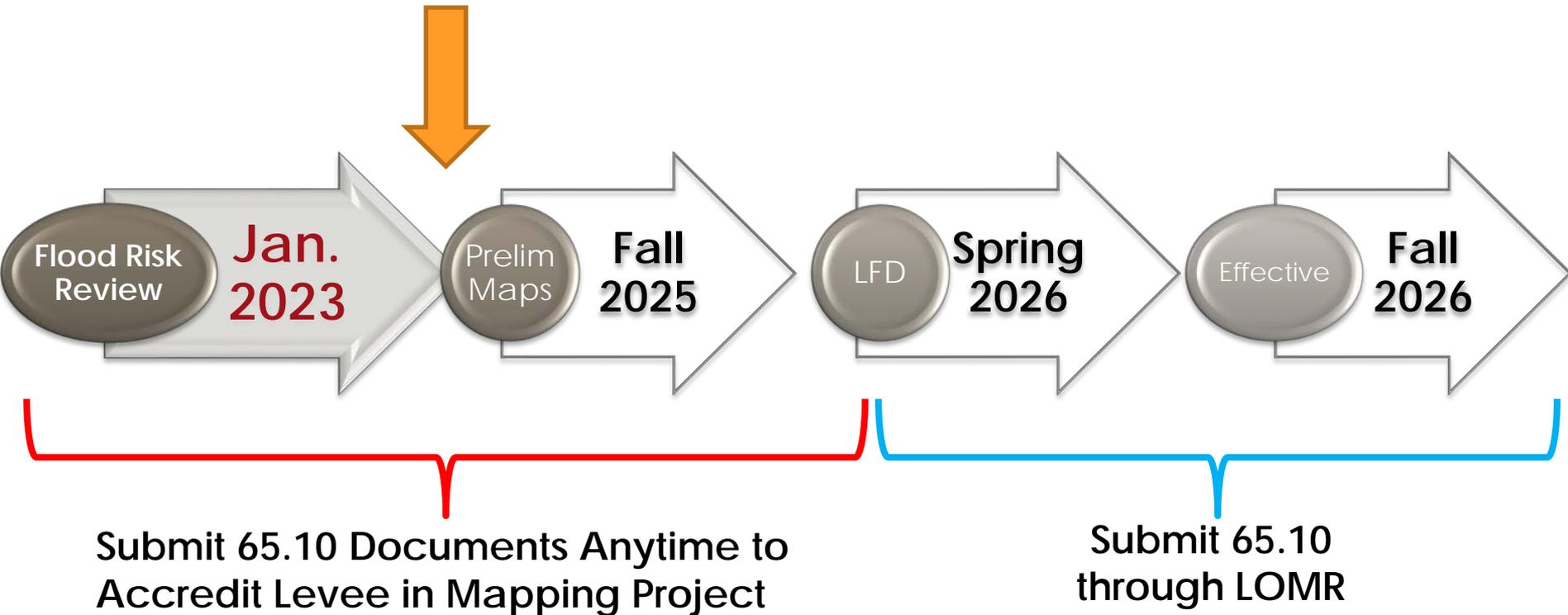
FY18 vs FY21 results



— Effective 1pct WSE — FY18 1pct WSE - - - FY21 1pct WSE — Ground

Review the Draft Flood Hazard Maps

Due to the efforts of Dodge City on levee certification, and also the upcoming Ford County floodplain mapping update, KDA has delayed the funding of preliminary map production until FY24



Questions and Answers

Have We Answered All Your Questions?

Project Web Map Demo:

<https://gis2.kda.ks.gov/gis/dodgecity/>