ILLINOIS

Illinois State Water Survey

PRAIRIE RESEARCH INSTITUTE

Embarras River Tributaries

Coles, Edgar, Cumberland, Clark, Jasper, Crawford, and Lawrence Counties, Illinois

FEMA Risk MAP
Project Initiation Community Coordination Call

May 13, 2025

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FEMA

Agenda

- Rollcall
- Introduction
- Project Objectives and Goals
- National Flood Insurance Program
- Hazard Mitigation
- Terminology
- Project Scope
  - Data Development Phase
  - Communication and Outreach
- Project Schedule
- Community Participation
- Questions & Contact Information

Roll Call

Crawford County*
- Village of Oblong
- Village of Stoy
- Village of Flat Rock

Coles County *
- Village of Ashmore*
- City of Charleston*
- Village of Lerna*

Clark County*
- City of Casey*
- City of Martinsville *
- Village of Westfield

Cumberland County *
- Village of Greenup*
- Village of Jewett
- Village of Montrose*
- Village of Toledo

Edgar County*
- Village of Kansas

Lawrence County
- City of Bridgeport
- City of Lawrenceville*
- City of Sumner*

Jasper County*
- Village of Hildago
- Village of Rose Hill
- Village of Willow Hill
- City of Newton*
- Village of Sainte Marie*
- Village of Yale

Other Agencies
- FEMA
- IDNR-OWR
- IEMA
- Cole County Regional Planning Development Commission
- Greater Wabash Regional Planning Commission

*Participates in the National Flood Insurance Program (NFIP)

Introduction

Introduction

Who We Are

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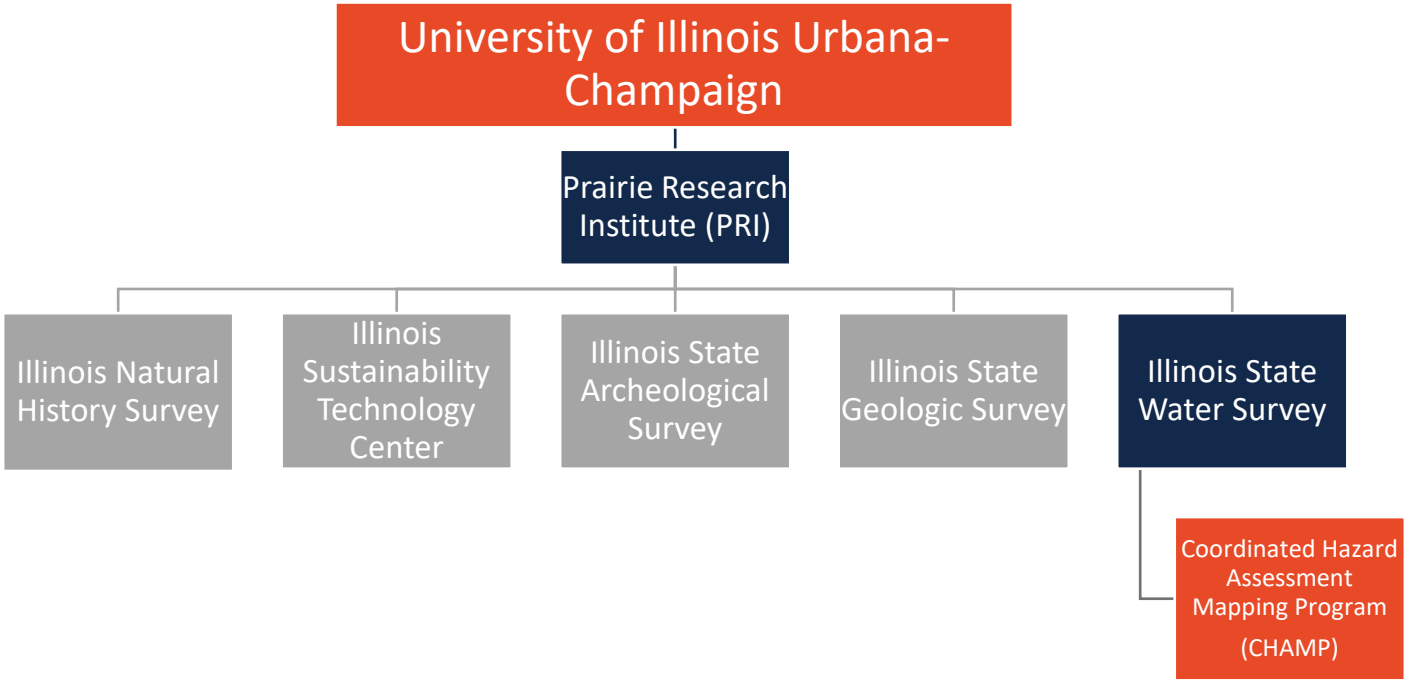

https://www.illinoisfloodmaps.org/

https://www.isws.illinois.edu/champ

Introduction

Our Partners

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FEMA

ISWS is a Cooperating Technical Partner (CTP) with the Federal Emergency Management Agency. (FEMA)

FEMA
The Cooperating Technical Partners (CTP) Program

IDNR-OWR

ISWS partners with The Illinois Department of Natural Resources-Office of Water Resources (IDNR-OWR). Together we prioritize Illinois floodplain studies and mapping projects.

Illinois Department of Natural Resources

Your Community

ISWS provides ongoing engagement with state and local officials and watershed stakeholders to reduce flood risk.

Introduction

What We Do

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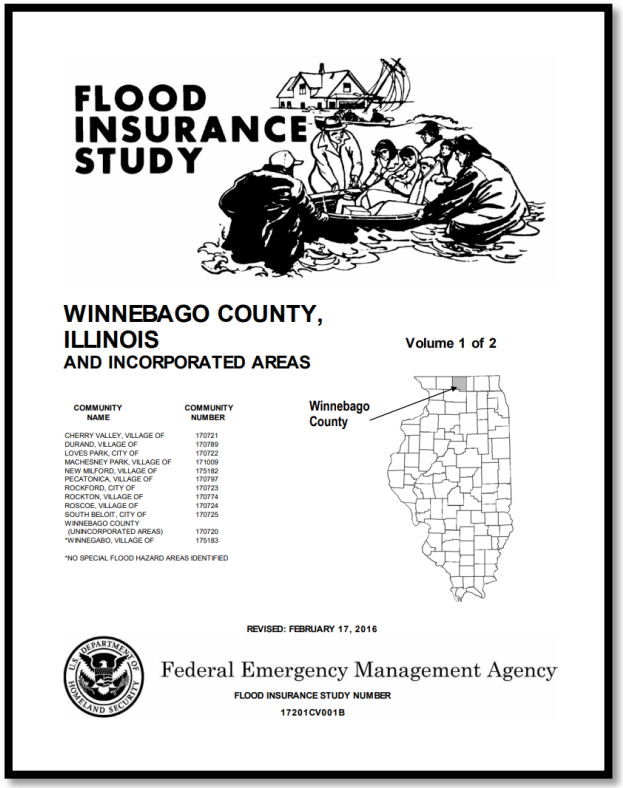
PRODUCE FLOOD STUDIES


FLOOD INSURANCE STUDY

WINNEBAGO COUNTY, ILLINOIS
AND INCORPORATED AREAS

Volume 1 of 2

COMMUNITY NAME	COMMUNITY NUMBER
CHERRY VALLEY, VILLAGE OF	170721
DURAND, VILLAGE OF	170789
LOVES PARK, CITY OF	170722
MACHESNEY PARK, VILLAGE OF	171009
NEW MILFORD, VILLAGE OF	175182
PECATONICA, VILLAGE OF	170797
ROCKFORD, CITY OF	170723
ROCKTON, VILLAGE OF	170774
ROSCOE, VILLAGE OF	170724
SOUTH BELOIT, CITY OF	170725
WINNEBAGO COUNTY (UNINCORPORATED AREAS)	170720
*WINNEGABO, VILLAGE OF	175183

*NO SPECIAL FLOOD HAZARD AREAS IDENTIFIED

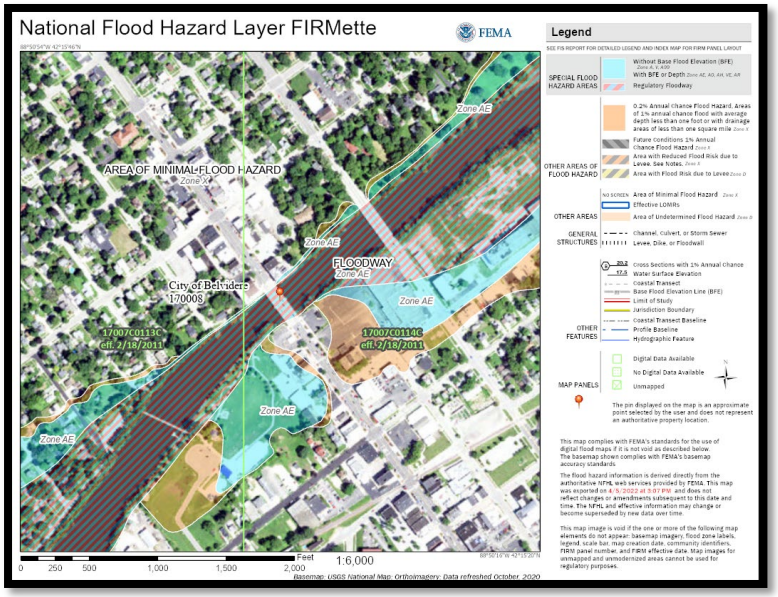
Winnebago County

REVISED: FEBRUARY 17, 2016

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
17201CV001B

GENERATE FLOODPLAIN MAPS



Introduction

How We Are Funded

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NATIONAL FLOOD INSURANCE PROGRAM

FEMA administers the **National Flood insurance Program** (NFIP).

The **Risk Mapping, Assessment, and Planning** (Risk MAP) Program is the FEMA process used to implement NFIP floodplain studies and mapping projects.

FEMA

The Cooperating Technical Partners (CTP) Program

FEMA provides grants to Cooperating Technical Partners to complete Risk MAP work.

Introduction

What We Do

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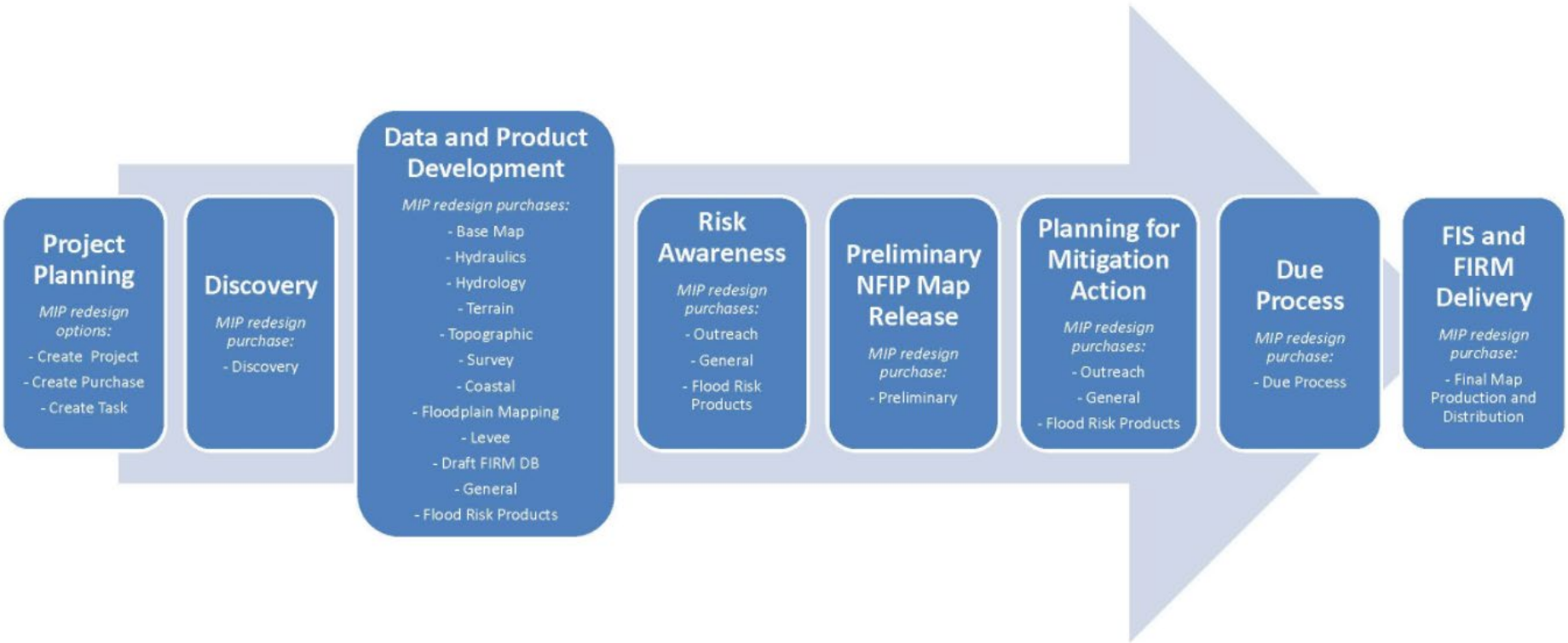
INFORM RESIDENTS AND COMMUNITIES about flood hazards in their communities.

Project Objectives and Goals

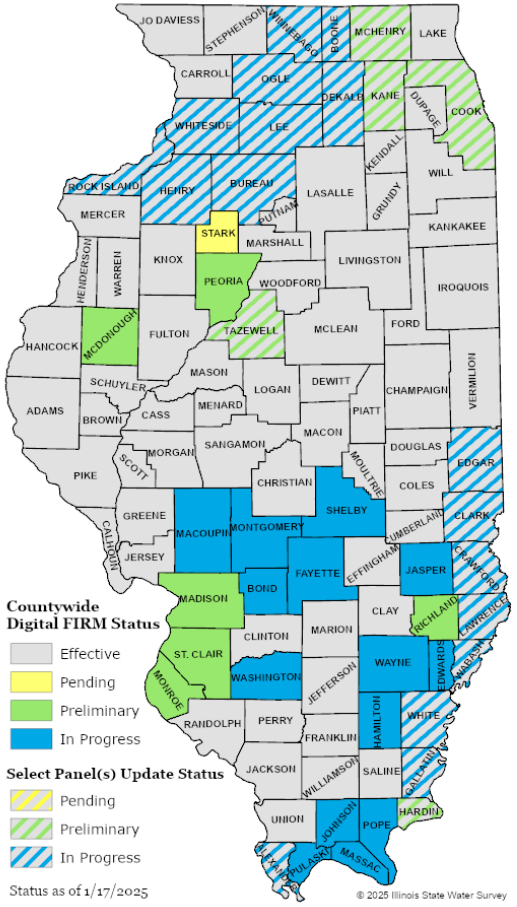
FEMA National Objectives and Goals



State Objectives and Goals

Update Flood Risk with Hydrologic and Hydraulic Analyses for Select Streams

Update Digital Floodplain Maps



https://www.illinoisfloodmaps.org/

Update Flood Risk Data and Maps

Effective Flood Insurance Rate Map (FIRM Dates)

Coles County: 07/18/2011 (Digital)

Edgar County: 01/19/2011(Digital)

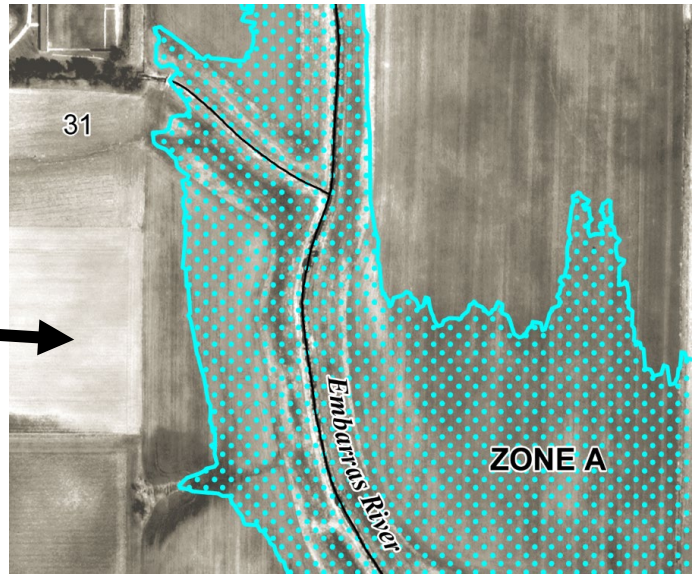
Cumberland County: 02/4/2011 (Digital)

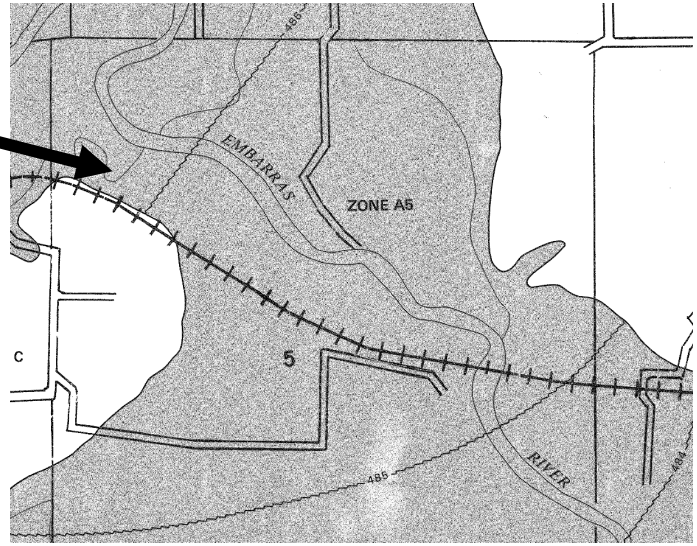
Clark County: 08/02/2007 (Digital)

Jasper County: 1/17/1985 (Paper-based)

Crawford County: 06/02/2011 (Digital)

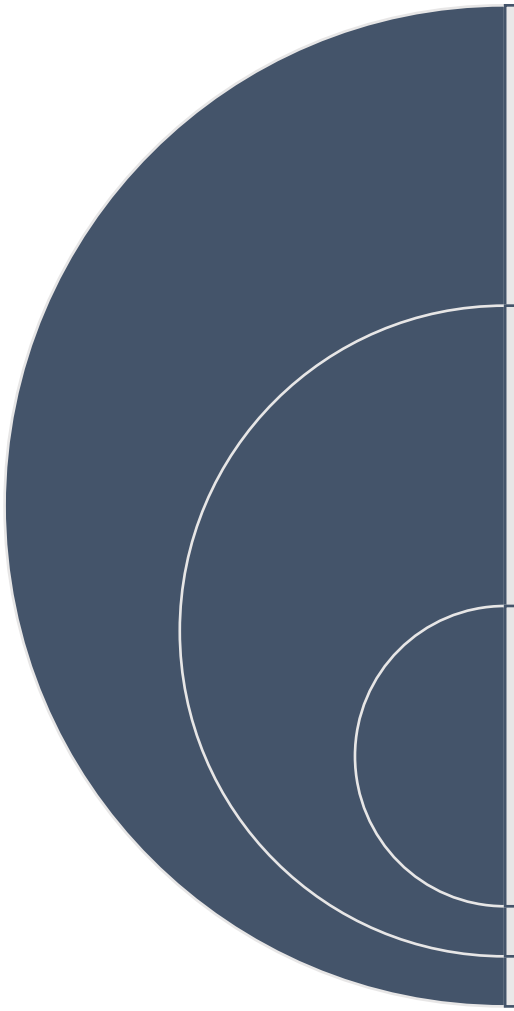
Lawrence County: 7/18/2011 (Digital)





National Flood Insurance Program

National Flood Insurance Program



The NFIP is a voluntary program based on a mutual agreement between the Federal government and a community.

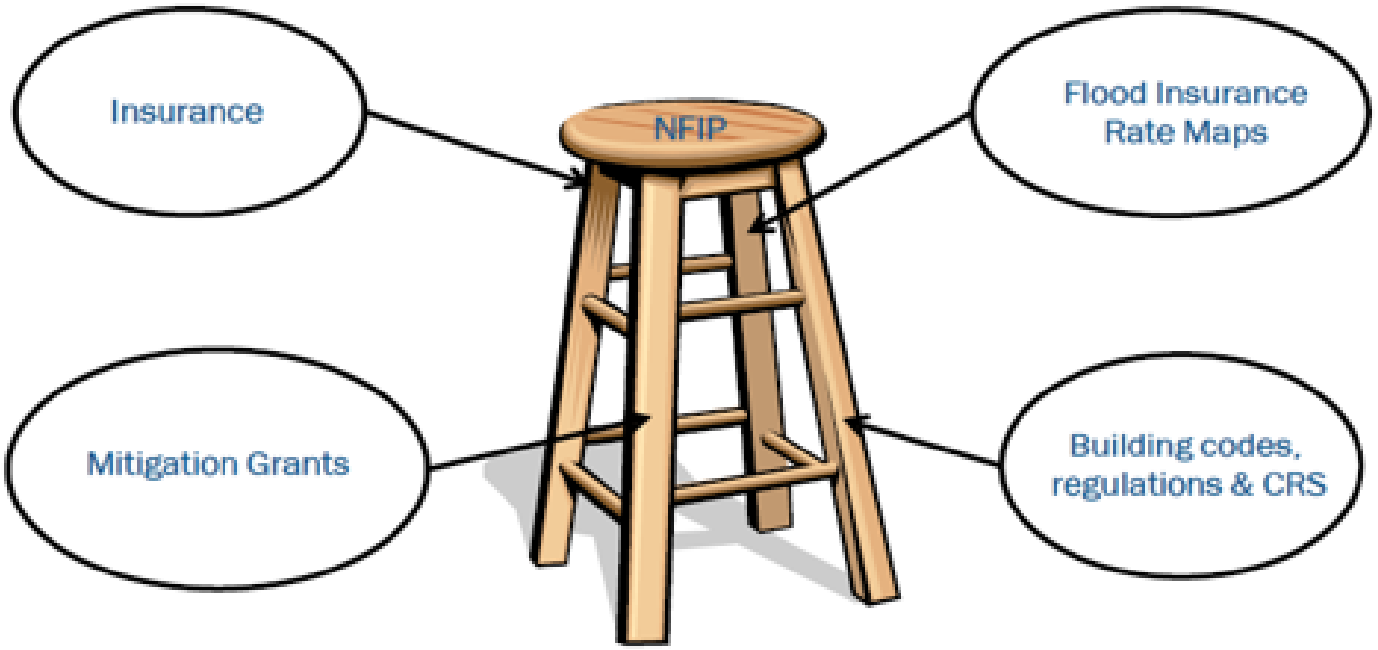
In exchange for adopting and enforcing a floodplain management ordinance, Federally-backed flood insurance is made available to property owners throughout the community.

Erin Conley, NFIP State Coordinator

erin.c.conley@Illinois.gov

National Flood Insurance Program

Three +1 Related Program Areas



NFIP Participating Communities

https://www.fema.gov/cis downloaded 02/13/2025

Community	CAC Date	CAV Date	No. Flood Policies	Total Coverage, $	Total Claims Since 1978	Total Paid Since 1978, $	Rep Loss Structures
OAKLAND, CITY OF	06/27/2022	09/12/1994	0	-	-	-	0
ASHMORE, VILLAGE OF	-	-	-	-	-	-	-
CHARLESTON, CITY OF	-	12/18/2014	13	2,220,000	16	184,774	4
LERNA, VILLAGE OF	-	-	-	-	-	-	-
COLES COUNTY*	-	1/22/2006	12	2,190,000	10	350,488	2
EDGAR COUNTY*	-	-	-	-	0	7,578	-
CASEY, CITY OF	-	-	-	350,000	0	0	-
MARTINSVILLE, CITY OF	-	-	0	0	0	0	0
CLARK COUNTY*	-	3/22/2005	4	331,000	18	208,531	0

* Unincorporated Areas

NFIP Participating Communities

https://www.fema.gov/cis downloaded 02/13/2025

Community	CAC Date	CAV Date	No. Flood Policies	Total Coverage, $	Total Claims Since 1978	Total Paid Since 1978, $	Rep Loss Structures
GREENUP, VILLAGE OF	-	-	0	0	0	0	0
MONTROSE, VILLAGE OF	-	-	-	-	-	-	-
CUMBERLAND COUNTY*	-	-	2	418,000	5	17,809	0
STE. MARIE, VILLAGE OF	-	-	0	0	0	0	0
NEWTON, CITY OF	9/18/2000	11/24/1992	1	350,000	7	114,651	4
JASPER COUNTY*	-	-	2	99,000	2	32,000	0
CRAWFORD COUNTY*	-	3/23/2005	12	1,787,000	9	118,819	6
SUMNER, CITY OF							
LAWRENCEVILLE, CITY OF	1/22/22019	-	6	588,000	13	129,757	6
LAWRENCE COUNTY*	-	-	0	937,000	3	17,133	0

* Unincorporated Areas

Hazard Mitigation

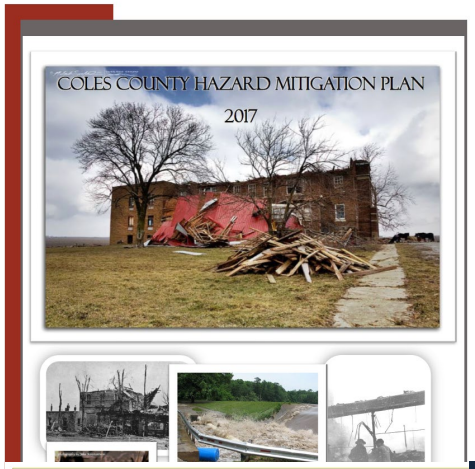
Hazard Mitigation- FEMA Disaster Declarations

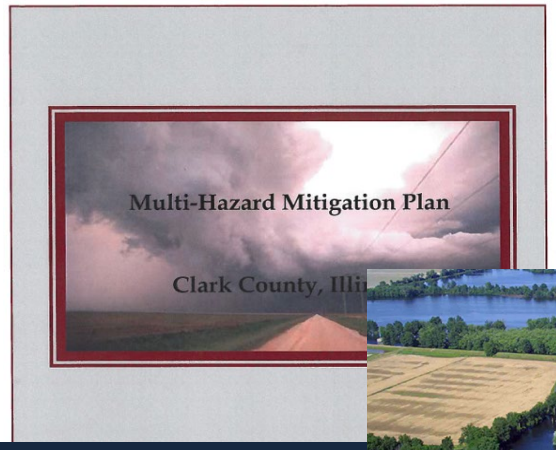
2002 to present

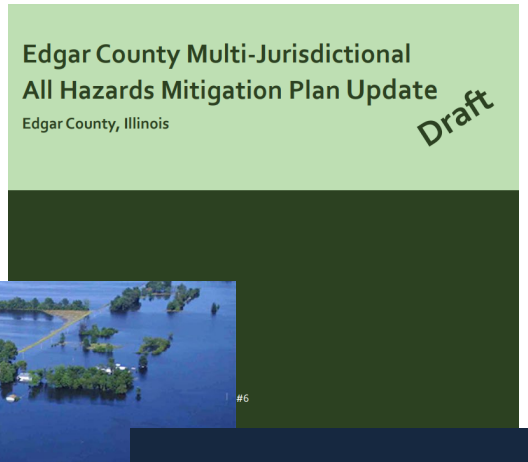
https://www.fema.gov/disaster/1025/designated-areas

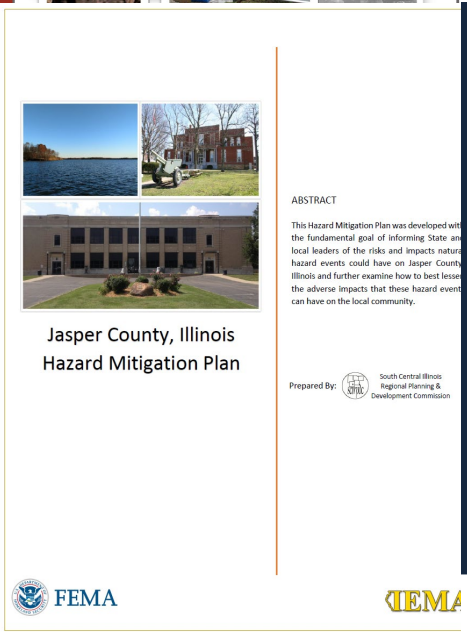
Date of Declaration	Disaster Number	Disaster Description	Type of Assistance	Designated Counties
2002-05-21	DR-1416-IL	Severe Storms, Tornadoes and Flooding	Individual	Coles, Cumberland, Jasper, Crawford, Lawrence
			Public	Cumberland, Jasper, Lawrence
2008-06-24	DR-1771-IL	Severe Storms and Flooding	Individual and Public	Douglas, Coles, Cumberland, Jasper, Crawford, Lawrence
2011-06-07	DR-1991-IL	Severe Storms and Flooding	Individual & Public	Lawrence
2013-05-10	DR-4116-IL	Severe Storms, Straight-line winds and Flooding	Individual	Crawford
			Public	Crawford
2020-03-26	DR-4489-IL	COVID-19 Pandemic	Individual & Public	Coles, Cumberland, Jasper, Crawford, Lawrence
2023-08-15	DR-4728-IL	Severe Storms and Flooding	Public	Coles, Cumberland

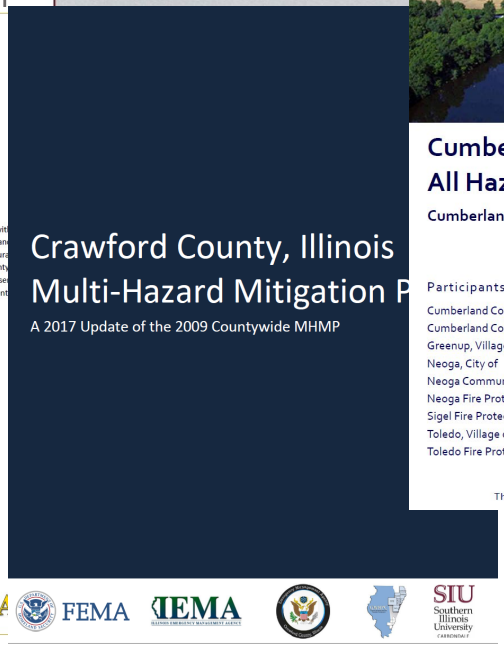
Hazard Mitigation Plans

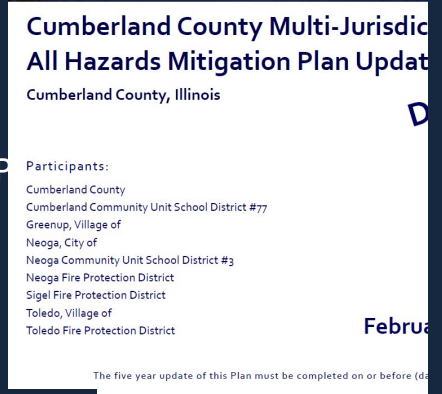


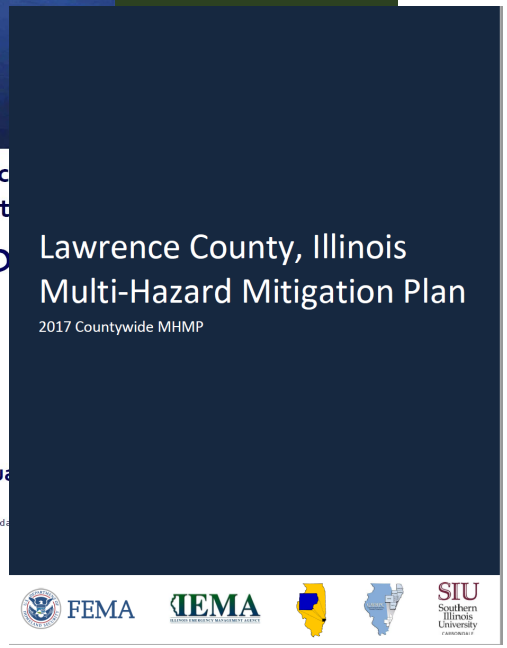












Hazard Mitigation Plans

County	Plan date
Coles	In review
Clark	In review
Crawford	In review
Cumberland	4/4/2028
Edgar	8/30/2027
Jasper	6/15/2026
Lawrence	In review

HMP General Goals

Goal 1: Lessen the impacts of hazards to new and existing infrastructure.
- retrofitting critical facilities and structures

Goal 2: Create new or revise existing plans/maps for study area
- integrate floodplain management ordinances with mitigation plan and future land use plans as part of the 5-year update;
- review and update other existing community/county plans;
- support compliance with NFIP

Goal 3: Increase public awareness and education of natural hazard events and incorporate natural hazard mitigation in local government plans and regulations
- develop web-based and paper materials to educate public
- workshops and planning guides

Terminology

What is a Special Flood Hazard Area?

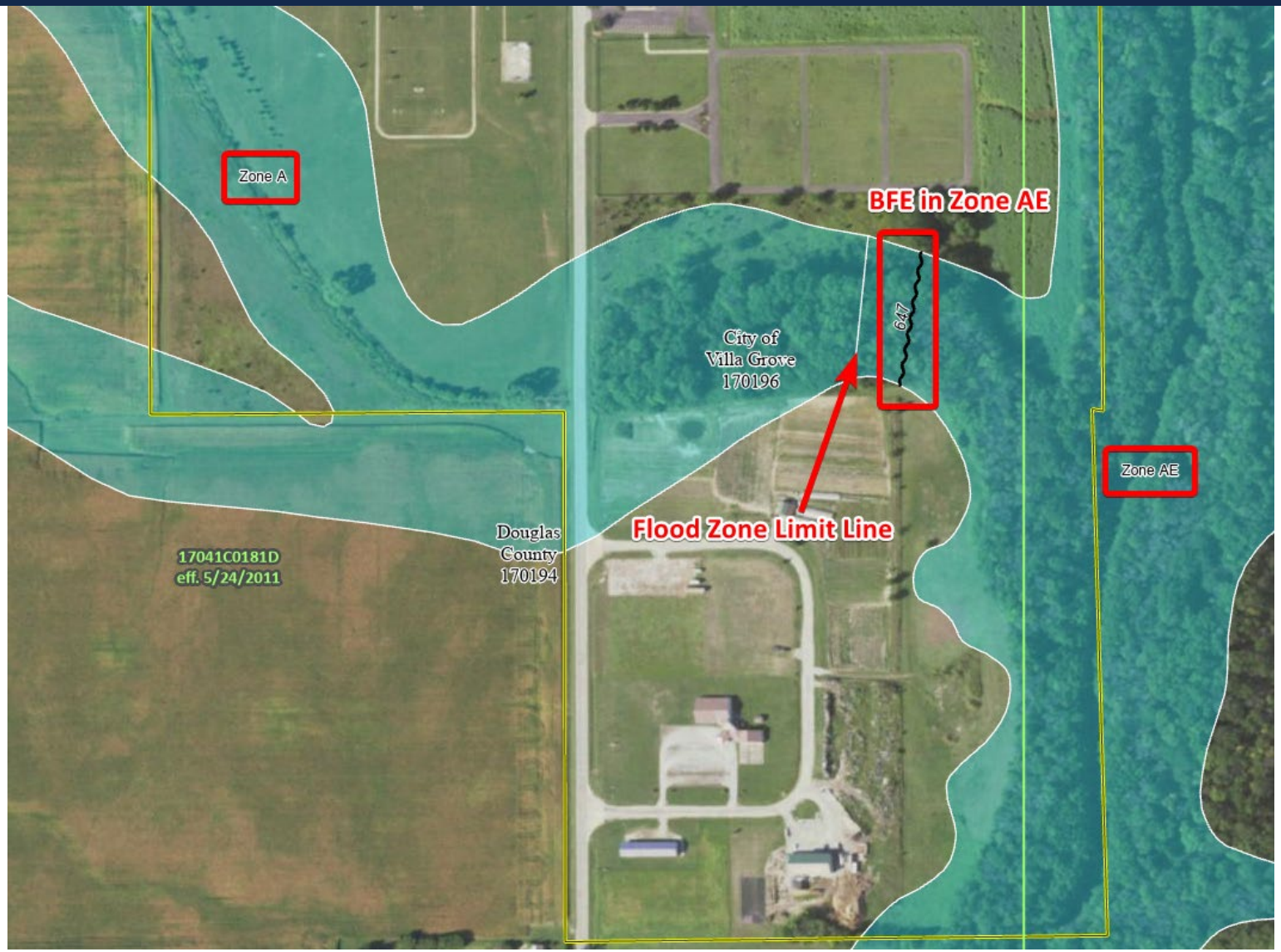
The FEMA Special Flood Hazard Area (SFHA) is the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year.

Riverine hydraulic analysis typically results in SFHA designation as **Zone A** or **Zone AE**, based on the analysis level deemed appropriate for the study area.

The Base Flood Elevation (BFE) is the elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year.

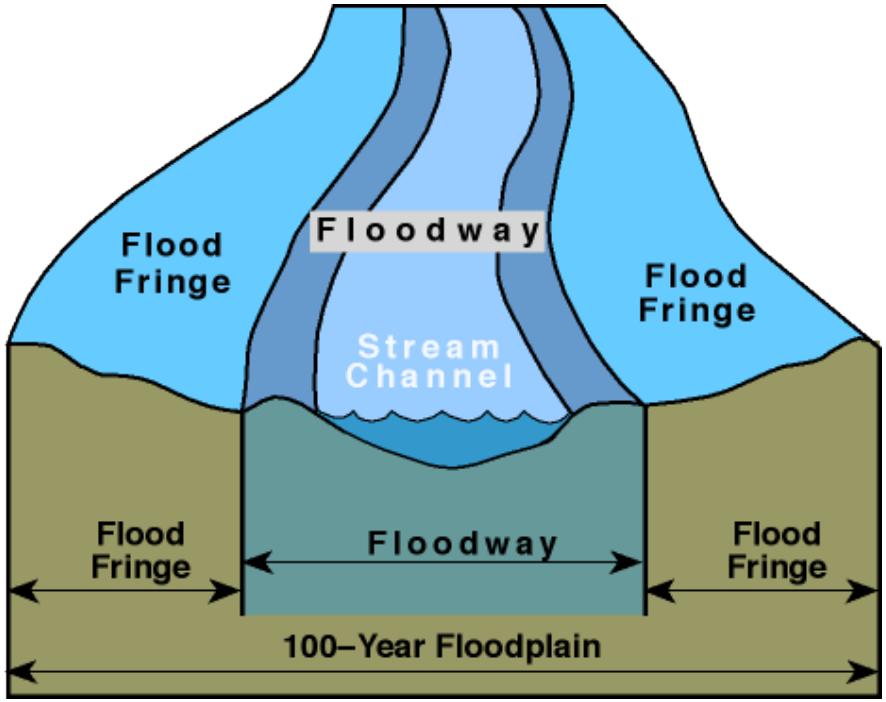
Zone A	Areas subject to inundation by the 1-percent-annual-chance flood event. **NO** Base Flood Elevations are shown.
Zone AE	Areas subject to inundation by the 1-percent-annual-chance flood event. Base Flood Elevations **ARE** shown.

What is a Special Flood Hazard Area?



Floodway

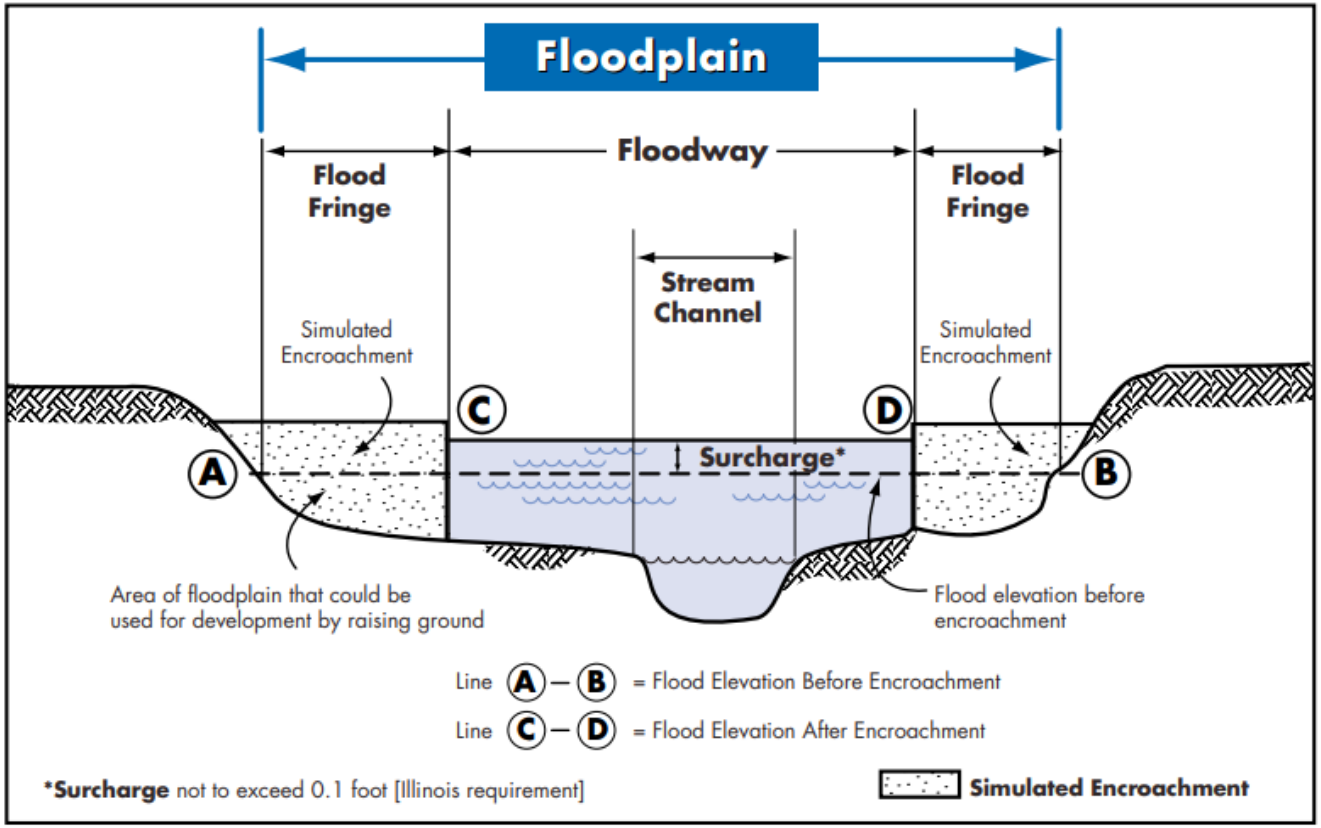
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.



Illinois Floodways

Illinois Floodway criteria:

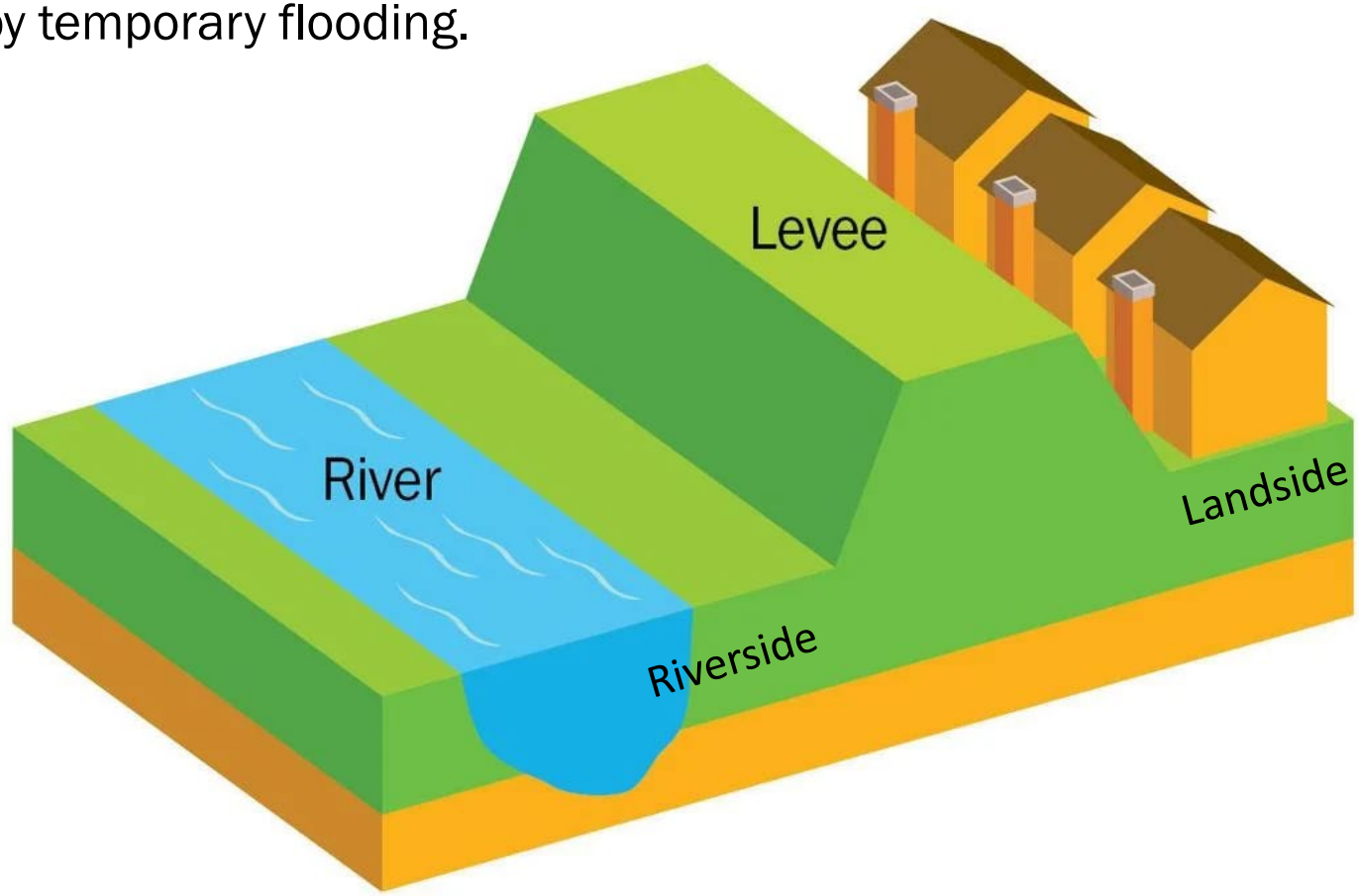
- 0.1-foot maximum surcharge
- Max 10% reduction is storage volume
- Max 10% increase in flow velocity



Credit: https://www2.illinois.gov/dnr/WaterResources/Documents/Resman_ILFPMQuickGuide.pdf

Levee - Definition

Per 44 CFR 59.1, a **levee** is a manmade structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water to reduce flood hazards posed by temporary flooding.



Levees - Accreditation

An **Accredited Levee System** is a system that FEMA has determined meets requirements of the NFIP regulations as cited in the Code of Federal Regulations (CFR) at Title 44, Chapter 1, Section 65.10 (44 CFR 65.10) and that FEMA has recognized on a FIRM as reducing the flood hazards posed by a base (1-percent-annual-chance) flood.

This determination is based on the submittal of data and documentation as required by 44 CFR 65.10. The area landward of an accredited levee system is shown as Zone X (shaded) on the FIRM except for areas of residual flooding, such as ponding areas, which are shown as SFHA.

Project Scope

Previous Projects – Wabash, Little Wabash

Embarras River Watershed and Completed Work

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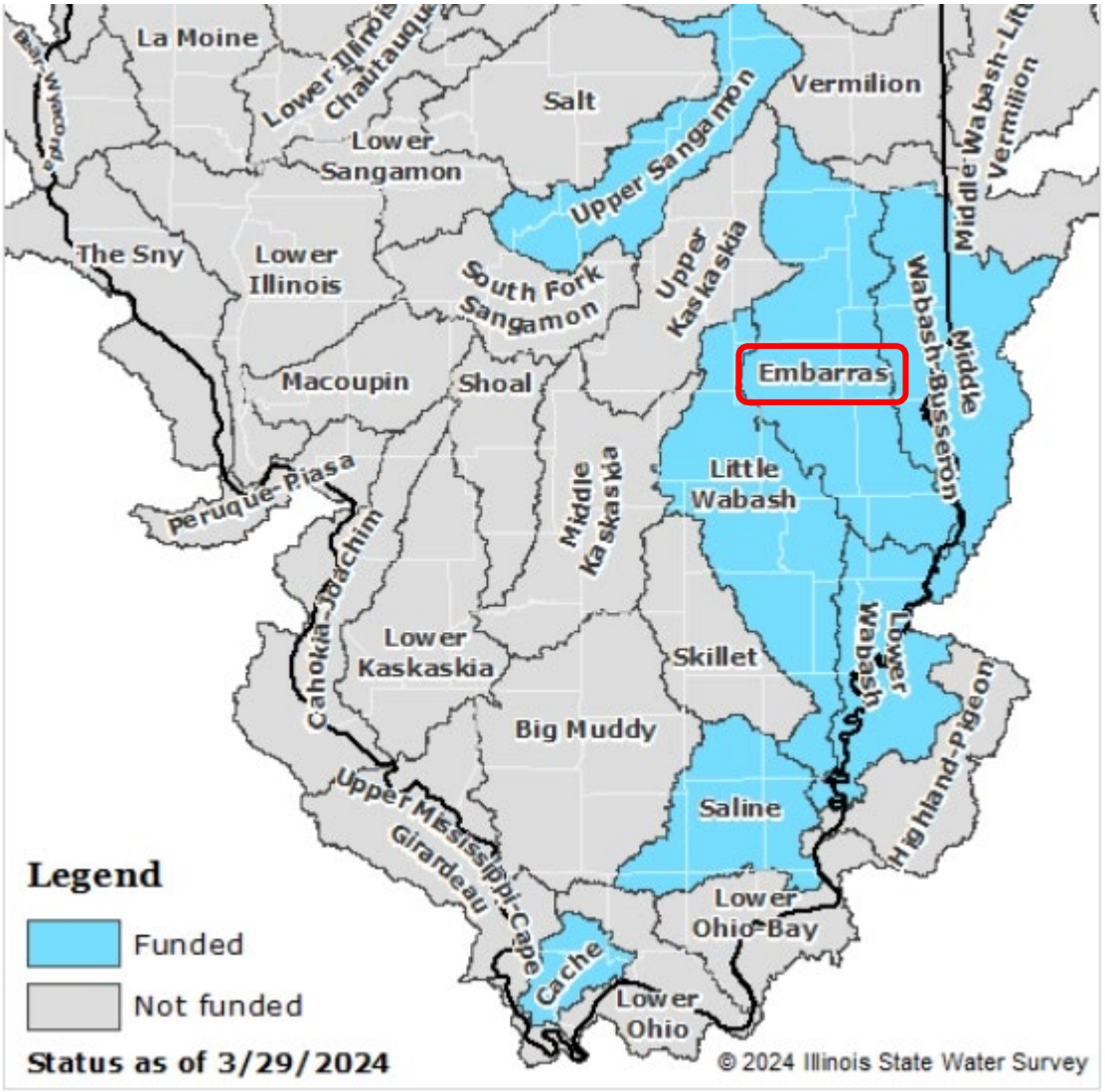
The Embarras River watershed is the last piece in the mapping puzzle for many counties like Clark, Coles, Crawford, Edgar, Jasper and Lawrence Counties.

It consists of two projects:

1. *Embarras River Mainstem (FFY23)*, and
2. *Embarras Tributaries (FFY24)*



Project Scope

Embarras River Tributaries

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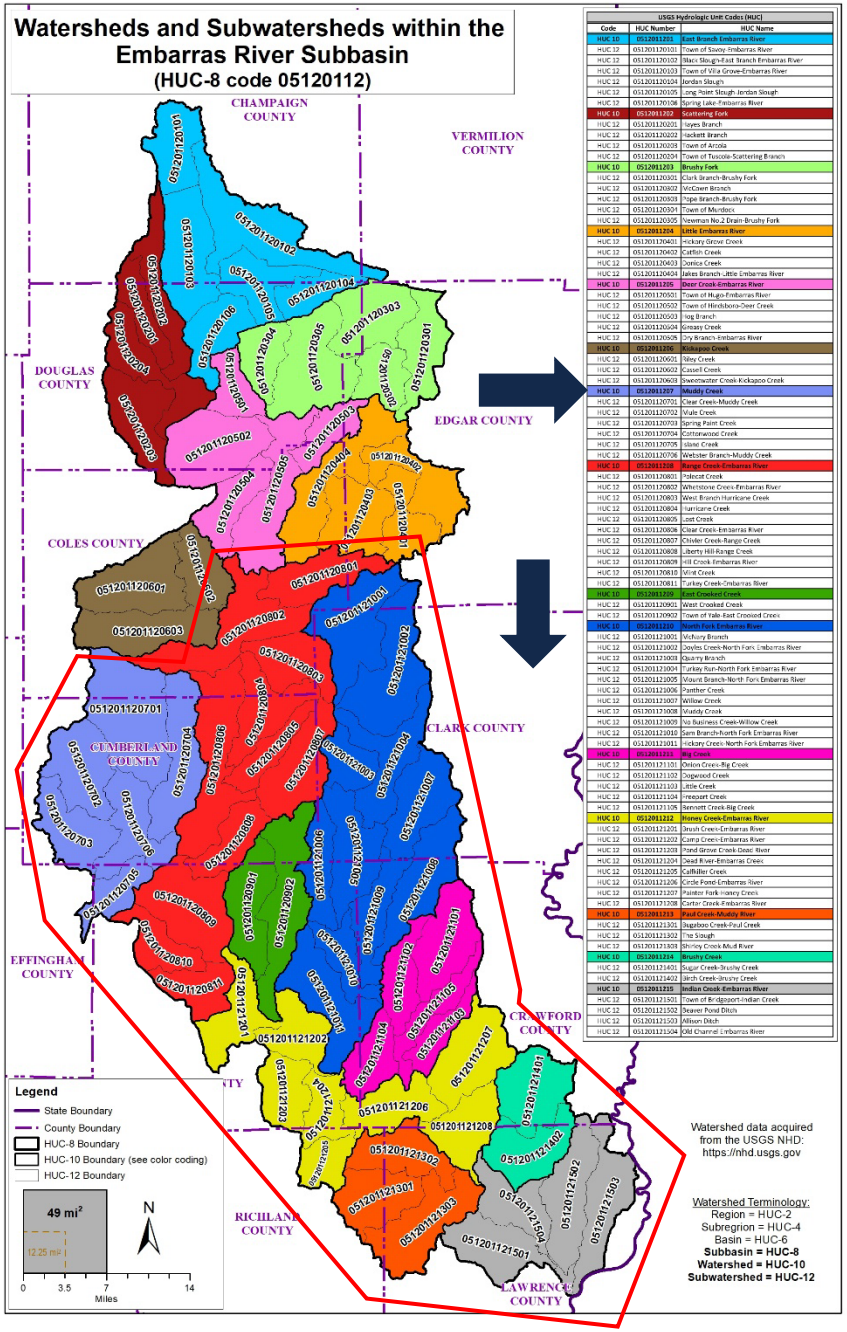
https://illinoisfloodmaps.org/images/wsEmbarrasRiver_HUC8_1012.jpg

- 9 of 15 Tributary watersheds will be studied
- 2024 – 2027 H&H Data Development for Tributary watersheds and sub-watersheds in Clark, Coles, Crawford, Cumberland, Edgar, Jasper and Lawrence Counties
- Extent: Muddy Creek Watershed (lavender-colored) downstream to Indian Creek Watershed (gray-colored)



Project Scope

Big Picture

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Zone A

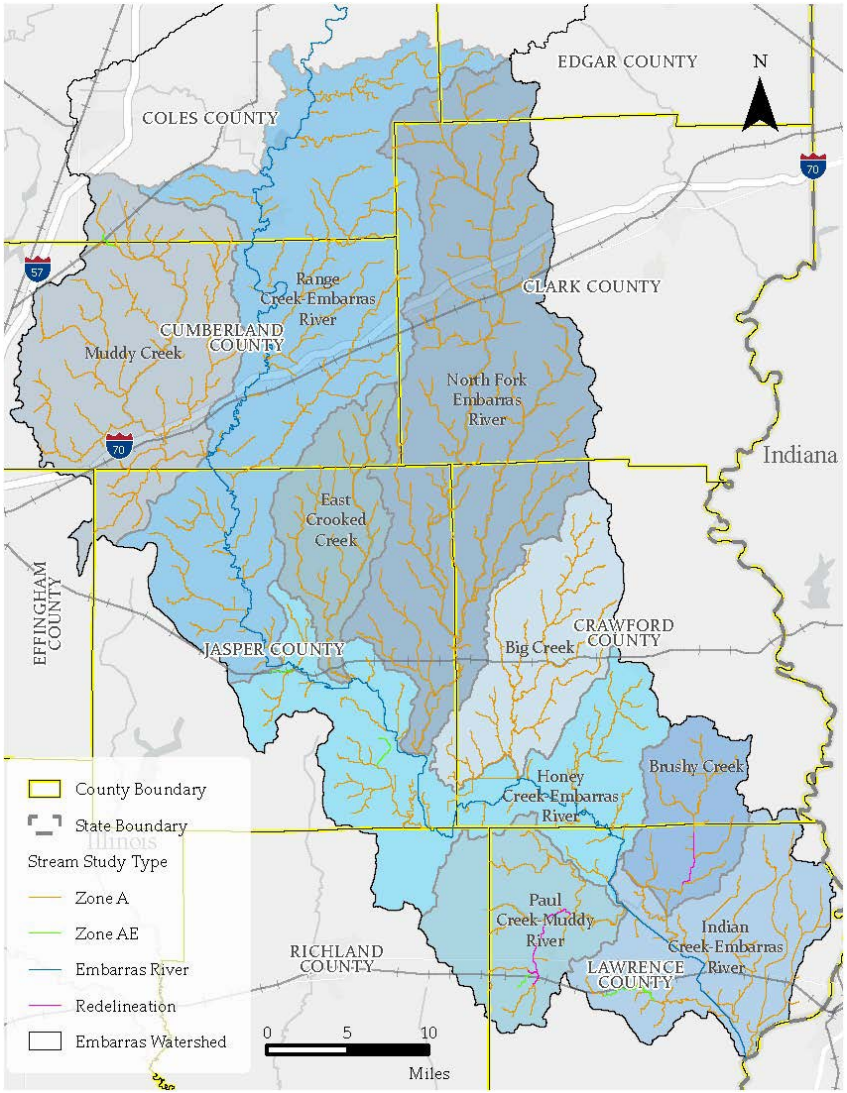
- 592 miles new studies
- 443 miles updated studies
- 1035 miles subtotal

Zone AE

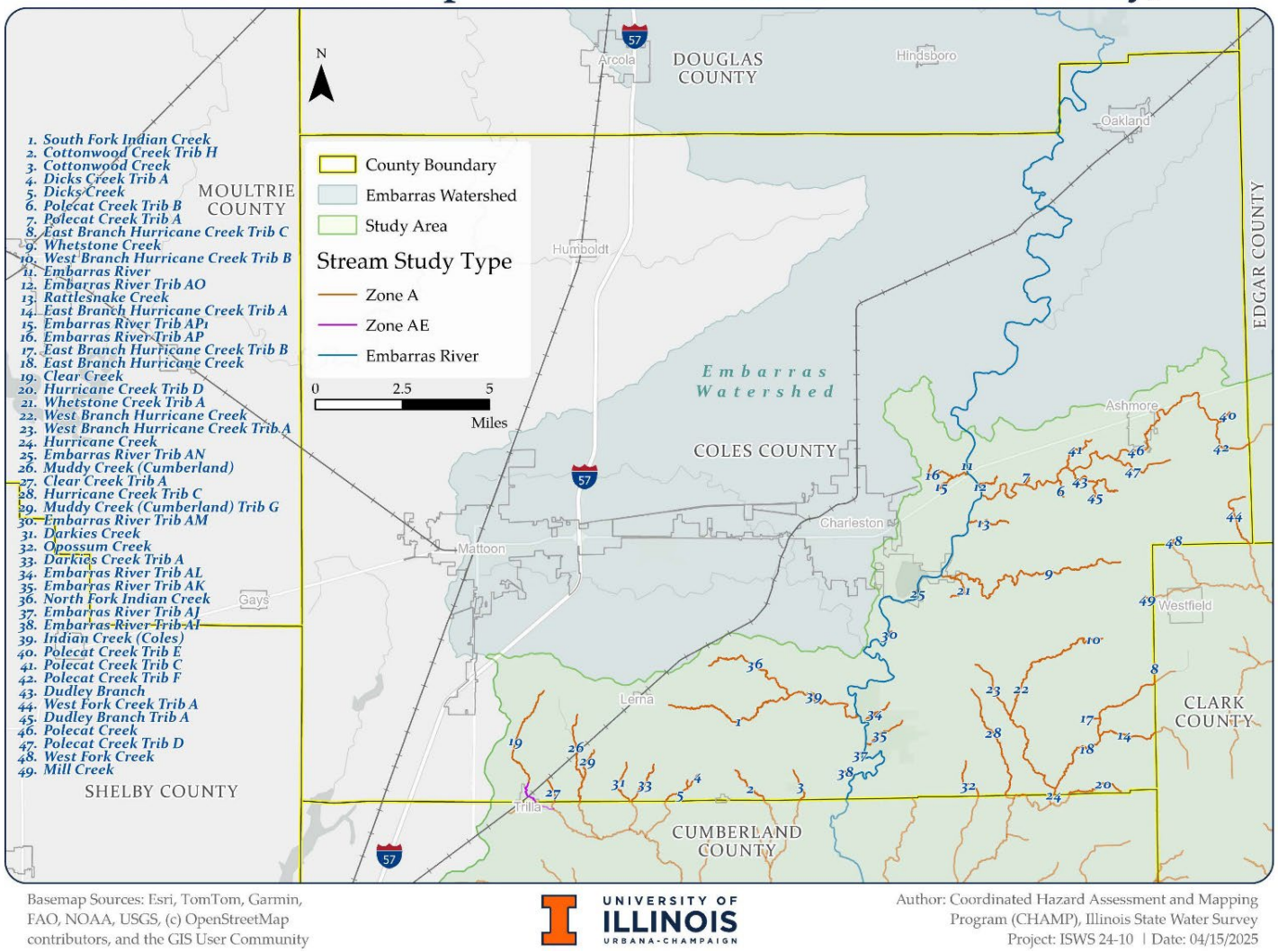
- 1 mile new studies
- 13 miles updated studies
- 14 miles subtotal

Total 1049 miles

Study Extent For The Nine Embarras Tributary Phase 1 watersheds for Clark, Coles, Crawford, Cumberland, Edgar, Jasper and Lawrence Counties.

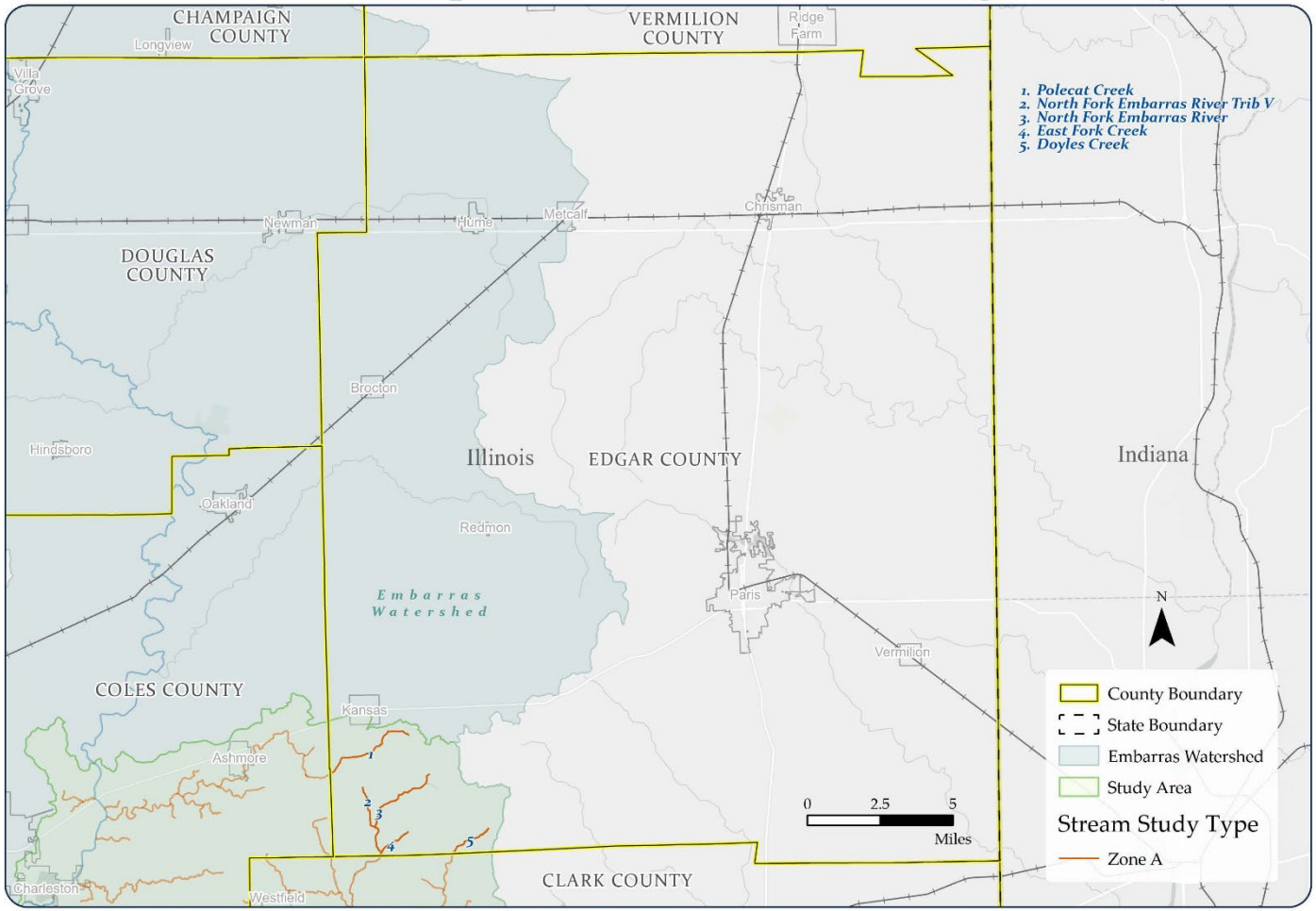


Project Scope



Project Scope

SID 620 Exhibit: Proposed Stream Studies for Edgar County, IL



Basemap Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

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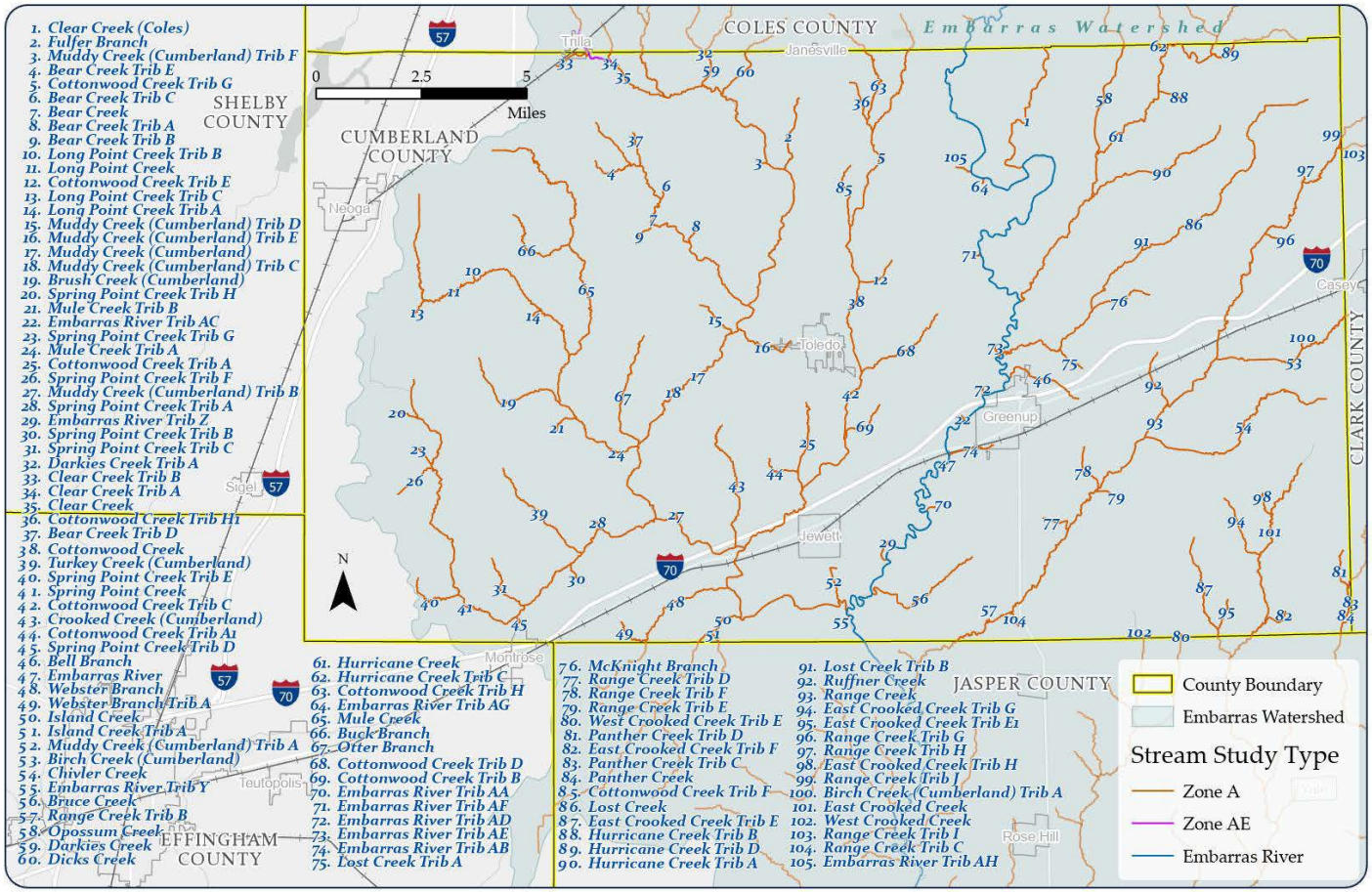
Author: Coordinated Hazard Assessment and Mapping Program (CHAMP), Illinois State Water Survey
Project: ISWS 24-10 | Date: 04/15/2025

Project Scope

SID 620 Exhibit: Proposed Stream Studies for Cumberland County, IL



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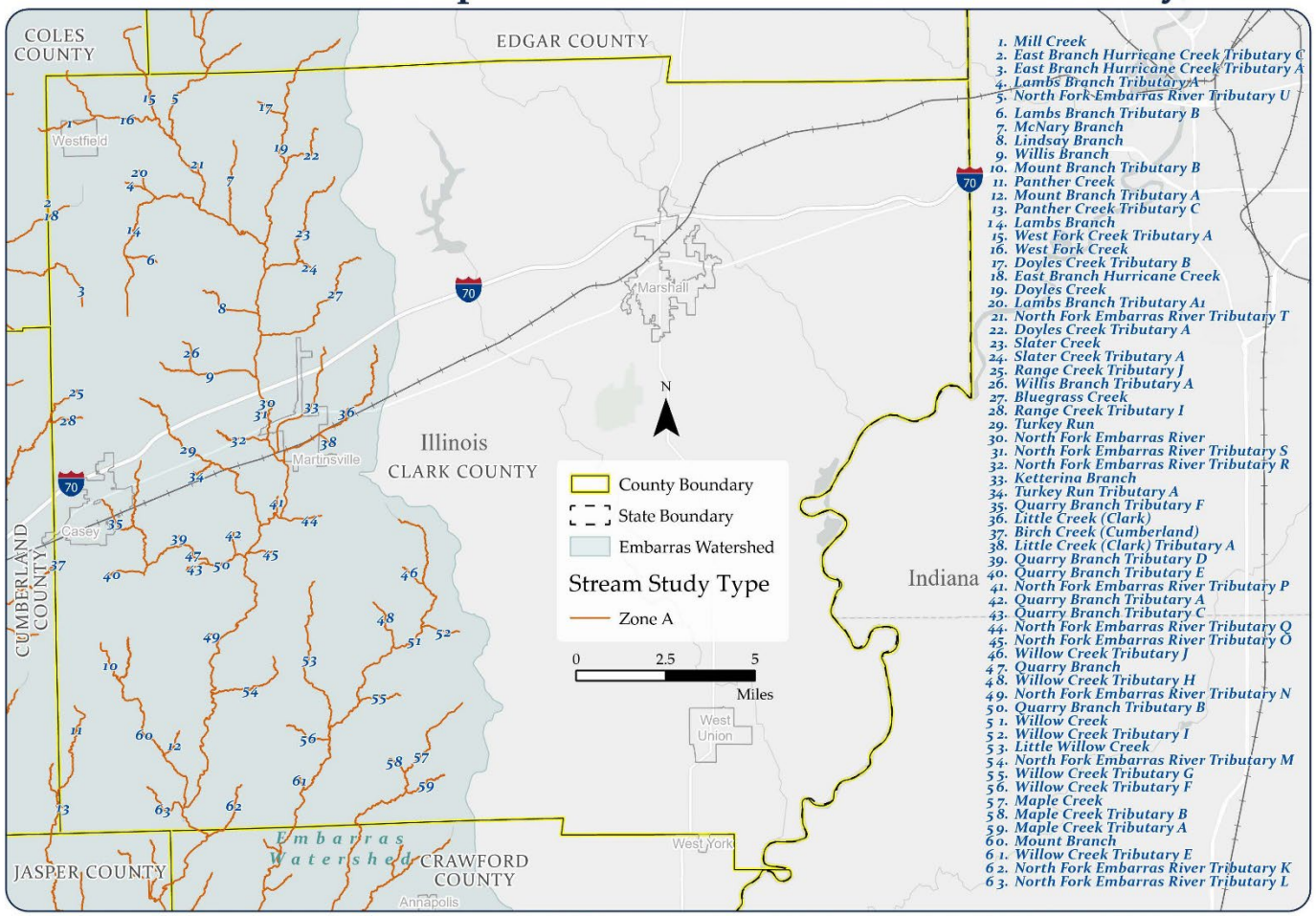
Author: Coordinated Hazard Assessment and Mapping Program (CHAMP), Illinois State Water Survey
Project: ISWS 24-10 | Date: 04/15/2025

Project Scope

SID 620 Exhibit: Proposed Stream Studies for Clark County, IL



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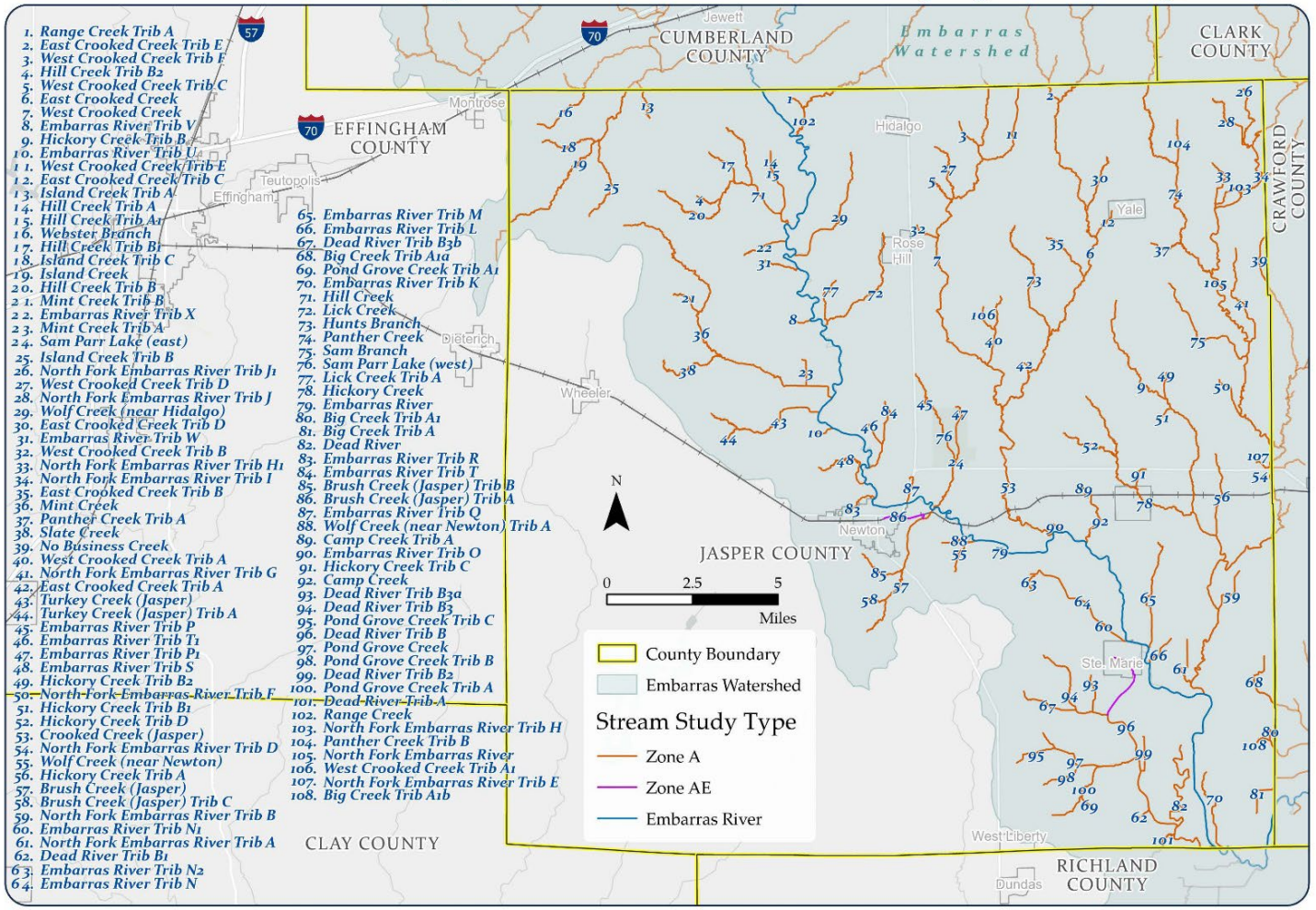
Project Scope

SID 620 Exhibit: Proposed Stream Studies for Jasper County, IL



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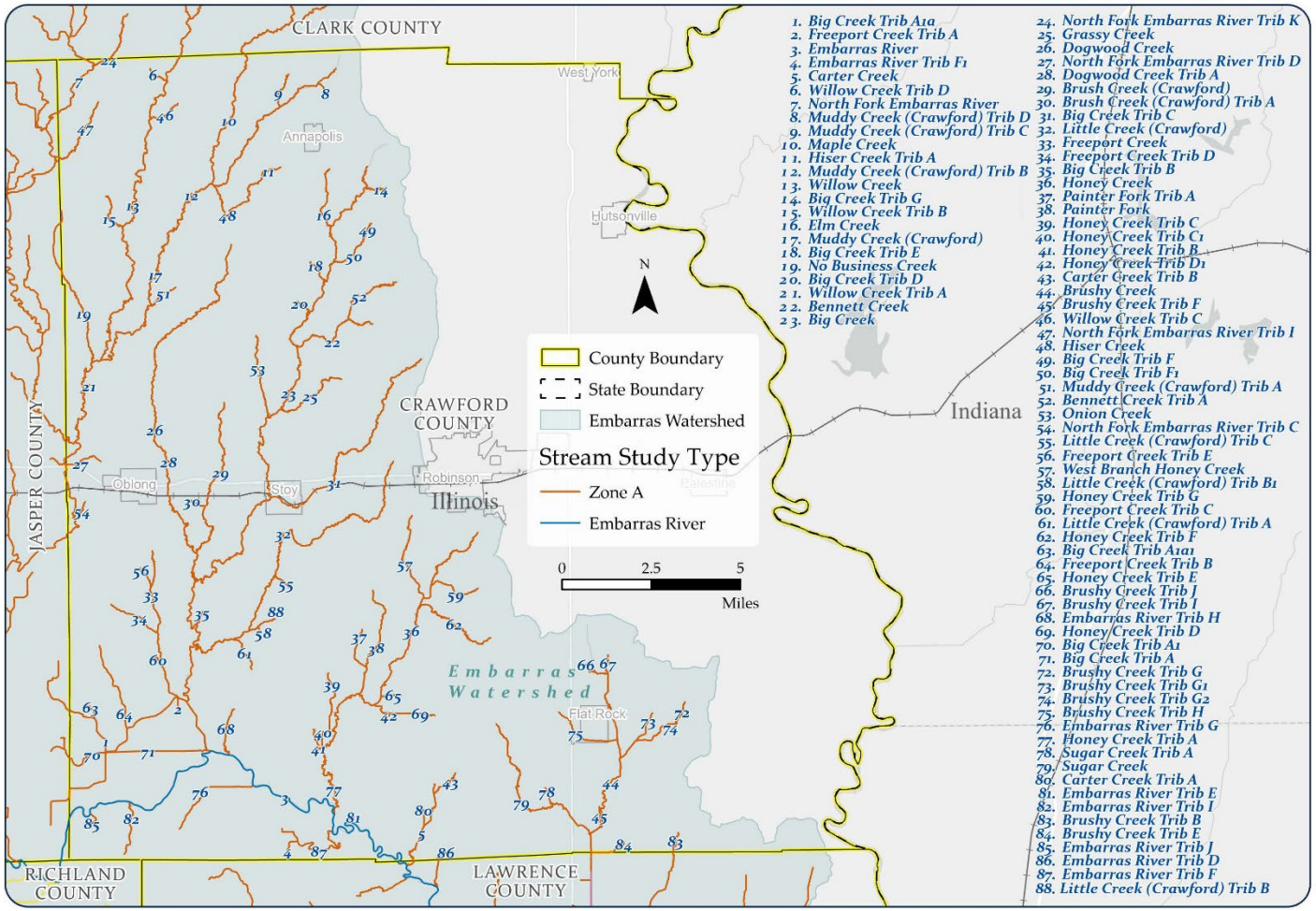
Project: ISWS 24-10 | Date: 04/15/2025

Project Scope

SID 620 Exhibit: Proposed Stream Studies for Crawford County, IL



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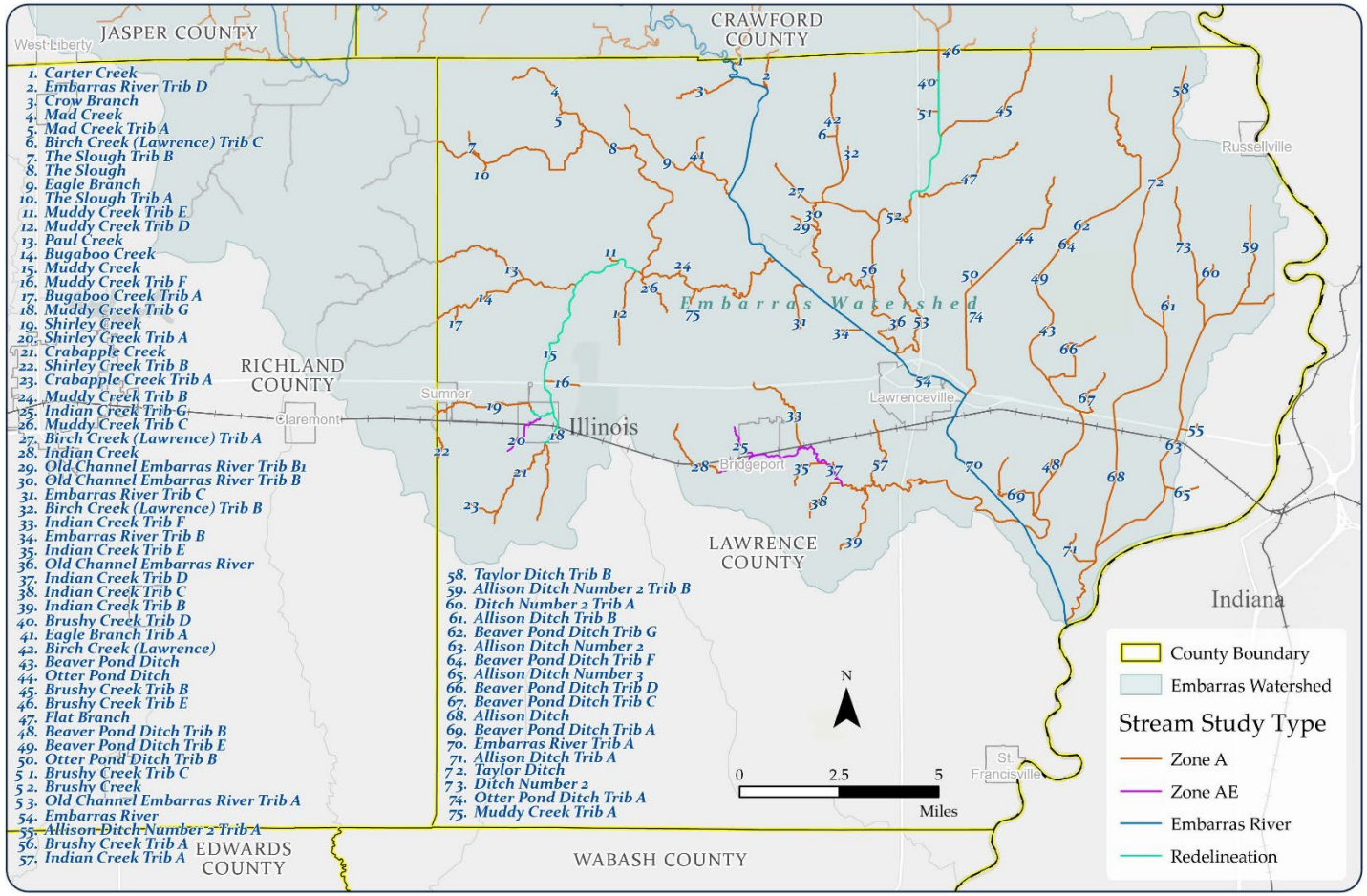
Project: ISWS 24-10 | Date: 04/15/2025

Project Scope

SID 620 Exhibit: Proposed Stream Studies for Lawrence County, IL



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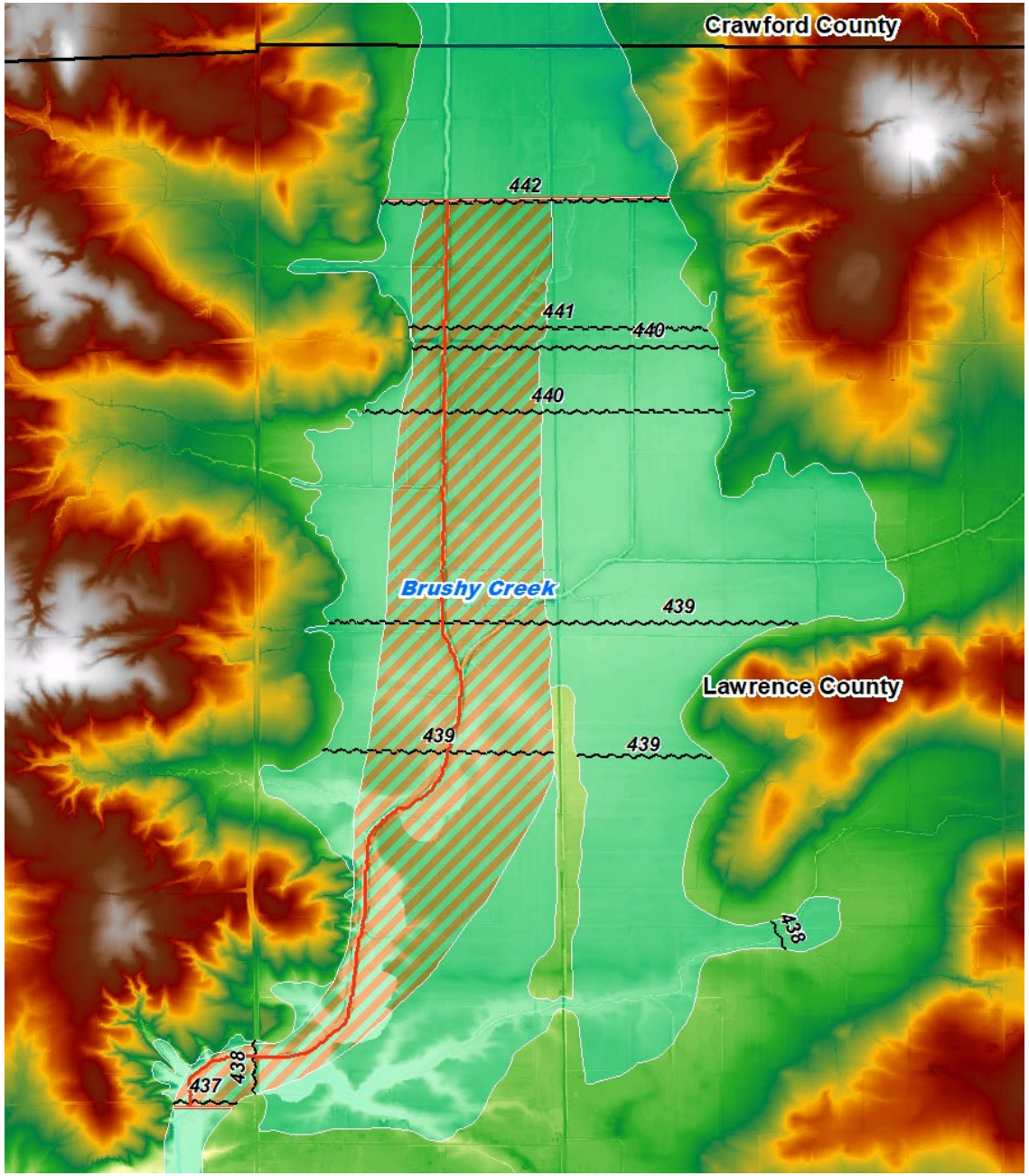
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

Author: Coordinated Hazard Assessment and Mapping Program (CHAMP), Illinois State Water Survey
Project: ISWS 24-10 | Date: 04/15/2025

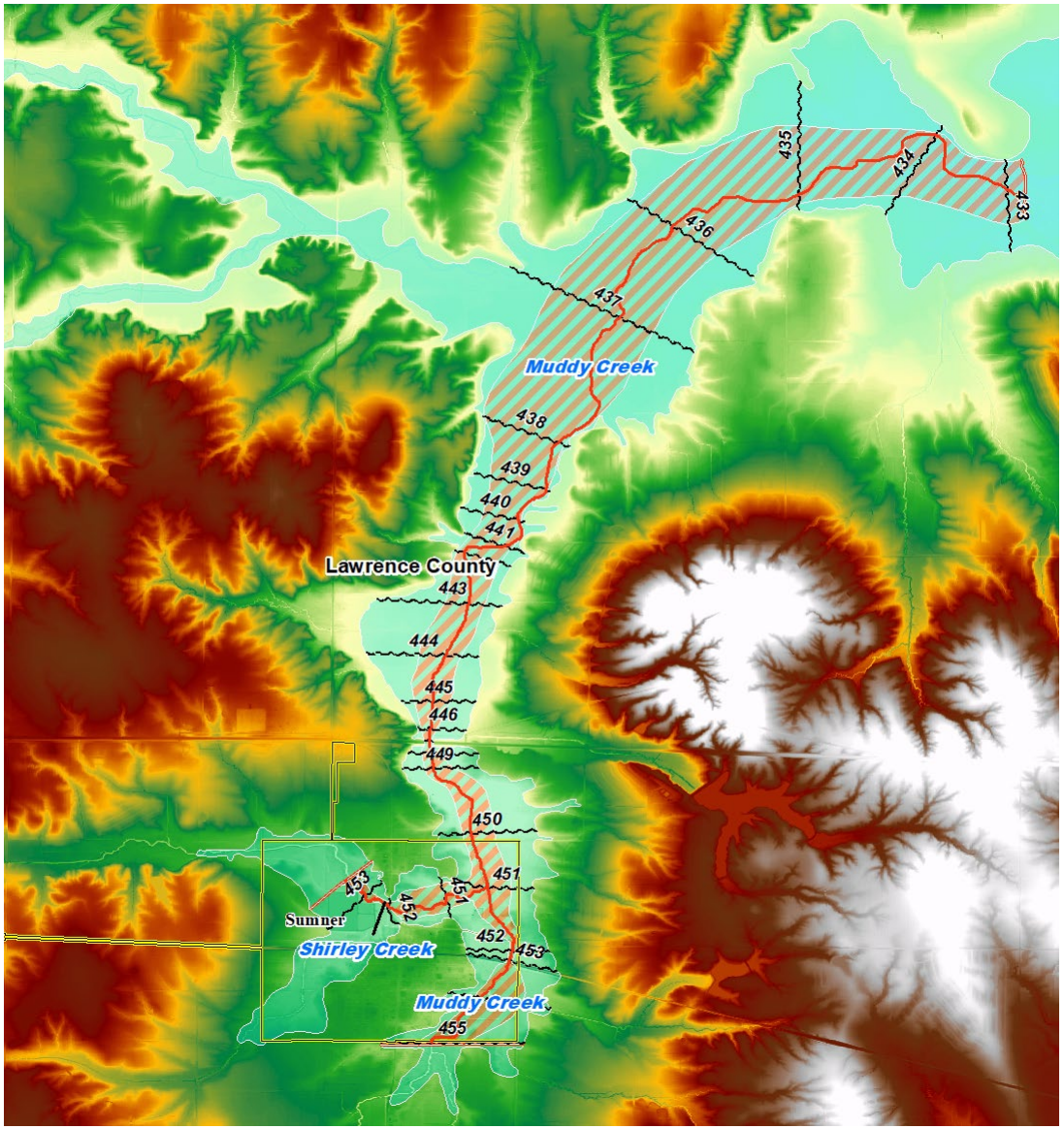
Brush Creek Redelineation

- Base Flood Elevations will not be changed
- Floodplain delineation will be changed



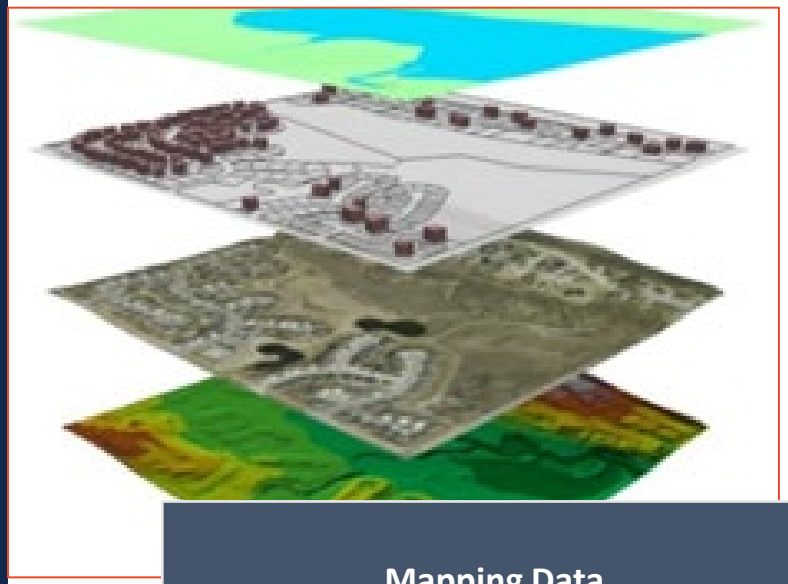
Muddy Creek and Shirley Creek Redelineation

- Base Flood Elevations will not be changed
- Floodplain delineation will be changed



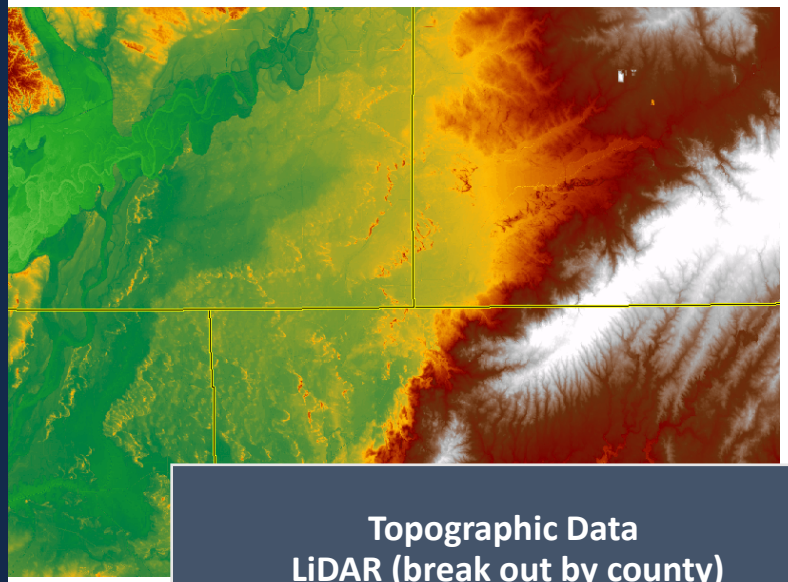
Data Development Phase

Mapping Data

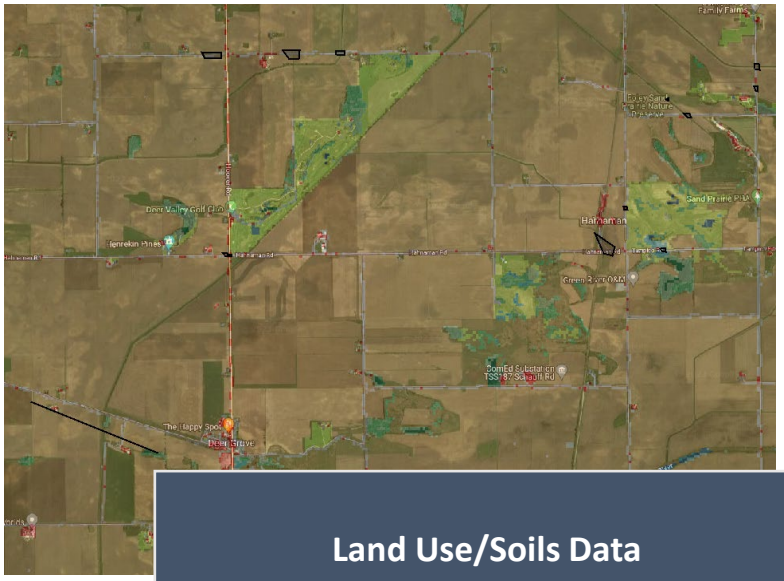


Mapping Data

Orthophotos



Topographic Data
LiDAR (break out by county)



Land Use/Soils Data

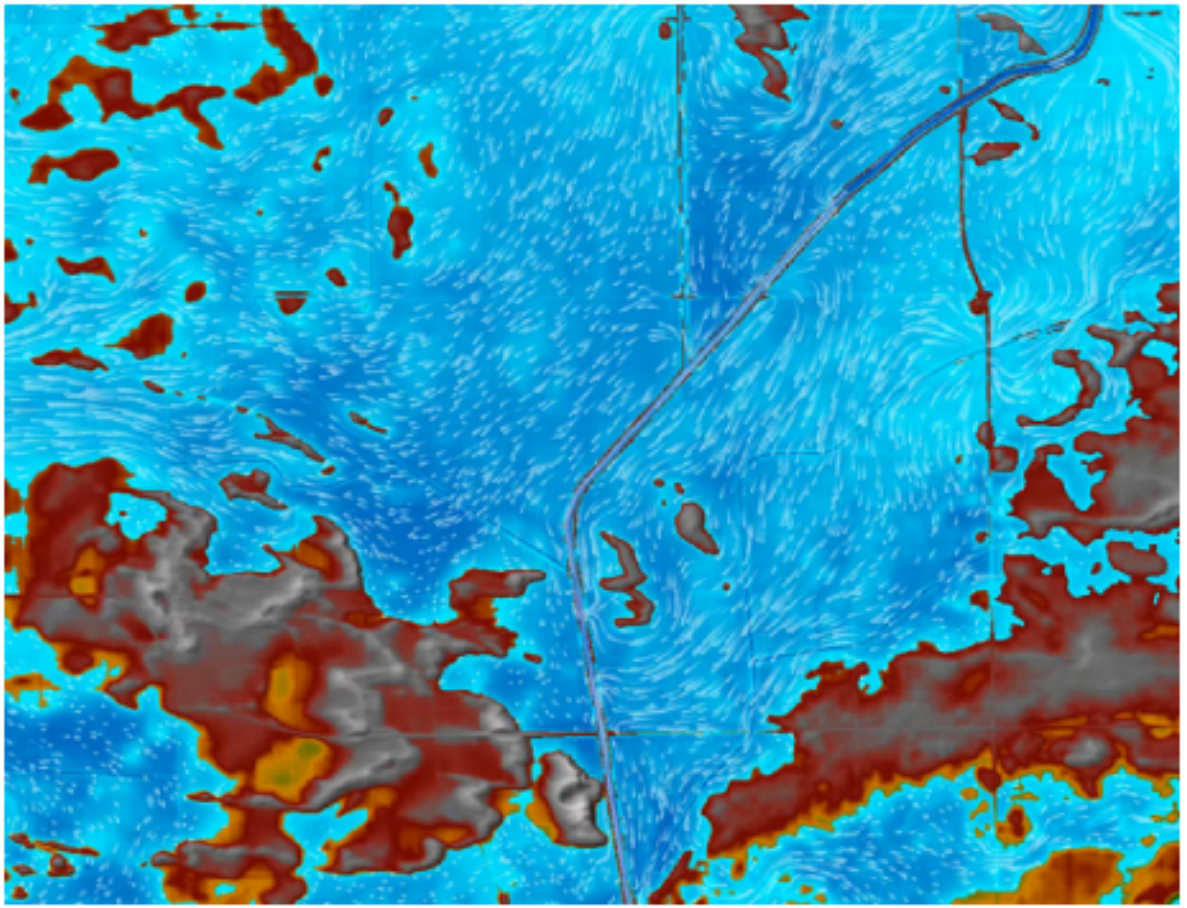
HEC-RAS 1D & 2D Modeling

2-Dimensional Modeling:

1. Peak flows determined using 2D Rain-On-Mesh with Bulletin 75 rainfall depths and Huff Temporal Distributions.
2. Peak flows will be determined for the 10%, 4%, 2%, 1%, 0.2%, and 1%+ annual chance flows (10, 25, 50, 100, 500 year)
3. HEC-RAS version 6.4.1 or higher.
4. Results will be used to map the Zone A and some Zone AE streams.

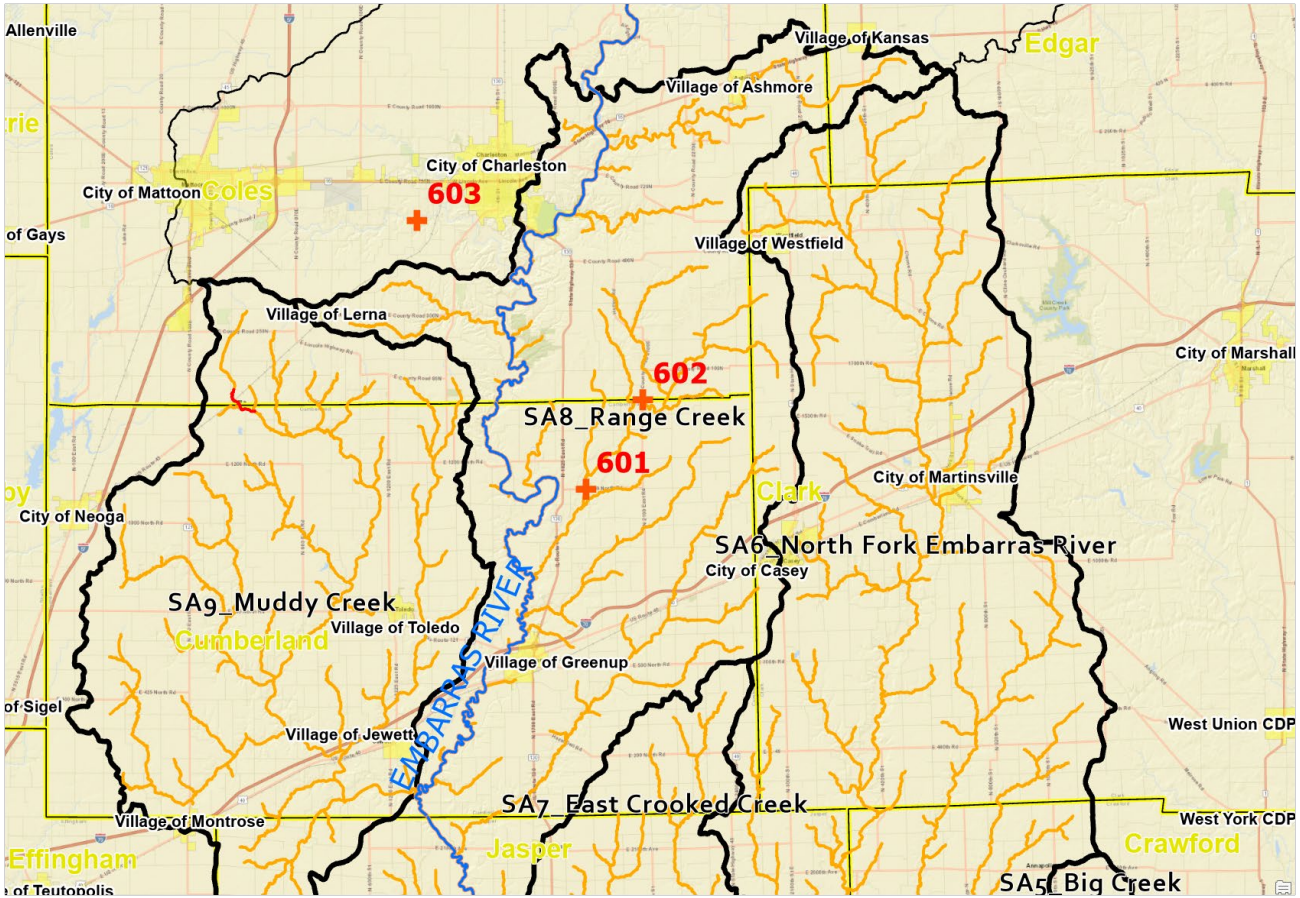
1-Dimensional Modeling:

1. Results will be used to map floodplains for the Zone AE streams which will have a floodway computed.
2. HEC-RAS version 6.4.1 or newer.
3. Will use peak flow results from the 2-Dimensional model to map the floodplains.



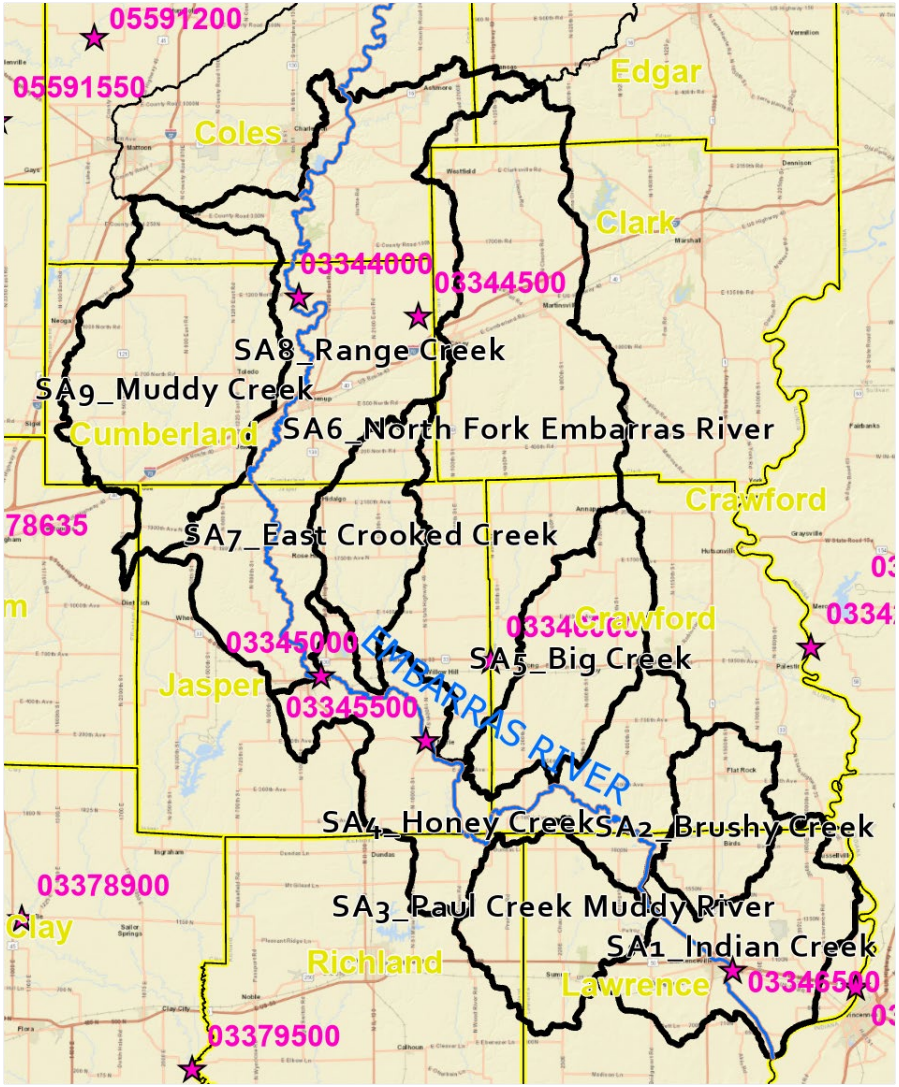
Stream Gages

1. **Hurricane & Kickapoo Creek Gages:**
   a. from ISWS CR 2004-05 Report.
   b. Gages have 2-year period of record.

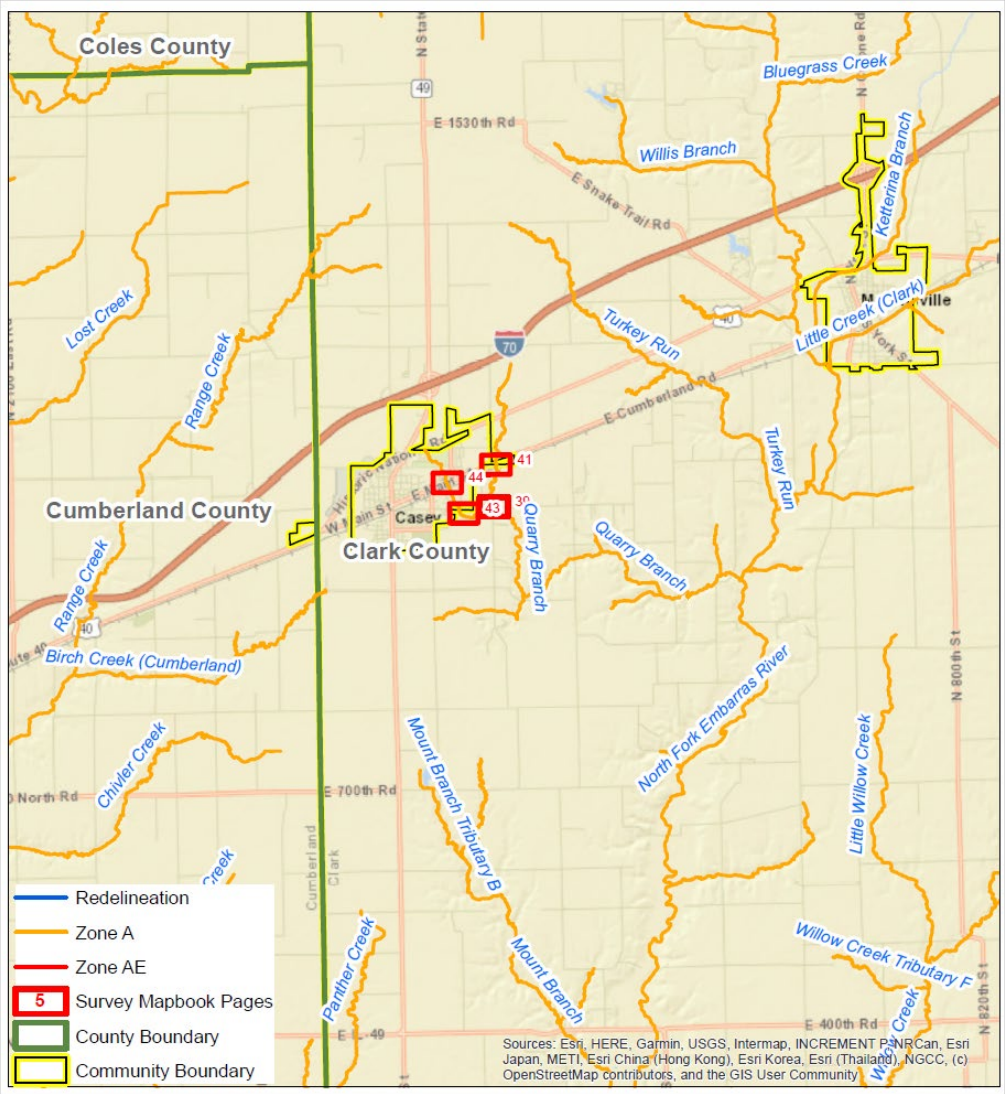


Stream Gages – cont'd

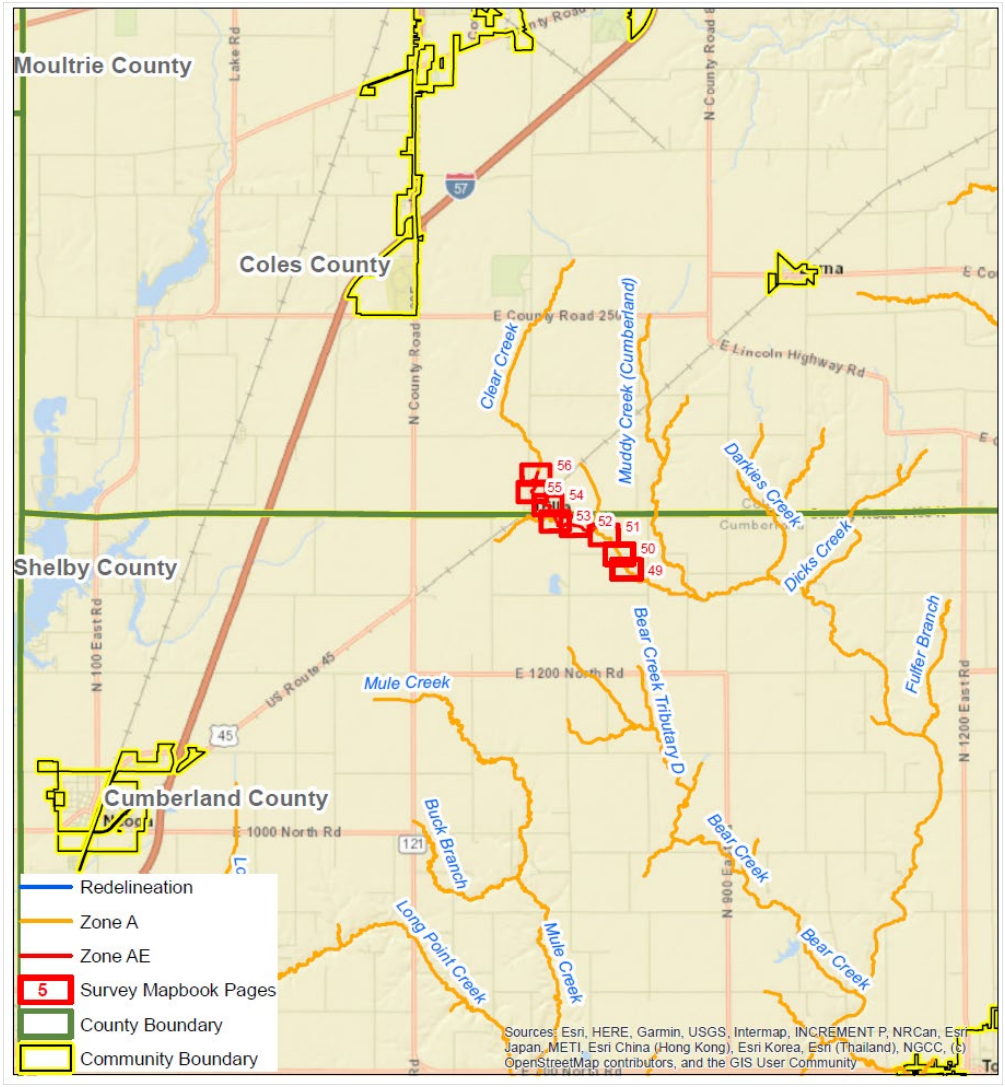
1. **USGS Gages:**



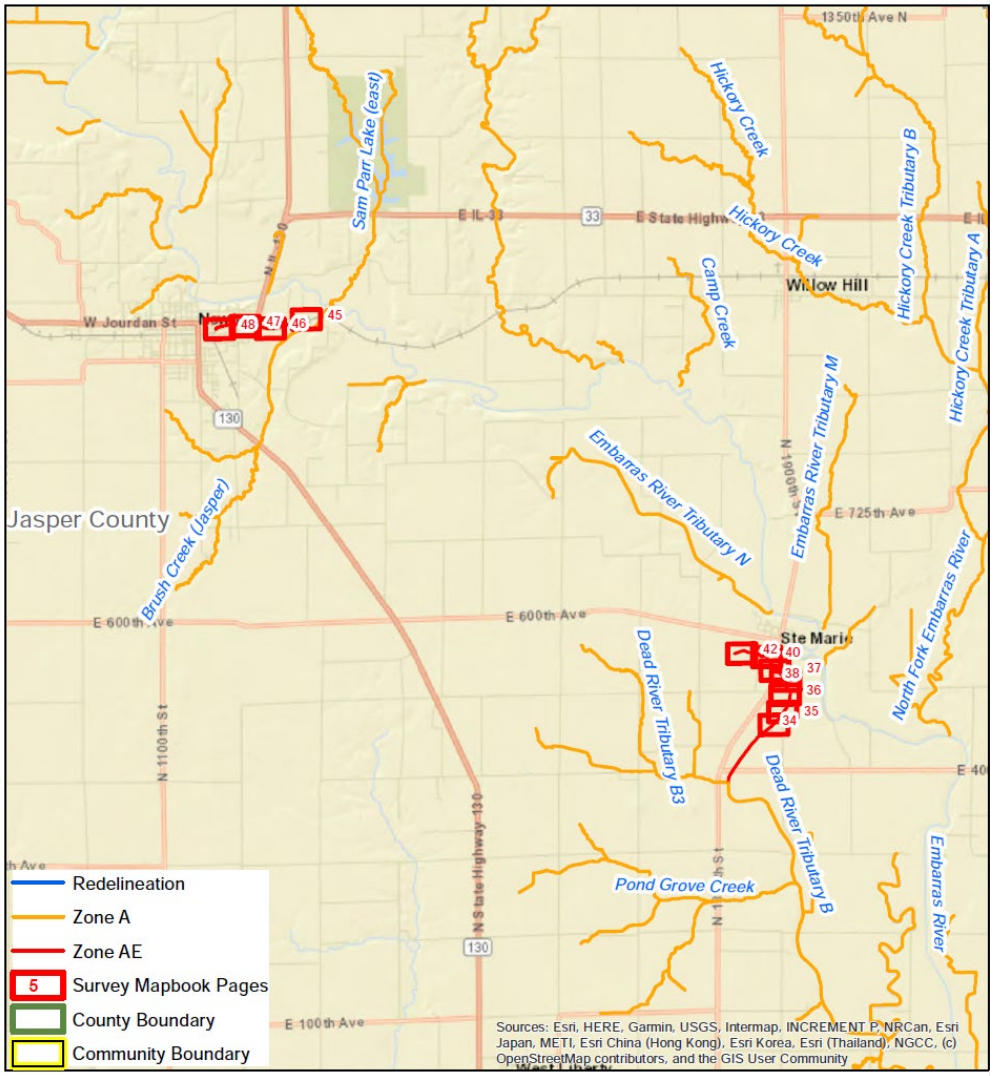
Field Survey Activities(May thru Sept 2025)



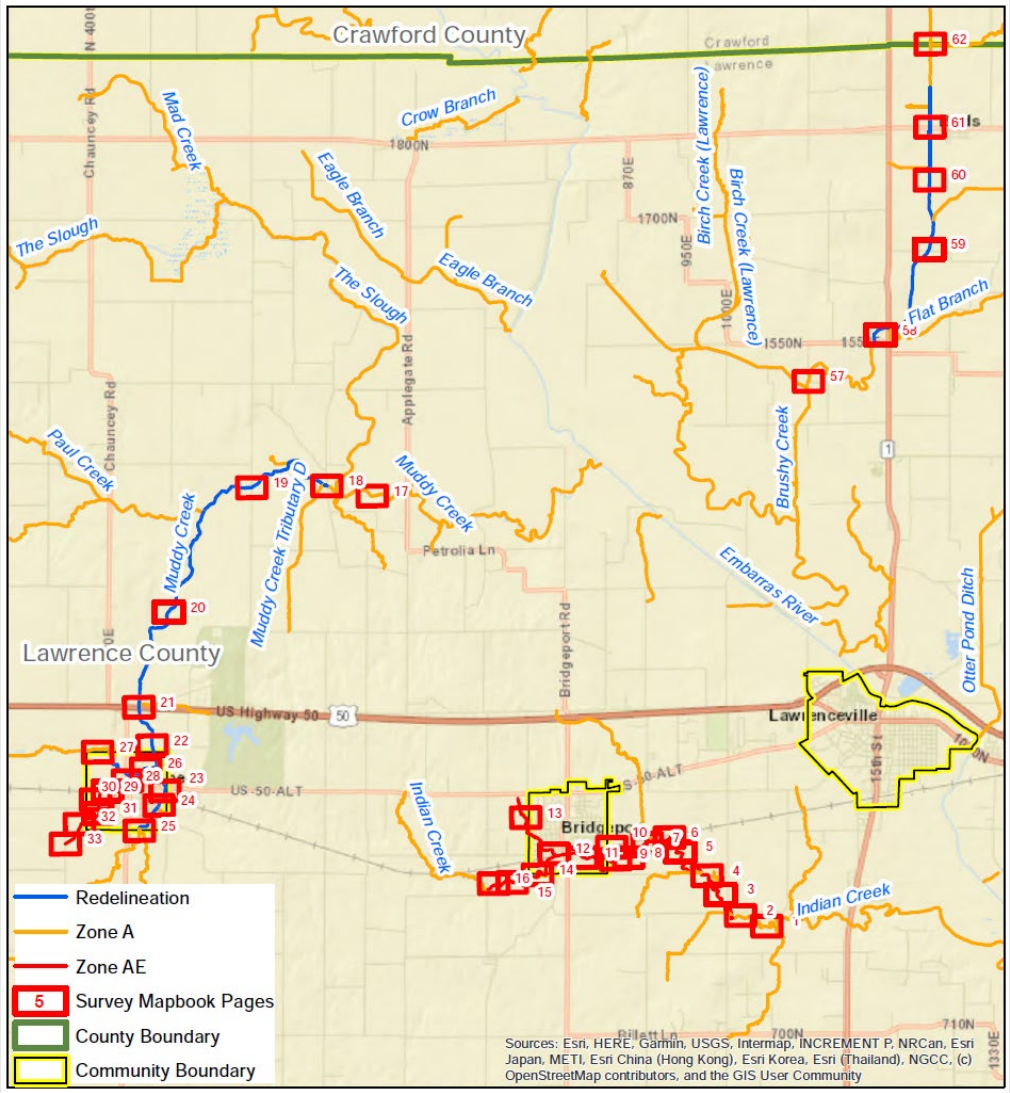
Field Survey Activities – cont'd



Field Survey Activities – cont'd



Field Survey Activities – cont'd



Communication and Outreach

Communication and Outreach

- Communication Plan
- Project Initiation Community Coordination Meeting (today)
- Proposed Engineering Methods Notification Letter
  - 30-Day Comment Period
- Flood Risk Review Meeting
  - 30-Day Comment Period
- Data Submission Notification Letter
  - 30-Day Comment Period

Communication and Outreach

Proposed Engineering Methods Letter

FEMA Standard ID 620

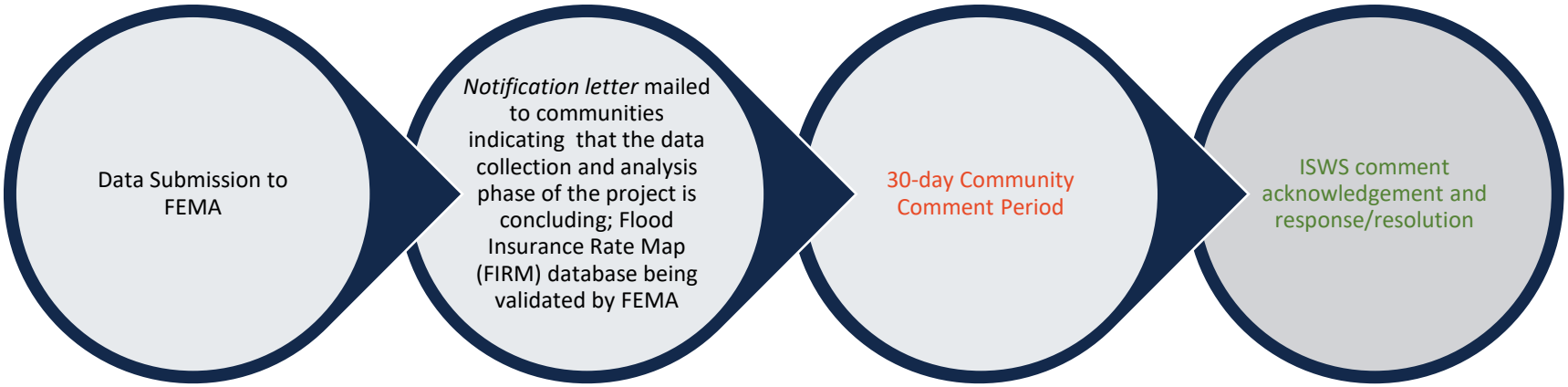
Communication and Outreach

Flood Risk Review Meeting

Communication and Outreach

Data Submission Notification

FEMA Standard ID 621



Project Schedule

Project Schedule

Project Initiation and Community Coordination Meeting

- Today

Engineering Methods Letters to communities

- SID 620 Letters and maps will be issued within a week or two for the Embarras Tributaries streams.

Complete all Hydrologic Studies

- Mainstem Embarras Phase is complete
- Embarras Tributaries Spring 2026

Complete all Hydraulic Studies

- Mainstem Embarras Phase Fall 2025
- Embarras Tributaries Spring 2026

Flood Risk Review Meeting

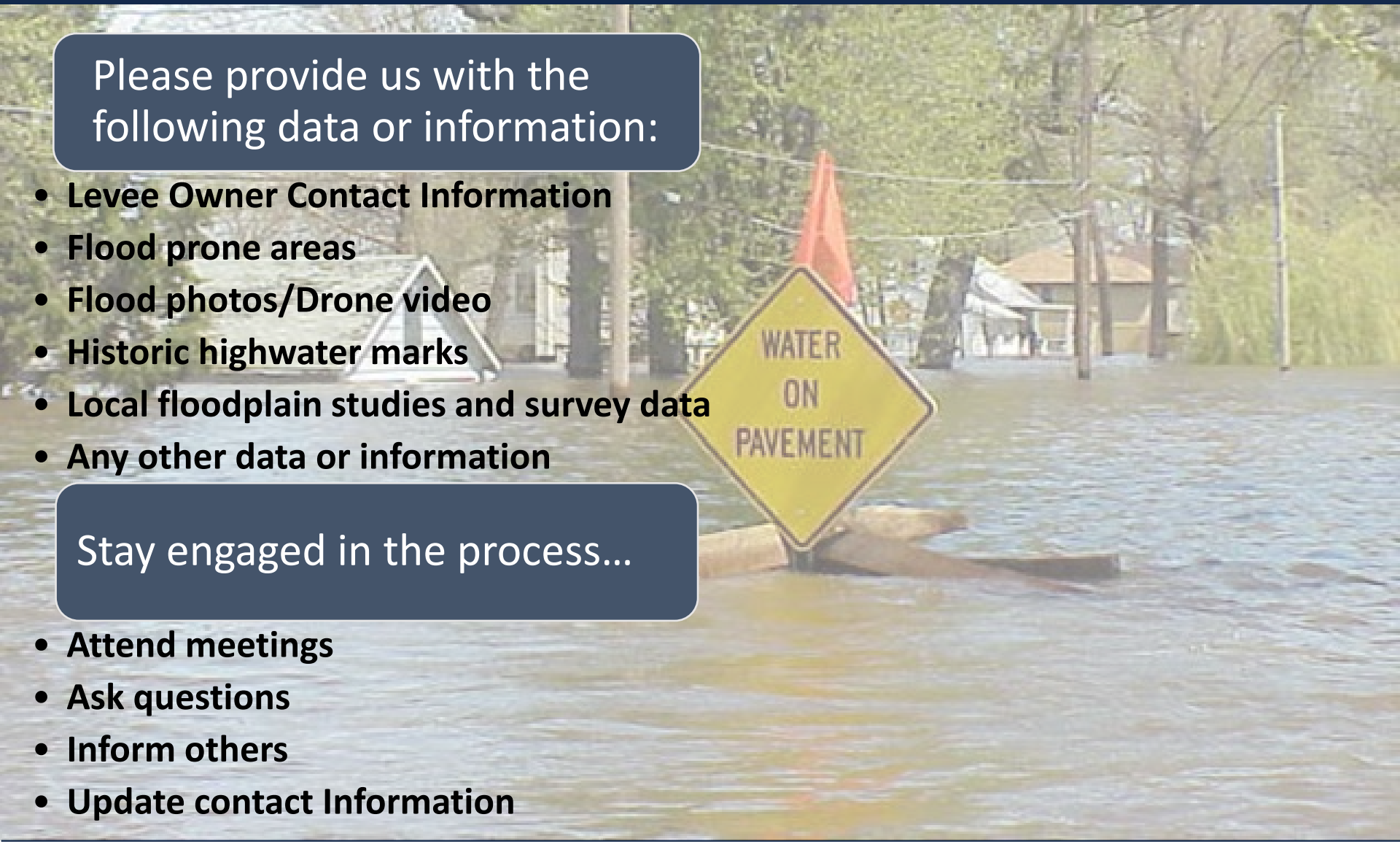
- Schedule one FFR meeting to include both the mainstem Embarras and the Embarras Tributaries projects late 2026 or early 2027.

Digital Flood Insurance Rate Map Project to follow pending conclusion of data development

- ***Future Phase (***To Be Determined)

Community Participation

Community Participation



Please provide us with the following data or information:

- **Levee Owner Contact Information**
- **Flood prone areas**
- **Flood photos/Drone video**
- **Historic highwater marks**
- **Local floodplain studies and survey data**
- **Any other data or information**

Stay engaged in the process…

- **Attend meetings**
- **Ask questions**
- **Inform others**
- **Update contact Information**

Community Participation

In Summary

Local Partners are critical to the project	• Best understand their community needs • Can provide critical information to enhance the studies with local knowledge
Our goal is to make managing and mitigating flood risk easier for our local partners	• Use the latest data to understand flood risk • Utilize the tools and mapping available to assist communities in administering the NFIP locally
Please ask questions and share your concerns	• Communicating early and often ensures the flood risk products capitalize on local knowledge and best address local needs

Questions?

Illinois State Water Survey

PRAIRIE RESEARCH INSTITUTE

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