



ILLINOIS

Illinois State Water Survey

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**Embarras River Mainstem-
Champaign, Douglas, Coles,
Cumberland, Jasper, Richland and
Lawrence Counties, Illinois**

**FEMA Risk MAP
Project Initiation Community
Coordination Call**

April 10, 2024

Agenda

Rollcall

Introduction

Project Objectives and Goals

National Flood Insurance Program

Terminology

Project Scope

Data Development

Communication & Outreach

Schedule

Community Participation

Questions & Contact Information

Roll Call

Champaign County*

- City of Champaign*
- City of Urbana*

Douglas County *

- City of Villa Grove*
- Village of Camargo

Coles County *

- City of Charleston*
- City of Oakland*

Cumberland County *

- Village of Greenup*
- Village of Jewett

Jasper County*

- City of Newton*
- Village of Sainte Marie*

Crawford County*

- Unincorporated Areas only

Richland County*

- Unincorporated Areas only

Lawrence County

- City of Lawrenceville*

Other Agencies

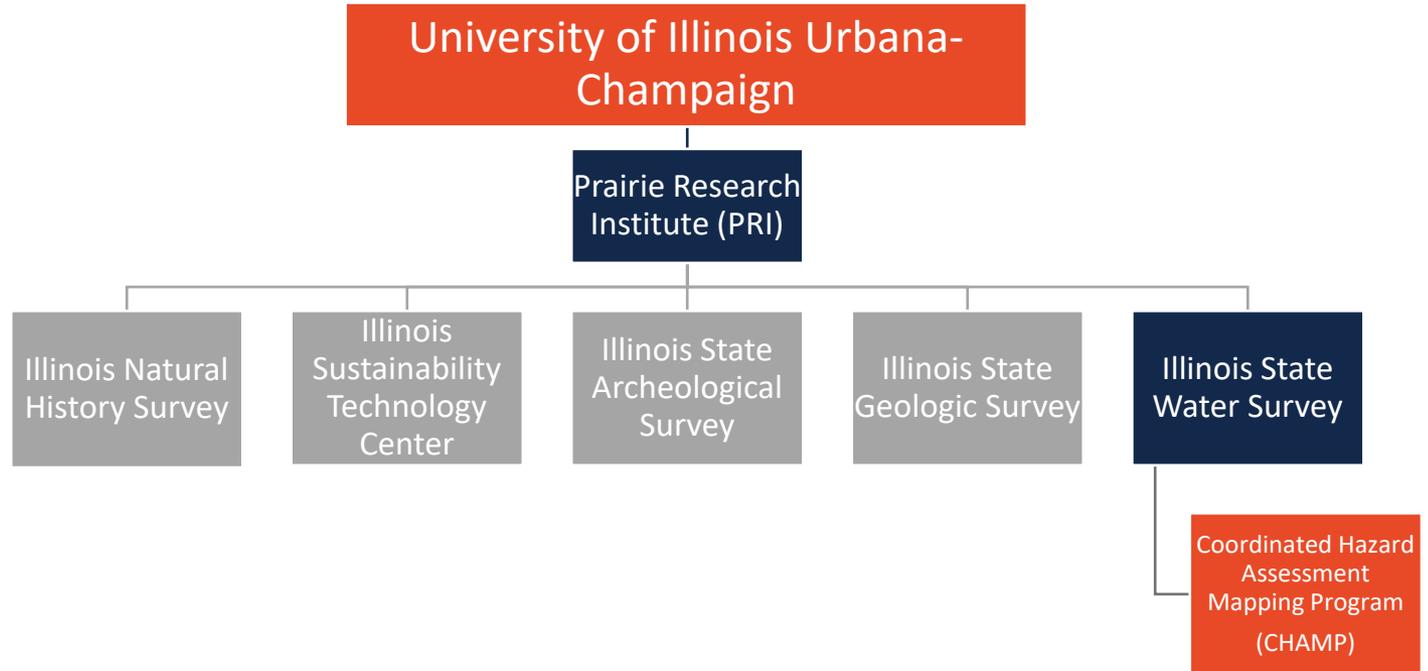
- FEMA
- IDNR-OWR
- IEMA
- Regional Planning Commission

*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

FEMA

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



Your Community

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

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Introduction

What We Do

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
LOUIS PARK, CITY OF	170722
MACHESNEY PARK, VILLAGE OF	171009
NEW MILFORD, VILLAGE OF	175182
PECATONICA, VILLAGE OF	170797
ROCKFORD, CITY OF	170523
ROCKTON, VILLAGE OF	170774
ROSDALE, VILLAGE OF	170724
SOUTH BELLEVUE, CITY OF	170725
WINNEBAGO COUNTY (UNINCORPORATED AREAS)	170720
WINNEBAGO, VILLAGE OF	175183

*NO SPECIAL FLOOD HAZARD AREAS IDENTIFIED

Winnebago County



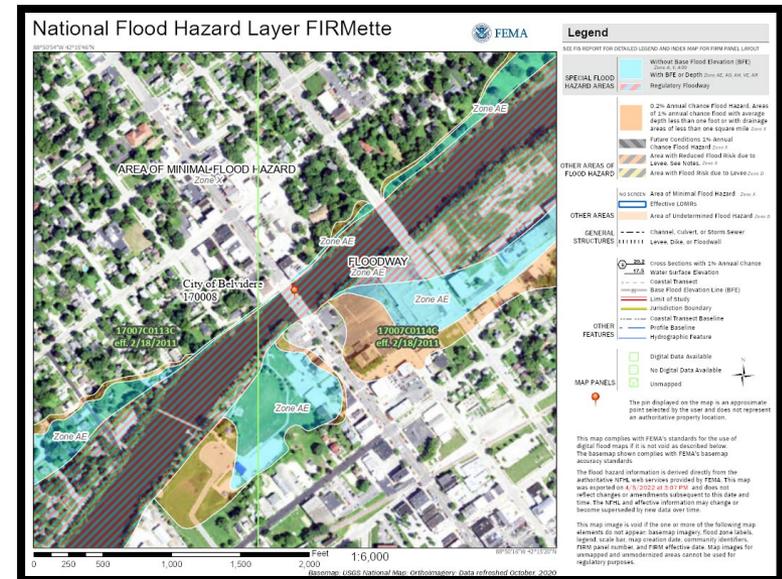


Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
17201CV001B

REVISED: FEBRUARY 17, 2016

GENERATE FLOODPLAIN MAPS



Introduction

How We Are Funded

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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.



The Cooperating Technical Partners (CTP) Program

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

Introduction

INFORM RESIDENTS AND COMMUNITIES about flood hazards in their communities.

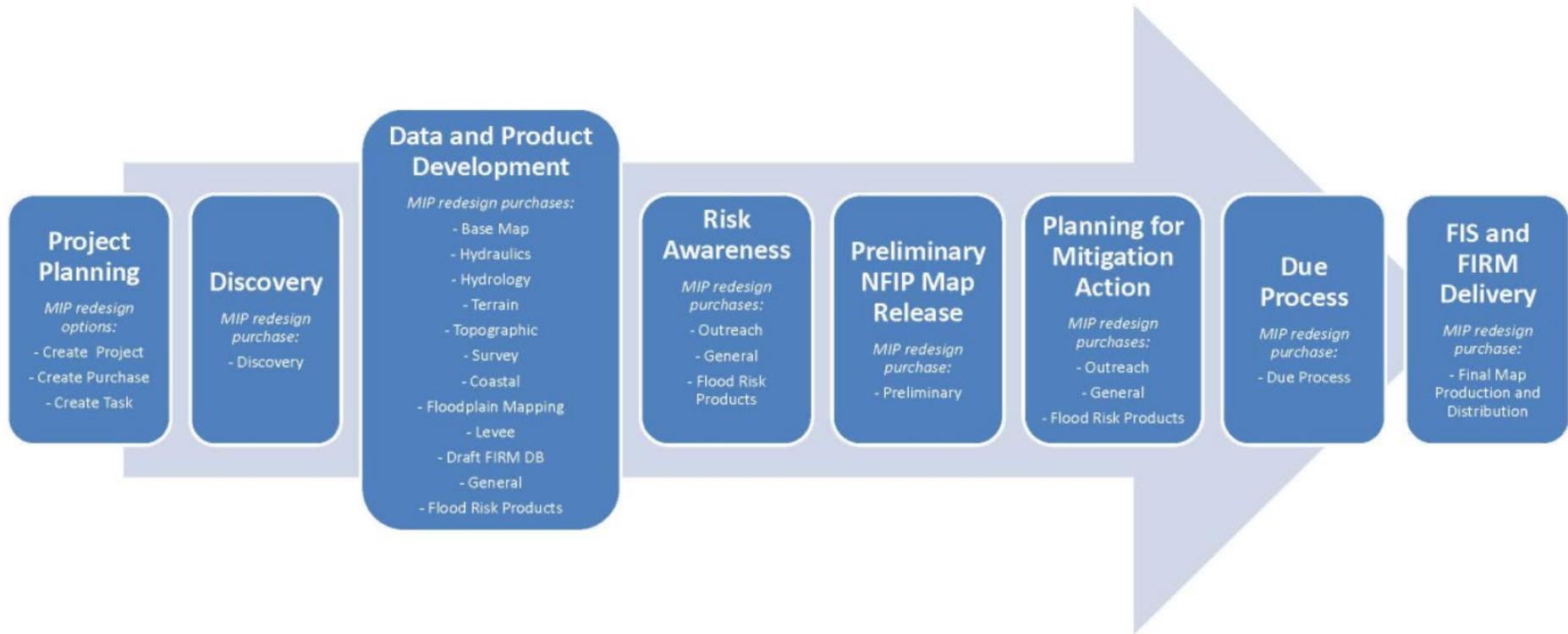
What We Do



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Project Objectives and Goals

FEMA National Objectives and Goals



Update Flood Risk Data and Maps

Effective Digital FIRM Dates

Champaign County: 10/2/13 (Digital)

Douglas County: 05/24/11 (Digital)

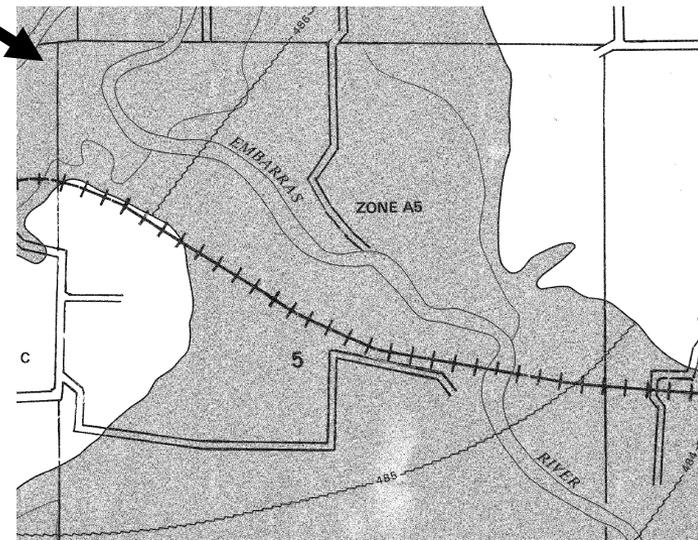
Coles County: 7/18/11 (Digital)

Cumberland County: 2/4/11 (Digital)

Jasper County: 1/17/85 (Paper-based)

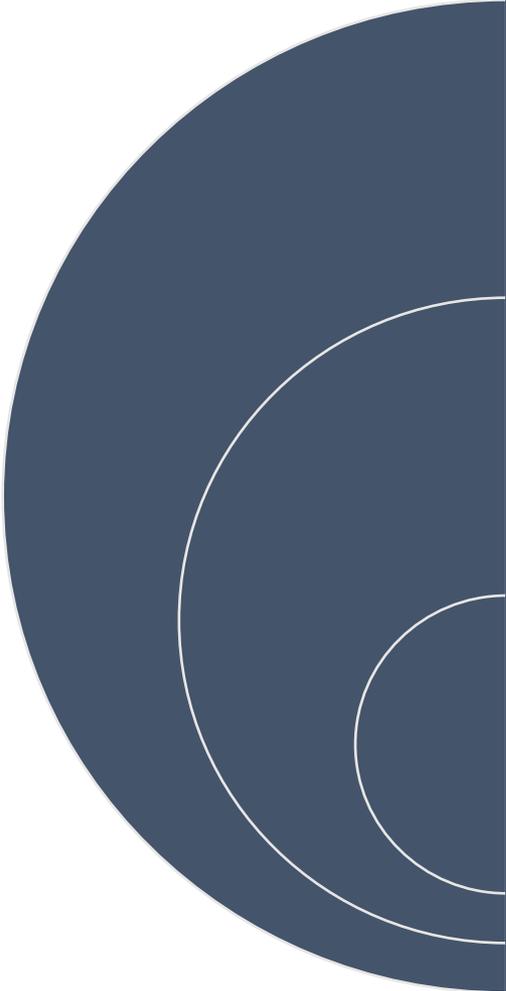
Richland County: 11/1/84 (Paper-based)

Lawrence County: 7/18/11 (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.

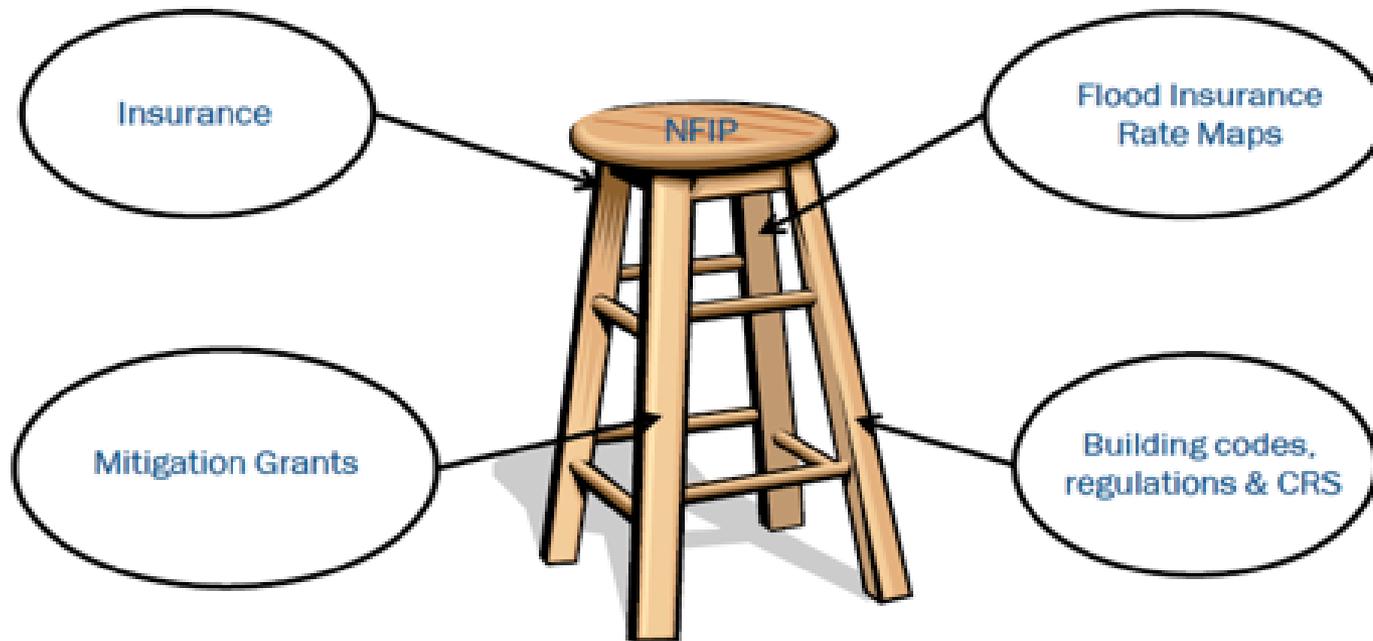
In exchange for adopting and enforcing a floodplain management ordinance, Federally-backed flood insurance is made available to property owners throughout the community.

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 02/20/2024

Community	CAC Date	CAV Date	No. Flood Policies	Total Coverage, \$	Total Claims Since 1978	Total Paid Since 1978, \$	Rep Loss Structures
Champaign County	-	12/6/1994	73	18,756,000	44	551,431.00	16
City of Champaign	04/24/2023	07/06/2017	48	11,669,000	133	709,044	59
City of Urbana	-	09/17/2009	56	8,097,000	7	43,158	0
Coles County	-	1/22/2006	13	2,275,000	10	350,488.00	2
City of Charleston	-	12/18/2014	13	2,209,000	16	184,774.00	4
City of Oakland	06/27/2022	09/12/1994	1	140,000	0	0	0
Douglas County	11/23/2004	6/17/2023	12	1,622,000	10	122,472.00	4
City of Villa Grove	-	2/3/2010	66	8,030,000	129	726,625.00	49
Cumberland County	8/27/2009	-	2	418,000	5	17,807.00	0

NFIP Participating Communities

<https://www.fema.gov/cis> downloaded 02/20/2024

Community	CAC Date	CAV Date	No. Flood Policies	Total Coverage, \$	Total Claims Since 1978	Total Paid Since 1978, \$	Rep Loss Structures
Jasper County	11/2/2023	-	3	100,000	2	32,000.00	0
City of Newton	09/18/2000	11/24/1992	3	100,000	2	32,000.00	4
Richland County	-	-	1	35,000	0	-	0
Crawford County	-	3/23/2005	12	1,787,000	9	118,819.00	6
Lawrence County	-	-	0	-	3	17,133.00	0
Lawrenceville, City of	1/22/22019	-	7	728,000	13	129,757.00	6

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	Champaign, Douglas, Coles, Cumberland, Jasper, Crawford, Richland, Lawrence
			Public	Douglas, Cumberland, Jasper, Richland, 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	Douglas, Crawford
			Public	Crawford
2013-11-26	DR-4157-IL	Severe Storms, Straight-line winds and Flooding	Individual Assistance	Champaign, Douglas
2020-03-26	DR-4489-IL	COVID-19 Pandemic	Individual & Public	Champaign, Douglas, Coles, Cumberland, Jasper, Crawford, Richland, Lawrence
2023-08-15	DR-4728-IL	Severe Storms and Flooding	Public	Douglas, Coles, Cumberland

Hazard Mitigation Plans

2019

Hazard Mitigation Plan

Champaign County Emergency Management Agency

COLES COUNTY HAZARD MITIGATION PLAN

2017



Cumberland County Multi-Jurisdiction All Hazards Mitigation Plan Update

Cumberland County, Illinois

Draft

Participants:

Lawrence County, Illinois Multi-Hazard Mitigation Plan

2017 Countywide MHMP

Douglas County

Multi-Jurisdictional All Hazards Mitigation Plan



Participants

- Arcola, City of
- Arthur, Village of
- Atwood, Village of
- Douglas County
- Garrett, Village of
- Newman, City of
- Tuscola, City of
- Villa Grove, City of

August 2017

The five year update of this Plan must be completed on or before September 11, 2022



Jasper County, Illinois Hazard Mitigation Plan

ABSTRACT

This Hazard Mitigation Plan was developed with the fundamental goal of informing State and local leaders of the risks and impacts that natural hazard events could have on Jasper County, Illinois and further examine how to best reduce the adverse impacts that these hazard events can have on the local community.

Prepared By: South Central Illinois Regional Planning & Development Commission

Crawford County, Illinois Multi-Hazard Mitigation Plan

A 2017 Update of the 2009 Countywide MHMP



RICHLAND COUNTY, ILLINOIS

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



Hazard Mitigation Plans

County	Plan date
Champaign	2019 with update in progress
Douglas	2010 update underway
Coles	2017 update underway
Crawford	2017 update under way ISWS/GWRPC
Cumberland	2023-Draft
Jasper	2021
Lawrence	2017 update under way ISWS/GWRPC
Richland	2012 Draft 2023

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?

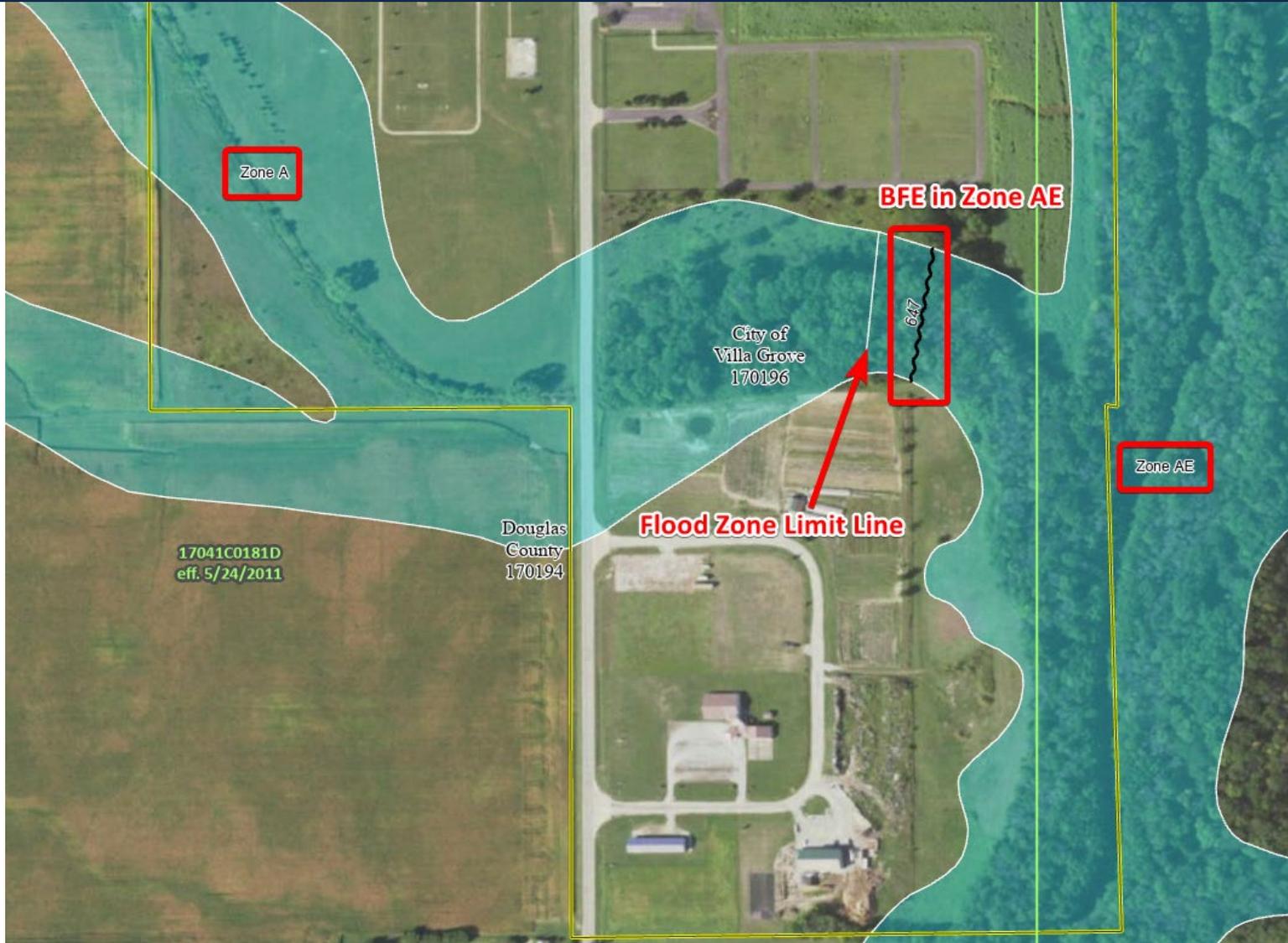
The FEMA Special Flood Hazard Area (SFHA) is the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year.

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.

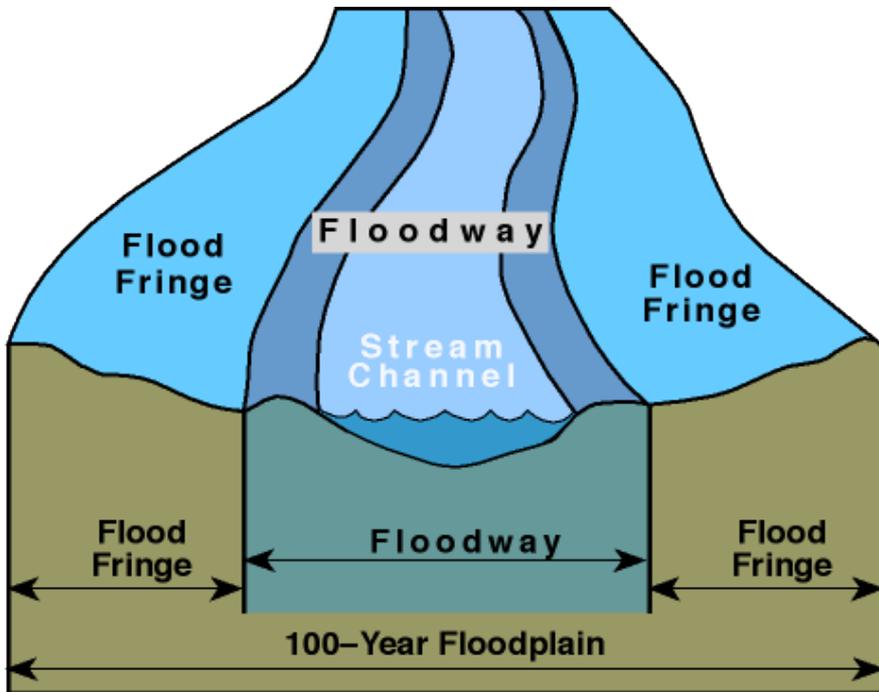
Zone A	Areas subject to inundation by the 1-percent-annual-chance flood event. NO Base Flood Elevations are shown.
Zone AE	Areas subject to inundation by the 1-percent-annual-chance flood event. Base Flood Elevations ARE shown.

What is a Special Flood Hazard Area?



Floodway

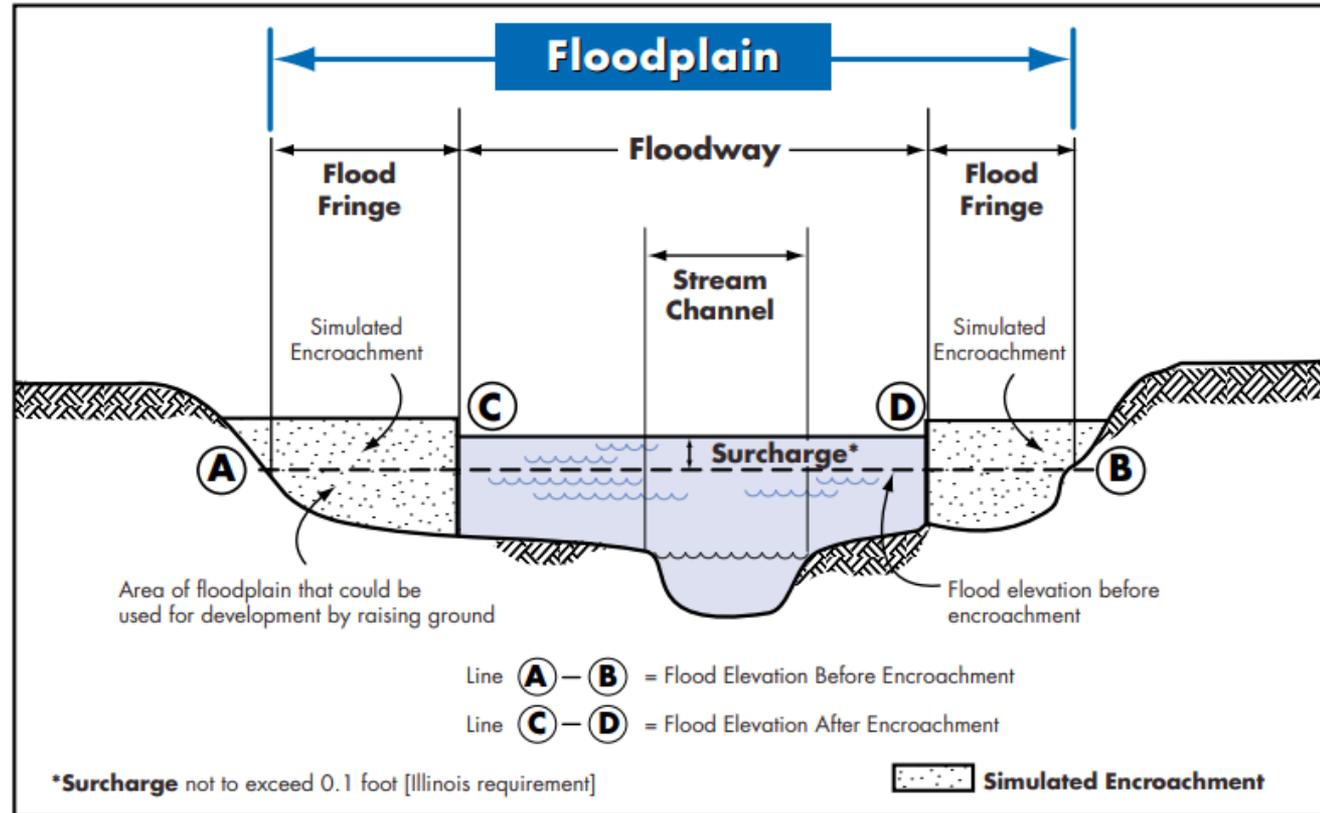
The **floodway** is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.



Illinois Floodways

Illinois Floodway criteria:

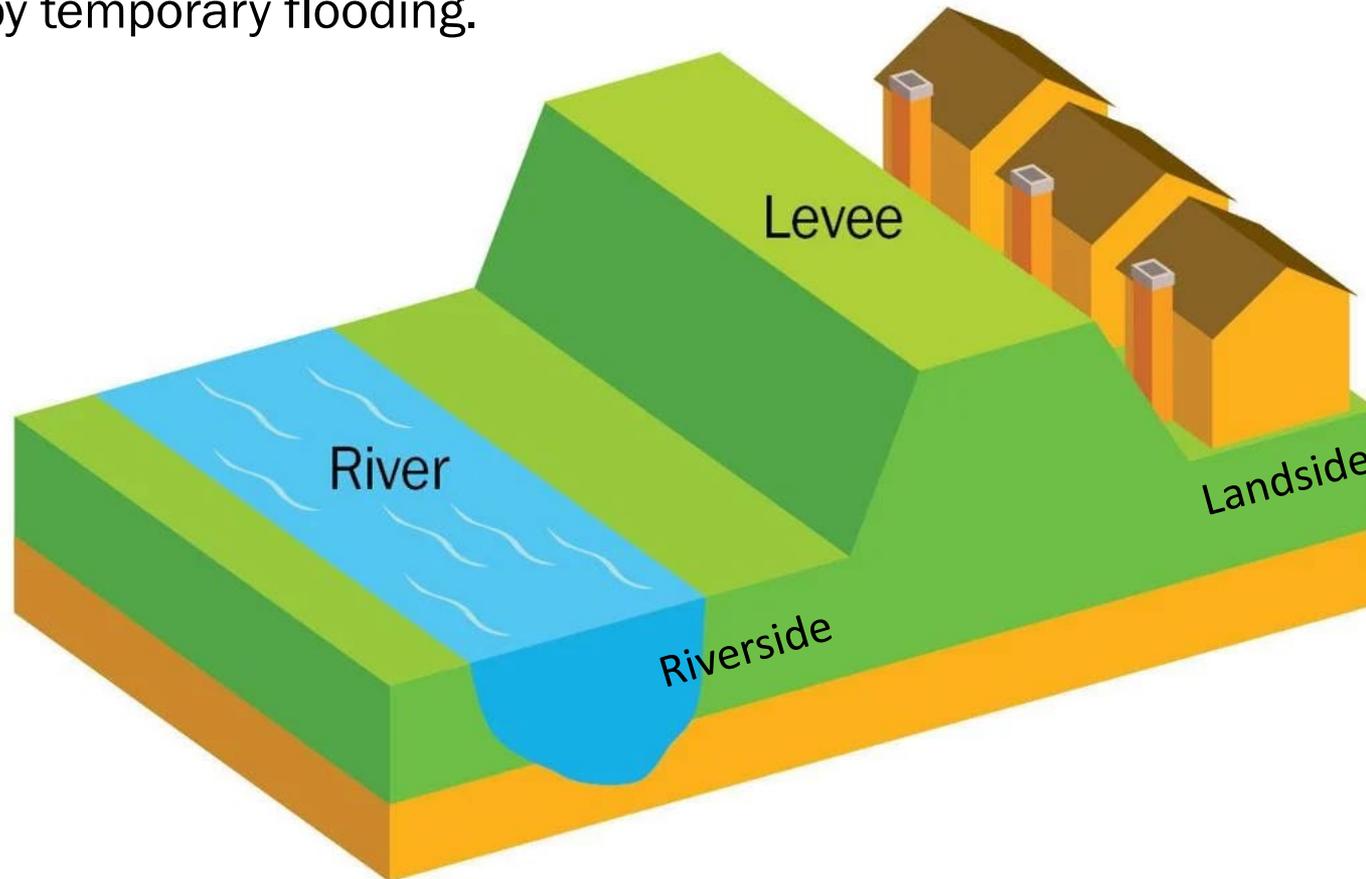
- 0.1-foot maximum surcharge
- Max 10% reduction is storage volume
- Max 10% increase in flow velocity



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.



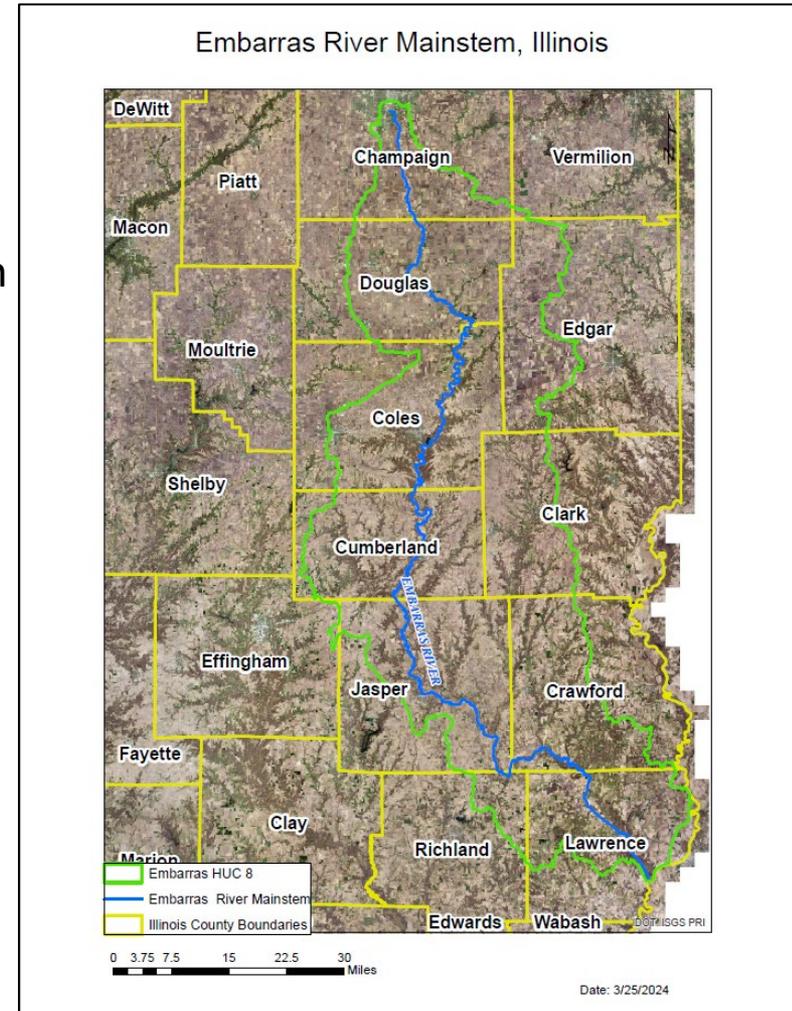
Project Scope

Project Scope

Big Picture

- 200 Miles of New Study Data
- From the Wabash River at Lawrenceville to our offices in Champaign Illinois.

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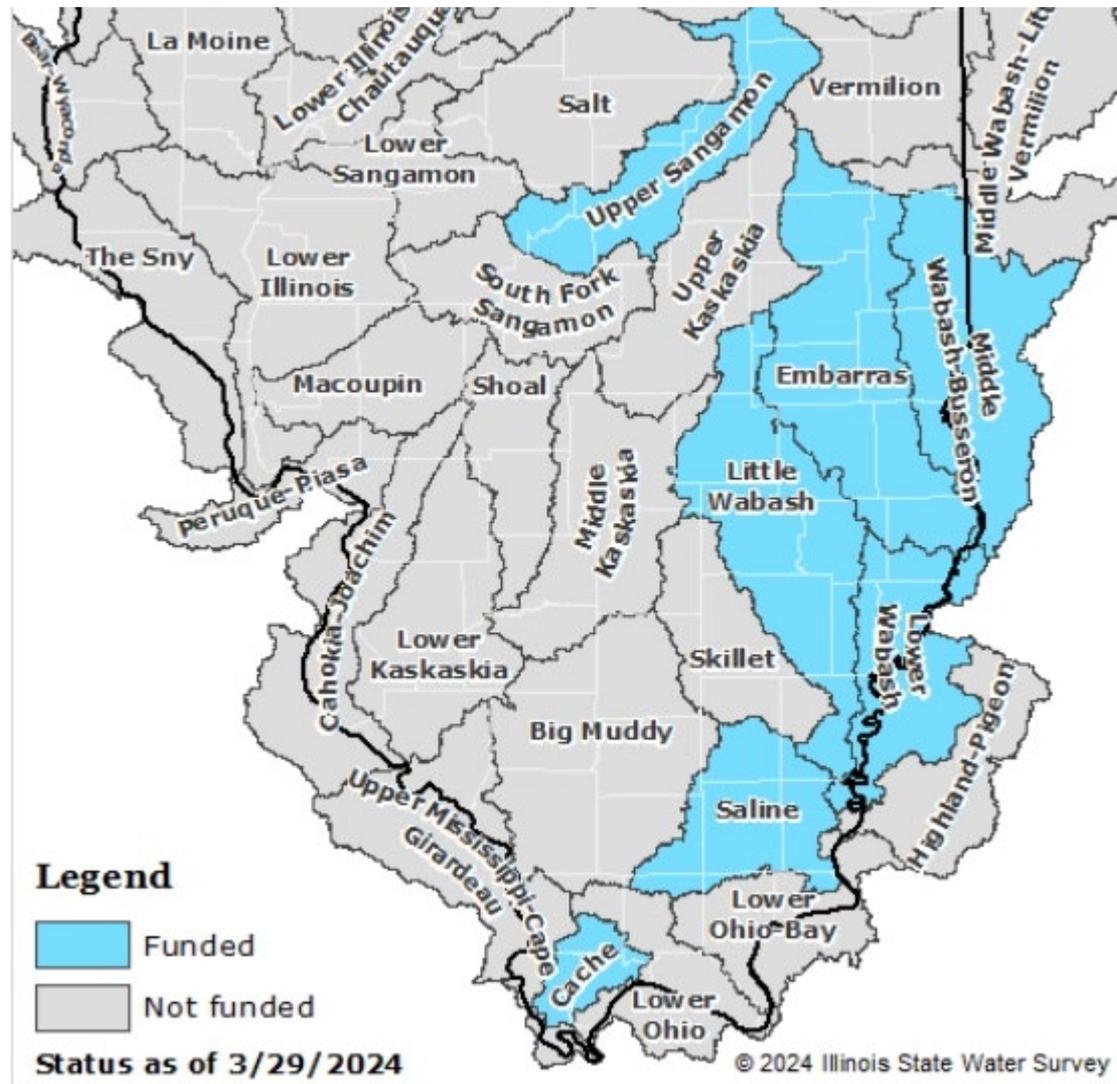


Previous Projects – Wabash, Little Wabash

Embarras River and Completed Work

Embarras River is the last piece in the mapping puzzle for many counties like Lawrence, Crawford, Richland, Jasper and Cumberland Counties.

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Project Scope

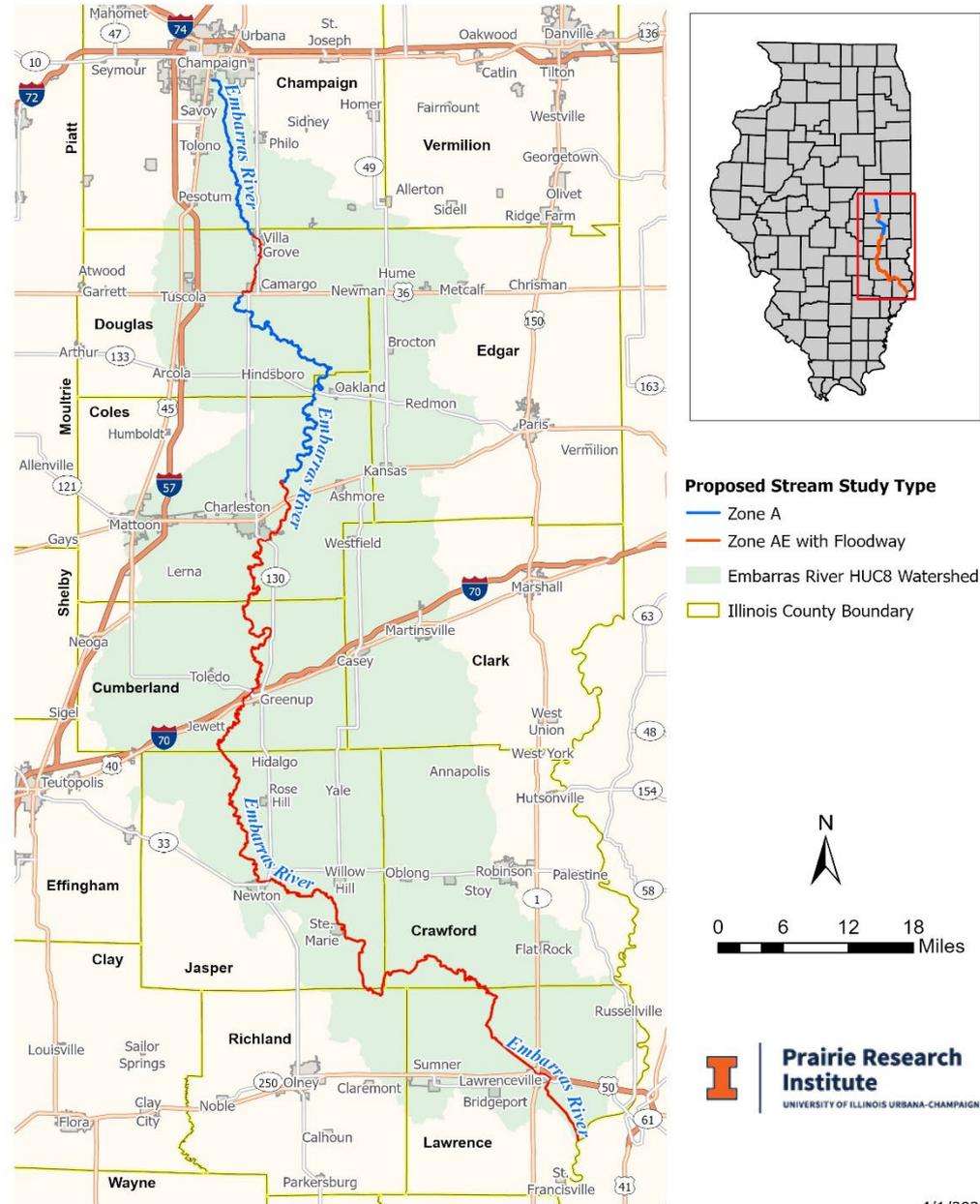
Stream Study Lines

- 140 Miles of Detailed Study (Zone AE) with Floodway
- Wabash River through Lawrenceville and Charleston and through Camargo and Villa Grove
- 58 Miles of Approximate Study (Zone A) remainder in Richland, Coles, Douglas and Champaign Counties

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Proposed Study of the Embarras River Watershed



4/1/2024

Future Project Scope

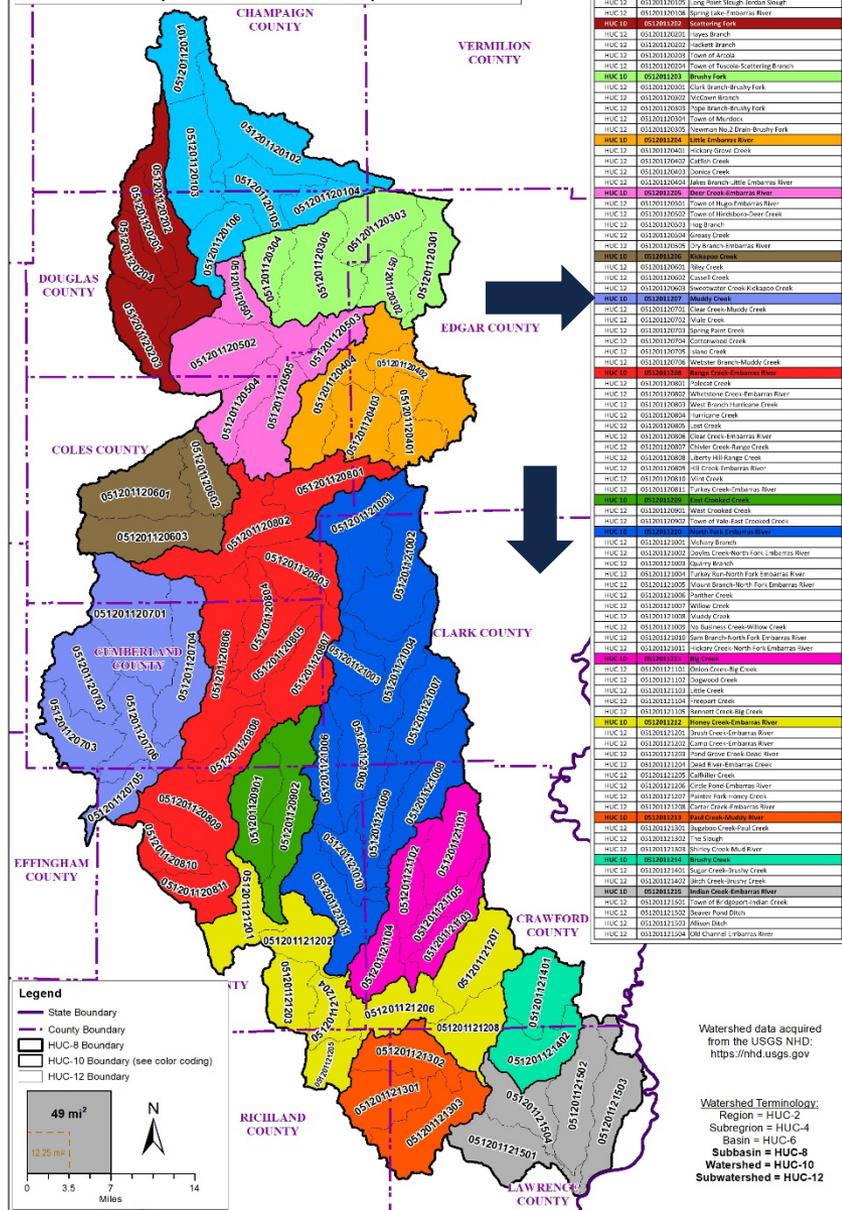
Embarras River Tributaries

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https://illinoisfloodmaps.org/images/wsEmbarrasRiver/HUC8_10_12.jpg

- 2024 – 2027 H&H Data Development for Tributary watersheds and sub-watersheds in Lawrence, Crawford, Richland, Jasper, Clark and Cumberland Counties
- 9 of 15 Tributary watersheds
- Muddy Creek (lavender) downstream to Indian Creek (gray)

Watersheds and Subwatersheds within the Embarras River Subbasin (HUC-8 code 05120112)



Project Scope & Methods

1. Hydrology

- Peak Flow Stream Gage Analysis Weighted with Regression Equations

2. Hydraulics

- HEC-RAS 1D Steady Flow Modeling

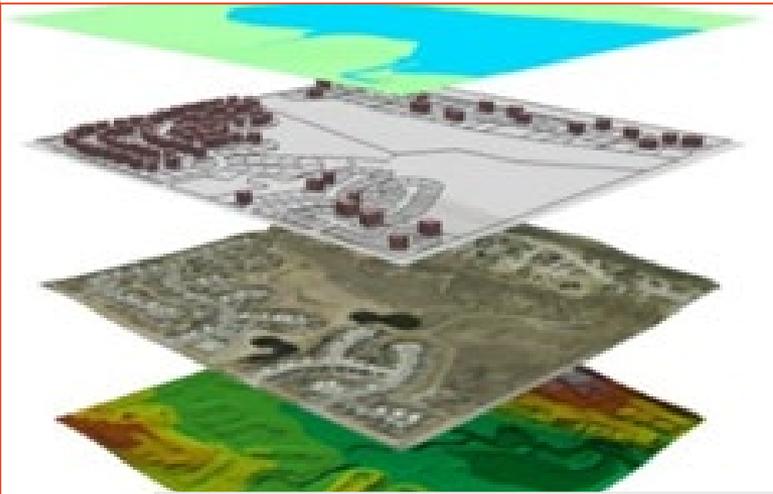
3. Develop Draft Floodplain Delineations

4. Community Outreach and Engagement

5. Complete Digital Flood Insurance Rate Maps (Future Phase)

Data Development Phase

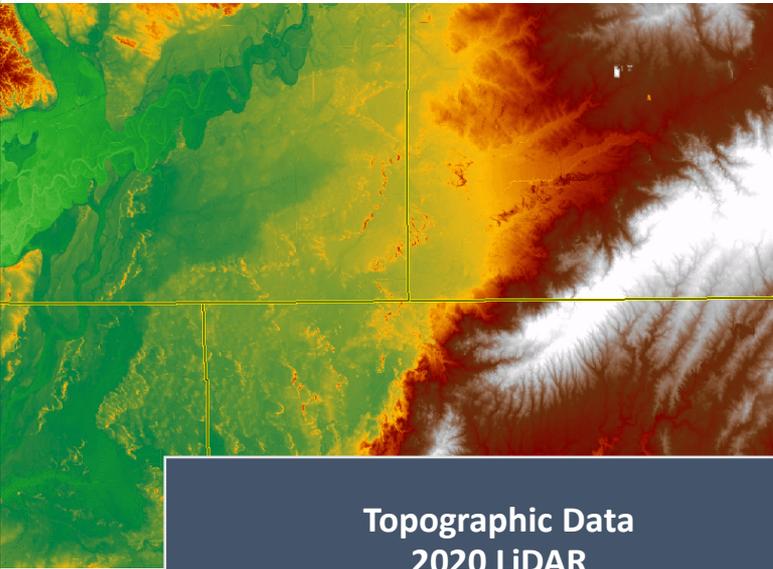
Mapping Data



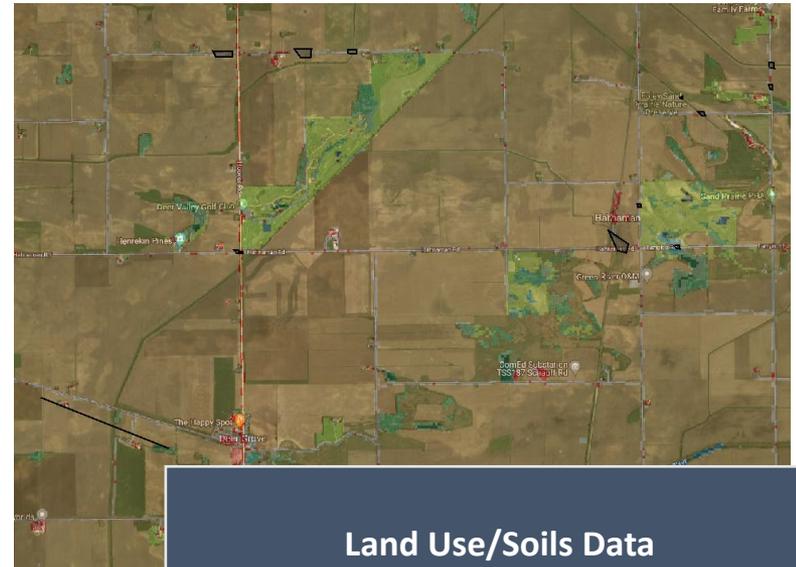
Mapping Data



Orthophotos

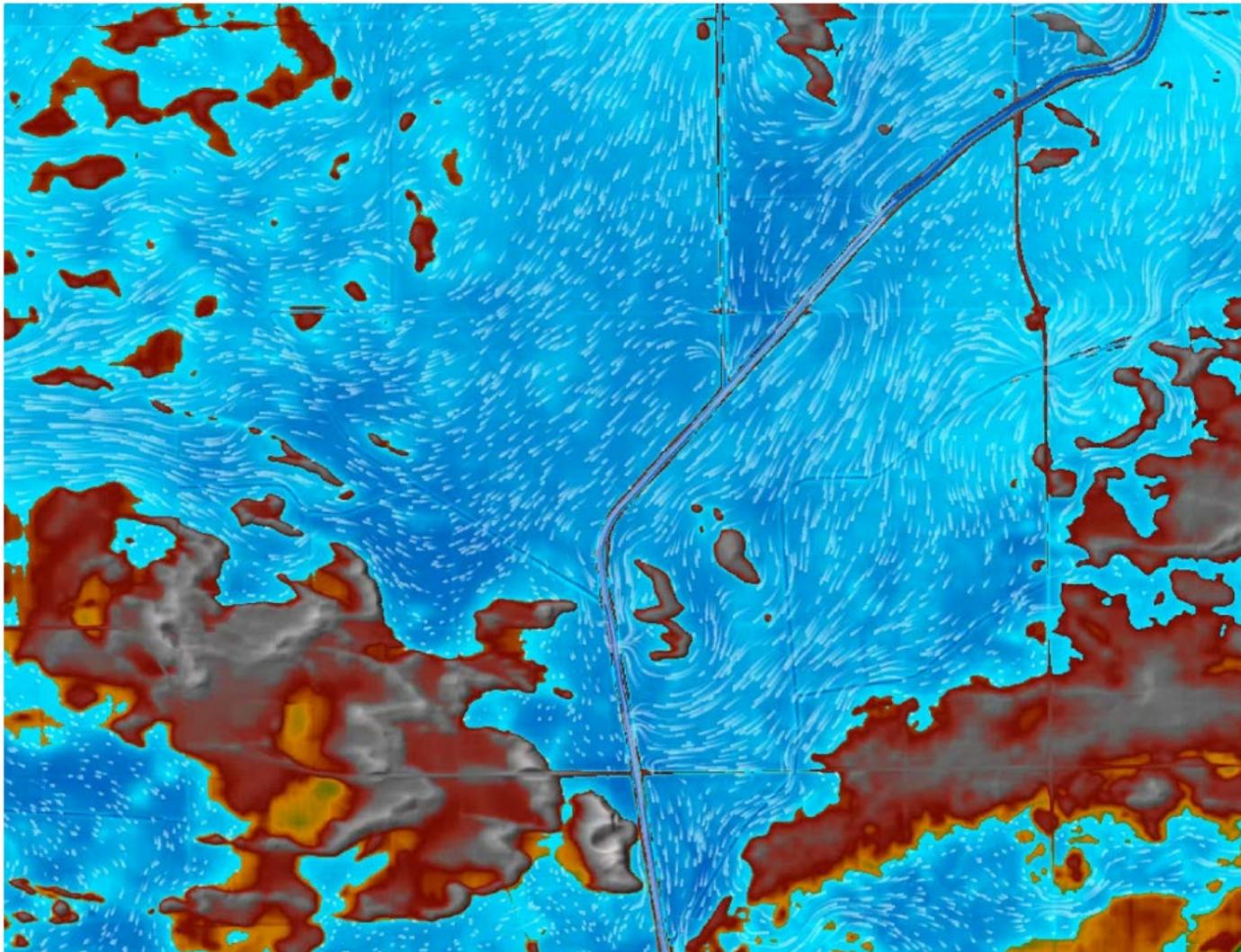


Topographic Data
2020 LiDAR



Land Use/Soils Data

HEC-RAS 2D Modeling



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

Please reach out to **Mary Richardson** at mjr@illinois.edu

Communication and Outreach

Proposed Engineering Methods Letter

FEMA Standard ID 620



Communication and Outreach

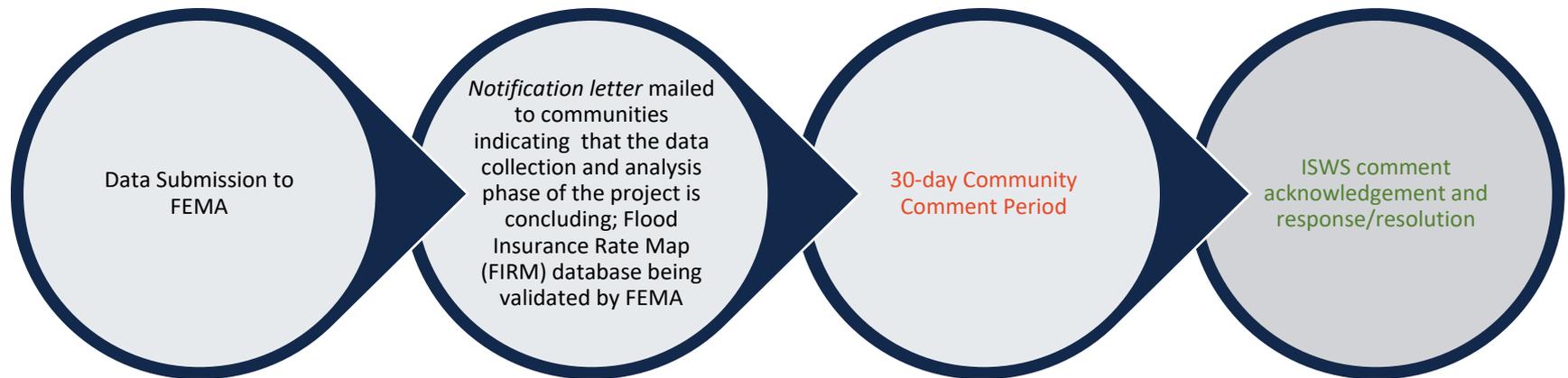
Flood Risk Review Meeting



Communication and Outreach

Data Submission Notification

FEMA Standard ID 621



Project Schedule

Project Schedule

Project Initiation and Community Coordination Meeting

- **Today and about a year from today, Winter 2025.**

Engineering Methods Letters to communities

- Letters will be issued within next week or so. The Embarras Tributaries project will do the same about 1 year later.

Complete all Hydrologic Studies

- Mainstem Embarras Phase April 2024, Downstream Tributaries Phase 1 February 2026

Complete all Hydraulic Studies

- Mainstem Embarras Phase February 2025, Downstream Tributaries Phase 1 February 2026

Flood Risk Review Meeting

- Mainstem Embarras Phase December 2025, Downstream Tributaries Phase December 2026

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

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- Project Manager: Brian S. Chaille, P.E., CFM
bchaille@illinois.edu
- Outreach: Mary Richardson, CFM
mjr@illinois.edu
- Mitigation Planning: Glenn Heistand, P.E., CFM
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www.illinoisfloodmaps.org

Additional Contacts

FEMA R5 Project Engineer: John Wethington, P.E.
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FEMA R5 Flood Insurance Liaison: James Sink
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Illinois NFIP Coordinator: Erin C. Conley, CFM
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IEMA State Hazard Mitigation Director: Zak Krug, MA
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IEMA State Hazard Mitigation Officer: Jeffrey Thompson
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