




ILLINOIS

Illinois State Water Survey

PRAIRIE RESEARCH INSTITUTE



Montgomery County, Illinois
FEMA Risk MAP
Project Initiation Community
Coordination Call

March 28, 2023

Shoal Creek
visitlitchfield.com

Agenda

Rollcall

Introduction

Project Objectives and Goals

National Flood Insurance Program / Mitigation

Project Scope

Data Development

Communication

Schedule

Community Participation

Rollcall

Village of Butler
Village of Coalton
City of Coffeen⁺
Village of Donnellson⁺
Village of Farmersville⁺
Village of Fillmore
Village of Harvel
City of Hillsboro^{*+}
Village of Irvine
City of Litchfield^{*+}
City of Nokomis^{*+}

Village of Ohlman
Village of Panama⁺
Village of Raymond
Village of Schram City⁺
Village of Taylor Springs⁺
Village of Waggoner⁺
Village of Walshville
Village of Wenonah
City of Witt^{*+}
Montgomery County ^{*+}

Other
Agencies?
FEMA
IDNR
IEMA

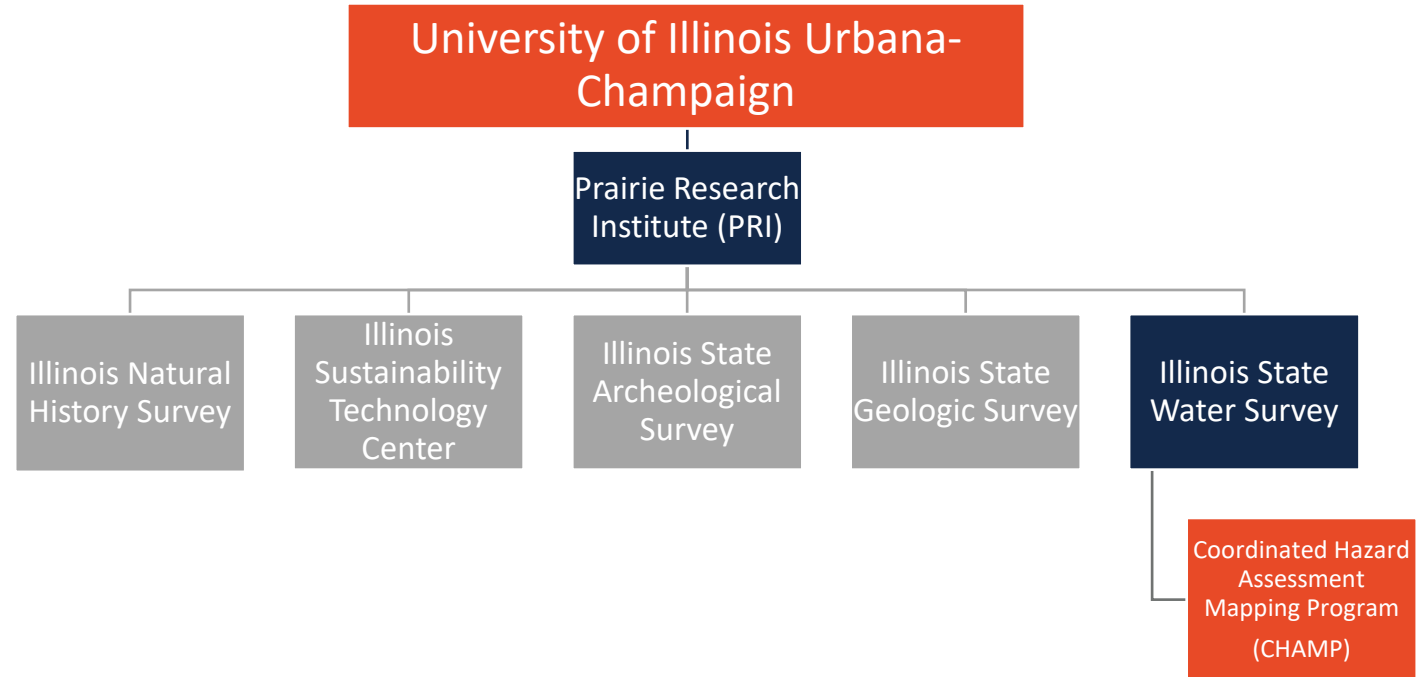
*National Flood Insurance Program (NFIP) participants

+ Participating Jurisdiction Represented in the 2016 NHMP

Introduction

Introduction

Who We Are



I ILLINOIS
Illinois State Water Survey
PRAIRIE RESEARCH INSTITUTE

<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.

I ILLINOIS

Illinois State Water Survey

PRAIRIE RESEARCH INSTITUTE

Introduction

How We Are Funded

I ILLINOIS

Illinois State Water Survey
PRAIRIE RESEARCH INSTITUTE



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

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
LOVES PARK, CITY OF	170722
MACHESNEY PARK, VILLAGE OF	171009
NEW MILFORD, VILLAGE OF	175182
PECATONICA, VILLAGE OF	170787
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



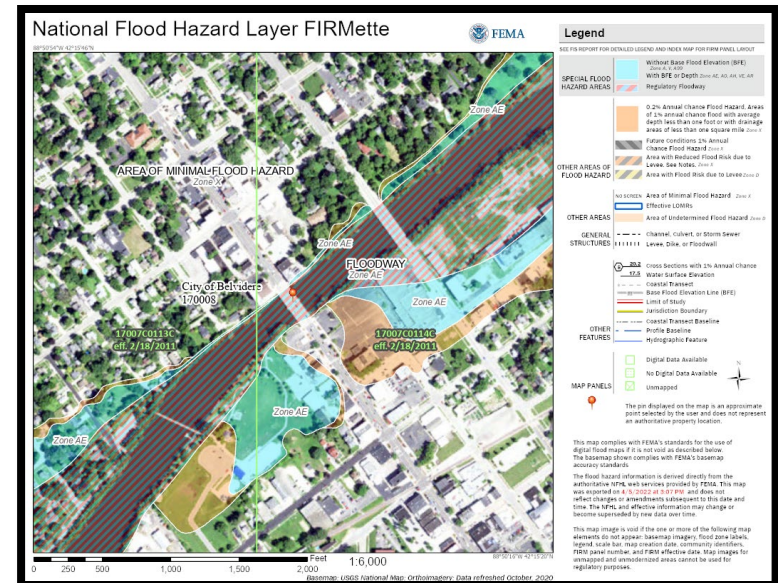


REVISED: FEBRUARY 17, 2016

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
17201CV001B

GENERATE FLOODPLAIN MAPS



Introduction

INFORM RESIDENTS AND COMMUNITIES about flood hazards in their communities.

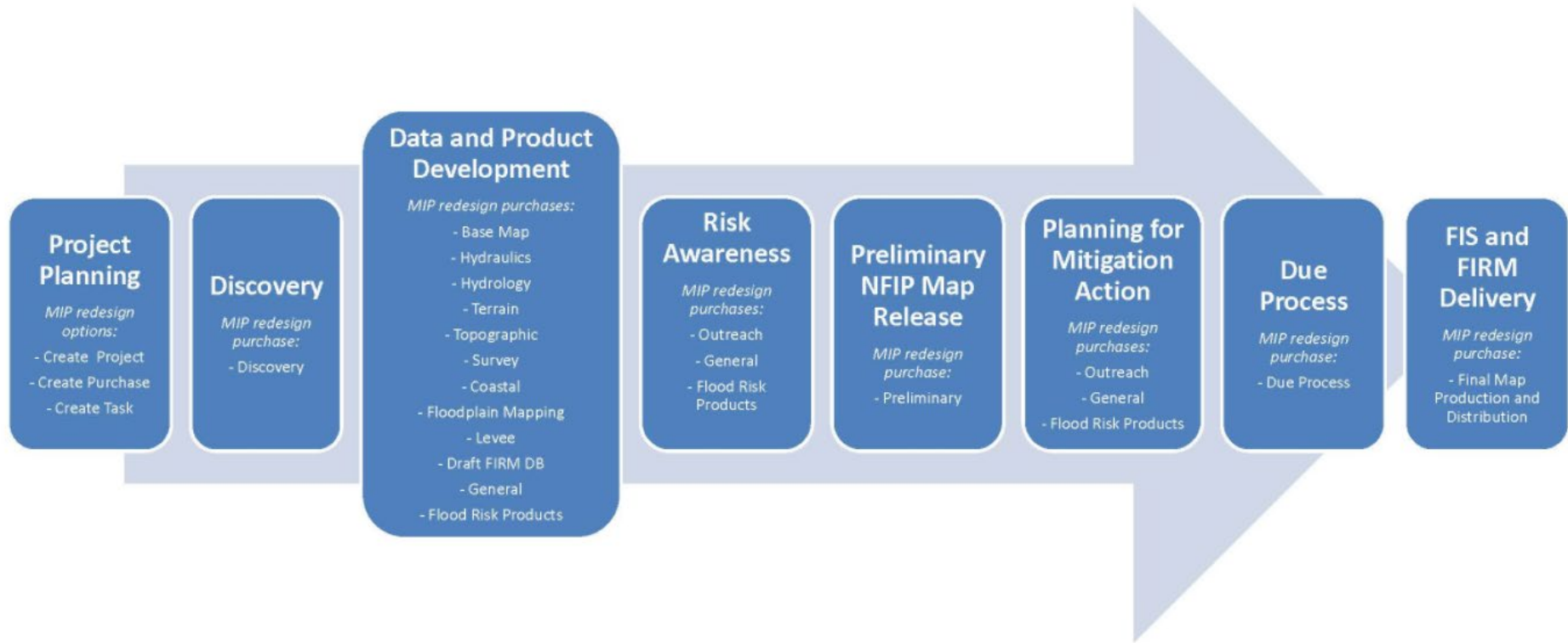
What We Do



I ILLINOIS
Illinois State Water Survey
PRAIRIE RESEARCH INSTITUTE

Project Objectives and Goals

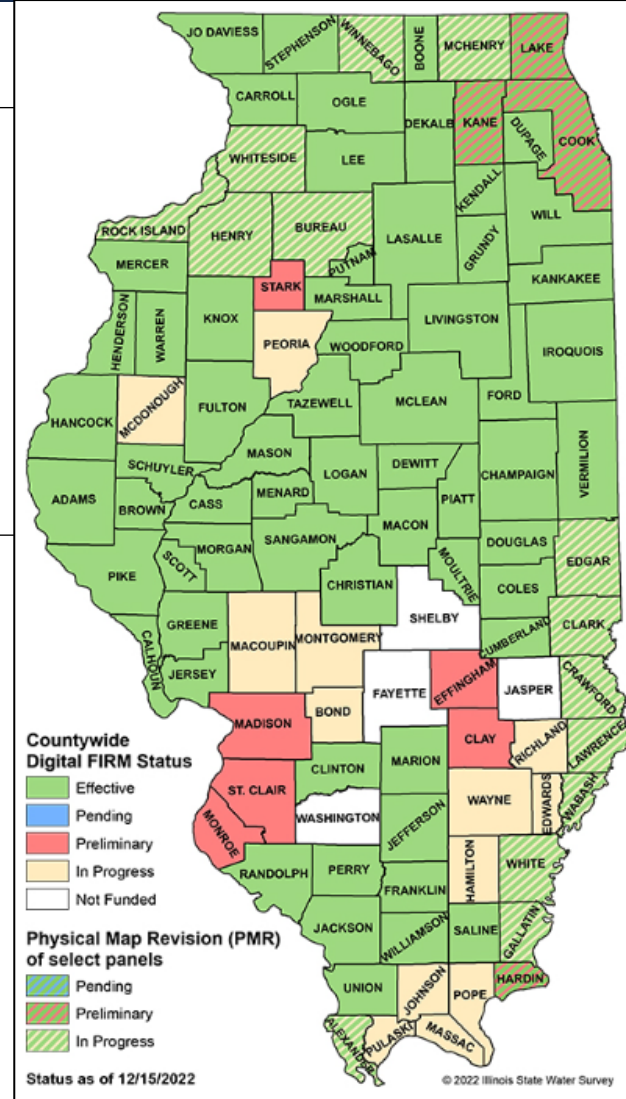
FEMA National Objectives and Goals



State Objectives and Goals

Update Flood Risk with Hydrologic and Hydraulic Analyses for Select Streams

Update Digital Floodplain Maps



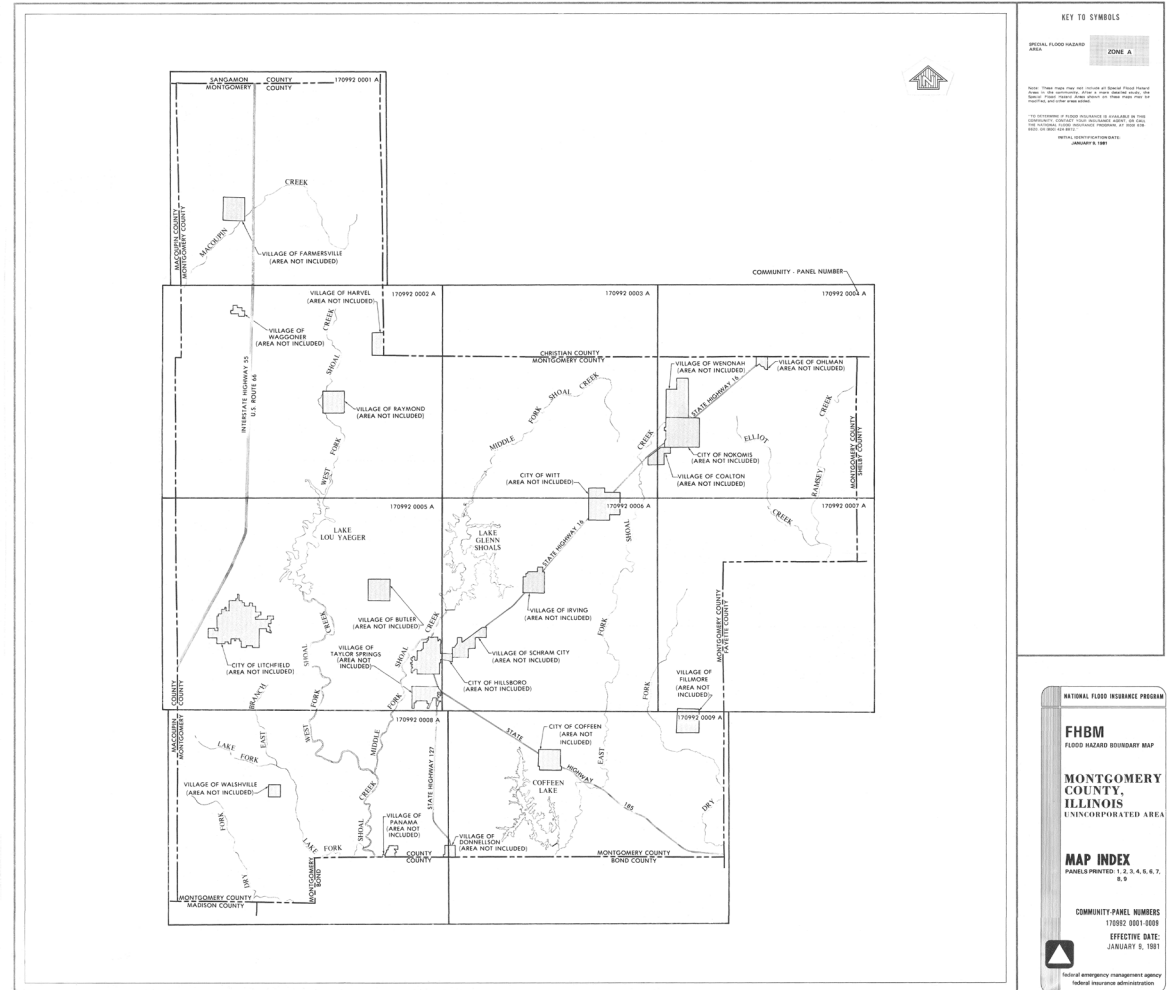
<https://www.illinoisfloodmaps.org/>

Update Flood Risk Data and Maps

Montgomery County
DFIRM Effective date:
January 9, 1981

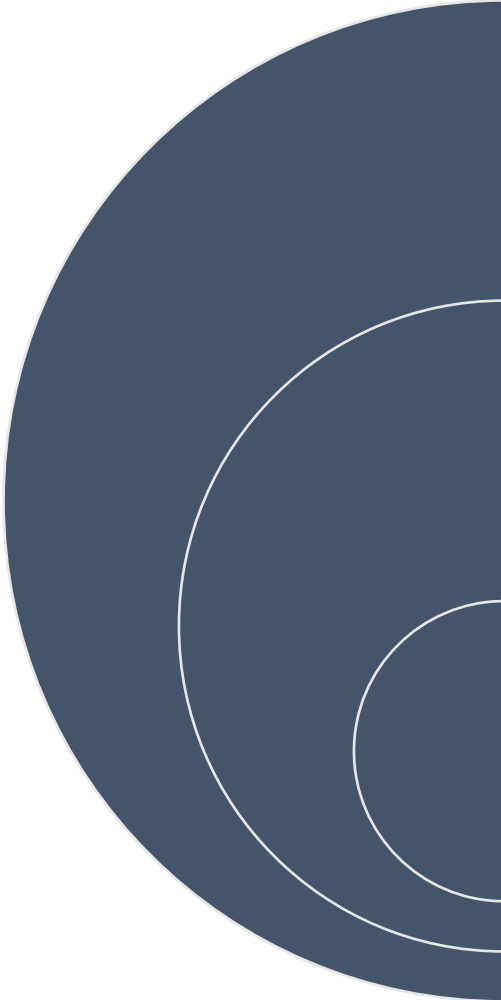
Harvel : June 16, 2011

Hillsboro, Litchfield and
Nokomis : August 19,
1986



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.

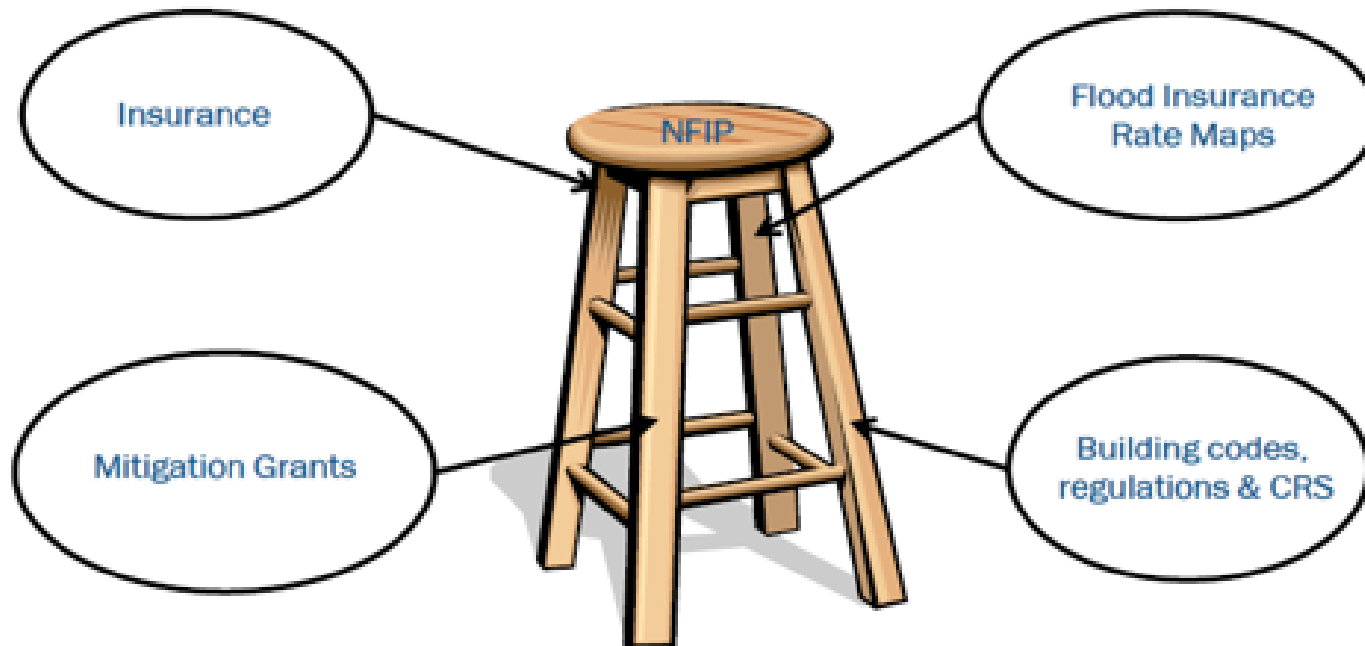
In exchange for adopting and enforcing a floodplain management ordinance, Federally-backed flood insurance is made available to property owners throughout the community.

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 02/06/2023

Community	CRS Status	CAC Date	CAV Date	No. Flood Policies	Total Coverage, \$	Total Claims Since 1978	Total Paid Since 1978, \$	Rep Loss Structures
City of Hillsboro	-	8/17/2010	1/30/2007	0	\$ 0	1	\$ 0	0
City of Litchfield	-	11/1/2006		0	\$ 0	1	\$ 0	0
City of Nokomis	-	-	-	0	-	-	-	0
City of Witt	-	-	-	1	\$45,000	2	\$15,173	20
Montgomery County	-	1/31/2007	3/27/1996	1	\$45,000	3	\$94,153	1

Figure 69
Estimated Potential Dollar Losses to Potentially-Damaged Housing Units from a Riverine Flood Event

Participating Jurisdiction	Average Market Value (2014)	Potentially-Damaged Housing Units	Potential Dollar Losses		Total Potential Dollar Losses (Rounded to the Nearest Dollar)
			Structure	Content	
Coffeen	40,799	0	\$ 0.00	\$ 0.00	\$ 0
Donnellson	27,803	0	\$ 0	\$ 0	\$ 0
Farmersville	69,614	0	\$ 0.00	\$ 0.00	\$ 0
Hillsboro	67,361	25	\$336,805.00	\$252,603.75	\$915,622
Litchfield	64,685	0	\$ 0	\$ 0	\$ 0
Nokomis	51,307	12	\$123,136.80	\$92,352.60	\$215,489
Panama	22,244	0	\$ 0.00	\$ 0.00	\$ 0
Raymond	74,383	0	\$ 0	\$ 0	\$ 0
Schram City	44,224	0	\$ 0.00	\$ 0.00	\$ 0
Taylor Springs	48,969	0	\$ 0.00	\$ 0.00	\$ 0
Waggoner	31,387	0	\$ 0	\$ 0	\$ 0
Witt	34,041	0	\$ 0	\$ 0	\$ 0

Hazard Mitigation

Figure 14
Severe Storms – Heavy Rain Events Reported in Montgomery County
2003 – 2014

Date(s)	Start Time	Location(s)	Magnitude (inches)	Injuries	Fatalities	Property Damage	Description
11/17/2003 thru 11/18/2003	7:00 a.m.	countywide	2.00 – 5.00 in.	n/a	n/a	\$100,000	- very heavy rains fell over a 12 to 24 hour period causing widespread flooding
1/5/2005	10:00 a.m.	countywide	3.00 – 6.00 in.	n/a	n/a	\$100,000	- heavy rains over a 4 to 5 day period caused general flooding; many streams and creeks flooded - numerous roads were flooded and closed due to the flooded streams or excessing ponding of water from the rain
Subtotal:				0	0	\$200,000	

Sources: Fenton, Dennis, State Farm Insurance Agent.
NOAA, National Environmental Satellite, Data & Information Service, National Climatic Data Center, Storm Events Database.

Figure 87
Mitigation Goals

Goal 1	Educate people about the natural hazards they face and the ways they can protect themselves, their homes, and their businesses from those hazards.
Goal 2	Protect the lives, health, and safety of the people and animals in the County from the dangers of natural hazards.
Goal 3	Protect existing infrastructure and design new infrastructure (roads, bridges, utilities, water supplies, sanitary sewer systems, stormwater retention and elimination systems, etc.) to be resilient to the impacts of natural hazards.
Goal 4	Incorporate natural hazard mitigation into community plans and regulations.
Goal 5	Place a priority on protecting public services, including critical facilities, utilities, roads and schools.
Goal 6	Preserve and protect the rivers and floodplains in our County.
Goal 7	Ensure that new developments do not create new exposures to damage from natural hazards.
Goal 8	Protect historic, cultural, and natural resources from the effects of natural hazards.
Goal 9	Ensure proper communication between emergency services and government organizations that comply with NIMS regulations.

Montgomery County Multi-Jurisdictional Natural Hazards Mitigation Plan



PARTICIPANTS

Coffeen, City of
Donnellson, Village of
Farmersville, Village of
Hillsboro, City of
Hillsboro Area Hospital
Litchfield, City of

Montgomery, County of
Nokomis, City of
Panama, Village of
Raymond, Village of
Regional Office of Education #3

Schram City, Village of
St. Francis Hospital
Taylor Springs, Village of
Waggoner, Village of
Witt, City of

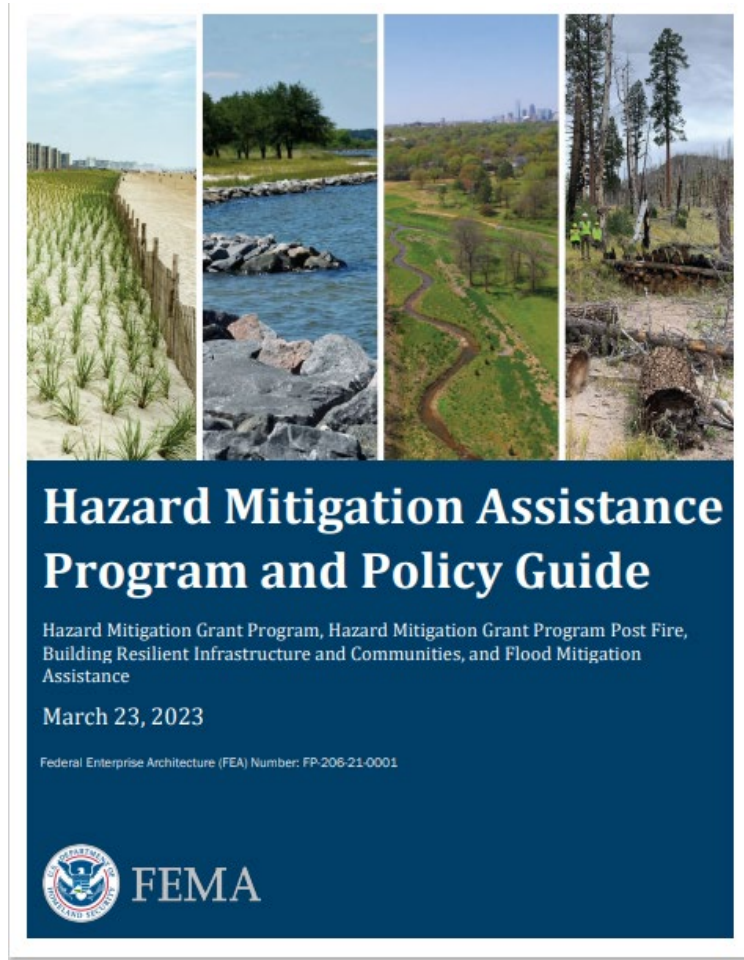
July 2016

The five year update of this Plan must be completed on or before September 6, 2021.

Hazard Mitigation- Disaster Declarations 2002 to present

Date of Declaration	Disaster Number	Disaster Description	Type of Assistance
December 13, 2021	EM-577-IL	Severe Storms, Straight-line Winds Tornadoes	Public
March 26, 2020	DR-4489-IL	COVID-19 Pandemic	Individuals and Public
October 18, 2008	DR-1800-IL	Severe Storms and Flooding	Public
June 24, 2008	DR-1771-IL	Severe Storms and Flooding	Individual
February 9, 2006	DR-1681-IL	Severe Winter Storm	Public
September 7, 2005	EM-3230-IL	Hurricane Katrina Evacuation	Public
May 21, 2002	DR-1416-IL	Severe Storms, Tornadoes and Flooding	Individual

Hazard Mitigation



[Hazard Mitigation Assistance Program and Policy Guide \(fema.gov\)](https://www.fema.gov/hazard-mitigation-assistance-program-and-policy-guide)

Terminology

What is a Special Flood Hazard Area?

The FEMA Special Flood Hazard Area (SFHA) zone type designation is related to the method and level of hydraulic analysis performed.

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.

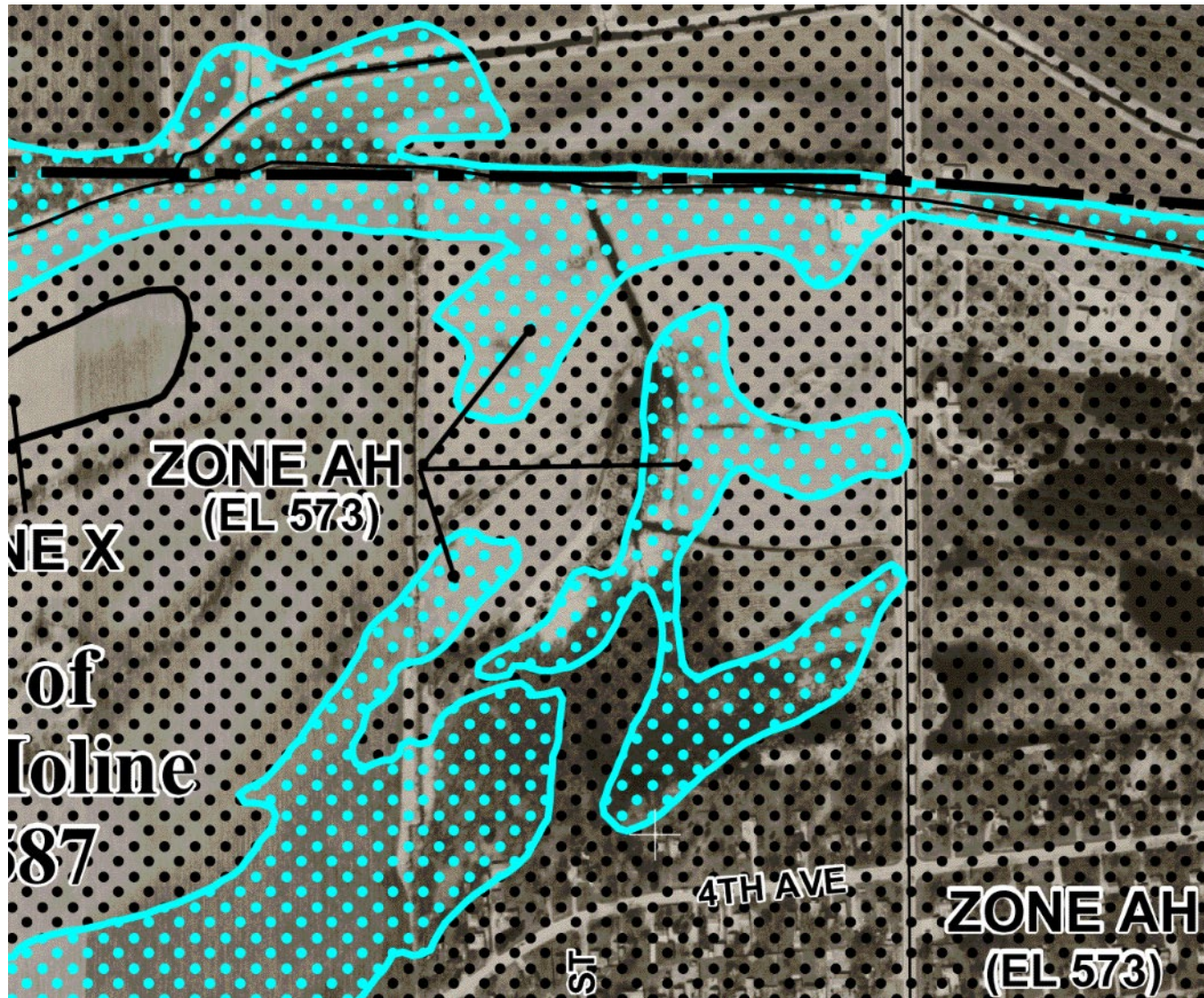
The Base Flood Elevation (BFE) is the elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year.

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.
Zone AH	Area subject to inundation by the 1-percent-annual-chance flood event. Usually for shallow ponding (1-3 foot depth) Base Flood Elevations ARE shown.

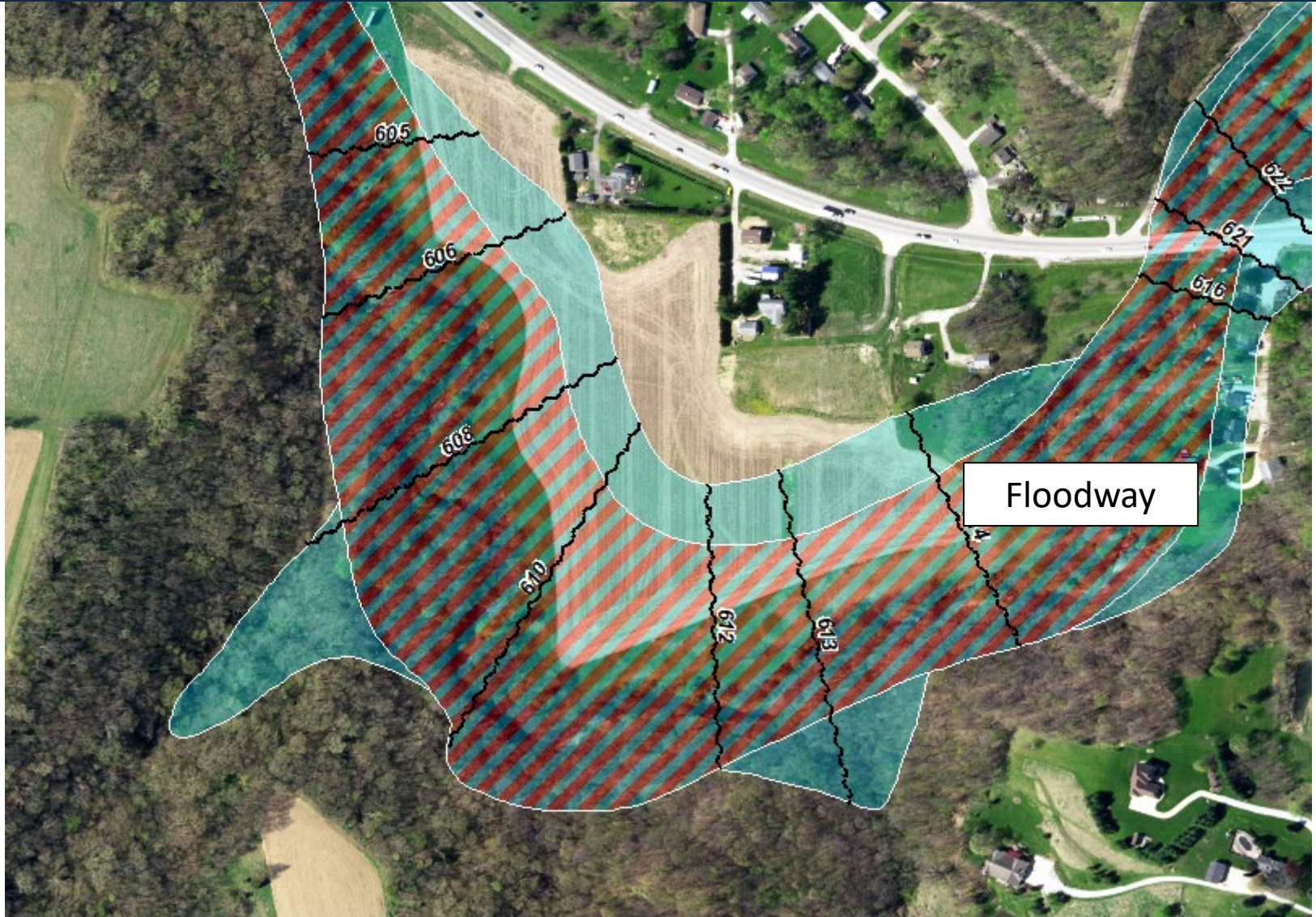
What is a Special Flood Hazard Area?



What is a Special Flood Hazard Area?

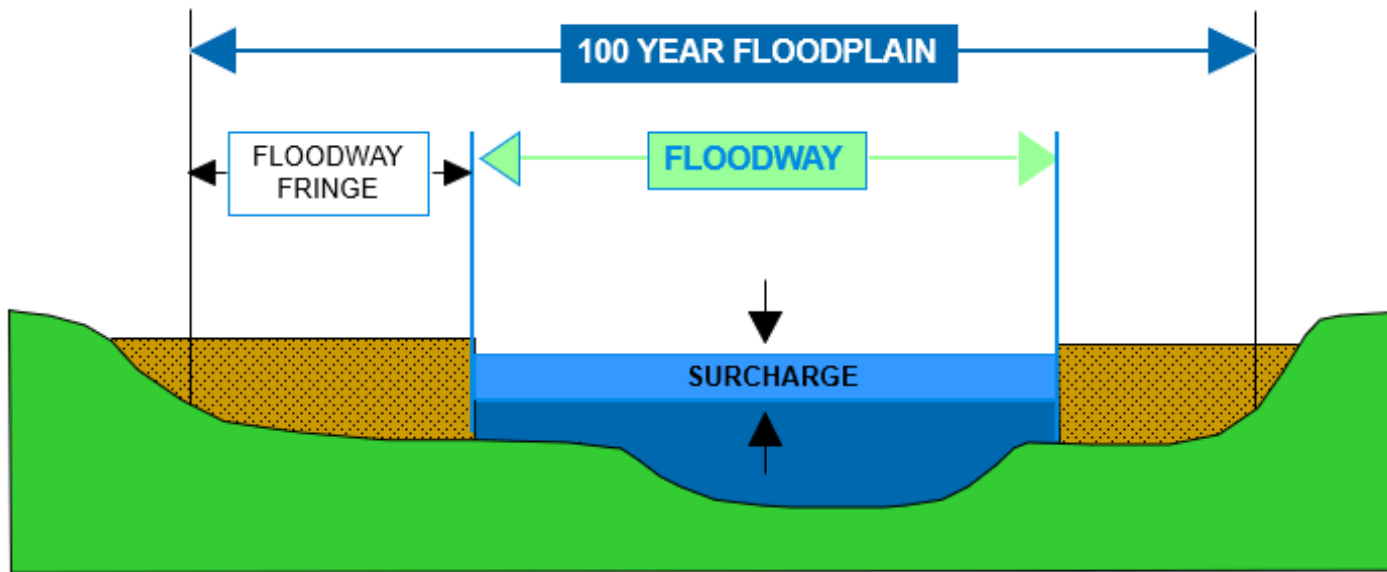


What is Floodway?



What is Floodway?

- National Standard = 1 foot floodway surcharge
- Illinois Standard = 0.1 foot floodway surcharge



FLOODWAY + FLOODWAY FRINGE = 100 YEAR FLOODPLAIN
SURCHARGE NOT TO EXCEED 0.1 FOOT

Project Scope

Project Scope

1. Hydrology

- HEC-HMS with Bulletin 75 rainfall
- USGS StreamStats

2. Hydraulics

- HEC-RAS 1D for

3. Develop Draft Floodplain Mapping

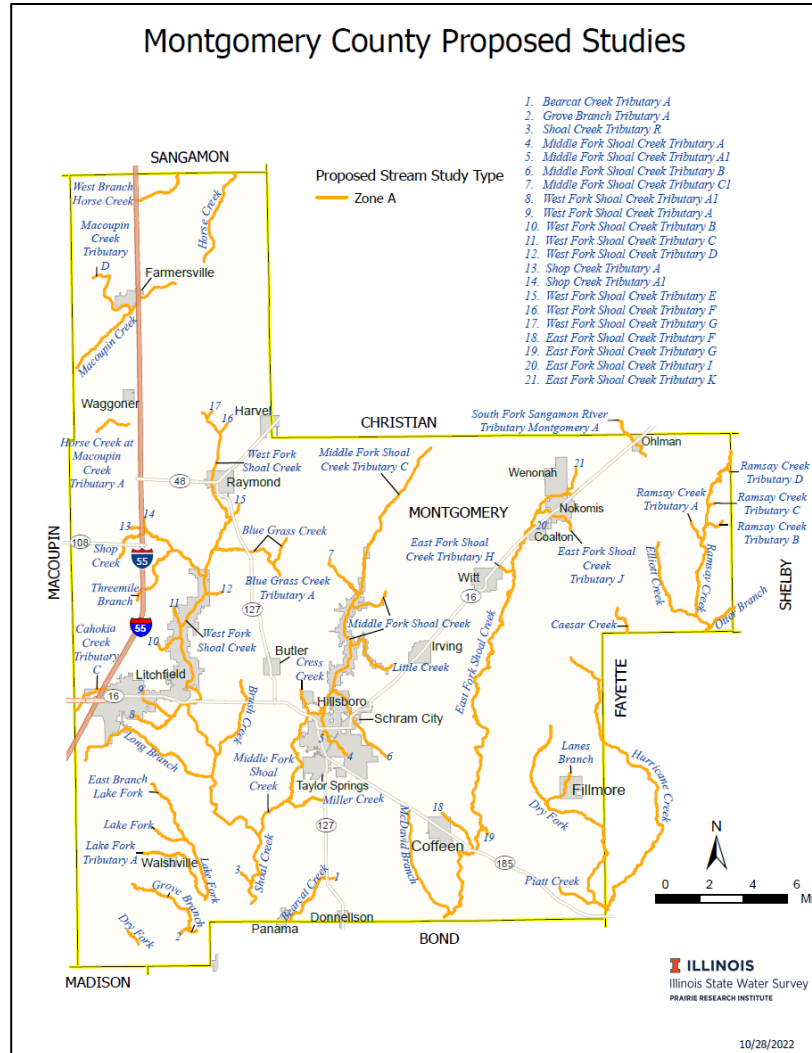
4. Community Outreach and Engagement

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

Project Scope

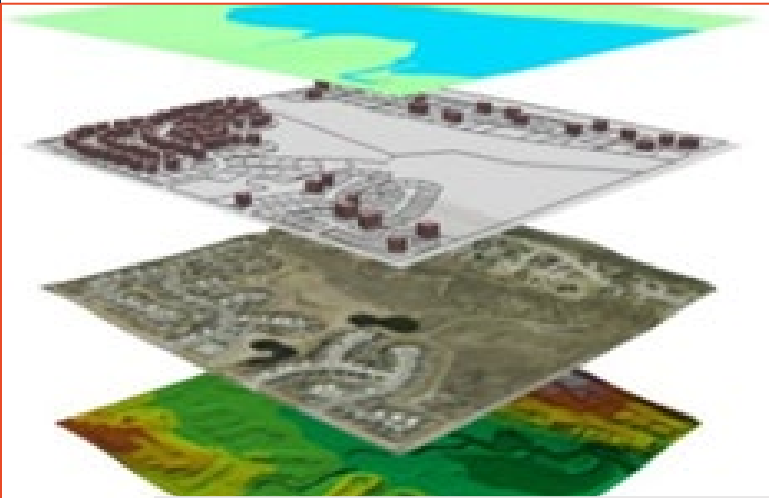
Montgomery County Project Location Map

I ILLINOIS
Illinois State Water Survey
PRAIRIE RESEARCH INSTITUTE

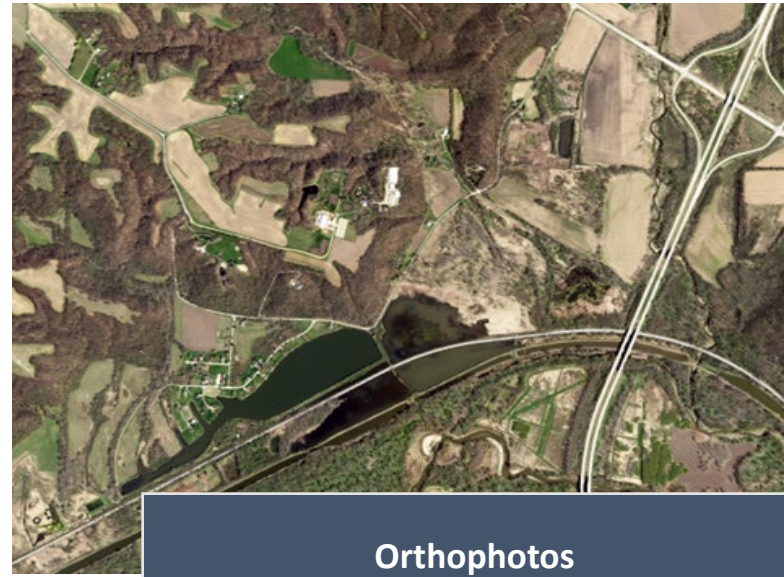


Data Development Phase

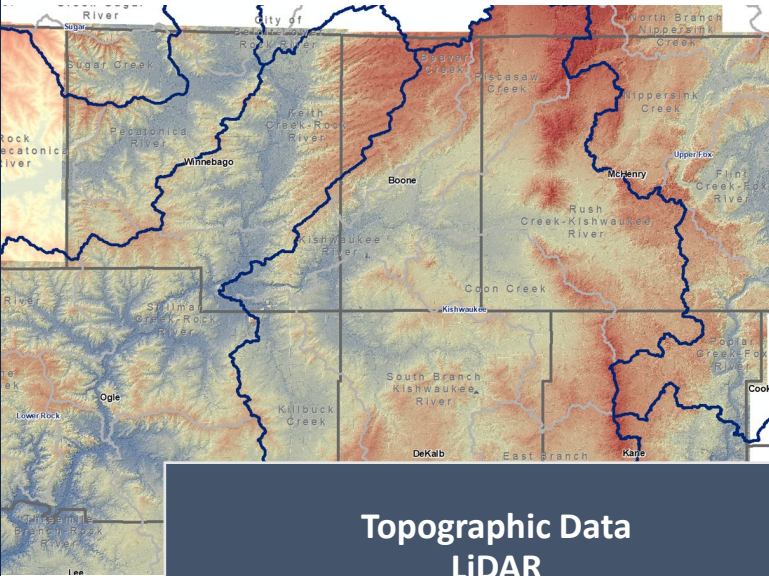
Mapping Data



Mapping Data



Orthophotos



Topographic Data
LiDAR



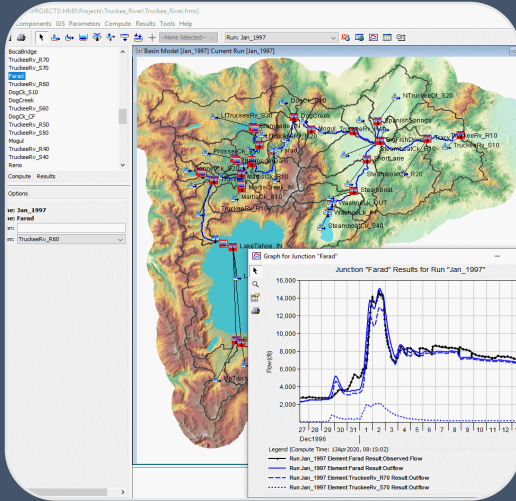
Survey

Proposed Engineering Methods

Hydrologic Studies

Determine 100-Year stream **Flows** using:

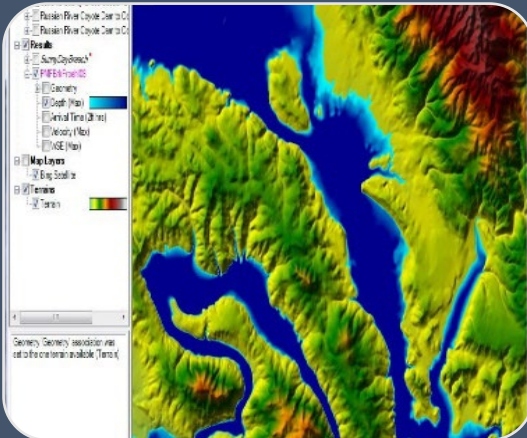
- HEC-HMS version 4.10 or higher (Lakes)
- USGS StreamStats Online Application
- 10%, 4%, 2%, 1%, 0.2% and 1%+ annual chance storm events



Hydraulic Studies

Determine 100-Year flood **Elevations** using Army Corps of Engineers

- HEC-RAS 6.3 River Analysis System Hydraulic Model
- All streams will be modeled with 1D methodology



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

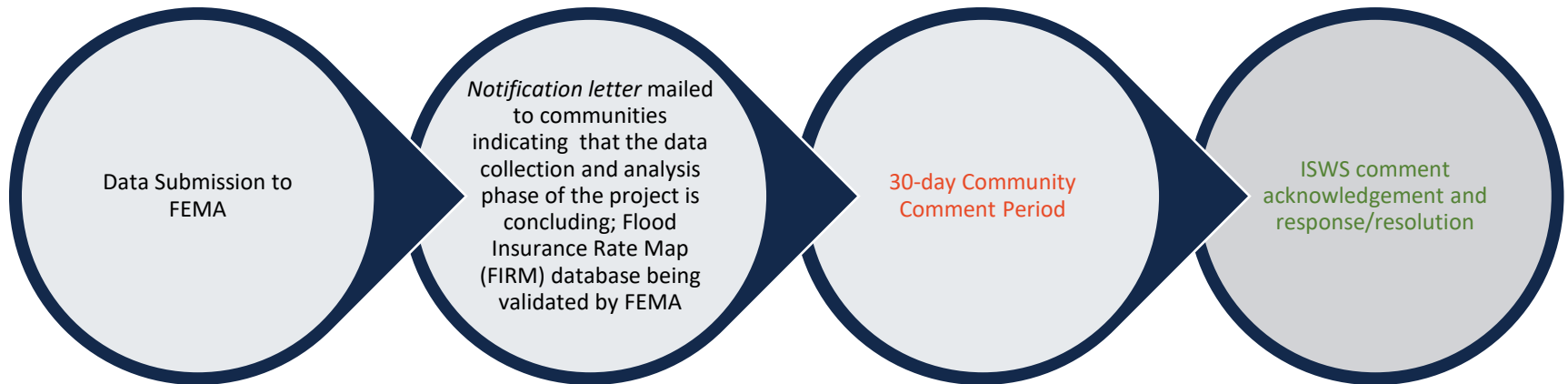
Flood Risk Review Meeting



Communication and Outreach

Data Submission Notification

FEMA Standard ID 621



Project Schedule

Project Schedule

Project Initiation and Community Coordination Meeting

- **Today**

Engineering Methods Letters to communities

- Within 60 days

Complete all Hydrologic Studies

- Fall 2023

Complete all Hydraulic Studies

- Spring 2024

Flood Risk Review Meeting

- Summer 2024

Submit Funded Flood Studies to IDNR for State review

- Fall 2024

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:

- 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

- Project Manager: James Powell, P.E., CFM
powell@illinois.edu
- Outreach: Mary Richardson, CFM
mjr@illinois.edu
- Mitigation Planning: Glenn Heistand, P.E., CFM
heistand@illinois.edu

www.illinoisfloodmaps.org



Illinois State Water Survey

PRAIRIE RESEARCH INSTITUTE



FEMA