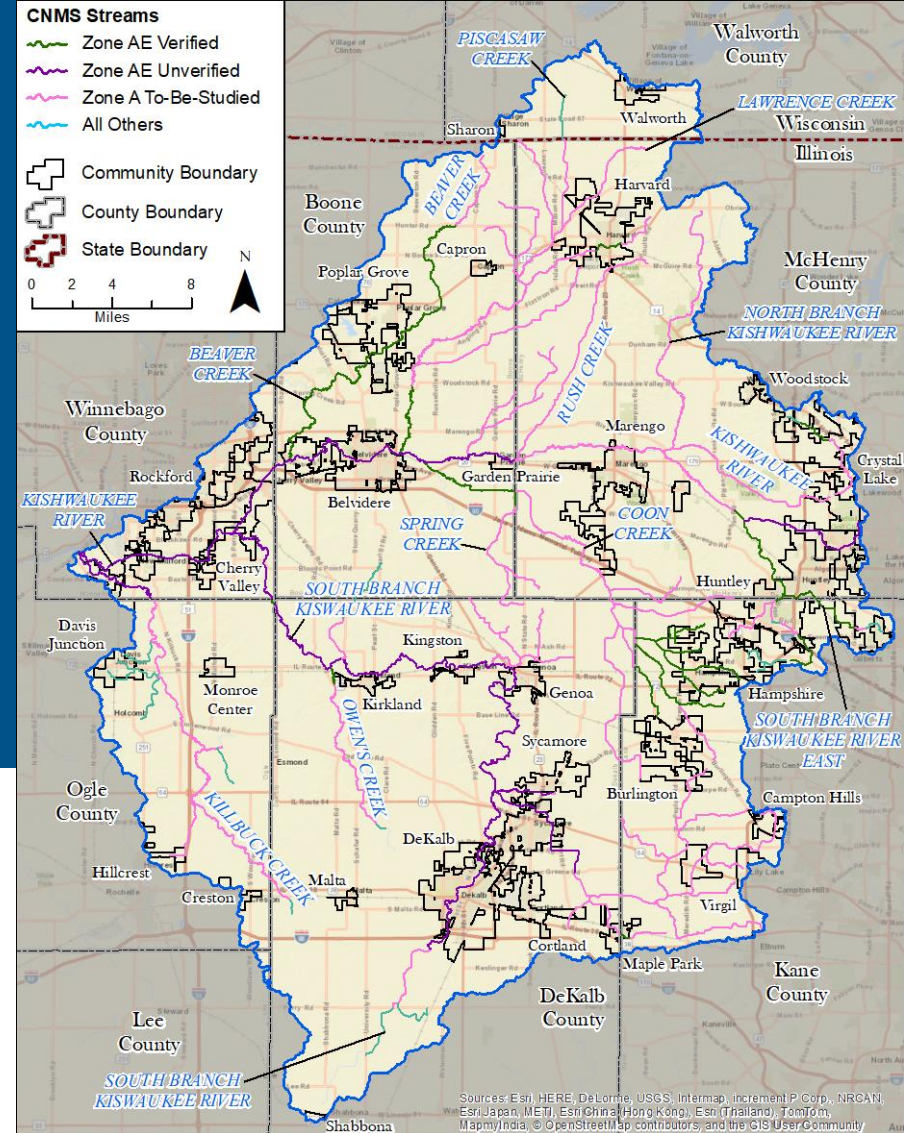
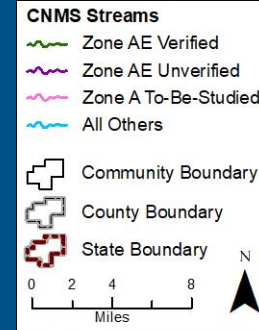




FEMA

Kishwaukee River HUC 07090006 Watershed FEMA Risk MAP Discovery Meeting November 7 & 8, 2018

Mary Richardson CFM
Sally McConkey P.E., CFM
Curt Abert
Lisa Graff GISP, CFM
Brad McVay GISP, CFM
Zoe Zaloudek GISP, CFM



RiskMAP

Increasing Resilience Together

I
ILLINOIS

Illinois State Water Survey
PRAIRIE RESEARCH INSTITUTE



Risk MAP (Mapping, Assessment, Planning)

Through collaboration with State, Local, and Tribal entities, Risk MAP will deliver quality data that increases public awareness and leads to action that reduces risk to life and property



Risk MAP process (3-5+ years)

- **Discovery** –communities identify flood study needs and provide local data
- **Discovery Map; Study and Geospatial data** - provided to communities via web site
- **Data Development** – communities asked to provide feedback on planned flood studies and methods; hydrologic and hydraulic models developed with draft flood inundation mapping
- **Flood Risk Review Meeting** – communities review draft maps and models and provide feedback
- **Preliminary Flood Insurance Study and Maps** – distributed to communities for comment
- **Open House Meeting and Community Official Meeting** – review preliminary studies and maps, review due process
- **Comment Period** - for Preliminary Flood Insurance Study and Maps – 30 days
- **Appeal Period** - for Preliminary Flood Insurance Study and Maps – 90 days
- **Comments and Appeals Resolved** – written communication to communities
- **Final Flood Insurance Study and Maps** – provided to communities with notification regarding adoption (6 months to adopt)
- **Flood Insurance Rate Map and Study** – effective for flood insurance and floodplain management

Discovery Meeting Goals



- **Provide information about watershed, floodplain management & mitigation resources**
- **Gather information on flood study and mapping needs**
- **Start a dialogue with watershed stakeholders**

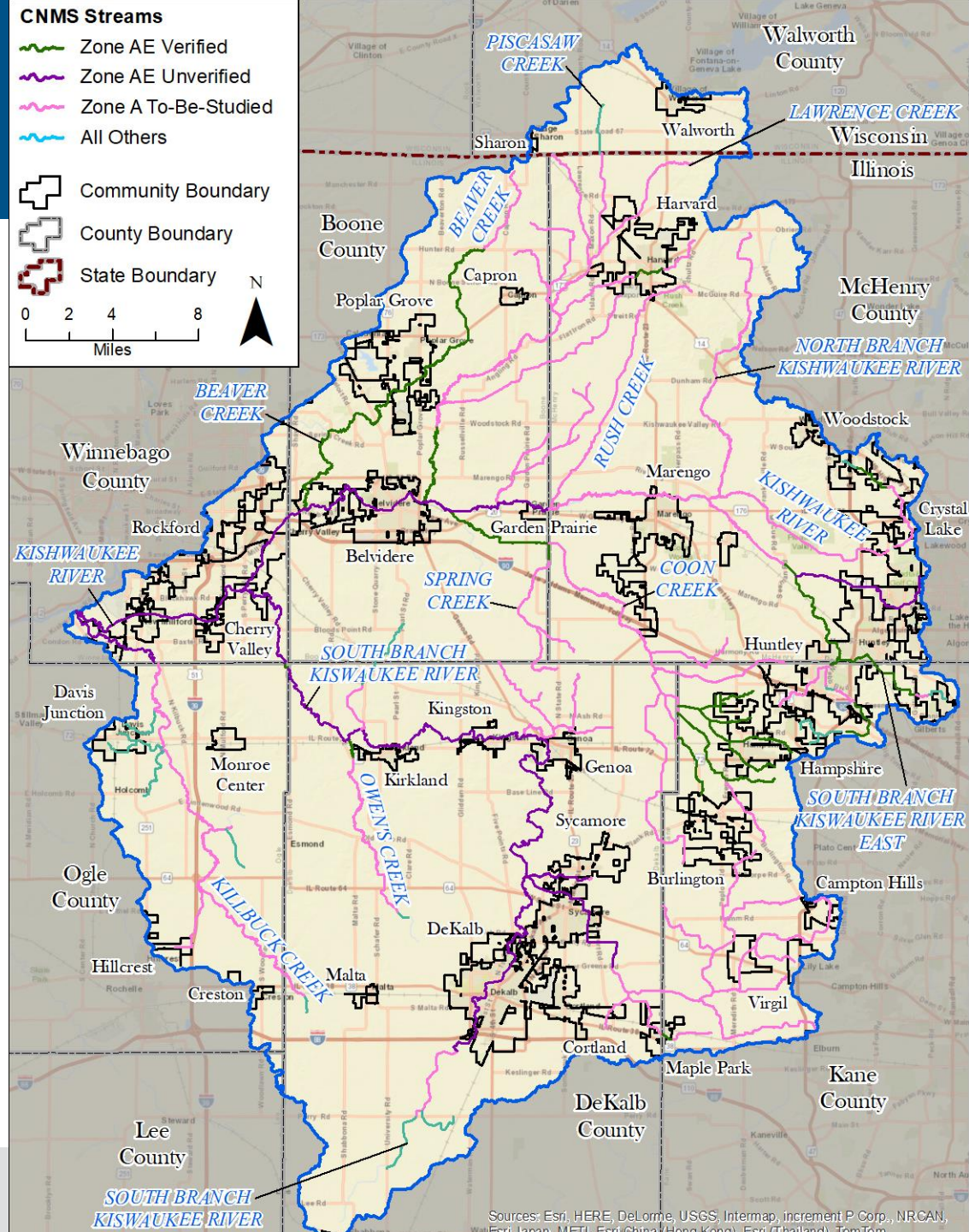
Today's Meeting has two parts:
Presentations & Breakout session for one on one discussions

FEMA Risk MAP: watershed basis

- Identify flood hazards
- Raise flood awareness
- Encourage mitigation actions to increase resilience and reduce flood risk

Kishwaukee Watershed

8 counties
50 communities
740 miles of streams with SFHA

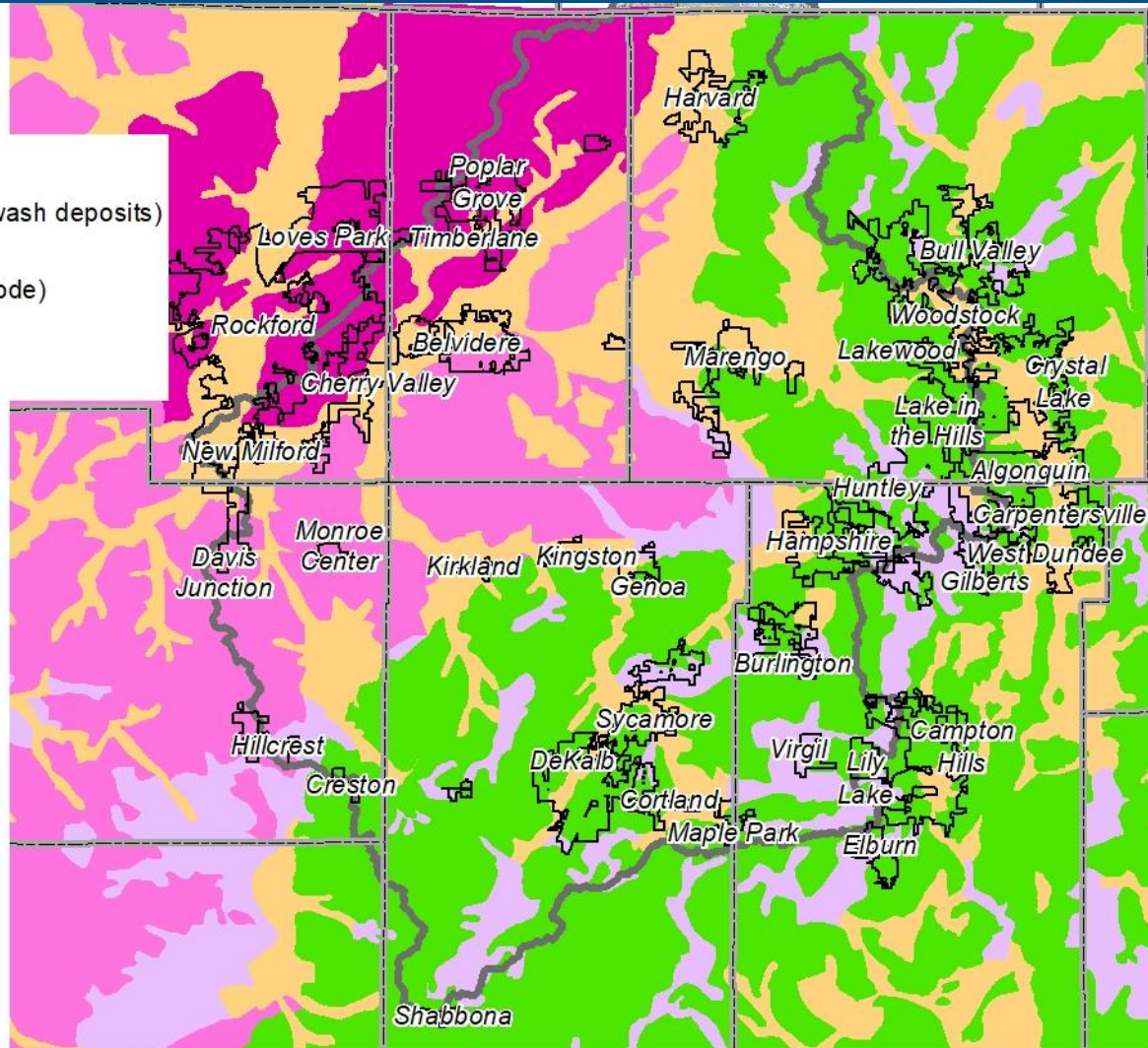


Regional Geology – shaped by ice and water

Quaternary Geology Formation

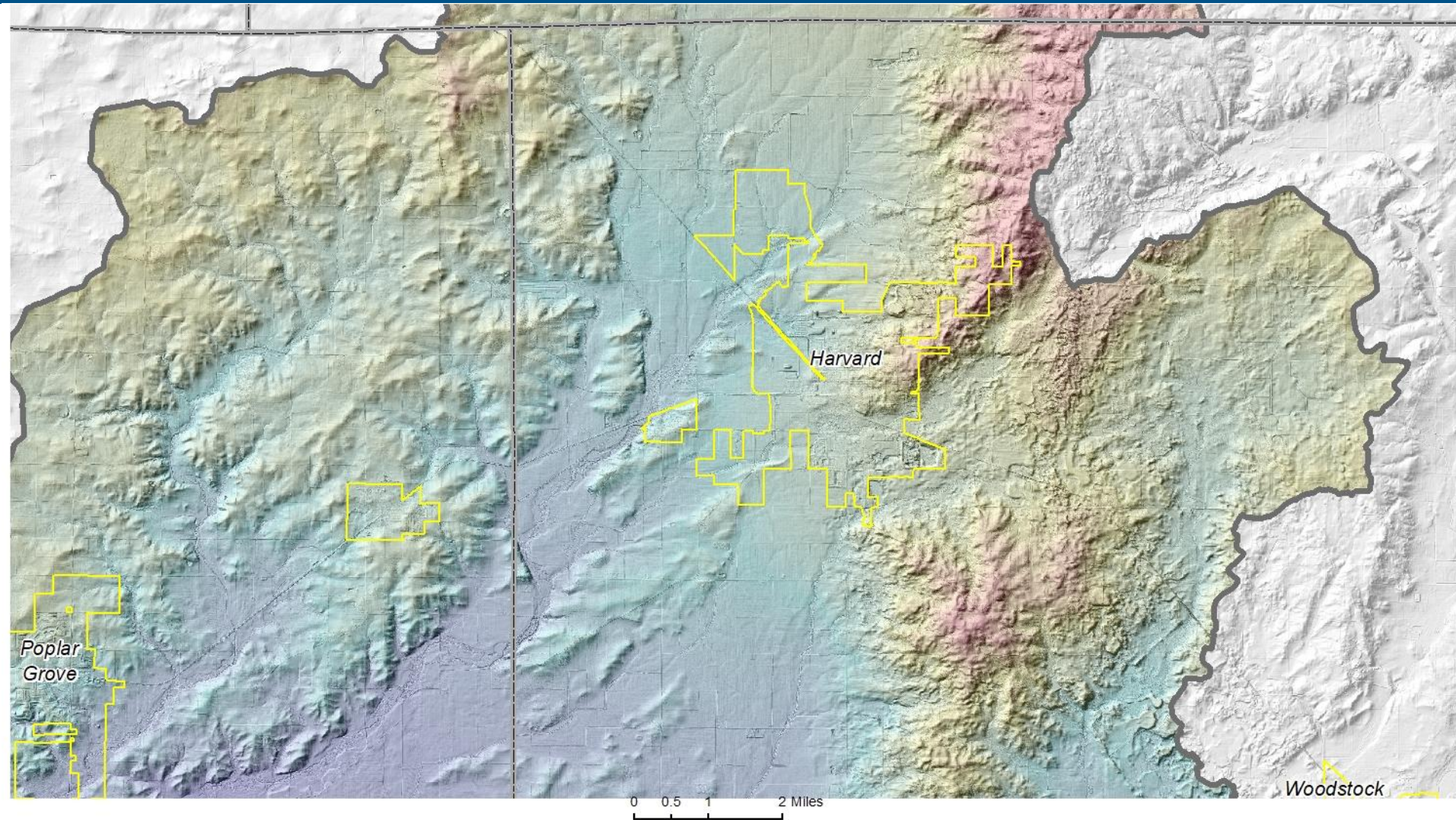
- Cahokia and/or Henry (stream and outwash deposits)
- Equality (lake deposits)
- Wedron Group (Wisconsin Glacial Episode)
- Winnebago (Illinois Glacial Episode)
- Glasford (Illinois Glacial Episode)

0 1 2 3 4 Miles

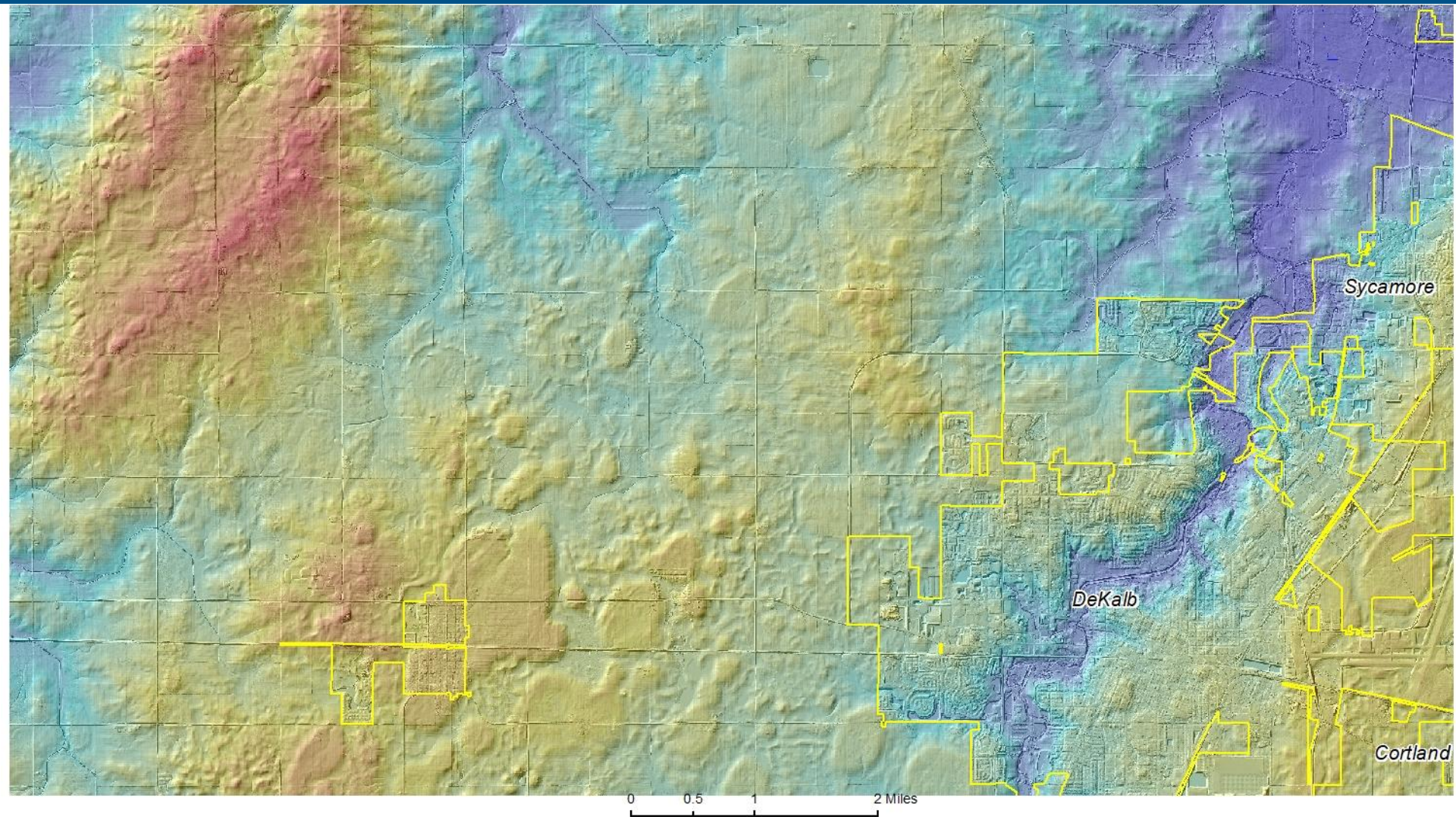


Glacial meltwater deposits sand and gravel outwash plains

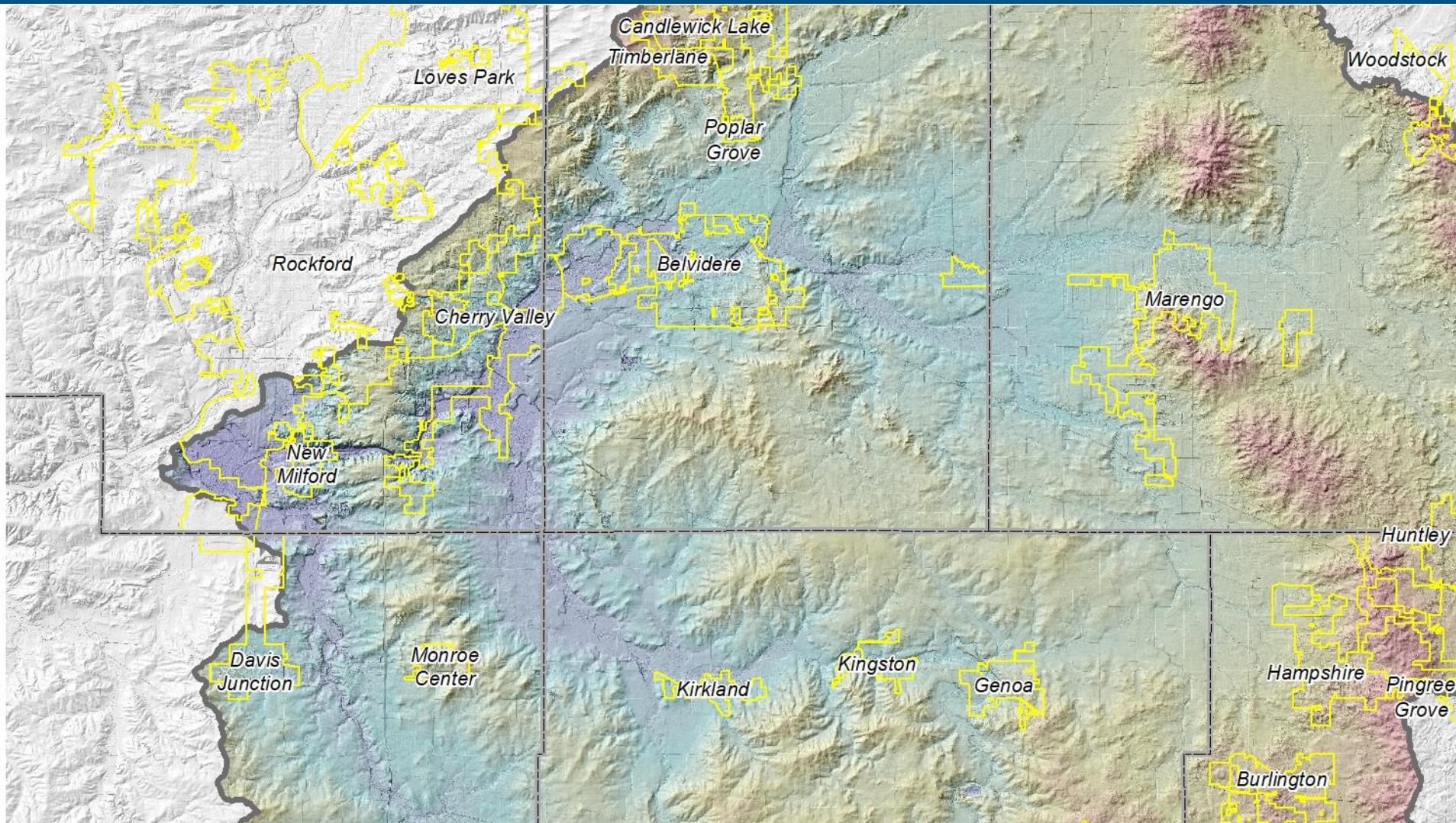
7



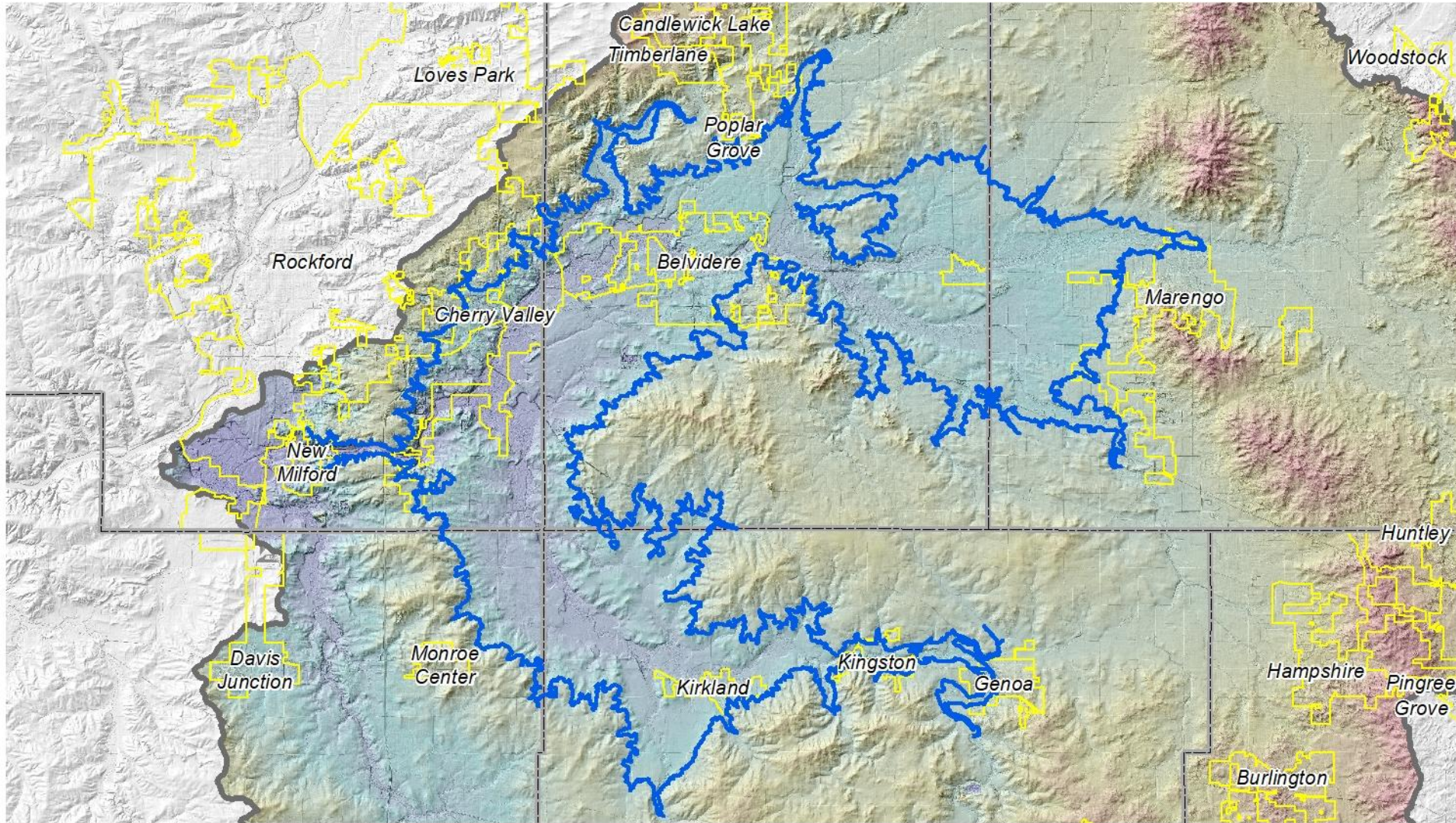
Ice-walled glacial lakes



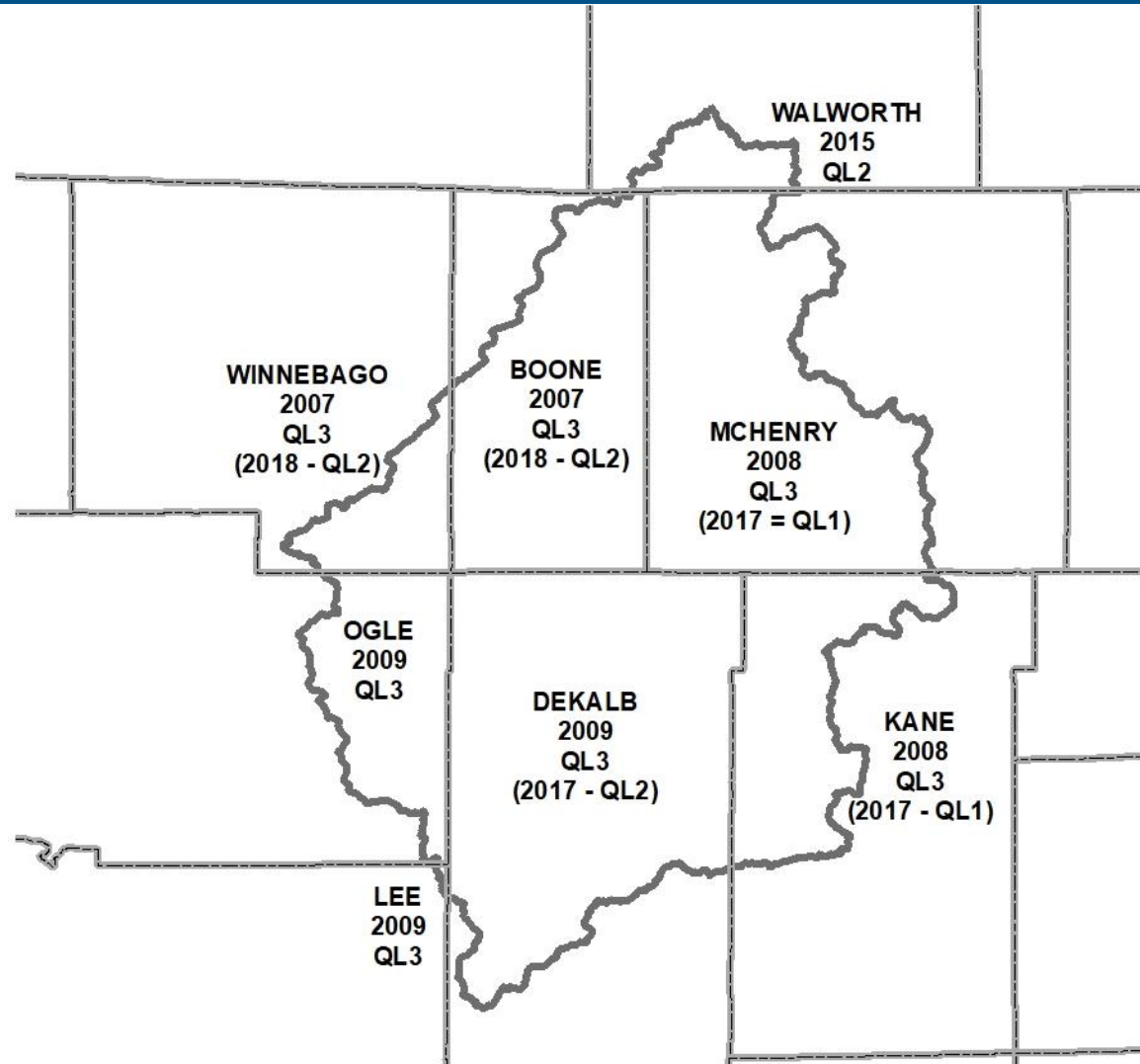
Kishwaukee River outlet



Kishwaukee River outlet



County Lidar date and quality

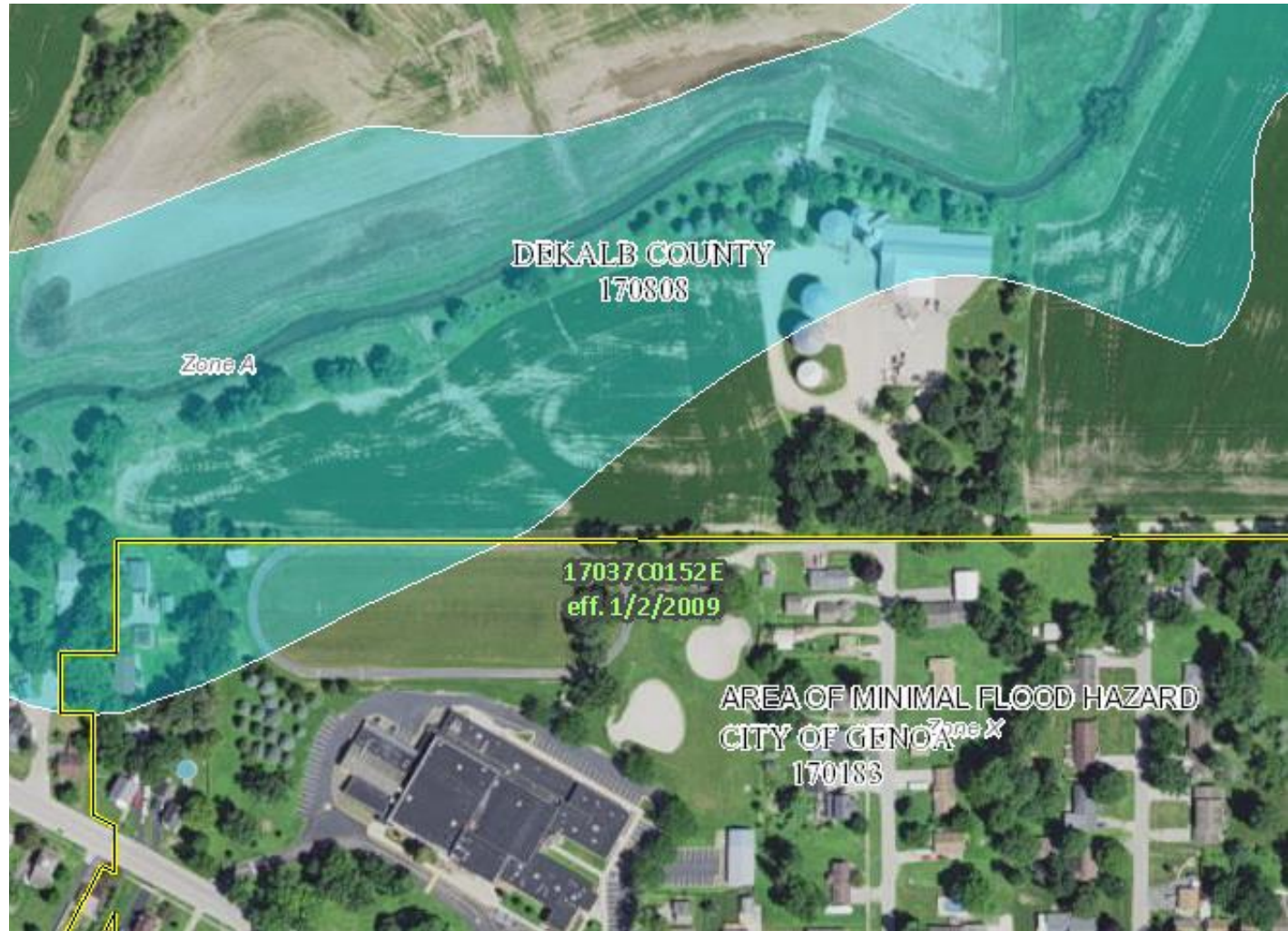


Basic FIRM Terms: SFHA, Zone AE, Zone A and Zone X

- **SFHA:** Special Flood Hazard Area (generic term for floodplains shown on a Flood Insurance Rate Map)
- **Zone AE:** Areas subject to inundation by the 1-percent-annual-chance flood event determined by **detailed** methods. BFEs are shown within these zones.
- **Zone A:** Areas subject to inundation by the 1-percent-annual-chance flood event. Because detailed hydraulic analyses have not been performed, **no** Base Flood Elevations (BFEs) or flood depths are shown.
- **Zone X:** (shaded) Moderate risk areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1-percent-annual-chance flood by a levee. No BFEs or base flood depths are shown within these zones.

Basic Map Terms: SFHA, Zone A

Zone A Areas subject to inundation by the 1-percent-annual-chance flood event. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown.



Basic Map Terms: SFHA, Zone AE and Zone X

Zone AE

- BFEs have been established based on an engineering study performed to determine how high the water will rise
- 0.2%, 1% , 2%, 4% and 10% annual chance flood events



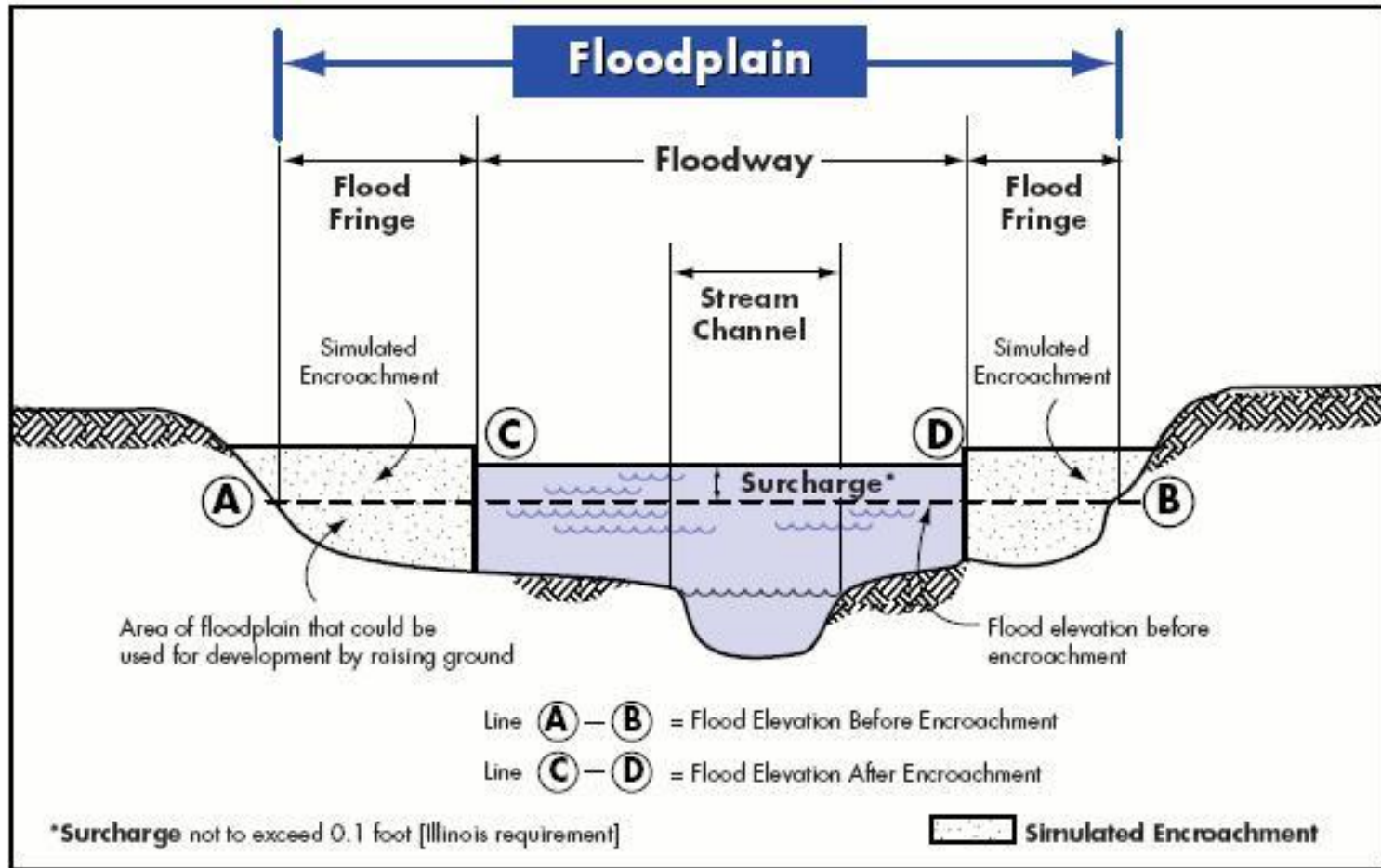
Floodway

Illinois Floodway

< 0.1 foot elevation increase

< 10% avg. velocity increase

< 10% decrease in storage (area)



Flood Insurance Study

FLOOD INSURANCE STUDY



DE KALB COUNTY, ILLINOIS AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
CORTLAND, TOWN OF	170181
DE KALB, CITY OF	170182
DE KALB COUNTY (UNINCORPORATED AREAS)	170808
GENOA, CITY OF	170183
HINCKLEY, VILLAGE OF	170184
KINGSTON, VILLAGE OF	170185
KIRKLAND, VILLAGE OF	170186
*LEE, VILLAGE OF	171035
*MALTA, VILLAGE OF	170187
MAPLE PARK, VILLAGE OF	171018
SANDWICH, CITY OF	170188
SHABBONA, VILLAGE OF	170189
SOMONSAUK, VILLAGE OF	170180
SYCAMORE, CITY OF	170181
*WATERMAN, VILLAGE OF	170864

* NO SPECIAL FLOOD HAZARD AREAS IDENTIFIED

DE KALB COUNTY



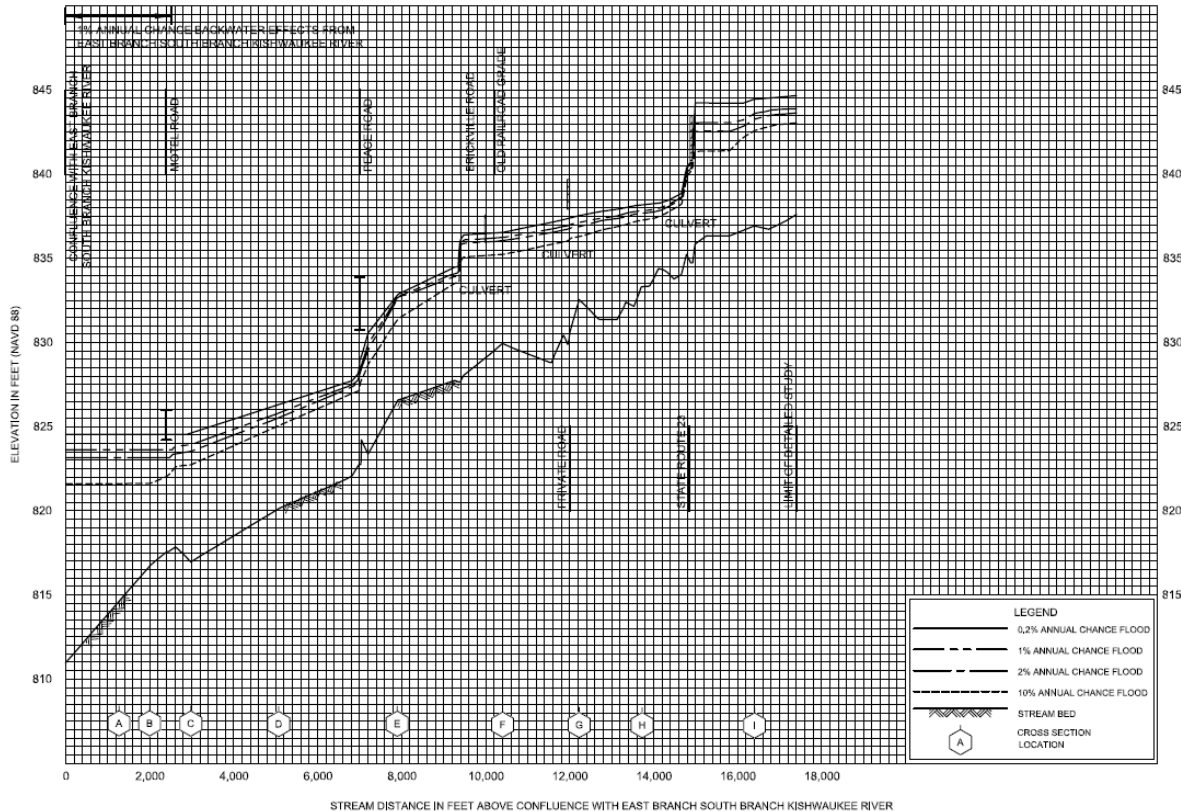
REVISED

January 2, 2009



Federal Emergency Management Agency

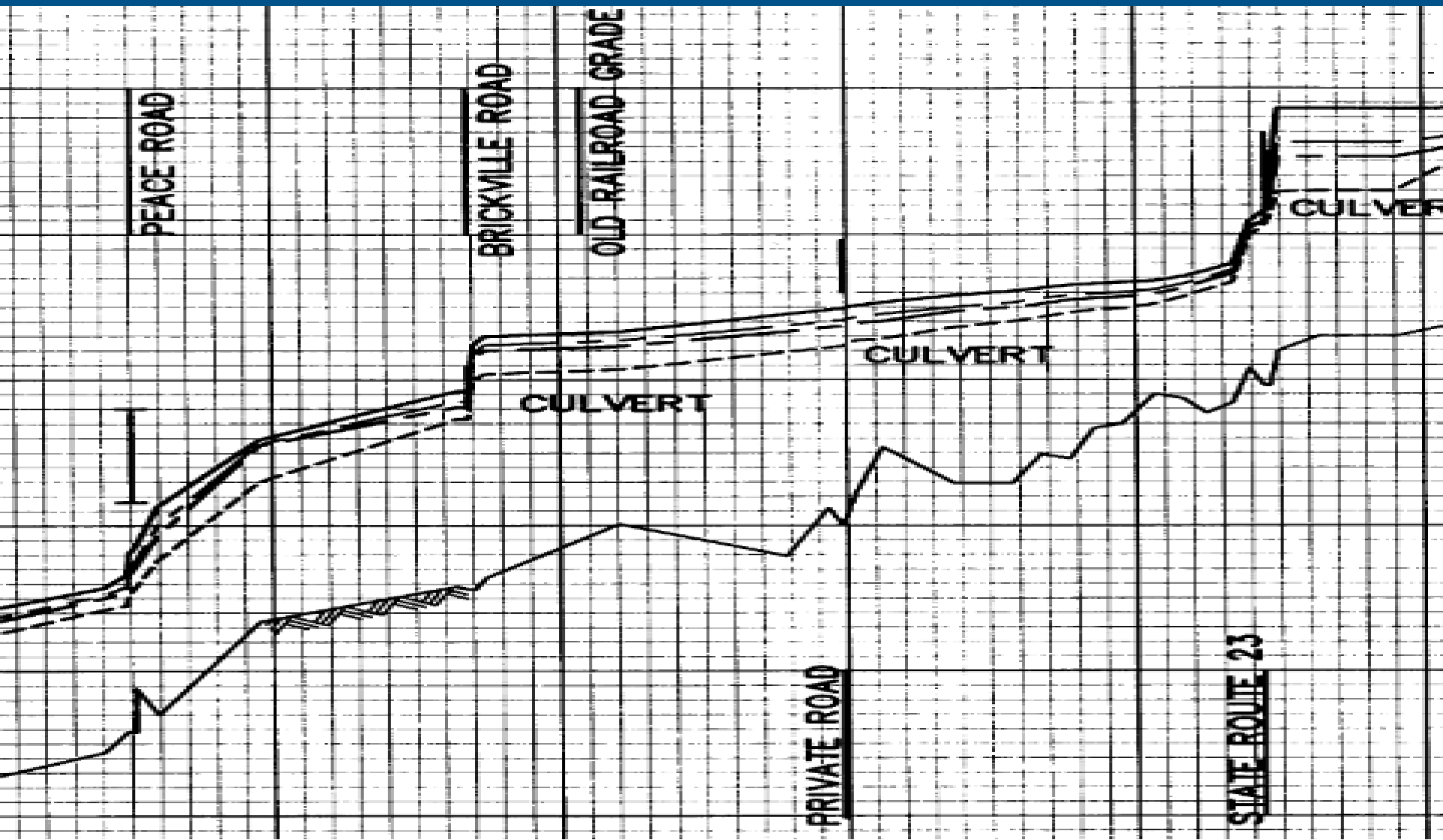
FLOOD INSURANCE STUDY NUMBER
17037CV000A



FLOOD PROFILES
BLUE HERON CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
DE KALB COUNTY, IL
AND INCORPORATED AREAS

FIS profile



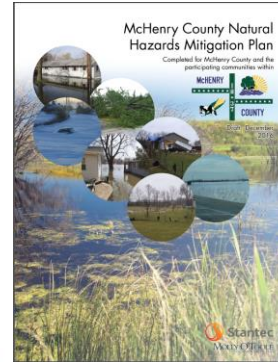
FEMA's Toolbox

Publications



Education

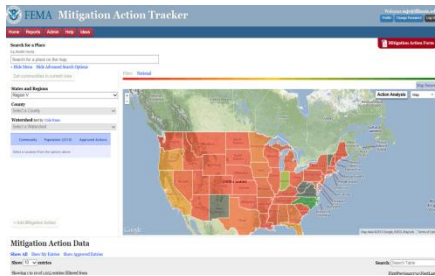
www.ready.gov



FEMA Pre-Disaster Mitigation Grant Program & Flood Mitigation Assistance Grant Program



Mitigation Action Tracker

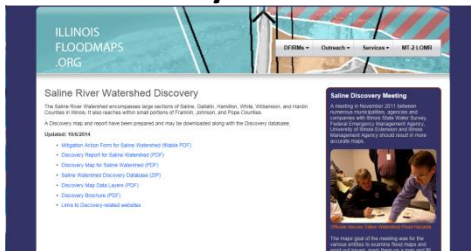


Hazard Mitigation Plans

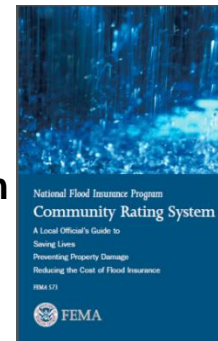
National Flood Insurance Program



Discovery Products



Community Rating System



Changes Since Last FIRM



The National Flood Insurance Program (NFIP)

19

A voluntary program based on a mutual agreement between the Federal government and the local community:

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

FEMA training:
<http://training.fema.gov/EMI/>

EMERGENCY MANAGEMENT INSTITUTE

NATIONAL EMERGENCY TRAINING CENTER • EMMITSBURG, MD 21727



FEMA

**Course: E0273 Managing Floodplain Development through the
National Flood Insurance Program**

2019 Course Dates:

March 18-21

June 17-20

August 26-29

NFIP State Coordinator



Paul Osman

**Illinois Department of Natural Resources,
Office of Water Resources**

Springfield, IL

Paul.Osman@Illinois.gov

Marilyn Sucoe

**Illinois Department of Natural Resources,
Office of Water Resources**

Bartlett, IL

Marilyn.Sucoe@Illinois.gov

Kishwaukee River Watershed Community NFIP Participation (as of 10/31/2018)

- All but 7 communities participate, 5 do not have SFHA
- Village of Timberlane (Boone Co) and Village of Bull Valley (McHenry) do not participate and have SFHA

Number Policies (community totals)	Total Coverage	Total Premium	Total Claims (1978- Oct 2018)	Total Paid (1978- Oct 2018)
2329	\$473,109,900	\$2,899,180	2740	\$28,852,161



Community Rating System (CRS)



- **FEMA National Flood Insurance Program Administered by ISO (Insurance Services Office)**
- **Recognition for Going Above and Beyond Minimum NFIP Standards with Reduce Flood Insurance Premiums**
- **Voluntary Program with Community Activities for Point Accumulation**
- **Based on a 10 Class System. 500 Points & 5% Discount / Class**

- **Local Floodplain Management Program More Organized.**
- **Free Technical Assistance for Certain Activities**
- **Better Educated Public**
- **Reduced Flood Damage and Faster Recovery**

Community Rating System (CRS)

<i>Community Name</i>	<i>CRS Status</i>
Village of Carpentersville, Kane Co.	6
Village of Lake-in-the-Hills, McHenry Co.	6
City of DeKalb, DeKalb Co.	7
City of Sycamore, DeKalb Co.	7
Village of Hampshire, Kane Co.	7
Ogle County	7
McHenry County	8
City of Woodstock, McHenry Co.	10

Premium Discounts

<u>Class</u>	<u>Points</u>	<u>SFHA</u>	<u>Non-SFHA</u>
1	4,500	45%	10%
2	4,000	40%	10%
3	3,500	35%	10%
4	3,000	30%	10%
5	2,500	25%	10%
6	2,000	20%	10%
7	1,500	15%	5%
8	1,000	10%	5%
9	500	5%	5%
10		0	0

CRS Contact Information

Lou Ann Patellaro

lpatellaro@iso.com

954-651-5021

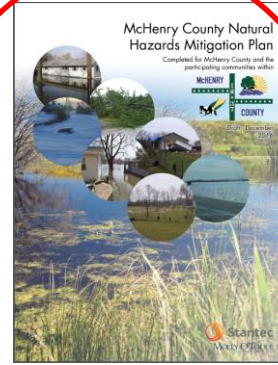
FEMA's Toolbox

Publications



Education

www.ready.gov

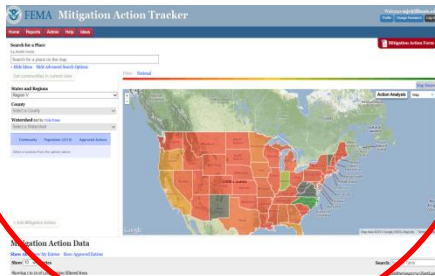


Hazard Mitigation Plans

FEMA Pre-Disaster Mitigation Grant Program & Flood Mitigation Assistance Grant Program



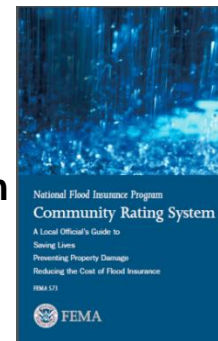
Mitigation Action Tracker



National Flood Insurance Program



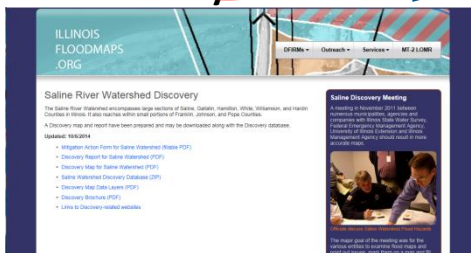
Community Rating System



Changes Since Last FIRM



Discovery Products



FEMA Pre-Disaster Mitigation Grant Program & Flood Mitigation Assistance Grant Program

- **Fiscal Year (FY) 2018 application period is October 1, 2018 through January 31, 2019.**
- **Note: Applications due to IEMA Dec 18, 2018**
- **The Notice of Funding Opportunity (NOFO) is posted on www.Grants.gov.**
- **<https://www.fema.gov/pre-disaster-mitigation-grant-program> (\$235,200,000 FFY2018; 75%Federal:25%Local)**
- **<https://www.fema.gov/flood-mitigation-assistance-grant-program> (\$160,000,000 FFY2018; 75%Federal:25%Local)**

Home ▶ Mitigation

Mitigation



MITIGATION

- ▶ Planning
- ▶ Programs
- ▶ Hazard Information
- ▶ Mitigation Links
- ▶ Application Checklist

<https://www2.illinois.gov/iema/Mitigation/Pages/default.aspx>

Sam AL-Basha
State Hazard Mitigation Officer
1035 Outer Park
Springfield, IL 62704-4462
217/785-9942
sam.m.al-basha@illinois.gov

Hazard Mitigation Plan Status

<i>Community Name</i>	<i>NHMP Expiration Date</i>
Boone County	2020
DeKalb County	2018
Kane County	2020
Lee County	No plan
McHenry County	2021
Ogle County	2015
Winnebago County	2019
Walworth County, WI	Update in progress

Mitigation Ideas



Mitigation Ideas

A Resource for Reducing Risk to Natural Hazards

January 2013



- **Drought**
- **Flood**
- **Erosion**
- **Earthquake**
- **Tornado**
- **Hail**
- **Lightning**
- **Extreme Temperature**
- **Severe Winter weather**

Mitigation Action Tracker (MAT)

- The **Mitigation Action Tracker (MAT)** is a Web-based tool used to capture, store, organize and track mitigation actions.
- Community officials are encouraged to utilize this tool as a resource for organizing and tracking potential mitigation actions in their community.
- Mitigation actions will be entered as part of our follow up work after Risk MAP Discovery meetings.



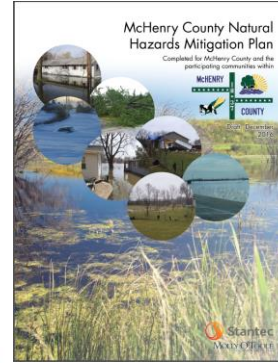
FEMA's Toolbox

Publications



Education

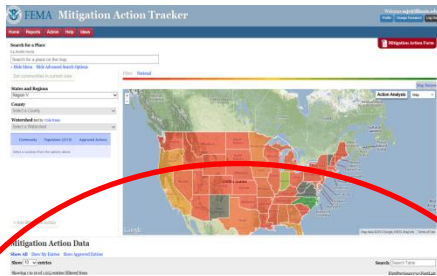
www.ready.gov



FEMA Pre-Disaster Mitigation Grant Program & Flood Mitigation Assistance Grant Program



Mitigation Action Tracker

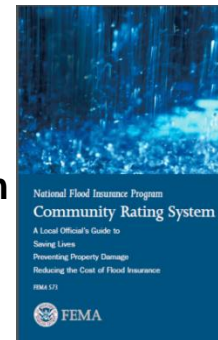


Hazard Mitigation Plans

National Flood Insurance Program



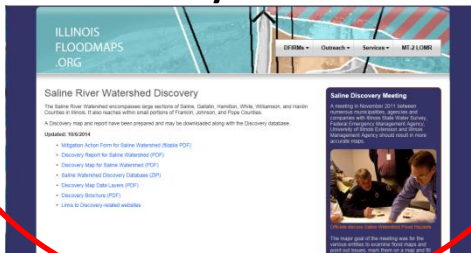
Community Rating System



Changes Since Last FIRM

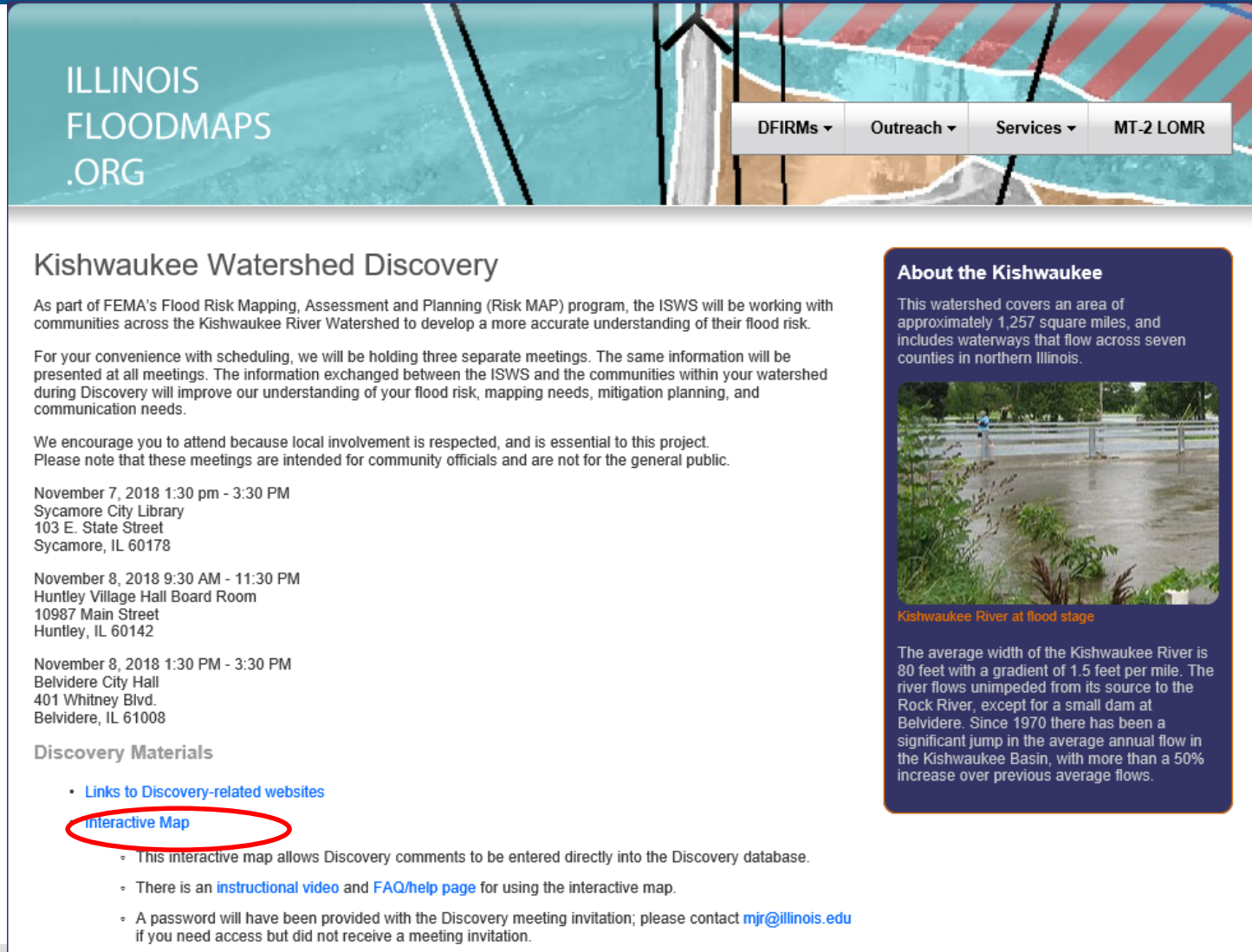


Discovery Products



Kishwaukee River Watershed Discovery: www.illinoisfloodmaps.org

Go to
www.illinoisfloodmaps.org
Select *Outreach*
then *Kiswaukee*



ILLINOIS
FLOODMAPS
.ORG

DFIRMs ▾ Outreach ▾ Services ▾ MT-2 LOMR

Kishwaukee Watershed Discovery

As part of FEMA's Flood Risk Mapping, Assessment and Planning (Risk MAP) program, the ISWS will be working with communities across the Kishwaukee River Watershed to develop a more accurate understanding of their flood risk.

For your convenience with scheduling, we will be holding three separate meetings. The same information will be presented at all meetings. The information exchanged between the ISWS and the communities within your watershed during Discovery will improve our understanding of your flood risk, mapping needs, mitigation planning, and communication needs.

We encourage you to attend because local involvement is respected, and is essential to this project. Please note that these meetings are intended for community officials and are not for the general public.

November 7, 2018 1:30 pm - 3:30 PM
Sycamore City Library
103 E. State Street
Sycamore, IL 60178

November 8, 2018 9:30 AM - 11:30 PM
Huntley Village Hall Board Room
10987 Main Street
Huntley, IL 60142

November 8, 2018 1:30 PM - 3:30 PM
Belvidere City Hall
401 Whitney Blvd.
Belvidere, IL 61008

Discovery Materials

- [Links to Discovery-related websites](#)
- [interactive Map](#)
 - This interactive map allows Discovery comments to be entered directly into the Discovery database.
 - There is an [instructional video](#) and [FAQ/help page](#) for using the interactive map.
 - A password will have been provided with the Discovery meeting invitation; please contact mjr@illinois.edu if you need access but did not receive a meeting invitation.

About the Kishwaukee

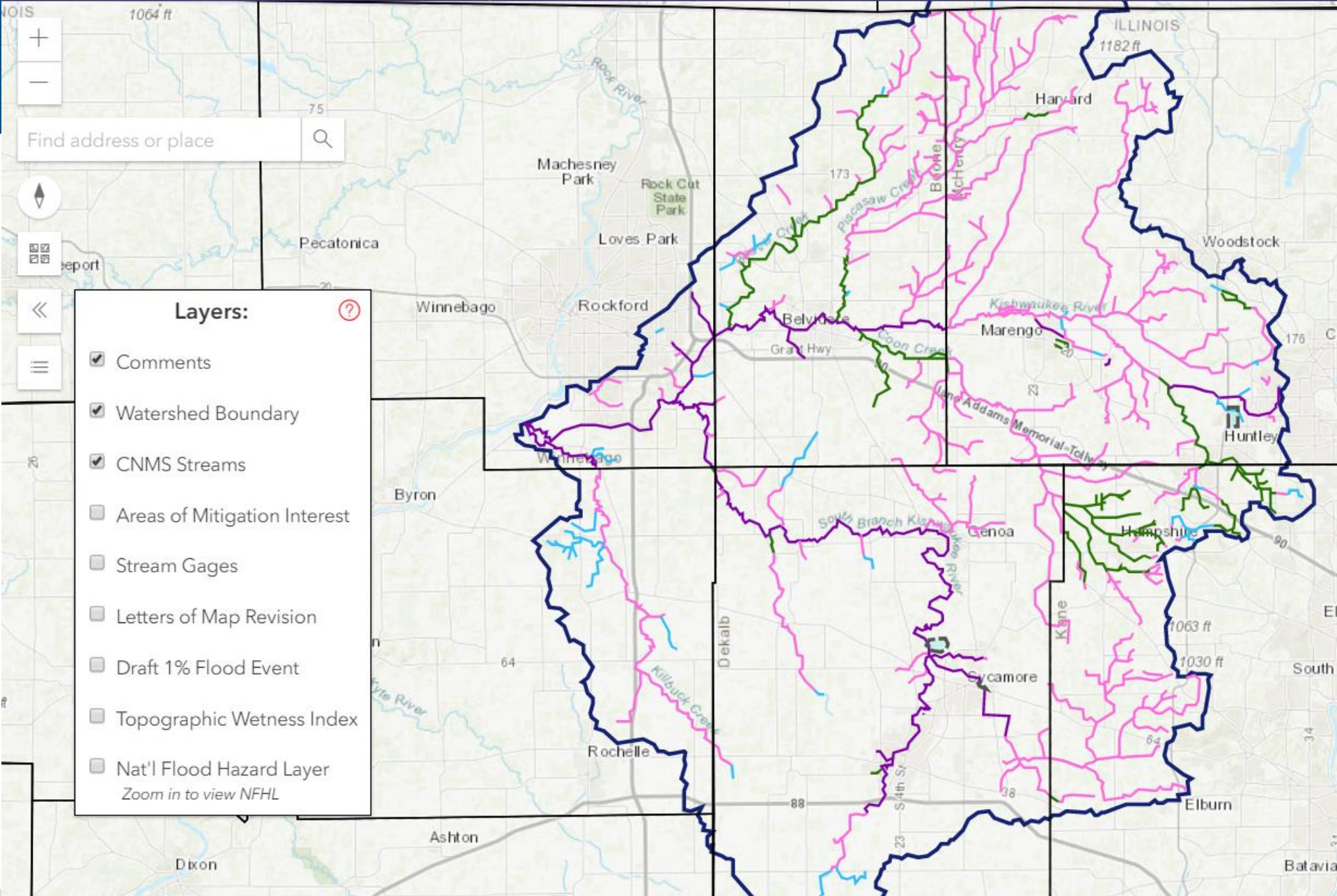
This watershed covers an area of approximately 1,257 square miles, and includes waterways that flow across seven counties in northern Illinois.



Kishwaukee River at flood stage

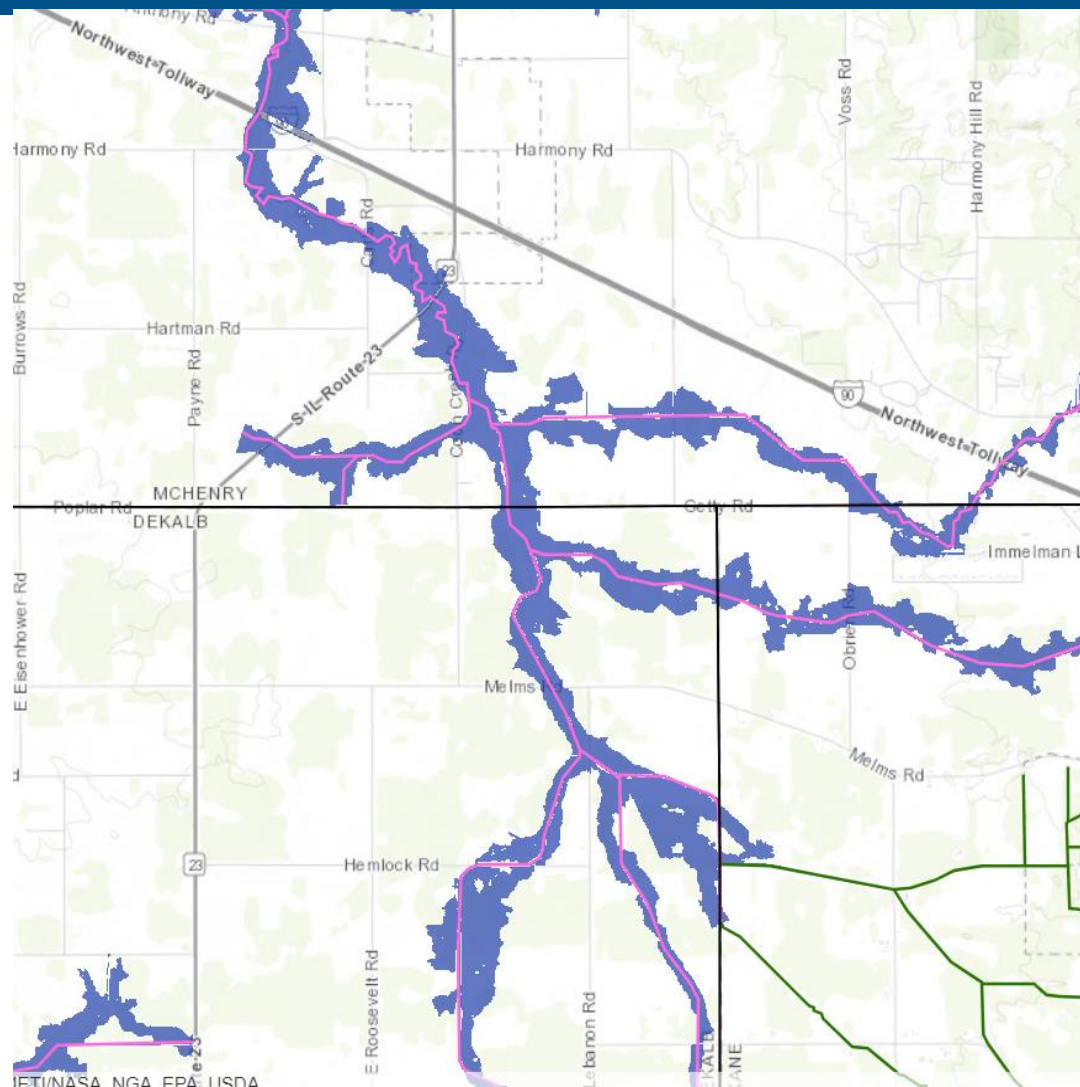
The average width of the Kishwaukee River is 80 feet with a gradient of 1.5 feet per mile. The river flows unimpeded from its source to the Rock River, except for a small dam at Belvidere. Since 1970 there has been a significant jump in the average annual flow in the Kishwaukee Basin, with more than a 50% increase over previous average flows.

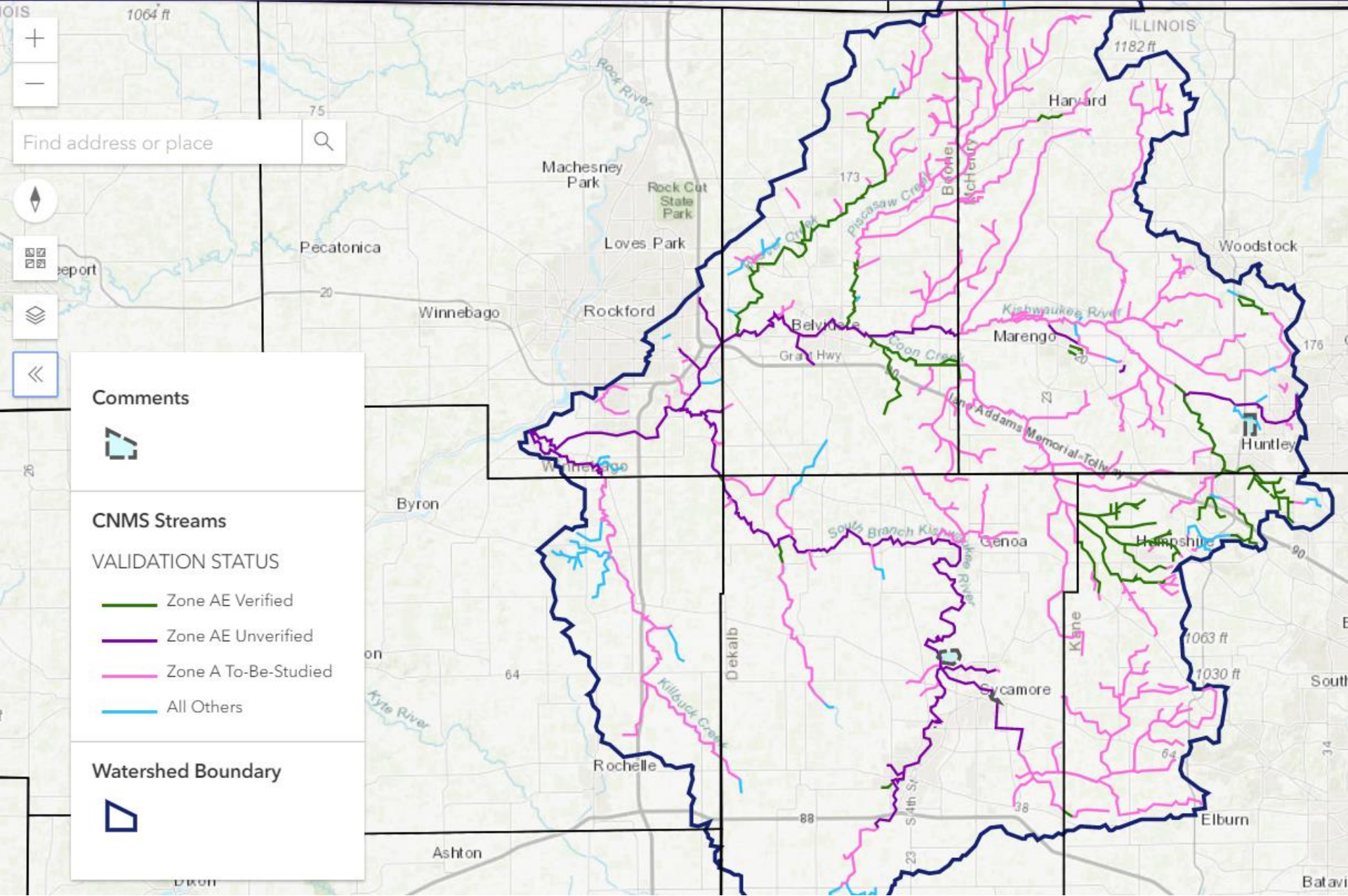
Kishwaukee Watershed Discovery



Draft 1% Flood Event for current Zone A

- **Very approximate methods used to map floodplain for 1% flood event**
- **Compare to current Zone A areas on FIRMs**
- **What might change: increase /decrease**

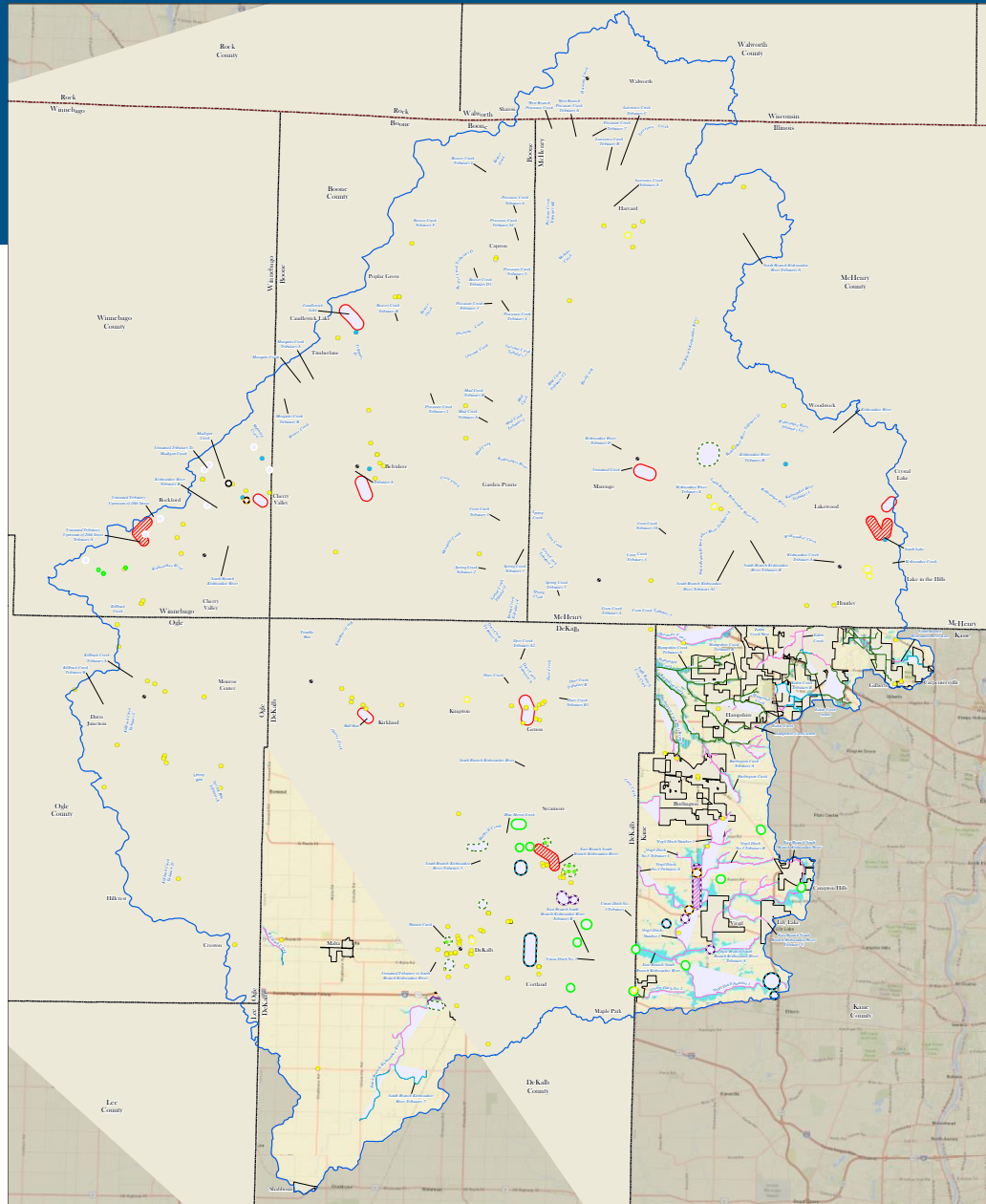




Gather information on flood study and mapping needs

- streams where the effective study/ mapping does not reflect existing conditions
- streams where base flood elevations are needed
- areas of growth where more detailed flood study data is needed
- available technical data to support hydrologic and hydraulic studies
- restrictive bridges, culverts or other structures
- overtopped roads
- dams
- areas of stream erosion
- levees and levee like structures and failures
- locations of critical facilities
- areas of mitigation interest
- flood photos, high water marks, reports of past flooding

Discovery Map



NATIONAL FLOOD INSURANCE PROGRAM
Discovery Map
 Kishwaukee Watershed

HUC-8 Code:
 07090006
 Map Release Date:
 11/07/2018



Map Symbology	
CNMS Streams (Study Validity as of 11/07/2018)	Areas of Mitigation Interest
<ul style="list-style-type: none"> Zone AE Verified Zone AE Unverified Zone A To Be Studied All Others 	<ul style="list-style-type: none"> Areas of Significant Erosion At Risk Essential Facilities Key Emergency Routes Overtopped Past Claims Hot Spot Significant Land Use Change Stream Flow Constrictions Other Flood Risk Areas Other
Flood Hazard Zones	<ul style="list-style-type: none"> Stream Gauge FEMA Public Assistance Data Dam Letter of Map Change Cluster Levee Community Boundary County Boundary State Boundary Watershed Boundary
<ul style="list-style-type: none"> 1% Annual Chance Flood (Zone A) 1% Annual Chance Flood (Zone AE) Regulatory Floodway 0.2% Annual Chance Flood 	



ILLINOIS
 Illinois State Water Survey
 www.isws.uiuc.edu





RiskMAP
 Increasing Resilience Together



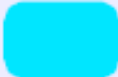



Discovery Map Symbology

Map Symbology

CNMS Streams (Study Validity as of 11/07/2018)

-  Zone AE Verified
-  Zone AE Unverified
-  Zone A To-Be-Studied
-  All Others

Flood Hazard Zones

-  1% Annual Chance Flood (Zone A)
-  1% Annual Chance Flood (Zone AE)
-  Regulatory Floodway
-  0.2% Annual Chance Flood

Discovery Map Symbology

Areas of Mitigation Interest



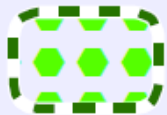
Areas of Significant Erosion



At Risk Essential Facilities



Key Emergency Routes Overtopped



Past Claims Hot Spot



Significant Land Use Change



Stream Flow Constrictions

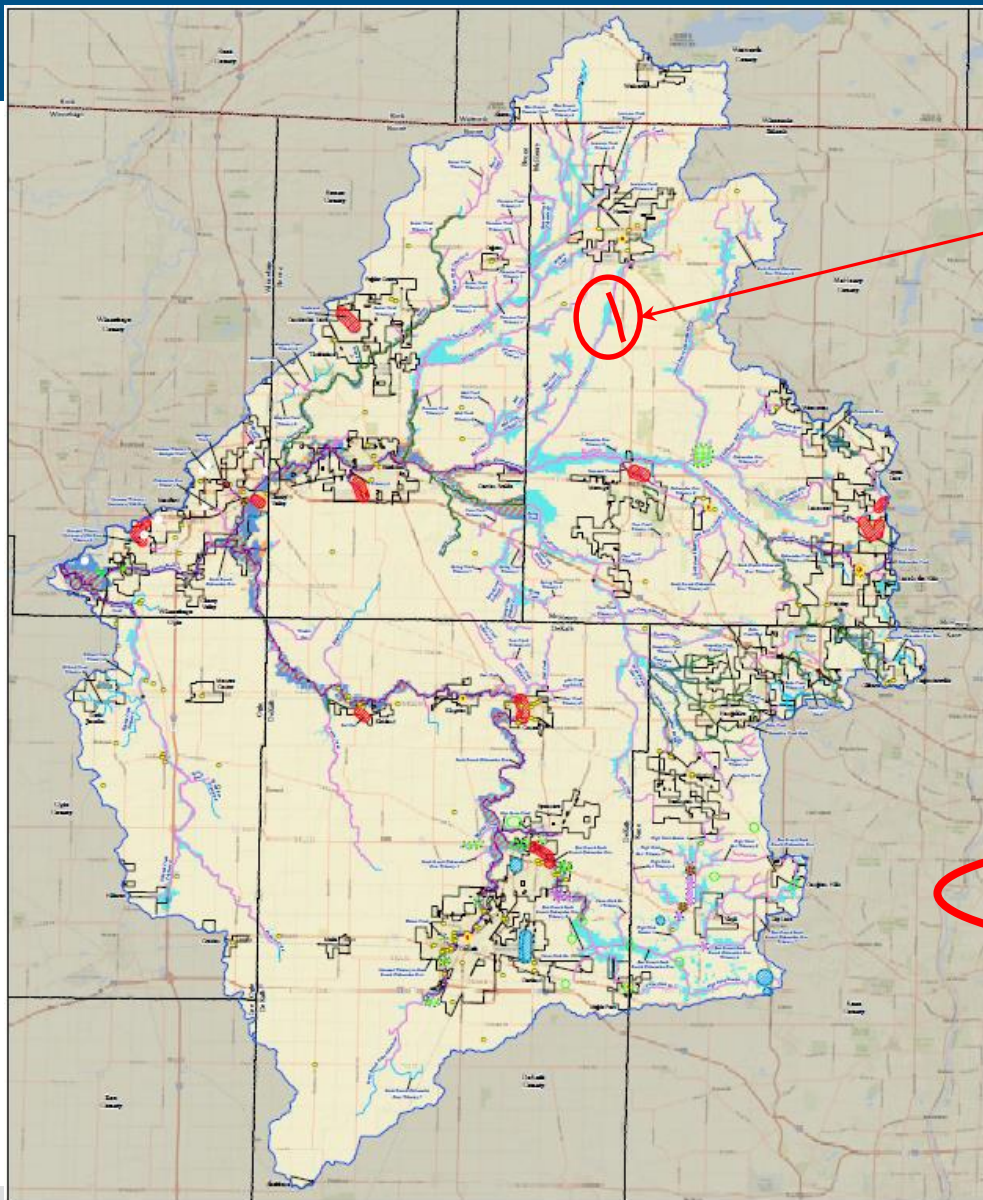


Other Flood Risk Areas



Other

Break out Session – Discovery Maps



Kishwaukee River Watershed Discovery Meeting Comment Form #1

Please, provide the following information:		Date:
Name:		
Community/County:		
E-mail:	Phone:	

Explain your comment below and attach any supporting documents/materials. Mark the location of your comment on the map by circling the area and writing the comment form number near the circle. If you have more than one comment, please use **multiple** forms and give each comment a **unique** identifier.

Check Comment Subject:	
<input type="checkbox"/> Technical Data for Consideration	<input type="checkbox"/> Historic Flood Information
<input type="checkbox"/> Levee Name: Owner:	<input type="checkbox"/> Dam Name: Owner:
<input type="checkbox"/> Non-Levee Embankments Name: Owner:	<input type="checkbox"/> At-Risk Essential Facilities
<input type="checkbox"/> Stream Flow Constriction (including ice jams)	<input type="checkbox"/> Planned or Recent Project Area/LOMR
<input type="checkbox"/> Overtopped Road During Flooding Events	<input type="checkbox"/> Development (past, current, or future within 5 yrs.)
<input type="checkbox"/> Areas of Mitigation Success	<input type="checkbox"/> Stream Flow Constriction (including ice jams)
<input type="checkbox"/> Significant Riverine Erosion	<input type="checkbox"/> Other Flood Risk Area
<input type="checkbox"/> General Comment on Work Map presented	<input type="checkbox"/> Other

Comment Marked on:		
Discovery Map # _____	DFIRM Panel # _____	Other _____

Next Steps for Discovery

- **Submit comments and data - ongoing**
- **Discovery Map Update (ISWS)**
- **Discovery Report which will include new hydrology and hydraulic study needs (ISWS)**
- **Discovery Map and Report posted on the web site (Jan 2019)**
- **FEMA Region will evaluate information for prioritization of future projects (FFY2019)**
- **Webinars – let us know your interest**

Complete exit survey.

Questions?

Break out session:

Gather information on flood study and mapping needs

- streams where the effective study/ mapping does not reflect existing conditions
- streams where base flood elevations are needed
- areas of growth where more detailed flood study data is needed
- available technical data to support hydrologic and hydraulic studies
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