



FEMA

FEMA's Risk MAP Program:

Outreach and technical data
to influence risk reduction

IAFSM 2016 Annual Conference

March 10, 2016

Tom Smith – FEMA Region V

Stephanie Nurre, PE, CFM – STARR II

RiskMAP

Increasing Resilience Together



Overview

- **Promoting Flood Mitigation Action**
 - Risk MAP Vision
 - Community Mitigation Meeting Pilot Program
 - Risk MAP Discovery Process and Non-Regulatory Products
 - Hazard Mitigation Plans
 - Hazard Mitigation Assistance Grants

Risk Mapping, Assessment, and Planning (Risk MAP)

- **Risk MAP Vision – Not just deliver maps, but**
 - collaborate with State and local entities
 - deliver quality data
 - increase public awareness and
 - leads to action that reduces risk to life and property.

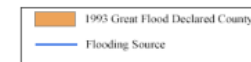
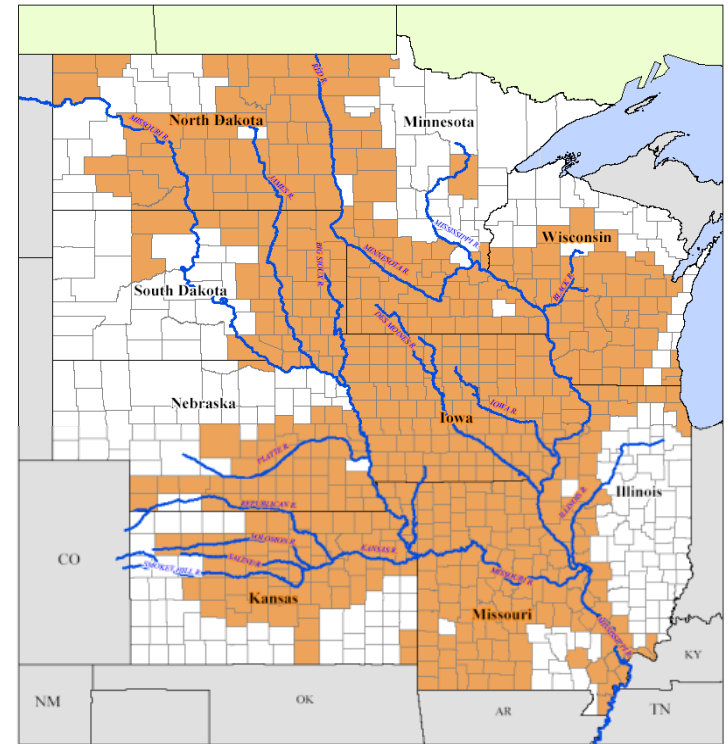


FEMA Individual and Public Assistance, Illinois

Notable Events:

- Great Flood of 1993 (\$259 million-Individual and Public Assistance)
- 1996 Northern Illinois Flooding (\$159 million)
- 1997 Flooding in Cook County (\$72 million)
- 2008 Midwest Floods (\$102 million)
- 2010 Northern Illinois Flood (\$406 million)
- 2013 Northern Illinois Flood (\$226 million)

Declared Counties for the Great Midwest Flood of 1993



U.S. Department of Homeland Security



Mitigation Division
ITS Mapping and Analysis Center
Washington, D.C.
05/07/2003

©2003. Declared only view

Recovery Assistance State/Other Federal Agencies

Long Term Recovery Council

FINAL REPORT

To Governor Pat Quinn &
The People of Illinois



Aftermath of the Floods of June 2008 &
Recommendations for Long-term
Economic Recovery

Long Term Recovery Council

Jim Bohnsack *Chair, Rock Island*
Terry Bruce *Chief Executive Officer*
Alan Donston *Chair, Madison*
John Spring *Mayor, City of*

Prepared by

Office of Sustainability
Office of the Vice Chancellor for Planning
University of Illinois at Urbana-Champaign

ILLINOIS

Table 9: Flood Response Expenditures by Federal Agencies

	Total Cost	# Affected
Federal Emergency Management Agency		
Individual Assistance	\$ 9,925,822.39	1752 individuals
Public Assistance	\$ 48,171,753.90	368 entities
U.S. Fish & Wildlife Service	\$ 4,789,000.00	5 refuges
FCIC Crop Insurance Payments	\$ 155,388,301.00	3,411,648 Acres
Health and Human Services		
Social Service Block Grant	\$ 5,319,455.49	
Illinois Department of Transportation	\$ 14,189,062.00	71 projects
IEMA Buyout Requests	\$ 38,033,019.00	966 properties
Small Business Administration		
Home	\$ 10,020,100.00	216 owners
Business	\$ 3,572,700.00	24 business owners
	\$ 1,220,500.00	13 projects
	\$ 7,173,595.00	9 projects
	\$ 80,023,804.00	
	\$377,827,112.78	

Table 8: Flood Response Expenditures by State Agencies

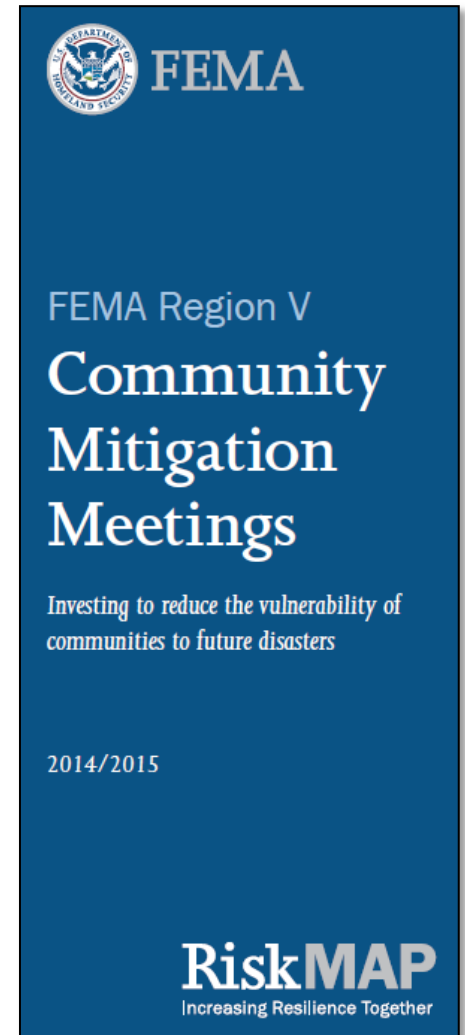
(Data provided by IEMA June 19, 2009)

Agency	FY 2008	FY 2009	Total
Department of Central Management Services	\$ 22,139.54	\$ 34,512.48	\$ 56,652.02
Department of Human Services	5,182.98	10,861.47	16,044.45
Department of Natural Resources	254,827.21	103,532.68	358,359.89
Department of Corrections	6,113.10	101,555.01	107,668.11
Department of Transportation	32,912.18	209,270.05	242,182.23
Department of Public Health	393,176.83	237,036.22	630,213.05
Emergency Management Agency	2,007,436.56	1,001,258.44	3,008,695.00
Environmental Protection Agency	0.00	0.00	0.00
Law Enforcement Alarm System	0.00	159,217.39	159,217.39
Medical Emergency Response Team	0.00	6,799.67	6,799.67
Department of Military Affairs	1,924,444.03	713,458.76	2,637,902.79
State Police	12,231.53	4,169.18	16,400.71
Totals	\$4,658,463.96	\$2,581,671.35	\$7,240,135.31⁽¹⁾

(1) Data and information provided by IEMA, represents expenditures by state agency for flood response.

FEMA Region V Community Mitigation Meeting Pilot Program

- **Region V and State partners proactively initiated Pilot Program to engage communities in discussions about risk reducing activities**



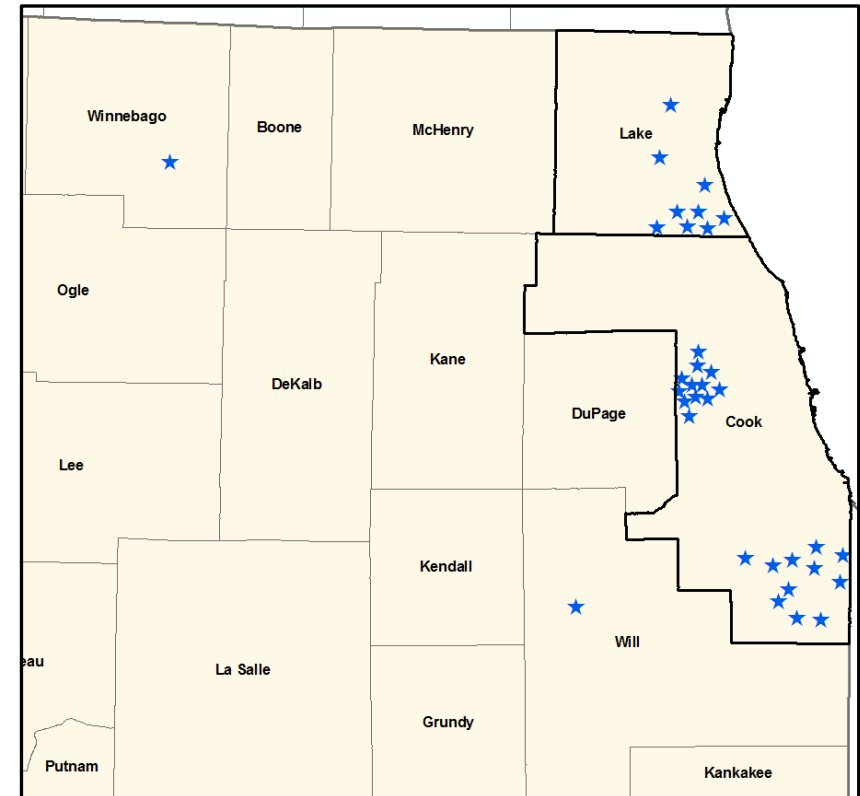
Community Mitigation Meetings - IL

■ Illinois

- 24 Cook County Communities
- 10 Lake County Communities
- 1 Will County Community
- 1 Winnebago County Community

■ Selected communities:

- Showed potential to pursue mitigation
- High levels of disaster recovery funds from FEMA



Community Engagement

Pre-Meeting Interview
Discuss and document mitigation needs



In-Person Meeting
Identify potential mitigation actions and implementation steps



Identify potential technical support
Mitigation Action Documentation



Pilot Close, Mitigation Action Support, if applicable



Mitigation Action Scoping and Implementation



Pilot Mitigation Action Support



COMMUNITY RATING SYSTEM (CRS) REVIEW AND SUMMARY OF POTENTIAL MITIGATION ACTIONS

FOR
WESTCHESTER, IL

Prepared for:
Village of Westchester
10900 West Roosevelt
Westchester, Illinois 60090

Prepared by:
Strategic Alliance for
135 South LaSalle Street
Chicago, Illinois 60603

May 2015

Learn Your Flood Risk

Address: 123 Flood Drive
Flood Source: Flood River
Flood Zone: High-Risk
Flood Map Panel ID: 17097C0164K
Effective Date: 9/18/2013

Estimated Depth of High-Risk
Flood Zone on Property:
Less than 2 Feet

Legend

- High-Risk Flood Zone
- Approximate Parcel Boundary



This property is in a high-risk flood zone.

- In high-risk flood zones, commonly called "100-year floodplains", there is at least a 1 in 4 chance of flooding during a 30-year mortgage. The Flood Insurance Rate Maps (FIRMs) label high-risk flood zones beginning with the letter A (for example: Zone A, Zone AE) in riverine areas. The FIRMs are available for viewing at www.msc.fema.gov.

Did you know?

- Just a few inches of water can cause thousands of dollars in property damage.
- All home and business owners in a high-risk flood zone are required to buy flood insurance, if they have a mortgage from a federally regulated or insured lender.

Be flood smart!

- Understand your risk.
- Stay informed during storm events.
- Be prepared.

Floods are the #1 natural disaster in the United States.

FOR MORE TIPS SEE THE BACK SIDE OF THIS FLYER!

Disclaimer: This data is not to be used to determine any base flood elevations or flood zone designations for NFIP (National Flood Insurance Program) purposes. For NFIP flood insurance and regulation purposes, please refer to the published effective FIRM panel noted above. A Registered Land Surveyor or Professional Engineer should be consulted to determine the precise location of property boundaries and ground elevations. This map does not constitute a regulatory determination and is not a base for engineering design. This map is intended to be viewed and printed in color.

Cook County Hazard Mitigation Grants Workshop for Cook County Community Officials

Does your community need to know about federal, state, and local grants that promote hazard mitigation, flood mitigation, disaster resilience, and stormwater management?

Come join your fellow Cook County community officials for a FREE informational workshop to learn more about disaster resilience grants straight from the experts!

Workshop

- Topics to be discussed include:
- Grant Opportunities
 - State and Local Priorities
 - Getting Ahead of Grant Application Process
 - Grant Leveraging/Matching
 - Local Success Stories



Please RSVP at <http://www.whoozin.com>
An agenda and directions are also available via the RSVP link.

From Concrete to Grass Roots: Community Strategies to Reduce Flood Risk

A Seminar for Community Officials

Join fellow community officials for a FREE informational seminar to learn more about urban flood initiatives, mitigation, and outreach concepts to reduce flood risk for residents of your community!

Workshop will include presentations by FEMA, IDNR, ISWS, Cook County, MWRD, MPC, CNT and the communities of Glenview and Blue Island.

Topics to be discussed include:
Urban Flood Awareness Act
Funding Opportunities

We look forward to seeing you there!

Flood Mitigation for Properties and Neighborhoods including:

- Structural and Green Infrastructure Measures
- Incentives to Help Homeowners Reduce Flood Losses
- Resident Education and Outreach
- Local Success Stories

**Wednesday
Feb. 3, 2016
1-4:30 pm**



South Suburban Mayors and Managers Association

1904 W. 174th Street
East Hazel Crest, IL 60429

Please RSVP at <http://whoozin.com/QWE-MJK-DHMJ>
An agenda and directions are also available via the RSVP link.

FEMA Region V Community Mitigation Meeting Pilot Program

■ **Successes**

- FEMA awareness and documentation of community needs and successes
- Increased community and agency collaboration
 - Dialogues with local agencies regarding funding
- Increased awareness of flood risk among community officials
- Training and education support for communities
 - Increased awareness of FEMA and local funding opportunities
 - Improved engagement of residents to support them in efforts to reduce personal property flood risk
 - Potential mitigation action concepts identified

FEMA Region V Community Mitigation Meeting Pilot Program

■ Challenges

- Funding roadblocks
- Capacity/personnel limitations
- Short timeframe
- Level of detail, support in data



■ More aligned with communities that need:

- Data gaps filled
- Collaboration assistance
- Planning support

- **These discussions better suited to occur during Risk MAP Discovery process to drive data development and planning discussions.**

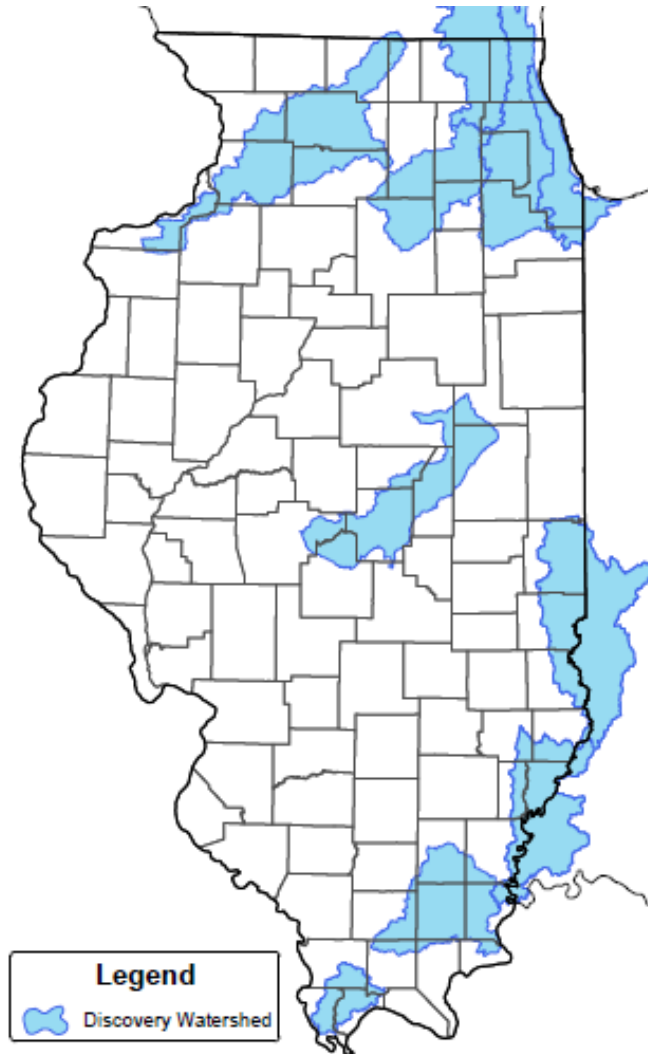
Risk MAP Project Timeline



Discovery Watersheds in Illinois



**ILLINOIS STATE
WATER SURVEY**
PRAIRIE RESEARCH INSTITUTE



Watersheds

- Cache River
- Chicago River
- Des Plaines
- Lower Rock
- Lower Wabash
- Middle Wabash
- Saline River
- Upper Fox
- Upper Sangamon

Upcoming Discovery

- Lower Fox

Risk MAP

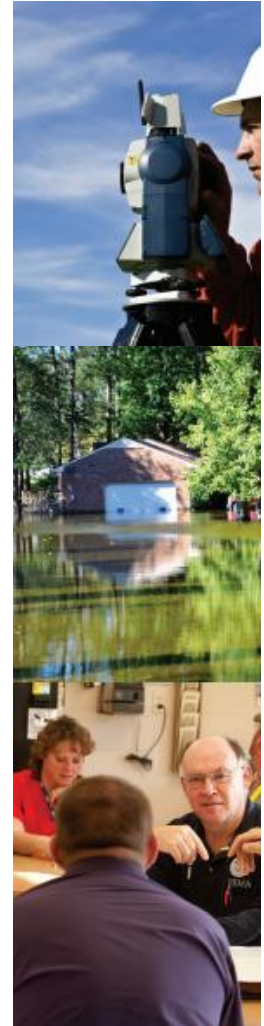
Watershed Discovery Goals

■ Identify Mapping Needs

- Pre-Zone A study to help drive discussion in un-modernized areas
- Where and why does community want a new study?
- What level of detail?
- What data can community leverage for study?
- FEMA facilitation data:
 - Draft Discovery MAP

■ Identify Mitigation Needs

- Supports communities within the watershed to develop a vision for the watershed's future
- Discuss HMP and potential mitigation actions
- Similar to Community Mitigation Meeting
- Draft Discovery Report discussed



Risk MAP

Watershed Discovery Data

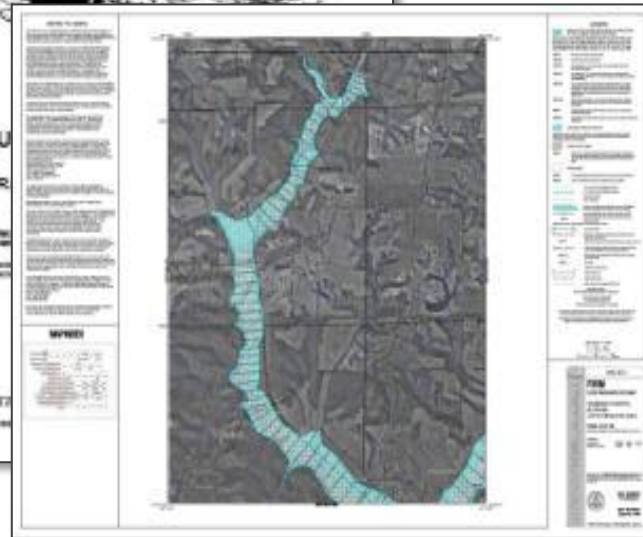
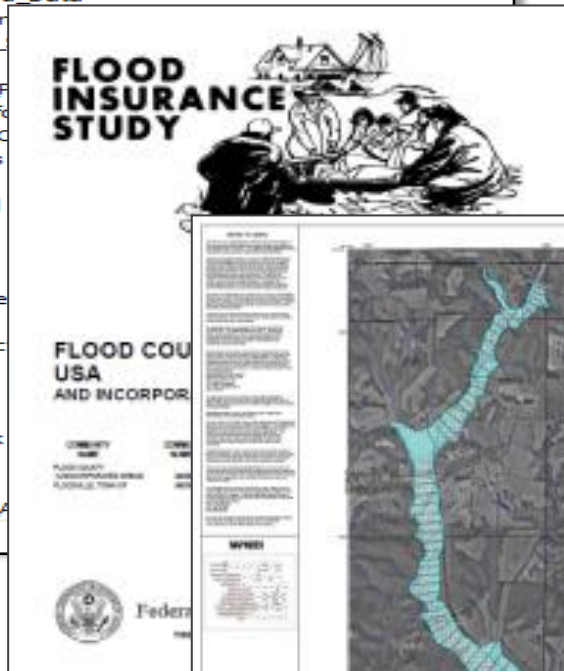
- **Data and information gathered during the Discovery process will be used to:**
 - determine that a flood risk project should be initiated
 - identify technical assistance for hazard mitigation planning
 - determine which flood risk products would be developed
 - plan a communication strategy to increase flood risk awareness among communities in the watershed.
- **If a flood risk project is initiated, flood risk products include regulatory and potentially non-regulatory products**

Regulatory Program Products

Traditional Regulatory Products

DFIRM Database

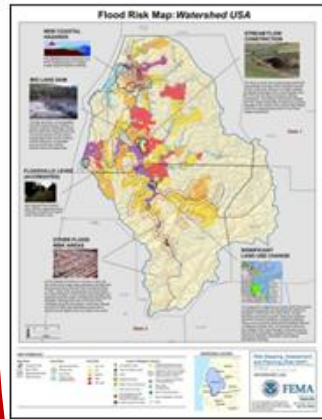
- Flood_Hazard_Data
- Political_Bour
- Public_Land_L
- TopoData
- Community_F
- L_Comm_Inf
- L_MT1_LOMC
- L_Pan_Revis
- L_Pol_FHBM
- L_Riv_Model
- L_Stn_Start
- L_Wtr_Nm
- S_Bfe
- S_DOQ_Inde
- S_Firm_Pan
- S_Gen_Struc
- S_Label_Ld
- S_Label_Pt
- S_LOMR
- S_Perm_Bmk
- S_Quad
- S_Riv_Mrk
- S_Trnsport_A



Traditional products are:

- regulatory
- subject to statutory due-process requirements

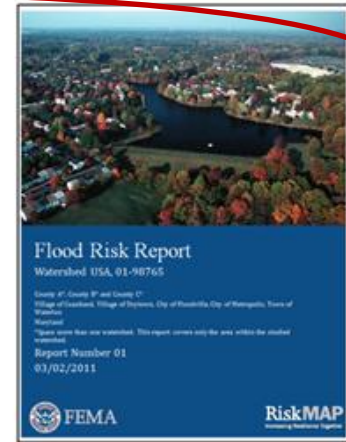
Non-Regulatory Flood Risk Products & Datasets



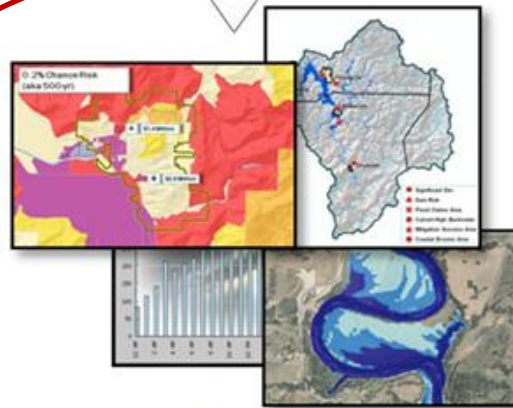
Flood Risk Map



Flood Risk Database



Flood Risk Report



Ad-Hoc Flood Risk Analysis & Visualization

Flood Risk Datasets

- **Summarize information captured through Discovery and subsequent analysis in Flood Risk Database**
- **Ability to visualize and analyze data → GIS**
- **Base Flood Risk Datasets can include:**
 - Area of Mitigation Interest
 - Changes Since Last FIRM
 - Flood Depth and Analysis Grids
 - Flood Risk Assessment Data

FEMA Flood Map Service Center

FEMA Flood Map Service Center : Search By Address

Enter an address, place, or coordinates: ?



The buttons below let you view and print the selected flood map, download the flood map image, open an interactive flood map (if available), or expand the search to all products to view effective, preliminary, pending, or historic maps, and risk products for the community. The locator map shows flood map boundaries in your area of interest. You can choose a new flood map by clicking elsewhere on the locator map or entering a new location in the search box.

Search Results—Products for CHICAGO, CITY OF

The flood map for the selected area is number **17031C0508J**, effective on **08/19/2008** ?



Show all products for this area



Search Results for CHICAGO, CITY OF

Click [subscribe](#) to receive email notifications when products are updated.

Please Note: Searching All Products by county displays all products for all communities within the county. You can refine your search results by specifying your specific jurisdiction location using the drop-down menus above.

- Effective Products (100) ?
- Preliminary Products (119) ?
- Pending Product (0) ?
- Historic Products (105) ?
- Flood Risk Products (10) ?

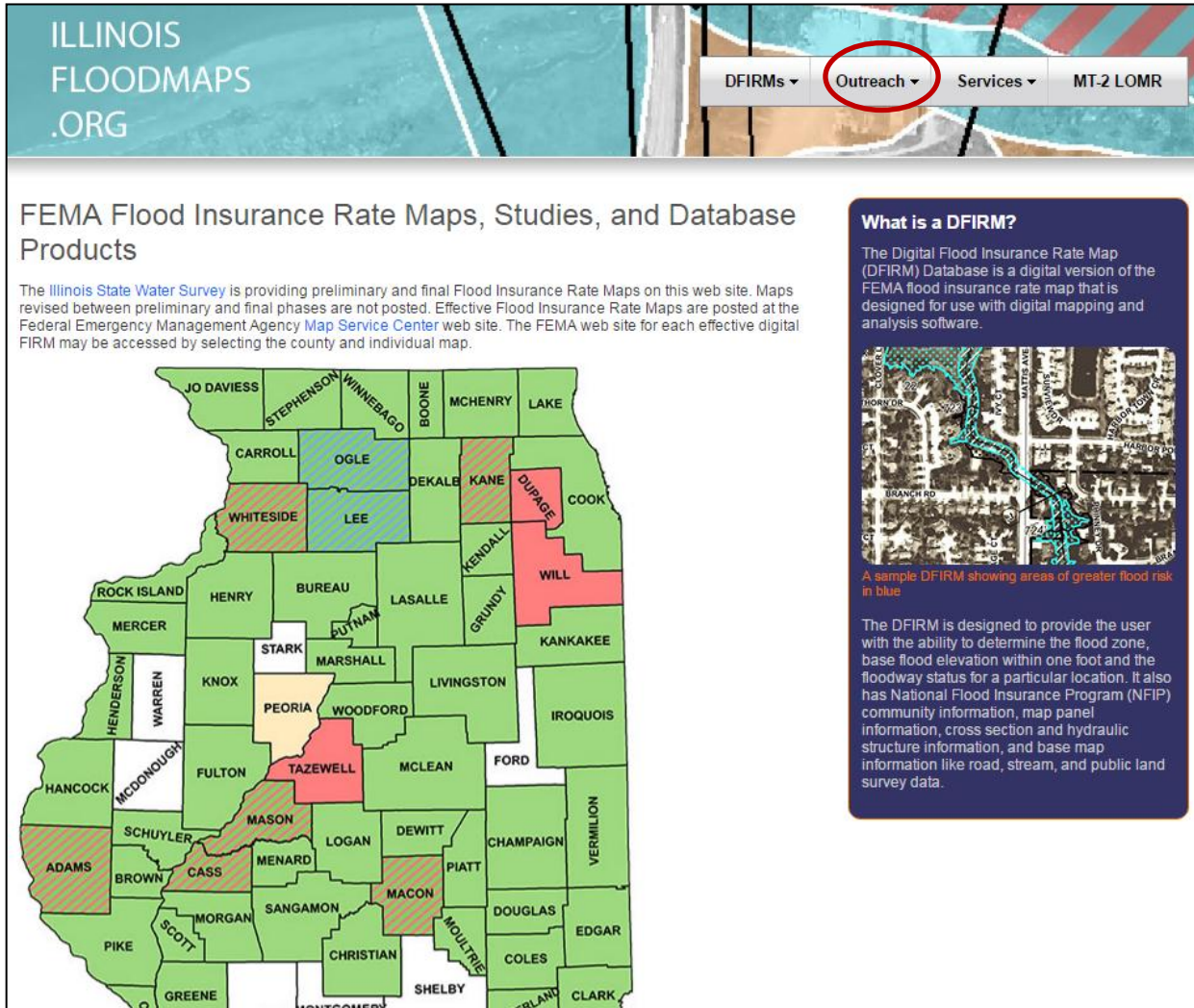
Please note: Flood Risk Products have purposes that are different from regulatory flood hazard products (i.e., FIRM, FIS Report, and FIRM Database). Regulatory flood hazard products are mandated by law and used by the National Flood Insurance Program (NFIP) for rating flood insurance policies and enforcing the federal mandatory insurance purchase requirements. Flood Risk Products are supplementary resources for communicating flood risk to communities and may not entirely align with the regulatory flood maps. The information in these products reflect what was produced by the FEMA Risk MAP study in that area. Depending on the requirements of the study, the Flood Risk Products available for your community may consist of a Flood Risk Map, Flood Risk Report or Flood Risk Database.

- ▶ Flood Risk Maps (4)
- ▶ Flood Risk Reports (2)
- ▼ Flood Risk Database (4)

Product ID	File Format	MSC Posting Date	Size	Download
FRD_07120003_GeoDatabase	GeoDatabase	01/27/2015	15MB	
FRD_07120003_ShapeFiles	ShapeFiles	01/27/2015	18MB	
FRD_07120004_GeoDatabase	GeoDatabase	01/15/2015	500MB	
FRD_07120004_ShapeFiles	ShapeFiles	01/15/2015	11MB	

<https://msc.fema.gov/>

ILLINOISFLOODMAPS.ORG



ILLINOIS FLOODMAPS .ORG

DFIRMs ▾ Outreach ▾ Services ▾ MT-2 LOMR

FEMA Flood Insurance Rate Maps, Studies, and Database Products

The Illinois State Water Survey is providing preliminary and final Flood Insurance Rate Maps on this web site. Maps revised between preliminary and final phases are not posted. Effective Flood Insurance Rate Maps are posted at the Federal Emergency Management Agency [Map Service Center](#) web site. The FEMA web site for each effective digital FIRM may be accessed by selecting the county and individual map.

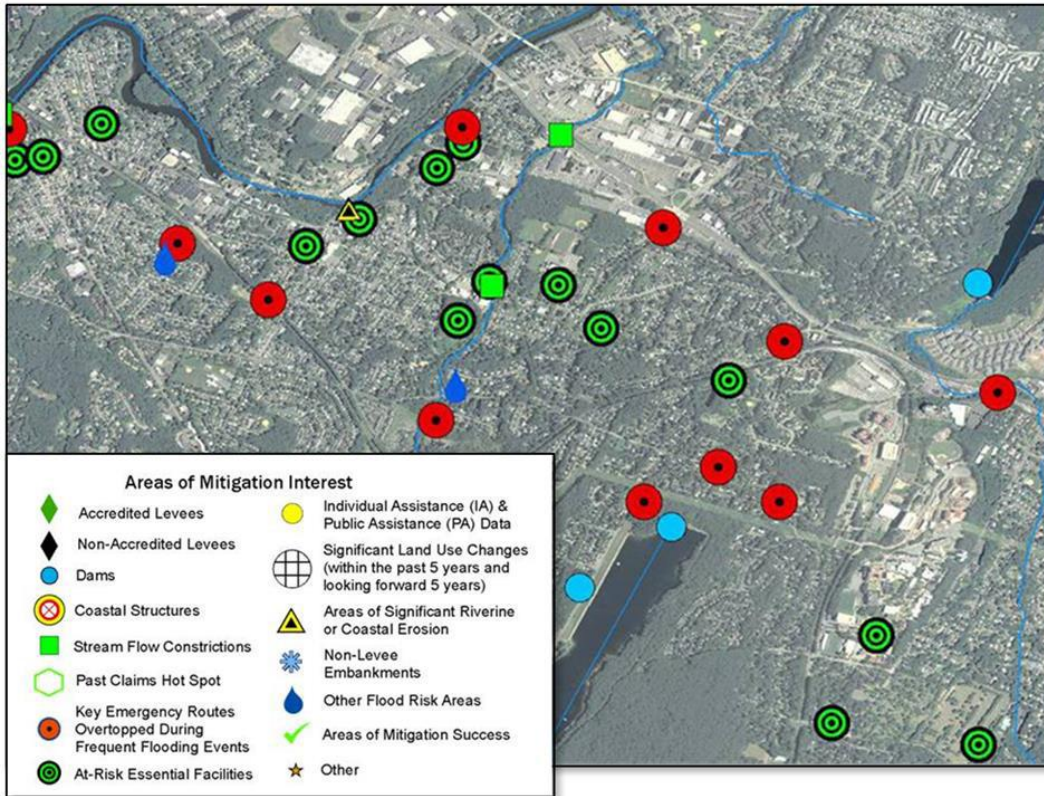
What is a DFIRM?

The Digital Flood Insurance Rate Map (DFIRM) Database is a digital version of the FEMA flood insurance rate map that is designed for use with digital mapping and analysis software.

A sample DFIRM showing areas of greater flood risk in blue

The DFIRM is designed to provide the user with the ability to determine the flood zone, base flood elevation within one foot and the floodway status for a particular location. It also has National Flood Insurance Program (NFIP) community information, map panel information, cross section and hydraulic structure information, and base map information like road, stream, and public land survey data.

Area of Mitigation Interest

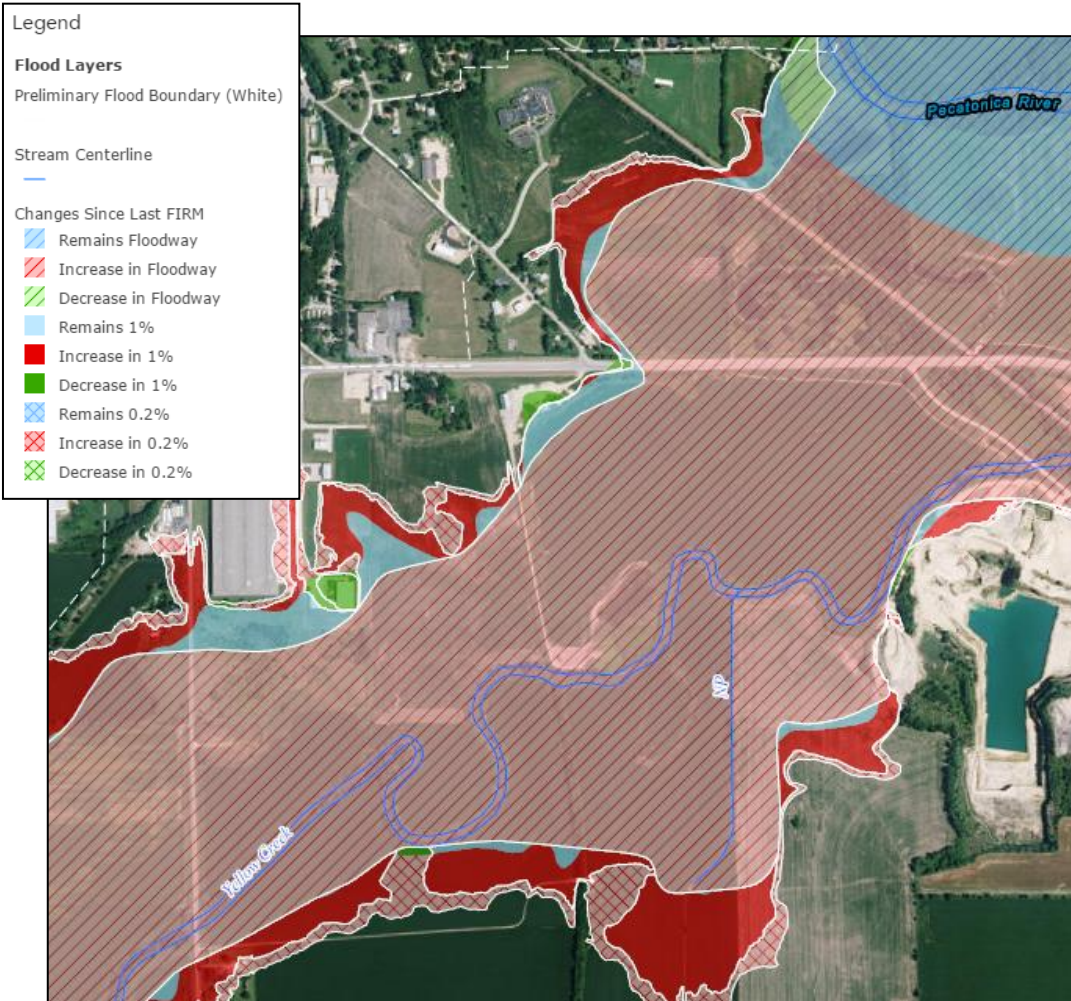


What does
AoMI show?

Spatial data points
Identifying:

Flood Risk Issues
Flood Impact Areas

Changes Since Last FIRM



What does
CSLF show?

Changes between the
Preliminary and effective
FIRMS:
Floodplain Boundary
Flood Zone
Floodway

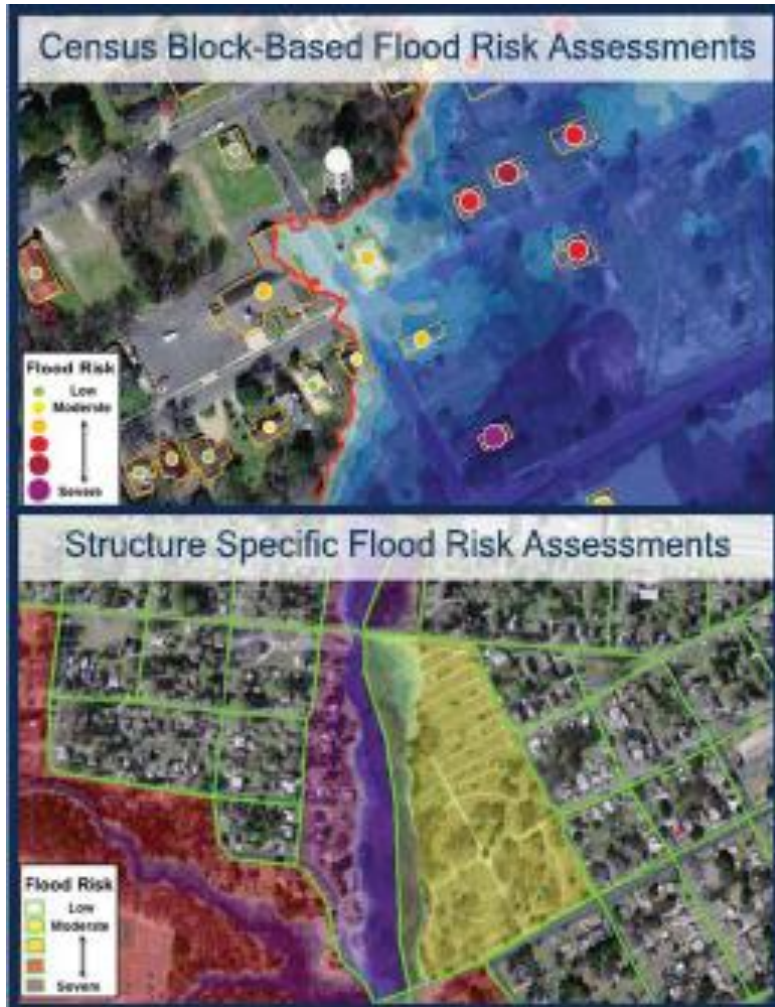
Flood Depth and Analysis Grids



What do
the grids show?

Flood depths, water
Surface elevations, and
Probability of flooding at
Any single point within
The SFHA

Flood Risk Assessment



What do
FRA show?

Flood risk exposure and
Damage estimates in an
Area including:

Physical Damage
Economic Loss
Social Impacts



FEMA

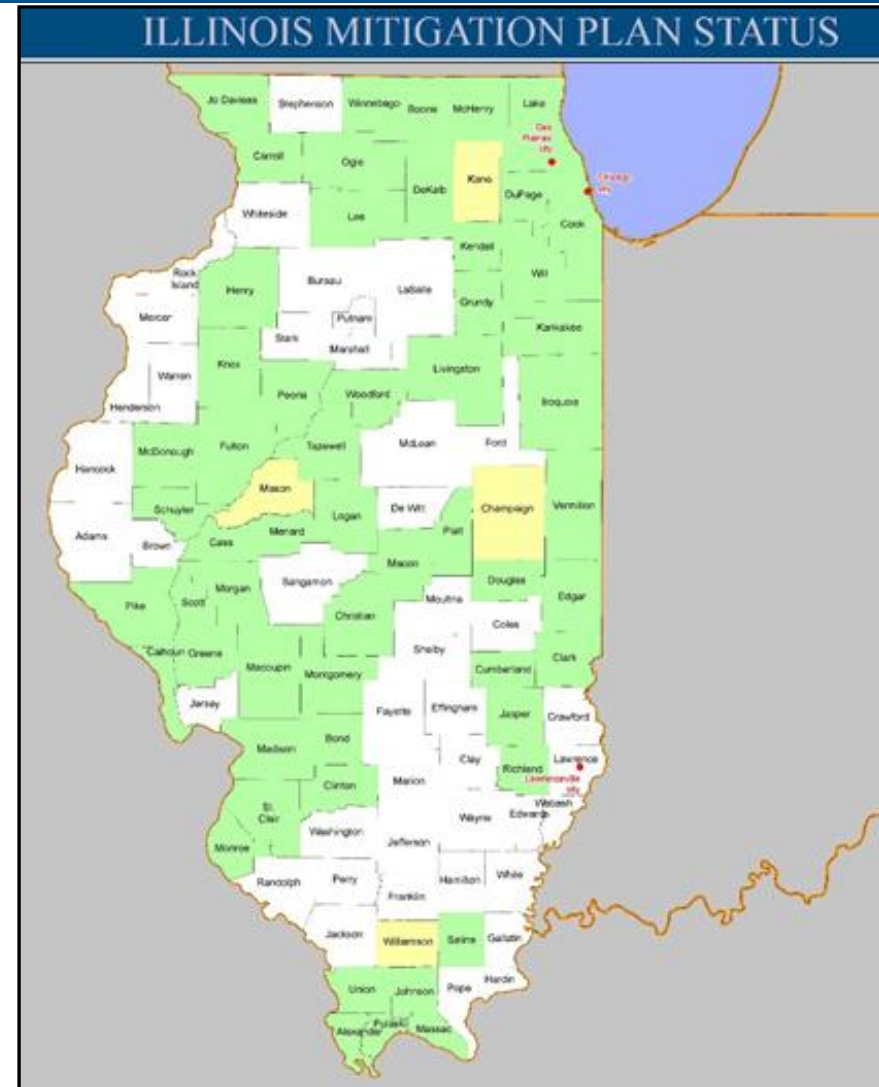
Hazard Mitigation Plans and the Hazard Mitigation Assistance Grant Program

RiskMAP
Increasing Resilience Together



Local Hazard Mitigation Plans

- **More than 60 of Illinois' 102 counties have approved and/or adopted plans.**
- **Most of the urban counties in state have plans—more than 80% of the state's population is covered by a plan.**
- **Numerous counties—Lake, Winnebago, Peoria, St. Clair, Rock Island County and others have undertaken numerous mitigation projects consistent with their plans.**
- **Several cities with their own plans—Glenview, Des Plaines, and Chicago have undertaken their own mitigation projects.**



Hazard Mitigation Plan Requirement

■ Applicants

- Must have a FEMA approved State or Tribal (Standard or Enhanced) Mitigation Plan

APPROVED
by FEMA

■ Subapplicants

- **HMGP** - Must have a FEMA-approved local mitigation plan at time of project obligation
- **PDM/FMA** - Must have a FEMA-approved local mitigation plan at time of application deadline and project award



Hazard Mitigation Assistance Grant Programs



Funding Availability



- **HMGP = post-disaster program**



- **PDM & FMA = annual, subject to Congressional appropriations**

Eligible Applicants

Entity	 HAZARD MITIGATION GRANT PROGRAM	 PRE-DISASTER MITIGATION	 FLOOD MITIGATION ASSISTANCE
State Agencies	✓	✓	✓
Tribal Governments	✓	✓	✓

Eligible Subapplicants

			
State Agencies	✓	✓	✓
Tribal Governments	✓	✓	✓
Local Governments/ Communities	✓	✓	✓
Private non-profit Organizations (PNPs)	✓	✗	✗

Eligible Activities

Eligible Activities			
1. Mitigation Projects	✓	✓	✓
Property Acquisition & Structure Demolition	✓	✓	✓
Property Acquisition & Structure Relocation	✓	✓	✓
Structure Elevation	✓	✓	✓
Mitigation Reconstruction	✓	✓	✓
Dry Floodproofing of Historic Residential Structures	✓	✓	✓
Dry Floodproofing of Non-Residential Structures	✓	✓	✓
Minor Localized Flood Reduction Projects	✓	✓	✓
Structural Retrofitting of Existing Buildings	✓	✓	✓
Non-Structural Retrofitting of Existing Bld. & Facilities	✓	✓	✓

Eligible Activities *Continued*

Eligible Activities	 HAZARD MITIGATION GRANT PROGRAM	 PRE-DISASTER MITIGATION	 FLOOD MITIGATION ASSISTANCE
1. Mitigation Projects	✓	✓	✓
Safe Room Construction	✓	✓	✗
Infrastructure Retrofit	✓	✓	✓
Soil Stabilization	✓	✓	✓
Wildfire Mitigation	✓	✓	✗
Post-Disaster Code Enforcement	✓	✗	✗
5% Initiative Projects	✓	✗	✗
2. Hazard Mitigation Planning	✓	✓	✓
3. Management Costs	✓	✓	✓

HMA Program Guidance



www.fema.gov

Search: Hazard Mitigation Assistance Guidance

Hazard Mitigation Assistance Guidance

Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, and Flood Mitigation Assistance Program
February 27, 2015



Federal Emergency Management Agency
Department of Homeland Security
500 C Street, S.W.
Washington, DC 20472



Pre-Disaster Mitigation (PDM)

- **FY 2016: \$90 million available**
- **\$575,000 set-aside for States and Tribes**
- **Project and Planning grants**
- **Period of Performance: 3 years**
- **Cost share 25%**
- **Program priorities: planning, non-flood projects**
- **A FEMA-approved local mitigation plan must be in effect at time of application deadline and at time of award for project applications.**



Flood Mitigation Assistance (FMA)

- **\$199 million available funding**
- **Project grants and Planning grants for flood hazard portion of Mitigation Plan**
- **Period of Performance: 3 years**
- **Cost share 25%, reduced for Repetitive Loss and Severe Rep Loss structures**
- **Structures must carry flood insurance**
- **Program priorities: SRL and Rep Loss**
- **A FEMA-approved local mitigation plan must be in effect at time of application deadline and at time of award for project applications.**



FMA – Severe Repetitive Loss (100% Fed)

- **A severe repetitive loss property is a structure that:**
- **(a) Is NFIP-insured, and**
- **(b) Has incurred flood related damage –**
 - (i) For which 4 or more separate claims payments (includes building and contents) have been made, with each exceeding \$5,000
- **or**
 - (ii) For which at least 2 separate claims payments (includes only building) have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure



FMA – Repetitive Loss (90% Fed)

- A repetitive loss property is a structure covered by a contract for **flood insurance** made available under the NFIP that:
 - (a) Has incurred flood-related damage on **2 occasions**, in which the **cost of the repair**, on the average, equaled or exceeded **25 percent of the market value** of the structure at the time of each such flood event
- **and**
 - (b) At the time of the second incidence of flood-related damage, the contract for flood insurance contains **increased cost of compliance** coverage



PDM / FMA Timeline

- **Application period opens:**
 - March 15, 2016
- **Application period closes:**
 - June 15, 2016
- **Anticipated funding selection date:**
 - August 30, 2016
- **Anticipated award:**
 - Fall 2016



PDM/FMA – Applying

- **Sub-applicant deadline: varies by State**
- **PDM Applicants limited to 18 sub-applications, maximum of 8 projects**
- not all sub-applications will be submitted to FEMA
- **Only eligible and complete sub-applications will be considered**
- **Contact your State Hazard Mitigation Officer**
- **Tribal Applicants – contact FEMA**



Buyout and Relocation Program

- **According to the Illinois State Hazard Mitigation Plan approximately 3,800 flood prone structures have been removed, relocated, or elevated since 1993.**
- **This mitigation of flood prone property has cost roughly \$200 million dollars.**
- **Since 2013 the State has continued buyout and relocation-- in communities with severe flooding issues and in communities property prices are high.**
 - City of Des Plaines
 - Village of Glenview
 - Village of Lisle
 - Unincorporated DuPage and Lake Counties.

Final Thoughts

- **Appreciate that mitigation takes a long time**

- Communities like to talk about mitigation concepts, but sometimes don't know what to do next
- Early and often coordination and outreach can help plan
- Track leverage data and damages

- **HMP**

- HMP helps document needs, should be comprehensive, regularly updated
- Use HMP for internal discussions and collaboration with other stakeholders

- **HMA Grants**

- Look for training in advance of grant cycle
- Track damage data and need for future opportunities

Questions



FEMA