

Illinois Water Information Center



State Water Plan Update



13 Topics

State Water Plan Update

1	Water Quality
2	Climate Change
3	Integrated Water Management
4	Long Term Funding
5	Water Sustainability
6	Lake Michigan
7	Flood Damage Mitigation
8	Aquatic & Riparian Habitat
9	Water Use Laws & Regulations
10	Navigation
11	Erosion & Sedimentation
12	Data Management
13	Recreation

Integrated Water Management

- State and interstate programs coordinating information, authorities, and program resources for unified, equitable, and improved problem resolution





Water Related Agencies,
Water Related Science,
Water Related Policies,
Water Related Issues, and
Water Related Information
are Interwoven Together



Illinois Water Information Center

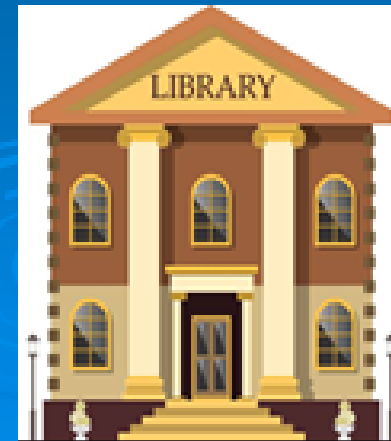
Located at U of I Prairie Research Institute

Centralized Library of Water Information



Illinois Water Information Center Would:

- ❑ Serve as portal to a library of water science-based information and technology
- ❑ Be accessible by Illinois' decision makers, program managers, emergency managers, community officials, home and business owners, and the public
- ❑ Serve as a centralized location for:
 - ❑ Updated rainfall information, hydrologic studies, hydraulic studies
 - ❑ Regulatory floodplain inundation and floodway mapping
 - ❑ NFIP letters of map revisions, NFIP letters of map amendment
 - ❑ County and community hazard mitigation plans, historical flood assessment reports
 - ❑ Public water use/consumption data, groundwater and well data
 - ❑ Water infrastructure systems mapping
 - ❑ Port and navigation information
 - ❑ Levee database information
 - ❑ Flood damage assessment inventory information (SAFR)
 - ❑ Flood mitigation information
 - ❑ flood preparedness information
 - ❑ drought preparedness information
 - ❑ GIS Meta-data



Illinois Water Information Center

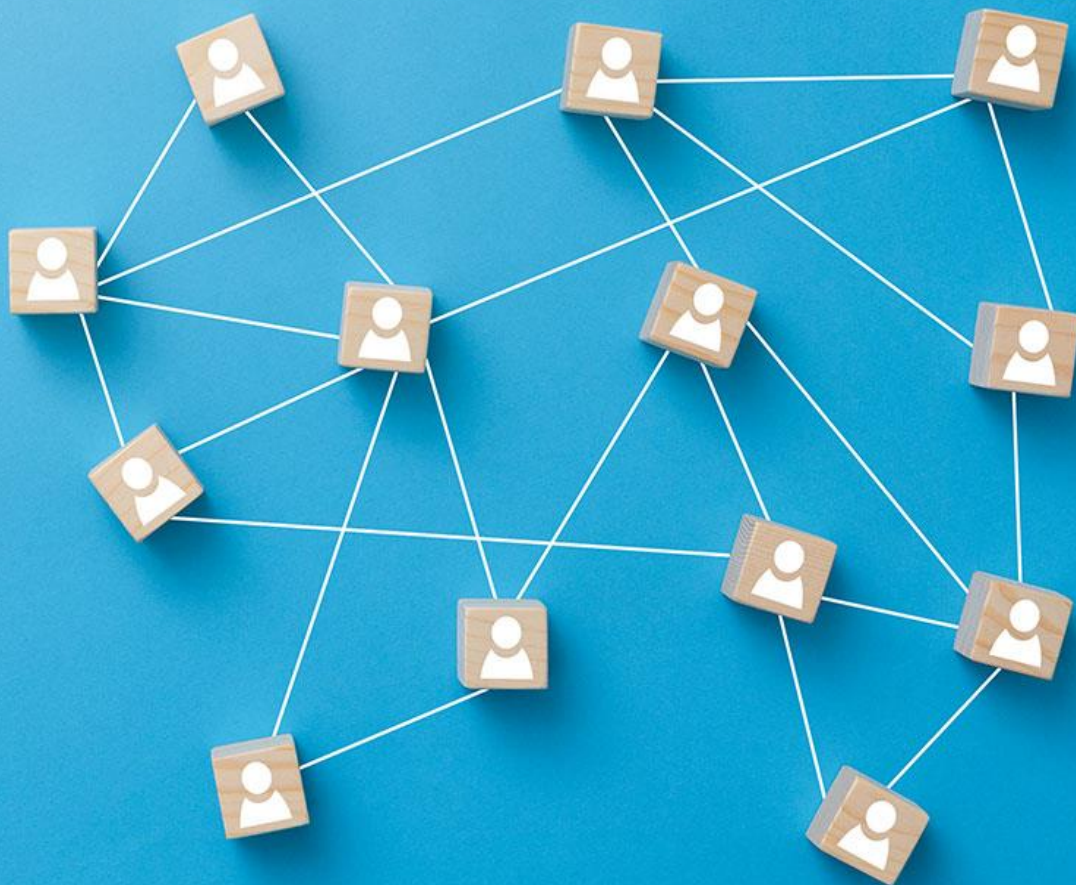
- ❑ Provide multi-lingual assistance to water related state programs and outreach efforts.
- ❑ Serve as a customer service center for local assistance coordination of state, federal and local program resources
- ❑ Other uses designated by the State Water Plan



Emerging Needs and Resources

The **Illinois Flood/Water Information Center**

- Merging science, education, and technical resources
- Facilitating partnerships and collaboration
- Equipping decision-makers
- Improving preparedness and reducing flood risk in Illinois.



Collaboration is the Mission

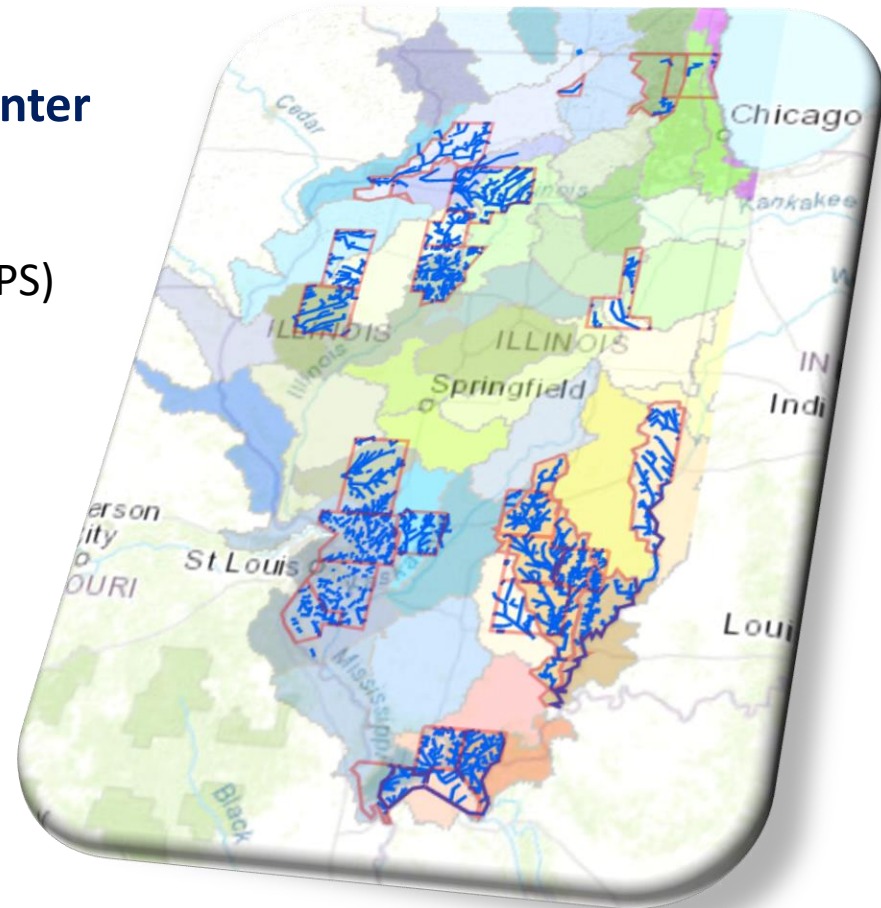
The **Illinois Flood/Water Information Center** will use basic and applied research to identify risk and mitigate flooding in Illinois through interdisciplinary collaboration between Illinois agencies and partners.



Projects & Activities

The **Illinois Flood/Water Information Center**

- Flood Insurance Rate Maps (FEMA)
- Community Flood Inundation Maps (AHAPS)
- Flood Risk Assessments (SAFR website)
- Education & Outreach
- H&H Modeling Repository
- **Statewide Floodplain Mapping (2D)**
 - **Climate & Atmospheric Science**
 - **Extreme Precipitation**



Statewide 2D Modeling

Statewide 2D Modeling

Watershed-scale models, driven by distributed rainfall, coupled with high resolution LiDAR

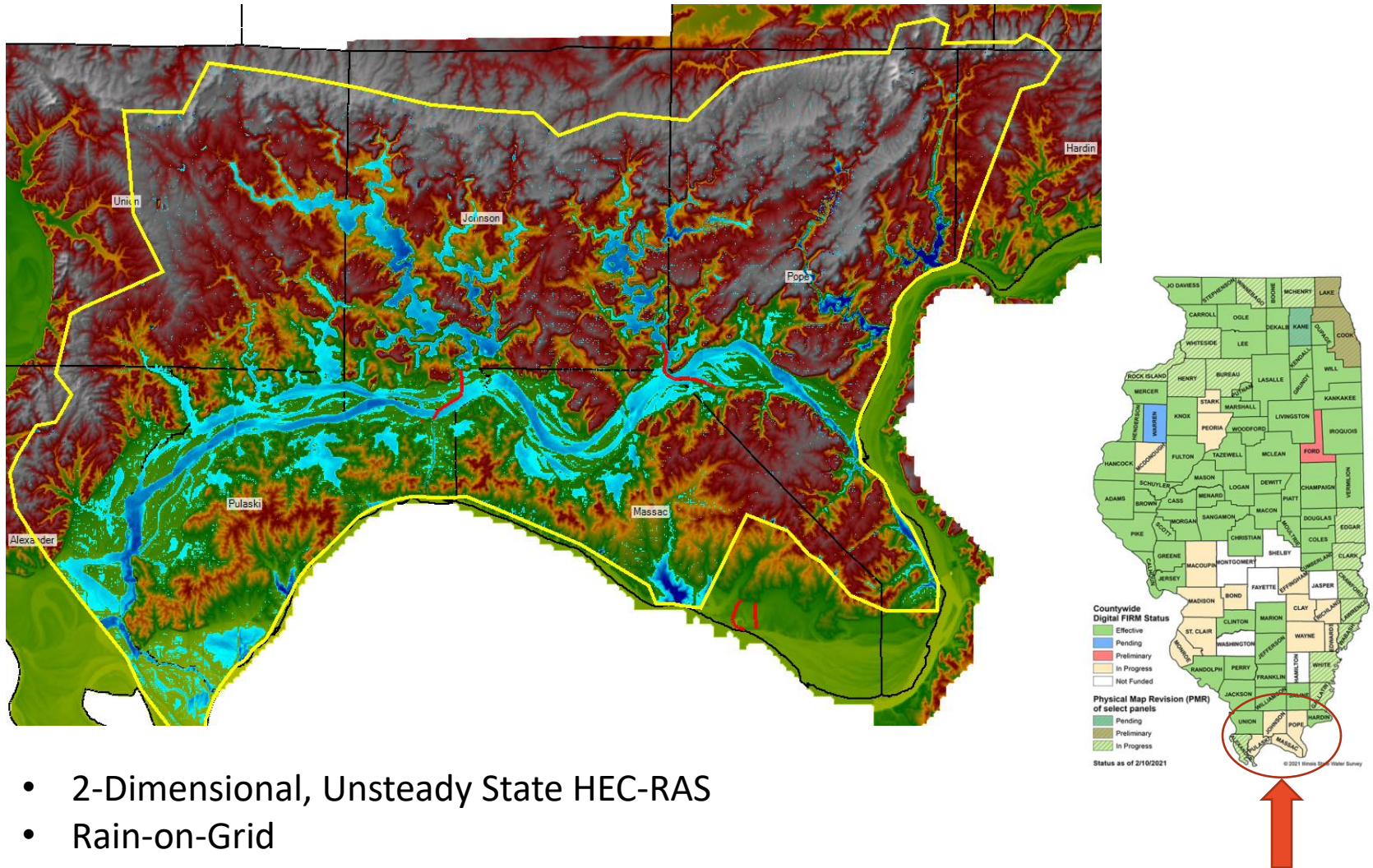
- Statewide estimated stream flows
- Flood inundation, road overtopping, velocity and direction of flows.
- Forecasts for future climate and land use scenario consequences
- Post-incident inundation mapping
- Urban flooding analysis
- Rural drainage issues
- Large river concerns
- Planning and mitigation statewide
- Underserved communities where planning and mitigation resources may be limited.

Statewide 2D Modeling

Potential Partners & Projects:

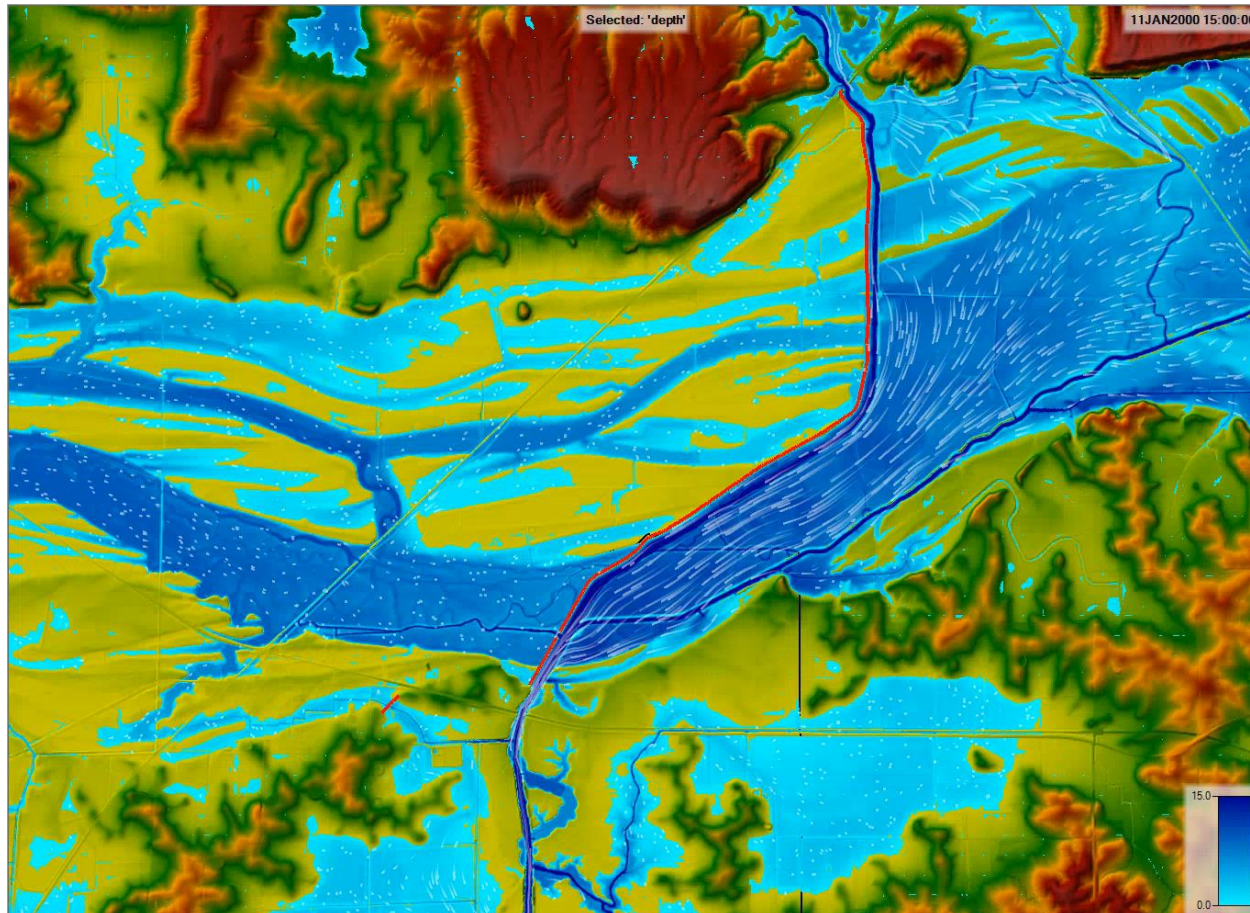
- **FEMA** - Fast path to 80% NVUE compliant stream miles in Illinois
- **USGS** - Stream gage network assessment
- **IDOT** - Bridge hydraulics/scour analysis/flooded roadways
- **NOAA/NWS** - Flood forecasting, real-time inundation mapping
- **USACE and IDNR-OWR** - Navigable waters assessment and planning, flood control and mitigation assessment
- **IEMA** - Flood Response and recovery, mitigation assessment, statewide structural risk assessment
- **NRCS** - Agricultural drainage, soil erosion
- **Fish & Wildlife** - Fish passage
- **IDNR-OWR** - Capitol flood control programs, informing policy and/or program decisions, informing best practices, statewide structural risk assessment
- **IAFSM** - Informing industry leaders
- **Stormwater Agencies** - Informing stormwater policy, prioritization of projects
- **CNT** - Urban flooding research

Cache River Valley Study

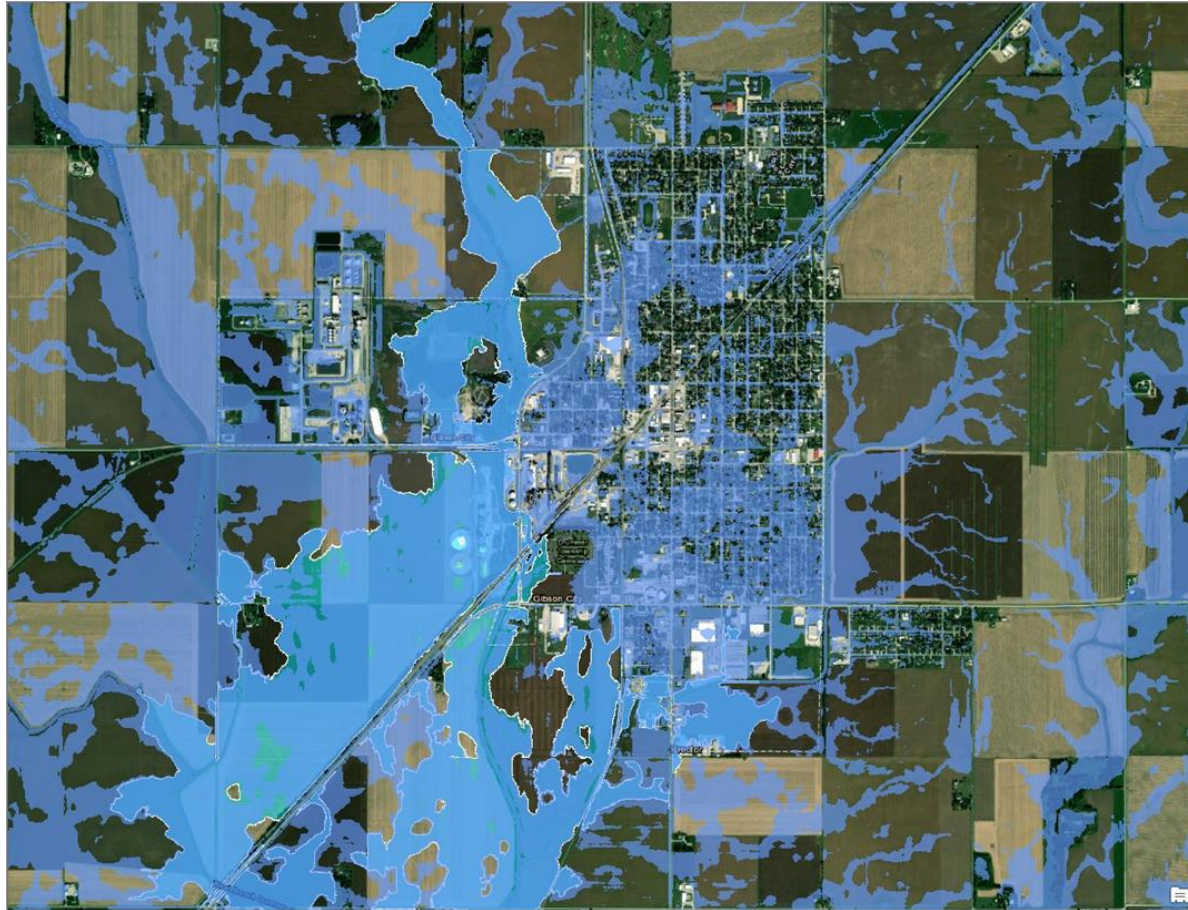


- 2-Dimensional, Unsteady State HEC-RAS
- Rain-on-Grid

Impact of Karnak Levee

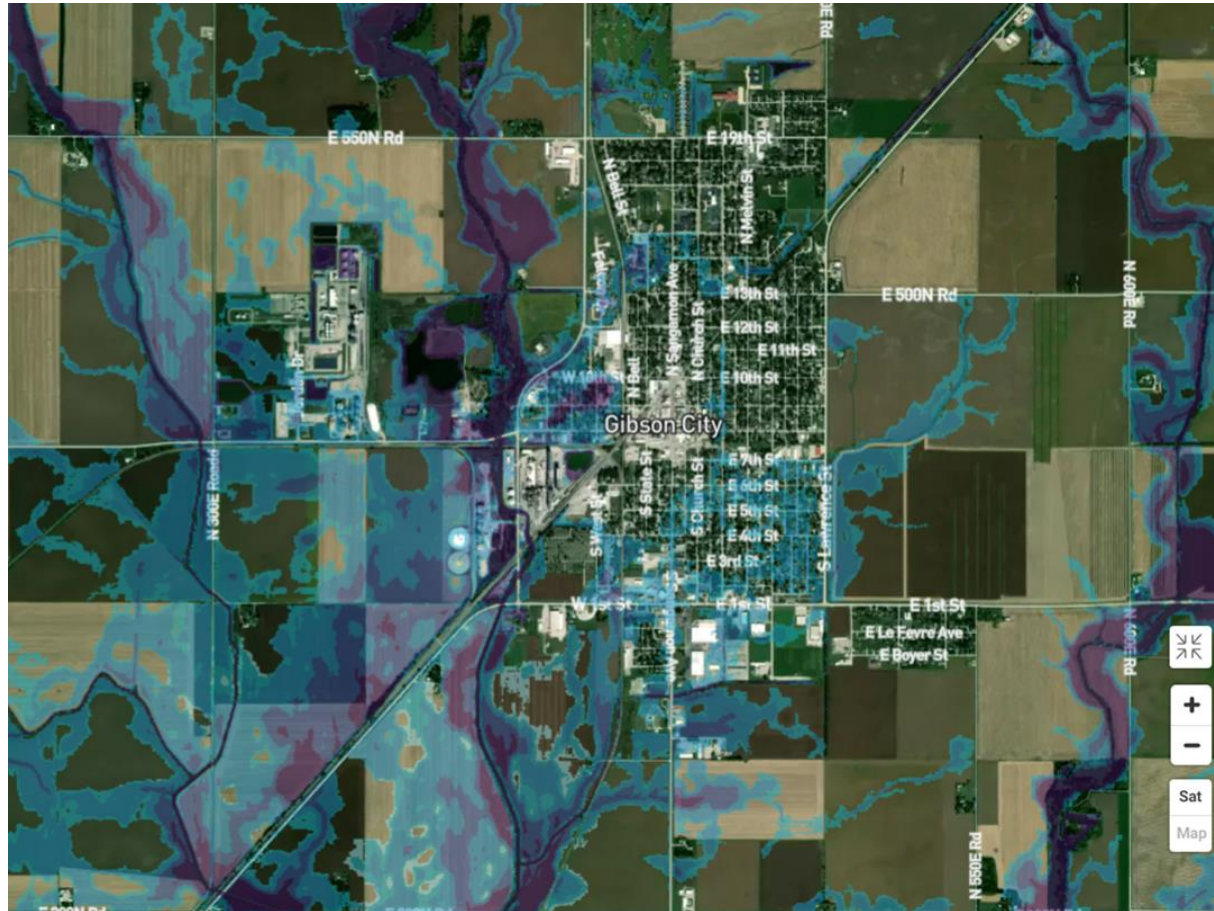


Gibson City Flood – Aug 12, 2021



- Comparison with FEMA Preliminary Map
- <https://storymaps.arcgis.com/stories/398e0ea564be4dcaa20d2ba88fa7ed01>

Gibson City Flood – Aug 12, 2021



- Comparison with First Street Foundation's Flood Factor Analysis
- <https://storymaps.arcgis.com/stories/398e0ea564be4dcaa20d2ba88fa7ed01>

Summary

Illinois Flood/Water Information Center

- Build and strengthen relationships with state agencies and affiliated partners.
- Foster collaboration and funding opportunities
- Put science-based information and technology in the hands of Illinois' decision-makers and emergency managers
- Increase coordination between agencies and state leaders, leading to new opportunities
- Integrate state agency efforts in flood related issues, analysis, and education
- Develop and use the latest tools, technology, and research to monitor, analyze, and mitigate flooding in Illinois

