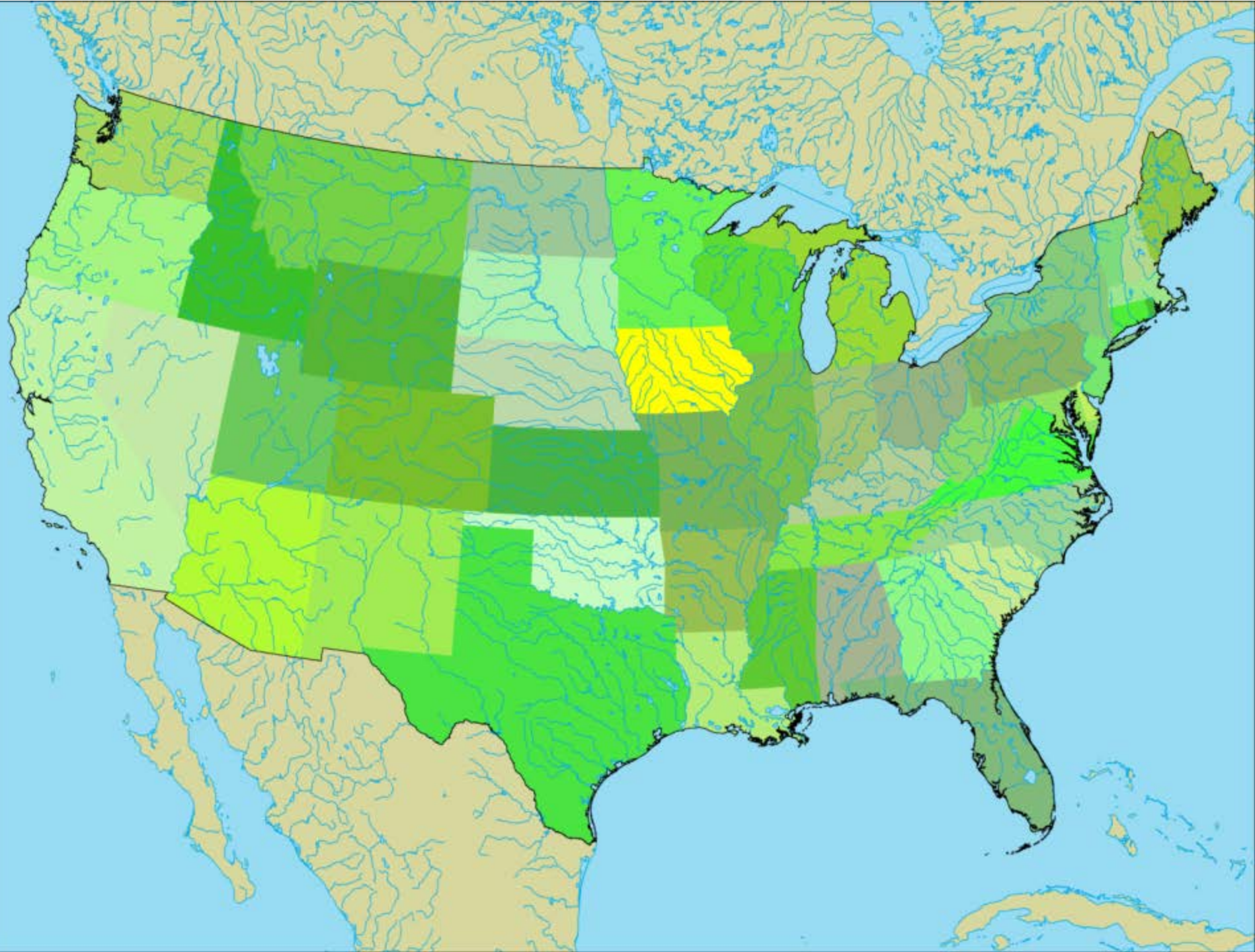


# Iowa Flood Center: Floodplain Mapping

# Overview

- **Iowa Flood Center**
- **Iowa Statewide Floodplain Mapping Program**
- **Community Flood Mapping Libraries**
- **Iowa Flood Information System**













# 2008 IOWA FLOOD IMPACTS

- **~ 38,000 people displaced**
- **Fourth largest disaster in US history (in terms of economic loss)**
- **Agriculture**
  - **greater than \$ 2 billion US damage**
  - **~4,900 km<sup>2</sup> (18,900 mi<sup>2</sup>, >12M acres) of corn and soybeans affected**
- **State infrastructure**
  - **\$ 800 million US damage**
  - **\$ 231 million US damage to the University of Iowa**
- **Cedar Rapids (most severely affected community)**
  - **Greater than \$ 1.5 billion US in damage**
  - **1,300 city blocks (24 km<sup>2</sup>, 9 mi<sup>2</sup>, 5,900 acres)**
  - **5,390 residential homes (700 had flood insurance)**
  - **1,049 commercial businesses**
- **\$ 8 billion - \$10 billion in total damages**

# IIHR - Hydrosience & Engineering

- Originated 90 years ago
- A UI center for interdisciplinary research with staff expertise in flood research, experimental and computational methods, sediment transport, river mechanics, river restoration, basin-scale hydrology, atmospheric sciences, and fluid mechanics
- 800 alumni from 55 countries holding leading water-related scientific and administrative positions throughout the world
- Recognized as an ASCE National Historic Landmark, June 2005



# IOWA HOUSE FILE 822

## DIVISION VI

### Sec. 15. NEW SECTION. 466C.1 IOWA FLOOD CENTER.

- 1. The state board of regents shall establish and maintain in Iowa City as a part of the state university of Iowa an Iowa flood center. In conducting the activities of this chapter, the center shall work cooperatively with the department of natural resources, the department of agriculture and land stewardship, the water resources coordinating council, and other state and federal agencies.**
  
- 2. The Iowa flood center shall have all of the following purposes:**
  - a. To develop hydrologic models for physically based flood frequency estimation and real-time forecasting of floods, including hydraulic models of flood plain inundation mapping.**
  - b. To establish community-based programs to improve flood monitoring and prediction along Iowa's major waterways and to support ongoing flood research.**
  - c. To share resources and expertise of the Iowa flood center.**
  - d. To assist in the development of a workforce in the state, knowledgeable regarding flood research, prediction, and mitigation strategies.**



2010





2010





2011





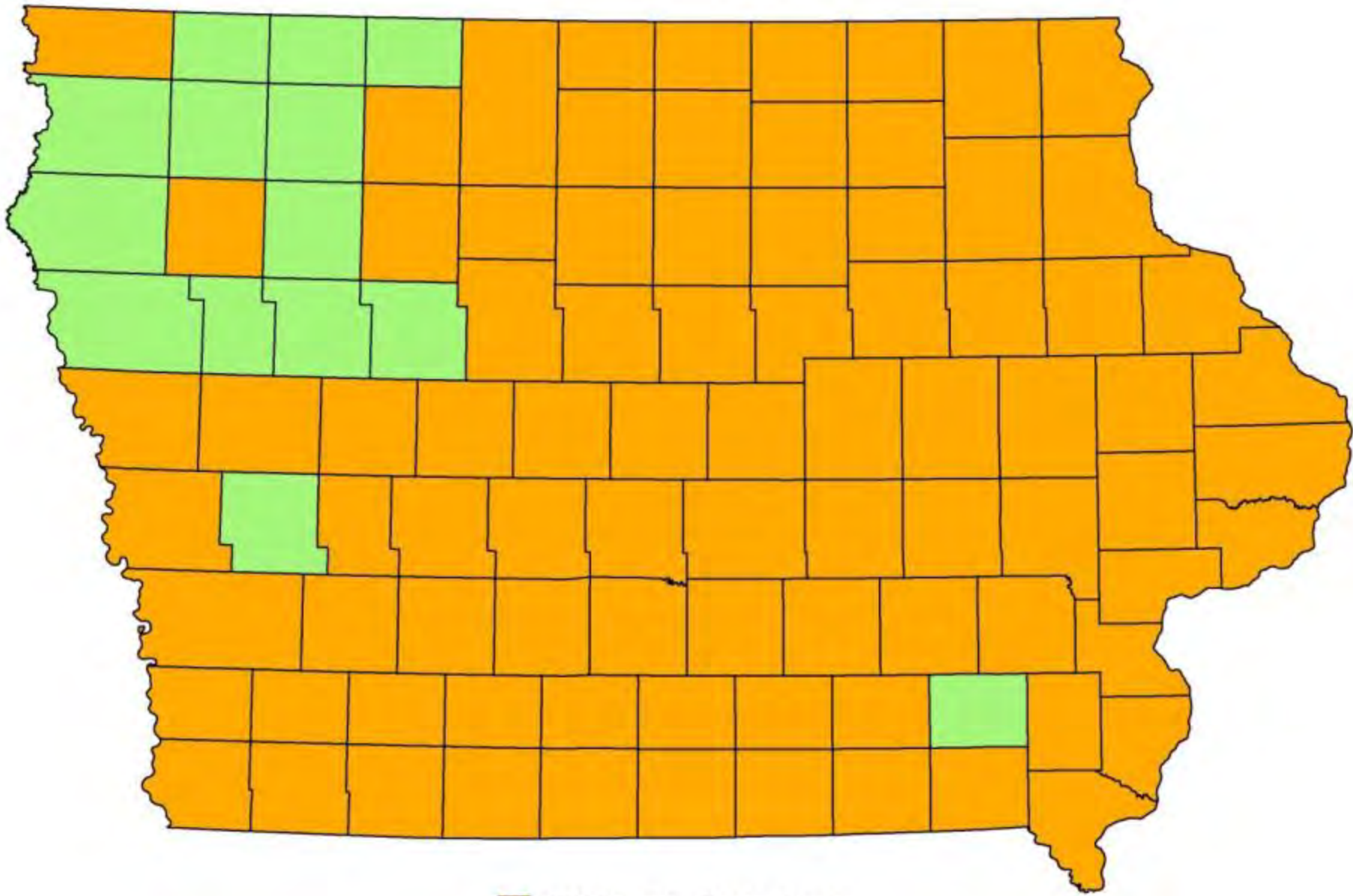
2011






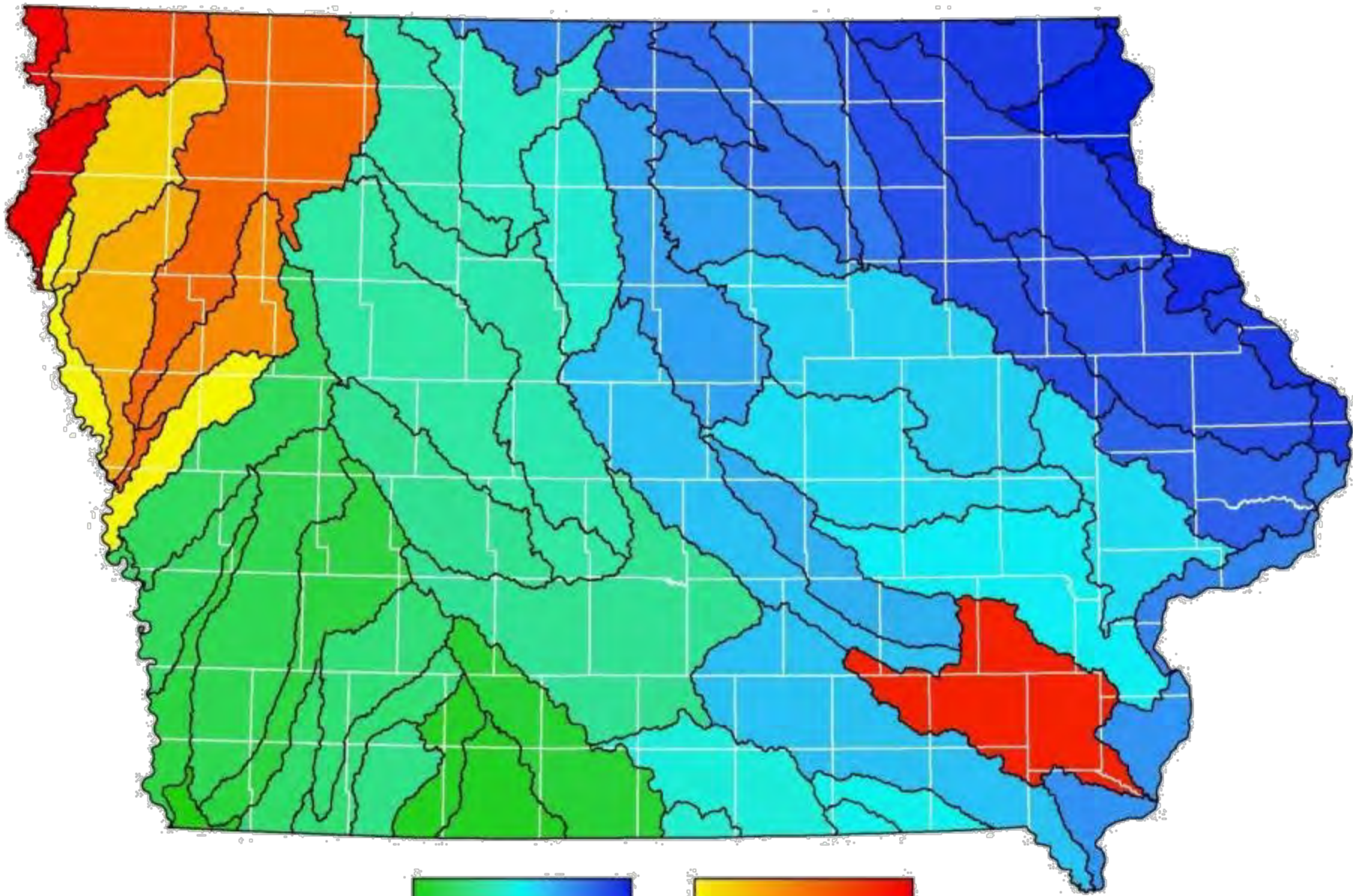
# IOWA STATEWIDE FLOODPLAIN MAPPING PROGRAM

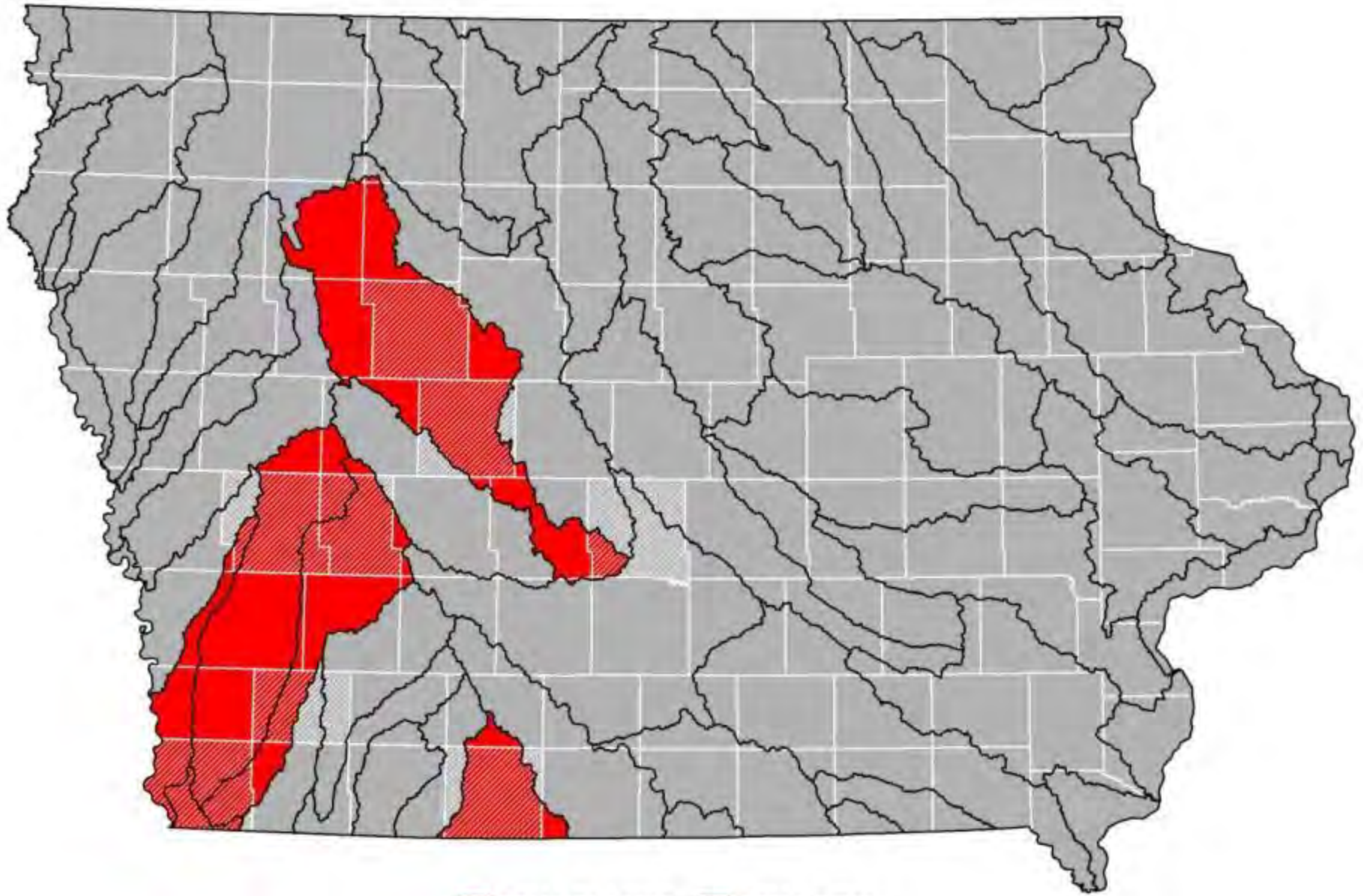
- Five-year effort to update or create floodplain mapping data for the entire state of Iowa
- Close partnership with the Iowa Department of Natural Resources
- Funding to map all counties declared federal disaster areas following the 2008 flood
- Mapping data is being developed to FEMA RiskMAP standards
- Data will be used for planning and management within the state
- FEMA RiskMAP products and FIRMs will be developed using the data, according to need and funding availability




 2008 Disaster Declarations

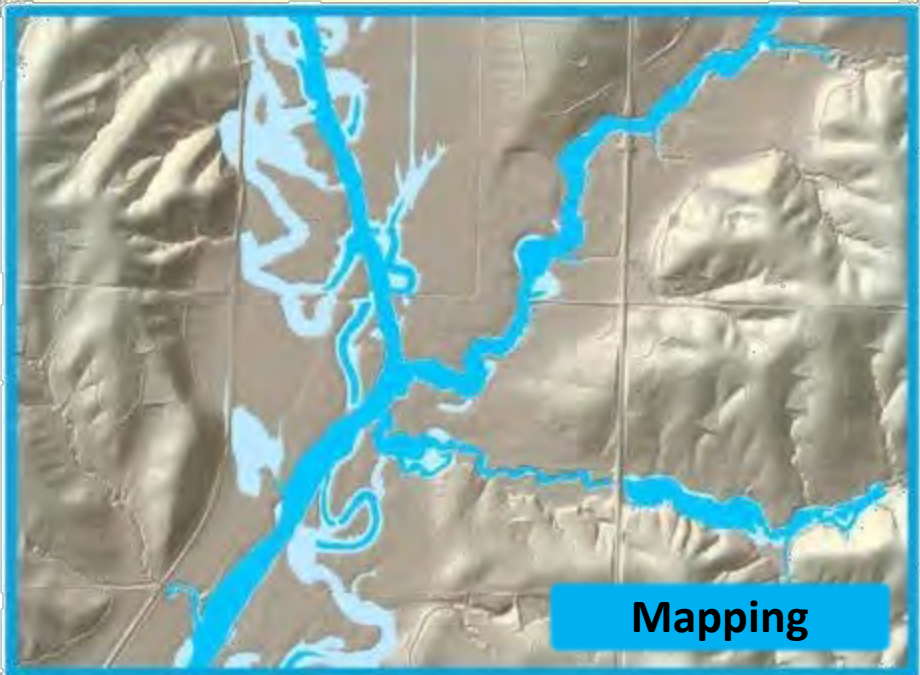
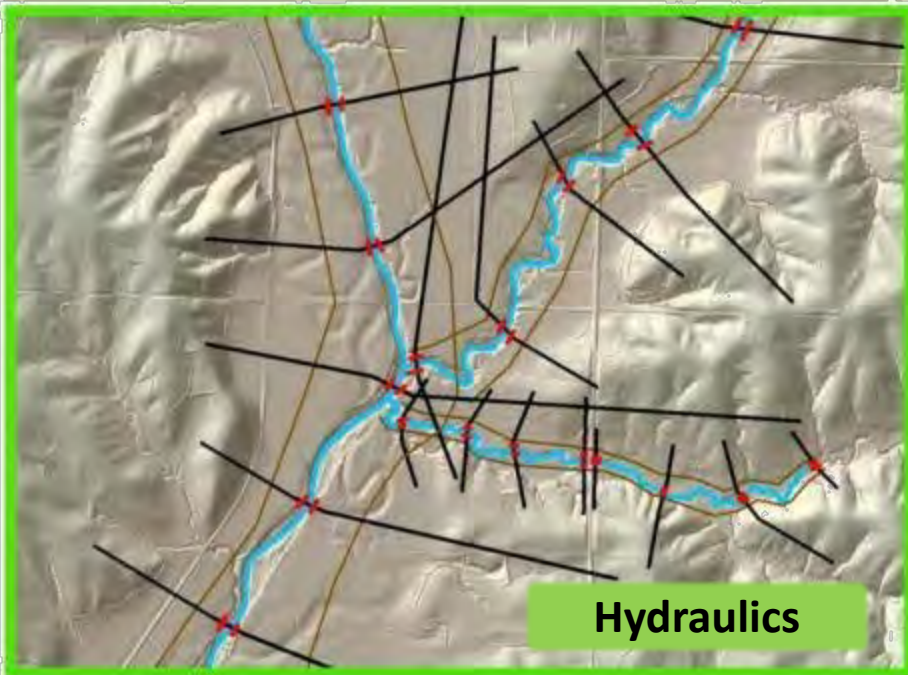
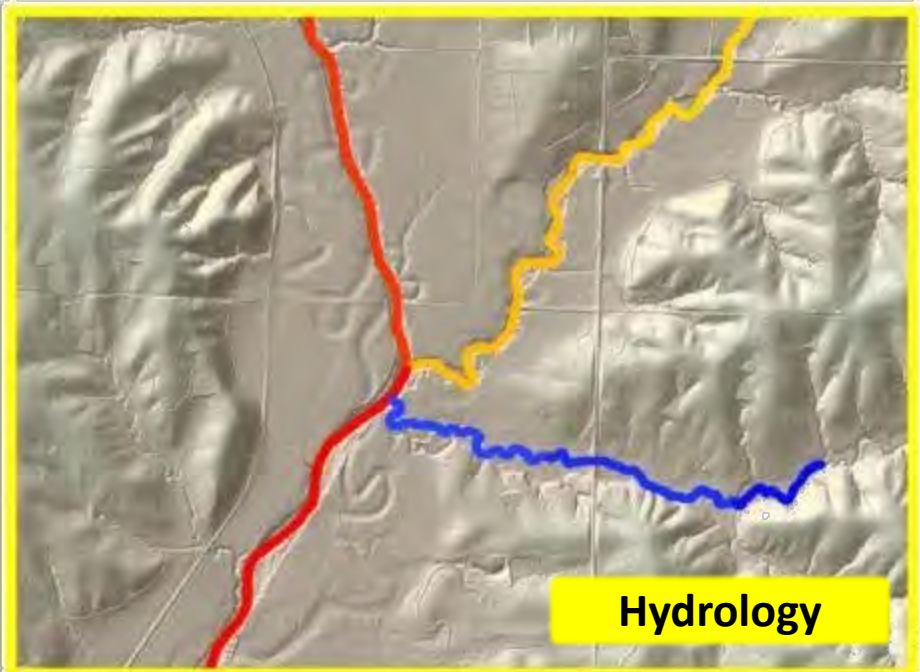
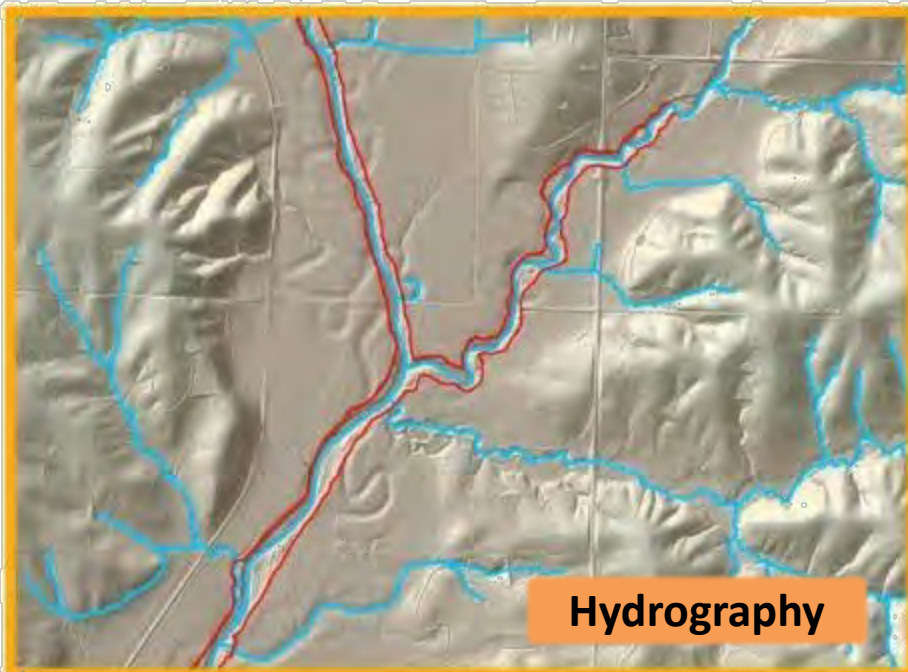




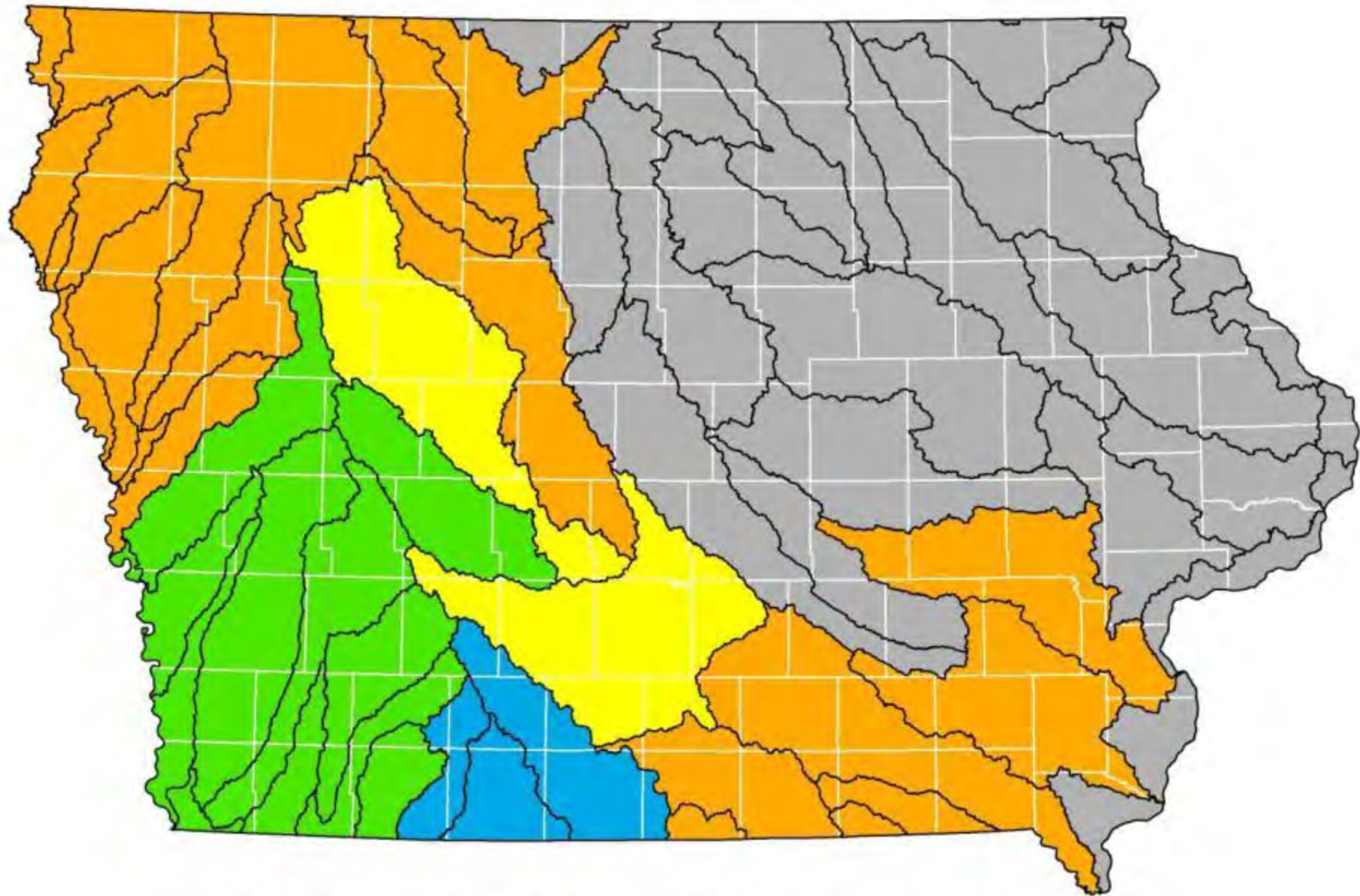


 FEMA RiskMAP  FEMA FIRM



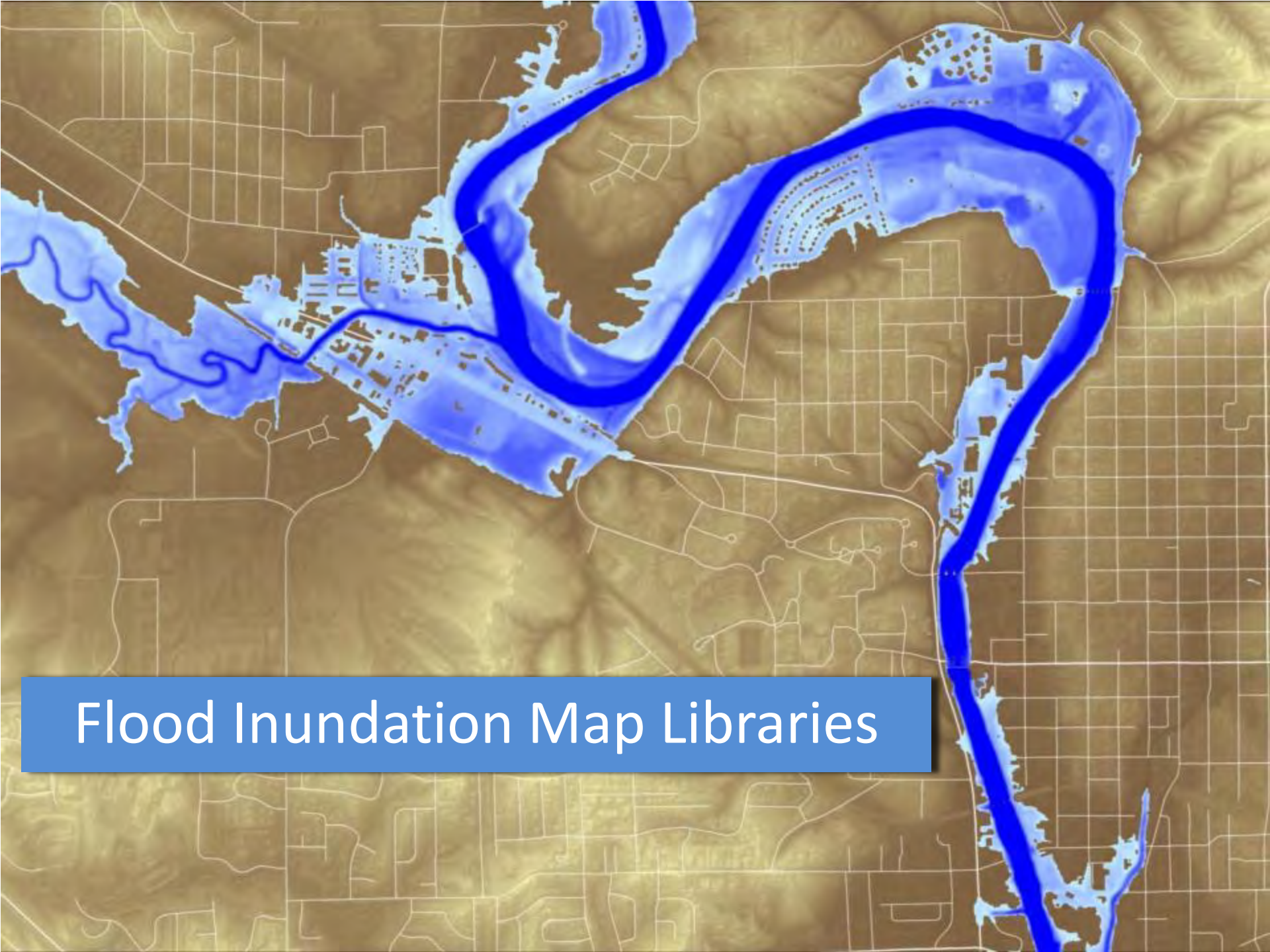




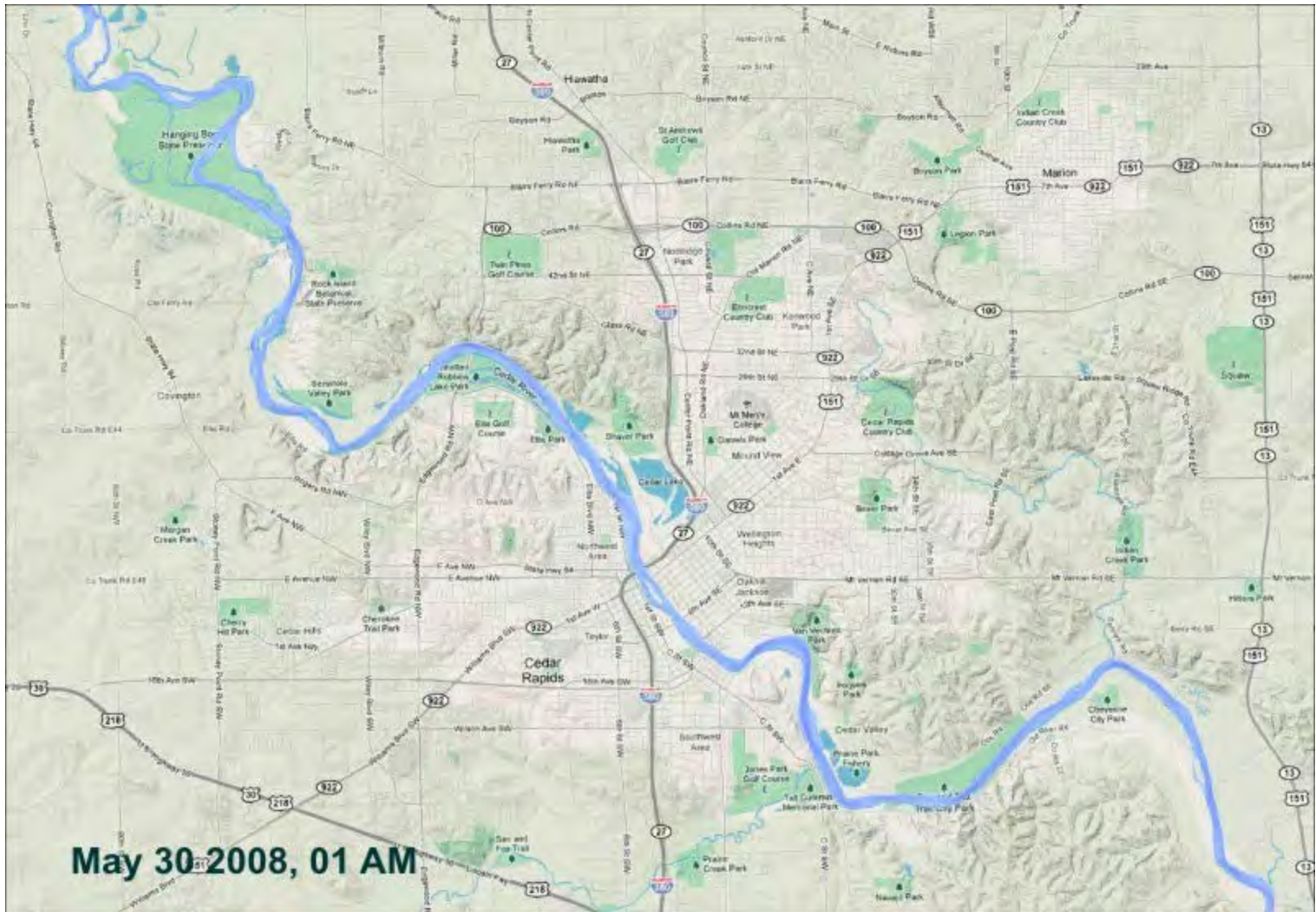


 Hydrography  Hydrology  Hydraulics  Floodplain Mapping



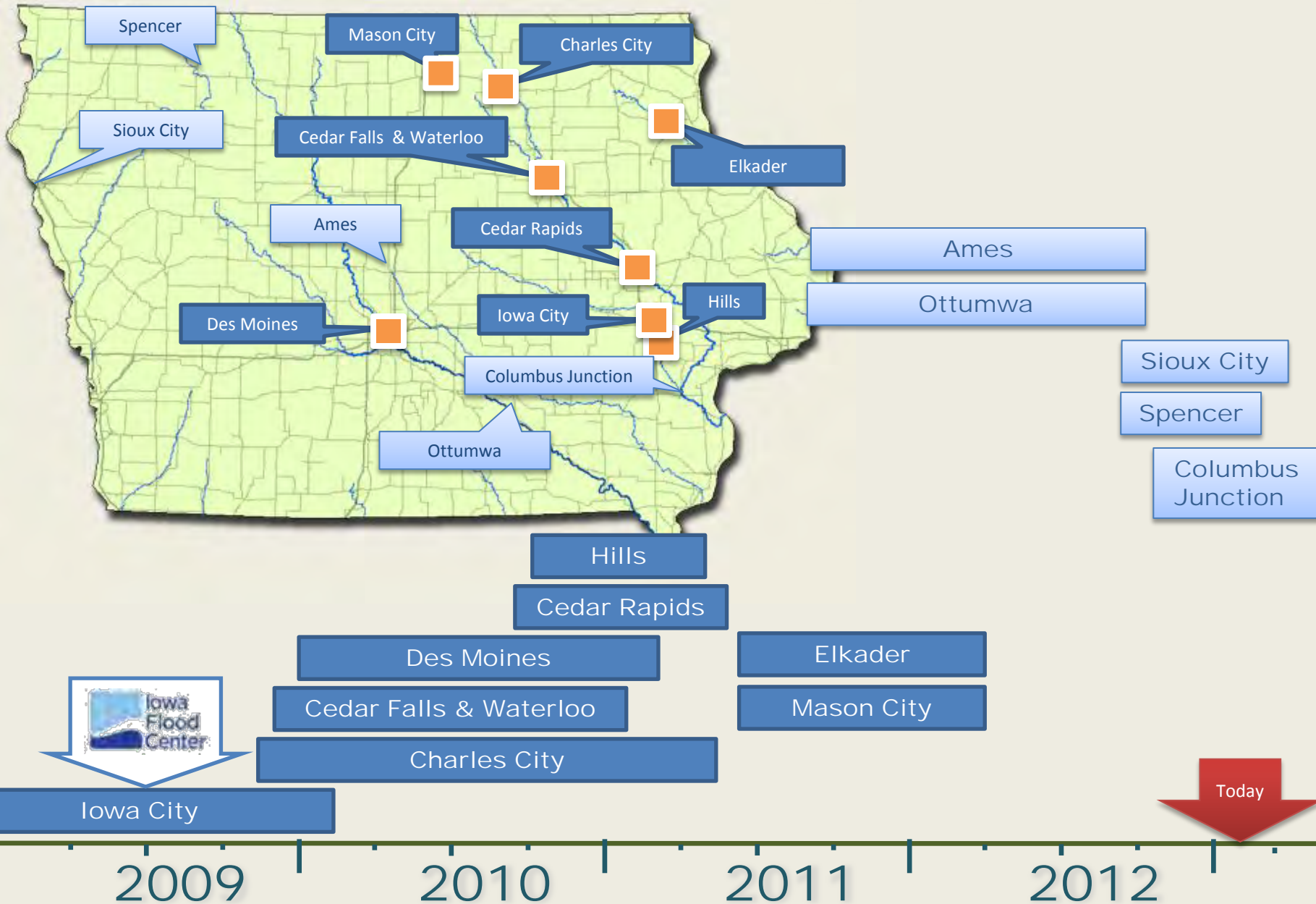


Flood Inundation Map Libraries





# Flood Inundation Maps



**THANK YOU**

[www.iowafloodcenter.org](http://www.iowafloodcenter.org)

[www.iihr.uiowa.edu](http://www.iihr.uiowa.edu)