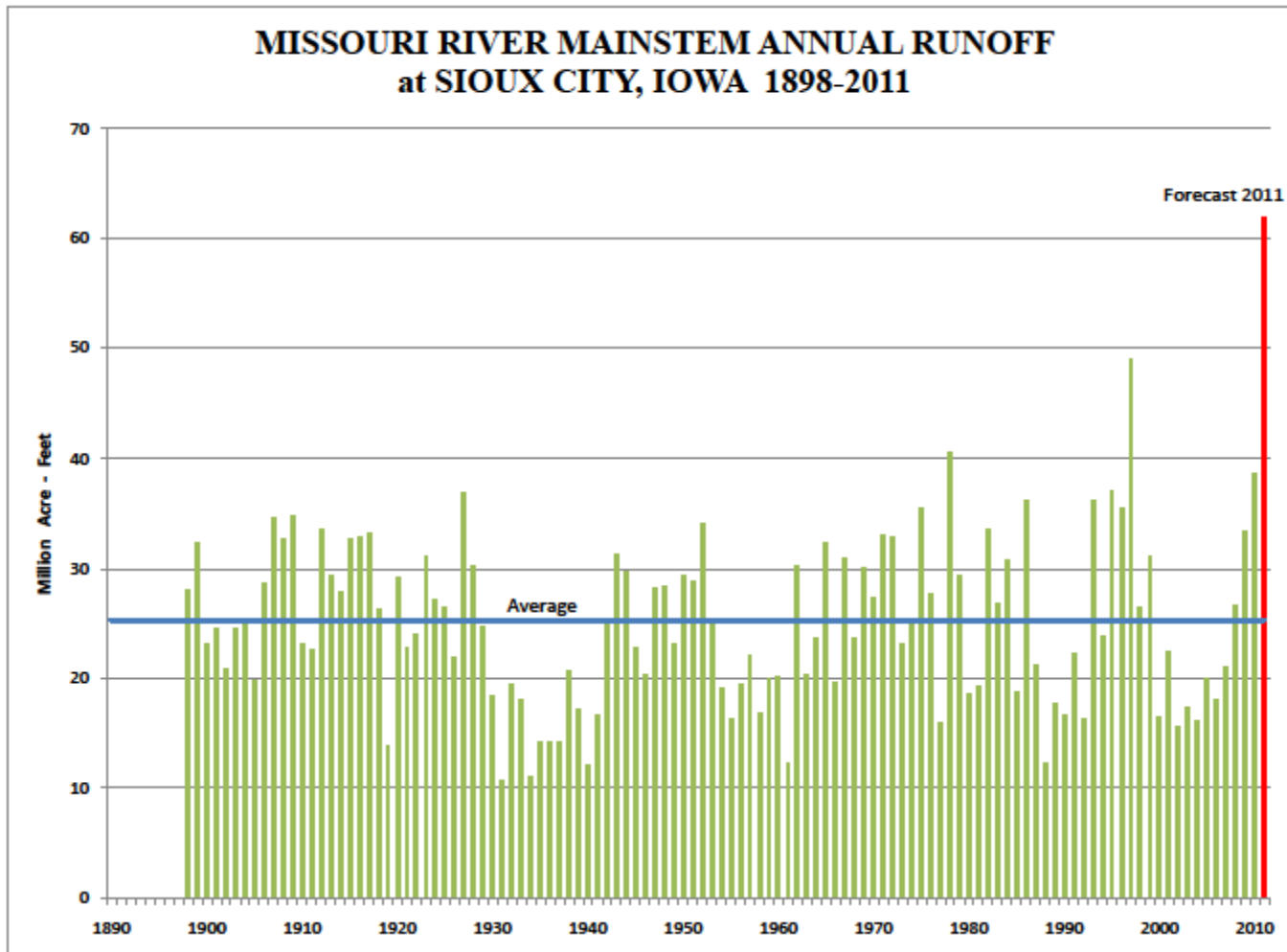
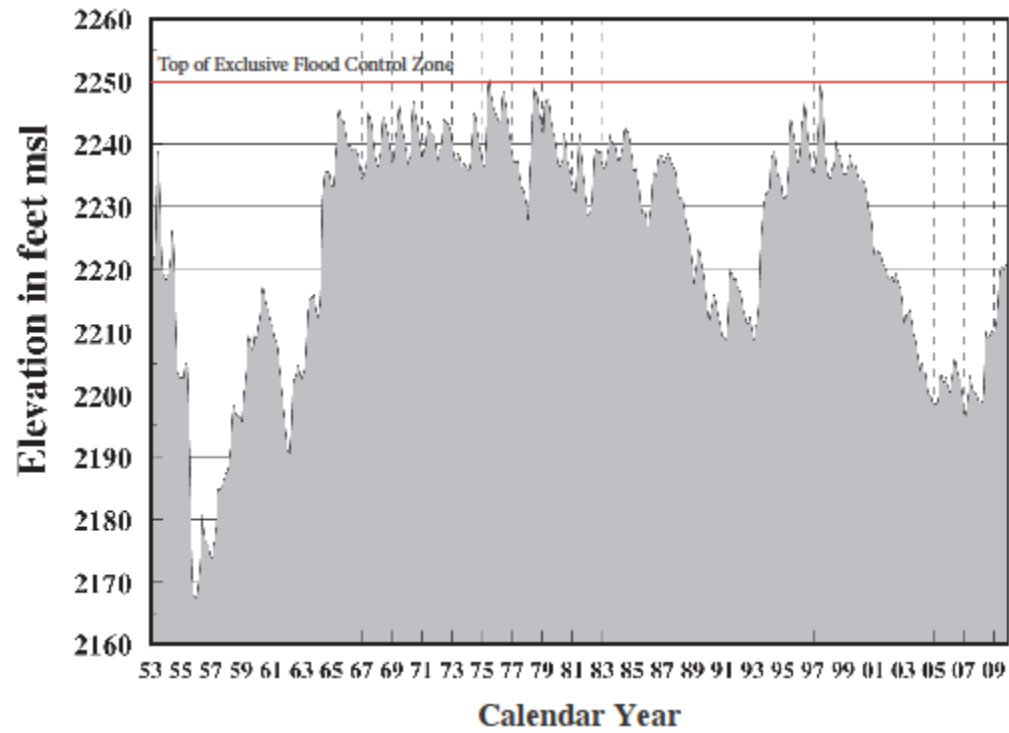


# MONTANA



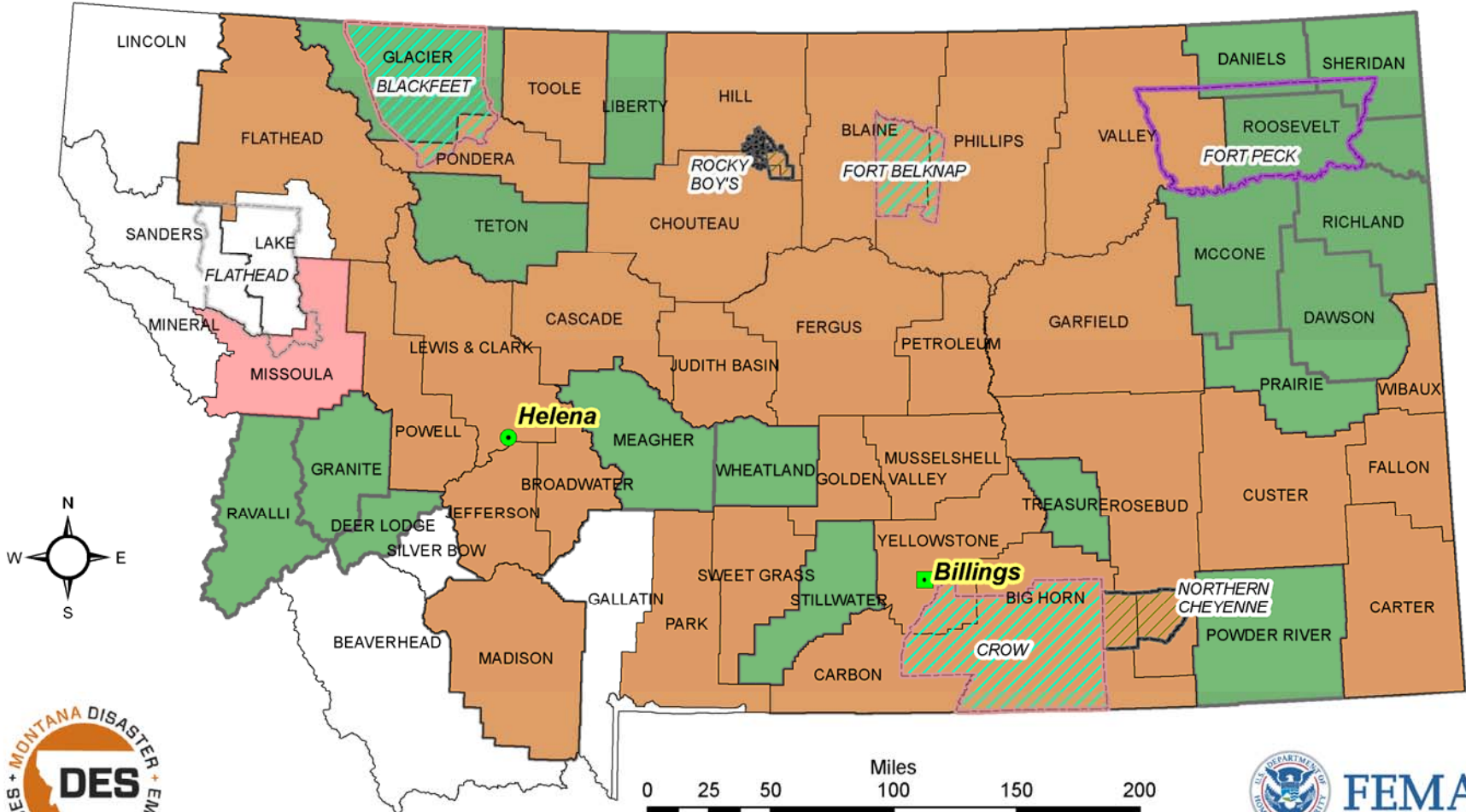
## Fort Peck Elevations 1953-2010



# FEMA-1996-DR-MT

## PA and IA Declared Counties/Reservations

Declared date: June 17, 2011      Amendment No. 4: August 24, 2011



**Legend**

Reservations	PA Reservations	PA AND IA Counties	County
IA Reservation	JFO	IA County	
PA and IA Reservations	FFO	PA Counties	



## 2011 MT Floods – Damages and Recovery Options

### **Damage Estimates**

- Public Works:
  - Between \$57.5 million
- Individual:
  - Housing Assistance  
\$4,442,194
  - Small Business Assistance  
\$1,634,100
  - Other Needs Assistance  
\$326,412

### **Recovery Options**

- Federal Assistance:
  - FEMA Mitigation Grants
  - Disaster Funds
  - NRCS funds
- State Assistance:
  - Match for FEMA Grant Programs
  - RRGL/RDG grants
  - Environmental Contingency

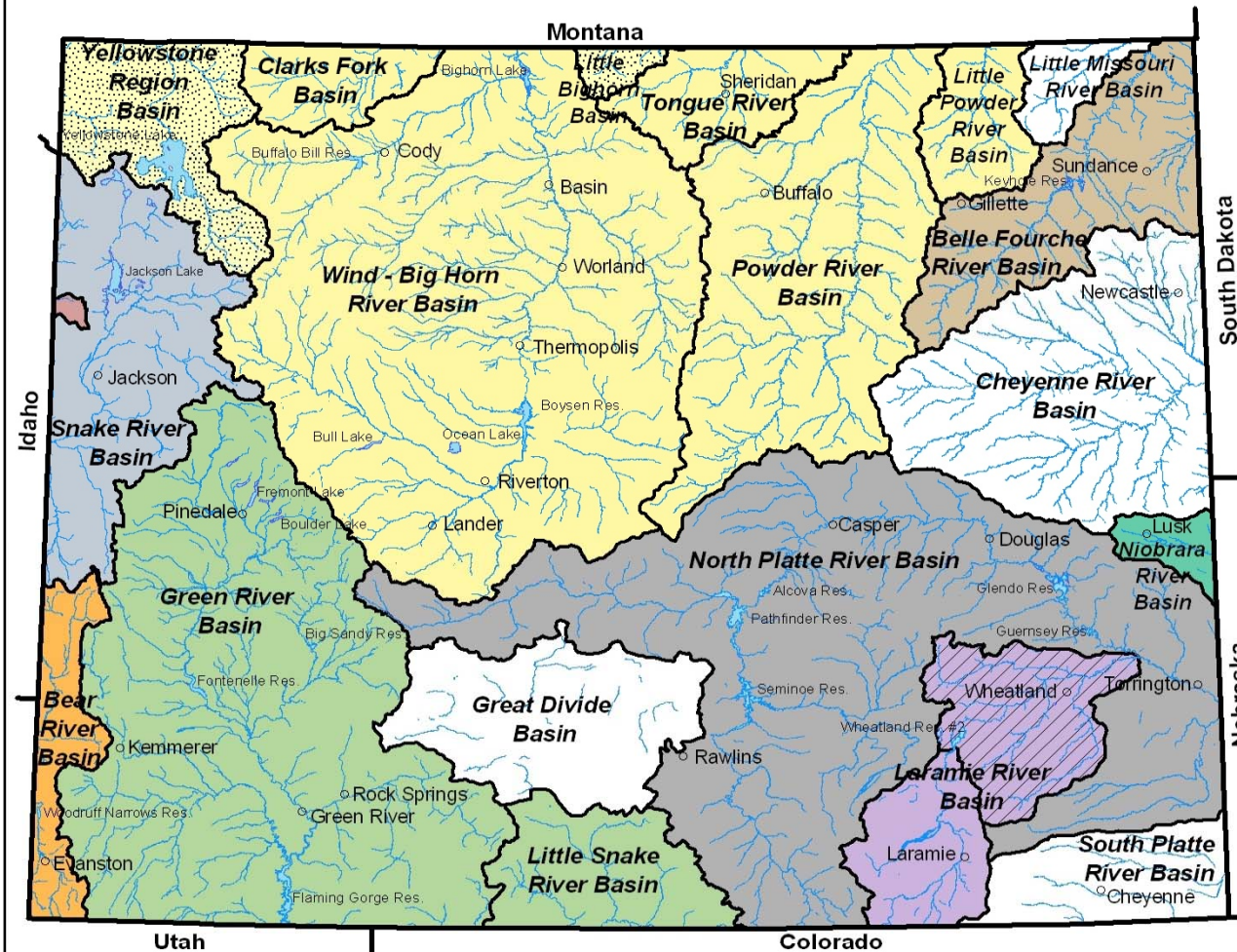


# WYOMING

## Authorities, Capabilities, & Programs

- Wyoming Office of Homeland Security
  - Disaster Response
  - Coordination with FEMA
  - Daily Coordination calls during Flood Fight (May-June '11)
- Wyoming State Engineer's Office
  - Dam Safety
  - Water Administration and Regulation
  - Interstate River Coordination
- Governor Matt Mead's Office/Nat. Res Sub-cabinet
  - Coordination among agencies

# Wyoming River Basin Compacts and Decrees

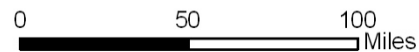


## Legend

- Cities
- Major Streams
- Lakes/Reservoirs

## Compacts and Decrees

- Amended Bear River Compact, 1978
- Colorado River Compact, 1922
- Upper Colorado River Compact, 1948
- Snake River Compact, 1949
- Yellowstone River Compact, 1950
- Exceptions within the Yellowstone River Compact Area
- Belle Fourche River Compact, 1943
- Upper Niobrara River Compact, 1962
- North Platte River Decree, 1945 (modified 2001)
- Laramie River Decree, 1922
- Roxana Decree, 1941
- No compacts or Decrees
- modified North Platte Decree, 2001



February 2006  
Wyoming State Engineer's Office



# Interests & Short-Term Activities

- Interests:
  - Coordination of river/reservoir management between MO River tributaries and the mainstem
  - As non-mainstem state, want an understanding of flood recovery efforts throughout the basin
- Short-term activities:
  - FEMA payments coordinated by Homeland Security
  - Repairs of diversions, headgates, gaging stations impacted by the flood flows
  - Safety of dams inspections
  - Determine appropriate role for Wyoming in this Task Force



# Challenges

- Getting prepared for next year, not knowing if it will be another big water year
- Compliment rather than a challenge:
  - The operations by Reclamation staff of their facilities in coordination with the Corps for downstream flooding was exemplary
- Lead-time prior to peak runoff due to cool June temps allowed for preparations to be placed, such as sandbagging, pumps, etc. Good when you have that advance, but can't plan on it.
- Ten to 60 day-out precipitation and temperature forecasts needed the most





# North Dakota's Authorities, Capabilities, & Programs

- Regulatory authority (State Engineer)
  - Sovereign land management and permitting
  - Project construction permitting
  - Water appropriation
- Project funding capabilities (SWC Cost-share Program)
  - Flood control, bank stabilizations, studies, snagging and clearing, dredging, buy-outs?
- Technical assistance (SWC, SE, ND National Guard, DES)
  - Before & During floods (engineering, modeling, surveying, levee constructions, road raises, EOC)
  - Post-flood (Silver Jackets Program, engineering, modeling, surveying, education, coordination)
  - Floodplain management



# North Dakota's Interests & Short-Term Activities

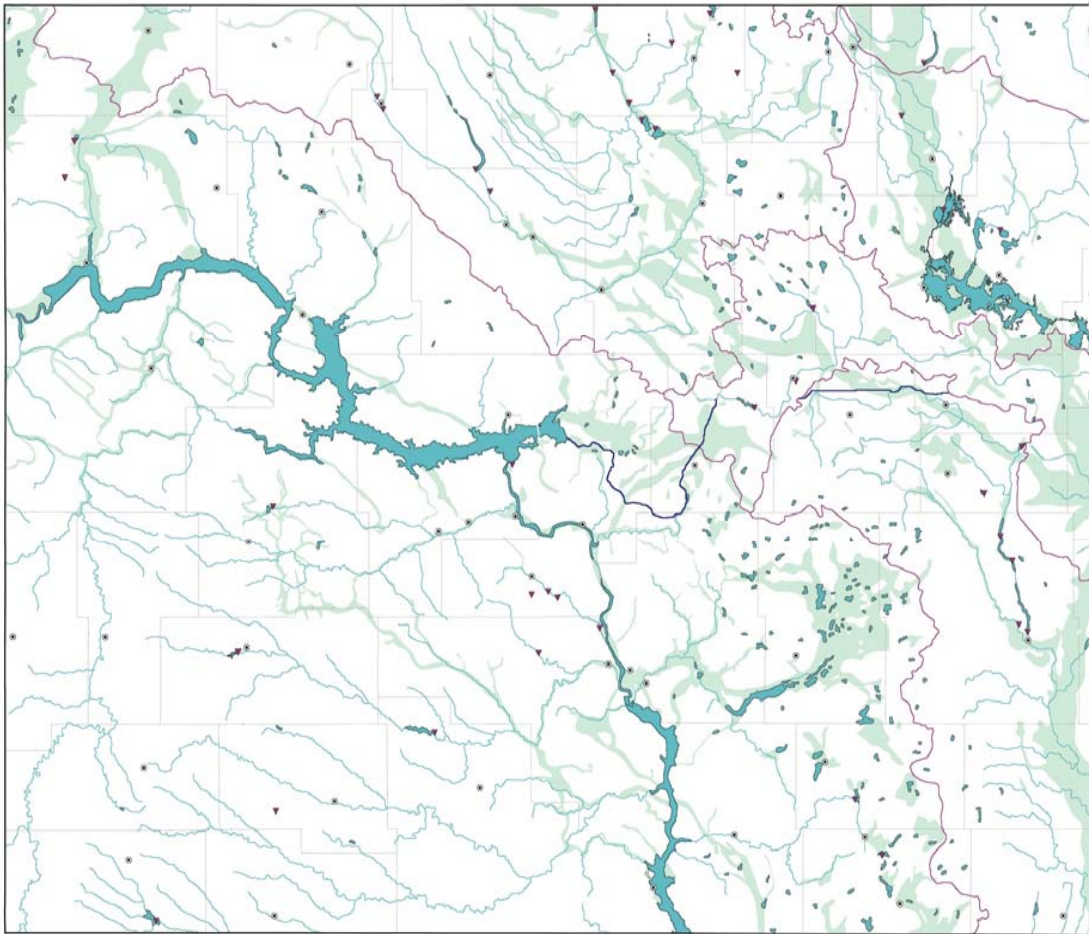
## Interests:

- Rapid flood recovery & looking to the future

## Short-term Activities:

- Governor-appointed Flood Recovery Officer
  - Gen. Murray Sagsveen
- Ongoing damage assessments along the MR corridor
  - Most damages – Bismarck-Mandan, Burleigh and Morton Counties, Williston, Fort Yates (Standing Rock Indian Reservation)
- After action meetings coordinated by NDDES
- Proposed local flood mitigation task force –
  - Bismarck, Mandan, Burleigh, Morton, and three water boards

# Challenges



- Corps bank stabilization projects
  - Need inspections and repairs ASAP
- Severe sedimentation problems
  - Bismarck-Mandan and Williston
- Improved use of run-off forecasting – especially in plains region
- Improved flood warning systems
- Additional fall drawdown of L. Sakakawea when appropriate
- Modification of spring releases
- Floodplain management and development encroachment along the Missouri River
- Corps ignoring natural flows and states' water rights

# NEBRASKA

## Authorities, Capabilities, & Programs

- Neb. Rev. Stat. Chapter 31, Article 10: Flood Plain
- Neb. Rev. Stat. Chapter 46, Article 16: Safety of Dams and Reservoirs
- Nebraska Administrative Code Title 455, Chapter 1 Minimum Standards for Floodplain Management Programs
- FEMA's Cooperative Technical Partners (CTP) Program
- Nebraska Silver Jackets Program
- Floodplain Mapping Capability
- Extensive GIS Capability
- In-house Ground Survey Capability
- Others



# Interests & Short-Term Activities

- Interests:
  - Ensuring that flood control is the highest priority in the operation of the Missouri River Mainstem System
  - Taking necessary measures to avoid a repeat of the 2011 flooding
- Short-term activities:
  - Technical assistance to basin Governors in developing recommendations to the Corps for the operation of the Missouri River Flood Regulation system
  - Provide technical review and feedback to the Corps' draft AOP
  - Provide technical assistance to communities for flood mitigation and risk reduction



# Challenges

- Lack of full understanding of operational constraints and flexibilities in the Master Manual
- Effectively communicating real-time flood information with all stakeholders during flooding
- Educating stakeholders and public about flood risk and flood damage reduction
- Lack of accurate topographic data (LiDAR) for flood risk identification



# MISSOURI

## Authorities, Capabilities, & Programs

### Missouri Department of Transportation

- Title 23, United States Code, Section 125 – Emergency Relief Program – administered by Federal Highway Administration for federal aid highways.
- Stafford Act, Public Law 93-288 – administered by the Federal Emergency Management Agency for non-federal aid state and local roads.

### State Emergency Management Agency

- Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 100-707.
- Flood Insurance Reform Act of 2004, PL108-264.

### Missouri Department of Natural Resources

- State Drinking and Waste Water Revolving Fund.
- Environmental Emergency Response Program.

### Missouri Department of Economic Development

- Community Development Block Grant (CDBG) Program.

### Missouri Department of Agriculture

- Missouri Agriculture Disaster Relief Fund.

### Missouri Department of Conservation

- Technical assistance and cost-share programs for fish, wildlife, forestry.

# Interests & Short-Term Activities

## **Missouri Interests:**

- To promptly restore and strengthen Missouri's flood damaged infrastructure so that Missouri citizens, commerce and economic interests can duly recover.
- Quick restoration of levees to pre-flood conditions to ensure protection of Missouri citizens, their homes, communities, businesses, vital infrastructure and prime agricultural land.
- Flood control must be the highest priority in managing the Missouri River system.

## **Missouri Short-Term Activities:**

- Facilitate prompt and accurate damage assessments to public infrastructure, levees and agricultural land.
- Ensure timely progress to the repair and strengthening of levees and vital infrastructure to at least pre-flood conditions.



# 2011 Missouri Disaster Events

## Missouri Counties Impacted



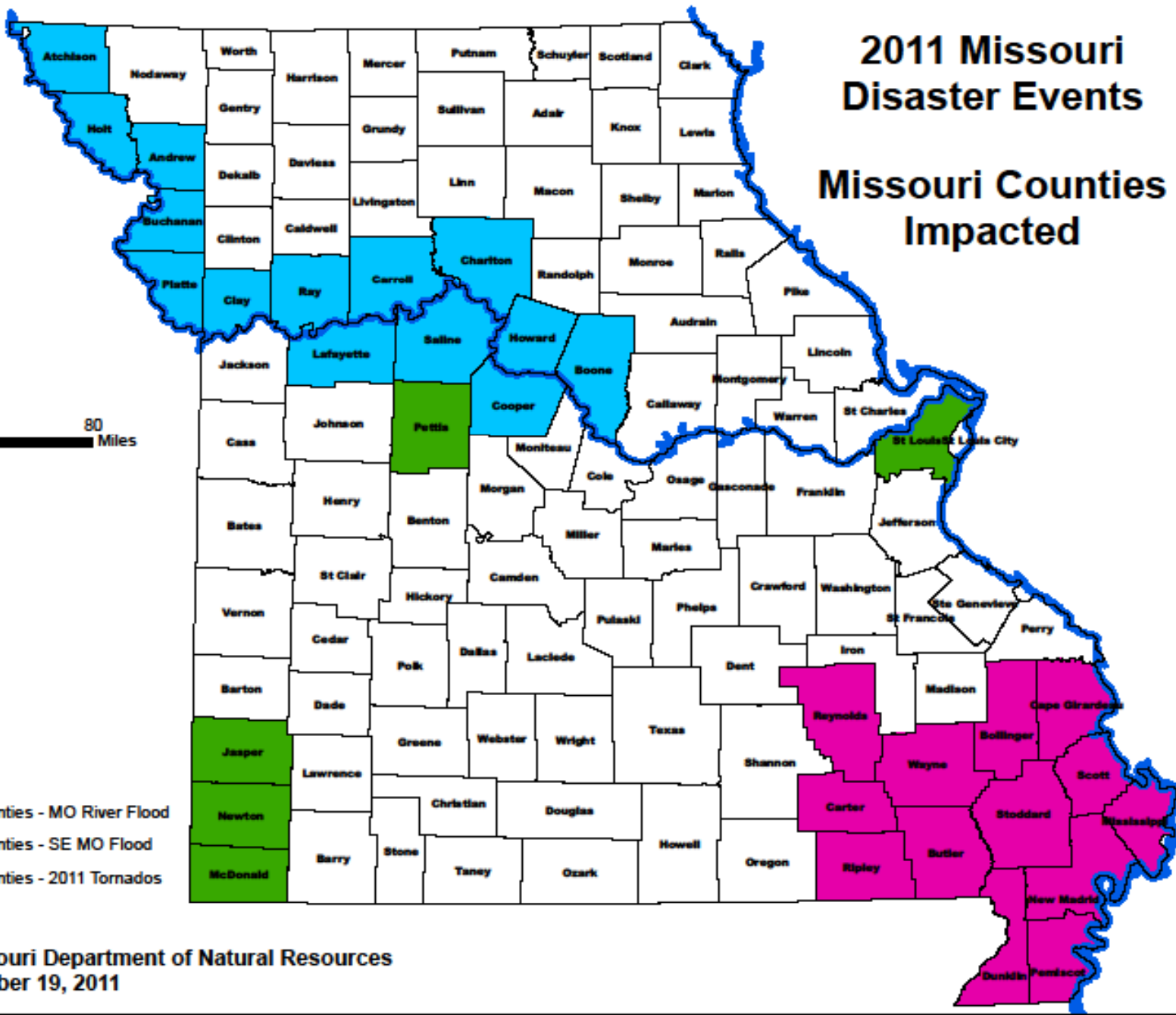
0 20 40 80 Miles

### Legend

-  Disaster Counties - MO River Flood
-  Disaster Counties - SE MO Flood
-  Disaster Counties - 2011 Tornadoes



Missouri Department of Natural Resources  
October 19, 2011





# Missouri Challenges

- Facilitating and coordinating the recovery of multiple disasters across the state.
- Ensuring the prompt repair of damaged levees to at least pre-flood conditions.
- Repair of transportation infrastructure damaged by flooding event.
- Prompt repair of public drinking water and wastewater systems impacted by flood.
- Funding to repair and recover from multiple major state disasters this year.



# Kansas

## Authorities, Capabilities, & Programs

- Department of Agriculture
  - Floodplain fill/levee permitting
  - Water Appropriation
- Department of Emergency Management
  - Disaster declaration and response
  - Coordination of FEMA disaster recovery and mitigation funds
- Kansas Water Office
  - Coordination of water projects/stakeholders
  - Ownership of storage in Corps reservoirs – water supply

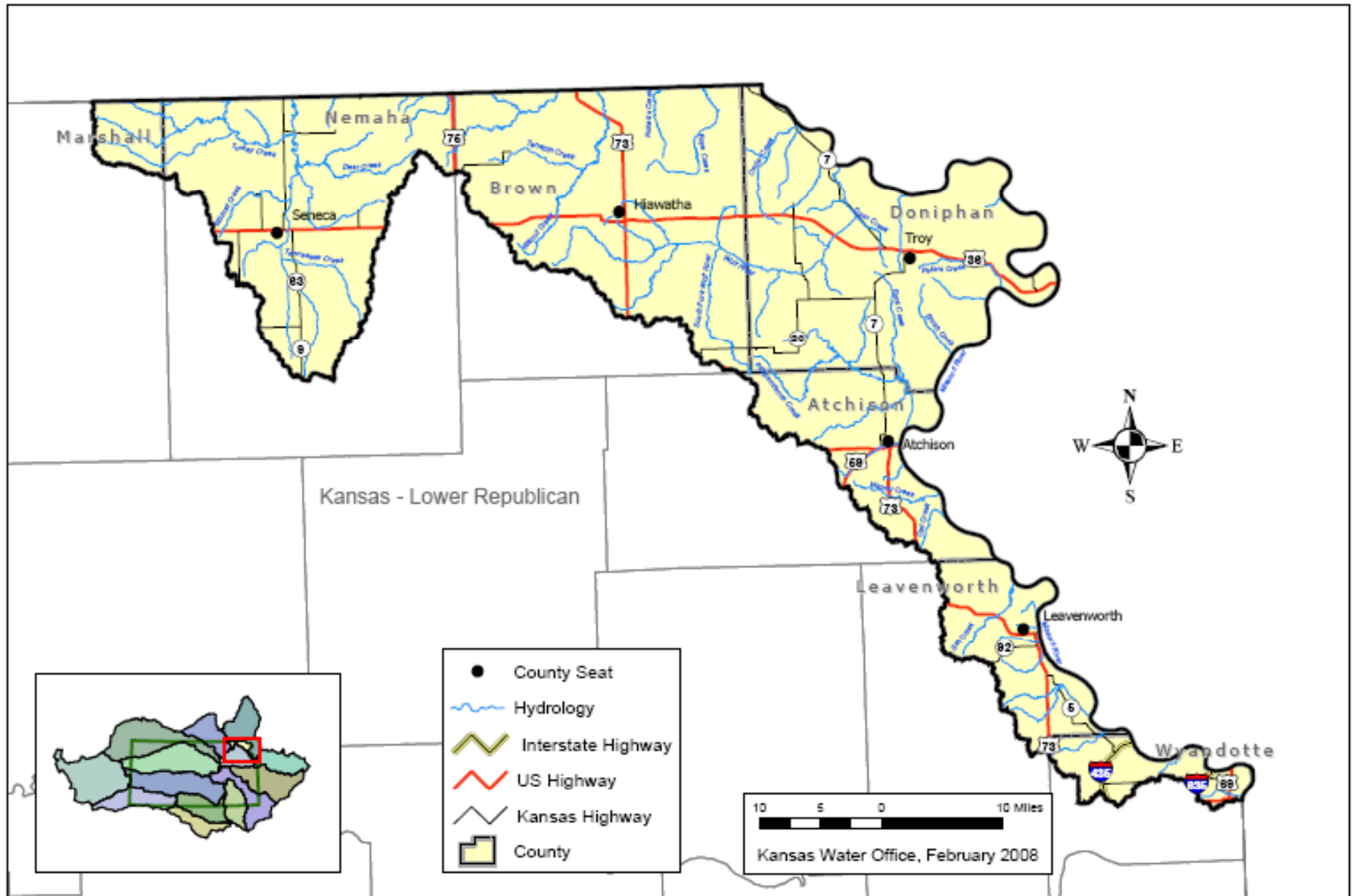


# Kansas

## Interests & Short-Term Activities

- Interests:
  - Repair of flood control structures
  - Balanced long term management of river
  - Better use of data, forecasting and trends
- Short-term activities:
  - Stakeholder meetings with affected area
  - Assisting with coordination of recovery/damage funds
  - Technical review of non – federal levees

# Missouri River Basin





# Kansas Challenges

- Timely review and repair of damage
- Lack of adequate information on projected flows
- Communication of what happened and what is possible to stakeholders
- Funding

# Authorities, Capabilities, & Programs

- **Iowa's Missouri River Recovery Coordination Task Force**

- Established to coordinate disaster recovery efforts of existing authorities

Working Groups:

- Utilities (Iowa Utilities Board-IUB)
- Housing (Iowa Finance Authority-IFA)
- Economic Development (IA Dept Economic Development-IDED)
- Transportation (IA Dept of Transportation-IDOT)
- Agriculture (IA Dept of Agriculture and Land Stewardship-IDALS)
- Natural Resources (IA Dept Natural Resources-DNR)
- Health & Human Services (IA Dept Human Services-DHS)
- Interagency Levee (IA Homeland Security & Emergency Management-HSMED)
- Public Assistance (HSEMD)
- Hazard Mitigation (HSEMD)
- Communications (HSEMD Public Information Office-PIO)
- Education (IA Dept of Education)
- Private Sector (Safeguard Iowa Partnership)

# Interests & Short-Term Activities

- **Initial time/effort spent on impacted areas:**
  - 192 miles of secondary roads
  - 58 miles of primary roads
  - 113 miles of federal levees
  - Undocumented non-federal levees (located within 114 river miles north of Eppley Airfield to Sioux City)
  - 975 residential homes (350 categorized as destroyed & major losses)
  - Economic impact
    - Citizens forced out of homes
    - Citizens forced out of jobs
    - Business losses and permanent business closures
    - Subsequent losses of homes due to unemployment
  - 262,426 acres of inundated prime farm land negatively impacted for next year's crop
- **Priority activities:**
  - Rebuild roadways
  - Rebuild and restore homes
  - Reinstate jobs
  - Rebuild businesses
  - Rebuild flood control and water control facilities
  - Restore farmland

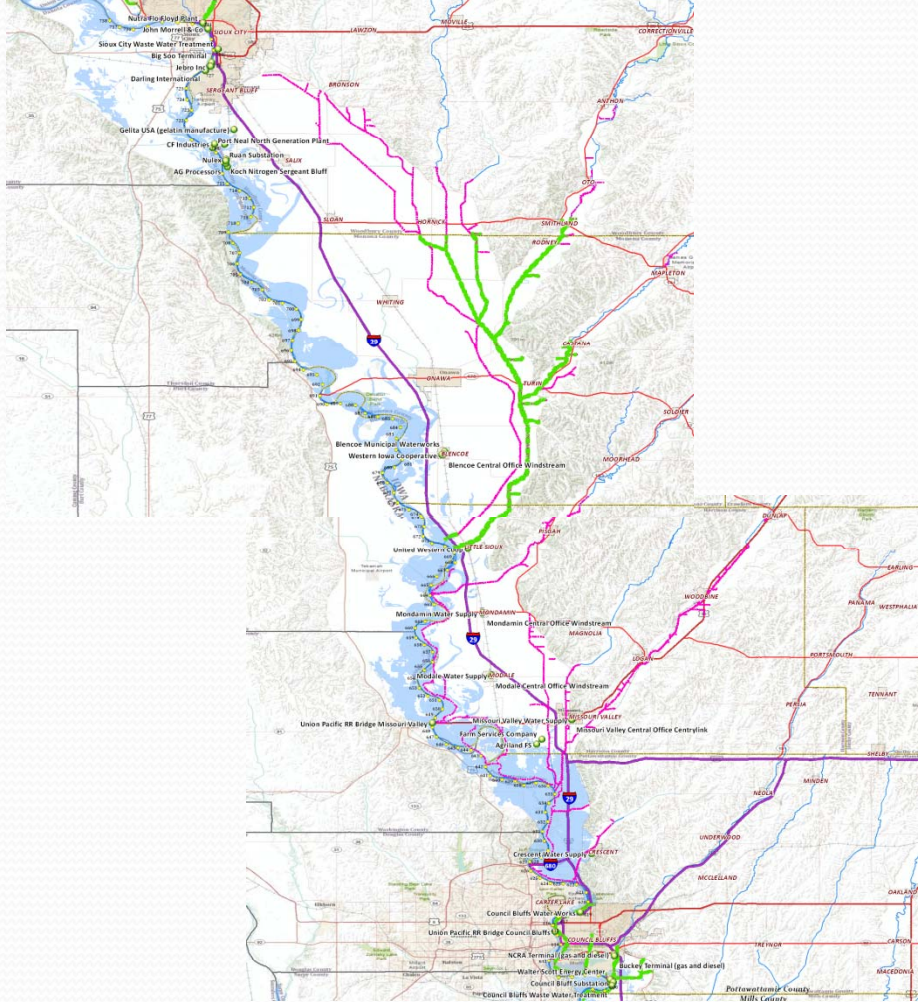


# Legend

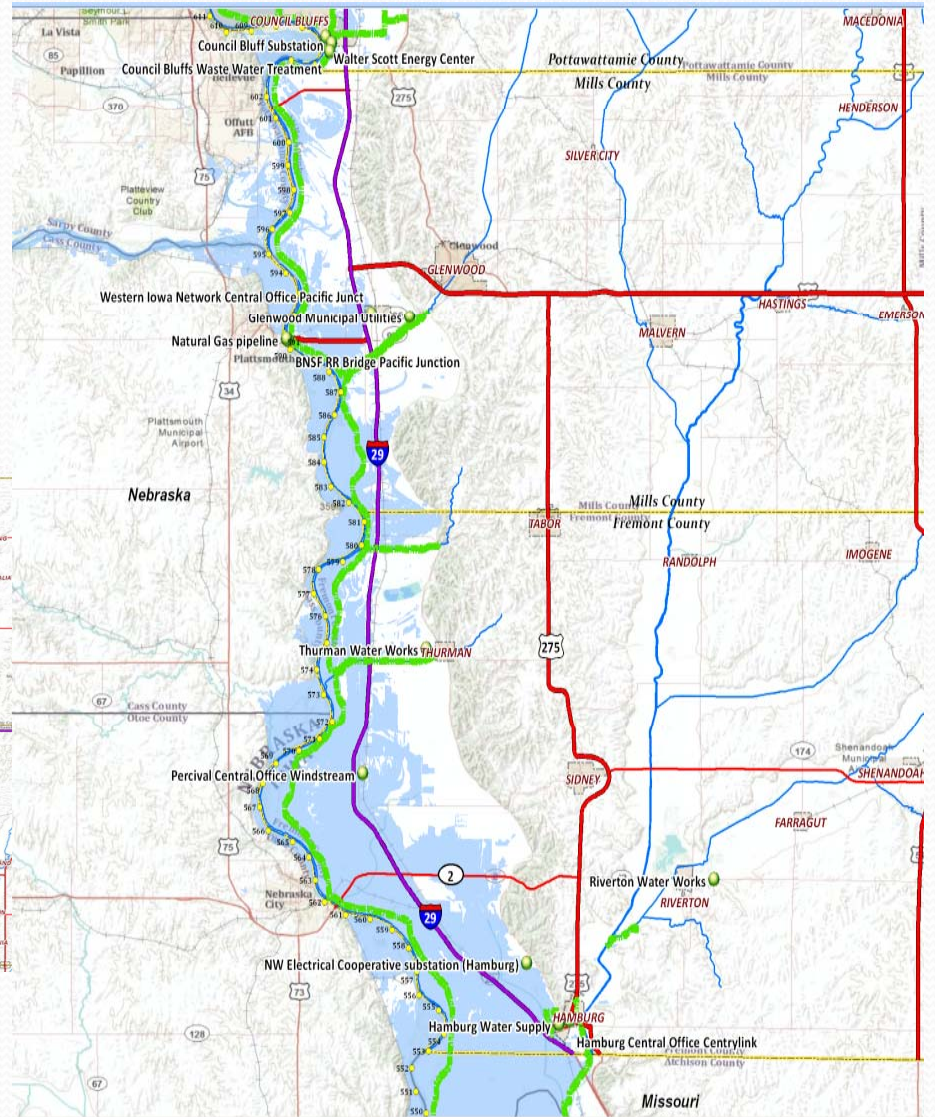
Iowa Levee Data

USACE Levee Data

## Sioux City (RM738) south to Council Bluffs (RM611)



## Council Bluffs (RM611) south to Hamburg (RM550)





# Challenges

- Preparing for potential high water levels in 2012
- Lack of inventory of non-federal levees in Iowa
- Lack of funding
- Public expectations
  - Programs established for 2008 flood recovery are no longer available



# City of Council Bluffs, Iowa Authorities, Capabilities & Programs

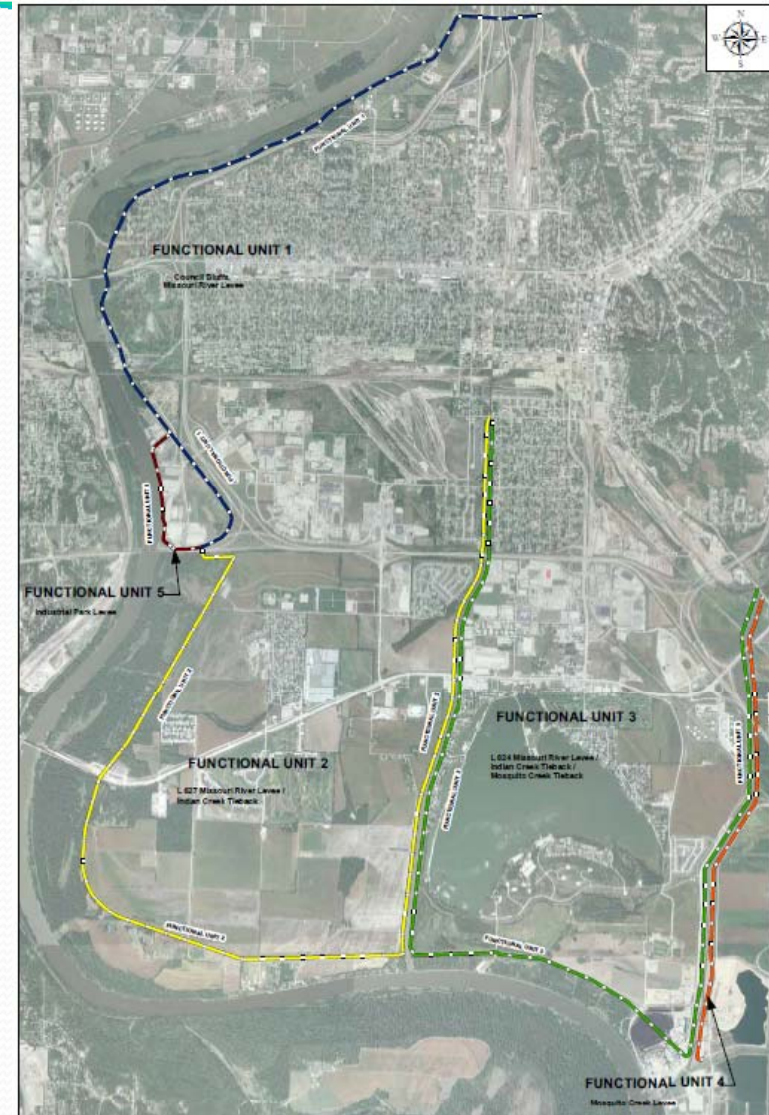
- Sponsor of 28 miles of Federal levee system
- Participant in FEMA National Flood Insurance Program

# INTERESTS

- Restoring flood protection capacity of the levee system and repair city infrastructure
- Short term activities
  - Complete damage assessment
  - Implement emergency repair projects to city infrastructure
    - Sanitary Sewer
    - Storm water pump stations
    - Roads
- Secure USACE PL84-99 repairs to levee

# Levee System

- ▶ 28.5 Miles of Levee
  - Missouri River
  - Indian Creek
  - Mosquito Creek
- ▶ 16 Storm Water Pump Stations
- ▶ 45 Gate Structures
- ▶ 173 Relief Wells





# CHALLENGES

- Timely damage recovery
- Funding damage recovery
- Managing & complying with State & Federal regulation
- Adjusting for a new aspect of flooding:  
Duration
- Levee certification in FEMA's NFIP