



# Success Stories from the Front Line Partnering for Flood Risk Reduction

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# Presentation Outline

- Floodplain
- Flood Events
- Actions/Projects
- Other Activities
- Partnerships





# Cedar Falls, Iowa

- Northeast Iowa
- 41,255 (Census 2015 estimate)
- Black Hawk County population = 132,904



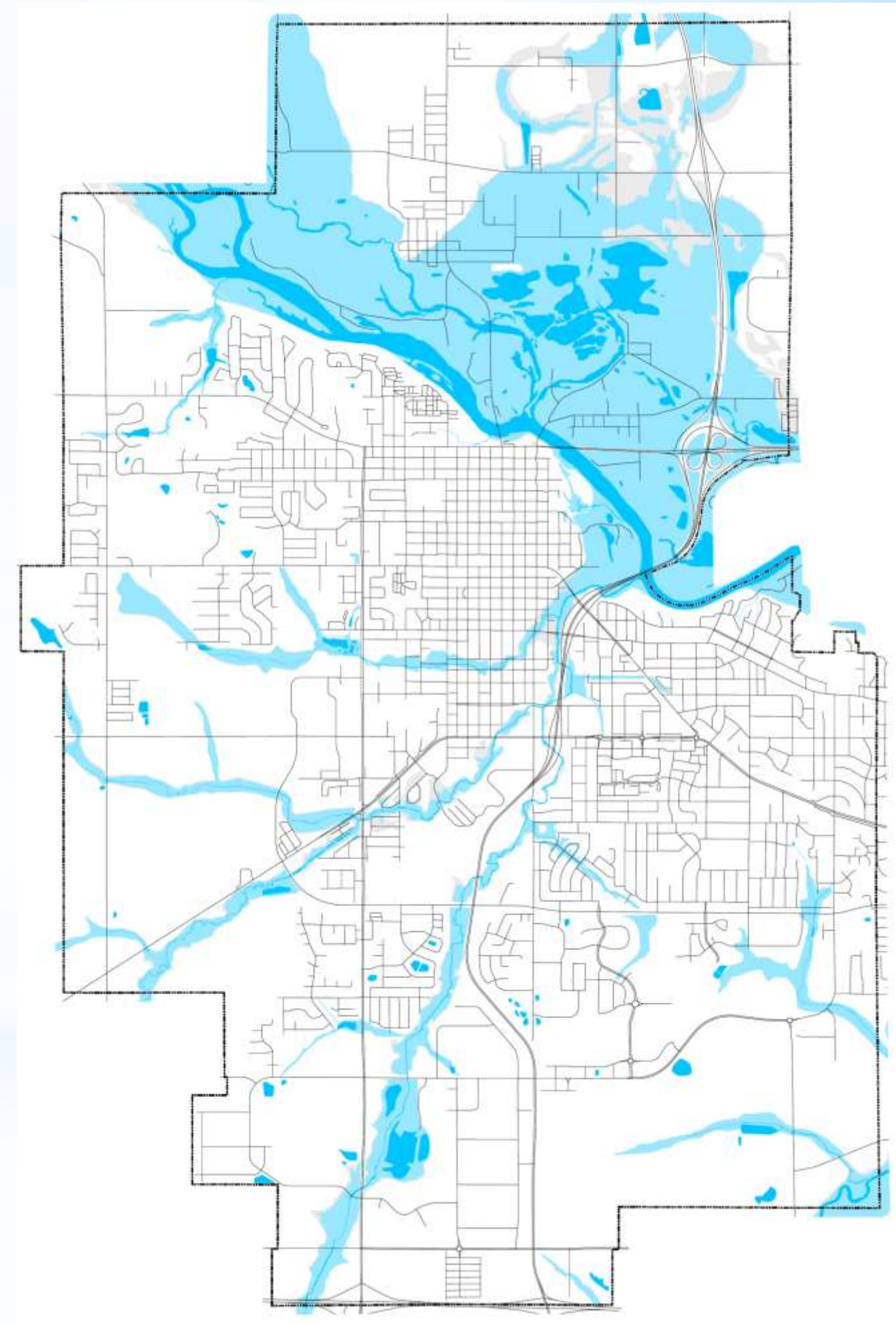
# Floodplain

- Floodplain Characteristics
- Buyout Program
- Flood Photos
- Flood Event Actions



# Floodplain Characteristics

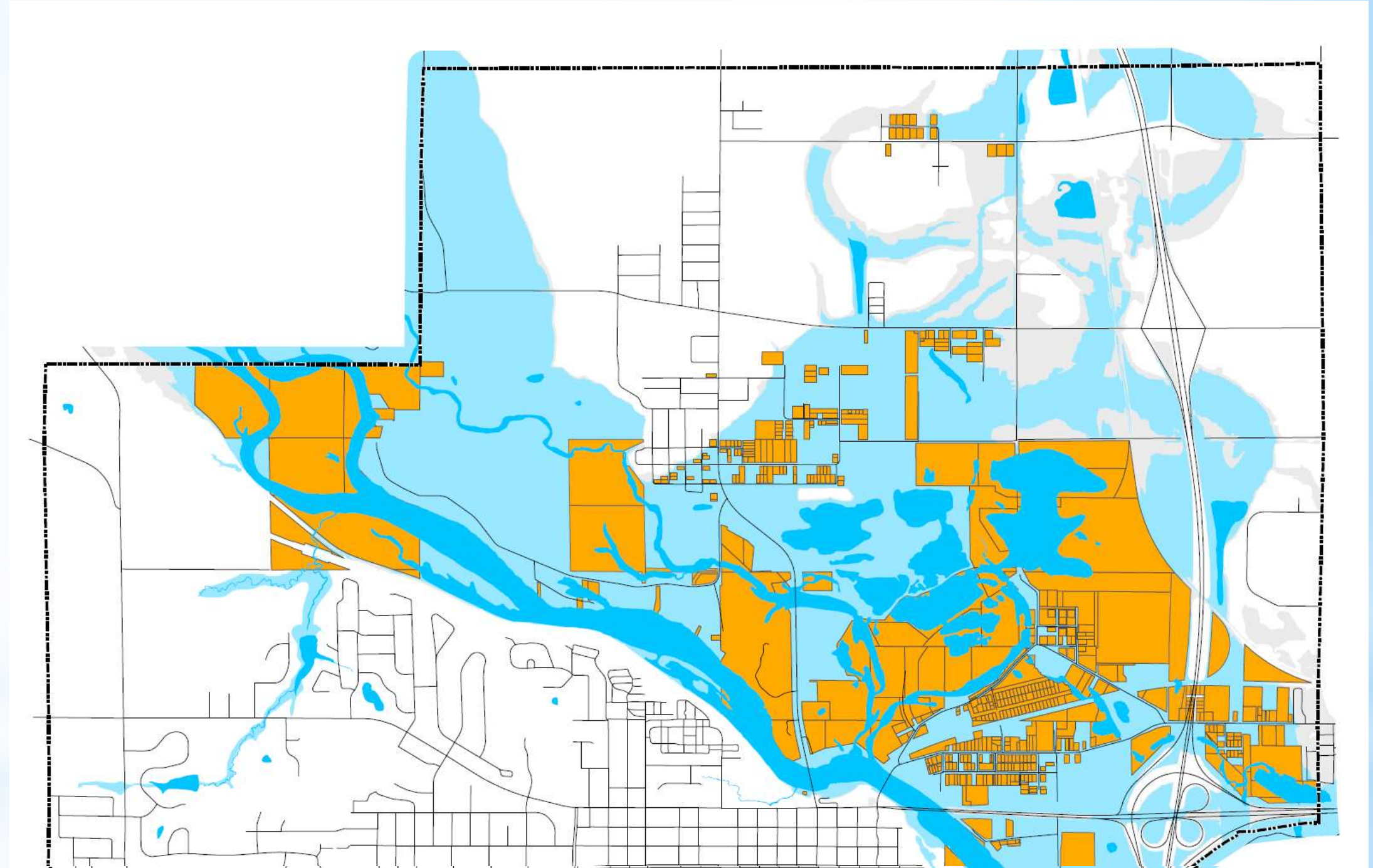
- Cedar River
- 4,100 acres in the SFHA
- A and AE zones
- Top 5 River Levels
  - 2008 – 102.13
  - 2016 – 98.9
  - 1999 – 96.2
  - 1961 – 96.1
  - 1993 – 95.8
- Top of the Levee – 102.9





# Cedar Falls Flood Buyout Program

- 1993 = 100 properties
- 1999 = 65 properties
- 2008 = 171 properties
- Residential = 318
- Vacant Lots = 5
- Commercial = 11
- Mobile Home Parks = 2
- Total = 336





# Flood Photos - 2008- 2016



Beach House



# Flood Photos - 2008- 2016





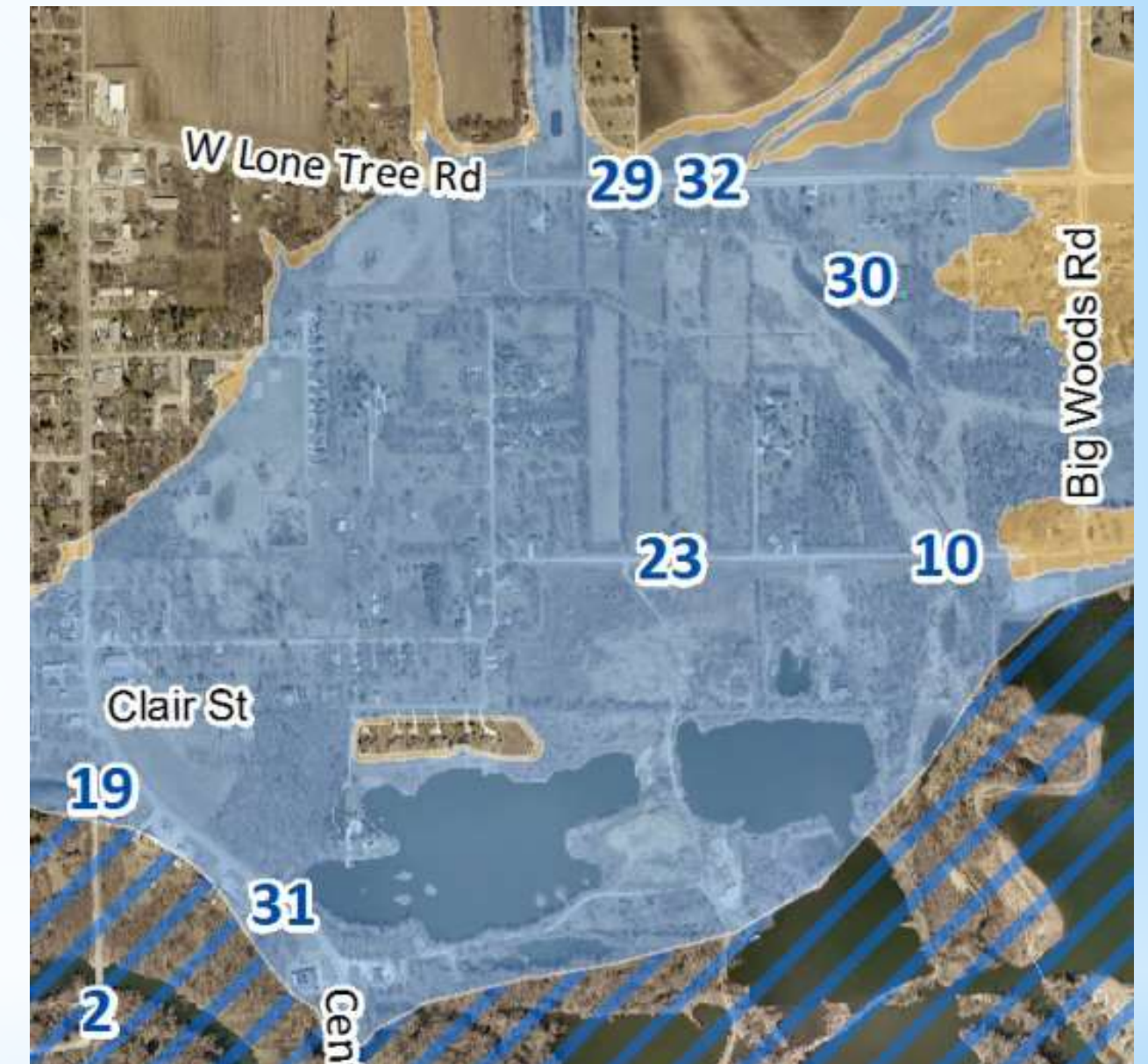
# Flood Photos - 2008- 2016





# Pre-Flood Preparations

- PSAs
- Set up Emergency Operations Center (EOC)
- Departmental assignments
- Fire Department Distributes Flood Information
  - Door to door



29	95.9	water covers E. Lone Tree Rd., 200–300 blocks covered
30	95.9	water covers south end of Timothy St.
31	96.0	water covers 1500–1700 blocks of Center St. between the Brown Bottle & Cottage Row Rd.
32	97.8	water covers the 200 block of E. Lone Tree Rd.



# Pre-Flood Preparations

- Donation drop off sites
  - Food, clothing, cleaning supplies, pet food
  - Red Cross partner





# Flood Event

- Flood status
- Staff EOC 24/7
- Sandbagging
- Bladder system





# Flood Event

- Citizen flood status
- Staff EOC 24/7
- HESCO barrier units
- Bladders





# Post-Flood Activities

- Property Inspections
  - Distribute post flood information





# Post-Flood Activities

- Damage assessments
- Continue EOC Operations





# Actions/Projects

- Ordinance Development
- Mapping Updates
- Local Projects
- Other Development Factors

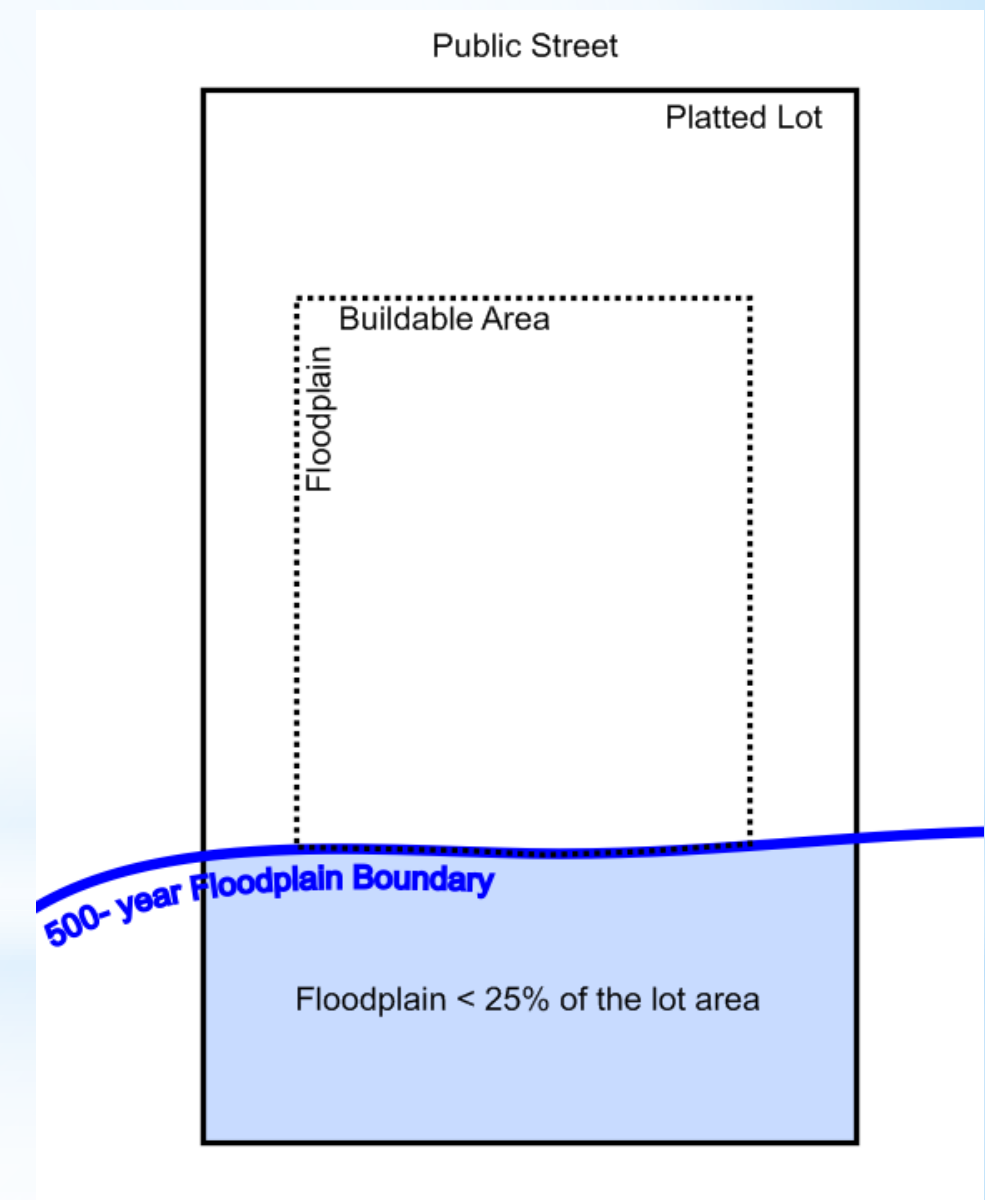


# Ordinance Development

## Flood of 2008 Warranted Changes

Major changes include

- Lowest floor
  - 500 year flood elevation +1 foot
- Limit fill activity in SFHA
  - 3 foot maximum fill height
  - 1/3 of the lot area
  - No LOMRs
- Limit platting of lot in SFHA

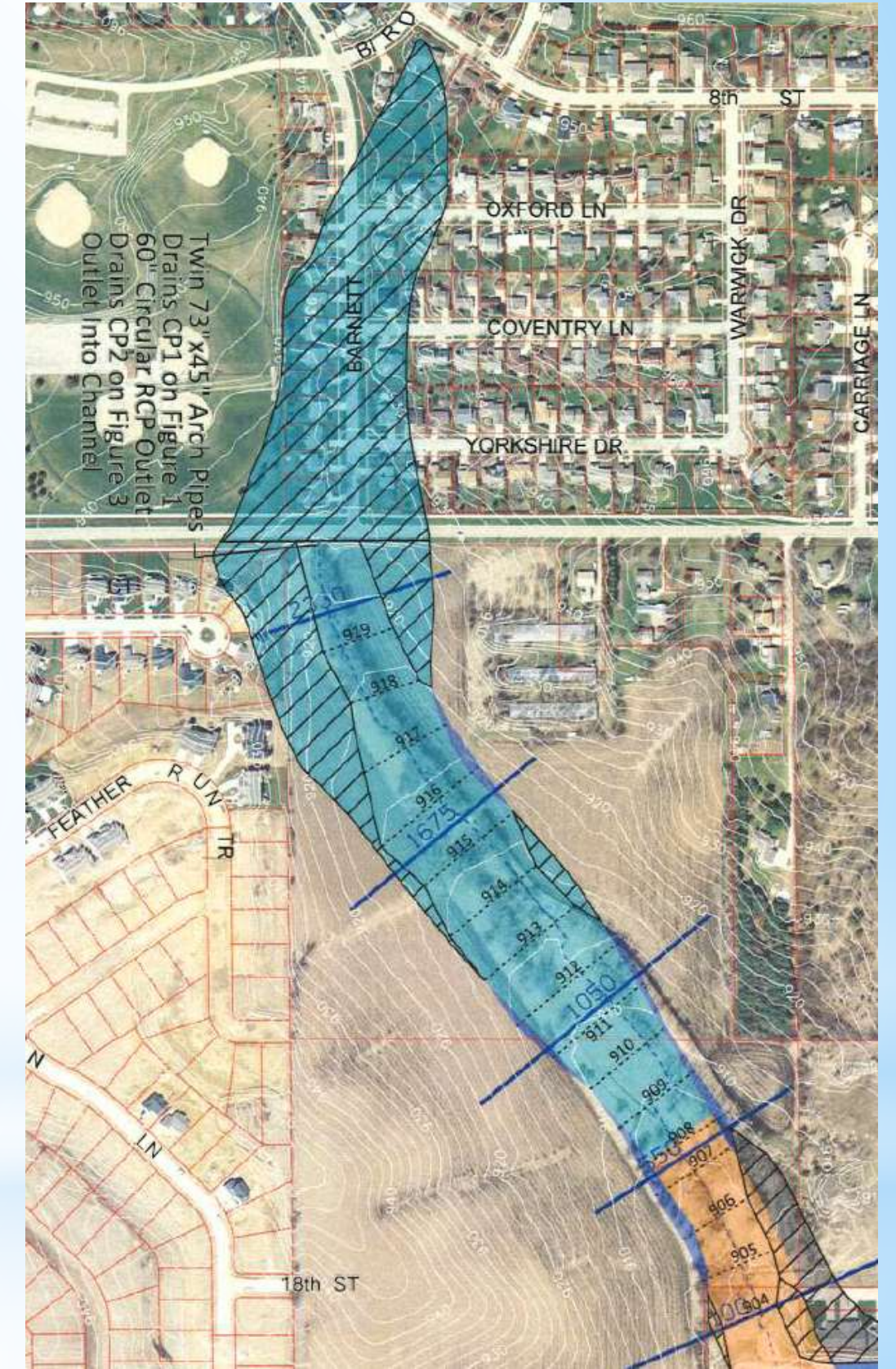
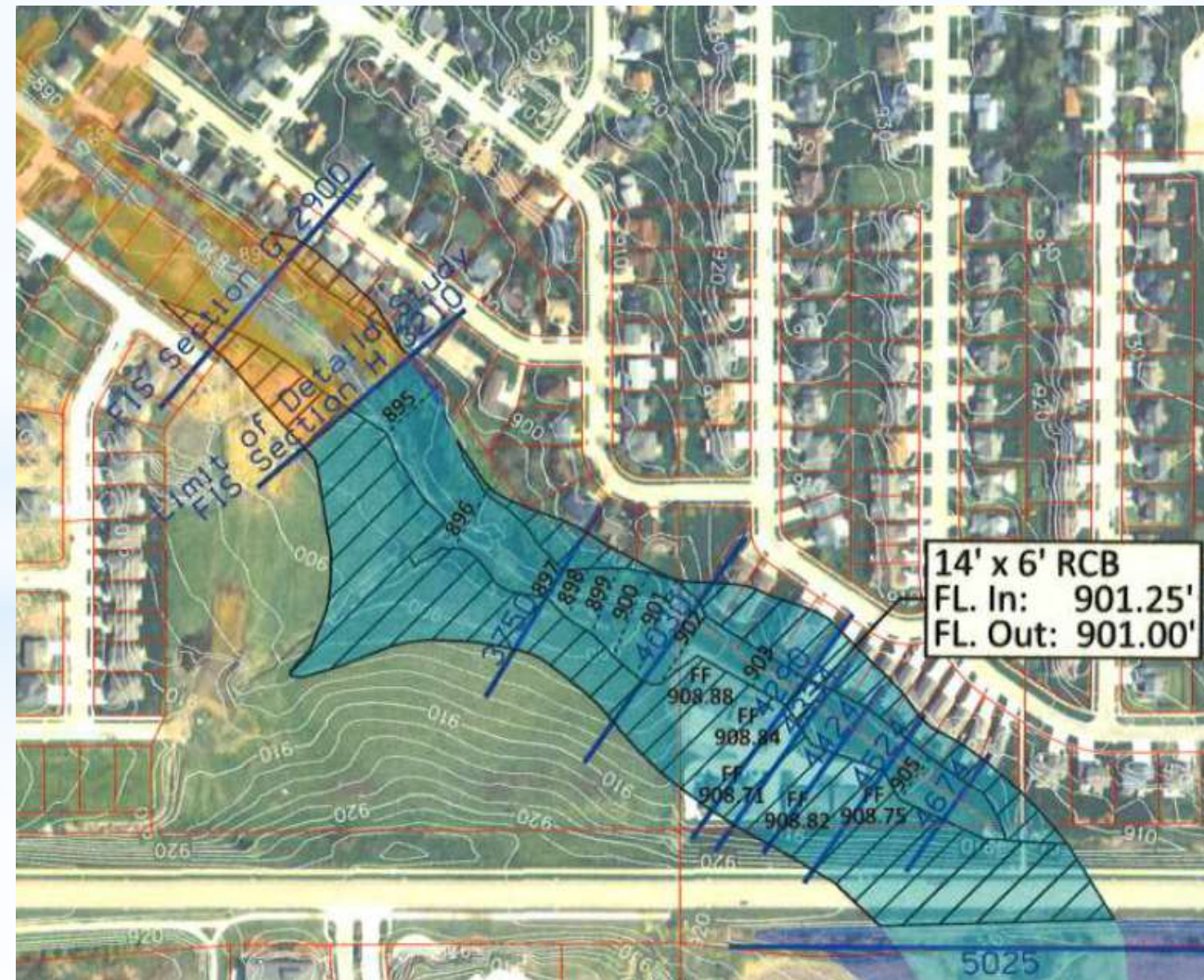




# Map Updates

# Flood Rate Insurance Map

- New FIRM maps adopted in July of 2011
- Worked with FEMA to complete the analysis of unstudied areas of the SFHA





# Local Projects

## Public Alleyway Projects

- Permeable pavers
- Stormwater control

Biocells installed as a part of the road project





# Other Development Factors

## Subdivision Ordinance Requirements

- Stormwater management plan
  - Grading
  - Stormwater routing
  - On-site Detention Basins and Water Quality
- Environmental Checklist
  - Soils analysis
  - Wetlands

## SWPPP Development (Stormwater Pollution Prevention Plan)

- Permitting for new construction



# Other Activities

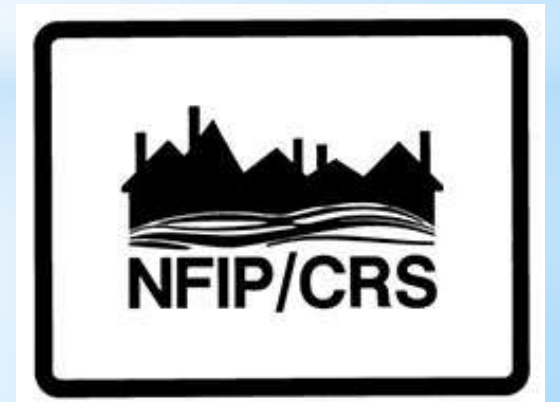
- Community Rating System (CRS)
- The Watershed Approach
- Partnerships





# Community Rating System

- Cedar Falls CRS Community – May 2014
- Class 5
- Up to a 25% discounts on flood insurance





# Community Rating System

- Awarded points on certain activities
  - Maintaining flood maps, permits, elevation certificates
  - Public outreach
  - Open space preservation (buyouts)
  - Higher standards
  - Repetitive Loss Properties
  - Stormwater management
  - Floodplain management planning (Hazard Mitigation)

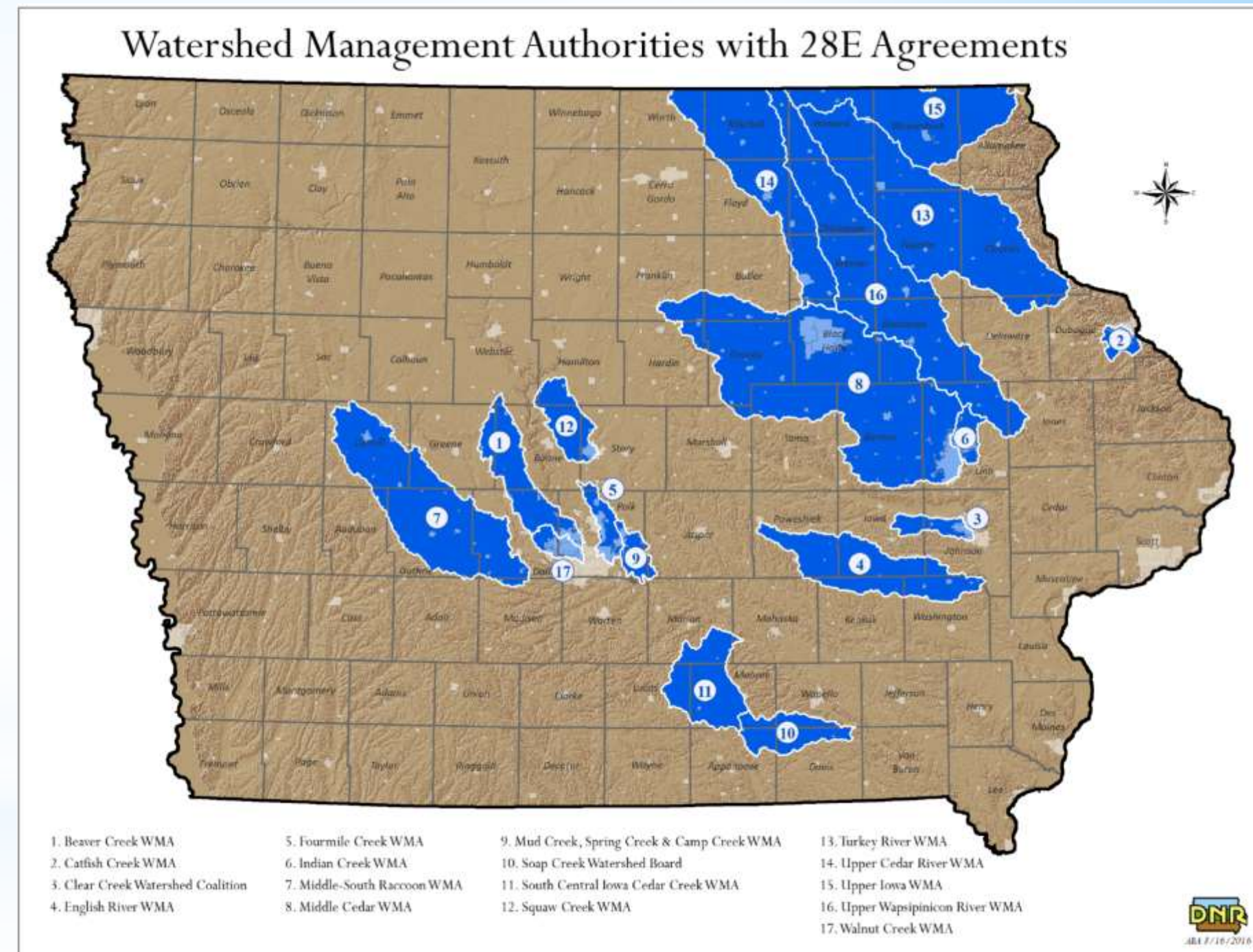




# Watershed Management Authority

2010 Iowa Legislation authorized the creation of WMAs

- Assess and reduce flood risk
- Assess and improve water quality
- Monitors federal flood risk and planning activities
- Flood and water quality education
- Allocate \$\$ for water quality and flood mitigation

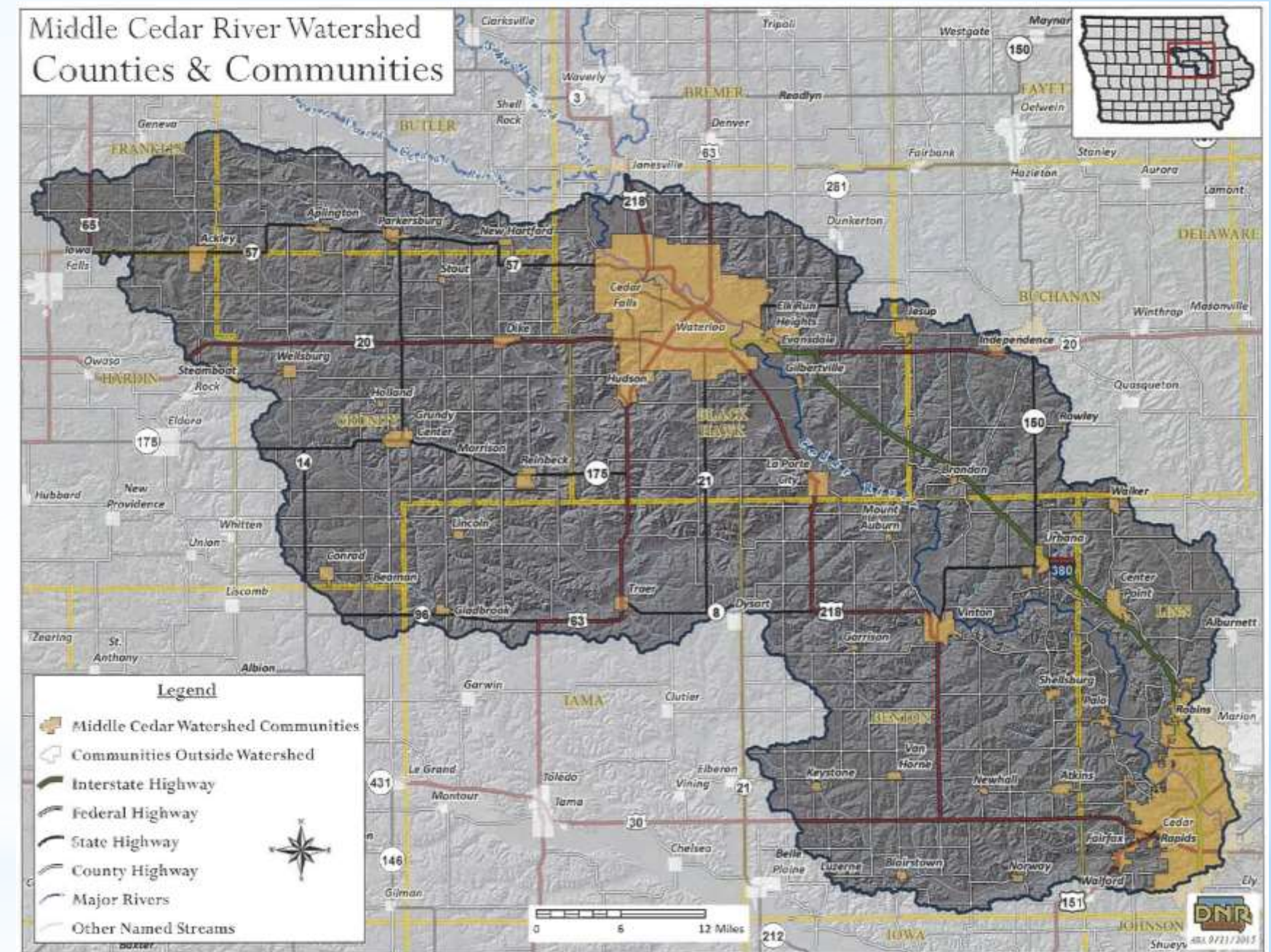




# Watershed Management Authority

## Middle Cedar WMA

- 1.55 million acres
- Local officials, cities, counties, stakeholders
- Develops partnerships
- Leverage resources for funding and technical expertise





# Partnerships

- National, State, Local Governments
- Acronym Agencies
- Engineers/Surveyors
- Property Owners/Citizens





Thank You and May the 4<sup>th</sup> Be With You

Thank You

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