Presentation from the USDA Agricultural Outlook Forum 2017

United States Department of Agriculture
93rd Annual Agricultural Outlook Forum
"A New Horizon: The Future of Agriculture"

February 23-24, 2017
Arlington, Virginia

2017 Agricultural Outlook Forum
"A New Model for Delivering Conservation: Success With RCPP"
February 23, 2017
City of Cedar Rapids
Middle Cedar Partnership Project

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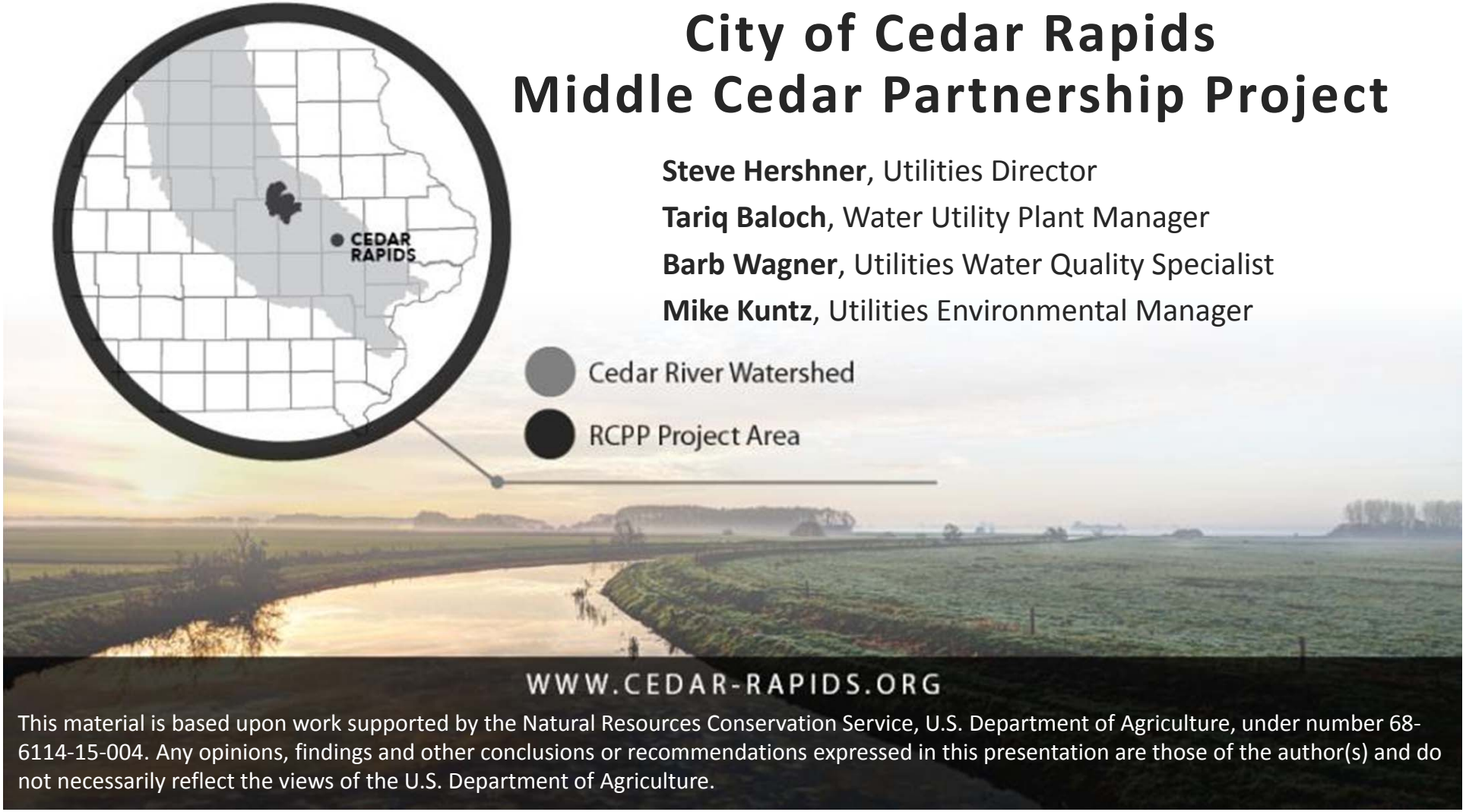

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MCPP

WHY RCPP?
Historical Flood Crest in 2008

MCPP - Middle Cedar Partnership Project

MCPP

WHY COLLABORATE?

Historical Flood Crest in 2008

Water Treatment Facility, 2008

Vertical Well, 2008

MCPP

WHY COLLABORATE?
(SOURCE WATER - PUBLIC WATER SUPPLY)

- Raw water highly influenced by river water quality
- Public notification for nitrates at 10 mg/L
- Hach Nitratax

Vertical Well, 2012
After FEMA & City Supported Mitigation Project

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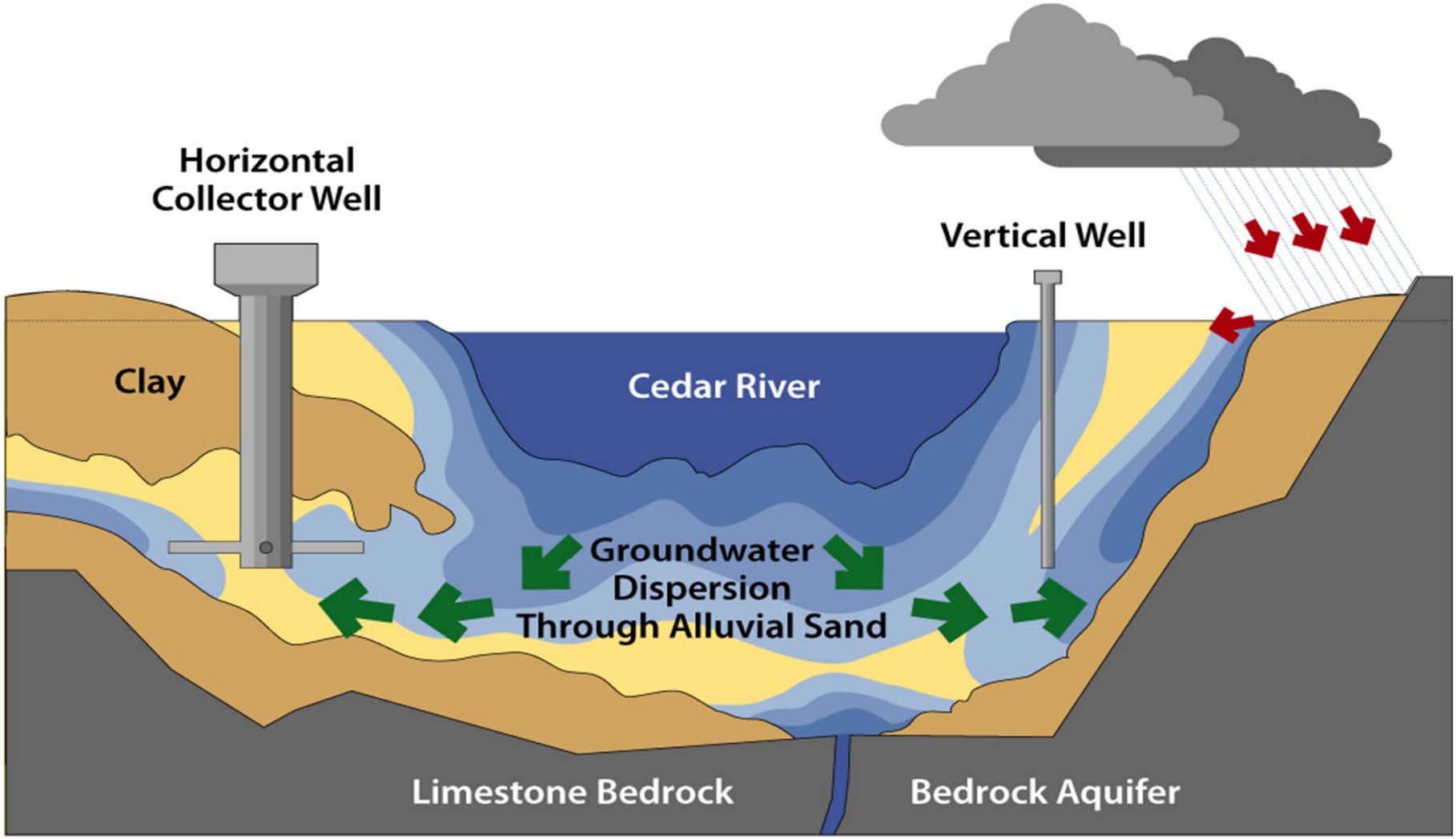
WHY COLLABORATE?
(SOURCE WATER - PUBLIC WATER SUPPLY)



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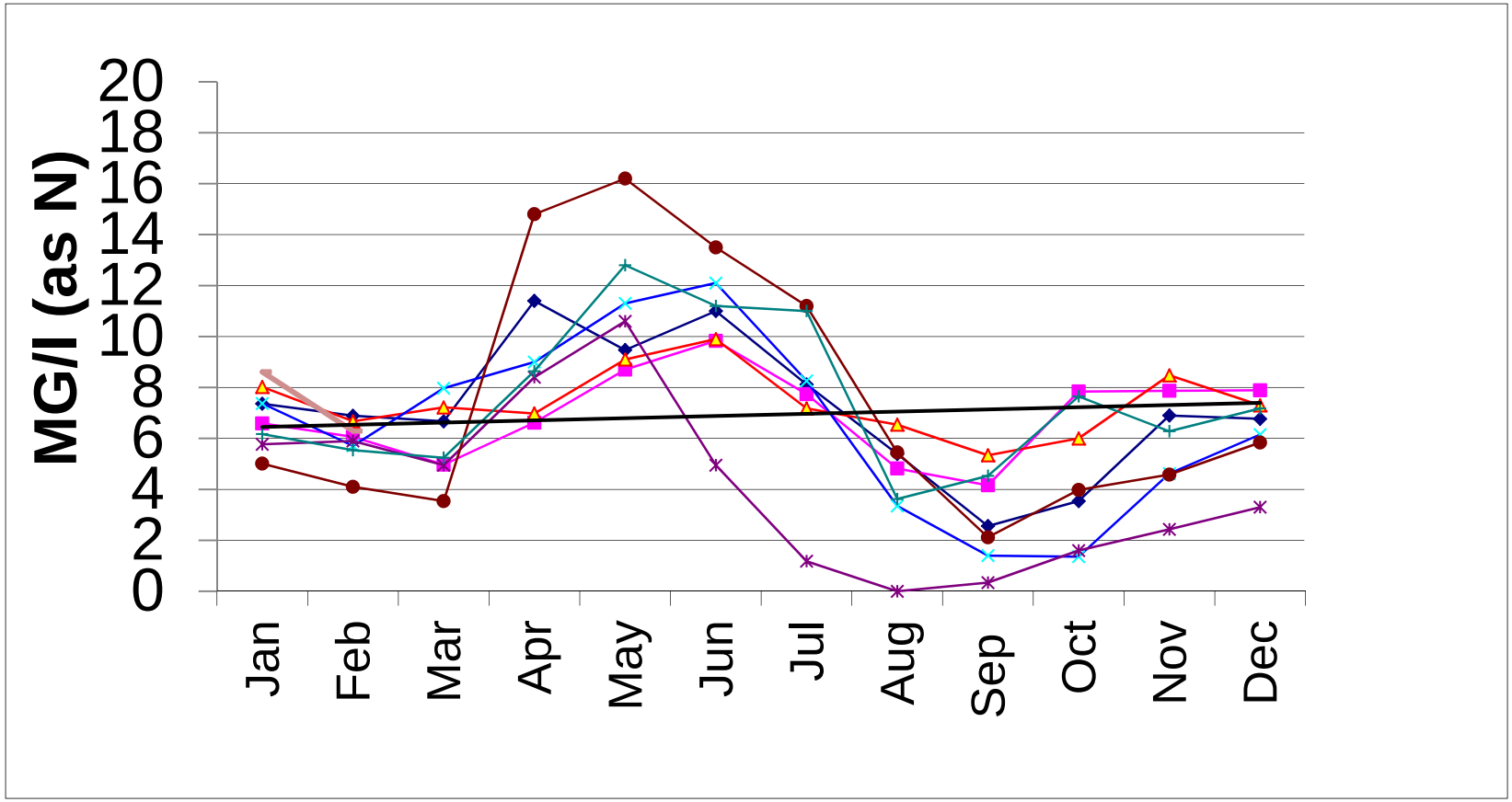
WHY COLLABORATE?
(SOURCE WATER - PUBLIC WATER SUPPLY)

Monthly Maximum Nitrate Concentrations in the Cedar River 2008-2015



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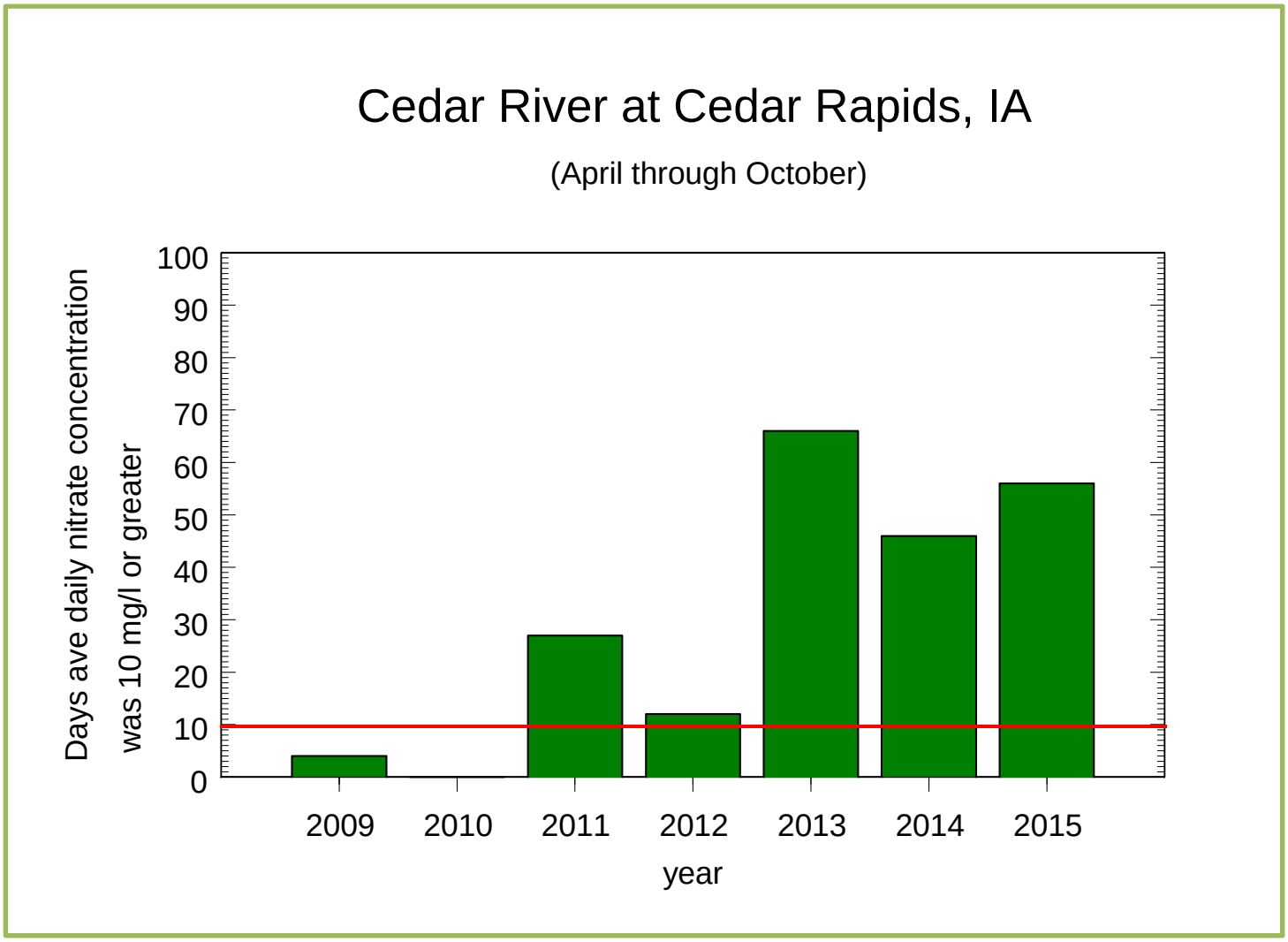
WHY COLLABORATE?
(SOURCE WATER - PUBLIC WATER SUPPLY)

Nitrate concentrations in the Cedar River 2009-2015



MCPP

WHY PARTNER WITH UPSTREAM FARMERS & LANDOWNERS?

MCPP = Middle Cedar Partnership Project

PUBLIC HEALTH & WELFARE/FLOODING

RCPP Benefits

Leverage Natural Resources Conservation Service, U.S. Dept. of Agriculture program and technical support

RCPP Benefits

Leverage existing County Soil & Water Conservation District Network resources

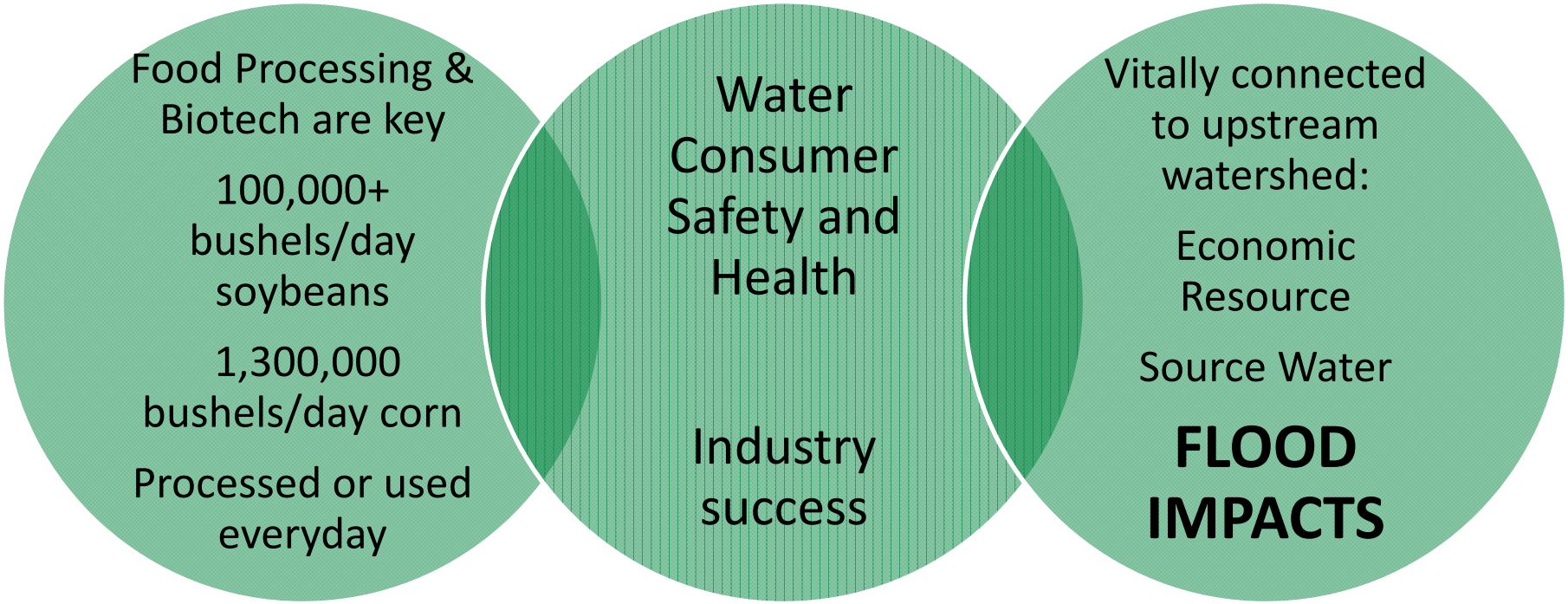
INDUSTRY & ECONOMY

SOURCE WATER/PUBLIC WATER SUPPLY

RCPP Benefits

Meeting critical needs of our community (water quality & flooding relief)

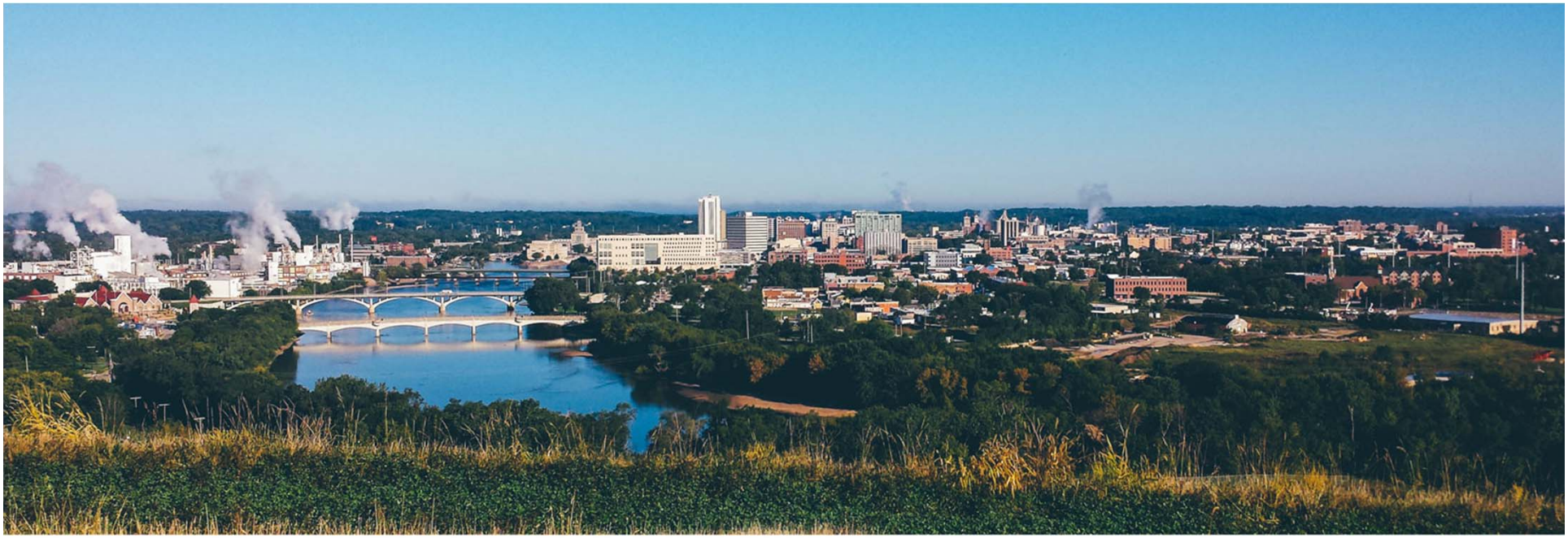
MCPP | WHY PARTNERSHIP? UTILITY/COMMUNITY VALUE



Cedar Rapids Working with 15 Partners

- Improve Water Quality
- Enhance Flood Protection

WHY AGRICULTURE IS IMPORTANT TO CEDAR RAPIDS



GENERAL MILLS

LESAFFRE YEAST CORPORATION

RED STAR Yeast Company LLC

Cargill

PEPSICO

pepsi Lay's Tropicana QUAKER

KraftHeinz

Kraft Heinz

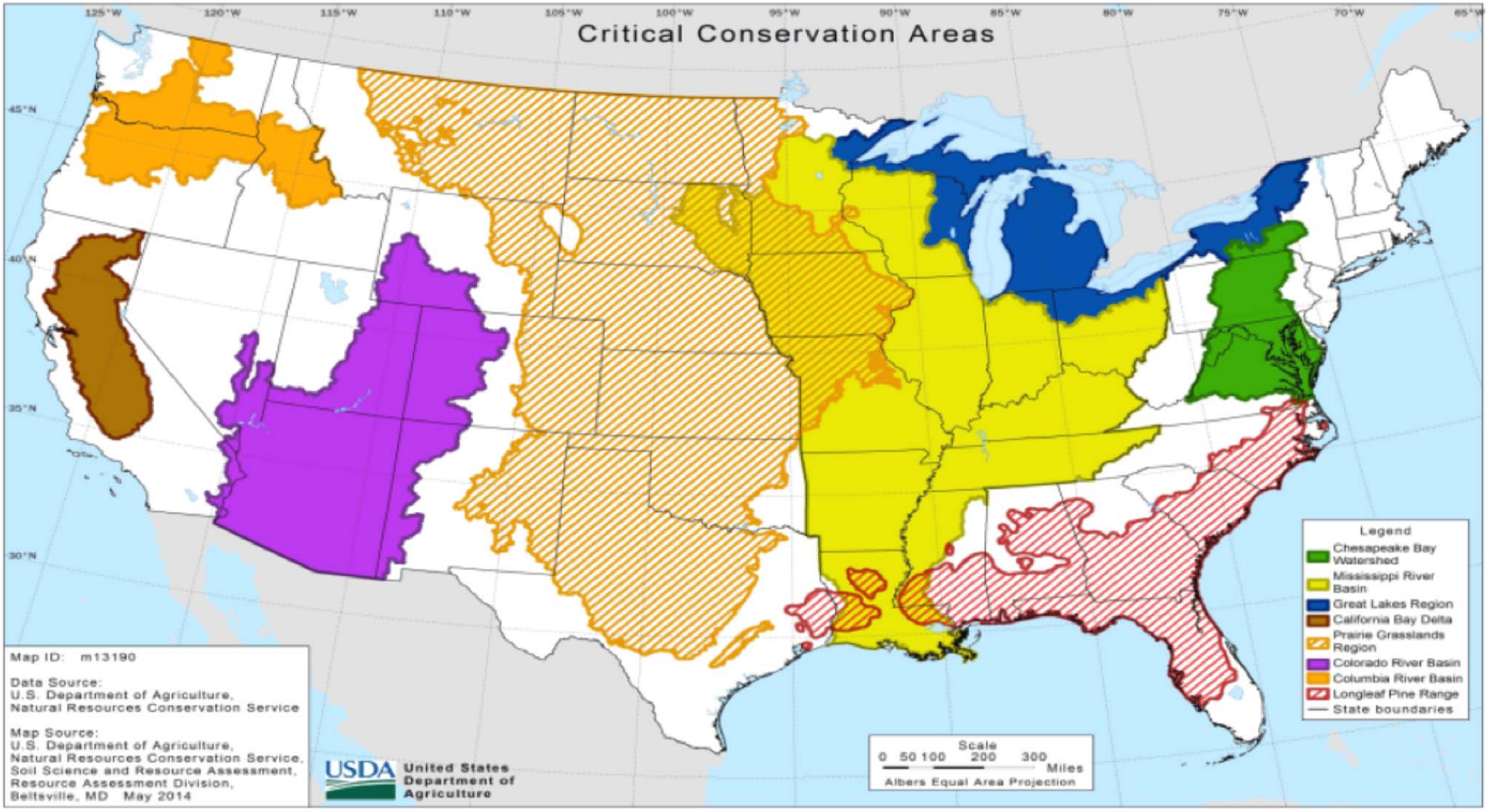
Ingredion

ADM

MCPP

NATIONAL PERSPECTIVE

(Regional Conservation Partnership Program – Critical Conservation Areas)



MCPP

PARTNERING FOR SUCCESS
MIDDLE CEDAR PARTNERSHIP PROJECT

NRCS through Regional Conservation Partnership Program (RCPP) contributing $2.0M

Primarily financial, some technical assistance

16 MCPP partners contributing $2.3M

Primarily technical, some financial assistance

$4.3M available over the next five years

Clock started June 5, 2015

MCPP

PARTNERING FOR SUCCESS
MIDDLE CEDAR PARTNERSHIP PROJECT

Middle Cedar Partnership Project (MCPP)

Collaborating for Soil & Water Quality

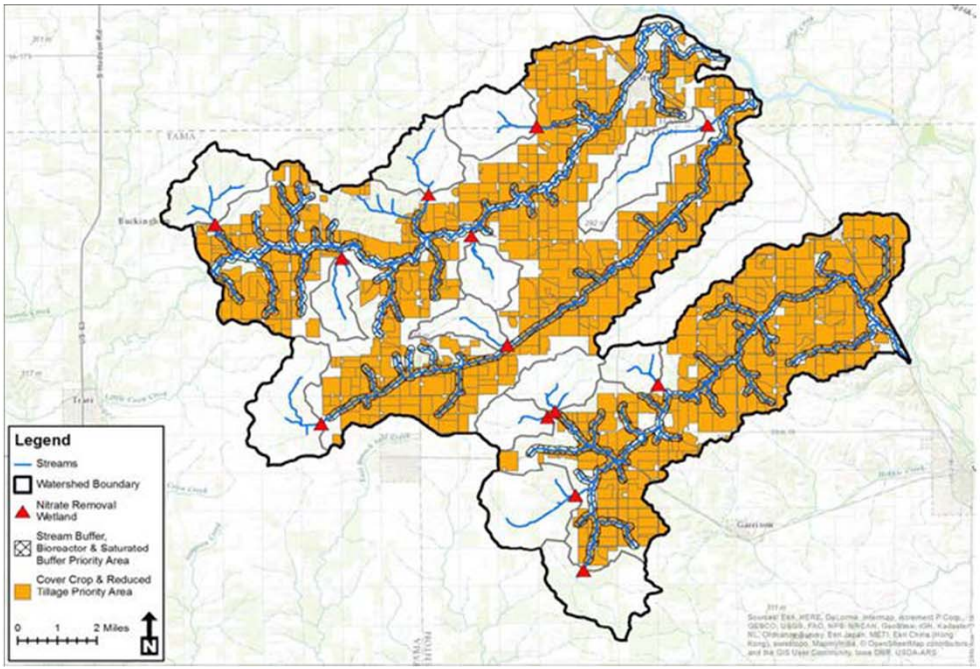
MCPP

PARTNERING FOR SUCCESS
1st Step - WATERSHED CONCEPT PLAN

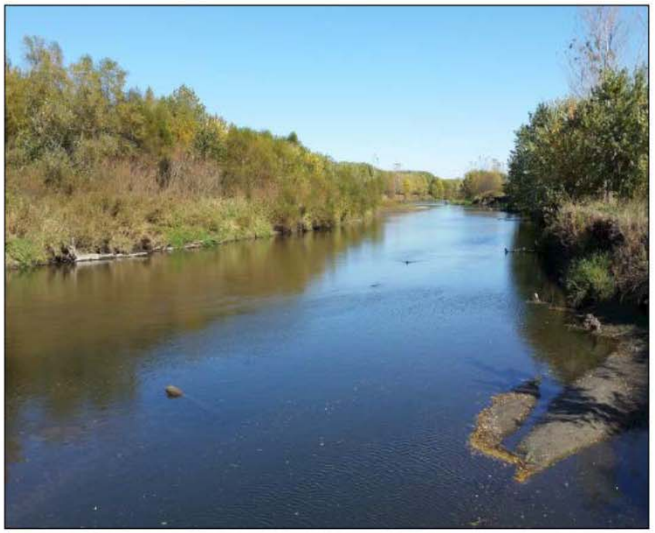
Support Iowa Nutrient Reduction Strategy by:
Reducing in-stream nonpoint nitrogen by 41%
Reducing in-stream nonpoint phosphorus 29%

Reduce flood risk within three watersheds & downstream

Maintaining or increasing agricultural productivity and profitability



BENTON/TAMA WATERSHED IMPROVEMENT PLAN



A roadmap for improved water quality, sustained agricultural productivity & reduced flood risk

Prepared by:

Environmental Programs & Services
IOWA SOYBEAN ASSOCIATION

MCPP | PARTNERING FOR SUCCESS
EXECUTING THE PLAN

16,539 acres of cover crops

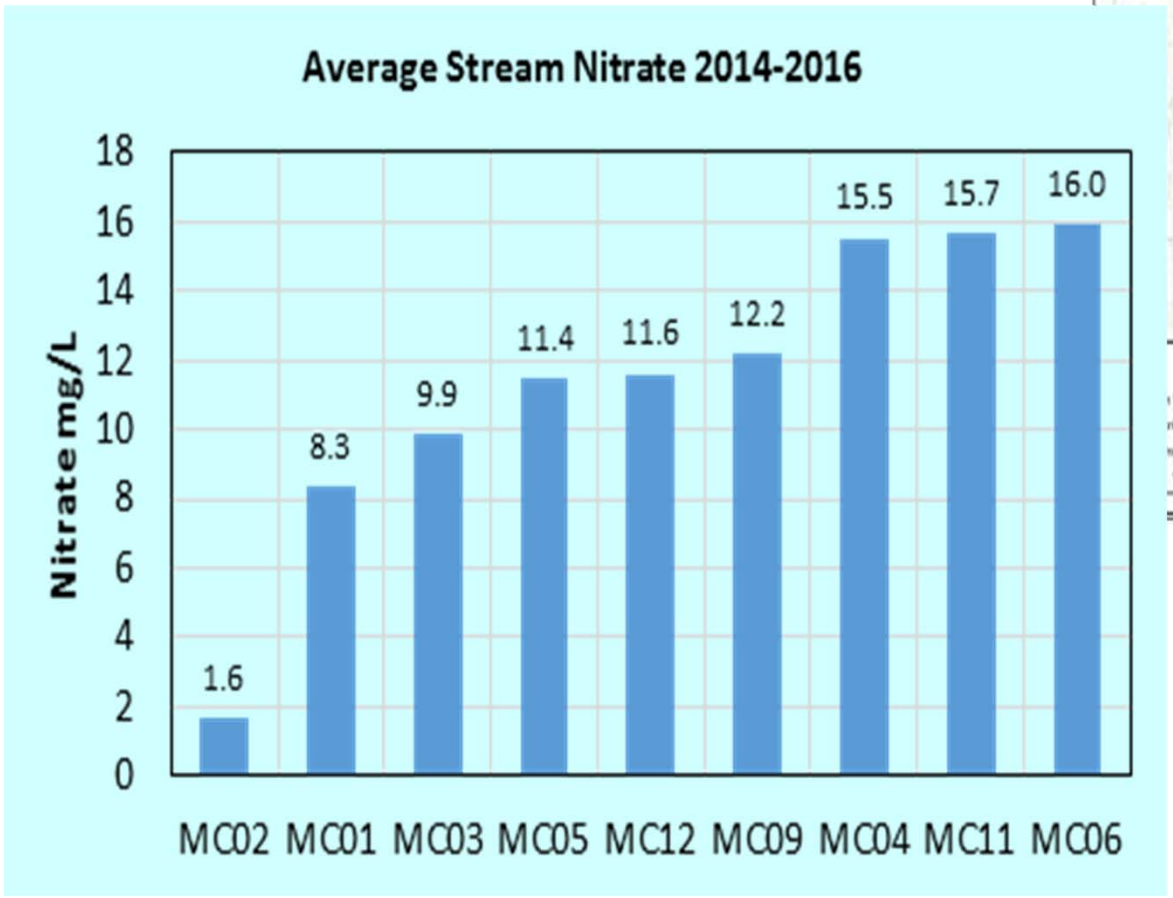
- 134% increase in cover crops acres from 2015 to 2016.
- Approximately 15% of total crop acres in MCPP area are in cover crop program

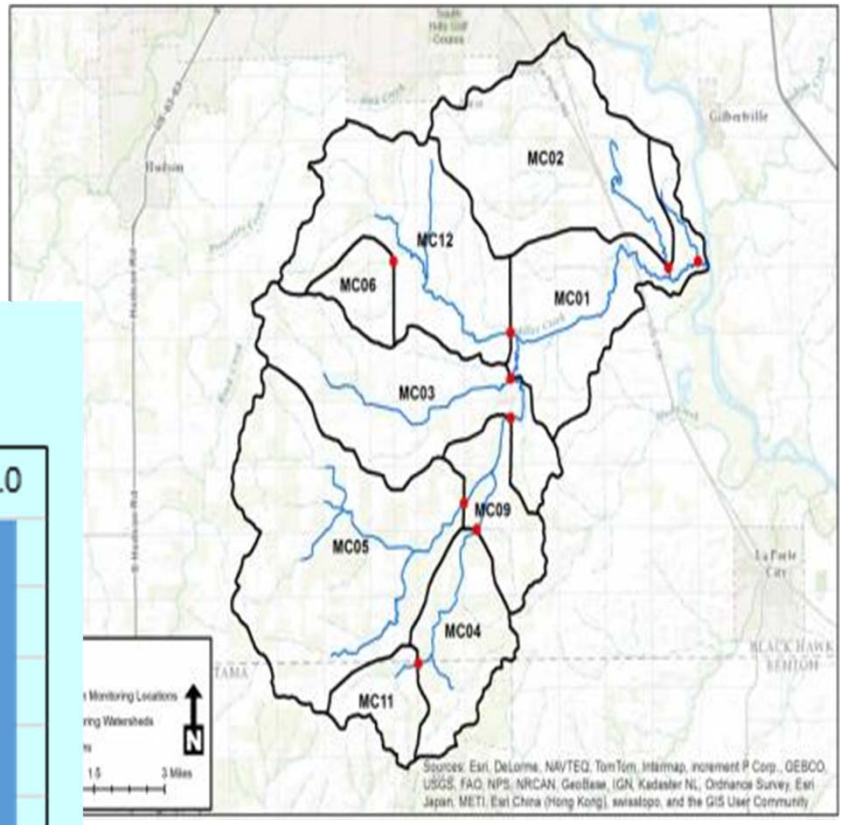
6,522 acres of nutrient management plans or practices

9,173 acres of no-till, strip-till or reduced tillage practices

2 saturated buffers and 1 bioreactor

MCPP | EVALUATING RESULTS
WATER QUALITY





MCPP | Possible Barriers - Challenges to Watershed Solutions

- Will watershed solutions happen fast enough to meet downstream needs?
  - This is start of long term effort, City is also working on a Flood Control System and exploring best treatment options to remove nitrates
- How do we connect with enough farmers & landowners to make a difference?
  - MCPP work plan includes outreach resources to contact producers and landowners directly, which helps target activities to watershed areas of potential greatest benefit
  - Cannot stress enough how important this outreach effort has been to increase farmer/land owner comfort level with new cropping techniques and installed practices

MCPP | Opportunities for Expanding Watershed Solutions

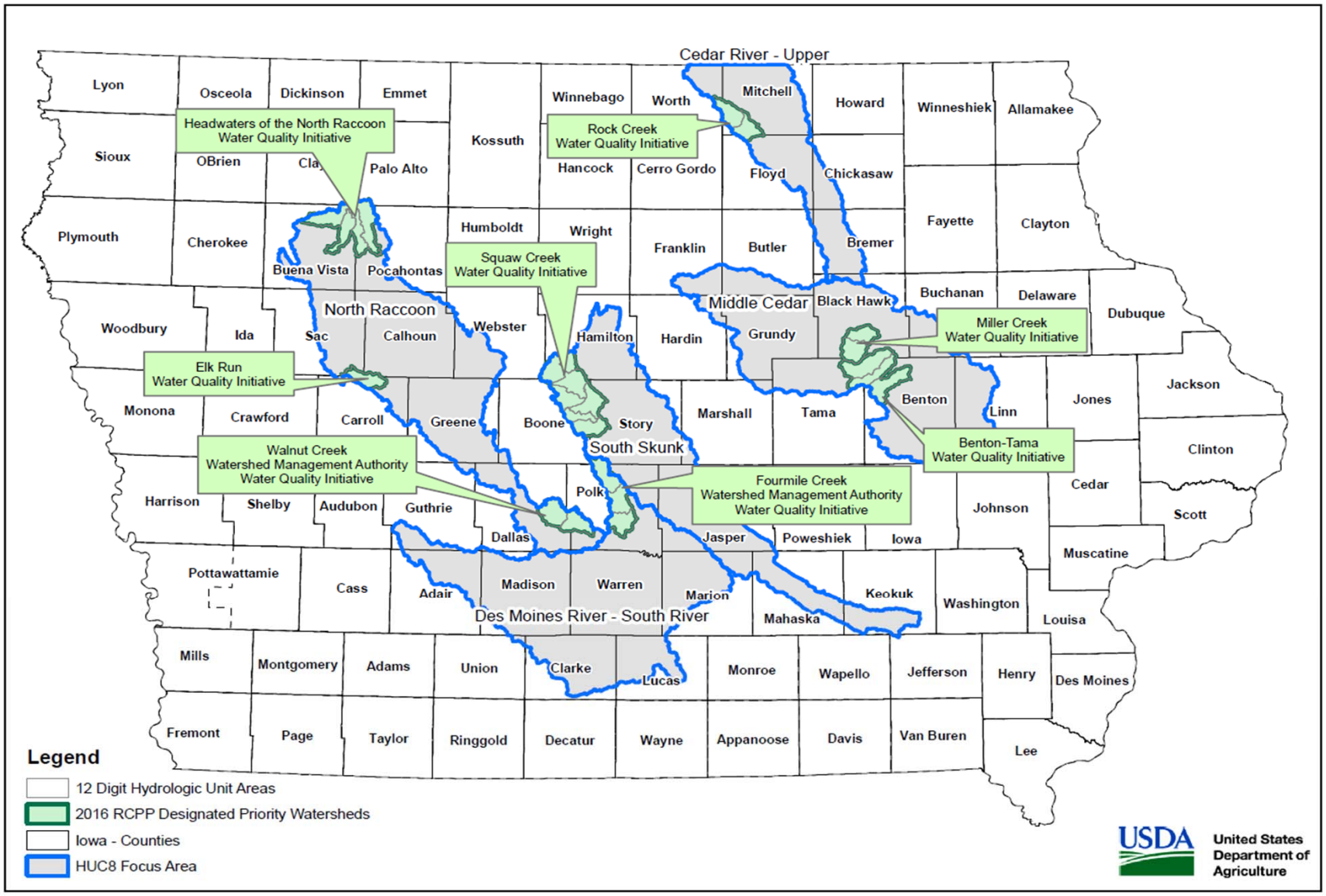
- How to meet NRCS - RCPP & other projects expanding technical resource needs for development of edge-of-field installations (bioreactors, saturated buffers, wetlands)?
  - Municipal or private partner water quality trading or nutrient registry opportunities represent a chance to expand technical resources through the use of consulting engineering resources that these entities use routinely
- City of Cedar Rapids actively encourages the concept of “One Water” supported the US Water Alliance
  - US Water Alliance’s One Water Summit will be held June 27 – 29, 2017 in New Orleans, we will be participating in a session titled “What are the critical success factors to effective agriculture-municipal partnerships to solve America’s nutrient challenge?”

MCPP | LEVERAGING RESOURCES

Expanding Partnership Opportunities

- Iowa Flood Center – HUD Disaster Resilience Grant ($96.9M)
- Midwest Agriculture Water Quality Partnership (RCPP 2nd Round - $9.5M, project leverages total of $47M
- Iowa Water Quality Initiative (Miller Creek) ~$1+M
- Iowa Nutrient Reduction Demonstration Project (Benton & Tama Counties) ~$1+M

IOWA CONSERVATION AREAS
Regional Conservation Partnership Program



MCPP

PARTNERING FOR SUCCESS

Iowa Watershed Approach
Iowa Flood Center / University of Iowa

Quarterly Watershed Management Authority Meetings 2016-17

Example:
Middle Cedar River WMA Meeting
Thursday, January 12, 2017
Farmers Savings Bank & Trust, Vinton

Iowa Watershed Approach (IWA) is a vision for Iowa's future that voluntarily engages stakeholders throughout the watershed to achieve common goals, while moving toward a more resilient state.

HUD Disaster Resilience Grant to Iowa: $96.9 million

More information at: http://www.iihr.uiowa.edu/iwa

Urban Water Management

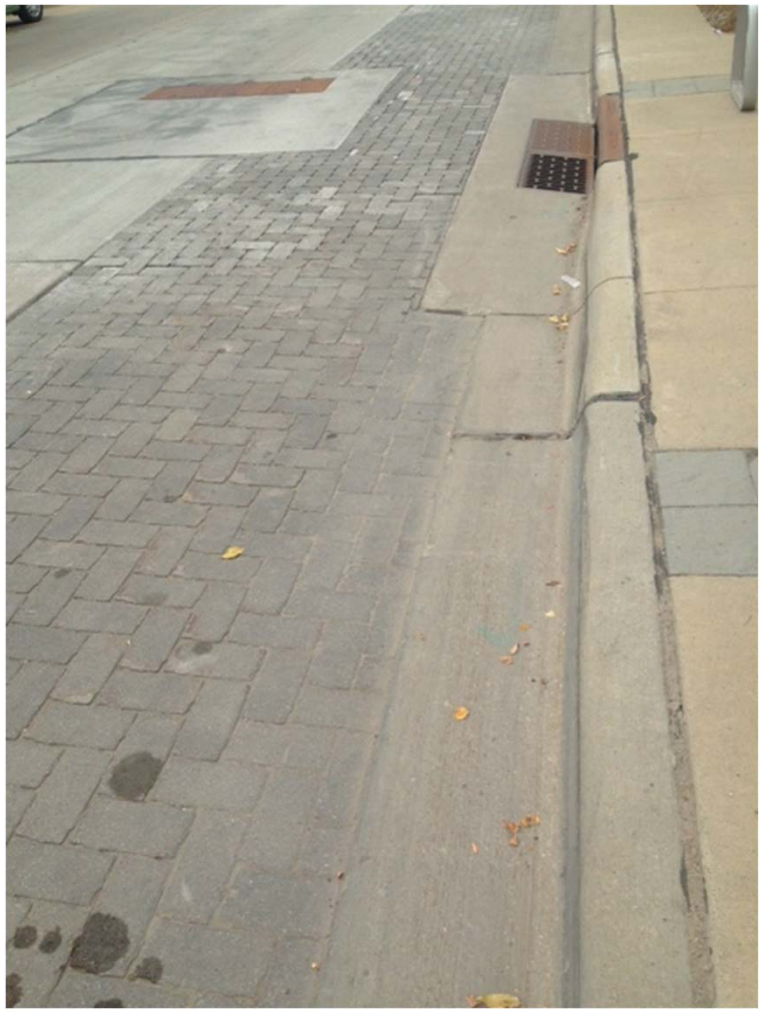
Community Opportunities (Changing Focus)

- Flood re-construction (LEED)
- Improve existing urban lake (Cedar Lake)
- Stormwater Utility Fees based on impervious surface (ordinance change) + BMP cost share
- Topsoil requirement post project development
- Sponsored projects

Downtown library constructed to platinum LEED certification

Permeable pavers on 3rd St SE

Bioswales



Incentivizing Infiltration

Sponsored Projects

- State supported alternate green infrastructure funding option using 1% of interest on SRF projects

- Noelridge Park

URBAN WATERSHED EFFORTS

Watershed Involvement

- 2 Watershed Management Authorities

Green Infrastructure

- Cost-Share Program
- DNR Funding for Pilot Projects

Policy Changes

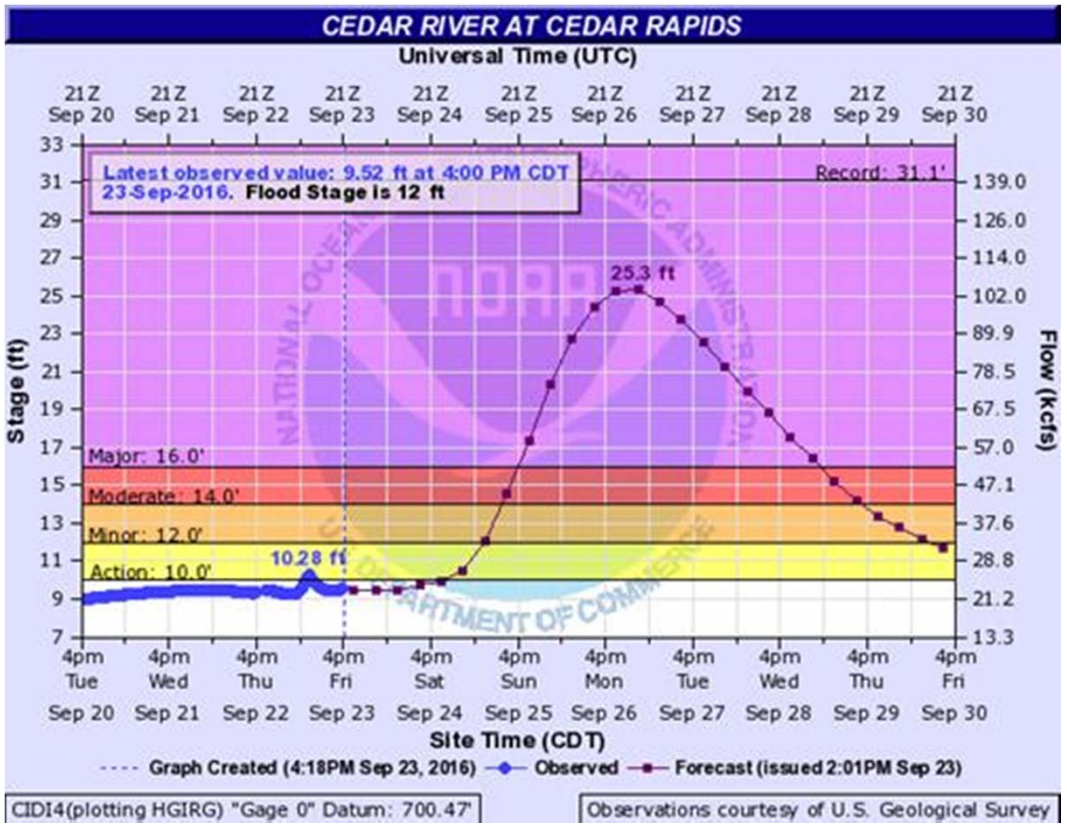
- Nutrient Management
- Stormwater Rate Change
- Possible Topsoil Rule

September 22, 2016

- 2008 = 31.12 flood stage
- 19.5’ predicted 9/22
- 25.3 predicted 9/24
- **4 days to prepare**

Crested at 21.97 feet 9/27,

2nd highest flood on record



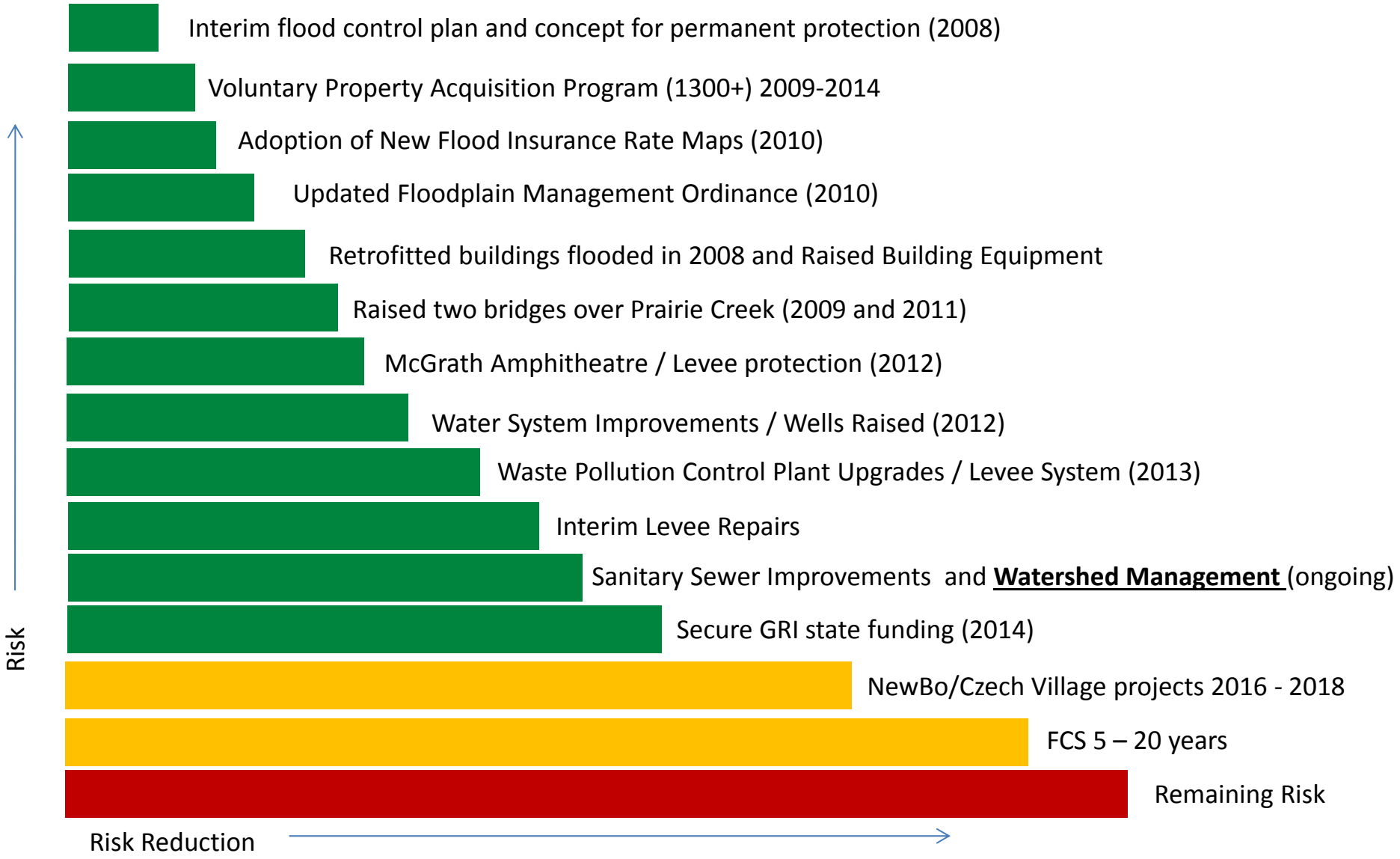
CEDAR RAPIDS FLOOD CONTROL SYSTEM

STRENGTHENING OUR COMMUNITY

Above Ground Barrier: A Difficult Decision

Wall required solid foundation and elevation

Reducing Flood Risk – Flood Control System



MCPP | WHAT DOES FUTURE SUCCESS LOOK LIKE?

- **Improved soil health**, leading to increased productivity and a better bottom-line for upstream producers
- **Increased adoption of tested practices** because it makes financial sense and it's the right thing to do
- Demonstrated **water quality improvements** that benefit all downstream entities, including City of Cedar Rapids source water for our alluvial well system
- **Expansion of similar MCPP promoted activities** within Cedar River watershed and other watersheds across Iowa

CEDAR RAPIDS
City of Five Seasons®

MIDDLE CEDAR PARTNERSHIP PROJECT

QUESTIONS?

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