

MORE!!! Water Quality and Soil Conservation Through Expedited Infrastructure Process in Iowa



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National Rankings for Iowa Agriculture

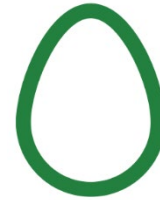
#1



Corn
2.6 billion bushels



Pork
23.8 million hogs



Eggs
14.9 billion eggs



Ethanol
3.7 billion gallons

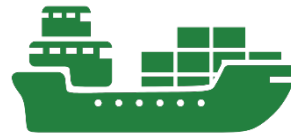


Red Meat Production
8.96 billion pounds

#2



Soybeans
622 million bushels



Ag Products Exported
\$12.6 billion

#3

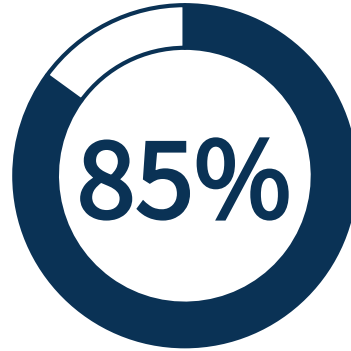


Number of Farms
84,900

Fast Facts About Iowa's Agriculture

185

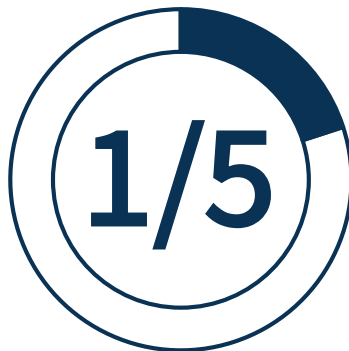
countries import products from Iowa



of Iowa's land is used for agriculture

11.5

million turkeys are raised in Iowa each year



of jobs in Iowa are connected to agriculture



of the nation's pork is raised in Iowa



of the nation's food is grown in Iowa



Cost of Agriculture

Prior to European settlement, wetlands covered 4 to 6 million acres, or approximately 11% of Iowa's surface area. Wetlands were part of every watershed in the state, but nearly 95% of them have been drained.



STATEWIDE MAPPING OF EXISTING CONSERVATION PRACTICES USING AERIAL IMAGERY SHOWS A STRONG FOUNDATION

114,000 POND DAMS

325,000 ACRES OF GRASSED WATERWAYS

460 MILLION FEET OF TERRACES

240,000 WATER AND SEDIMENT CONTROL BASINS

**THESE EXISTING PRACTICES WOULD REQUIRE
AN ESTIMATED \$6.2 BILLION TO BUILD TODAY**



Water Quality Wetlands

WQ Wetlands are strategically located and designed to remove nitrate from tile-drainage water from cropland areas.

The larger the wetland, the greater the percentage of N removal; nitrate concentration reduction averages 52%. Wetlands also provide improved habitat for Iowa wildlife.

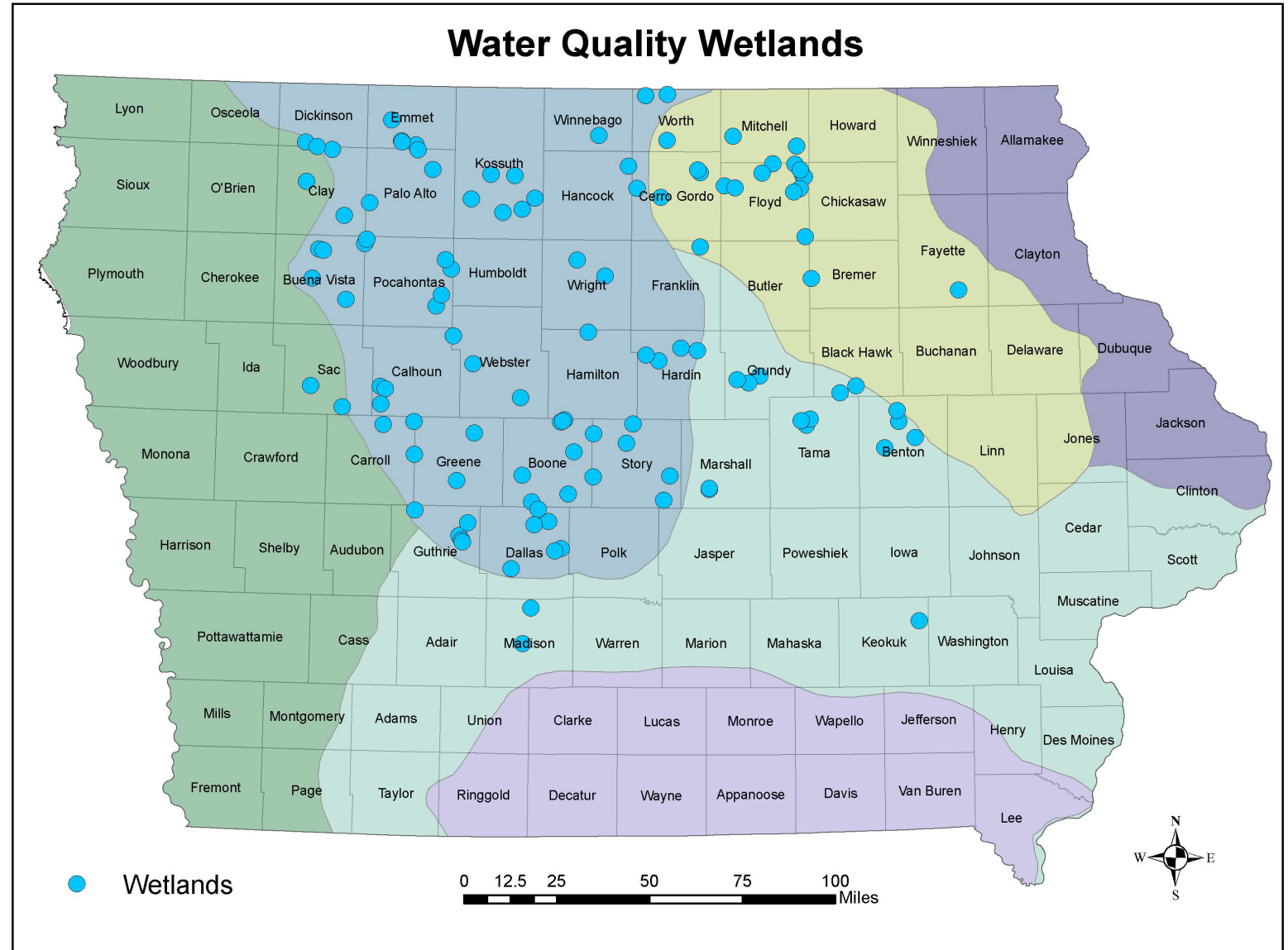
1 acre of wetland can remove excess Nitrogen in runoff from 100 acres of corn producing ground.



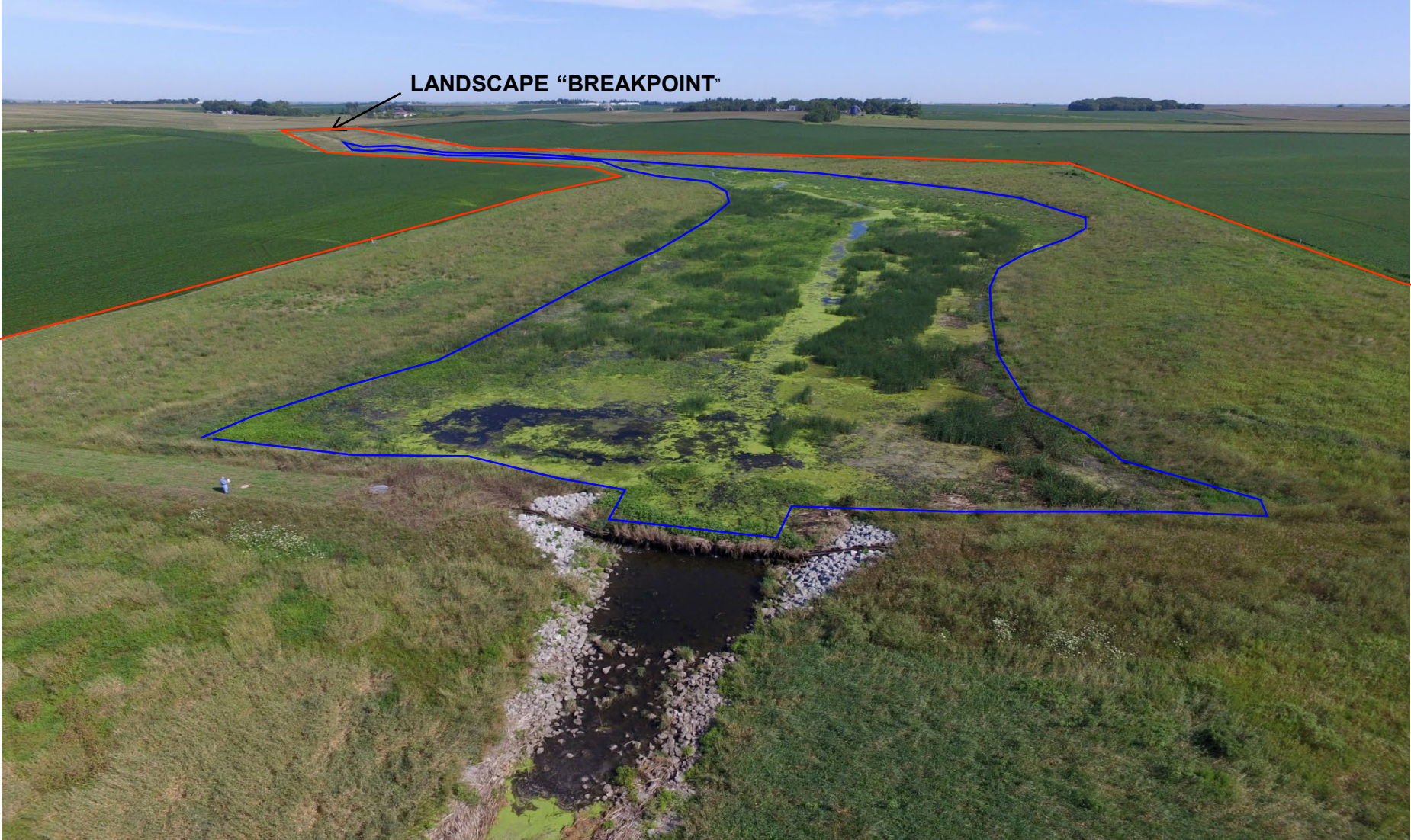
Wetlands

Conservation Reserve Enhancement Program (CREP)

- Iowa's CREP program established in 2002 to target water quality wetlands on and along Des Moines Lobe
- Proven monitoring program
- 105 CREP wetlands installed to date (11 additional non-CREP water quality wetlands)



Traditional Breakpoint



Excavated

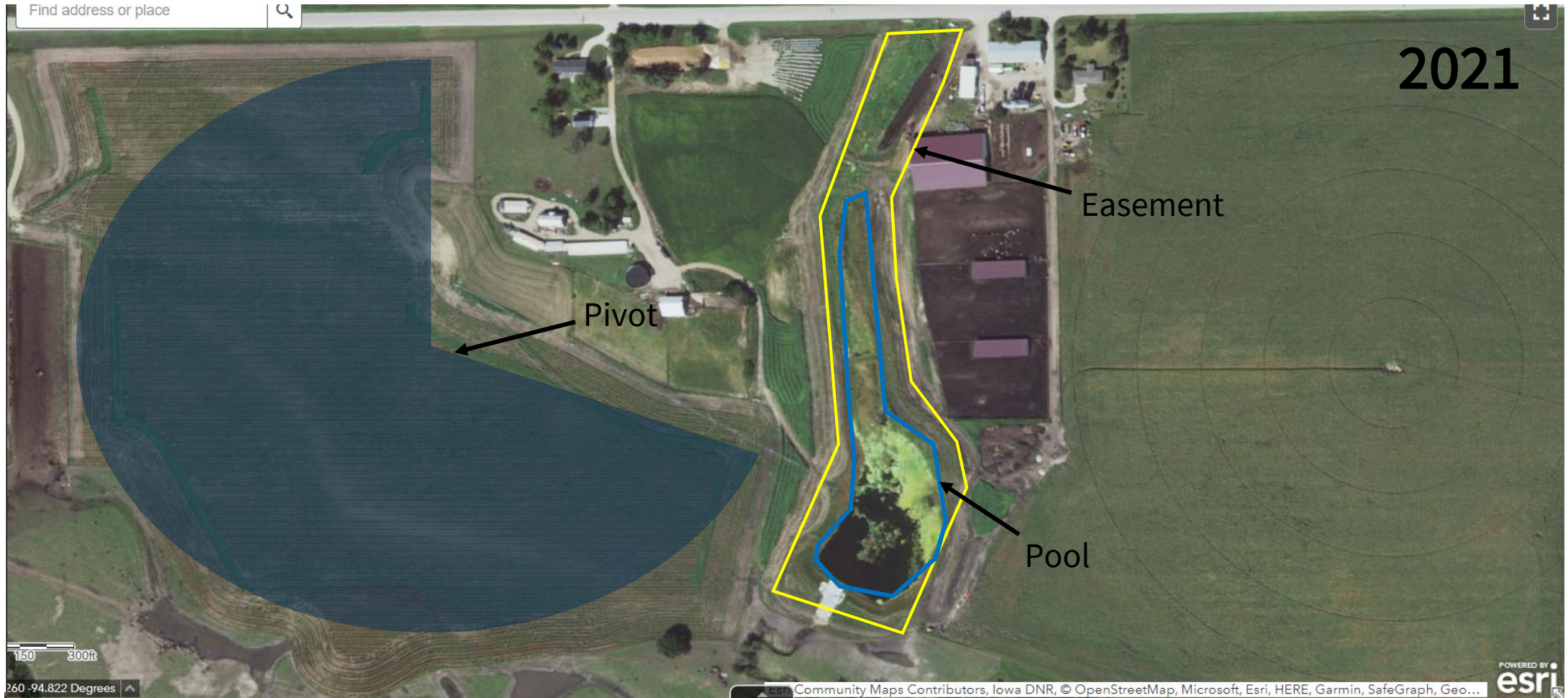


2022

Vern Fish, Black Hawk SWCD



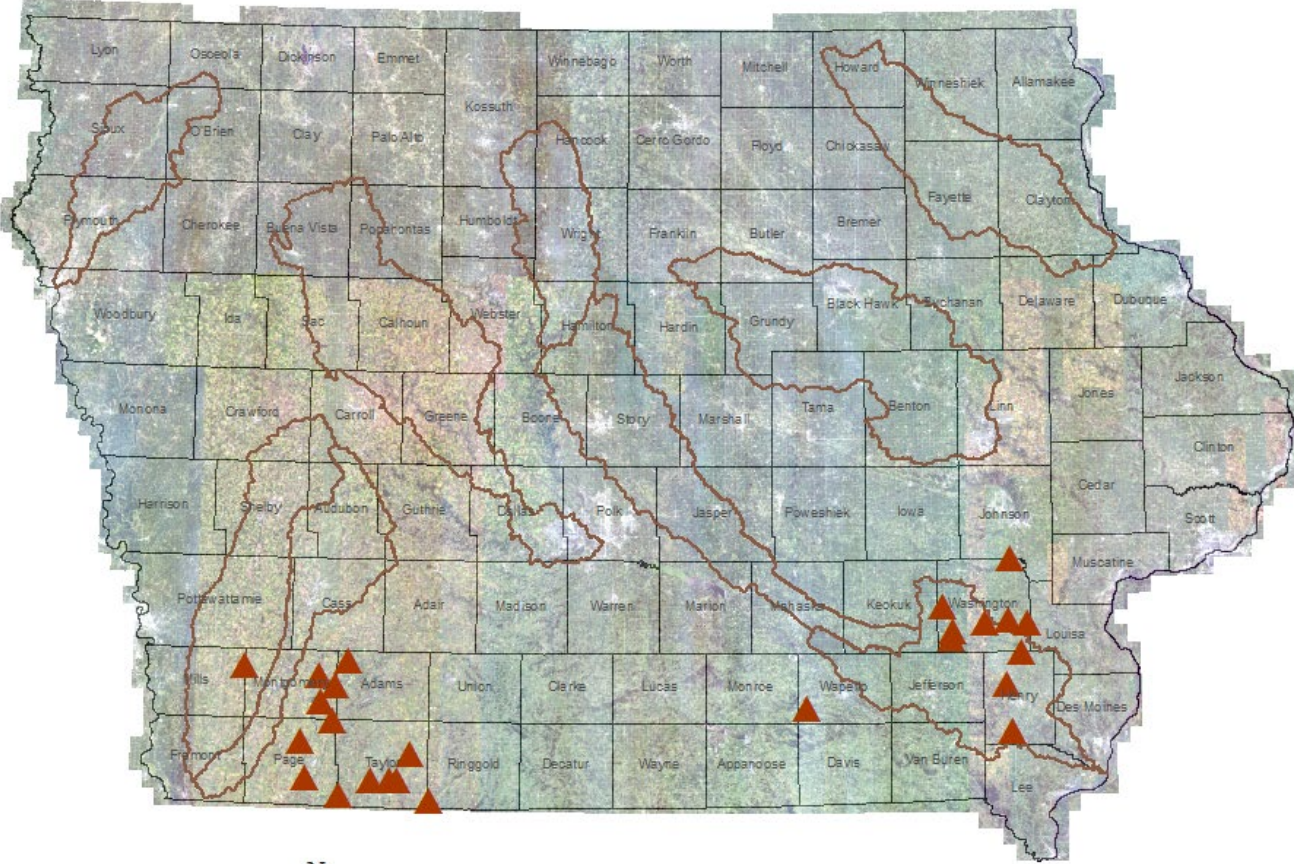
Drainage Water Recycling



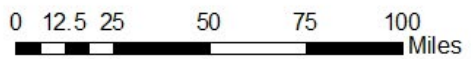


Grade Stab's (Ponds) in key areas

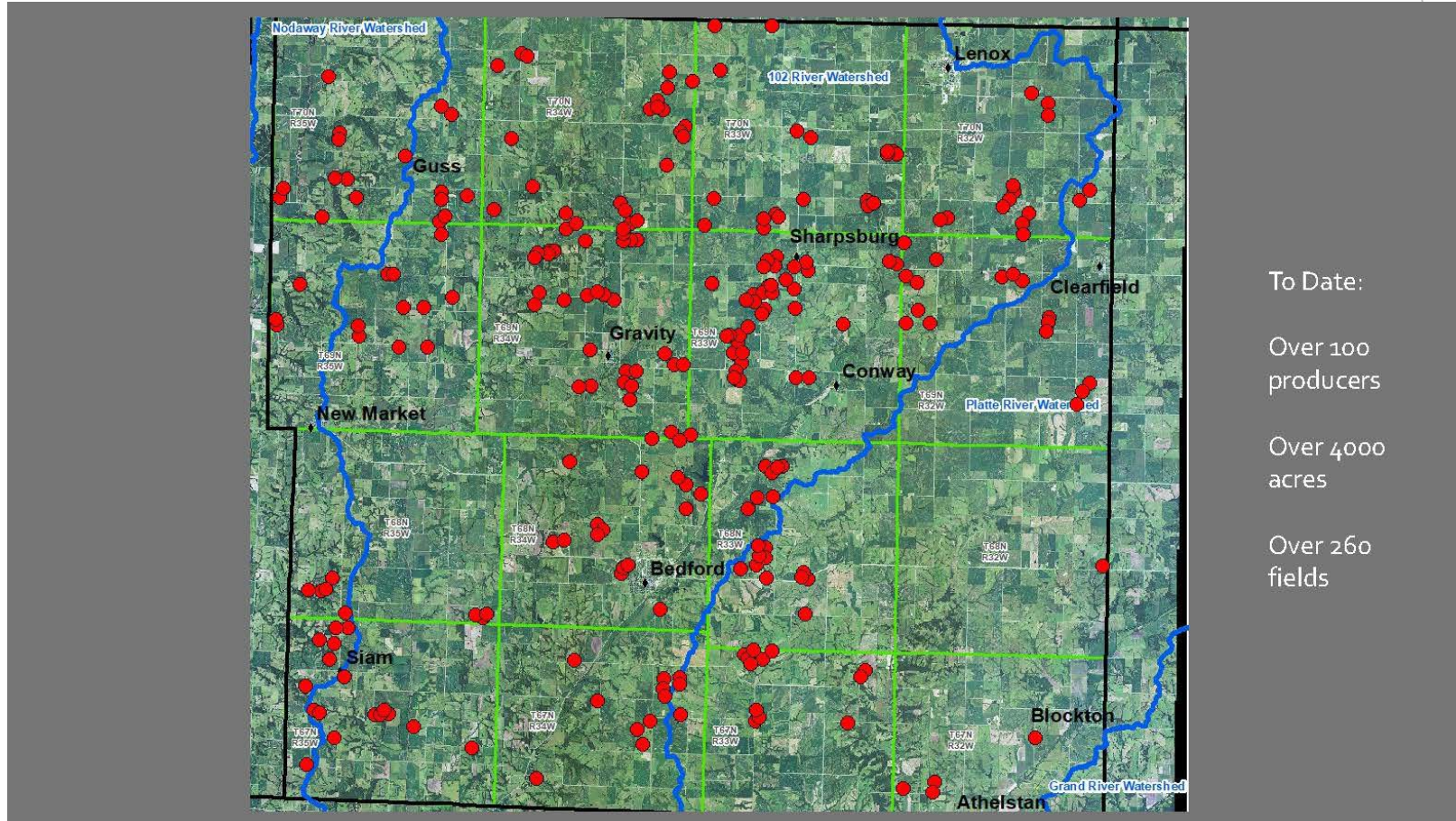
Grade Stabilization Structures



- ▲ Grade Stabilization Structures
- ▭ NRS Priority HUC8 Watersheds
- ▭ Counties



Land Conversion - Unproductive Land to Productive Land



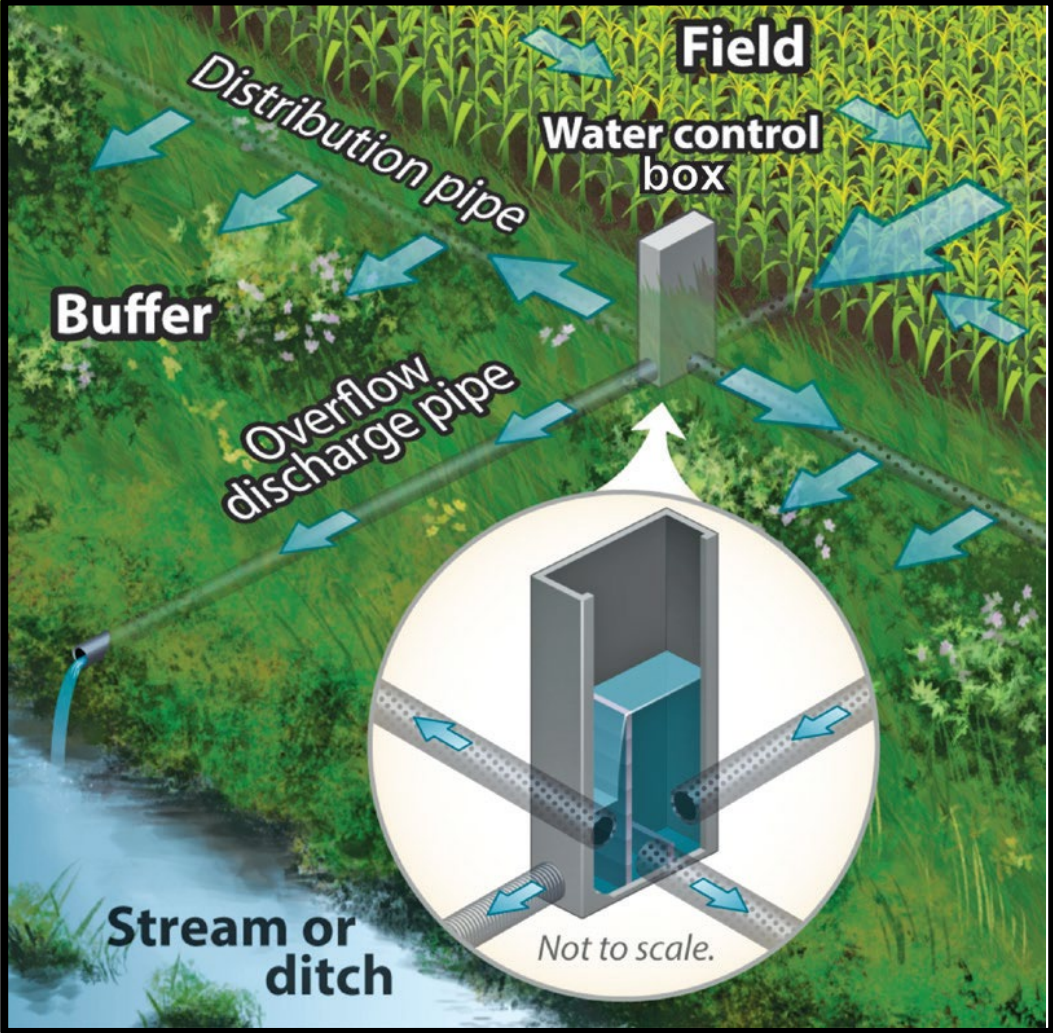


Edge of Field Practices

- Saturated Buffers
- Bioreactors



Saturated Buffers





Bioreactors



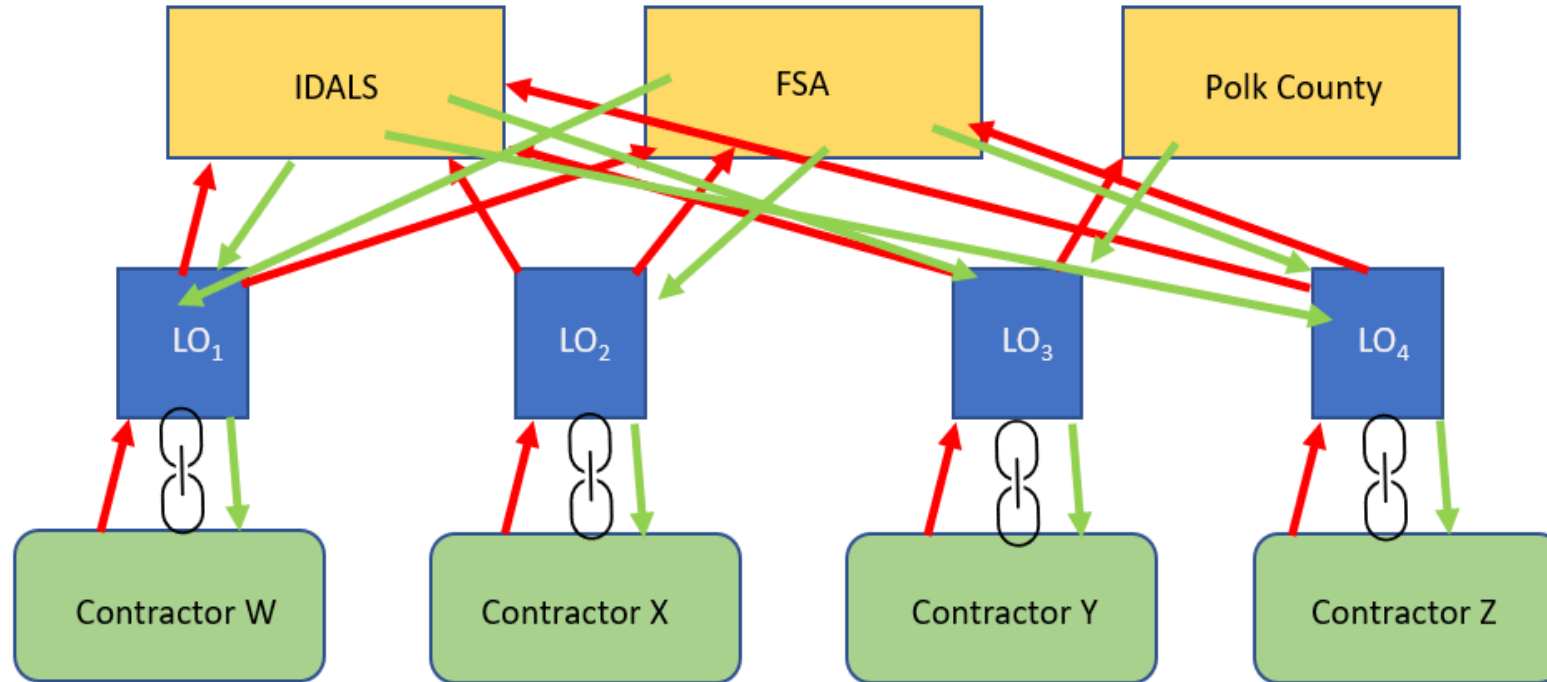


The First Batch and Build

- ◆ Watershed Management Plan- 300 outlet goal/10 year
- ◆ 6 completed from 2015-2019
 - ◆ 100% cost share
 - ◆ Monitoring funds available
- ◆ How do we increase adoption? Batch and Build!
 - ◆ Targeting
 - ◆ Hassle factor
 - ◆ Contractors
 - ◆ Simplify the process
 - ◆ Prioritize Saturated Buffers

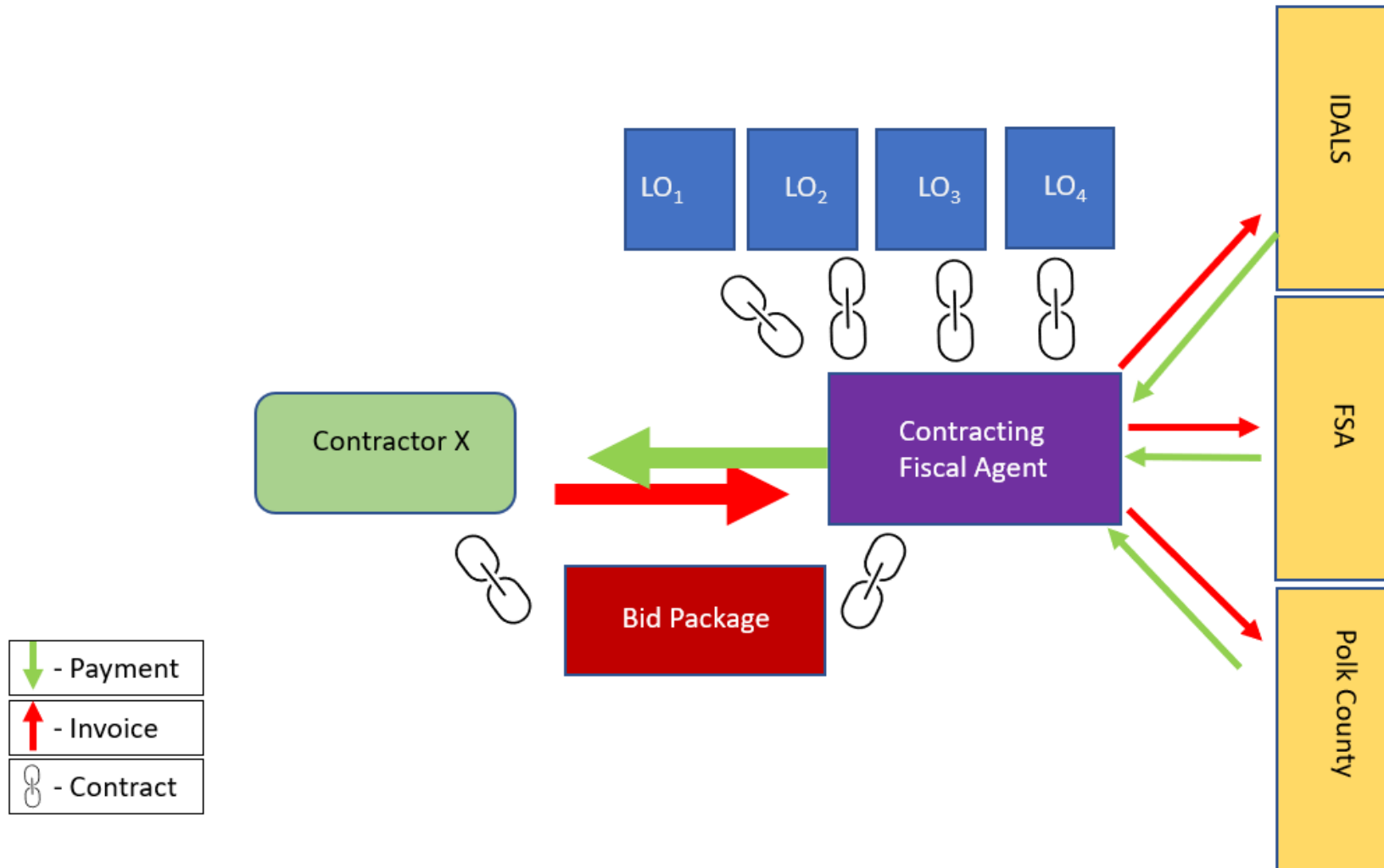


Conventional Funding Model



- ↓ - Payment
- ↑ - Invoice
- ⌘ - Contract

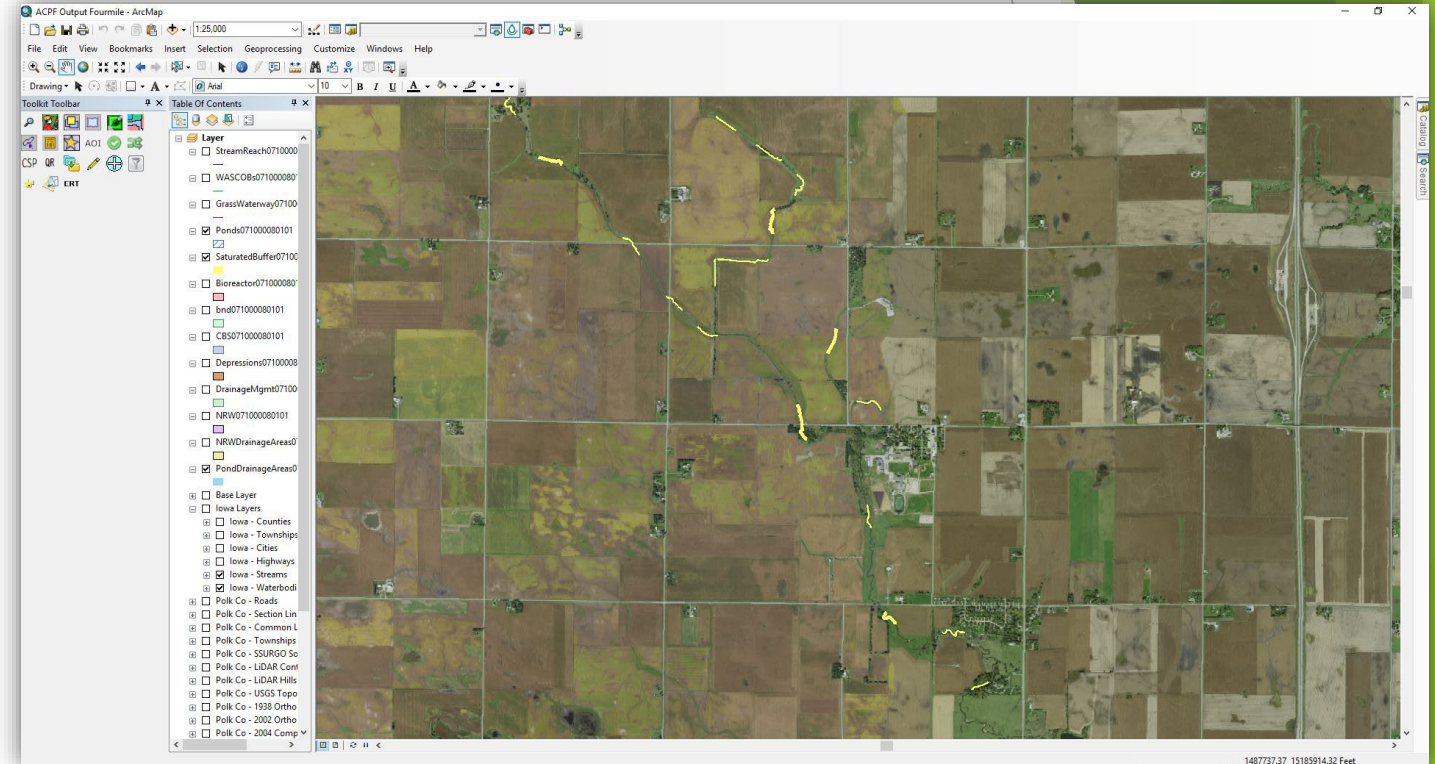
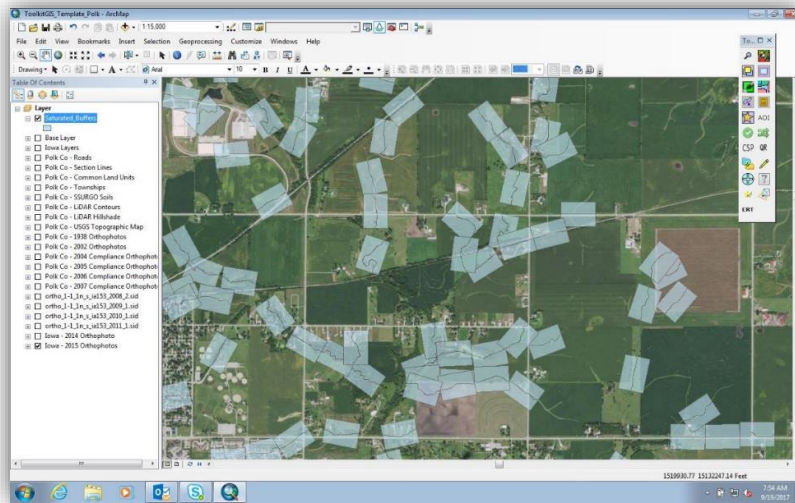
Fiscal Agent Funding Model



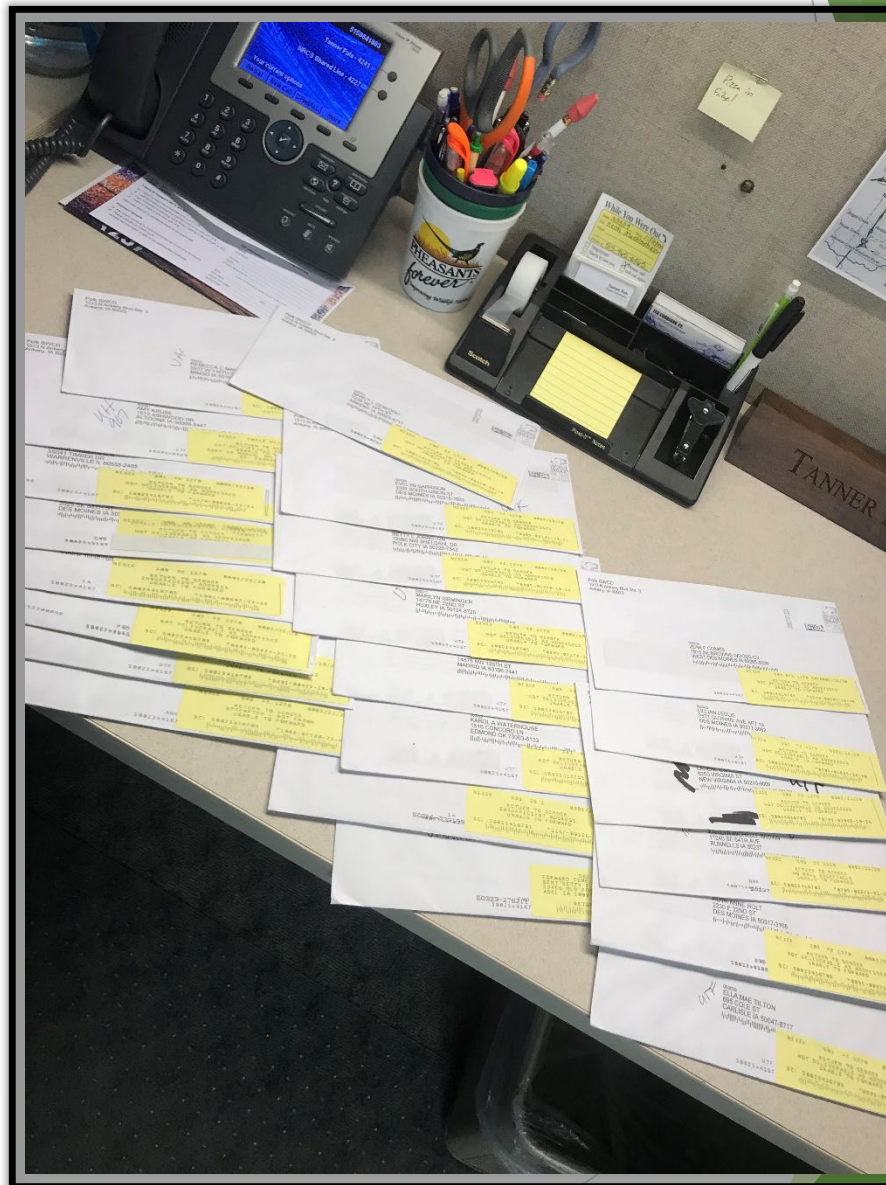
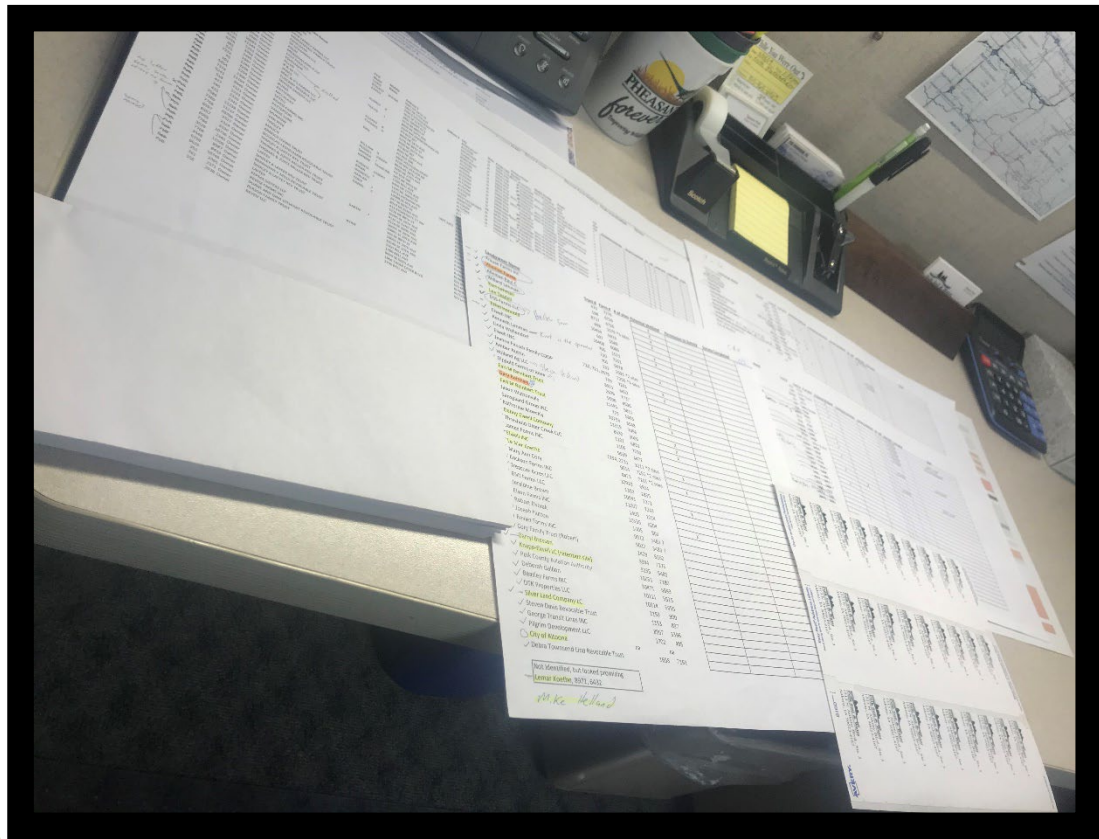
The Steps: Finding Sites

ACPF Tool

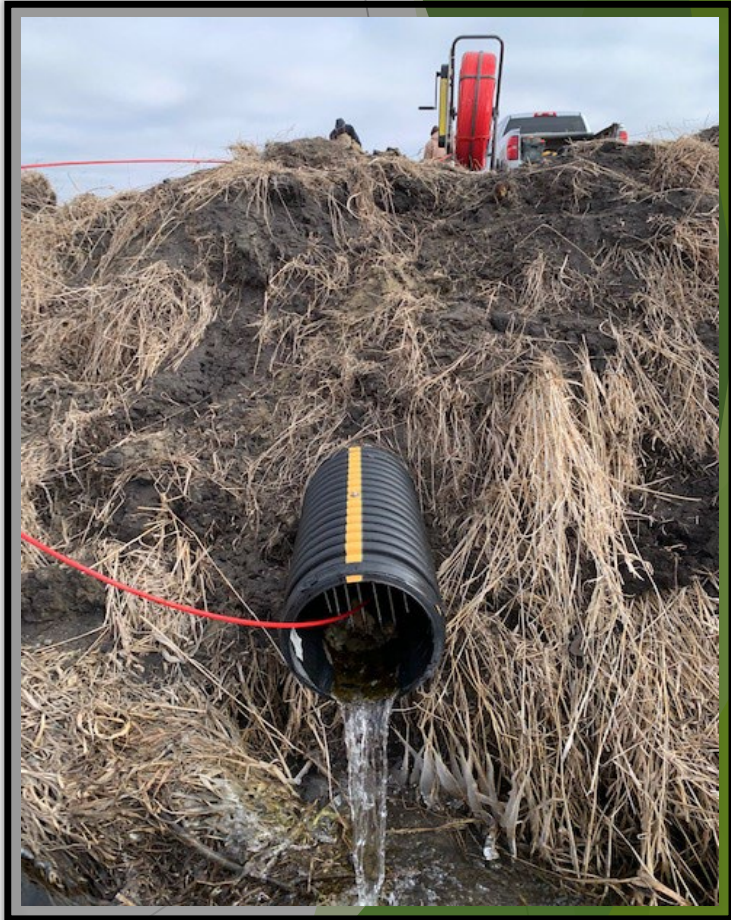
- Completed for all watersheds
- Used for targeted outreach



The Steps: Outreach

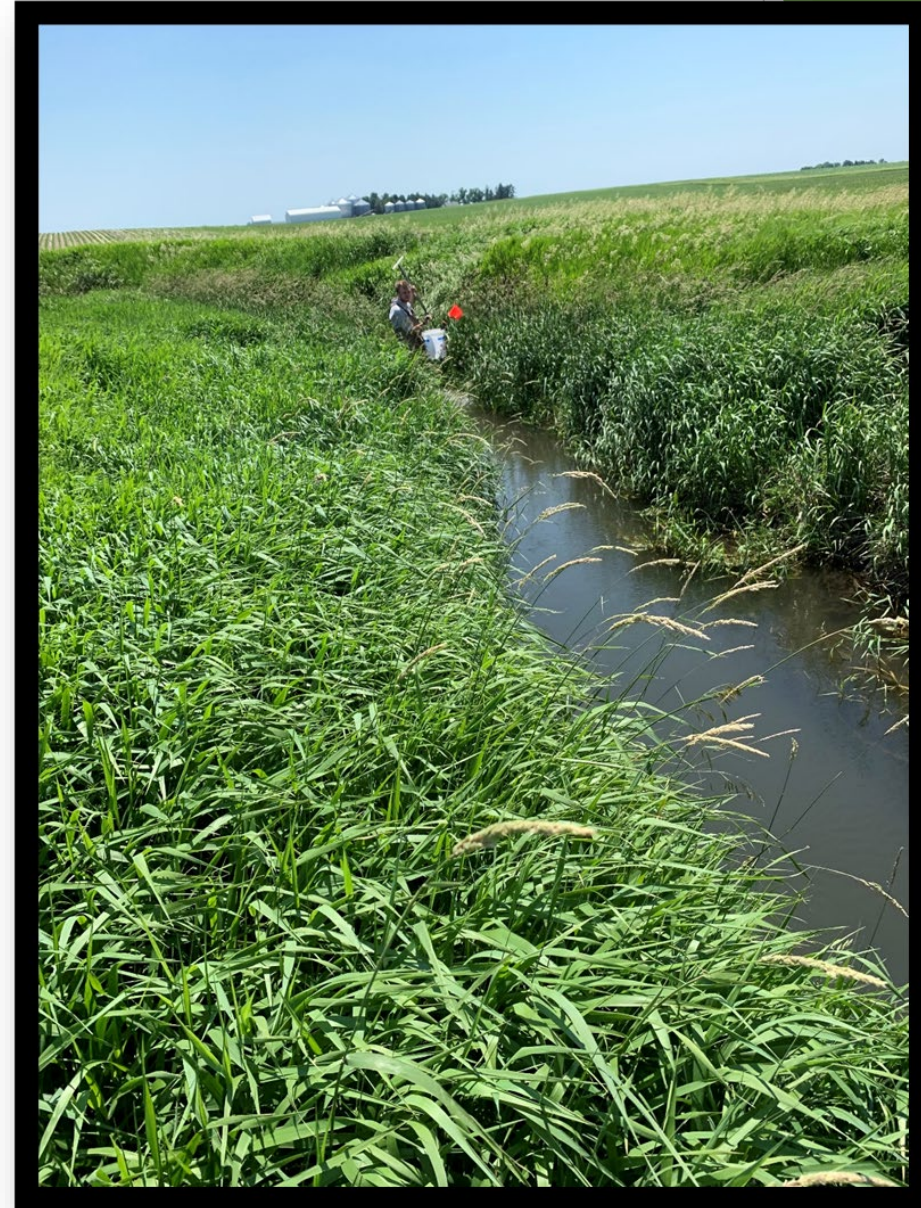


129 Sites Surveyed



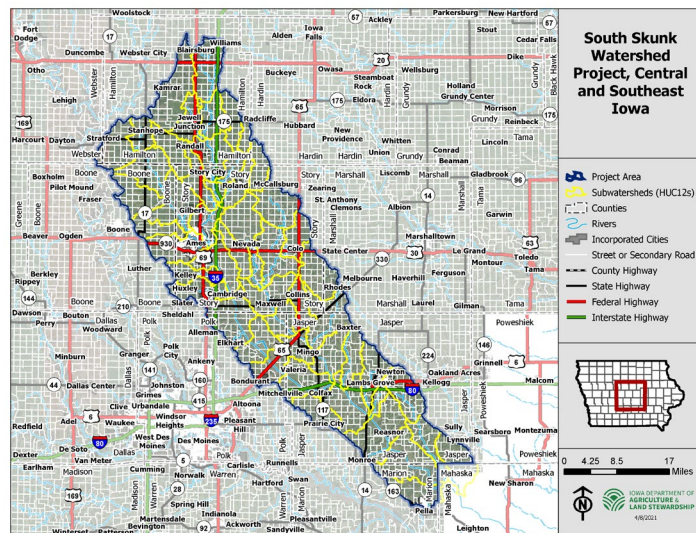
What are the numbers?

- Year 1 Goal - 25 Saturated Buffers
- Year 1 Results
 - 51 Outlets treated (12 landowners)
 - Total Project cost \$426,077
 - 10 Bioreactors, 41 Saturated Buffers
- Year 2 Results
 - 48 Outlets treated



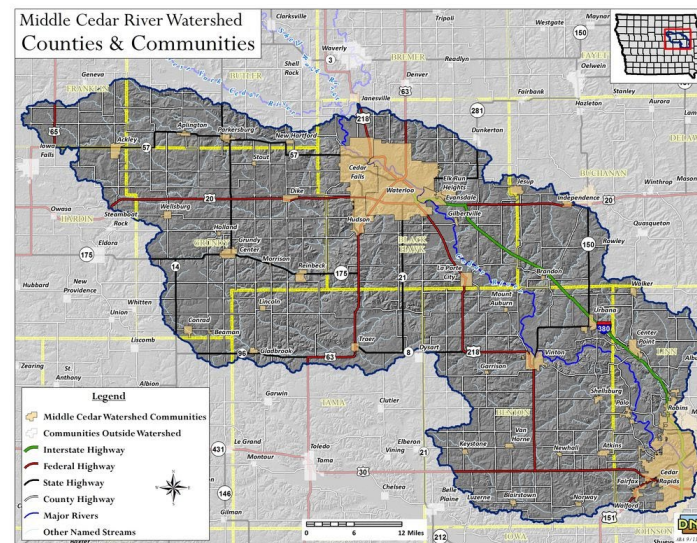
Expanding Batch and Builds

◆ Story County



- ◆ 20 outlets treated
- ◆ Working with City of Ames and Story County Conservation
- ◆ Fall 2022 construction

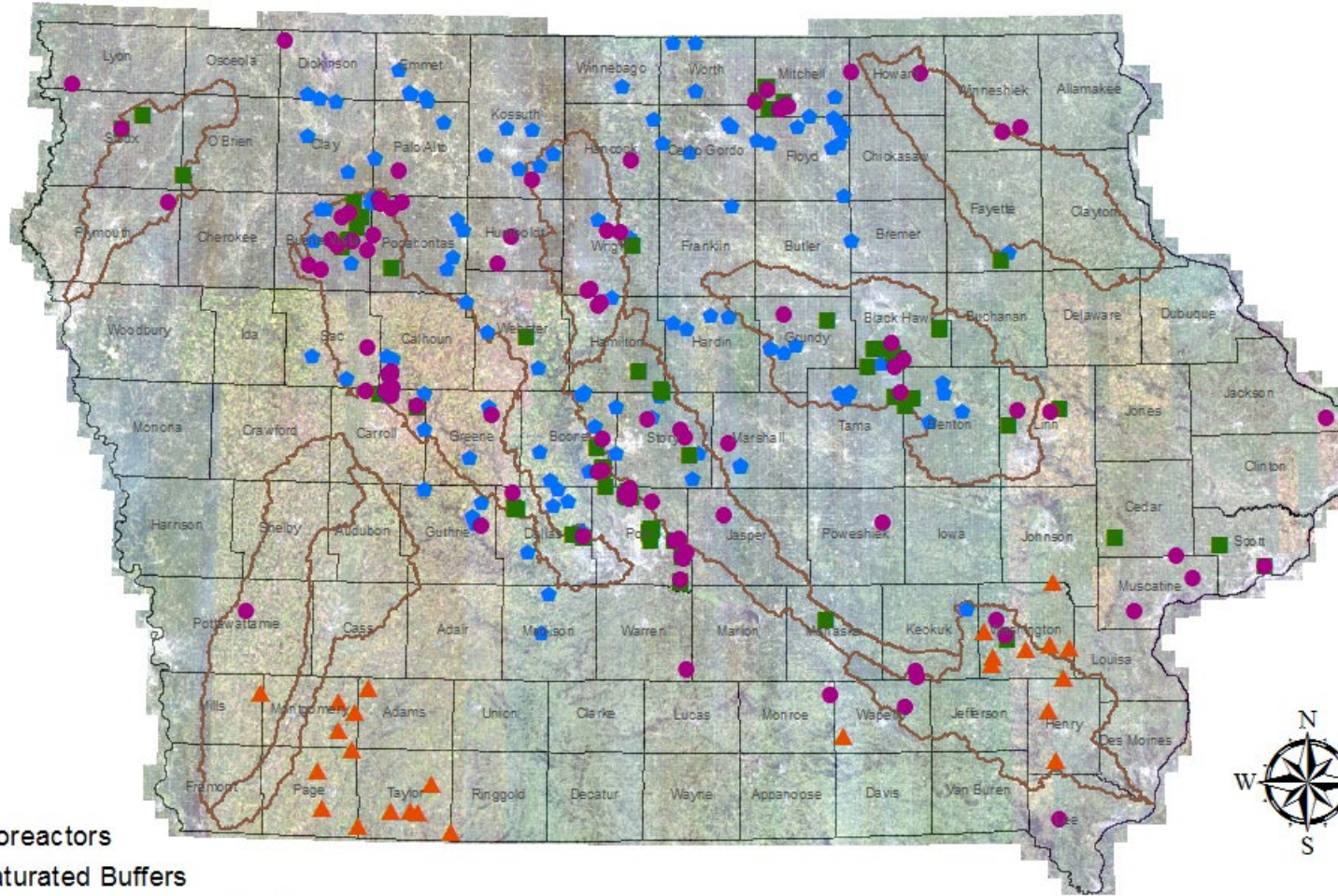
◆ Middle Cedar



- ◆ 6 counties involved
- ◆ Multiple project coordinators
- ◆ Spring/Summer 2023 construction

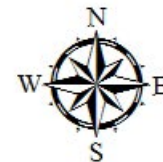
Statewide Efforts

Water Quality Infrastructure - 2022



- Bioreactors
- Saturated Buffers
- ▲ Grade Stabilization Structures
- Wetlands
- ▭ NRS Priority HUC8 Watersheds
- ▭ Counties

0 12.5 25 50 75 100 Miles



Contact for answers!



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