

**2023 ANNUAL REPORT**

# **ACCELERATING IOWA'S SOIL CONSERVATION AND WATER QUALITY PROGRESS**



**IOWA DEPARTMENT OF  
AGRICULTURE &  
LAND STEWARDSHIP**

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## UPDATE FROM SECRETARY MIKE NAIG

2023 was a milestone year for conservation and water quality in Iowa. Not only did we recognize 10 years of the state's Nutrient Reduction Strategy and 50 years of cost-share through the Iowa Financial Incentives Program, but we also set yet another record for conservation implementation in the state. More Iowans than ever are saying "Yes" to conservation.

Department-wide, our programs continue to see record utilization - in cost-share dollars invested, dollars leveraged, and in total practices implemented. We've gone from approximately 10,000 acres of cover crops statewide a decade ago to nearly 4 million today. We've completed 133 wetlands and have dozens of additional sites in the design process as we head toward our goal of building 30 per year. We invested in 108 urban projects, including 14 this year, demonstrating that conservation can be accomplished in communities big and small. We've built hundreds of saturated buffers and bioreactors through our innovative and highly efficient "batch and build" model, which is also now being adopted for use by other states. With eight active "batch and build" agreements in place and more in development, there's ample room for growth. We launched 13 new or expanded Water Quality Initiative projects in targeted watersheds in 2023 with the help of more than 350 public and private partners. This work is unquestionably making a difference.

This success would not be possible without the strong and ongoing funding support from Governor Reynolds and the Legislature. I am very thankful for this leadership and commitment. Because of our trailblazing approach - from our Nutrient Reduction Strategy to dedicated funding sources to practice implementation models - our innovative work is now serving as a blueprint for other states.

We know that positive changes to the land will lead to more positive impacts to our water. And even though Iowa State University's dashboard measurements show that we are making progress towards the goals of the Nutrient Reduction Strategy, we are far from satisfied. We want to push further every year, continually recruiting more farmers, landowners and partners. Conservation records exist to be broken and that's what we intend to keep doing. We've come a long way, yet we still have a long way to go.

Iowa's economy depends on agriculture and agriculture depends on our natural resources. Because of many who are continually championing these efforts, we are building a thriving culture of conservation in this state. Without question, the investments we are making, the partnerships we are forming, the practices we are implementing, and the water quality momentum we are accelerating will benefit not just the Iowans of today but the generations of Iowans yet to come.




## WATER QUALITY & SOIL CONSERVATION HIGHLIGHTS

**3.8M** COVER CROP ACRES STATEWIDE  
(\*2022 INREC SURVEY)

**286** SATURATED BUFFERS AND  
BIOREACTORS COMPLETED

**\$23.2M** STATE COST-SHARE  
INVESTMENT

**300+** SATURATED BUFFERS AND  
BIOREACTORS IN DEVELOPMENT

**\$43.2M** ESTIMATED FARMER AND OTHER  
PARTNER CONTRIBUTIONS

**133** WETLANDS  
COMPLETED

**6,000+** FARMERS AND LANDOWNERS  
PARTICIPATING IN DEPARTMENT PROGRAMS

**60+** WETLANDS IN  
DEVELOPMENT

# ANOTHER RECORD YEAR FOR CONSERVATION

The Iowa Department of Agriculture and Land Stewardship, working with Iowa’s 100 Soil and Water Conservation Districts, USDA-NRCS, and many other partners, once again shattered a record for conservation and water quality practice adoption within Iowa during FY2023. While we are far from satisfied with our results and we have much more work to do, we are unquestionably making water quality and soil conservation progress. The acceleration of this important work will only continue to build as more farmers, landowners, partners, practices, people and resources are added in the years and decades ahead.

## RECORD CONSERVATION COST SHARE IN FY2023

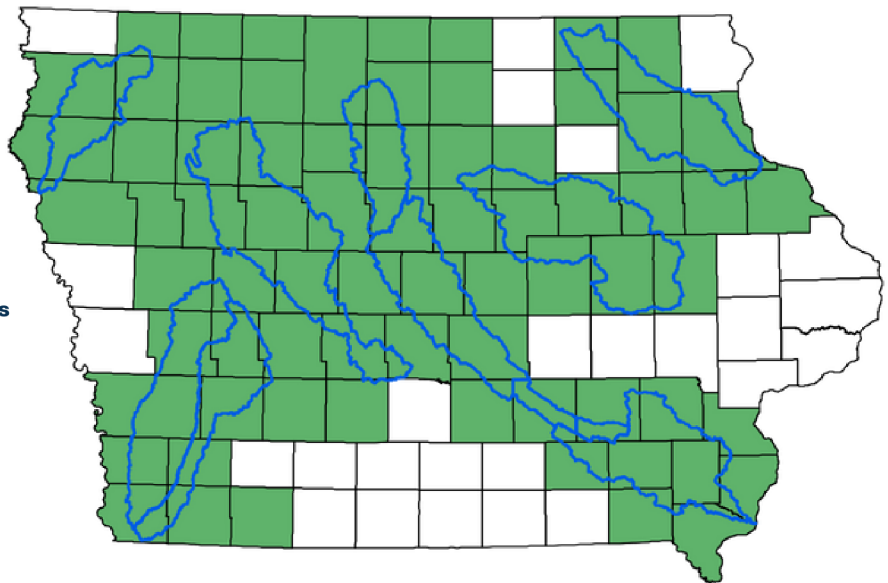
The following summary includes all Iowa Department of Agriculture and Land Stewardship cost-share programs but excludes edge-of-field practices and wetlands.

- \$23.2M State Cost-Share Contributions
- \$43.2M Estimated Farmer and Other Partner Contributions
- 6,000+ Farmers and Landowners Participated in FY2023

## WQI PROJECT AREAS

Though we target much of our water quality and soil conservation investments into priority watersheds, impactful work is happening and making a difference across the state.

-  Priority HUC-8 Watersheds
-  Counties with existing WQI projects



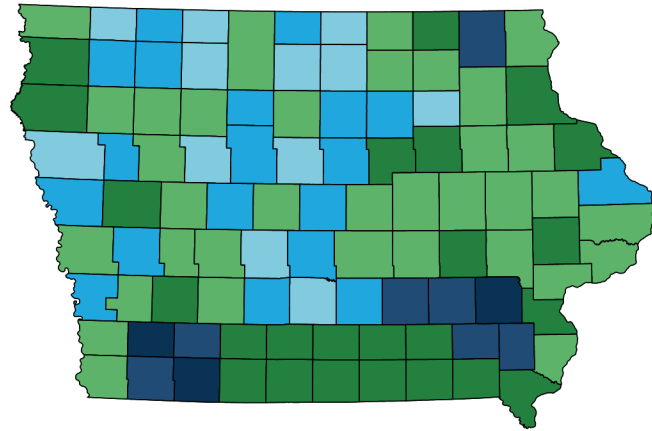
## LEVERAGING STATE FUNDS

EPA Gulf of Mexico	NRCS Mississippi River Basin	NRCS Regional Conservation Partnership Programs	Private/Non- Government Organizations	Conservation Infrastructure Program
<b>\$3.3M</b>	<b>\$20.7M</b>	<b>\$142.4M</b>	<b>\$963,600</b>	<b>\$25M</b>

*Note: Summary is the total amount received since the start of the WQI and directly tied to WQI activities. Many of these projects are multi-year and are in various stages of their project term. These totals do not include investments made by individual farmers or landowners.*

# INCENTIVES FOR CONSERVATION ADOPTION PROVIDED TO IOWA FARMERS AND LANDOWNERS

Diverse landforms across Iowa directly affect the cost and type of conservation practices best suited for each field and impact the funding each county needs and receives.



## FY2023 COST-SHARE DOLLARS EXPENDED BY DISTRICT

- < \$50,000
- \$50,000 - \$100,000
- \$100,000 - \$250,000
- \$250,000 - \$500,000
- \$500,000 - \$750,000
- \$750,000 +

## PERMANENT STRUCTURES FUND ONGOING BENEFITS

## TONS OF SOIL SAVED PER YEAR

<b>497</b> TERRACE PROJECTS, COVERING 1,271,508 FEET	<b>32,692</b>
<b>122</b> GRADE STABILIZATION STRUCTURE PROJECTS	<b>21,884</b>
<b>92</b> WATER AND SEDIMENT CONTROL BASIN PROJECTS	<b>5,819</b>
<b>121</b> GRASSED WATERWAY PROJECTS	<b>6,386</b>

## PRACTICE EXAMPLES



TERRACES



COVER CROPS



GRASSED WATERWAYS



WATER AND SEDIMENT CONTROL BASINS



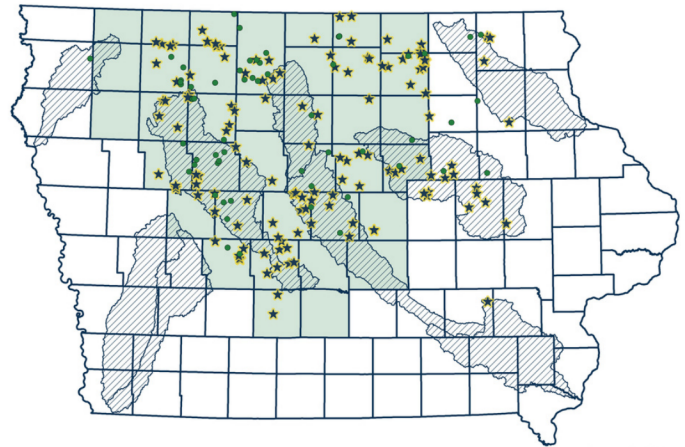
GRADE STABILIZATION STRUCTURES

## HOW COST SHARE WORKS

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Legislature appropriates funding	Department allocates funds to Soil and Water Conservation Districts (SWCD)	Farmers and landowners apply for cost share at SWCD offices	SWCD Commissioners approve cost share applications	Local contractors install conservation practices	Conservation practices improve soil health and water quality

# WATER QUALITY WETLANDS

Water quality wetlands do an excellent job of filtering water before it reaches our rivers, lakes and streams. However, these beautiful additions to our landscape also provide important habitat for wildlife. Research and ongoing monitoring by Iowa State University has demonstrated that strategically sited and designed nutrient reduction wetlands remove up to 90% of nitrates from cropland drainage waters, providing a high return on investment for this efficient and effective permanent practice. In 2023, the Department announced an expanded partnership with Ducks Unlimited and is working with other partners to accelerate the construction of even more wetlands going forward. To date, 133 wetlands have been built with dozens more in the design process as we head toward our goal of building 30 per year.



- ★ COMPLETE (133)
- IN PROGRESS (59)
- ▨ PRIORITY HUC8 WATERSHEDS
- CREP-ELIGIBLE COUNTIES

**133**

WATER QUALITY WETLANDS HAVE BEEN CONSTRUCTED

**1.8M+**

POUNDS OF NITROGEN REMOVED FROM THE WETLANDS ANNUALLY

**\$0.27/lb.**

AVERAGE N-REMOVAL COST OF NUTRIENT REDUCING WETLANDS

**137,778**

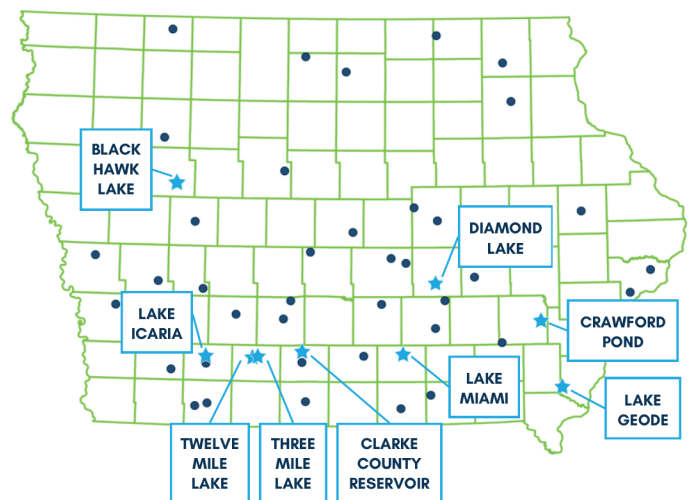
EST. TONS OF NITRATES WILL BE REMOVED OVER THEIR LIFETIMES

**1,359**

ACRES OF WETLAND PROTECTING A COMBINED 158,869 ACRES OF WATERSHED

# PUBLICLY OWNED LAKES

Iowa's many public lakes are key assets to our state, and we want to ensure that Iowans can enjoy these beautiful attractions for generations to come. This program, which is jointly administered by the Iowa Department of Agriculture and Land Stewardship and the Iowa Department of Natural Resources, provides cost-share funding to landowners for conservation practices on private land within watersheds above publicly owned lakes and reservoirs. Eligible practices include soil conservation and water quality practices that reduce nutrient loss and sediment delivery to Iowa's public lakes. These resources complement additional efforts by the agencies and their public and private partners to enhance and protect water quality in Iowa lakes and other surface waters. Each year, a minimum of five percent of the appropriation to the Iowa Department of Agriculture and Land Stewardship for soil conservation cost share is targeted for protecting the water quality of publicly owned lakes in Iowa.



- FY 2006 - 2022 PROJECTS
- ★ FY 2023 PROJECTS

# INNOVATIVE “BATCH AND BUILD” MODEL RAMPS UP

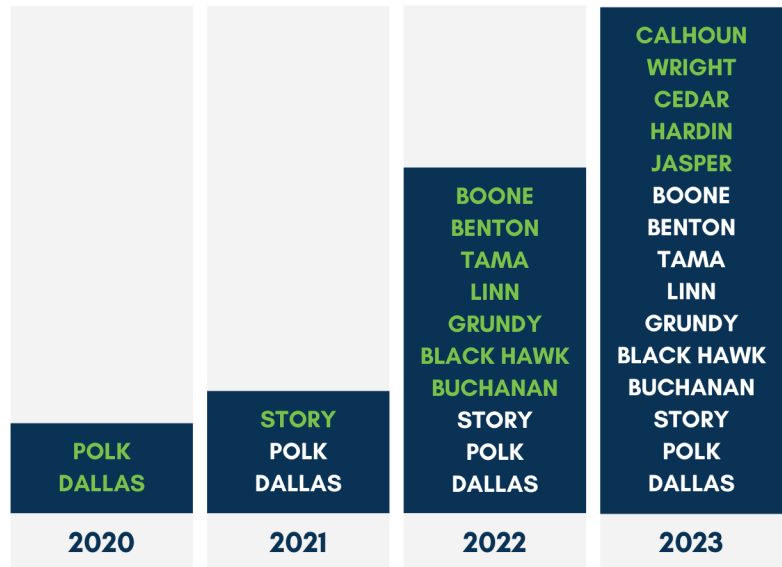
The “Batch and Build” model modernizes and streamlines the project management process by installing batches of edge-of-field conservation practices on multiple farms at once, therefore allowing a faster acceleration of water quality progress. The model is used to install bioreactors and saturated buffers, which filter and denitrify water as it leaves the farm field and before it enters our waterways.

- **8** active Batch and Build agreements in place, installing practices in **15** different counties.
- **5** more Batch and Build agreements in planning stages with local partners.



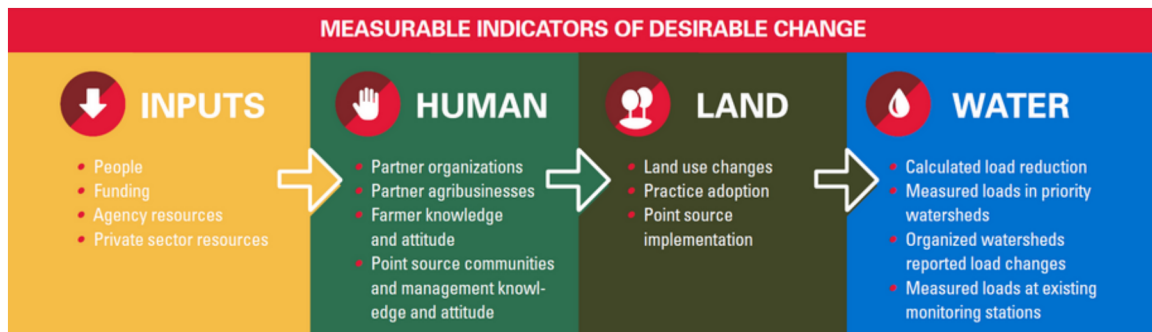
Saturated buffer in Cedar Creek

## COUNTY PARTICIPATION BY YEAR



## PARTNERS IN MEASURING PROGRESS

In 2021, the Iowa Department of Agriculture and Land Stewardship, Iowa Department of Natural Resources, and Iowa State University launched an online dashboard to improve the Iowa Nutrient Reduction Strategy’s reporting process. The online dashboard uses visual reporting tools, including charts, graphs and maps to share the data. The online dashboard is updated regularly as data is collected from a variety of sources and partners. Each update focuses on one of the “measurable indicators of desirable change” – inputs, human, land and water – that guide the Nutrient Reduction Strategy. The online dashboard is available at [nrstracking.cals.iastate.edu](http://nrstracking.cals.iastate.edu).



*The Logic Model of the Iowa Nutrient Reduction Strategy, which is guided by measurable indicators of desirable change.*

# URBAN CONSERVATION SURPASSES 100 PROJECTS STATEWIDE

**WHAT IS URBAN CONSERVATION?** Whether you live in an urban, suburban or rural area, all Iowans have an important role in protecting and improving our state’s water quality.

The Department provides financial and technical assistance to communities and organizations implementing urban water quality practices. To receive state funding, urban water quality projects must include education and outreach components and involve local partners. These community-based projects raise awareness about new stormwater management methods and encourage others to adopt similar infrastructure-based practices to improve water quality. Urban conservation projects include water quality practices like bioretention cells, bioswales, native plantings, permeable pavers, rain gardens, soil quality restoration, wetlands and many other proven practices. These practices help to slow the flow of water, which helps to reduce downstream erosion and flood risk, by capturing stormwater from impervious surfaces to reduce pollutants such as sediment and nutrients before it drains to a water source.

## URBAN CONSERVATION SNAPSHOT

	PROJECTS	ALLOCATED IN WQI FUNDS	LEVERAGED FROM APPLICANTS AND PARTNERS
<b>IN 2023</b>	<b>14</b>	<b>\$2.2M</b>	<b>\$10.3M</b>
<b>SINCE 2015</b>	<b>108</b>	<b>\$10.3M</b>	<b>\$39.8M</b>

### SUCCESS IN WAUKON

The City of Waukon used WQI urban conservation funding to construct a stormwater wetland that treats runoff from 61 acres above the city park. The wetland treats nearly 850,000 gallons of stormwater and reduces the flow rate of the water after a storm event. The wetland was just one phase of a larger project that included the installation of a bioretention cell and permeable pavers, which treats stormwater from nine acres. These practices protect an additional 40,000 gallons of water. Native prairie species were also planted on over eight acres to help filter stormwater and provide habitat for wildlife and pollinators.



*Stormwater wetland and bioretention cell in Waukon*



*Permeable pavers and a bioretention cell in Waukeke*

### SUCCESS IN WAUKEE

The City of Waukeke incorporated bioretention cells and permeable pavers into the new parking lot for the city library. The bioretention cells were placed in the islands of the parking and around the building. The pavers were installed in the parking spaces of the lot to capture water and these practices treat 150,000 gallons of water from eight acres. There is an additional 20 acres that drains into a wet pond adjacent to the library parking lot. The pond stores over 1 million gallons of stormwater and slows down the flow of water before it enters nearby Sugar Creek. Signage was placed near the practices and inside the library to educate visitors about stormwater management techniques.

# CATTLE AND CONSERVATION PARTNERSHIP PROJECT EXPANDS

A successful Water Quality Initiative project that started in Taylor and Page counties expanded in 2023 into five more western Iowa counties, including Carroll, Guthrie, Cherokee, Ida and Woodbury.

The Department and other partners work with farmers and landowners by using precision ag tools to identify, build and expand opportunities for forage-based crops where row crops are less profitable. Assistance is provided to cattle producers on an individual basis to evaluate their operations and goals on a sub-field level and to identify the best opportunities to target conservation practices. Goals and practice priorities include grazing and hay land planting, installing grade stabilization structures that incorporate watering systems, promoting extended crop rotations, incorporating the use of cover crops in livestock operations, and engaging with new and beginning farmers.

Since 2016, when the initial project launched, more than 62,500 acres of cover crops have been planted, 5,600 acres of cropland have been converted to forage-based systems, and 32 grade stabilization structures have been constructed.

The project combines \$10.8 million in funding from both state (Water Quality Initiative) and federal (RCPP) sources. Additional partners include the Cherokee, Ida, Woodbury, Carroll and Guthrie County Soil and Water Conservation Districts, Cherokee and Carroll County Cattlemen, Iowa Cattlemen's Association, Iowa Beef Industry Council, Coalition to Support Iowa's Farmers and Iowa State University.

The project reinforces that cattle and conservation make for a great combination and that this innovative model is scalable and can be replicated statewide. Farmers and landowners are proving that they can conserve and protect our valuable natural resources while also keeping Iowa's farmland working in ways that keep family farms productive.



*Grazing and hay land planting, grade stabilization structures, and cover crops in Taylor and Page counties.*