



IOWA DEPARTMENT OF
**AGRICULTURE &
LAND STEWARDSHIP**

2024 ANNUAL REPORT

Accelerating Iowa's Soil Conservation and Water Quality Progress

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UPDATE FROM SECRETARY MIKE NAIG

I am pleased to provide the Legislature with an annual update on our statewide efforts to improve Iowa's water quality and protect our valuable soil.

Iowans, once again, demonstrated a strong commitment to protecting our state's rich natural resources with yet another record-setting year for conservation. For the third consecutive year, the Iowa Department of Agriculture and Land Stewardship, in partnership with Iowa's 100 Soil and Water Conservation Districts (SWCDs), farmers, landowners, and public and private partners, have set a record for the implementation of proven practices within Iowa.

That's great news.

And this acceleration would not be possible without the continued long-term, dedicated funding made possible by the steadfast support of the Legislature and Governor Reynolds.

For the fiscal year ending on June 30, 2024, \$27.1 million was spent in state cost-share assistance, which was an increase of nearly \$3.8 million from the previous year, also a record. Farmers and landowners and public-private partners also contributed \$41.2 million of their own resources, proving their commitment to improving Iowa's soil and water.

The increase in cost-share leads to an increase in practices. More practices in turn yields more improvements in our water quality and soil health. The state is paying 900 more cost-share reimbursements today than it was in 2022, and 2,000 more than a decade ago. Whether it's cover crops and nutrient management or terraces and grass waterways, these practices work, and we continue to see growing utilization by Iowans.

Notably, these record cost-share totals do not consider all other conservation and water quality financial assistance and funding paid by farmers and landowners, other government entities, and other private partners. They also do not factor in other programs including our water quality wetlands program and batch and build projects for saturated buffers and bioreactors, among many others.

For example, our urban conservation program this year surpassed 125 urban conservation projects completed in the last decade. Our wetland program produced significant progress toward our goal of building 30 wetlands per year. We closed the last of the state's 195 ag drainage wells, concluding this program's work to protect groundwater that has spanned more than a quarter-century. We're constructing more grade stabilization structures, establishing more multi-purpose oxbows, and are expanding our popular cattle and conservation working lands program. With 11 batch and build agreements covering 27 counties, hundreds of bioreactors and saturated buffers have been built and hundreds more are in the construction or planning phase.

And while these highlights are exciting, we also know there is much more work to be done. As we continue to implement the state's Nutrient Reduction Strategy, it's important to recognize that the adoption of practices is a long-term effort that takes time, planning, resources, and commitment to show its full impact.

To ensure that Iowa's water and soil are protected for the benefit and enjoyment of future generations, we must keep accelerating. The records we've set this year are proof that when we work together, we can achieve great things.



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, Iowa State University and many other partners, once again shattered a record for conservation and water quality practice adoption within Iowa during FY2024. The acceleration of this important work will continue to build as more farmers, landowners, partners, practices, people and resources are added in the years and decades ahead. 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.

WATER QUALITY & SOIL CONSERVATION HIGHLIGHTS

3.8M COVER CROP ACRES STATEWIDE
(*2023 INREC SURVEY)

439 SATURATED BUFFERS AND BIOREACTORS COMPLETED

\$27.1M STATE COST-SHARE INVESTMENT

300+ SATURATED BUFFERS AND BIOREACTORS IN DEVELOPMENT

\$41.2M ESTIMATED FARMER AND OTHER PARTNER CONTRIBUTIONS

139 WETLANDS COMPLETED

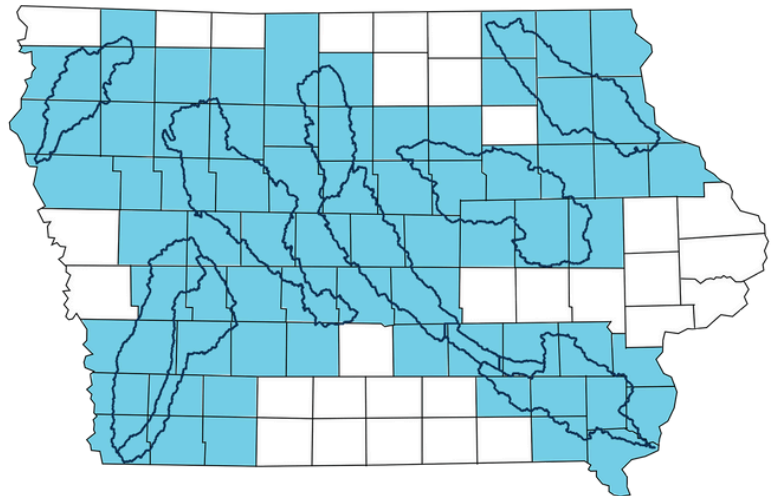
7500+ FARMERS AND LANDOWNERS PARTICIPATING IN DEPARTMENT PROGRAMS

88 WETLANDS IN DEVELOPMENT

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

\$3.3M EPA GULF OF MEXICO

\$1.05M PRIVATE/NON-GOVERNMENT ORGANIZATIONS

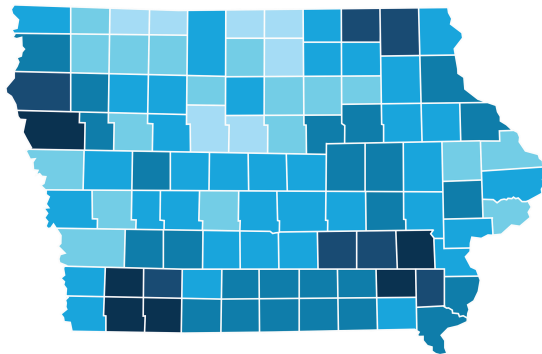
\$34.7M NRCS MISSISSIPPI RIVER BASIN

\$25M CONSERVATION INFRASTRUCTURE PROGRAM

\$142.4M NRCS REGIONAL CONSERVATION PARTNERSHIP PROGRAMS

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



FY2024 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 +

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.

PERMANENT STRUCTURES FUND ONGOING BENEFITS

453 TERRACE PROJECTS COVERING 1,271,508 FEET
123 GRADE STABILIZATION STRUCTURE PROJECTS
116 WATER AND SEDIMENT CONTROL BASIN PROJECTS
141 GRASSED WATERWAY PROJECTS

TONS OF SOIL SAVED PER YEAR

30,562
66,396
6,816
13,795

DID YOU KNOW?
THAT'S EQUAL TO

= 2,183
= 4,742
= 486
= 985



DUMP TRUCK LOADS OF SOIL

PRACTICE EXAMPLES



TERRACES



COVER CROPS



GRASSED WATERWAYS



WATER AND SEDIMENT CONTROL BASINS



GRADE STABILIZATION STRUCTURES

HOW COST SHARE WORKS



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



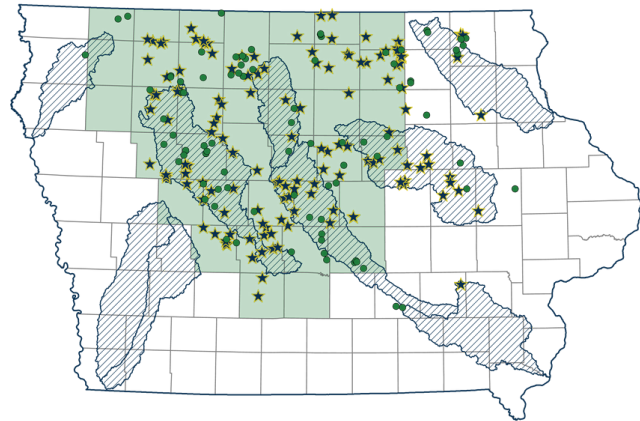
Local contractors install conservation practices



Conservation practices improve soil health and water quality

WATER QUALITY WETLANDS

Water quality wetlands do an excellent job of filtering remaining nutrients from water before it reaches our rivers, lakes and streams. However, these beautiful additions to our landscape also provide important habitat for wildlife and pollinators, flood mitigation and much more. Research and ongoing monitoring by Iowa State University has demonstrated that strategically sited and designed nutrient reduction wetlands remove an average of 40–70% of nitrates from cropland drainage waters, providing a high return on investment for this efficient and effective permanent practice. To date, 139 wetlands have been built with dozens more in the design process.



★ COMPLETE (139)
● IN PROGRESS (88)
▨ PRIORITY HUC8 WATERSHEDS
■ CREP-ELIGIBLE COUNTIES

139 WATER QUALITY WETLANDS HAVE BEEN CONSTRUCTED

1.8M+ POUNDS OF NITROGEN REMOVED BY WETLANDS ANNUALLY

\$0.27 AVERAGE N-REMOVAL COST OF NUTRIENT REDUCING WETLANDS PER POUND

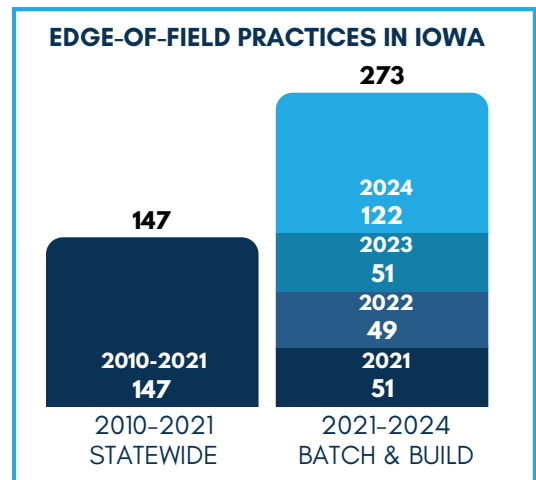
275M+ EST. POUNDS OF NITROGEN WILL BE REMOVED BY WETLANDS OVER THEIR LIFETIMES

158K+ WATERSHED ACRES PROTECTED BY 1,359 ACRES OF WETLANDS

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, accelerating adoption. 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.

- The Department deployed this model in 2020.
- **11** active Batch and Build agreements in place, installing practices in **27** different counties, with more agreements in planning stages with local partners.

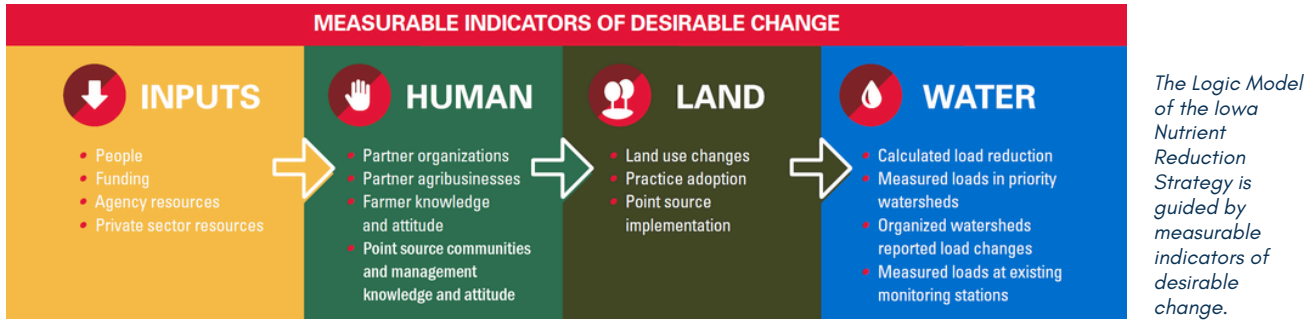


THE YEAR BATCH & BUILD MODEL EXPANDED INTO COUNTY



MEASURING PROGRESS

The Nutrient Reduction Strategy's online dashboard uses visual reporting tools, including charts, graphs, and maps to share the statewide progress being made. The dashboard is updated quarterly as data is collected from a variety of sources and public and private 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 dashboard is available at nrstracking.cals.iastate.edu.



SECRETARY NAIG COMMISSIONS WATER QUALITY MONITORING RESEARCH PROJECT

The Iowa Department of Agriculture and Land Stewardship has commissioned a multi-year research project in April 2024 to monitor the impacts of installed water quality practices. The data will further refine which science-based practices may be the best fit for various landscapes, and then guide the addition of future practices to have the greatest positive nutrient reduction benefit.

In addition to the Department, the research partnership includes Iowa State University and the Iowa Department of Natural Resources, the other two principals of the Iowa Nutrient Reduction Strategy (NRS). ISU will subcontract with the United States Geological Survey (USGS) to help conduct some of the research, which has recently concluded similar work for the State of Illinois.

The project is expected to cost approximately \$2.7 million, with USGS providing approximately \$249,000 of the funding for the statewide nutrient monitoring component. The additional funding will be provided through the state's Water Quality Initiative.

The research includes the following areas of focus:

- Assess the current structure of statewide nutrient load monitoring and methodology reported on the NRS dashboard and identify opportunities to improve and refine the methodology to advance future reporting.
- Evaluate the successes and impacts of edge-of-field practice deployment in targeted watersheds while factoring in the scale of practice implementation compared to the size of the area assessed.
- Measure the performance of existing, individual edge-of-field practices to support the improved delivery of future practices.
- Quantify the additional benefits of water quality wetlands, which can include habitat for wildlife and pollinators, flood mitigation, and more.
- Conduct field investigations and surveys and offer design assistance and training opportunities to enhance the technical capacity available to support and accelerate adoption.

This project will further maximize the impact of the state's conservation funding and accelerate water quality practice implementation across Iowa. The research is expected to conclude by September 2027.

URBAN CONSERVATION HIGHLIGHTS

SIOUX CENTER WET POND

The city of Sioux Center was seeing new development in the southeast part of town, an area that drains to a tributary of the West Branch of the Floyd River. Instead of using traditional grey infrastructure to collect and pipe stormwater to the creek, they opted to install a wet detention pond to capture and treat the water from a 145-acre drainage area. The city received a \$100,000 WQI grant as well as funding through the State Revolving Fund Water Resource Restoration Sponsored Projects program. This four-acre pond not only treats the water quality volume from small, more frequent storms, but it also manages the runoff from large storm events to minimize flood risk. The pond has a multi-stage outlet pipe that allows the water to be retained longer, which helps to manage the outflow and reduce downstream flooding and erosion.



URBAN CONSERVATION SNAPSHOT

Includes WQI and other funding sources

	PROJECTS	ALLOCATED FUNDS	LEVERAGED FROM APPLICANTS AND PARTNERS
IN 2024	16	\$3.6M	\$7.2M
SINCE 2015	126	\$14.7M	\$48.5M

GLENDALE CEMETERY WET POND REHABILITATION

In the spring of 2023, the Department awarded the City of Des Moines a \$250,000 urban water quality cost-share grant, utilizing funding from the state’s WQI and Conservation Infrastructure Program (CIP). The grant helped leverage a total of \$1 million from the city and local sources to complete the project. Rehabilitation work was completed in August 2024.

Glendale Cemetery Pond, which was originally constructed in 1939, is located at the headwaters of Waveland Creek Watershed, which flows into Walnut Creek, and, eventually, the Raccoon River. Prior to the rehabilitation project, the 2-acre pond, which receives urban runoff from approximately 122 acres, suffered from extensive shoreline erosion and sedimentation.

The rehabilitation process included draining water and removing sediment, which increased the pond’s storage capacity and reduced peak runoff rates and erosion downstream. To further reduce erosion and sedimentation, a modified outlet structure was installed to control the flow of water released following storm events, and the pond banks were re-shaped. Finally, native vegetation was planted to provide additional stabilization to the banks of the pond, deter unwanted waterfowl, provide food for pollinators and add to the public’s enjoyment.



BURDENSOME PERMITTING SLOWS WETLAND INSTALLATIONS, INCREASES COSTS

Water quality wetlands are one of the most effective practices that can be implemented for nutrient reduction. These structures are designed to intercept cropland runoff and filter the water by slowing it down, significantly reducing the quantity of nitrates that reach our rivers, lakes and streams. In addition to the water quality benefits, these wetland restorations offer wildlife habitat and can help mitigate flooding, while enhancing the beauty of Iowa's diverse landscapes.

Research and ongoing monitoring by Iowa State University has demonstrated that strategically sited and designed nutrient reducing wetlands can remove an average of 40 to 70 percent of nitrates from cropland drainage. Wetlands also provide a high return on investment when considering the permanent nature of these infrastructure-based practices, and their minimal footprint means less land is removed from crop production. Because of their numerous benefits, water quality wetlands are highly prioritized within Iowa's Nutrient Reduction Strategy and align with the goals of the Hypoxia Task Force.

The process to identify, develop, permit and ultimately install water quality wetlands has changed dramatically since Iowa began prioritizing this practice over a decade ago. One of the most impactful changes limiting implementation is the permitting process administered by the Army Corps of Engineers (ACOE). Throughout history, Iowa's landscape has been notably altered to facilitate the conversion of prairies and wetlands to agriculture. Many areas that were historically wetlands were converted to streams, ditches or erosional features to lower the water table and benefit crop production. The ACOE asserts jurisdiction on these areas as streams (anything with a continuous surface connection to streams and rivers) and limits alterations to prevent "conversion" from streams back to wetlands.

Unfortunately, due to requirements imposed by the ACOE, the Department and its partners must pursue a burdensome regulatory process that often results in significant delays and doubles construction costs at taxpayers' expense. One alternative is to construct wetlands in areas outside of the ACOE's jurisdiction, which may compromise the effectiveness of the practices. These options are a disservice to the citizens and taxpayers of Iowa, and are slowing down water quality progress.

The Department continues to be in regular communication with the ACOE in an effort to find a solution that reduces arbitrary requirements and accelerates water quality work across the state's diverse landscapes.

