



## **2023 ANNUAL REPORT**





his annual report for Agriculture's Clean Water Alliance is abundant with accomplishments for the 2023 fiscal year as our members and associate members continue to make positive impacts on Iowa's landscape. The report highlights achievements under our three Core Pillars: Leader & Advocate, Innovate & Sustain, and Science to Solutions. As ACWA grows, so do our goals. This report also offers a glimpse into future directions for ACWA.

Every day, this group lives up to the theme that accompanies our logo "Making Conservation Retail Real." Through new members, new partnerships, and new professionals, ACWA is assisting Iowa farmers and landowners in their profitability while making a difference in Iowa's water quality for all Iowa citizens.

- Roger Wolf, Executive Director

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### AWCA 2023 MEMBER REPRESENTATIVES



Front row (left to right): Harry Ahrenholtz, ACWA chairman; Molly Toot, Landus Cooperative; Greg Wandrey, Iowa Corn Growers Association; Thomas Fawcett, Heartland Co-op; John Van Diest, Van Diest Supply; Gregg Schmitz, Nutrien; Tim Mundorf, Central Valley Ag; Dan Dix, NEW Cooperative; Kristen Dearden, ACWA Membership and Communications Coordinator. Back row: Chris Petersen, Gold-Eagle Cooperative; Lacie Thomas, Koch Ag and Energy Services; Sean McMahon, Iowa Agriculture Water Alliance; Brent Hall, Truterra/Land O'Lakes; Dana Gee, Pro Cooperative; Dave Schwartz, Verdesian; Eric Scherder, Corteva; Roger Wolf, AWCA Executive Director.

## **ACWA MEMBERS**

#### AgState Cherokee | agstate.org

# AgState

AgState was formed in 2021, but the cooperative has been in existence collectively for more than 100 years. AgState has locations in 14 northwest lowa counties, most of which sit above the watersheds in the lowa Nutrient Reduction Strategy. The company believes in long-term sustainability and is proud to be a founding member of ACWA.

## **Central Valley Ag**

#### York, Nebraska | cvacoop.com

Joining ACWA in 2023, Central Valley Ag (CVA) was formed in 2003 by three Nebraska cooperatives and serves farmers in Nebraska, Kansas,



and Iowa. CVA offers agricultural products and services for cropping systems solutions including nutrient and soil management, carbon credits, grain premiums for sustainability practices, and organic farming. CVA leaders believe that being an ACWA member helps them fulfill the co-op's vision of ensuring sustainable agriculture for future generations.

## **Gold-Eagle Cooperative**

#### Goldfield goldeaglecoop.com

Gold-Eagle Cooperative is a founding member of ACWA. It was formed in 1908 as Farmers Elevator Company of Goldfield. In 1983, Farmers



Elevator merged with Farmers Cooperative Company of Eagle Grove to become Gold-Eagle Cooperative. Since then, they have expanded to include 16 locations in central Iowa. The company serves farmers in Wright, Humboldt, Kossuth, and Hancock counties in the heart of the Boone River watershed.

### **Heartland Co-op**

#### West Des Moines heartlandcoop.com

Heartland Co-op serves farmers in 70 locations across lowa as well



as in Nebraska and Texas. It was established in 1987 through a merger of cooperatives in Panora, Dallas

Center, Minburn and Granger. Its origins are truly centered in Iowa's heartland amid the Raccoon and Des Moines river watersheds, a main focus of ACWA. The company is a founding member of ACWA and has helped the organization become the leader in water quality that it is today.

## Helena Agri-Enterprises, LLC

#### West Des Moines | helenaagri.com

Headquartered in Tennessee, Helena Agri-Enterprises, LLC has been part of ACWA since the beginning. Helena has seven Iowa retail locations



and a wholesale group in Ankeny that serves retailers in Iowa and the surrounding states. Helena offers an array of crop inputs including fertilizer, seed, and chemicals as well as soil and tissue sampling, yield analysis, variable rate application recommendations, custom applications, and more. A subsidiary, Helena Industries, LLC, includes a facility in Des Moines that manufactures their products.

### Landus Cooperative

#### Ames | landuscooperative.com

One of Iowa's largest agriculture cooperatives, Landus is a founding member of ACWA. It has been known



as Landus since 2016, but the company's agricultural roots go back more than 130 years. Landus offers products and services for all aspects of farming: agronomy, grain, feed, animal nutrition, and data. The company is in 23 counties, mostly in the Des Moines and Raccoon River watersheds and above the Cedar River watershed. Landus is part of the Farm to River Partnership, an Iowa Water Quality Initiative (WQI) led by ACWA.

### NEW Cooperative, Inc.

#### Fort Dodge | newcoop.com

A founding member of ACWA, NEW Cooperative began in 1973 by farmers in Northeast



Webster County, creating its acronym name. The new business was a merger between one cooperative with rail capabilities and one with additional grain for the outgoing trains. Since then, NEW Cooperative has grown to 60 locations in 19 counties in north, central, and western lowa. The cooperative offers grain, feed, energy, and agronomy services.

### **Nutrien Ag Solutions**

#### Wall Lake | nutrienagsolutions.com

Nutrien Ag Solutions has been a part of ACWA since 1999. It was known as United Agri Products until 2017, but



the company has been serving farmers across the Midwest since the 1960s. The full-service supply company offers a Sustainable Ag platform, tailoring solutions for the best fit in individual fields. Nutrien Ag Solutions is also part of the Farm to River Partnership, an Iowa Water Quality Initiative led by ACWA.

### **Pro Cooperative**

#### Pocahontas procooperative.com

A founding member of ACWA, Pro Cooperative has been a steadfast resource for farmers in north-central and northwestern Iowa since



1911. The company serves producers in 12 counties nestled in between and above the Des Moines and Boone River watersheds, which are focus areas in the Iowa Nutrient Reduction Strategy. Although the co-op's customers generally aren't located in these targeted watersheds, farm and land management in Pro Cooperative's geographic areas affects their neighbors downstream.

### Van Diest Supply

#### Webster City vdsc.com

Van Diest Supply Company was founded in 1956



by Bob Van Diest, serving farmers in central lowa with fertilizer and other chemical needs. Today, the company includes facilities on 270 acres in Webster City and 19 distribution centers across the Midwest. The company formulates and distributes chemical products for agriculture, and products for management of turf, trees, mosquitoes, and invasive brush and aquatic plants. Van Diest Supply is a founding member of ACWA. With the company's roots in Hamilton County, Van Diest's local customers directly affect the Boone River and its tributaries.

## **ASSOCIATE MEMBERS**

**Corteva Agriscience** Indianapolis, IN | corteva.com

**Iowa Agriculture Water Alliance** Ankeny, IA | iowaagwateralliance.com

**Iowa Corn Growers Association** Johnston, IA | iowacorn.org

**Iowa Soybean Association** Ankeny, IA | iasoybeans.com

Koch Fertilizer, LLC Wichita, KS | Kochind.com

**The Mosaic Company** Tampa, FL | mosaicco.com

Nationwide Des Moines, IA | nationwide.com

Truterra, LLC sustainability business of Land O'Lakes Arden Hills, MN | truterraag.com

Verdesian Life Sciences Cary, NC | vlsci.com

## **NEW ASSOCIATE MEMBER**

### Syngenta Crop Protection

Greensboro, NC | syngenta-us.com

Syngenta is a global corporation that provides inputs to growers including



seeds, seed treatments, and crop protection products, focusing on crop protection, seeds, lawn and garden, and biotechnology.

With global headquarters in Basel, Switzerland, the company has U.S. production facilities in North Carolina, Illinois, Louisiana, Texas, and Nebraska. Syngenta works in Iowa, the U.S. and around the world to help customers reach their cropping, turf and landscape productivity goals.

Sustainability is one of the company's priorities and it has been since Syngenta's founding. The Sustainability division includes aspects that farmers take into account every day: water, soil health, biodiversity, climate, and regenerative ag. The company collaborates with many organizations like ACWA to ensure agriculture productivity continues for generations. The goals of ACWA align with Syngenta's sustainability initiatives, which makes the partnership a good fit for Iowa farmers and landowners.

## **WORK GROUPS**

n order to implement ACWA's work plan each year, three Work Groups have been established with board members or member staff working on one or more groups. Membership Services, Outreach and Communications, Projects and Programs Work Groups all help to advance ACWA's mission and vision. They are a great way to get members involved and have a voice on the direction of ACWA goals. These groups also help ACWA expand awareness of the organization as well as recruiting and retaining members.

### **Programs and Projects Work Group**

#### 2023 Members

Thomas Fawcett, Heartland Co-op (chair) Brent Hall, Truterra/Land O'Lakes Clint Sires, AgState Derek Hommer, Nationwide Dewey Petersen, Nutrien Ag Solutions Jacob Aizikovitz, Koch Fertilizer LLC Dan Dix, NEW Cooperative Tim Mundorf, Central Valley Ag Adam Herges, The Mosaic Company

#### **Programs and Projects accomplishments**

- Advanced Conservation Agronomist (CA) Network through IDALS-ACWA Cooperative Agreement (28E) with five ACWA members; collaborated with IDALS for implementation and reporting process for engaging retailers, helping members recruit and establish positions
- Planned and participated in Making Retail Conservation Real: A National Meeting to Advance Conservation Agronomy in the Private Sector
- Achieved 100% participation (90% using a nitrogen stabilizer) in ACWA's 2024 Code of Practice
- Partnered with Sac County Supervisors to advance a Batch and Build project through Farm to River WQI and efforts for extending and renewing Farm to River WQI
- Continued ACWA's water monitoring and data
   collection and development of outreach information
- Supported scale-up and expansion of Polk County Batch and Build programming with CAs, engineers, and local and state agencies via the Agribusiness Edge of Field Initiative; included 56 structures treating 76 outlets in Big Creek and 40 structures in eastern lowa; was significant in illustrating feasibility of expansions.

#### **Membership Services Work Group**

#### 2023 Members

Dave Schwartz, Verdesian Life Sciences (current chair) Molly Toot, Landus Cooperative (chair through Dec. 2023) Dan Dix, NEW Cooperative Johnny Robb, Helena Agri-Enterprises Lance Heikens, Van Diest Supply Company Gregg Schmitz, Nutrien Ag Solutions Jacob Aizikovitz, Koch Fertilizer LLC Brent Hall, Truterra/Land O'Lakes

#### **Membership Services accomplishments**

- Onboarded CVA and Mosaic memberships
- Enlisted Syngenta Crop Protection as a new associate member starting FY2024
- Conducted visits with potential members as well as impactful calls with member leadership for renewal
- Strengthened relationships with partners: Agribusiness Association of Iowa (AAI), Iowa Nutrient Research and Education Council (INREC), Iowa Department of Agriculture and Land Stewardship (IDALS), and Des Moines Water Works (DMWW)
- Planned and participated in Making Retail Conservation Real: A National Meeting to Advance Conservation Agronomy in the Private Sector
- Held networking event and educational opportunities: 4R event, Baton Global study, panel discussion on carbon markets and opportunities for ag retail, upstream/downstream impacts

### **2023 EXECUTIVE COMMITTEE**



Left to right: Treasurer Thomas Fawcett, Heartland Co-op; Vice-President Molly Toot, Landus Cooperative; Secretary Chris Petersen, Gold Eagle Cooperative; President Dan Dix, NEW Cooperative.

### **Outreach and Communications Work Group**

#### 2023 Members

Eric Scherder, Corteva Agriscience (chair) Gary Moritz, NEW Cooperative Jennifer Ohlendorf, AgState Kristin Schmit, Heartland Co-op Elizabeth McOllough, Gold-Eagle Cooperative Gracie Vatthauer, Pro Cooperative Eric Moon, Nutrien Ag Solutions Johnny Robb, Helena Agri-Enterprises Joel Abbott, Van Diest Supply Co. Mary Harrington, Landus Michelle Jones, Koch Fertilizer LLC Shannon Textor, Iowa Corn Growers Association Aaron Putze, Iowa Soybean Association Steve Ferreira, Nationwide Matt Lail, Verdesian Life Sciences Mark Vanderlinde, Truterra/Land O'Lakes Rebekah Jones, Iowa Agriculture Water Alliance Owen Baker, Central Valley Ag Adam Herges, The Mosaic Company

## Outreach and Communications accomplishments

- Generated outreach materials to update and inform members and partners including quarterly newsletters, press releases, Annual Report, Farm to River newsletter
- Enlisted members' communications teams to help with distribution of ACWA informational materials to colleagues and clients
- Developed an ACWA Infographic impact piece on the scalable and measurable impact across Iowa
- Developed an ACWA "who we are" PowerPoint template for recruitment and retention
- Supported and sponsored the AAI Showcase and 4R Stewardship Event
- Planned and participated in Making Retail Conservation Real national meeting to advance conservation agronomy in the private sector
- Increased social media (Facebook) presence
   highlighting ACWA's efforts

## Looking Ahead WORK PLAN GOALS FOR FY2024-25

The three work groups spend time establishing goals and tasks for each fiscal year. Many of the items on each work group's list are ongoing such as oversight of water monitoring, which has been taking place since ACWA's founding in 1999. Other goals are added to the work plan for a particular fiscal year like marking the 25th anniversary.

With the expansion of ACWA across the state, the member services work group, with the aid of the entire membership, will continue to recruit new members to ACWA.

Other goals and actions for the future include:

- Support and build upon collaborative initiatives with current partners and potential new partners.
- Develop local and regional networking opportunities for increased member engagement.
- Expand outreach efforts with ACWA members and their customers through news stories, social media, and an updated website.

- Continue to sponsor statewide water monitoring; increase connections with ACWA members and their customers for learning opportunities about the water monitoring efforts.
- Advance the conservation agronomists and water quality improvement efforts in their geographic areas.
- Expand upon the ideas and actions put forth from the Making Retail Conservation Real event.

These are just a few of the items of the three ACWA Work Group goals for the coming year. There are many items on the list but ACWA remains dedicated to their customers, Iowa farmers and landowners, its urban residents, and those downstream.

## **COLLABORATING WITH PARTNERS**

With the growth of ACWA also comes more partner collaboration. ACWA partnered with several organizations this year to advance ACWA's goals of improving lowa water quality while keeping lowa farmers and landowners productive and profitable.

ACWA sponsored and participated in the Agribusiness Association of Iowa's Showcase and Conference and sponsored a 4R event with The Nature Conservancy and The Mosaic Company. A collaboration with the Soil and Water Conservation Society (SWCS) included planning and co-sponsorship of the Making Retail Conservation Real event.

Bâton Global has been partnering with ACWA over the last few years, conducting focus groups and oneon-one conversations with ag retailers and farmers to gauge perceptions of conservation agronomy. The company also facilitated the Making Retail Conservation Real event and is helping to prioritize goals that emerged from the meeting.



ACWA's partnership with Iowa Department of Agriculture and Land Stewardship (IDALS) continues through an agreement to expand the conservation agronomist network (page 12), grant funding for the Farm to River Partnership (page 13), and the Batch and Build program.

### **Batch and Build Takes Off**

ACWA is joining forces with partners to implement Batch and Build programming, which is a way to more efficiently install agricultural conservation practices on the land, such as a bioreactor or saturated buffer. This helps to accelerate and scale-up their implementation.

With IDALS, the Iowa Nutrient Research and Education Council (INREC), the Sac County Board of Supervisors, Iowa Seed Association, and numerous other sponsors via the Ag Retail Edge of Field Batch and Build initiative, and several conservation agronomists are leading the work to implement these practices. Conservation agronomists serve as liaisons between engineers, local and state agencies, contractors, farmers, and landowners to help find appropriate locations for these structures, handle permits and other paperwork, and contractor logistics, at no cost to the farmer or landowner.

Through the Batch and Build model, contractors install several of these practices at the same time in nearby locations, saving time, and labor and equipment costs. These structures reduce nitrate levels in tile-drained water, contributing to the Iowa Nutrient Reduction Strategy goals, which includes the reduction of total nitrogen and phosphorus loading into the Mississippi River by 45%.

In preparation for the Sac County project, ACWA worked with the Iowa DNR and Sac County Soil and Water Conservation District (SWCD) to sample water from an established bioreactor on the Russ Hass farm, installed a few years ago. They conducted this preliminary work to show farmers and landowners in

A bioreactor is installed through the Batch and Build program funded by a grant from the lowa Department of Agriculture and Land Stewardship. ACWA conservation agronomists help implement this program in several counties throughout the state. the county of the impact that a bioreactor can make on tile-drained water.

The graphs, shown below, illustrate the sampled water pulled from the tile drain compared to water exiting the bioreactor in 2022. Figure 1 shows the nitrate-N concentration in the sampled water, in mg per liter. Figure 2 shows the nitrate-N loading in sampled water in pounds per day comparing incoming and outgoing water.



Figure 1. Nitrate-N concentrations in a bioreactor compared to nearby tile drained water in 2022. Nitrate-N is shown as mg/L. Sampling was done by owner Russ Hass and Sac County SWCD.



Figure 2. Nitrate-N potential and actual loading from Sac County bioreactor taken in 2022. Nitrate-N is represented in Ibs/day. Sampling was done by owner Russ Hass and Sac County SWCD.



ACWA water monitoring technician Anthony Seeman pulls water samples from an established bioreactor to test nitrate-N levels from the tile-drained water entering the bioreactor.



n 1999, a group of Iowa agriculture retailers met to discuss nutrient loading into the Raccoon and Des Moines rivers. These competing retailers united over concerns about nitrogen levels in these rivers that serve as the drinking water supply for Des Moines metro residents.

Long before the federal Gulf Hypoxia Task Force's national strategy was a reality, ACWA was founded. Fast forward 25 years and the organization is just as committed to their goals and mission.

In 2024, ACWA marks its 25th anniversary of commitment to improving water quality in Iowa and productivity for Iowa's farmers.

Throughout the year, ACWA will mark this quarter-century milestone with various activities. Watch the website, Facebook, and your local ACWA ag retailer member for commemorative highlights to come.

## **MAKING RETAIL CONSERVATION REAL**

## National Event to Advance Agricultural Conservation in the Private Sector

The "Making Retail Conservation Real" event, held Feb. 21-22, 2024, in Des Moines, drew more than 100 participants from across the country representing agricultural retailers, conservation, and commodity groups. They gathered to share ideas for scaling up the adoption of conservation on the agricultural landscape.

The meeting included fast-paced presentations and small group discussions about the current state of agricultural conservation, why advancing ag conservation is important, and how to make advancements in this space.

Agriculture's Clean Water Alliance (ACWA), Iowa Soybean Association (ISA), and the Soil and Water Conservation Society (SWCS) co-hosted the event, and they enlisted executives with Bâton Global, a Des Moines-based company, to facilitate the discussions.

"Agricultural conservation has been going on in the U.S. for a long time. Since the Dust Bowl in the 1930s, our government has been intentionally working to improve soil protection and water quality," said Roger Wolf, Director of Conservation at ISA and ACWA Executive Director. "Through this meeting, I hope we can accelerate ways that integrate retail agriculture, farmers and landowners, and public programming to increase and speed up the process of conservation implementation."

Agricultural conservation includes the goals of building soil health and reducing excess nutrients in waterbodies. Farmers can help achieve these goals by planting cover crops, reducing tillage, and managing nutrient application. They can install bioreactors and saturated buffers, which are structures that reduce nutrients in the water leaving ag fields before entering a river or stream. Currently, government agencies are heavily relied upon to implement these practices.

The Making Retail Conservation Real meeting opened doors for finding additional, innovative ways these conservation practices get on the landscape. To launch the discussions, key guest speakers included lowa Deputy Secretary of Agriculture Grant Menke and Robert Bonnie, USDA Under Secretary for Farm Production and Conservation. They shared their thoughts on the need for conservation and how ag retailers have an important role in increasing conservation.

Other speakers included representatives from ag retail companies including Heartland Co-op, Perdue AgriBusiness, and Nutrien Ag Solutions; as well as non-profit groups such as the Environmental Defense Fund, The Keith Campbell Foundation for the Environment, The Nature Conservancy, and more. They shared the current trends and the existing

drivers for conservation implementation, discussed challenges that slow the process of implementing conservation, and offered ways to meet those challenges.

"The private sector has a great opportunity to engage in projects and make conservation practice adoption as easy as possible for farmers and landowners," said



ACWA Executive Director Roger Wolf welcomes attendees to the meeting.

Ben Gleason, Executive Director of the Iowa Nutrient Research and Education Council (INREC) and event attendee. "We need to be open to new ideas and



Ryan Locke, Nutrien Ag Solutions; and Todd Sutphin, Iowa Soybean Association, discuss ideas with their group between speaker presentations.

Attendees broke into small groups to narrow down ideas for possible actions to help scale up conservation on the agricultural landscape.

not remain in outdated methods of conservation delivery."

Meeting attendee Melissa Miller, Project Director for the Iowa Nitrogen Initiative, agreed. "Our success in working with farmers is dependent on mutual trust and cooperation," she said. "We can meet the goals of the Iowa Nitrogen Initiative by working with ag retailers and farmers to better understand how different farming systems impact optimum nitrogen fertilizer rates, including those who implement conservation practices."

In his closing remarks, Wolf said this isn't an either/or conversation, rather it's an 'and' conversation, and stakeholders need to be proactive as well as adaptable to use technology as it develops and as policies change.

"To truly make retail conservation real, these discussions and sharing of ideas can help meet the need for scalable conservation," he said. "There are ways to include everyone involved in agriculture in some way, from farmers and landowners, to retailers, policymakers, and government agencies. We all have roles in scaling up conservation on the landscape."

Notes from the small-group discussions and presentations are being compiled and results will be shared with attendees and their staff. Wolf expects this to be the first of several meetings of this group and plans to add key stakeholders as ideas are developed and conservation practices are adopted.



#### **Additional Sponsors:**

Iowa Agriculture Water Alliance The Campbell Foundation Great Outdoors Foundation National Fish and Wildlife Foundation The Nature Conservancy

Special thanks to these ACWA members for additional sponsorship funds: Central Valley Ag Gold-Eagle Cooperative Heartland Co-op Helena Agri-Enterprises Landus Cooperative NEW Cooperative, Inc. Nutrien Ag Solutions Pro Cooperative

Van Diest Supply



Alex Echols, The Campbell Foundation, Annapolis, Maryland



Vincent Gauthier, Environmental Defense Fund, Raleigh, North Carolina



Ruth McCabe, Heartland Co-op, Des Moines, Iowa

## **EXPANDING THE CONSERVATION AGRONOMIST NETWORK**

n March 2023, the Iowa Department of Agriculture and Land Stewardship (IDALS) announced a cooperative agreement with ACWA and Iowa Soybean Association (ISA) to expand the number of conservation agronomists across the state. The initial cooperative agreement includes four years of financial support for the CAs and for increased agricultural conservation practices on the land including cover crops, reduced tillage, improved nutrient

With the Conservation Agronomist Network, Gilman plans to have all the CAs in this position, no matter where they are employed, meet regularly to build knowledge, collaborate, and share ideas. The new CAs will be employed directly by the ag retailer, and after the agreement is fulfilled, the plan will be to absorb them as permanent staff members.



Currently, there are 13 CAs in Iowa in 2024.

"This is the vision. The challenge before us is making the CA position sustainable," comments Gilman. "It isn't easy to put budget numbers to conservation practices, unlike seed or chemical sales. With this CA network, we will work together to find solutions for making the CA position sustainable for years to come."

The conservation agronomist model will help lowa's efforts to reduce nitrogen and phosphorus loading into waterbodies that flow to the Gulf of Mexico, supporting the federal Gulf Hypoxia plan.

Iowa has made strides in getting conservation practices in place, and ACWA and the CA network is just one avenue for Iowa's goals. According to IDALS 2023 Annual Report, statewide stats are climbing, but there is still much work to be done.

management, and edge-of-field practices such as bioreactors and saturated buffers.

Five ACWA members are adding a CA to their staff through the agreement: AgState, Gold-Eagle Cooperative, Landus, NEW Cooperative, and Heartland Co-op, which already has three CAs on board. ISA has five CAs on staff.

Mike Gilman, ISA conservation agronomy lead, oversees this network of CAs, which includes all CAs no matter where they are employed. He also serves as the project manager for ACWA agreement.

"I'm assisting the ag retailers any way I can as this project gets going. Most of the CAs have been hired and are beginning their work," Gilman says. "I'm helping them with the on-boarding of these new staff members and working with them to understand what their daily activities may be like."

Getting conservation practices in place means more people need to be involved in their planning, promotion, and installation. The conservation agronomist can aid in all of these aspects, but this position is just being realized in the agricultural industry.

The Making Retail Conservation Real national meeting was a way to introduce the conservation agronomist model to those unfamiliar with the model. Speakers at the meeting included Gilman and Ruth McCabe, a CA with Heartland Co-op, who shared their insights and goals for this position with the group. ACWA hopes those who attended the meeting see the value in this position and follow the model ACWA originated.

## NORTH RACCOON FARM TO RIVER PARTNERSHIP COMPLETES THIRD YEAR



The North Raccoon Farm to River Partnership is concluding the last year of a three-year Water Quality Initiative (WQI) project through the Iowa Department of Agriculture and Land Stewardship.

ACWA oversees the partnership, with the goals of adding conservation practices to farmland including cover crops, improved nutrient management, bioreactors, and saturated buffers throughout Sac, Calhoun, Carroll and Greene counties.

Conservation agronomist Joe Wuebker oversees the Farm to River Partnership and has worked diligently to achieve the project's goals.

"When the Partnership began, we used a blanket approach to reach farmers and landowners, with some positive results," says Wuebker. "But over this last year, we've used a more targeted approach as we work to expand the number of cover crop acres and increase edge-of-field practices."

Wuebker is using the Batch and Build model, which is the installation of several bioreactors and saturated buffers at the same time at locations close to one another. This saves time and contractor expenses. He's receiving a lot of local help, including the Sac County Supervisors, who agreed to serve as the fiscal agent for the batch and build project. The Sac County NRCS and DNR have gotten involved as well. Through this most recent three-year WQI, six bioreactors or saturated buffers were installed.

Farmers are adopting cover crops in the Partnership area with the help of local ag retailers and conservation professionals. In the last three years, cover crops have been adopted on more than 16,000 acres, in addition to 11,500 acres that were added during the previous initiative from 2019-2021.

"Adding cover crops has been a goal of the Farm to River Partnership, and the number of acres grew slowly in that first year," Wuebker comments. "Over the last two years, we saw tremendous growth with cover crop acreage. Farmers have more options than ever for seed suppliers and applicators." Water monitoring has also been an active component of the Farm to River Partnership. With each new bioreactor or saturated buffer with the project, farmers have the option to monitor the water entering and exiting the structure so they can see how well it is working to denitrify the subsurface drainage.

The Partnership received a short extension for the project as they approach the end of the three-year initiative.

### **Looking Ahead**

ACWA leaders and IDALS are working on a possible expansion of the WQI or other ways to continue the positive efforts that have been established through the Farm to River Partnership.

"This Partnership has generated some strong relationships with local communities as well as farmers and landowners," Wuebker says. "We need to continue the work to drive conservation practice adoption."



## WATER MONITORING

As with any year, environmental conditions are a key player in agriculture. A perfect amount of rainfall at the right time along with warm days at the ideal time of year – these variables are not the norm.

Again in 2023, drought conditions affected many areas of Iowa as well as the Midwest. When drought conditions are apparent, water sampling becomes challenging. In addition to not being able to collect samples due to the absence of water, nitrate-N is held in the soil, and water samples don't show its presence accurately.

Figure 2, below, from the U.S. Drought Monitor website, paints the larger picture of drought in the North Raccoon River watershed between Jan. 1, 2000 and Jan. 1, 2024. Although no "exceptional drought" has been present, it shows the drying trend over the last four years. These prolonged periods of dryness could impact future nitrate-N loading into Iowa waterbodies.

The Raccoon River Nitrate Yield graph (Figure 1) corresponds with the drought monitor chart, illustrating the years with high nitrate-N yield come after a period of drought, as do low amounts of nitrate-N yield during drought years.

Conservation Agronomists (CA) across the state are

taking water samples in their respective areas, with support from ACWA for funding and water sample evaluation. Iowa Soybean Association staff, CAs, and volunteers pull water samples from streams, individual farm tile drains and edge-of-field practices including bioreactors, ponds and wetlands, and saturated buffers. Figure 3 (on the right) illustrates where where samples are collected.

Water monitoring is a key part of the Conservation Agronomist's toolbox. ACWA water monitoring



Figure 1. Raccoon River Nitrate Yield in lbs. per acre, 1999-2023.



Figure 2. North Raccoon Watershed (HUC 7) percentage of drought conditions between Jan. 2000 and Jan. 2024.



Figure 3. lowa water monitoring areas in 2023.

support empowers the CAs with real-world data to share with farmers about their operation. Initially, the results provide an evaluation of past and current nutrient management practices, and helps inform the farmer or landowner about nutrient cycling and loss in their fields. Ongoing water sampling builds on the initial data and helps to demonstrate the role that weather can play as well as consideration of conservation practice or management changes. Continued data collection can validate the impact of changes or be used to target difficult locations that may merit investment in edge-of-field practices. While using a batch-and-build approach scales up implementation and reduces barriers to widespread adoption in an area, these efforts will only be enhanced by having robust water quality data to

prioritize locations that offer the biggest return on investment.

Additionally, having a local network of water sampling promotes learning opportunities for the CA and neighbors alike. For example, long-term sampling in the South Raccoon River watershed has helped to show the impact of cover crops on water quality. Figure 4 shows a comparison of two fields near Coon Rapids: one with long-term cover crop use and one with more conventional management. The cover crop field is consistently lower in nitrate concentrations and its response to drought effects is less as well, even though drought impact is visible.

In this instance, the farmer who has been using cover crops for many years is confident the cover crops are making the desired impact on nutrient loss in that field. Although the other producer isn't ready to adopt cover crops across their operation, the data drives continued conversations about what is happening on the land. There are many more differences beyond cover crops between these two operations, but this illustrates how data from an area can add to the knowledge base as well as provide a benchmark to compare other conservation alternatives.

As more Conservation Agronomists come on board along with more structures implemented on the landscape, water sampling will be key in demonstrating performance as well as maximizing their effectiveness.



Figure 4. Comparison of nitrate-N from water sampled in two fields in Guthrie County: one with long-term cover crop usage vs. a conventional field.

## **CODE OF PRACTICE: AN ACWA HALLMARK**

A CWA members reaffirmed their annual commitment to protect Iowa's soil and water at their September 2023 board meeting. The members agreed to the Environmental Code of Practice for Nitrogen Fertilization, which states they will delay fall anhydrous applications without a nitrification inhibitor until soil temperatures are 50 degrees Fahrenheit and trending lower. This reduces nitrate loading from farm fields into Iowa's rivers and streams, helping to protect the state's water resources.

Since ACWA's founding in 1999, members have agreed to the Code of Practice, a requirement of membership since 2001. Because of members' locations, ACWA's

footprint touches 81 of Iowa's 99 counties, enabling the Code of Practice to have a greater impact on water quality than ever before.

ACWA members are dedicated to helping farmers manage nutrients to enhance crop production and environmental quality. Every member reported using Code of Practice requirements and 94% reported using a nitrogen stabilizer.

Members self-report to ACWA to validate their conformance to the Code of Practice, which takes place usually in mid to late October, depending on the region. Colder soils hinder the conversion of ammonium nitrogen to nitrate, which reduces leaching, or denitrification, and keeps ammonium in the soil.

ACWA recommends using the county soil temperature and forecast maps published by Iowa State University as a decision tool for beginning fall fertilizer applications.

In addition, ACWA members encourage the use of nitrogen stabilizers, slow-release fertilizers, incorporation or injection, soil nitrate testing, and other tools that minimize loss of nitrogen to water sources.

Farmers and landowners can implement conservation practices including no-till, cover crops, bioreactors, and saturated buffers, which keeps nutrients and soil in farm fields and reduces loading into waterbodies.



Photo: Kristin Schmit, Heartland Co-op

ACWA also endorses 4R Plus, which focuses on nutrient stewardship by using fertilizer from the Right Source, at the Right Rate, the Right Time, and the Right Place. The Plus refers to the conservation farming practices that can be used for soil health and water quality improvement. 4R Plus is guided by a coalition of agricultural and conservation organizations to support farmers' efforts to implement these practices.

### 2023 ACWA Code of Practice Member Participation

**100%** Members reported implementing Code of Practice requirements

Counties with soil temperature observations

**108** Total observations for soil temperature

**94%** Members reported using a nitrogen stabilizer

# **2023 FINANCES**

### FY2023: March 1, 2023-February 29, 2024

#### Revenue

Total\$705,000*
Additional In-kind Grants & Contracts
Total \$661,572
Interest
Making Retail Conservation Real27,000
Soil and Water Conservation Society/
Farm to River and 28E Partnership 180,951
Associate Members175,000
Members \$275,000

\*Supplemental in-kind funding aligned with ACWA mission and initiatives

Expenses
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Operations	27,000
Soil and Water Conservation Society/	27000
Management/Admin/Members	194,740
Projects and Programs	\$430,951

# **THANK YOU!**

A big thank you goes out to all ACWA members, associate members, partners, collaborators, and farmers who contributed to these efforts. ACWA members are truly Making Conservation Retail Real. From supporting a conservation agronomist to sharing information about conservation opportunities to their customers, our members continue to work hard for cleaner water and healthier soil.

If you are an ag retailer or a business supporting ag retail and would like more information, contact us for more information about joining ACWA: kristen@acwaiowa.com • 515-334-1482

Please keep up the efforts that make Iowa a great place to live, farm, and thrive.



Follow ACWA on Facebook @AgCleanWaterAlliance

# **ACWA Impact** BY THE NUMBERS

## **ACWA FOOTPRINT**

10 regular members
9 associate members
362 service locations
35,000 farmer customers
17 million rowcrop acres
81 lowa counties

### MAKING**CONSERVATION** RETAIL**REAL**

# WATER MONITORING

## 14,372 water samples

### processed through ACWA between 2020-2023

### **Benefits of water monitoring:**

- Guides watershed planning
- Enables targeting practice placement & implementation
- Validates practice performance
- Generates insights to better understand impacts of land use, management and weather over time





# **ACWA CODE OF PRACTICE**

ACWA members agree annually to the Environmental Code of Practice for Nitrogen Fertilization. They will delay fall anhydrous applications without a nitrification inhibitor until soil temperatures are 50 degrees Fahrenheit and trending lower.



of members reported implementing Code of Practice requirements 90%

Members reported using a nitrogen stabilizer in 2023



## CONSERVATION AGRONOMIST NETWORK

## 13 conservation agronomists in 2024

## CONSERVATION AGRONOMIST IMPACT - 2019-2023

- 129,000 acres of cover crops 14,300 acres of no-till, strip-till 130 edge-of-field practices acres with improved
  - **15,000** acres with improved nutrient management strategies

= 1.8 million lbs nitrogen 49,500 lbs phosphorus







North Raccoon Farm to River Partnership Project

Water Quality Initiative overseen by ACWA >100,000 acres in 4 counties

Agriculture's Clean Water Alliance (ACWA) is a non-profit association whose mission is identifying and advancing solutions that reduce nutrient loss, build healthier soils and improve lowa's waters. ACWA is recognized for its ability to build upon its members' extensive relationship with farmers across lowa.



## www.acwaiowa.com



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