



focus on
THE FUTURE

2012 ACWA PROGRESS REPORT



ACWA HAS BEEN FOCUSED ON THE FUTURE of water quality from its inception. Thirteen years ago, long before there was even talk about the need for a coordinated and scientific-based state Nutrient Reduction Strategy, the members of ACWA have been determined to actively engage in the issues that affect their businesses and water quality.

When it comes to water quality, active participation is not optional and, through our leadership, we believe we have made some great strides toward addressing the complicated issues associated with the business of agriculture, nutrients and water.

ACWA is an association consisting of 12 ag retailers and 3 associate members operating in the Des Moines and Raccoon River basins. Many of the members are direct competitors. As ag retailers, they are aware of the dual mission to help farmers improve agronomic performance in the field while supporting environmental performance beyond the field's edge. Because of their role as drinking water sources, sport fisheries and paddling destinations, the Raccoon and Des Moines Rivers are important indicator streams for Iowa. Also, because

their courses takes them through one of the world's most fertile agricultural regions, these waterways are important environmental indicators for agriculture.

Farmers, agronomists, environmentalists, agencies and policy makers are all seeking scientific data, workable solutions and leadership in an attempt to achieve water quality improvements.

In its forward focus, ACWA has taken the many steps toward making progress on water quality in these important watersheds. This report documents activities, endeavors and achievements during the past year and demonstrates the group's role in offering vital research in the ongoing effort to improve water quality. Since 1999, ACWA members have invested more than \$1 million in funding for water quality monitoring in the Raccoon River and, since 2008, in the Des Moines River and their largest tributaries. More than 10,000 water samples have been collected by more than 200 certified samplers and automated samplers and analyzed for nitrate-nitrogen and E. coli bacteria.

In addition, ACWA funded the first successful real-time nitrate analyzer in Iowa, a device installed in the



Raccoon River at Van Meter. This remote monitor has been providing minute-to-minute nitrate data to the general public via the internet since 2008.

The success of this project led researchers at the University of Iowa and the U.S. Geological Survey to implement similar projects of their own on the Mississippi and Iowa Rivers. ACWA continued with this theme by helping fund another device on the Middle Raccoon River at Panora in 2010.

All ACWA members follow a Code of Practice for fall application of nitrogen, perhaps the only one of its kind in the nation. This is a formal agreement among the retailers that they will delay fall anhydrous applications without a nitrification inhibitor until soil temperatures reach 50 degrees F at a depth of four inches with a forecast of cooling soil temperatures.

To our knowledge, and according to some of our research partners, ACWA's extensive agricultural water monitoring network, funded almost completely by private ag-industry for the benefit of both public and private stakeholders, is unique nationally. ACWA was cited as an example for private industry in the September

2010 report "Charting New Waters: A Call to Action," presented in Washington, D.C., by the Johnson Foundation at Wingspread and 28 participants from the public and private sectors.

We believe this also demonstrates a fairly unique model for collaboration among businesses that are normally competitors, their customers (in this case, farmers), public agencies and environmental non-profits to take on environmental issues requiring long-term commitment, creative approaches, applied research and significant resources. ACWA has years of research that will help lead the focus on the future of Iowa's water quality work.



Roger Wolf

Executive Director
Agriculture's Clean Water Alliance



FROM THE **PRESIDENT**

THE FIRST THING WE WILL REMEMBER most about 2012 – for most of us involved in water quality and agriculture – is the drought that persisted through the majority of the crop growing season. This weather presented extraordinary challenges faced by everyone connected to production agriculture in this great state. In retrospect, though, it was also a year of progress and new beginnings.

It is a resilient, optimistic populace that occupies the agricultural production sector, and we at ACWA are so very proud to be a part of that community. ACWA marks 2012 as the completion of its thirteenth year as an organization committed to finding answers in the effort to improve water quality. The majority of our work occurs primarily in the Raccoon and Des Moines watersheds, but the applied science has impacts far beyond these watersheds.

The knowledge gained from our extensive water monitoring activity has provided insight for several different entities and continues to offer important insight and research for the future.

The resulting pilot projects initiated by ACWA have yielded successes and provided valuable examples of cleaner water opportunities. We have learned much through our efforts over the years, but the most obvious lesson learned is that there is no silver bullet to solve this issue. It is a complex problem and the solution is equally complex.

2012 provided several extraordinary opportunities to share ACWA's story. To illustrate just a few:

- In the fall of 2012, Nancy Stoner, acting assistant administrator for Water USEPA, and two of her staff attended the Hypoxia Task Force Meeting in Des Moines. They spent an entire afternoon with an ACWA team visiting demonstration sites including a bioreactor and a stream auto sampler in the Webster City area. We were privileged to spend this much time with her during the visit to Iowa. Our gracious hosts, Arlo and Claudia Van Diest, provided Stoner and her staff a real-life example of good land and water stewardship. The tour gave us the opportunity to showcase some ACWA field activity and share some quality one-on-one time with Stoner during the trip.
- We were invited to provide comments to the launch announcement of the U.S. Department of Agriculture's (USDA) Long Term Agro-ecosystem Research Network. Ann Bartuska, USDA deputy undersecretary for research, education and extension, released the announcement at the meeting which was moderated by Jerry Hatfield, laboratory director at the National Laboratory for Agriculture and the Environment in Ames



- We determined that the series of articles featured in Des Moines Register during October addressing the Gulf Hypoxia deserved a response. We submitted a letter to the editor that was published in its entirety as a guest editorial in the Sunday, Nov. 18, issue. It highlighted the focused work effort of ACWA since its formation in 1999.

On Nov. 19, the draft of the Iowa Nutrient Reduction Strategy was released for public comment. It was the culmination of two years of work by ISU, IDALS, DNR and others under the leadership of Bill Northey, Iowa Secretary of Agriculture, and Chuck Gipp, DNR director. ACWA supports the strategy and its voluntary approach.

It is a science-based approach and provides the flexibility for producers to implement the most effective practices specific to their individual farms. We believe this can be the most powerful resource to achieve broad implementation and meaningful water quality improvement. We believe it will generate more positive results in a shorter time frame.

I am most proud of our organization for the dedication of time and resources from our members, partners, staff and volunteers. This dedication has earned ACWA a high profile in science and government arenas. As a result, we have a seat at the table with important local state and national groups.

Being at the table has allowed ACWA to contribute, at many levels, to important policy development. An example of this is the involvement of Dave Coppess, former ACWA president, and Roger Wolf working closely with agencies, researchers and others in the development of the recently-released draft of the Iowa Nutrient Reduction Strategy.

Assuredly, the challenges ahead and the necessary work to achieve success will not diminish. To be sure, ACWA has made significant contributions to the clean water effort through its ongoing work. With confidence, I'm certain ACWA will be an important contributor to the ultimate solutions as we focus on the future.

Harry Ahrenholtz
ACWA President

WHY WATER MONITORING MATTERS — NO MATTER WHAT THE WEATHER



Dr. Chris Jones, an analytical chemist and environmental scientist with Iowa Soybean Association's Environmental Programs & Services, has worked with ACWA since it began water monitoring--initially, in his capacity as laboratory supervisor for Des Moines Water Works.

ACWA HAS DOCUMENTED WATER QUALITY IN IOWA STREAMS FOR 13 YEARS. This water monitoring set the standard for how agriculture's environmental performance should be measured. For most of this period, spanning 2000 to the present day, Iowa has been in a wet precipitation regime.

The Raccoon River Watershed of central Iowa, for example, averaged 3.2 inches more rain per year during that period as compared to the long-term historical average, with all of the increase coming during the growing season. Last year's historic drought brought an abrupt end to that wet pattern. One might ask if water monitoring is as important during drought as in other times, and if the data is useful. The answer clearly is yes.

It's no secret that nitrogen (N) loss is highest during wet years. Stream monitoring during wet periods is important because it measures the effectiveness of conservation and nutrient reduction strategies, quantifies N loading in the Mississippi River Basin and delineates sources of nitrogen from the various sub-watersheds feeding the Mississippi River. **SEE CHART [A] TO RIGHT.**

During drought, rivers are in a "baseflow" condition. Tiles are not running and surface runoff is minimal, resulting in less water leaving the farm. Nitrate stays in the field. Streams now give us a snapshot view of nitrogen levels in the groundwater that feeds them. Point sources, such as wastewater treatment plant discharges, have a much greater impact during drought, and monitoring measures this activity.

Drought data also provide us with a baseline condition from which future years can be compared. Lastly, monitoring now helps us characterize the biological mechanisms that process nitrate in the environment. Little processing occurs when streams are running high. In hot and dry conditions, however, algae and other organisms kick into overdrive to consume stream nutrients.

Monitoring data can quantify these processes and illustrate differences from stream to stream. We know the rains will eventually return, and Iowa streams have seen some their highest nitrate concentrations in the first few years following drought. Lower crop yields during drought mean less N leaves the field in the grain and more leaves the field in the water when the rains do come.



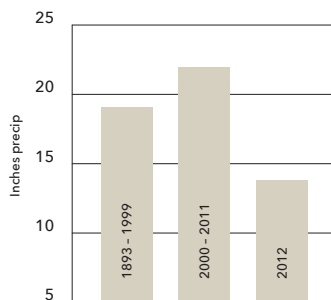
Soil microbes burst into action after a long period of inactivity, mineralizing organic nitrogen and subsequently increasing soil and water nitrate concentrations. **SEE CHART [B] BELOW.**

Natural processes plus unused nitrogen equal big losses of N when a rainy regime begins. Data collection during drought is critical for quantifying these processes, designing future nutrient reduction strategies, implementing conservation and improving future performance.

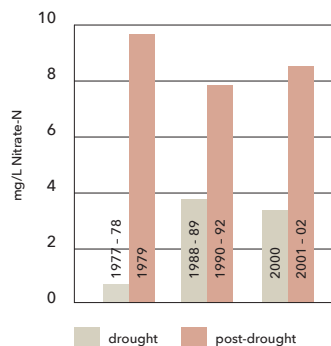
ACWA continues to lead by integrating this monitoring data into conservation and environmental practices that can be implemented on the farm. ACWA's partners, including the Nature Conservancy in Iowa, Iowa Department of Natural Resources, Iowa State University and the Iowa Department of Agriculture and Land Stewardship, have recognized the success of this approach and continue to adopt ACWA's suggested strategies.

No one wants drought. Nonetheless, it is an integral part of the environment and our state's hydrological system. Through monitoring, drought provides an opportunity to learn more about Iowa's production systems and their environmental performance.

[A]
RACCOON RIVER WATERSHED:
Growing season precipitation



[B]
RACCOON RIVER:
Nitrate following drought



BIOREACTOR PROJECT PROVES ITS WORTH **IN HELPING FARMERS REDUCE NITRATE LEVELS**

IN 2008, ACWA EXPANDED ITS ROLE FROM A WATER MONITORING ORGANIZATION to an organization exploring innovative solutions to problems by partnering with the Sand County Foundation (SCF) to fund the Bioreactor Demonstration Project.

Dave Coppess, ACWA president in 2008, saw the demonstration project as ACWA's first step towards water quality remediation. ACWA and the SCF provided funding to coordinate outreach, technical assistance, construction and monitoring of denitrifying bioreactors through a contract with the Iowa Soybean Association Environmental Programs and Services.

The goal of the project was to evaluate the effectiveness of bioreactors as a means of reducing nitrate at the field scale in a private landscape. By funding the demonstration project, ACWA was a catalyst in delivering the practice from the research scale to the implementation scale.

A total of six bioreactors were installed throughout the Racoon, Boone and Des Moines River Watersheds over a three-year time frame as a result of the project. Data collected from these initial installations contributed to the writing of a National Resources Conservation Service (NRCS) interim practice standard, which provides cost share dollars to farmers through the Environmental Quality Incentives Program (EQIP).

The amount of cost share provided was established as 50 percent of the average cost of ACWA bioreactor installations, as they were the only field scale installations using the current design protocol at the time. Continued monitoring led to bioreactors being targeted as a primary nitrogen trapping practice in the Mississippi River Basin Initiative (MRBI), which brought additional cost share dollars to ACWA customers if they farmed in a selected MRBI watershed.

In 2012, the Iowa Department of Agriculture and Land Stewardship, Iowa Department of Natural Resources and Iowa State University released the Iowa Nutrient Reduction Strategy. The strategy represents the culmination of a two-year scientific assessment to evaluate the effectiveness of voluntary practices to reduce the amount of nitrogen and phosphorus released to the Mississippi River.

Bioreactors were included in the strategy, and data was used from two of the initial six ACWA/SCF demonstration project installations in the assessment of the practice. Without data collected and shared from these initial installations, it is unknown if bioreactors would be considered in the strategy as an effective practice due to lack of scientific evidence.



The groundwork laid by ACWA will likely lead to additional dollars available to the association's partners and customers who are interested in removing nitrogen by using a denitrifying bioreactor relative to the Iowa Nutrient Reduction Strategy.

Overall, the project demonstrated that farmers are interested in the practice and that the practice can be cost effective in terms of cost per pound of nitrogen removed. Initial results indicate that bioreactors can remove 40 to 60 percent of the nitrate load in a typical year on a 6- to 10-inch tile line that drains 30 to 80 acres. The Bioreactor Demonstration Project has successfully evolved from a research plot to a measureable and implementable practice that can be instituted on a significant scale in the private landscape.

There has been interest in the results of the project nationwide, raising awareness of ACWA's novel approach to water quality monitoring and remediation.



FARMERS, CO-OPS FIND SUCCESS IN CCPI FUNDING FOR CONSERVATION PRACTICES

THE APPROVAL OF A NEW FOUR-YEAR COOPERATIVE CONSERVATION PARTNERSHIP INITIATIVE (CCPI) designed specifically for farmers in portions of the Boone and North Raccoon Watersheds was announced in July 2011 by the Natural Resources Conservation Service (NRCS). The goal was to encourage farmers to sign up to apply new conservation practices on their land through the Mississippi River Basin Healthy Watersheds Initiative (MRBI).

The CCPI project provides \$850,000 in EQIP funds to eligible farmers over a four-year period. To date, eight farmers have been awarded 12 contracts totaling approximately \$175,000 in cost share to implement the enhanced nutrient management practices.

The project provides incentives and technical assistance to farmers in these watersheds to integrate nitrogen stabilizers into both fall and spring farming practices and stimulate the use of nutrient management planning to meet yield goals while reducing nitrogen losses.

Harry Ahrenholtz, current ACWA president, says that although this is a new initiative for farmers, members have been aware of the issues surrounding the Mississippi River Basin Watershed, such as the Gulf hypoxia, for some time.

"This agreement gives us new opportunities to join with government agencies to implement and measure conservation strategies with our producers," said Ahrenholtz. "The goal is to identify ways we can contribute to a positive impact on nitrogen management."

The project is innovative for the agriculture input supply industry. Partnering fertilizer retailers have committed to:

- Encouraging farmers to use nitrogen stabilizers with both fall and spring nitrogen fertilization to maximize nutrient use efficiency and help protect surface and ground water quality.
- Communicating the availability of CCPI funds for eligible farmers and providing the information they need to successfully apply for the EQIP funds.
- Providing the tools and information needed to complete nutrient management plans.
- Helping assure nutrient applications and stabilizer use meet program requirements and appropriate documentation is provided to NRCS.

Dave Coppess, vice president of Heartland Co-op in West Des Moines, says they are excited to participate in the CCPI, as they view this as an opportunity to grow their relationship with NRCS and utilize their local agronomists to engage in the delicate balance between agriculture production and environmental stewardship.

"Our objective is to help farmers put together crop nutrient plans that optimize their yields and manage crop nu-



trients for optimal results, working to keep crop nutrients in the field and out of our streams and rivers,” Coppess said.

Jason Danner, an agronomist with Heartland Co-op in Rippey, received training through a partnership with the Iowa Soybean Association. He took it to the countryside to encourage a father-son farming team, Gary and David Weaver, to implement a nutrient management plan on their farm to improve fertilizer efficiency. Danner said he worked to find innovative farmers who were active in the community and interested in demonstrating that farmers are very conscious of their interaction with the environment.

David Weaver’s interest in NRCS programs grew after he heard a local NRCS field staffer talk about the opportunities.

“When we mentioned those options to Jason, he told us he could help us with developing a nutrient management plan,” explained David. “We had been doing nitrogen stalk tests for a few years and, since the cost share was available, we decided to go the next step with developing the plan. It involved using a nitrogen stabilizer, which we probably wouldn’t have done without the cost share opportunities in the program.”

Heartland Co-op decided to offer technical assistance for NRCS programs from their agronomy staff, opening up cost share opportunities for their customers.

“We had never worked with NRCS programs before,” stated Danner. “But the CCPI cost share funding made the program attractive to the Weavers. Growers have many

questions and a little confusion about government-funded programs, but it can be cleared up pretty fast if they trust their source of information.”

Working as the technical service provider between NRCS and the grower also helped Danner build a solid relationship with NRCS.

“We’ve opened up a line of communication,” Danner said. “It has allowed me to learn more about conservation planning, cover crops, tillage systems and nutrient management from the NRCS point of view and keep those programs in mind when I’m working with my customers.”

Danner helped the Weavers develop a nutrient management plan, following Iowa State University guidelines and NRCS’s 590 standard that not only helps them improve nutrient efficiency, but also contributes to improved water quality. With the training he received, Danner hopes to encourage additional farmers to take a look at NRCS programs.

“Once they know what’s expected and that they can rely on a local voice for advice, they’re much more interested,” he said.

Coppess credits Danner with making the effort to bridge information between watershed opportunities and farmers.

“Finding the right value package for us to offer the farmer and encouraging the farmer to participate is key,” said Coppess. “The economic incentives offered through NRCS that allow for voluntary farmer participation are important to take these projects to the next level.”

MCKNIGHT FOUNDATION FUNDING SUPPORTS MONITORING, EVALUATION

IN 2011, ACWA'S YEARS OF WATER QUALITY RESEARCH WERE RECOGNIZED BY THE MCKNIGHT FOUNDATION in the form of an \$80,000 grant to expand the association's work in the Boone River Watershed and help disseminate it to other MRBI watersheds.

ACWA's prior work in the basin, from 2007 to 2012, included monitoring, implementation and outreach. The association decided that formally-designed scientific investigation was lacking. This inspired the group to propose funding that would help build scientific capacity in the basin.

Contracts were finalized in May 2012 for science team members Michelle Soupier of Iowa State University (ISU), Lisa Schulte-Moore of ISU and Keith Schilling with the Iowa Department of Natural Resources (DNR). Soupier's group is modeling hydrology and pothole function in the Boone watershed and the sub-basin of Lyons Creek. Initial efforts include a time-of-travel study in the hydrologically-modified Lyons basin, evaluating water flow in its three tilledsheds.

Schulte-Moore's group, in collaboration with John Tyndall of ISU, is assessing implementation and communication strategies with the target populations of watershed stakeholders, farmers and landowners to whom they will recommend potential improvements. Lessons learned will be summarized in a "how to" manual to guide watershed-based water quality improvement programs elsewhere in the Upper Mississippi River basin and beyond, using the principles of adaptive resource management.

ISU graduate student Stephanie Enloe conducted interviews of partners in previous Boone work, including staff members of the Iowa Soybean (ISA), the Nature Conservancy in Iowa and Natural Resources Conservation Services. She produced several conceptual models that will help create a Monitoring and Evaluation (M and E) Framework for the Boone basin. This M and E Framework will guide future work in other agricultural watersheds. Schilling is evaluating existing hydrological and water quality data for the Boone and Raccoon Rivers and Lyons Creek, and comparing it to fertilizer sales data and NASS crop yield data to assess nutrient budgets in the basins.

This effort, in collaboration with Chris Jones and Tony Seeman at ISA and Cal Wolter from the DNR, is expected to result in two articles to be published in peer-reviewed publications.



An article evaluating the Lyons basin's nitrate transport has been published. It concluded that relatively modest reductions in tile water nitrate could have profound downstream impacts. Seeman presented the results at the National Water Monitoring Conference in Portland, Ore., in May. Boone basin water quality impairments include hyper-nutrication. Reconciling this with corn and soybean production is a challenging problem for this and other watersheds.

Quantifying nutrient inputs and exports is critical in targeting conservation and edge-of-field nutrient reduction treatment, setting goals, and tracking pollutant sources.

Jones is working with Schilling to evaluate carbon loss from fields in the Boone and Lyons basins. Some of this work was recently published by the Journal of Environmental Quality. Important conclusions of this paper were that carbon transport via tiles is small compared to the total amount carbon present in the soil; carbon transport from the Raccoon basin is actually lower than the rest of the Upper Mississippi River basin; and controlling tile flow may provide a revenue for farmers in possible future carbon-trading opportunities. These results were also presented by Jones at the American Society of Agronomy 2012 Annual Meeting in Cincinnati, Ohio.

Ongoing data will help quantify the effectiveness of implemented practices, especially strip- and no-till and incorporation of cover crops to reduce the loss of soil organic matter. Maintaining soil organic matter benefits stream water quality and crop production by increasing water-holding capacity and enhancing plant nutrient uptake.

Along with its McKnight-sponsored work, ACWA continues to participate in edge-of-field treatment projects, including restored oxbows and denitrifying bioreactors. Dredging and reconnecting old oxbows to their adjacent stream provides important habitat. These oxbows can be designed to capture tile effluents and provide a nitrate sink, reducing loads to the river. ACWA bioreactors also continue to reduce nitrate loads to the Boone River. Keegan Kult from ISA presented bioreactor results from the Boone basin at the National Land and Sea Grant Water Quality Conference in Portland, Ore., in May.

In summary, ACWA staff believes the objective of increasing scientific capacity for the Boone River Watershed has been achieved through the McKnight Foundation grant, and the association will continue to use that capacity to guide future work.

Thanks to the efforts of ACWA and its partners, the Boone River will soon serve as a model for how agricultural production can coexist with healthy streams.

ASSOCIATE GOLD MEMBER PROFILE



KOCH WORKS TO HELP CROPS THRIVE, PROTECT WATER QUALITY. One of the world's largest fertilizer companies wants to ensure their products help feed the world, not pollute the water.

Koch Fertilizer, a subsidiary of Koch Industries based in Wichita, Kan., is an associate member of Agriculture's Clean Water Alliance (ACWA).

Koch Fertilizer's mission is to help crops thrive, farmers succeed and feed a growing world. Protecting the environment is just as important to the company, and that's why it decided to join forces with ACWA.

"We believe ACWA's primary mission is aligned with Koch Fertilizer's mission and is worth supporting,"

Todd Minnihan, Koch fertilizer regional leader.

Koch Fertilizer and affiliates manufacture, market and distribute more than 13 million metric tons of fertilizer products annually. This includes anhydrous ammonia, urea, phosphate, potash, AGROTAIN nitrogen stabilizer and sulfur-based products, just to name a few.

The company believes it has a responsibility to help educate current and future customers about the effective, efficient and sustainable use of fertilizers. That's why

it contributes to worthy organizations like ACWA and the Nutrients for Life Foundation.

"There are no short-term solutions or quick fixes for the responsible management of crop nutrients," Minnihan says.

The Des Moines and Raccoon rivers watershed drains 6.3 million acres of farmland in 30 counties in central Iowa stretching from just north of the Minnesota border to Des Moines. The Raccoon River is the primary water supply for the city of Des Moines, with a population of about 500,000.

ACWA Executive Director Roger Wolf commends Koch's commitment to the organization and environment. He says the decision to become an associate member is proof – highlighting the shared responsibility of keeping Ag strong and our waters clean, something that benefits everyone.

"ACWA associate members are fully-invested partners in addressing the environmental issues that concern our industry. Membership can help connect all the links in the channel to focus on the common goal of water quality improvement," Wolf says.

Additional resources provided by associate members – membership levels range from \$5,000 to \$25,000 – are being used to build upon current efforts to create awareness and expand critical water quality work. This includes encouraging farmers to use nitrogen stabilizers and urease inhibitors.

"(All are) methods to improve productivity and reduce nutrient loss," Wolf adds.



Dow AgroSciences

DOW AGROSCIENCES BRINGS A GLOBAL APPROACH TO IMPROVING WATER QUALITY IN IOWA AND BEYOND. The company, based in Indianapolis, Ind., is an associate member of Agriculture's Clean Water Alliance.

As one of the largest crop protection, seed and fertilizer stabilizer companies in the world, Dow AgroSciences believes it's their responsibility to help farmers succeed while protecting the environment. John Demerly, Dow's portfolio marketing leader for nitrogen stabilizers, says there's no better place than Iowa to help, given the state's productivity and potential to feed a growing world.

"Our commitment to the state of Iowa is high ... agriculture needs to be a strong steward; a strong conservationist of the land,"

John Demerly, Dow's portfolio marketing leader

Dow AgroSciences' sales of insecticides, herbicides, fungicides, fumigants, nitrogen stabilizers, seed and seed traits in 2011 topped \$5.7 billion. Popular products include Herculex insect protection, Dairyland Seed, N-Serve stabilizer, Lorsband insecticide and Telone soil fungicide, just to name a few.

While all the products help crop productivity, Demerly said the company wants to do everything it can to keep

them from getting into the water supply. That includes local and downstream waters, like the Mississippi River.

Demerly says joining the alliance aligns well with the ideals of Dow AgroSciences.

"It makes natural sense for us to be engaged," Demerly says. Dow brings a global and national business perspective pertaining to water quality to ACWA, Demerly says. It also has ties to federal and state policy makers, water quality data and promotional tools the organization can use.

ACWA Executive Director Roger Wolf is pleased to have Dow on board as an associate member. It shows the company is committed to the environment, he says.

"I think the associate members are realizing that ACWA understands the need for helping farmers be efficient and profitable, while also being a leader in water quality," Wolf says.

FINANCIAL IMPACT OF ACWA

SINCE FY2001, ACWA MEMBER RETAILERS HAVE INVESTED \$2,216,414 in the organization's mission to reduce nitrogen lost to waters draining land in their service areas. The graphs and charts in this section illustrate ACWA's financial profile—both throughout its history and in the past year.

These summaries reveal interesting facts that might surprise ACWA members, their customers and the general public—giving all a new appreciation for these agricultural retailers' commitment to gathering data from the water that can help address the nutrient loss issue and to engage diverse public and private partners in identifying and implementing solutions.

Here are some highlights:

- \$1,162,418 spent directly on water monitoring and analysis.
- \$54,441 invested to install denitrifying bioreactors on farms, leveraged 1:1 by private foundation funding to make Iowa a leader nationally and internationally in this innovative practice treating tile drainage water
- Accepted first associate member in FY10—associate membership investment grew 11 times in 3 years.
- Member dues made up 100% of income through FY09; in FY13, they were 69.3%, with private foundation grants at 17% and associate member dues 13.7%.

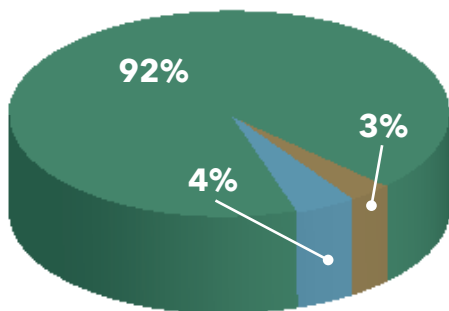
What appears on ACWA books does not come near to capturing its financial impact on advancing Iowa farmers' environmental performance while maintaining economic growth and sustainability.

ACWA's nationally-unprecedented investments in sophisticated and extensive water monitoring for over a decade, along with its investment in innovative practices and programs, have been instrumental in implementation leveraging nearly \$17,750,000 in federal and state funding, Iowa soybean checkoff and private funding to Iowa for work related directly to ACWA's mission.

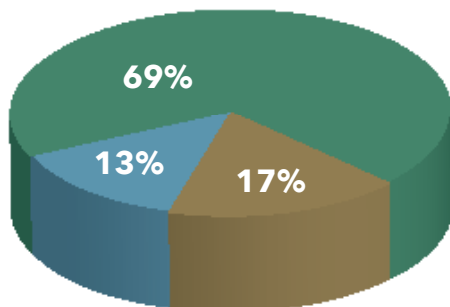
Of these funds:

- Nearly one-half have been managed or invested by Iowa Soybean Association (ISA), through ISA's Environmental Programs & Services which also serves as ACWA's program staff.
- Roughly 80 percent has provided cost share directly to farmers or fully subsidized service to farmers to help improve environmental performance through conservation planning and/or implementing conservation practices.
- The bulk of this investment has been made in ACWA members' service area to help reduce nitrogen losses.

ACWA TOTAL REVENUE 2001-2012
\$2,401,415



ACWA TOTAL REVENUE 2013
\$352,530



- MEMBERS
- ASSOCIATE MEMBERS
- MCKNIGHT GRANT

ACWA TOTAL EXPENSES

TYPE	2001-2012	2013
MANAGEMENT/ ADMIN	\$504,267	\$55,500
CONTRACTED SERVICES	\$61,363	–
COMMUNICATIONS	\$233,719	\$22,467
WATER MONITORING	\$1,162,418	\$164,900
WAGES	\$51,376	–
MCKNIGHT SCIENCE TEAM*	\$80,000	\$68,413
CCPI PROJECT COORDINATION	\$52,500	\$35,000
AMORTIZATION/DEPRECIATION	\$49,599	–
BIOREACTOR	\$54,441	–
OPERATIONS	\$77,030	\$6,250
TOTAL EXPENSES	\$2,326,713	\$352,530

*Funded by McKnight Foundation

NOTABLE IN-KIND

CONTRIBUTOR	2012
WALTON FAMILY FOUNDATION	\$88,500
THE NATURE CONSERVANCY	\$33,794
ISA ENVIRONMENTALPROGRAMS & SERVICES	\$614,706
ISA EPS CONSERVATION INNOVATION GRANT	\$191,400
TOTAL EXPENSES	\$928,400



ACWA MEMBERS

Ag organizations working for better water quality

Ag Partners LLC, Albert City, Iowa
www.agpartners.com

Farmers Cooperative Company, Ames, Iowa
www.fccoop.com

First Cooperative Association, Cherokee, Iowa
www.first.coop

Gold-Eagle Cooperative, Goldfield, Iowa
www.goldeaglecoop.com

Heartland Co-op, West Des Moines, Iowa
www.heartlandcoop.com

Key Cooperative, Roland, Iowa
www.keycoop.com

Helena Chemical Company-Midwest Division,
 West Des Moines, Iowa
www.helenachemical.com

New Cooperative, Inc., Fort Dodge, Iowa
www.newcoop.com

Pro Cooperative, Gilmore City, Iowa
www.procooperative.com

Crop Production Services, Wall Lake, Iowa
www.cropproductionservices.com

Van Diest Supply, Webster City, Iowa
www.vdsc.com

West Central, Ralston, Iowa
www.westcentral.coop

ASSOCIATE MEMBERS

Dow Agriscience, Indianapolis, IN
www.dowagro.com

Koch Industries, Wichita, KS
www.kochfertilizer.com

SFP, Leawood, KS
www.sfp.com

PARTNERSHIPS

Our partners make this work possible. Thanks to:

National Laboratory for Agriculture and the Environment
www.ars.usda.gov

Des Moines Water Works
www.dmww.com

Lake Panorama Association
www.lakepanorama.org

Raccoon River Watershed Association
www.northraccoon.org

US Geological Survey
www.usgs.gov

Iowa Soybean Association
www.iasoybeans.com

Sand County Foundation
www.sandcount.net

The Nature Conservancy
www.nature.org

USDA Natural Resources Conservation Service and the
 numerous county soil and water conservation districts
 throughout the ACWA watersheds
www.nrcs.usda.gov

THANKS FOR SPECIAL PROJECT FUNDING:

McKnight Foundation
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