

# Building *a* Legacy *of* Leadership

10



2010 — ACWA PROGRESS REPORT

# Overview

*Last year's annual report celebrated 10 years of Agriculture's Clean Water Alliance's (ACWA) making a difference in Iowa water quality.*

The past year has been one of building on ACWA's legacy of leadership. This annual report celebrates the many signs of progress demonstrated in 2010 as ACWA's visionary efforts led people to action and a myriad of programs building on what's been done and leveraging ACWA's initial investment.

ACWA's upfront investment in monitoring water quality has been the catalyst for partnerships with numerous organizations and agencies now engaged in unique and diverse water quality improvement projects in Iowa's watersheds. The data that's been gathered is being used to leverage funding that multiplies, many times over, the impact of the original investment.

While this report highlights numerous projects, three are particularly significant examples of ACWA's important work in 2010.

In June, ACWA was recognized in a ceremony at Panora celebrating the successful partnership of organizations and individuals that helped fund and install a continuous nitrate monitor that gives Panora advance information about upstream nitrate levels and enables the city to manage its water quality accordingly.

Based on the success of a remote nitrate monitoring station established by ACWA at Van Meter in 2006 and two others deployed by the U.S. Geological Survey at Sac City and at Jefferson in providing Des Moines Water Works (DMWW) advance notice of water conditions upstream, local leaders of Panora sought their own real-time monitor which would enable them to manage their water treatment in a manner similar to DMWW. ACWA teamed up with the City of Panora, the Lake Panorama Association, DMWW, the Izaak Walton League and the Raccoon River Watershed Association in the installation of the real-time monitor.

ACWA also partnered with more than 130 organizations in Iowa, representing 300,000 Iowans, to form the Iowa Water & Land Legacy Coalition, working together for passage of

Iowa's Water & Land Legacy Amendment in November. Passed by an overwhelming margin – nearly two-thirds of Iowans voted “yes” on Question 1 – the Amendment will protect Iowa's rich soil and farming heritage, restore wetlands and protect against future flood damage.

In addition, ACWA participated this year in developing the Water Quality Master Plan for the Raccoon River, an initiative to create a comprehensive water quality plan for the 3,625 square mile Raccoon River Watershed. The process included an Agricultural Best Management Practice (Ag BMP) Expert Panel event in June, in which 25 experts traveled to several locations throughout the watershed and engaged in discussion about agricultural management practices and their potential to address impairments in the Raccoon River. ACWA provided financial support for the Ag BMP event; Jim Penney, an ACWA member from Key Cooperative, served on a panel; and ACWA's bioreactor project was included among the technical presentations. ACWA will continue to participate in the resulting Master Plan.

*The common theme in all of these efforts is that, where water quality problems are presenting themselves in Iowa, ACWA is at the forefront, providing data and leveraging its investment to work in partnerships toward solutions that will benefit all Iowans.*

# Presidents Letter

During the past 11 years, ACWA and our key partners – Iowa Soybean Association (ISA), Des Moines Water Works (DMWW), Iowa Department of Natural Resources (IDNR), Iowa Department of Agriculture and Land Stewardship (IDALS) and the U.S. Department of Agriculture (USDA) – have accumulated a significant amount of information about the Raccoon River Watershed. Some have said it's the largest watershed database in the United States.

The organization began with the simple premise of collecting data via our certified water sampling effort. In the same manner we use agronomic data to identify practices that improve agronomic performance, ACWA believes we need good environmental data to identify sound environmental practices. Water monitoring will continue to be the backbone of our work. As ag retailers, we are very aware of a dual mission to help farmers improve their agronomic performance in the field while supporting environmental stewardship and long-term sustainability beyond the field's edge.

So what have we learned from this massive base of information? And how is it being used to shape our efforts for long-term sustainability? *Sustainability means protecting resources we use to meet current needs without damaging the ability of future generations to meet their needs.* Can we unravel the complexities of nutrient management within our environment and champion voluntary Best Management Practices (BMP's)? What new practices can we implement to achieve satisfactory results fast enough to meet public demand? Will our efforts allow ag retailers and farmers to avert mandatory regulations and protect our freedom to operate?

This annual report is designed to share some of our findings and efforts for water quality remediation. We believe we are beginning to see signs of progress; however, it's a long

journey and will require constant vigilance and nurturing to achieve our mission of keeping nitrates from our rivers and streams. This mission continues to grow as we link our efforts with others in the Upper Mississippi River basin who are charged with addressing the growing hypoxia concerns in the Gulf of Mexico.

ACWA's reputation has gained us a place representing agriculture with other groups and state agencies engaged in water quality improvement projects. Yet, our need for greater visibility is clearly evident. Agriculture still has much to do



to meet the public's expectations for environmental responsibility. Our efforts in ACWA represent a positive step; however, we must continue to educate the public about our work if we want long-term support. ACWA reached out this past year with presentations to environmental and industry groups interested in our efforts, both locally and nationally. It's our hope that, by sharing our story, we develop new ambassadors and sponsors who share our passion for sustaining the efforts of progressive agriculturists well into the future.

Dave Coppess, Heartland Co-op  
President, ACWA

# Watershed Work

*In the past year, numerous projects have come together in the Raccoon and Des Moines watersheds, making a difference in Iowa water quality.*

Many of them have been made possible by the use of ACWA data, thus leveraging ACWA's investment in water quality monitoring to fund projects that are making and will continue to *make a big difference* in Iowa's watersheds.

To fully appreciate how work in the watersheds has progressed, one must know some of the history. ACWA began certified water sampling in 2000 in the Raccoon River Watershed (RRW). The result is a comprehensive database now including 12 years of water quality monitoring information.

In 2008, ACWA also expanded its efforts to initiate water sampling in the Des Moines River Watershed (DMRW) and took over sampling of the Boone River Watershed (BRW), a Des Moines River Tributary. Because the Nature Conservancy (TNC) had identified the BRW as a priority watershed, TNC and the Iowa Soybean Association (ISA) had partnered in 2007 to fund water monitoring in all 30 subwatersheds within the Boone; in 2008, ACWA took over responsibility for that monitoring.



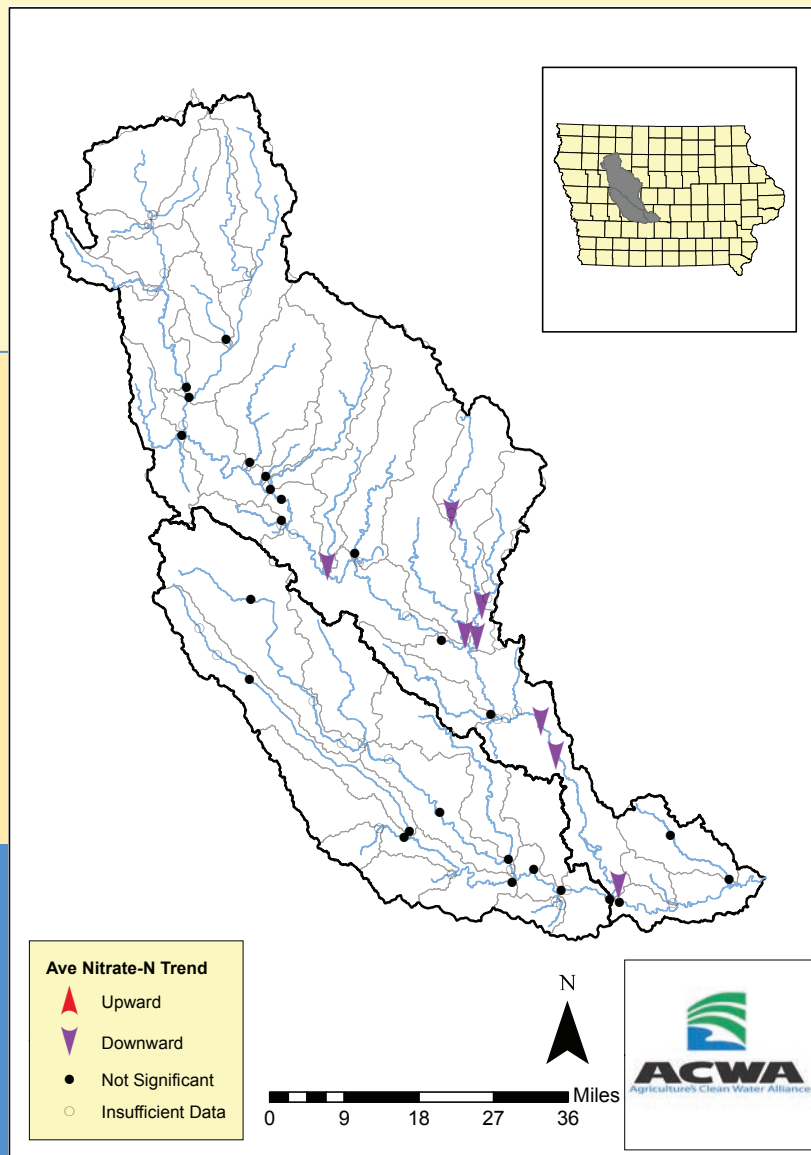
Utilizing the data obtained in the first two years, ACWA participated in a watershed plan in the West Buttrick Creek, a Raccoon River Tributary, in 2002. Since then, two-thirds of the 78 producers in the watershed have completed nutrient management plans and nearly half have completed pest management plans. In the past nine years, a Conservation Reserve Enhancement Program (CREP) wetland has also been established there.

ACWA and the Sand County Foundation piloted the first bioreactor demonstration in the West Buttrick in 2008. Having shown a 40 percent nitrate load reduction, it generated a significant amount of attention and spurred the installation of other bioreactors. As a result of this demonstration project, bioreactors are now included among conservation practices qualifying for cost share funding.

Watershed work in the Boone in 2010 shows a maturing of the process, with diverse groups working together, benefited by careful watershed planning. Watershed planning begins with developing local leadership and working through a process to identify resource concerns and determine locally acceptable solutions. The resulting plan serves as a road map.

Because it would be cost prohibitive to apply programming to an area the size of the entire BRW, using water monitoring data to develop a watershed plan helps target areas of need. Targeting allows for more efficient use of resources by determining areas needing the greatest attention and showing the best chance for continued performance, then implementing practices most closely matching the need.

## Trends In Annual Nitrate-N Concentrations 1999-2010



*Raccoon Watershed — ACWA's water quality project began with the Raccoon. Our water sampling data for this area dates back to 2000. Eleven years of monitoring data in the Raccoon watershed shows the trend. For more information about this map and other data on all three watersheds, visit [www.acwa-rrws.org](http://www.acwa-rrws.org).*

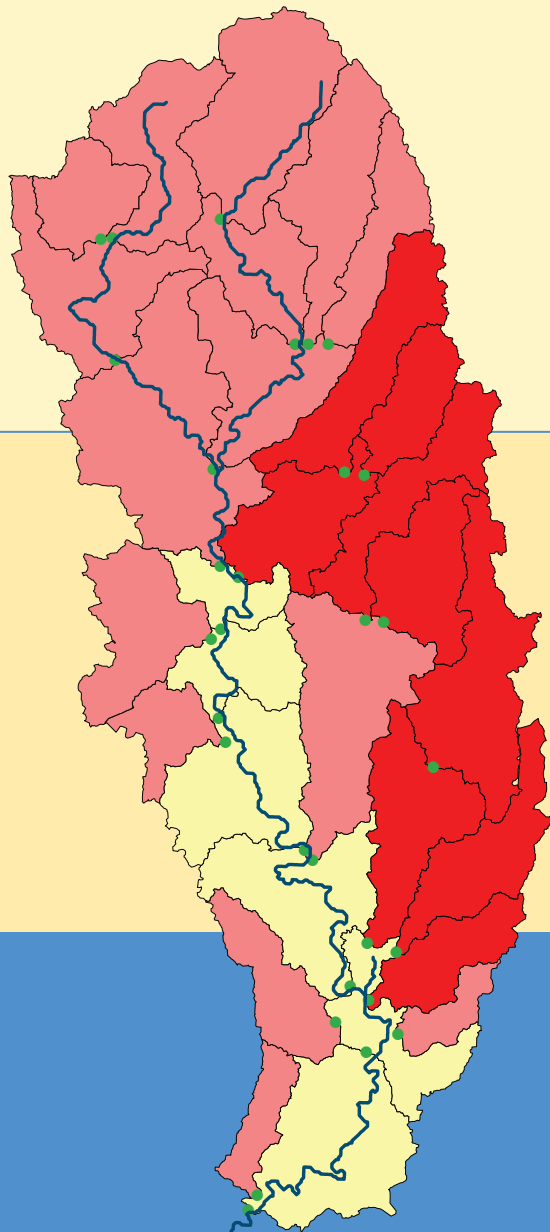


Using that targeting process, three subwatersheds of the Boone – Lyons Creek, Buck Creek and Lower Eagle Creek – were identified for more intensive monitoring, planning and implementation. Obtained with the help of ACWA water monitoring data, several major grants are enabling important progress in the watersheds.

This has been the second year of the three-year Watershed Improvement Review Board (WIRB) grant, obtained by Des Moines Water Works (DMWW) in 2008 to provide assistance to local producers to address issues and improve water quality in Brushy Creek, in the Raccoon River watershed. The WIRB project has included stalk nitrate testing to determine the optimal amount of nitrogen that should be applied. In addition, more than \$43,000 of Environmental Quality Incentive Pro-

gram (EQIP) funding was allocated for Comprehensive Nutrient Management Plans (CNMP). Approximately 40 producers participated in this program in 2010.

A three-year NRCS Conservation Innovation Grant (CIG) obtained by ISA in 2008 is being used, along with Congressional appropriations and the Iowa soybean checkoff, to develop Watershed Management Plans for the Fannys Branch and Willow Creek watersheds of the Raccoon. Through the grant, approximately 60 producers are developing enhanced resource management systems (RMS) addressing nutrients, soil/residue, pests and energy use efficiency, as well as wildlife habitat.



**Ave Nitrate-N**

**Ave3Yr**

- No Data
- 0 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- 20 - 40
- Mainstem
- Sample Sites

*Boone River Watershed — ACWA's water monitoring data from 2007-2009 has consistently shown higher concentrations of nitrates in the eastern portion of the Boone watershed, prompting targeted watershed efforts in that area.*



The CIG is also helping producers in the targeted watersheds of the BRW conduct cornstalk sampling, aimed toward optimizing nitrogen management, and develop a watershed management plan for the Lower Eagle and Buck Creeks, while a different IDALS/IDNR grant supports planning in Lyons Creek.

When the Mississippi River Basin Initiative (MRBI) was introduced by USDA NRCS this past spring to reduce nutrient loading in the Mississippi River basin, partners in the Raccoon watershed, including ACWA, were awarded an MRBI grant for \$2.3 million in cost share funding to farmers for projects in the West and East Buttrick Creeks and Fannys Branch of the North Raccoon, covering more than 70,000 acres in Greene, Webster and Dallas counties.

Two additional watersheds within the Raccoon River basin have received MRBI funding. One is the Upper Buttrick Creeks project, sponsored by the Webster Soil and Water Conservation District, which includes Headwaters for East and West Buttrick Creeks and Tank Pond. The second is the Buena Vista North Raccoon Headwater Project, located near Storm Lake, sponsored by the Buena Vista Soil and Water Conservation District; it includes Poor Farm Creek, Outlet Creek, Drainage Ditch 101 and Lateral #4.

*“Results over three years will be important in showing that we are decreasing the phosphorous load and the nitrate load.”*

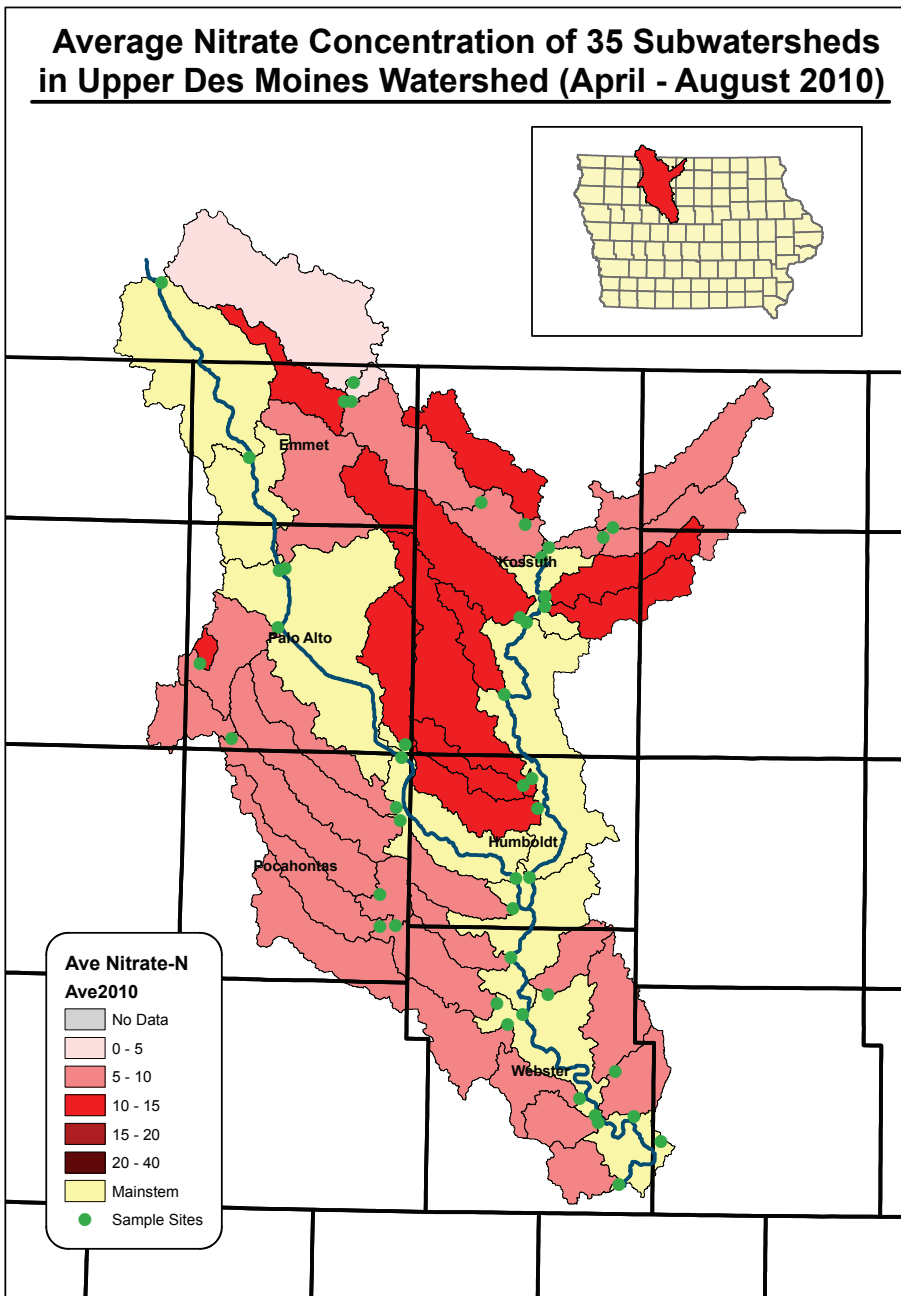
— Don Hagen, Silver Lake Watershed, Palo Alto County

MRBI funding has also been granted to the Boone River watershed where, over five years, a total of \$4.2 million will be committed to conservation practices to address identified concerns. Farmers in eight targeted subwatersheds (including Lyons, the Lower Eagle and Buck Creeks), covering sections of Wright and Hamilton counties, will have the opportunity to receive higher payment rates on conservation practices and systems that avoid, control and trap nutrient runoff, improve wildlife habitat and maintain agricultural activity.

Just as projects are coming together in the Raccoon and Boone River Watersheds, local stakeholders in the Des Moines River Watershed are now using ACWA data as they

organize watershed projects.

Don Hagen is coordinator of the Silver Lake Watershed project in Palo Alto County, which has received WIRB and IDALS funding. “Results over three years will be important in showing that we are decreasing the phosphorous load and the nitrate load,” Hagen says. “Minnesota has now legislated funding to clean the river upstream from us, so the data will be important to them. Information from down-river will be very important to us and will help to leverage funding. We will need data to document problems and then to show improvement.”



*ACWA water monitoring provides the baseline and ongoing evaluation data for local projects to assess the impact of utilizing practices and to show improvements over time.*

Heron Lake Watershed District (HLWD) in southern Minnesota recently received a grant to fund a coordinator for interstate monitoring and education efforts, look for opportunities of enhanced cooperation and promote the overall implementation of the West Fork Des Moines River (WFDMR) watershed.

In Emmet County, where local leadership has been awarded \$154,000 in WIRB funding for Tuttle Lake this year, project coordinator Seana Goldbold credits ACWA water sampling for helping her compile enough data to form an alliance with the Minnesota portion of the Tuttle Lake watershed. *“The fact that my watershed lies on the border is a big deal because both states must come to agreement and prepare to do improvements in the watershed simultaneously. The water monitoring data set strengthened the argument that **work needs to be done.** It was a great opportunity to target key sampling points.”*

Opportunities continue to present themselves. Karen Hansen, who works with the Webster County Conservation Board and the Smeltzer Trust Learning Farm, reports that two watershed projects under consideration in her area may benefit from the sampling data: “Prairie Creek watershed landowners have indicated interested in starting an organized watershed group, and the Skillet Creek watershed also has a potential project,” Hansen says.

HLWD District Administrator Jan Voit says, *“The data collected through ACWA’s efforts provide valuable information for preparing for that monitoring effort, and the skills learned by the watershed coordinator through working with ACWA will be very useful. Without the **partnership** developed between HLWD and ACWA, the HLWD grant would lack a major component and likely would not have been funded.”*

# Major Watershed Projects

**WIRB** – *The Watershed Improvement Review Board (WIRB)* awards grants to improve water quality and flood prevention. Local watershed improvement committees, soil and water conservation districts, county conservation boards and public water supply utilities are among the eligible applicants. The Iowa Legislature makes yearly appropriations to the Watershed Improvement Fund, administered by WIRB.

**CIG** – *Conservation Innovation Grants (CIG)*, administered by Natural Resources Conservation Service (NRCS), are intended to stimulate the development and adoption of innovative conservation approaches and technologies while leveraging Federal investment in environmental enhancement and protection, in conjunction with agricultural production. One of the targeted areas is the Mississippi River Basin. Grants are funded up to three years. Under CIG, Environmental Quality Incentives Program (EQIP) funds are used to award competitive grants.

**MRBI** – To improve the health of the Mississippi River Basin, including water quality and wildlife habitat, the USDA NRCS has developed the Mississippi River Basin Healthy Watersheds Initiative (MRBI). Through 2013, NRCS and its partners will provide assistance to producers in selected watersheds who are voluntarily implementing a system of practices that will minimize the nutrient loss, control soil erosion, improve soil quality and provide wildlife habitat while managing runoff and drainage water for improved water quality.

**Watershed Planning Grants** – Both Iowa Department of Natural Resources (IDNR) and Iowa Department of Agriculture and Land Stewardship (IDALS) offer planning assistance and development grants for watershed groups to complete comprehensive watershed assessments and develop watershed management plans aimed at restoring Iowa lakes and streams. Completed watershed management plans are then eligible for various grant programs, including the Watershed Protection Fund (WSPF), Water Protection Fund (WPF), Watershed Implementation Grants (EPA Section 319/314), and the Watershed Improvement Fund (via WIRB).



# Partnerships

*ACWA's visionary investment of more than \$ 1 million in water monitoring has led to collaborations that have already resulted in \$7 million in watershed projects, thanks to partnerships with these organizations:*

(Need the complete list from Victoria and/or Mary)

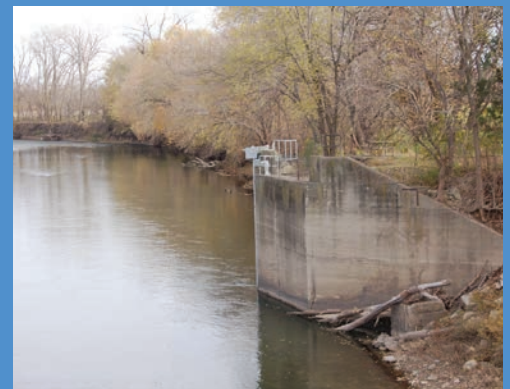
*"The challenge we face here in Iowa is a microcosm of the challenges faced by the whole world: how to use our finite natural resources in a sustainable and environmentally-responsible way, without negatively impacting distant but interconnected ecosystems and populations. Although individuals can and should act locally to 'do their part,' these global challenges need institutional leadership – institutions like ACWA and DMWW, working together, overcoming obstacles and solving problems on a watershed scale for all Iowans and those downstream of us." — Chris Jones, laboratory supervisor at DMWW*

## Panora's Real-Time Monitor

In 2006 ACWA provided \$10,000 to establish and operate the first remote nitrate monitoring station that senses and records real-time nitrate data, thus providing a continuous 12-hour advanced notice of changing water quality conditions to Des Moines Water Works (DMWW). DMWW and the Iowa Department of Natural Resources (DNR) contributed operational and maintenance support, and the U.S. Geological Survey (USGS) provided the site, near the Van Meter bridge, just below the confluence of the North, Middle and South Raccoon branches.

That monitor demonstrated the value of real-time water quality data, proving that real-time documentation was feasible and affordable. Based on the success of the Van Meter device, USGS purchased and deployed two nitrate monitors for the North Raccoon River, one at Sac City and one at Jefferson.

This year, the City of Panora initiated action to obtain its own real-time monitor. Because of nitrate concentrates in the city's drinking water supply, Panora sometimes needs to purchase well water to blend with its surface water to dilute nitrate concentration. Local leaders wanted a real-time monitoring site, which would enable them to manage their water treatment in a manner similar to DMWW.



ACWA contributed financially to the project, along with the City of Panora, the Lake Panorama Association, DMWW, the Izaak Walton League, and the Raccoon River Watershed Association. A local fundraising effort helped to make the monitor a reality.

Thanks to the installation of a continuous nitrate monitor near Lenon Mills Dam, Panora now has advance information about upstream nitrate levels and is able to manage its water quality accordingly.

Water monitoring data from the Panora real-time site can be accessed at <http://waterdata.usgs.gov/nwis/uv?05483600>

# Bioreactors

*Six bioreactors have been installed as a result of the ACWA / Sand County Foundation Bioreactor Demonstration Project, initiated in 2008.*

A bioreactor is a practice designed to reduce the amount of nitrate-nitrogen transported by tile lines from reaching surface waters without taking land out of production. Two bioreactors were installed in 2010. The first, installed in Carroll County in April, was partially funded by a WIRB grant received by Des Moines Water Works (DMWW). The most recent installation is located in Greene County. It was installed in September.

shed management specialist who works for ACWA on the bioreactor project. “In the Hamilton County bioreactor, (Figure 1) the concentration was reduced by an average of 68 percent. The Webster County bioreactor (Figure 2) had an average reduction of 96 percent. The Greene County 1 bioreactor had a 55 percent reduction rate in 2009 and a 46 percent reduction rate in 2010.”

The Hancock County bioreactor (Figure 3) showed an average reduction of 55 percent during 2010. Other than the spring-melt when the water table was above the

Table 1

	Median Nitrate-N Concentration, mg/L	
	IN	OUT
Hancock	8.5	4.6
Hamilton	10.4	3.0
Webster	12.1	0
Greene	10.5	5.3

Figure 1: Hamilton County Bioreactor

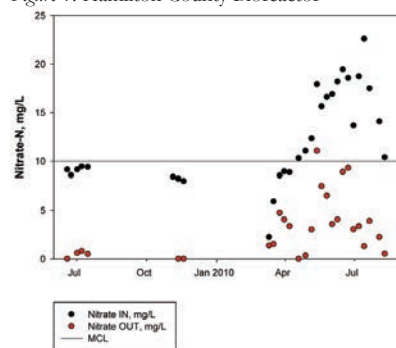
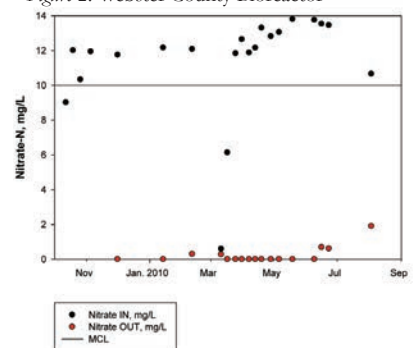


Figure 2: Webster County Bioreactor



## 2010 Update

There are now two years of data at the Greene 1 bioreactor and a full year of data for the Hancock, Hamilton and Webster County bioreactors. Table 1 describes the median values for nitrate-N concentrations before the tile water enters the bioreactor (IN) and after the tile water exits (OUT) the bioreactor. The treated water has a significantly lower concentration than the water entering the bioreactor. Figure xx shows the concentration values of the individual sampling events at the Hancock County Bioreactor.

*“On average, the nitrate concentration was reduced by 55 percent in 2010,”* says Keegan Kult, ISA water-

bioreactor, bypass was only witnessed during one sampling event at the bioreactor. “With nearly all of the water going through the bioreactor and a 55 percent average reduction in nitrate concentration seen, it is within reason there was nearly a 50 percent load reduction,” Kult says.

The Webster County bioreactor is actually showing an average percent reduction of 96 percent; however, that is because it is not treating a very high percentage of the tile flow. It appears water is not draining properly from the bioreactor and retention time within the bioreactor is extended, resulting in the near 100 percent reduction. Maintenance on this bioreactor will be done to improve drainage so a higher volume of water can be treated.

The Greene County 1 bioreactor (Figure 4) went from a 55 percent average concentration reduction in 2009 to a 46 percent in 2010. The increased flow rates in the field tile resulting from the above average precipitation seen in 2010 reduced the retention time within the bioreactor, which accounts for the decrease in percent concentration reduction.

The Hamilton County bioreactor showed a 68 percent average concentration reduction. The bioreactor handled a majority of the flow from the field tile as bypass of the bioreactor was only seen a couple of times. From March through November 2010, the Hamilton County bioreactor removed approximately 110 kg of nitrate-N.

Data from the ACWA/Sand County Demonstration Project has been used to help Iowa NRCS develop an interim standard as well as make bioreactors an eligible practice for cost share in the Mississippi River Basins Initiative. Under the interim standard, the bioreactor is eligible for EQIP cost share up to \$3,999.

“If the producer is in an MRBI eligible watershed, bioreactors are cost shared up to \$7,999,” Kult explains.

Kult says funds from the ACWA/Sand County Foundation Bioreactor Demonstration project are going to be used as the match for EQIP for a planned installation in Pocahontas County.

“Since the planned Pocahontas County bioreactor is being partially funded by the NRCS EQIP program, the bioreactor design must be approved by a NRCS engineer. Once the engineer approves, plans will be made for installation.”

*Kult says the team is pleased with the early results they are seeing from the bioreactors.*

“Even with the high amounts of rainfall seen during the summer of 2010, the bioreactors were still performing and there were no issues with restricting drainage in the field,” Kult says. “Even with the Webster County bioreactor having internal drainage issues, water was bypassing properly in the control structures which allowed the field to drain as it normally would.”

Figure 3: Hancock County Bioreactor

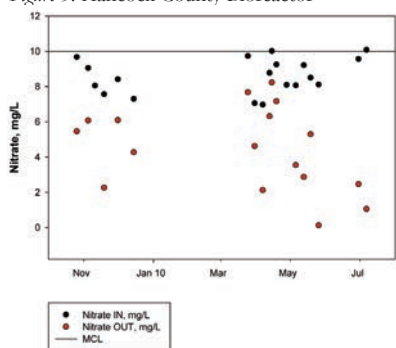
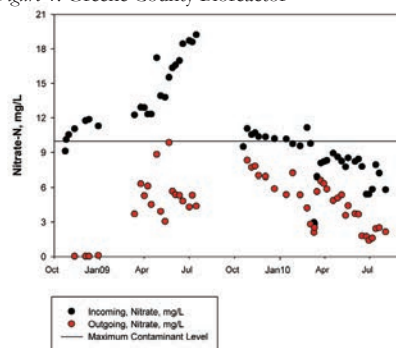


Figure 4: Greene County Bioreactor



*“Even with the high amounts of rainfall seen during the summer of 2010, the bioreactors were still performing and there were no issues with restricting drainage in the field,” Kult says.*

*“The MRBI watersheds are a part of a targeted approach to implementing conservation practices. The eight targeted subwatersheds in the Boone River Watershed and three subwatersheds in the North Raccoon River Watershed were selected in part because of the data provided by ACWA’s water monitoring efforts.”*

ACWA’s monitoring data showed these subwatersheds to have historic high nitrate-N concentrations. The MRBI project intention is to install bioreactors in a cluster approach in areas shown to have a historic high nitrate-N concentration, allowing the practice to be most effective.

For more information or to watch video of a bioreactor installation, go to [www.acwa-rrws.org/bioreactordemonstration.html](http://www.acwa-rrws.org/bioreactordemonstration.html).

# Certified Water Samplers

*Data from ACWA water monitoring helps watershed stakeholders better understand the conditions of surface waters and also helps identify areas of concern.*

ACWA's water monitoring network includes 138 sampling sites, including 11 automated samplers and a corps of certified samplers in the Raccoon and Des Moines watersheds. A total of 1497 water monitoring samples were collected and analyzed in 2010.

This monitoring program wouldn't be possible without ACWA's water quality monitoring volunteers. Many individuals, groups and organizations assist with the monitoring efforts, including certified samplers from Soil and Water Conservation Districts, County Conservation Boards, Future Farmers of America and local watershed groups.

Elizabeth Hill is one of those certified samplers. She became involved in ACWA's water sampling initiative while she was the ecologist on staff at Whiterock Conservancy. She also served on the board of the Raccoon River Watershed Association and the Iowa Rivers Revival. She is now studying for her master's degree in biology, focusing on plant ecology, at the University of South Dakota in Vermillion.

Before leaving Whiterock Conservancy, Elizabeth described her experience as a certified water sampler with ACWA. "I volunteered to conduct water sampling from 2007-2010 in the Brushy Creek (WIRB), Middle Raccoon, and Willow Creek watersheds because, as Whiterock Conservancy's ecologist, I also assisted in the management of land in these three watersheds. Living within a mile of the Middle Raccoon River and attempting to manage lands for both economic and ecological sustainability prompted me to find ways in which I could support other organizations that are doing the same thing, such as the partnership between ACWA, the Iowa Soybean Association and Des Moines Water Works."

"The days that I conducted monitoring, I would rise early and spend the morning cruising around the watershed, observing the physical changes in the streams as well as the changing water quality. It was a wonderful way to stay

connected to the rivers and streams I was so focused on improving, and in late summer, after I finished sampling my last round, I had already started to miss the time. It was actually during one of my sampling sessions that I came up with the idea of writing a book about the Raccoon River Watershed, and I have been working on the outline and text recently, with inspiration taken from my watershed road trips."

"My interest in the water quality of Iowa rivers and streams is rooted in my *dependence on and love for our aquatic resources, from both ecological and*



*recreational standpoints.* I greatly enjoy spending time on and in Iowa rivers. As a young Iowan who returned to the state after living on the West Coast and who would like to live here in future, I am involved in working to improve water quality in our streams for partially selfish reasons: I want to be able to swim in clean, cold water and fish for healthy, diverse fishes and look at vibrant, biodiverse riparian communities. Most importantly, though, I hope other Iowans will grow to appreciate our bountiful riparian ecosystems, to enjoy our rivers and streams, to understand how much we depend on them and to work towards improving their health."

# Fall Code of Practice

*ACWA members reaffirmed their fall nitrogen Code of Practice in 2010.*

The ACWA Fall Nitrogen Code of Practice is an agreement among the retailers that they will not distribute anhydrous ammonia for fall application until soil temperatures reach 50°F at a depth of four inches (or 60°F with use of a nitrification inhibitor) with a forecast of cooling soil temperatures.

ACWA members use the county soil temperature and forecast maps compiled by Iowa State University, available at <http://extension.agron.iastate.edu/NPKnowledge>, as a reference point for soil temperatures.

ACWA President Dave Coppess says the Code of Practice was established simply to give the industry reasonable and practicable guidelines for fall nitrogen fertilization.

*“Following these guidelines is one step in working for better nutrient management in these watersheds,”* Coppess says.

ACWA members have held to their commitment in the past, even in the face of unfavorable market conditions, projected equipment shortages in spring and many other unknowns shared by dealers and their farming customers. The commitment of ACWA to the Fall Nitrogen Code of Practice has received good reviews from the public, regulators, farmers and dealers alike. The Agribusiness Association of Iowa (AAI) also adopted the Code of Practice, and ag retailers throughout the state are being encouraged to follow it, once again exemplifying ACWA's tradition of leadership.

## List of ACWA Members

Ag Partners LLC, Albert City, Iowa  
[www.agpartners.com](http://www.agpartners.com)

Dedham Cooperative Association, Dedham, Iowa  
[www.dedham.coop](http://www.dedham.coop)

Farmers Cooperative Company, Ames, Iowa  
[www.fccoop.com](http://www.fccoop.com)

First Coop Association, Cherokee, Iowa  
[www.first.coop](http://www.first.coop)

Gold-Eagle Cooperative, Goldfield, Iowa  
[www.goldeaglecoop.com](http://www.goldeaglecoop.com)

Heartland Cooperative, West Des Moines, Iowa  
[www.heartlandcoop.com](http://www.heartlandcoop.com)

Heart of Iowa Cooperative, Roland, Iowa  
[www.hoic.com](http://www.hoic.com)

Helena Chemical Company-Midwest Division  
West Des Moines, Iowa, [www.helenachemical.com](http://www.helenachemical.com)

New Cooperative, Inc., Fort Dodge, Iowa  
[www.newcoop.com](http://www.newcoop.com)

Pro Cooperative, Gilmore City, Iowa  
[www.procooperative.com](http://www.procooperative.com)

UAP/CPS, Wall Lake, Iowa, [www.uap.com](http://www.uap.com)

Van Diest Supply, Webster City, Iowa  
[www.vdsc.com](http://www.vdsc.com)

West Central, Ralston, Iowa  
[www.westcentral.coop](http://www.westcentral.coop)

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Agriculture's Clean Water Alliance

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