WORKING FOR CLEAN WATER

2010 WATERSHED IMPROVEMENT SUCCESSES IN IOWA

Working for clean water

2010 watershed improvement successes in Iowa

Left: *Boating Rathbun Lake, near Centerville*
Cover: *Dry Run Creek, Cedar Falls*

From the Director

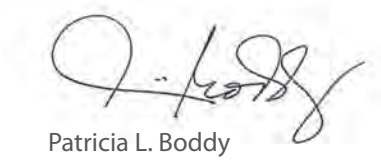
Last November, Iowans made it clear that they value and care about our state's natural resources. More than 60 percent of voters approved Iowa's Water and Land Legacy Amendment, which created the Natural Resources and Outdoor Recreation Trust Fund. While this fund won't be filled until the next time the state legislature increases the sales tax, it signaled that Iowans want to up their investment in improving the state's natural resources, including water quality.

Future efforts that result from this new fund will build on the successes Iowans are already achieving in their local lakes, rivers and streams. That includes following a strategic approach, finding the areas in the state in most need of help and creating watershed management plans to best reach success.

People are banding together locally and regionally to lead watershed improvement efforts based on solid watershed and community research. With that sound data, groups are partnering with organizations like the DNR to develop comprehensive, long-term plans to improve the land and water. The DNR's watershed improvement, fisheries, wildlife, forestry and water quality staff – to name a few – can contribute to locally-led efforts, helping Iowans achieve success in the long run.

The following stories, while rooted in similar approaches to watershed improvement, show the myriad ways that these efforts can have real returns. In some cases, it's protecting a source of drinking water in a town or making a creek a safer place for kids to splash around. Many times, it improves recreational opportunities like boating, swimming, fishing, hunting and wildlife viewing, which can in turn boost a town's tourism and quality of life.

Please join me in applauding these Iowans' efforts and in discovering how we each can make a difference in our own nearby waters. Clean water starts with you, but we can all lend a hand.



Patricia L. Boddy
DNR Interim Director

Fishing Brushy Creek Lake in Webster County

We all live in a watershed, an area of land that drains to a lake or stream. What we do on that land — whether a backyard, farm, small business or factory site — affects the health of our lakes, streams and rivers. Clean water starts with us.

When water runs off the land, it can carry pollutants with it. For example, motor oil can wash off our driveways and into storm sewers, which dump directly into a lake or stream without treatment. Rainfall can send loads of exposed soil from fields and bare ground into our waterways. If we don't make changes to the way we manage the land to keep soil, nutrients and other materials where they belong, they'll end up in our water.

Iowans are coming together in communities across the state to improve their local lakes, streams and rivers. They're investigating problems and creating long-term plans to improve and protect their water. They're working with the DNR and other local, state and federal agencies, which provide technical know-how, planning guidance and financial assistance. Local watershed leaders work one-on-one with landowners, homeowners and volunteers to make changes on the land and in our homes to improve the quality of water entering our lakes, streams and rivers. These organized efforts offer Iowans access to better resources and funding assistance to make improvements on their property that protect water quality.

While the Watershed Improvement Program heads up these watershed efforts for the DNR, projects are a collaborative effort with many DNR programs and other partners. Fisheries staff do in-stream and in-lake work that, together with better water quality, helps fish and aquatic life thrive. Wildlife staff work with landowners to install buffer strips and vegetation that provide habitat for pheasant, turkey and other wildlife while protecting streams. Our foresters help Iowans plant trees to stabilize streambanks. Our geology, water monitoring and water quality staff help identify problems and offer solutions. The DNR also works with a number of partners, such as the Iowa Department of Agriculture and Land Stewardship - Division of Soil Conservation (IDALS-DSC), the USDA Natural Resources Conservation Service (USDA-NRCS) and Iowa Soil and Water Conservation Districts.

The U.S. Environmental Protection Agency, through Section 319 of the Clean Water Act, provides DNR watershed improvement funding. DNR Watershed Improvement often funds local watershed efforts in cooperation with other DNR programs, IDALS, USDA-NRCS and soil and water conservation districts.

West Union rain garden

Partner group initials used in this booklet:

County Conservation Board (CCB) ◆ Iowa Department of Agriculture and Land Stewardship (IDALS) - Division of Soil Conservation (DSC) ◆ Iowa Department of Natural Resources (DNR) ◆ Iowa Department of Transportation (DOT) ◆ Iowa State University (ISU) ◆ Soil and Water Conservation District (SWCD) ◆ U.S. Department of Agriculture (USDA) ◆ USDA Farm Services Agency (USDA-FSA) ◆ USDA Natural Resources Conservation Service (USDA-NRCS) ◆ USDA Resource Conservation and Development (RC&D) ◆ U.S. Environmental Protection Agency (EPA) ◆ Watershed Improvement Review Board (WIRB)

Dry Run Creek enters a detention basin off 18th Street in Cedar Falls

It takes a village for Dry Run Creek

Dry Run Creek can be anything but when a rainstorm moves through Cedar Falls. Hundreds of thousands of gallons of stormwater rush off the urban landscape, carrying pollutants and damaging in-stream habitat for aquatic life in a stream that branches out into almost the entire town.

Add in erosion from rural areas in the watershed, and you'll understand why agencies, businesses, residents, local government and the University of Northern Iowa came together to change how water reaches the creek. The creek and its tributaries begin in farmland, then wind through industrial and residential areas and the UNI campus before meeting up with the Cedar River. "It requires a community effort, and we have that here in the Cedar Valley," said Ed Gruenwald, who serves on the creek's advisory board and leads Hartman Reserve Nature Center. "People are willing to roll up their sleeves and accomplish that goal." The group, started in 2005, aims to treat runoff from the first 1.25 inches of rain in a storm, reduce sediment reaching the creek by 30 percent and protect in-stream habitat, all while working with the community to better understand the creek. "Just getting people to know what a watershed is is a big step. This kind of thing takes a long time, but it pays off. We're still getting folks to understand how valuable the resource is," said Gruenwald, who's created two rain gardens in his yard to absorb runoff.

Workshops and meetings forge partnerships across the watershed, said Phil Schuppert, who coordinates the effort. "There's been an increase of the recognition of the watershed and of watershed issues," he said. "Changing attitudes has been one of our biggest success stories." As a result, conservation efforts, both urban and rural, are making differences. Filter strips on rural land control soil erosion. The City of Cedar Falls has slowed and reduced runoff to the creek with 23 bioretention cells, a large detention pond and a permeable paving parking lot, and has strengthened streambanks.

UNI, flanked by Dry Run tributaries, has long led efforts to protect the creeks that serve as living classrooms for faculty and students. "While we're doing the right thing, we're also creating learning opportunities everyday," said Eric O'Brien, UNI sustainability coordinator. The university uses pervious pavers, green roofs, bioswales and native plantings to reduce runoff. Educational signs next to these draw attention and grow understanding. In 2011, it will add pervious paving to the UNI-Dome's north parking lot, which will soak runoff through the pavement instead of allowing it to run off. It will capture runoff from almost 8 acres of impervious area (where water can't soak through), that can create almost 264,000 gallons of runoff with a 1.25 inch rain – enough to fill 2.5 Olympic-sized pools.

"In our case, partnerships are instrumental," said Schuppert. "Because of our partners, we've been able to reduce the amount of sediment reaching the creek by 100 tons per year and have practices that can soak up 167,000 gallons of stormwater, and we have more projects in the works that will improve those numbers."

A rain garden on College Hill in Cedar Falls helps absorb rainfall.

Project partners:

- Iowa DNR
- University of Northern Iowa
- City of Cedar Falls
- Black Hawk SWCD
- Black Hawk CCB
- Hartman Reserve Nature Center
- Meadows Homeowners Association
- Lockard Development
- Weichers Construction
- Cedar Valley RC&D
- WIRB
- IDALS
- I-JOBS
- Community Foundation of Northeast Iowa

John and Megan McCleary wait for ducks at Kiowa Marsh

Marsh makes a historic comeback

The 55-acre wetland just off of Highway 20 in Sac County may seem like a new addition to the area, but it's part of an effort to restore a millennia-old chain of natural marshes.

Located in the 1,200-acre Kiowa Marsh Wildlife Management Area, the formerly drained wetland helps to filter excess sediment and nutrients from runoff water as part of a larger chain of marshes. That's especially important here in the Indian Creek watershed, which feeds into the North Raccoon River basin. The Raccoon River, used as a drinking water source for 450,000 Iowans, has high nitrate, phosphorus and E. coli levels.

Ducks Unlimited engineers and the DNR restored the marsh by building an earthen dam and a water control structure to allow staff to manipulate the wetland's water level. Shallow wetlands like those in the marsh complex traditionally went through occasional dry cycles, allowing them to drain, re-grow plants and refill. The water control structure allows wetland managers to recreate these cycles. A fish barrier keeps out carp and other undesirable fish. Upland of the new wetland, three new ponds catch sediment and nutrients before they reach the marsh. A new 32.5-acre swath of prairie reduces soil erosion, traps runoff contaminants and provides wildlife nesting cover. Estimates show that the project will reduce the amount of sediment reaching Indian Creek by 652 tons per year and trap 847 pounds of phosphorus.

"Kiowa Marsh represents another great partnership project that DU was pleased to be a part of," said Eric Lindstrom, Ducks Unlimited regional biologist. "This successful project will provide high quality habitat for waterfowl and other wetland-dependent wildlife, as well as critical flood storage capacity and improved water quality benefits for downstream residents."

Wildlife has already begun to make use of the new wetland and prairie habitat. "We're starting to see more vegetation in the wetland, and that's drawing waterfowl like blue wing teal and shorebirds," said John McCleary, a DNR wildlife technician at the marsh. "We've seen some painted turtles and snapping turtles and frogs. Amphibians and reptiles will benefit, too."

That also makes the area attractive for hunters and birders. Jeff Kestel enjoys hunting the area with his son and taking the dog out for a run there. "I don't think a lot of people know about it, but the amount of habitat and diversity of it is great – upland for pheasants, marsh for waterfowl," he said. "When we create these areas, hunters use the area and everyone gets the advantage of better water quality and protecting the soil."

Kiowa's marshes and surrounding uplands draw waterfowl, songbirds, pheasants, amphibians and other wildlife.

Project partners:

- Iowa DNR
- Ducks Unlimited
- EPA
- U.S. Fish and Wildlife Service

Visitors to Honey Creek State Park Resort enjoy Rathbun Lake

Protecting lake a six-county effort

Imagine a 26-mile-long line of dump trucks, each packed with 15 tons of valuable Iowa soil, ready to dump that dirt into Rathbun Lake. That's the amount of soil a similarly long line of landowners, producers and organizations work to keep out of the lake each year.

A partnership of more than a dozen federal and state agencies, private organizations and hundreds of landowners, the Rathbun Land and Water Alliance has worked for almost 20 years to improve Rathbun Lake. Since 2003, the Alliance's Protect Rathbun Lake Project has been trying to reduce sediment and phosphorus reaching the lake, a tourism draw for 1 million visitors each year, home of Honey Creek Resort State Park and a drinking water source for 80,000 southern Iowans.

The partnership approach to solving the lake's water quality problems has been the key to the group's success, according to the Alliance's Marty Braster. "I can't overstate the role of partners in helping us do things the way they should be done. At first, we didn't want to spend time on assessments and planning because we thought we knew what to do. The partners' firm guidance and direction is what made us successful."

With water monitoring data and detailed research of the watershed, the Alliance crafted a watershed management plan that identified which parts of the watershed needed the most help and how to best address those problems – not a small task for a 354,000-acre basin that covers six counties. The long-range plan allows for staff to specialize in areas like water monitoring, outreach and for working one-on-one with landowners. "It's really the on-farm presence that keeps landowners interested," said Braster.

And landowners have responded. In 28 of the area's smaller sub-watersheds, 265 landowners have installed new conservation practices through the project. Word has spread neighbor to neighbor. "Jim and Betty Sullivan told me all about it," said farmer Terry Bear. "The water was washing my ditches out, and I wanted to save all the soil I could. The program helps the farmer on cost. We're saving money, and soil, too."The Sullivans were some of the first landowners to work with the project. "We've always been into conservation. My father started in the '60s and passed it on to us," said Jim. He and Betty have done at least one conservation project each year since they bought the farm in 1986. "Cost-share made it possible to do so much more work," Jim said. "We've done everything you can do to keep the soil in place."

Those practices, as evidenced by the dump truck analogy, do make an impact. "The key reason the project keeps getting support is the results we're seeing," said Kathleen Chester, who handles the effort's outreach. "There are big reductions in sediment and phosphorus reaching the lake."

Jim and Betty Sullivan (right) were some of the first landowners to install conservation practices with the Rathbun Lake effort.

Project partners:

- Rathbun Land and Water Alliance
- Landowners
- Iowa DNR
- IDALS-DSC
- ISU
- WIRB
- EPA
- USDA-FSA
- USDA-NRCS
- U.S. Army Corps of Engineers
- Appanoose SWCD
- Clarke SWCD
- Decatur SWCD
- Lucas SWCD
- Monroe SWCD
- Wayne SWCD
- Iowa Farm Bureau
- Rathbun Regional Water Association
- Southern Iowa Development and Conservation Authority

Butterflies and bumblebees explore plants in a West Union rain garden

Sustainability starts on Main Street

What started as a small project to update six blocks of the downtown streetscape has blossomed into a community effort to create a more sustainable West Union.

Looking for help on the streetscape project, West Union turned to the Iowa Department of Economic Development, which chose the town as one of two pilot communities for its new Iowa Green Streets Initiative. Soon, community members and government agencies sat around a table, discussing their vision for a new, sustainable downtown. "We knew that there's a lot of good community effort in West Union," said IDED's Jeff Geerts. "We wanted to help them revitalize their downtown, preserve businesses, improve water quality, and have a safer and more inviting downtown."

The new streetscape design needed to save energy. It would encourage people to walk and bike more, since the average car trip in town was less than two miles. It should help businesses in the long term and assist historic preservation efforts. It needed to improve the quality of stormwater runoff into Otter and Glover creeks, both trout streams, while also reducing runoff. "The floods of 2008 in Iowa City and Cedar Rapids were going on at the same time, and we asked, 'where did this water come from?' We saw we are a part of the contribution to urban stormwater issues downstream," said Robin Bostrom, the executive director of the West Union Chamber of Commerce.

With those ideas in mind, the city selected projects. The new street will use porous pavement, which can soak a 3- to 4-inch rainfall through the pavement, filtering and cooling the water before releasing it to the trout streams. Rain gardens and bioretention cells soak up and filter runoff, while narrowing the street for safer pedestrian crossings. Businesses are also taking individual steps. Groups stop by to check out the porous paver parking space, rain garden and rain barrel at Woodard Insurance. "With all the rain this year, it's done a good job of slowing water down and the plants are doing super," Dick Woodard said of his rain garden. "It's added a lot of color to the back parking area."

A geothermal system, stubbed to all downtown buildings, should cut heating and cooling costs by half, and there's potential for expanding the system beyond downtown. More than 70 businesses took part in a free energy audit, and many applied for grants to make improvements. Restored prairie took the place of turf grass between the elementary and high schools, soaking up rainfall and reducing runoff. And that's not even the entire project. "We know how to put on our boots and get something done when the community sees a need," said Bostrom. "We have had some hurdles. We still have work to do, but we know people want to be in a place where there are sustainable practices in place."

Dick Woodard installed pervious pavers, a rain garden and a rain barrel at his insurance business.

Project partners:

- City of West Union
- Iowa Department of Economic Development
- Main Street West Union
- West Union Chamber of Commerce
- Fayette County Economic Development
- Iowa DNR
- IDALS
- Conservation Design Forum
- IBC Engineering
- TeKippe Engineering
- Fayette SWCD
- Iowa DOT
- EPA
- U.S. Department of Energy
- Iowa Department of Cultural Affairs
- WIRB
- Upper Explorerland Regional Planning Commission

Tom and Agnes Kenney's tree farm in Clayton County often serves as an outdoor classroom

Couple's conservation roots run deep

Better water quality begins on the land, and Tom and Agnes Kenney are planting the seed – and saplings – to make that happen on their Clayton County farm.

The farm, which the Kenneys bought in 1968 south of Elkader, spans 440 acres. Retired from raising livestock and grain, they rent some acres to a young farmer who continues using the conservation practices the couple put in place. They've enrolled another 140 acres in the Conservation Reserve Program, which has reduced soil loss. The remaining 165 acres host the tree farm, a mixture of existing timber, former pastureland and other land not suited for crops. "We both enjoy the tree farm very much. He just loves the timber. He could live there," Agnes said.

The Kenneys, 2010 Outstanding Tree Farmers of the Year, began working on timber management with a DNR forester in 1980, then put a focus on planting 10 years later. Since then, they've planted trees on 80 acres and improved 65 acres of oak, walnut, ash, cherry and butternut, all while making sure the rest of the county knew about the benefits of tree planting. "My husband and I have great respect for the Kenneys and their love of the land. They're always enthused about what they're doing," said fellow Clayton County tree farmer Jody Kerns. "They're responsible for a lot of tree planting in Clayton County."

Working for the Iowa Department of Agriculture and Land Stewardship's Division of Soil Conservation in the Clayton County Soil and Water Conservation District office for 27 years, Agnes was quick to suggest tree planting to those coming in to the office. She and Tom use the farm as an outdoor classroom for local students, farmers and landowners, hosting field days to show new practices or help Future Farmers of America students learn how to age trees or judge soil. "We're glad that we're able to help educate both younger and older people. I think it's a great thing to educate the young people and give them something that will lead them on to further education," said Agnes.

The tree farm fuels the homestead – firewood has completely heated the house since 1976. A hot water heater fueled by firewood provides in-floor heating to a shop building. When ash yellows disease struck the farm, the couple cut down and milled the diseased ash trees to create a four-season room. With Cox Creek running through the farm, the couple is working to repair field damage from high water flows in recent years and prevent future damage. Shrub plantings near the house draw in wildlife, like deer and coyote. "We're very blessed it's right outside our window," Agnes said.

Tree farmers Tom and Agnes Kenney work to improve their land and help others do the same.

Project partners

- Tom and Agnes Kenney
- Iowa DNR
- IDALS-DSC
- USDA-NRCS
- USDA-FSA
- Clayton SWCD

A watershed effort at Nine Eagles Lake resulted in the lake coming off the state's impaired waters list

Ponds continue to protect lakes

More than five years after watershed projects wrapped up in two Decatur County watersheds, the results continue to be clear.

Excess sediment had landed both Nine Eagles Lake and Slip Bluff Lake on the state's impaired waters list, as runoff turned the lakes gray and cloudy from the clay soil it carried. "One big rain would keep the lake stirred up and cloudy all season long," said Kevin Reynolds, USDA-NRCS district conservationist, of Slip Bluff. With both lakes, the surrounding park land made up most of the watershed, so efforts began there.

At Nine Eagles State Park, the DNR assessed the watershed to create water quality improvement and forestry management plans. From there, the DNR built 17 ponds to catch sediment from gully erosion and improved trails to reduce impacts to the lake. In Slip Bluff Park, the Decatur County Conservation Board worked to reduce gully, streambank and shoreline erosion. The CCB built two large sediment basins and seven smaller ponds to trap sediment, and added rip rap to keep the shoreline in place.

Results quickly followed. Sediment reaching Nine Eagles Lake fell by 85 percent and by 64 percent at Slip Bluff. The lakes cleared up, water quality improved and the lakes dropped from the impaired waters list. Today, those benefits remain as the ponds continue to catch sediment from the lakes' watersheds. "It's terrific to be off that list. The lake has held up real well with all the rain we've had," said Rich Erke, Decatur County Conservation Board director, of Slip Bluff. "Without the ponds in place, it would be a muddy mess. It's nothing like we used to have. It clears up real quick after a rain."

With cleaner water comes good fishing and recreation opportunities. "The water clarity is absolutely beautiful at Nine Eagles," said DNR fisheries biologist Gary Sobotka, who recommends trying to hook a catfish, bass or bluegill there. "Now you can see down 18.5 feet. It's clearer than most lakes we have in the state, and it's helped fish growth." Fishing has improved at Slip Bluff as well, and more anglers use the lake now. "Two of the ponds we built are starting to produce good fishing in themselves," said Erke. The Nine Eagles ponds attract frogs and birds, and "the lake's beach is getting pretty good use," said Bud Taylor, park manager.

The success at Slip Bluff and Nine Eagles spurred the CCB to try a similar effort with sediment ponds at another county park, Little River. "We're doing the same sort of approach, but doing more upland work with landowners in the Little River watershed," Reynolds said.

Watershed efforts at Slip Bluff Lake have resulted in clearer water.

Project partners:

- Iowa DNR
- IDALS-DSC
- USDA-NRCS
- Decatur SWCD
- Decatur CCB
- Iowa DOT

Lake Anita has reclaimed its title as an incredible fishing lake following a fish renovation

Lake anchors community

Minnows and nightcrawlers in southwestern Iowa, be warned. Anglers are coming for you and heading to Lake Anita.

So much so that Cappel's Ace Hardware in Atlantic, 15 miles away, had to up its weekly bait orders to keep up with demand. Thanks to a watershed that protects water quality and a recent fish renovation, anglers and campers have made Lake Anita State Park the go-to place between Des Moines and Omaha. "We do real well – it has a great impact on us, that's for sure," said Tom Cappel, the store's owner, of the lake. "We have a large fishing section. It's gotten bigger since Anita has picked up again. It's a good business for us 52 weeks of the year."

Not that long ago, that wasn't the case. Yellow bass and grass carp were overtaking game fish and destroying aquatic plants. Without those plants to tie up phosphorus in the water, algae blooms became a problem. "When I first got here in 2002, camping was going down because fishing had become so poor," said Josh Peach, park manager. So in 2003, the DNR drained the lake, killed what fish remained, deepened and strengthened the shoreline, installed underwater fish habitat, and added pea gravel spawning areas to attract bluegills and largemouth bass closer to shore.

Park visitors were sparse while the lake took a couple of years to refill. The town of Anita, along the park's northern boundary, could feel that lack of campers and anglers. "What affects us at the park affects the town of Anita," said Peach. But once the lake refilled, word spread quickly about the successful renovation. The park hosted 12 fishing tournaments this summer. Park use and camping numbers are higher than ever before, especially on summer Saturday nights, when the Friends of Lake Anita offer a free movie and popcorn. Those park visitors stop in town for supplies, gas, bait, dinner and more. "It's a fantastic thing for the whole town. We get people coming in with the campers. I'm glad we have it here," said Lee Poeppe, owner of Redwood Steak House in Anita. "It has grown. It helps the community tremendously." People come from as far away as Waterloo and Omaha, said E.D. Brocker with the friends group. "Everything is in place here for a great weekend," Brocker said.

Conservation practices and a quality watershed protect that investment in the community. "The water quality has always been exceptional at Anita because of the watershed," said Peach. A small amount of land drains to the lake – 13 acres of land for every acre of lake – and a good portion of the basin is grassland, pasture or permanent vegetation through the Conservation Reserve Program. Along with the prairie restoration in the park, that helps soak up rainfall and reduce runoff. Ponds in the park catch sediment and nutrients before they can reach the lake. "The fishing's been phenomenal since the renovation," said Bryan Hayes, DNR fisheries biologist. "Part of it's the good water quality."

Great fishing and camping at Lake Anita helps local businessowners like Jo Ann and Lee Poeppe, owners of The Redwood Steak House.

Project partners:

- Iowa DNR
- Friends of Lake Anita

Relaxing by Casey Lake at Hickory Hills Park near Waterloo

Monitoring makes the difference

Water monitoring efforts in two Iowa watershed projects are providing answers to the inevitable question when it comes to practices for improving water quality – *but does it work?*

A four year monitoring project at Hickory Hills Park in Tama County tracked the effectiveness of three conservation practices in filtering pollutants from runoff before it reached Casey Lake. Nine automatic sampling stations, as well as Hawkeye Community College students, captured information from a retention pond, a pond with a wetland downstream, and a grade stabilization structure on the amount of sediment, nutrients and E. coli levels coming in and out of the structures. The monitoring showed that each structure significantly decreased pollutants entering Casey Lake. "There is no way to gauge improvement unless you monitor the results. It's like joining a weight loss program without ever getting on a scale," said Chad Fields with DNR Watershed Monitoring and Assessment. "Monitoring is becoming easier, too. Technology has increased so much that it's possible for a project manager half a state away to easily keep track of student or volunteer sampling schedules, results, reports, basically anything."

In northwest Iowa's Lyon County, water monitoring evaluated two new technologies designed to reduce nutrients in runoff from livestock feedlots. Using perennial forages or grasses, the systems settle out solids from manure, then soak up the liquid and filter out nutrients and other contaminants. To monitor how the systems work, stations grabbed samples of runoff after rain events for five months as it entered and exited the structures, looking for ammonia, nutrient, E. coli and other levels. After a June rainfall, sampling stations recorded an 89 percent drop in ammonia and 87 percent fall in nitrogen. Following an August rain, the samplers marked a 99 percent reduction in ammonia and 98 percent drops in nitrogen and phosphate.

"The water monitoring in the Lyon County project showed us that these structures and approaches are effective in reducing or nearly eliminating pollutants in their ag runoff from reaching streams, rivers, and lakes," said Steve Hopkins with DNR Watershed Improvement. "Landowners and producers can benefit from these systems by more effectively using the nutrient benefits from livestock manure for crop production." The structures show the importance of sampling and groundwork early on. "Monitoring water quality levels before a project starts greatly helps to characterize the water quality concerns and help design a better project," said Mary Skopec with DNR Watershed Monitoring and Assessment.

Structures like this one help protect water quality in Casey Lake.

Project partners:

- Iowa DNR
- Black Hawk CCB
- Tama SWCD
- USDA-NRCS
- IDALS-DSC
- Hawkeye Community College
- State Hygienic Laboratory at the University of Iowa
- Lyon SWCD
- Local engineers
- ISU Extension
- IOWATER

Kiowa Marsh, Sac County

Planning today for success tomorrow

We're with you every step of the way. When Iowans come together in their communities with the common goal of improving their lake, stream or river, the DNR and our partners can help you take action.

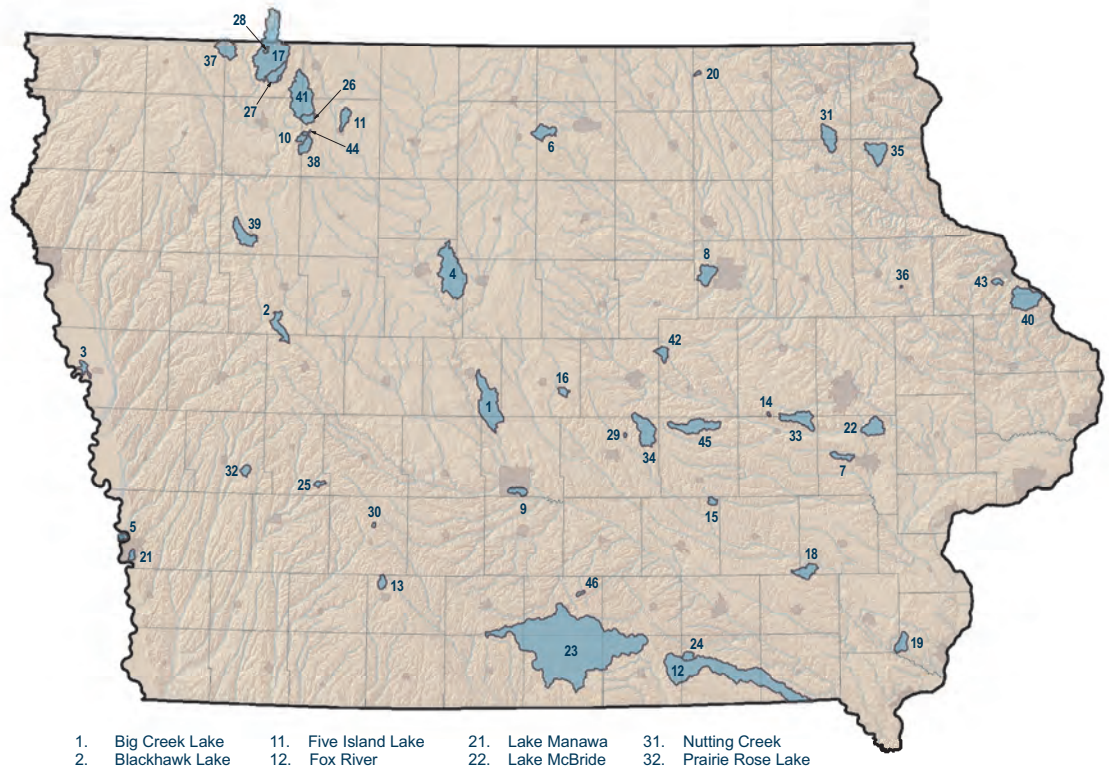
With DNR Watershed Planning Grants, local groups can receive funding, technical assistance and guidance to create a Watershed Management Plan. The plan assesses the watershed for problems, develops solutions and finds ways to involve your community in the effort. In short, the plan is a road map designed to move you toward success and help you get back on track if detours pop up along the way.

Once you have a plan, you need to put it in action, and the DNR can help with our DNR Watershed Implementation Grants. Use these grants to launch your plan, making changes on the land to improve the water. Implementation Grants are more than funding – DNR staff provide technical and outreach assistance, and guidance. Our partners, IDALS-DSC and NRCS, also offer additional grant funding.

"Sound planning is the foundation of any successful effort," said Allen Bonini with the DNR's Watershed Improvement Program. "Plans support long-term efforts and strategies to improve our water and keep it clean. As we help Iowa groups build solid Watershed Management Plans, we're excited to see the successes down the road."

Visit watershed.iowadnr.gov for more information on DNR watershed grants.

2010 DNR watershed projects



1. Big Creek Lake
2. Blackhawk Lake
3. Blue Lake
4. Brushy Creek Lake
5. Carter Lake
6. Clear Lake
7. Deer Creek
8. Dry Run Creek
9. Easter Lake
10. Elk Lake
11. Five Island Lake
12. Fox River
13. Green Valley Lake
14. Hannen Lake
15. Hawthorne Lake
16. Hickory Grove Lake
17. Iowa Great Lakes
18. Lake Darling
19. Lake Geode
20. Lake Hendricks
21. Lake Manawa
22. Lake McBride
23. Lake Rathbun
24. Lake Wapello
25. Littlefield Lake
26. Lost Island Lake
27. Lower Gar Lake
28. Marble Lake
29. Mariposa Lake
30. Meadow Lake
31. Nutting Creek
32. Prairie Rose Lake
33. Price Creek
34. Rock Creek Lake
35. Silver Creek
36. Silver Lake (Delaware)
37. Silver Lake (Dickinson)
38. Silver Lake (Palo Alto)
39. Storm Lake
40. Tete des Morts Creek
41. Trumbull Lake
42. Union Grove Lake
43. Upper Catfish Creek
44. Virgin Lake
45. Walnut Creek
46. Williamson Pond

For more information about DNR Watershed Improvement: Steve Hopkins at (515) 281-6402 or Stephen.Hopkins@dnr.iowa.gov | watershed.iowadnr.gov

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Enjoying Brushy Creek Lake beach

Iowa Department of Natural Resources

Leading Iowans in caring for our natural resources

www.iowadnr.gov

clean water starts with you.

IOWA DNR WATERSHED IMPROVEMENT