



IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

Bill Northey, Secretary of Agriculture

February 13, 2012

Governor Terry E. Branstad
State Capitol
LOCAL

Dear Governor Branstad:

Pursuant to Iowa Code Chapter 466A Section 3, Item 3e, the Watershed Improvement Review Board is pleased to provide you its annual report. A copy of this report are also being provided to the President of the Senate and the Speaker of the House. Per the requirements of Chapter 466A, an electronic version of the report is also being provided to your office, the President of the Senate and the Speaker of the House

The Board, codified in Chapter 466A, is an independent, self-governing body directed to award grants for water quality improvement and flood prevention in the state. The Board is authorized to request applications from soil and water conservation districts, local watershed improvement committees, public water supply utilities, counties, county conservation boards and cities and award grants to these entities. These grants are funded by the Watershed Improvement Fund.

Annual appropriations, funds from the Animal Agriculture Compliance Fund Penalties, carryover funds plus interest earned on the Watershed Improvement Fund allowed the Board to issue a Request For Applications from June 15 to July 27, 2012. On August 17, the Board awarded grants to twelve applicants for a total of \$946,952. In addition to providing environmental benefits, these implementation projects stimulate economic recovery and create jobs through the purchasing of local goods and services. A second Request For Applications was open from October 9 to December 14, 2012. Applications from this request will be reviewed in February 2013.

The Board extends its gratitude to the Governor and the General Assembly for supporting this visionary effort to improve water quality and prevent flooding and is looking forward to continuing and expanding upon this initiative.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Ballou".

Robert Ballou, Chair
Watershed Improvement Review Board

Cc: Bill Northey
Jay Johnson
Members, Watershed Improvement Review Board

RB:jn



IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

Bill Northey, Secretary of Agriculture

February 13, 2012

Pam Jochum
President of the Senate
State Capitol
LOCAL

Kraig Paulsen
Speaker of the House
State Capitol
LOCAL

Dear Senator Jochum and Representative Paulsen:

Pursuant to Iowa Code Chapter 466A Section 3, Item 3e, the Watershed Improvement Review Board is submitting its annual report. A copy of this report is being provided to the Governor. An electronic copy of the report is also being provided to your offices and the Governor per the requirements of Chapter 466A.

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Watershed Improvement Review Board Calendar Year 2012 Annual Report

Submitted February 15, 2013

The Watershed Improvement Fund and the Iowa Watershed Improvement Review Board (WIRB) were created in 2005. This statute is now codified in Iowa Code Chapter 466A.

The fifteen-member Board conducted six meetings throughout the year in-person or via teleconference. Meetings were held January 26, March 14, April 20, June 8, August 17, and November 2. Attachment 3 lists the board members and their organization affiliation.

The Board completed one Request For Applications (RFAs) for the Watershed Improvement Fund. The RFA was announced June 15, 2012 and closed July 27, 2012.

July 27, 2012 Closing Date Request For Applications: The Board received twenty-seven applications in response to this RFA. These applications requested \$2.36 million in Watershed Improvement Funds and leveraged an additional \$15.45 million for a total of \$17.81 million of watershed project activity proposed.

On August 17, after reviewing and ranking the applications individually from this RFA, the Board met and selected twelve applications for funding. The twelve projects were approved for \$946,952 of Watershed Improvement Funds. Data on the twelve selected projects in this RFA include the following:

- These projects included portions of 19 counties.
- The \$946,952 requested of Watershed Improvement Funds leveraged an additional \$7.17 million for a total of \$8.12 million in watershed improvements.
- Selected individual projects were approved for funding ranging from \$19,850 to \$100,000.
- Applicants could request up to \$100,000 of Watershed Improvement Funds.

Attachment 1 lists the approved projects project number, name, sponsor organization, county or counties where located, and funding amount for the July 27, 2012 closing date RFA. Attachment 2 is a map showing the location of the funded projects from this RFA.

A second Request For Applications was open from October 9, 2012 to December 14, 2012. Applications from this request will be reviewed and selections made in February 2013.

In 2011, changes were made in the authorizing legislation to allow the WIRB to fund a soil nutrient mass balance study to be conducted by the Iowa Department of Agriculture and Land Stewardship in cooperation with Iowa State University College of Agriculture and Life Sciences. The WIRB approved \$50,000 at their September 9, 2011 meeting to

complete the study. The final report for the study was submitted October 28, 2012. At the request of Iowa State University, the grant was extended to February 28, 2013 to allow the researchers present the report findings to the WIRB and legislative committees.

In 2012, changes were made in the authorizing legislation to have the civil penalties collected and interest on these penalties from the Animal Agriculture Compliance Fund Penalties be deposited into the Watershed Improvement Fund starting July 1, 2012.

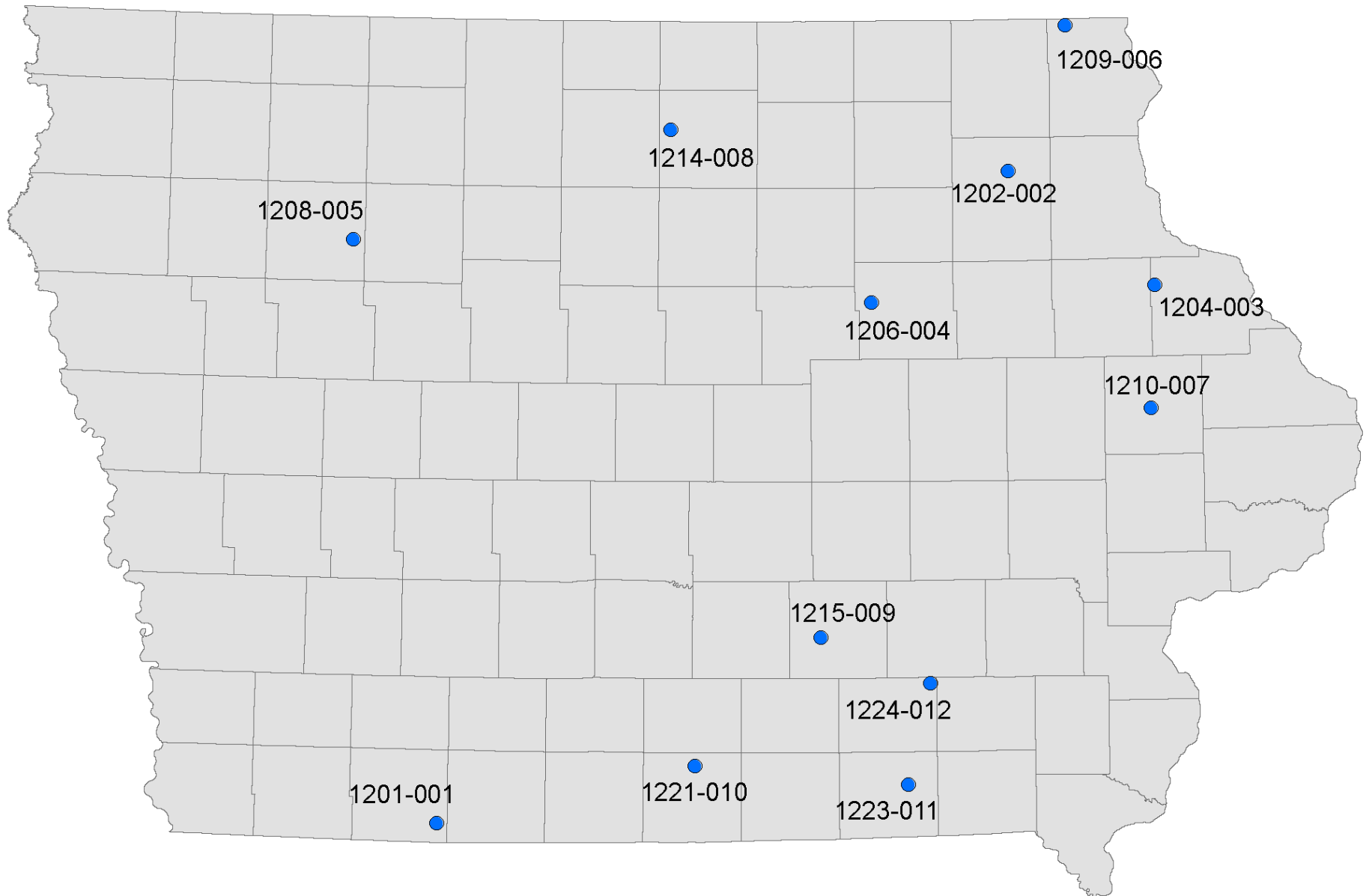
In cooperation with the Treasurer of State, submitted the 2012 year-end report for the Rebuild Iowa Infrastructure Fund and the Revenue Bonds Capitals II Fund to the Legislative Services Agency and the Department of Management.

Attachment 4 contains the annual progress reports from 38 active projects.

Attachment 1. Watershed Improvement Fund Grants Awarded From the Request For Applications Ending July 27, 2012.

Project Number	Watershed Name	Organization	Project Length	County(ies)	Grant Amount
1210-007	Central Park Lake	Jones County Conservation Board	3 years	Jones	\$96,650
1214-008	Clear Lake	Hancock SWCD	2 years	Hancock, Cerro Gordo	\$20,000
1224-012	Competine Creek	Wapello SWCD	2 years	Wapello, Jefferson, Keokuk	\$100,000
1206-004	Dry Run Creek	Black Hawk SWCD	2 years	Black Hawk	\$19,853
1215-009	Muchakinock Creek	Mahaska SWCD	1 year	Mahaska	\$78,688
1204-003	North Fork Maquoketa	Dubuque SWCD	2.5 years	Dubuque, Delaware	\$99,571
1208-005	North Raccoon	Buena Vista SWCD	3 years	Buena Vista, Pocahontas	\$63,900
1221-010	Rathbun Lake	Rathbun Land and Water Alliance	3 years	Appanoose, Lucas, Wayne	\$97,790
1201-001	Sands Timber	Taylor SWCD	2 years	Taylor	\$70,500
1223-011	South Chequest Creek	Davis SWCD	2 years	Davis	\$100,000
1202-002	Upper Otter Creek	Fayette SWCD	2 years	Fayette	\$100,000
1209-006	Waterloo Creek	Allamakee SWCD	2 years	Allamakee, Houston (MN)	\$100,000
Funding Approved by the Watershed Improvement Review Board					\$946,952

ATTACHMENT 2. WIRB FUNDED PROJECTS – JUNE 2012 RFA



**Attachment 3. Appointed Members of the Watershed Improvement Review Board
January 1 - December 31, 2012, Iowa Code Chapter 466A**

Name	City	Term Ending	Sponsoring Organization
Robert Ballou	Monticello	2013	Iowa Soybean Association
Jane Weber	Bettendorf	2015	Soil and Water Conservation Districts of Iowa
Larry Alliger	Gowrie	2015	Iowa Farm Bureau
Jolee Belzung	Ankeny	2013	Iowa Association of Water Agencies
Mark Rosenbury (January – April)	West Des Moines	2012	Agribusiness Association of Iowa
Dave Coppess (May – December)	West Des Moines	2015	Agribusiness Association of Iowa
Jim Gillespie	Earlham	2014	Representative of IDALS
Keri Van Zante (January – May)	Newton	2012	Iowa Association of County Conservation Boards
Larry Gullett (June – December)	Center Junction	2015	Iowa Association of County Conservation Boards
Tom Hadden (January -- April)	Altoona	2012	Iowa Environmental Council
Susan Heathcote (May – December)	Des Moines	2015	Iowa Environmental Council
Steve Hopkins	Des Moines	2014	Representative of DNR
Debra Karwal	Elliott	2014	Iowa Pork Producers
Lisa Walters	West Des Moines	2013	Iowa Rural Water Association
Dennis Black	Grinnell	2013	State Senator
Tim L. Kapucian	Keystone	2013	State Senator
Jarad Klein	Keota	2013	State Representative
Roger Thomas	Elkader	2013	State Representative

Attachment 3. 2012 Annual Project Reports Table of Contents

<u>Project ID</u>	<u>Watershed Name</u>	<u>Organization</u>	<u>Counties Where Located</u>	<u>Page Number</u>
9006	Bear Creek Watershed (report not received at time of filing)	Delaware SWCD	Delaware	
9003	Camp Creek Watershed	Growing Green Communities	Polk, Jasper	8
1109	Coe Creek Watershed	City of Elliott	Montgomery	9
1011	Competine Creek Water Quality Improvement Project	Marion SWCD	Marion	10
1019	Des Moines Middle Watershed (report not received at time of filing)	City of Luther	Boone	
1022	Dry Run Creek	Black Hawk SWCD	Black Hawk	11
1113	Duck Creek Watershed	City of Davenport	Scott	12
9020	Fox River Water Improvement Project	Fox River Ecosystem Development Board	Appanoose, Davis	13
9010	Hawthorn Lake Watershed	Mahaska SWCD	Mahaska	14
9008	Hewitt Creek Watershed	Hewitt Creek Watershed Improvement Association	Dubuque	15
1015	Indian Creek Watershed	City of Fairfield	Jefferson	16
9002	Indian Springs Pond Watershed	Allamakee SWCD	Allamakee	17
1016	Iowa Great Lakes Targeted Watershed	Dickinson SWCD	Dickinson	18
1118	Lake Hendricks Watershed	Howard SWCD	Howard	19
1119	Lake Icaria Watershed	Adams SWCD	Adams	20
9012	Little River Lake	Decatur SWCD	Decatur	21
9009	Lost Creek Watershed	Lee SWCD	Lee	22
9014	Lytle Creek Watershed	Limestone Bluffs RC&D Area, Inc.	Jackson	23
9032	Miller Creek Watershed	Monroe SWCD	Monroe	24
1208	North Raccoon River Watershed	Buena Vista SWCD	Buena Vista, Pocahontas	25

<u>Project ID</u>	<u>Watershed Name</u>	<u>Organization</u>	<u>Counties Where Located</u>	<u>Page Number</u>
9029	Otter Creek Watershed	City of West Union	Fayette	26
1112	Price Creek Watershed	Iowa SWCD	Iowa, Benton	27
9018	Rathbun Lake Watershed: BMPs for Priority Land in Targeted Sub-Watersheds 2009	Rathbun Land and Water Alliance	Appanoose, Clarke, Decatur, Lucas and Wayne	28
1004	Rathbun Lake Special Project	Rathbun Land and Water Alliance	Lucas, Wayne	29
1103	Rathbun Lake Special Project	Rathbun Land and Water Alliance	Lucas, Wayne	30
1201	Sands Timber Watershed	Taylor SWCD	Taylor	31
9005	Silver Creek Watershed Project	Clayton SWCD	Clayton	32
8009	Storm Lake Watershed	Lake Preservation Association for Storm Lake, Inc.	Buena Vista	33
1017	Tuttle Lake Watershed (report not received at time of filing)	Emmet SWCD	Emmet	
1102	Twelve Mile Watershed Project	Creston City Water Works	Union, Adair	34
9007	Upper Buffalo Creek Watershed	Buchanan SWCD	Buchanan, Fayette	35
9011	Walnut Creek Watershed	Poweshiek SWCD	Poweshiek	36
1014	Walnut Creek Watershed	Montgomery and East Pottawattamie SWCDs	Montgomery, Pottawattamie	37
1114	Walnut Creek Watershed	Montgomery and East Pottawattamie SWCDs	Montgomery, Pottawattamie	38
1209	Waterloo Creek	Allamakee SWCD	Allamakee	39
1008	White Oak Lake Watershed (report not received at time of filing)	Mahaska County Conservation Board	Mahaska	
1003	Williamson Pond Watershed	Watershed Improvement Review Board	Lucas	40
1012	Yellow River Headwater	Winneshiek SWCD	Winneshiek, Allamakee	41

Project Name: Camp Creek Watershed Erosion Control Project 9003-018
Project Sponsor: Growing Green Communities
Length of Project: April 1, 2010 to March 31, 2013

Counties included in the project area: Polk, Jasper

Total Watershed Improvement Funds awarded for this project:	\$ 322,500
Total Watershed Improvement Funds spent:	\$ 290,250
Total Watershed Improvement Funds obligated:	<u>\$ 32,250</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 0

Project objectives:

- Administer the Camp Creek Watershed Erosion Control Project.
- Protect erosion-control Best Management Practices (BMPs) to be constructed by recording them as conservation easements.
- Design and construct selected BMPs at selected sites within the Camp Creek Watershed.
- Reduce soil loss from landowner property and sediment delivery to Camp Creek by 10 tons per acre per year.
- Conduct an information and education program to increase awareness of water quality, particularly within the Camp Creek Watershed.

Summary of accomplishments and water quality outcomes

The main tasks for 2012 included:

- Completed BMP installation on previously acquired Gulling property
- Completed BMP installation on Bartelma South property
- Complete majority of BMP installation on Bartelma North property
- Legal recording of conservation easements.

A wetland bank is in development at the Gulling property. As stated in the 2010 Annual Report, the potential reduction of soil loss is approximately 695 tons per year. This produces an average reduction in soil loss and sediment delivery to Camp Creek of 16.4 tons per acre per year, exceeding the project goal of 10 tons per acre per year. The Gulling easement has been recorded with the county recorder.

Previous calculations using the Watershed Sediment Delivery Calculator calculated a reduction in soil loss from a 90-acre parcel of land at Bartelma Farms to be 39.1 tons per year. The easement area, however, is 26 acres; the reduction in soil loss is estimated to be 11.3 tons per year, exceeding the project goal of 10 tons per acre per year. The easement at the Bartelma property was legally surveyed and recorded with the county recorder.

The BMP construction at the Gulling and Bartelma South properties has been completed. The Bartelma North project is complete with the exception of seeding, which will be done in the spring.

Newspaper and magazine articles, a video news release, and a project video are in development with distribution anticipated in February and March 2013.

Project Name: Coe Creek Watershed 1109-003
Project Sponsor: Iowa Watershed Improvement Review Board
Length of Project: 2 years (January 1, 2012 to December 31, 2013)

Counties included in the project area: Montgomery

Total Watershed Improvement Funds awarded for this project:	\$ 166,460.00
Total Watershed Improvement Funds spent:	\$ 117,393.55
Total Watershed Improvement Funds obligated:	<u>\$ 49,066.45</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 0.00

Project Objectives:

- Administer the Elliott SWP Coe Creek Watershed Project to ensure all objectives and activities planned are implemented.
- Conduct a land survey on the land needed for the shallow water wetland.
- Obtain a purchase agreement between the City of Elliott and the landowner.
- Acquire a cultural resources assessment on the area of the shallow water wetland.
- Groundbreaking Event with informational education material.
- Bid Letting, Site Showing and Hiring a Contractor.

Summary Of Accomplishments And Water Quality Outcomes

The City of Elliott has had an increase of nitrate levels in their community water supply located in the Coe Creek Watershed. With the help of IDNR Source Water Protection program, a SWP team was formed and a plan of action was put in place. The SWP team held many meetings with the conclusion that a shallow water wetland with native grass seeding would be a long term method in reducing nitrates in the city wells. The City of Elliott partnered with the Natural Resources Conservation Service, Montgomery County Soil and Water Conservation District, Pheasants Forever, the Montgomery County Conservation Board, US Fish and Wildlife Service and the Montgomery County Board of Supervisors in the plan to restore the shallow water wetland along with a native grass buffer. The City of Elliott has accomplished all of our objectives for this reporting period and we are very excited to announce that the City of Elliott has secured two additional grants with 5 Star and REAP to be applied towards this Wetlands Project.

Project Name: Competine Creek Partnership Watershed Project
Project Sponsor: Wapello County Soil & Water Conservation District
Length of Project: December 15, 2010 to June 30, 2013

Counties included in the project area: (Jefferson, Keokuk, and Wapello)

Total Watershed Improvement Funds awarded for this project:	\$199,250.00
Total Watershed Improvement Funds spent:	\$162,532.32
Total Watershed Improvement Funds obligated:	<u>\$ 36,212.74</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 504.94

Project objectives:

- Establish 64,486' of tile outlet terraces, 12 grade stabilization structures and 12 water and sediment basins over the 2 years of the project.
- Reduce sediment delivery to Competine Creek by 3,617 tons/year and flood water discharge by 9%.
- Establish 40 acres of CRP Buffers over the life of the project.
- Construct 2 urban conservation practices utilizing REAP and landowner contributions.
- Conscientious administration ensuring objectives planned are implemented.

Summary of accomplishments and water quality outcomes

- Completed 104,543' of tile outlet terraces, 4 grade stabilization structures, and 24 water and sediment basins.
- In progress of completing 16,330' of tile outlet terraces, 2 grade stabilization structures, and 15 water and sediment basins.
- Reduced sediment delivery to Competine Creek by an estimated 2927 tons/year
- Partnered with WSPF, EQIP, IFIP, SIDCA, and landowner funds to complete these projects.
- Held annual Learning Farms field days to teach landowners about conservation practices such as cover crops and nutrient sampling.
- Work with Pekin FFA student to conduct water monitoring on Competine Creek.
- Held a booth at the annual Cow Calf Conference in Ottumwa Iowa.
- Met with advisory board bi-annually

Project Name: Dry Run Creek Watershed Improvement Project 1022-013
Project Sponsor: Black Hawk Soil and Water Conservation District
Length of Project: January 2011 – November 2013

Counties included in the project area: Black Hawk

Total Watershed Improvement Funds awarded for this project:	\$ 48,400
Total Watershed Improvement Funds spent:	\$ 0
Total Watershed Improvement Funds obligated:	\$ 48,400
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 0

Project objectives:

- Effectively administer the Dry Run Creek Watershed Project to ensure all objectives and activities planned are implemented and progress is reported to partners.
- Implement two bioretention cells for the University of Northern Iowa New Student Housing Phase II site.
- Document water quality and other environmental benefits of the practices installed.
- Conduct information and education program to increase awareness and knowledge of Dry Run Creek water quality issues to watershed residents, and the local community.

Summary of accomplishments and water quality outcomes

Originally, funding was to support Phase I of the UNI New Student Housing complex (two bioretention cells and one green roof). In cooperation with another funding source in the Dry Run Creek Watershed the WIRB board agreed to redirect funds to Phase II of the UNI New Student Housing complex site. This was to assist with the draw down process of EPA Section 319 grant dollars. Therefore, WIRB now funds two bioretention cells totaling 18,000sq.ft. to control first-flush runoff from the New Student Housing Complex building and the affiliated parking lot. The total acreage being treated by the two cells is 2.48 acres.

The parking lots that will be served by the bioretention cells have been constructed. Both Bioretention cells have been excavated. The rock, piping and engineered soils will be installed next spring. These practices are scheduled to be completed by the November 2013 deadline.

Project Name: Duck Creek Watershed Project 1113-005
Project Sponsor: City of Davenport
Length of Project: January 1, 2012 to June 30, 2013

Counties included in the project area: Scott

Total Watershed Improvement Funds awarded for this project:	\$300,000
Total Watershed Improvement Funds spent:	\$148,187
Total Watershed Improvement Funds obligated:	\$300,000
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 20,657

Project objectives:

1. Administer the Duck Creek Watershed Littig Area Detention Basin to ensure all objectives and activities planned are implemented.
2. Construct the Littig Area Detention Basin with a multi-stage outlet structure to detain the water quality volume, channel protection volume, and 5 to 100 year rainfall events.
3. Improve water quality by installing riffle and pool structures on the low-flow channel and installing native plants and trees within the basin.
4. Conduct a public outreach program to increase awareness and knowledge of Duck Creek water quality issues and the benefits of installing this structure to watershed residents, and the local community.

Summary of accomplishments and water quality outcomes

The project was designed by Wenck Associates, Inc. and bid documents and plans produced. During the design process, multiple meetings were held with representatives of the City of Davenport Public Works Department and local residents. The plans and specifications were approved by the City of Davenport Council on September 5th, 2012. Bids were opened publicly on September 10, 2012. Six bids were received which ranged from a low of \$786,589.00 to a high of \$1,424,405.40. The contract with Langman Construction of Rock Island, Illinois was approved by the City of Davenport Council on November 7, 2012. Construction of the project began November 26, 2012.

The permit process with the Corps of Engineers took over nine months as opposed to the standard ninety days. In order to keep as close to the finish schedule date as possible and meet permit requirements the City agreed to conduct an archaeological survey on the proposed basin location and agreed to mitigate the stream section that will be enclosed in pipe through the berm structure by installing a 870 foot long by 30 foot wide native buffer strip on the north bank of Duck Creek upstream of the Harrison Street Bridge. As of January 1, 2013 the contractor has completed excavation and removal of excess soil on the south side of the basin. This represents approximately one quarter of the total removal necessary to create the storage volume needed for the 100 year storm. A suitable fill location was found in close proximity to the excavation area which significantly reduced their cost of excavation.

Project Name: Fox River Water Improvement Project 9020-012
Project Sponsor: Fox River Ecosystem Development Board
Length of Project: January 1, 2010 to December 31, 2014

Counties included in the project area: Appanoose and Davis

Total Watershed Improvement Funds awarded for this project:	\$493,750.00
Total Watershed Improvement Funds spent:	\$228,569.16
Total Watershed Improvement Funds obligated:	<u>\$107,977.75</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$157,203.09

Project Objectives:

- Administer the Fox River Ecosystem Improvement Project to ensure all objectives and activities planned are implemented.
- All practices will be installed into priority areas within the impaired segment of the Fox River addressing sediment delivery reductions to the Fox River.
- Construct 50 grade stabilization structures controlling sediment delivery from 1,750 acres entering Fox River.
- Construct 50 water and sediment control basins controlling sediment delivery from 250 acres of pasture and cropland.
- Construct 30,000 feet of terraces to control sediment delivery from 120 acres of cropland.

Summary Of Accomplishments And Water Quality Outcomes

- WIRB Coordinator, Craig Foster and field office staff administered all projects to ensure objectives and activities planned were implemented.
- Construction has been completed on 19 grade stabilization structures controlling 883 acres and reducing sediment delivery by 2,328 tons per year.
- Construction has been completed on 74 water and sediment basins controlling 277 acres and reducing sediment delivery by 880 tons per year.
- Construction has been completed on 24,644 feet of terraces controlling 184 acres and reducing sediment delivery by 467 tons per year.

Additional Accomplishments:

- Fox River Impairment project received the CDI's "outstanding watershed Award" in 2010.
- A major accomplishment was to have funding approved on a grade stabilization project in particular. This grade stabilization project alone should control 161 acres drainage and reduce 595 tons of sediment from entering the Fox River.
- Most of the landowners in the project areas have high interest and are willing to implement and install these practices on their farms to improve water quality with technical and financial assistance.

Project Name: Hawthorn Lake Watershed Project 9010-007
Project Sponsor: Mahaska Co. Soil & Water Conservation District
Length of Project: January 1, 2010 to December 31, 2013

Counties included in the project area: Mahaska

Total Watershed Improvement Funds awarded for this project:	\$360,900.00
Total Watershed Improvement Funds spent:	\$201,233.36
Total Watershed Improvement Funds obligated:	\$ <u>0</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$159,666.64

Project Objectives:

- Administer Project and Implement all Activities and Objectives in the Hawthorn Lake Watershed Project.
- Conduct outreach activities that will provide opportunities for the general public, lake users, and rural landowners to gain a better understanding of water quality and their influence on water quality.
- Target best management practices within the watershed to reduce the delivery of sediment and phosphorus from sheet, rill, and gully erosion by 1,974 tons and 2,567 lbs respectively.
- Implement in-lake management strategies that will reduce shoreline erosion and sediment delivery by 379 tons and 493 pounds respectively and control invasive species such as carp and shad, improve fish habitat, and provide better fishing opportunities to the public.

Summary Of Accomplishments And Water Quality Outcomes

A kick-off meeting was held in May of 2010, with 34 landowners, stakeholders, staff, commissioners, news media, etc. in attendance. The 1st annual partner meeting was held in November of 2010 with 12 partners in attendance. The 2nd annual partner meeting was held in December of 2011 with 11 partners in attendance. Partners discussed shoreline work, structures on public property, signage, private land progress, and reviewed goals.

Shoreline work started the last week of December 2010 and was completed in February 2011, installing 5,125' feet of shoreline stabilization, (4,500' was the projected amount). Repairs to the existing boat ramps have also been completed. Shoreline in-lake management strategies will reduce shoreline erosion by 379 tons and sediment delivery by 493 pounds. Phase I (5 of the 9 Grade Stabilization Structures) of the project has been completed, sediment delivery reductions from Phase I are 567 (t/y). A nonselective fish kill on the main part of the lake was completed in March of 2011 to eradicate the carp and gizzard shad populations. Bluegills, channel catfish, largemouth bass and crappies have been restocked.

The partners combined ordered 13 new signs (12 signs were the projected amount), heightening the awareness of Hawthorn Lake and the watershed, including directional, recreational, and entering watershed signs. Mahaska County Secondary Roads Department and watershed coordinator installed all of the signs. Coordinator exhibited informational project posters at County AML Mine tour and Legislature meeting.

A Grade Stabilization Structure was completed on private property with sediment loading reduction of 157 (t/y). Three thousand two hundred thirty-eight feet of terraces on private property have been installed reducing sediment loading by 104 (t/y), and 2,109' of waterways reducing sediment loading by 32 (t/y).

Project Name: Hewitt Creek Watershed Improvement Project 9008-005
Project Sponsor: Hewitt Creek Watershed Improvement Association, Inc.
Length of Project: January 1, 2010 to December 31, 2014

Counties included in the project area: Dubuque

Total Watershed Improvement Funds awarded for this project:	\$482,035
Total Watershed Improvement Funds spent:	\$254,163
Total Watershed Improvement Funds obligated:	<u>\$ 2,000</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$225,872

Project Objectives:

- Increase watershed cooperator participation rate to 85% and encourage utilization of conservation programming.
- Improve watershed agronomic and economic performance measures.
- Reduce pollutant delivery to Hewitt Creek.
- Conduct a water monitoring program to document changes in water quality parameters.
- Administer the Hewitt Creek Watershed Improvement Project to ensure all objectives and activities planned are implemented.

Summary Of Accomplishments And Water Quality Outcomes

The Hewitt Creek Watershed Improvement Association completed year 3 of a 5-year performance-based watershed improvement project. Participation in the project exceeds 75% of watershed operators.

The locally developed incentive program continues to be effective at promoting practices that improve water quality by reducing phosphorus, sediment and nitrogen delivery to Hickory-Hewitt Creek. As part of the annual evaluation process, the watershed council increased the incentive for cover crops from \$10 to \$20 per acre, up to 40 acres. This change resulted in 785 cover crop acres being seeded during 2012 on 14 farms, a 37% increase over 2011. Cooperators also installed or improved 15,140 feet of grassed waterways and reduced or eliminated tillage on 450 acres. The adoption of these practices contributed to the total project sediment delivery reduction of 4,258 tons per year and phosphorus delivery reduction of 5,561 pounds per year. The 47-farm watershed average Iowa Phosphorus Index (PI) is 2.19 and Soil Conditioning Index (SCI) is 0.59. Both measurements continue to improve annually. Seventeen cooperators utilized the cornstalk nitrate test (CNT) to evaluate nitrogen performance. Despite the very dry growing season, where CNT results would be expected to be very high, average CNT results were 2,741 ppm NO₃-N, the third lowest in six years of testing.

Stream monitoring continued at four locations and edge-of-field tile monitoring was conducted at nine sites until the tiles ceased running due to the drought. Primarily due to the lack of rain the Site 3 rain event phosphorus concentration was 0.42 mg/L P, while site 3 season long nitrogen concentration was 6.5 mg/L (both are the lowest of 8 sampling years).

The watershed council continues to promote participation in the Mississippi River Basin Initiative (MRBI) project that also includes the North Fork Headwaters and Bear Creek watersheds north of Dyersville.

Detailed project information and updates can be found at <http://hewittcreek.wordpress.com/>.

Project Name: Indian Creek Watershed 1015-009
Project Sponsor: City of Fairfield
Length of Project: December 15, 2010 – November 30, 2012

Counties included in the project area: Jefferson

Total Watershed Improvement Funds awarded for this project:	\$ 33,000
Total Watershed Improvement Funds spent:	\$ 29,700
Total Watershed Improvement Funds obligated:	\$ 3,300
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 0

Project Objectives:

- OBJECTIVE 1.** Reduce the demand from city municipal water supply by approximately 480,000 gallons annually to supply Creative Edge's manufacturing cooling process
- OBJECTIVE 2.** Virtually eliminate 480,000 gallons of water discharged from the Creative Edge cooling process to the city sanitary sewer system.
- OBJECTIVE 3.** Reduce the volume of stormwater entering Indian Creek directly from Creative Edge rooftop by approximately 930,000 gallons
- OBJECTIVE 4.** Increased public awareness at the local, regional, and state level how this model project demonstrates how a business can install equipment to reduce the use of city water, a valuable resource instead of a making the water into a waste product while also working towards financial sustainability.

Summary Of Accomplishments And Water Quality Outcomes

The project is 90% complete as of December 31, 2012. All design parameters were first finalized by a qualified engineer, taking into account cost, efficiency, and specific goals to achieve. All roof water is now diverted from the city storm sewer system to a storm water management area where the water is cooled and cleaned before moving through the watershed to a final creek destination. One of the internal water chillers is currently in the process of being installed. The other 2 units are projected to be installed in the next 4-6 weeks. Publicity has already taken place, both locally and on a statewide basis. An extension request will be made and the project will be completed by March 31, 2013.

Project Name: Indian Springs Pond Watershed 9002-001
Project Sponsor: Allamakee SWCD
Length of Project: J anuary 1, 2010 – December 31, 2012

Counties included in the project area: Allamakee

Total Watershed Improvement Funds awarded for this project:	\$ 201,660
Total Watershed Improvement Funds spent:	\$
Total Watershed Improvement Funds obligated:	<u>\$ 1,638</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$95,350.02

Project Objectives:

- Minimize storm water runoff into Indian Springs Pond, sinkholes, and the stream.
- Reduce livestock stream-use by 40%.
- Reduce sediment loading of the stream and Indian Springs Pond by 3,170 tons.
- Educate the public about watersheds, karst topography, and conservation practices.
- Continue water quality monitoring of the watershed.

Summary Of Accomplishments And Water Quality Outcomes

In 2012, \$3,199.66 in WIRB funding and \$1,464.55 in landowner/city dollars were utilized to implement best management practices (BMPs) in the Indian Springs Pond Watershed. These practices will treat an estimated 9 acres and prevent 9 tons of sediment and 12 pounds of phosphorus from reaching Indian Springs Pond annually. In addition, 201,037 gallons of water per year will be prevented from running off the land surface through infiltration (rain gardens) or detention (rain barrels). Funding for an additional terrace project was obligated and the terraces were laid out. However, due to the drought, conditions were not suitable to build the terraces this fall.

In addition to what was installed during the first 2 years of the project, 1 rain garden (in the city park), 9 acres of prairie planting, and 10 rain barrels were installed this year. Over the 3 years of the project, a total of 1,900 feet of terraces, 17.6 acres of improved grazing management in association with 1 alternate water source and 1 heavy use protection area, 3 sediment basins, 2 rain gardens, 16 rain barrels, and 9 acres of prairie planting have been installed. This year, 5 large educational signs (24" x 36") were installed in the park covering topics such as karst topography, watersheds, rain gardens, conservation practices, and oak savannas. Additionally, 3 smaller educational signs (9"x12") were installed with information on Bur Oaks, open grown trees, and keeping nature clean. A kiosk was installed at the trailhead of a newly installed trail to allow us to change out information and pictures on the project into the future as we continue to do work in the city park.

This project has emphasized education and outreach. An end-of-project survey was sent to landowners to gain a better understanding of their opinions of the watershed project and water quality issues in the watershed. Several articles in the local newspaper and on the Allamakee SWCD website have highlighted different aspects of the project. Articles were also included in the district annual report and the district newsletter. The 6th grade Conservation Club has been helping with water sampling and TSI work and plans to continue this for several years. Through the installation of practices and recurring work in the watershed, there will be a continued impact on improving the water quality of the Indian Springs Pond.

Project Name: Iowa Great Lakes Targeted Watershed Project 1016-010
Project Sponsor: Dickinson County Soil and Water Conservation District
Length of Project: December 20th 2010 – February 28th, 2015

Counties included in the project area: Dickinson

Total Watershed Improvement Funds awarded for this project:	\$ 168,500
Total Watershed Improvement Funds spent:	\$ 13,715.28
Total Watershed Improvement Funds obligated:	<u>\$ 45,947.00</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$108,837.72

Project objectives:

- Education of landowners and operators
- Re-establish vegetation on key shorelines
- Water monitoring
- Reduction of nutrients and sediment loads entering the IGL and moving toward Lower Gar Lake.

Summary of Accomplishments and Water Quality Outcomes

2012 was another busy year for the Iowa Great Lakes Targeted Watershed Project. Public outreach and awareness of the watershed project continued throughout the year by utilizing many different media outlets. There were multiple radio segments the coordinator participated in on two local radio stations that discussed project goals and accomplishments. There were numerous presentations given detailing the project and displaying project successes to funding partners and organizations interested in water quality in the Iowa Great Lakes Region.

Since the beginning of the project in 2011, 26 BMP's (23 LID practices, two CRP contracts, and one grassed waterway) have been installed within the Iowa Great Lakes Watershed, with 12 of them built in 2012. With these practices treating 67.2 acres of runoff, an estimated 70 tons of sediment per year will be prevented from entering the Iowa Great Lakes because of the implementation of these practices. There has now been a total of \$561,702.92 spent toward water quality projects from project partners such as WIRB, WSPF, 319, REAP, IJOBS, CRP and local landowners and homeowners.

The major limiting factor in 2012 in implementing practices was the 2012 drought. There were two large sediment basin projects within targeted agriculture areas in the watershed that were put on hold due to lack of moisture required to construct these practices. These projects will be constructed as soon as adequate soil moisture can be obtained.

Looking to 2013 there should be more of an even split between agriculture and urban projects implemented as a result of the agriculture community becoming more aware of the watershed project. Currently there is already 11 other BMP projects that have cost share funds obligated toward them to be constructed in 2013.

Project Name: Lake Hendricks Watershed Project 1118-007
Project Sponsor: Howard Soil and Water Conservation District
Length of Project: January 1, 2012 – February 28, 2013

Counties included in the project area: Howard

Total Watershed Improvement Funds awarded for this project:	\$61,760
Total Watershed Improvement Funds spent:	\$28,331
Total Watershed Improvement Funds obligated:	<u>\$22,440</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$10,989

Project Objectives:

- Reduce sediment loading of Lake Hendricks by an additional 15%.
- Conduct an information and education program to increase awareness and knowledge of the water quality initiatives completed at Lake Hendricks.

Summary Of Accomplishments And Water Quality Outcomes

The Lake Hendricks Watershed Project (LHWP) was funded in 2012 to complement the water quality initiatives completed January 2009-December 2011 as part of a 319/IDALS funded project in which an estimated total of 1,608 tons of sediment and 55% less nitrates were prevented from entering Lake Hendricks. In 2012, to a total of 25 acres of timber stand improvement (TSI) were planned for completion in 2013, five interpretive sign panel designs were completed, six conservation practice tours/field days were conducted, and four press releases/publications were issued.

The 25 acres of TSI planned for 2013 will eliminate an invasive buckthorn understory which will ultimately prevent an estimated 20 tons of additional sediment from entering Lake Hendricks every year. The buckthorn understory has become so thick that little vegetation is able to grow under the quality native oak trees, leaving the exposed ground susceptible to erosion. By eliminating the buckthorn, native woodland vegetation will be able to grow which will provide adequate cover and erosion prevention. The quality of the woodland and the wildlife habitat will also be vastly improved and will create a native Iowa landscape for park visitors to enjoy.

A total of five interpretive sign panel designs were completed that will educate park visitors about the implemented conservation practices at Lake Hendricks including the wetland, bioreactors, grade stabilization structure, TSI, and invasive plant management. The interpretive panels will contain photographs, drawings, and narratives that will inform park visitors about why the conservation practices were installed, how they were installed, and the impact they will have on the water quality of Lake Hendricks. Once the panels are received they will be mounted on aluminum pedestals and installed in 2013 along the recreation trail east of Lake Hendricks.

A total of six conservation practice tours/field days were conducted in 2012 and four press releases/publications were issued as part of the project outreach initiative. The tour/field day participants included project funding partners, women landowners/operators, county conservation personnel, county supervisors, Riceville schools, and water quality personnel. The four press releases appeared in the local newspapers.

Project Name: Lake Icaria Watershed Project 1119-008
Project Sponsor: Adams Soil and Water Conservation District
Length of Project: July 15th, 2012-January 15th, 2015

Counties included in the project area: Adams

Total Watershed Improvement Funds awarded for this project:	\$ 203,650.00
Total Watershed Improvement Funds spent:	\$ 77,962.99
Total Watershed Improvement Funds obligated:	<u>\$ 125,314.70</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 372.31

Project Objectives:

- Reduce siltation to Lake Icaria by 400 tons through the installation of conservation practices.
- Repair the Rock Chute Wetland.

Summary Of Accomplishments And Water Quality Outcomes

This fall marked the beginning of watershed work above Lake Icaria with WIRB funds. Early fall the ground was too dry for good soil compaction so construction was not allowed. However some timely rains did allow for the construction of 9,675 feet of terraces which prevent 122 tons of sediment from being deposited in Lake Icaria every year. We have many more terrace applications on hand in need of funding.

Plans have been put together for four grade stabilization structures inside of the Lake Icaria Park. The four structures will be built with WIRB funding and will prevent 312 tons of sediment from being deposited in the lake every year.

An application was made for Publically Owned Lakes funds. Forty-one thousand dollars was appropriated to the Lake Icaria Watershed. The money has been obligated to two grade stabilization structures. We currently have three more applications for structures in the watershed. Grade stabilization structures are extremely effective at trapping sediment. Ninety percent of the sediment that flows into the structures from the watershed above is trapped in the pool area of the structure.

The Natural Resources Conservation Service and Iowa DNR have been working hard to come up with a plan for the Rock Chute Repair. A final design has been completed. Money received through this WIRB grant is not sufficient to complete the practice. A budget amendment has been requested from the WIRB asking for additional funds. The Iowa DNR Lakes Restoration Program has offered to pay for half of the repair. As soon as sufficient funding is secured the DNR will solicit bids and repair the structure.

Landowner interest in installing conservation in the watershed is extremely high. A WIRB grant was recently submitted for additional funds for upland conservation.

Project Name: Little River Lake Watershed 9012-009
Project Sponsor: Decatur SWCD
Length of Project: January 1, 2010 to December 31, 2012

Counties included in the project area: Decatur

Total Watershed Improvement Funds awarded for this project:	\$ 423900.00
Total Watershed Improvement Funds spent:	\$339,033.61
Total Watershed Improvement Funds obligated:	<u>\$ 67,160.37</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 17,706.02

Project objectives:

- Assist landowners to apply best management practices (BMPs) for priority land in the Little River Lake Watershed.
- Perform all project administrative requirements as per Grant agreement and approved application.

Summary Of Accomplishments And Water Quality Outcomes

This past year started off with a really mild winter. This prevented the shoreline riprapping from being completed, and the contract was extended for a year. The restoration of the above-lake silt dam was let and completed in the spring. A few terrace jobs were completed in the spring, but by July the ground was too dry to build any additional practices and all construction was halted.

Crops were harvested in record time. We allowed the landowners to install tile for terrace jobs, but, due to the extremely dry conditions, no dirt work could be done until the end of October. This really hurt the amount of construction we had hoped to get completed, and has forced us to request an amendment to extend our grant for an additional year. We did construct 15,850 feet of terraces, 4 grade stabilization structures and 12 water and sediment control basins.

The quality of the water in Little River Lake has improved considerably. Due to little run off from the drought and having killed off all the carp, the water treatment plant recorded readings similar to when the lake was first completed.

The contractors were able to begin placing riprap along the shoreline again in November and completed the riprapping the first week of January.

The District and partners continued to work with the project's team of experts to plan, carry out and assess activities. The District and team members regularly reviewed progress in project implementation. The District submitted the required project progress reports and financial ledgers in a timely manner.

Project Name: Lost Creek Watershed 9009-006
Project Sponsor: Lee Soil and Water Conservation District
Length of Project: January, 2010 – December, 2013

Counties included in the project area: Lee

Total Watershed Improvement Funds awarded for this project:	\$445,800
Total Watershed Improvement Funds spent:	\$171,116
Total Watershed Improvement Funds obligated:	<u>\$193,750</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 80,934

Project Objectives:

- Install BMPs in the watershed that target areas contributing sediment at a rate of one ton or more per acre per year to Lost Creek.
- Limit livestock access to the stream by one half, reducing stream bank erosion and limiting bacterial contamination of the water body.
- Implement an information and education campaign for Lost creek Watershed.

Summary Of Accomplishments And Water Quality Outcomes

- Nine Grade Stabilization Structures completed controlling 626 acres – sediment reduced by 2669 tons/yr. and phosphorous reduced by 3470 pounds/yr. Five additional structures have been surveyed and designed - three other applications have been approved.
- Fifty-seven acres of CRP buffers completed – sediment reduced by 74 tons/yr. and phosphorous reduced by 96.2 pounds/yr.
- A total of 132.7 acres of continuous CRP completed – sediment reduced by 358 tons/yr. and phosphorous reduced by 465.4 pounds/yr.
- Tile Outlet Terraces installed protecting 261 acres – sediment reduced by 890 tons/yr. and phosphorous reduced by 1157 pounds/yr.
- 105 acres of Prescribed Grazing applied – sediment reduced by 40 tons/yr. and phosphorous reduced by 52 pounds/yr.
- Eight roadside signs and 8 bridge signs installed to identify Lost Creek Watershed
- Three field days have been held concerning buffer strips, CRP program availability, and installation of Grade Stabilization Structures.
- A total of 6 press releases to raise public awareness
- Monitoring of water transparency by local secondary school teacher, students, and volunteers in conjunction with IOWATER personnel

Project Name: Lytle Creek Watershed Improvement Project 9014-010
Project Sponsor: Limestone Bluffs RC&D
Length of Project: January 1, 2010 to September 30, 2013

Counties included in the project area: Jackson

Total Watershed Improvement Funds awarded for this project:	\$ 391,752.76
Total Watershed Improvement Funds spent:	\$ 21,097.08
Total Watershed Improvement Funds obligated:	<u>\$ 391,752.76</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 370,655.68

Project Objectives:

- Administer the Leisure lake Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- Secure necessary agreements, contracts, and administrative services to move project forward to construction.
- Construct a wastewater collection and treatment system for the un-incorporated community of Leisure Lake to reduce nutrient and bacteria impairments to Lytles Creek, the Maquoketa River, and local groundwater sources.

EIRUSS received a letter of conditions from the USDA on December 8, 2011. This letter secured our funding and allowed us to proceed. EIRUSS then secured interim financing and completed purchase of the land for the treatment site on April 12, 2012

The project was bid on August 12. The project was awarded to Tschiggfrie Excavating on August 15, 2012. A contract was on September 5, 2012. The project's estimated completion date is June 30, 2013. Currently, the treatment lagoon is about 90% complete. The major remaining step is to install the liner. The collection system is about 19% complete.

Project Name: Miller Creek Water Quality Project 9032-017
Project Sponsor: Monroe County SWCD
Length of Project: April 1, 2010 to December 31, 2013

Counties included in the project area: Monroe

Total Watershed Improvement Funds awarded for this project:	\$ 255,300.00
Total Watershed Improvement Funds spent:	\$ 186,663.01
Total Watershed Improvement Funds obligated:	<u>\$ 18,734.64</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 49,902.35

Project Objectives:

1. Administer Miller Creek Water Quality Project to ensure all objectives and activities planned are implemented.
2. Improve water quality in Miller Creek by reducing sediment delivery by 70% on 3,837 acres of priority land.
3. Construct 14 grade stabilization structures to reduce sediment delivery from 450 acres of priority land.
4. Construct 41 water and sediment control basins to reduce sediment delivery from 120 acres of priority land.
5. Construct 10,270 feet of terraces to reduce sheet and rill erosion on 150 acres.
6. Conduct informational programs to increase awareness and knowledge of Miller Creek Watershed issues to the general public.

Summary Of Accomplishments And Water Quality Outcomes

- Funding was allocated for 13 grade stabilization structures. Of the 13 sites, 9 were designed and built, with three more planned and 2 more potential sites to evaluate.
- Nine thousand feet of terraces are completed to date while an additional 5,690 ft. are surveyed and designed. With partner funding, we will exceed our goal of 10,270 feet by 4,420 feet.
- Forth-one basins were designed and built meeting 99% of our goal.
- Two grazing systems impacting 200 ac are planned to be completed this year with EQIP and CRP funding.
- Two news articles were submitted to the local paper.
- A total of 151 acres of warm season grasses were planted utilizing CRP funding.

Despite dry conditions throughout the summer, the early harvest and rain helped many contractors to resume construction earlier this fall. We also held a field day in September showcasing a grazing system with a WIRB pond. With close to 35 attending, more interest was sparked for the Miller Creek project. Going forth in our last year of this project, we are close to completing many of our goals. Most of the funding for terraces and basins has been allocated with a few still in the planning stage. We have had more demand for basins and terraces and since most of the WIRB funding is allocated, IFIP and EQIP cost share is being utilized. Of the 3,837 priority acres, 1241.5 acres have been controlled, resulting in a reduction of 4040.5 tons of sediment and 1,613.95 pounds of phosphorus flowing into the Miller Creek watershed.

Project Name: North Raccoon River Watershed 1208-005
Project Sponsor: Buena Vista Soil and Water Conservation District
Length of Project: October 15, 2012 – February 15, 2016

Counties included in the project area: Buena Vista and Pocahontas Counties

Total Watershed Improvement Funds awarded for this project:	\$63,900.00
Total Watershed Improvement Funds spent:	\$
Total Watershed Improvement Funds obligated:	<u>\$ 7,142.00</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$56,758.00

Project Objectives:

1. Administer the North Raccoon River MRBI Watershed Project to ensure all objectives and activities planned are implemented.
2. Increase knowledge of MRBI financial assistance and conservation practices available to producers in each watershed through education and outreach.
3. Reduce nutrient loading and sediment delivery to the North Raccoon River through the installation of conservation practices.

Summary Of Accomplishments And Water Quality Outcomes

Certified 9,105 acres of Cover Crops planted.
Certified 765 new acres of No-Till/Strip-Till farming practiced.
Certified 1,118 acres of land with Nutrient Management practices applied.

With implementation of the above practices, it is estimated that we will achieve a reduction of:

Nitrate loss by 115,685 lbs/year
Phosphorus loss by 24,417 lbs/year
Sediment loss by 14,691 lbs/year

Project Name: Otter Creek Watershed Improvement 9029-015
Project Sponsor: City of West Union
Length of Project: April 20, 2010 to June 30, 2013

Counties included in the project area: Fayette

Total Watershed Improvement Funds awarded for this project:	\$500,000.00
Total Watershed Improvement Funds spent:	\$326,563.00
Total Watershed Improvement Funds obligated:	<u>\$ 0.00</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$173,437.00

Project Objectives:

- Minimize surface water runoff to Otter Creek, resulting in reduced sediment and chemical delivery and water temperature; with a goal to have no direct surface water runoff from streets and sidewalks. The system will perform to cool and cleanse storm water and establish a slower discharge rate to Otter Creek.
- Reduce impacts of storm and rainfall events. Upon completion, we project the area peak discharge rate reduction of 95% rate for a 100 year storm event (6.4 inches in 24 hours), and zero discharge of storm water from the project area for up to 0.8 inches in 24 hour rainfall event.
- Implement an information and education outreach to increase awareness and knowledge of water quality issues for Otter Creek and adjoining wetlands. Include local community residents and visitors, and make accessible so benefits can be replicated in communities throughout Iowa and the Midwest.

Summary Of Accomplishments And Water Quality Outcomes

The Otter Creek Watershed Improvement Project made significant headway in the past year of construction. Permeable Pavers have been installed on Vine Street from just south of the Plum Street intersection north through the Elm Street intersection to just south of the Main Street intersection. Elm Street is complete and has permeable pavers installed from one half a block west of the Vine Street intersection to one half block east of the Walnut Street intersection. Over 80 bio-retention cells have been constructed, with plantings in well over half. New plantings will grow quickly in the spring and once established, will improve the water retention of the cells. Little rain fell in the project area this year, limiting good data collection, and ongoing construction prevented the capture of “normal” conditions.

Education and outreach continued through several opportunities:

- Two film projects are underway. One, a project through the Iowa Economic Development Authority by Native Sun Productions will document the project and its environmental goals. “In View with Larry King” filmed a segment for an upcoming episode about the project.
- Four formal presentations given: American Association of Architects, Iowa Water Conference, Dubuque Sustainability Conference, Flood Center of Iowa.
- Twelve organized tours of the project area.

Project Name: Price Creek Watershed Project 1112-004
Project Sponsor: Iowa Soil and Water Conservation District
Length of Project: January 1, 2012-February 28, 2015

Counties included in the project area: Iowa, Benton

Total Watershed Improvement Funds awarded for this project:	\$ 102,695
Total Watershed Improvement Funds spent:	\$
Total Watershed Improvement Funds obligated:	\$
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 102,695

Project Objectives:

- Eliminate livestock access to 3.75 miles of Price Creek and its tributaries.
- Reduce bacteria loading by breaking the delivery network on the most critical areas.
- Reduce sediment loading by 1,000 t/y on the most critical cropland and stream bank.
- Eliminate bacteria loading from failing septic systems.

Summary Of Accomplishments And Water Quality Outcomes

The year 2012 was successful for the Price Creek Watershed Project, despite the extreme drought conditions present throughout the entire watershed. The lack of soil moisture delayed some projects, but progress toward Price Creek's Watershed Management Plan (WMP) goals continued. Important achievements in 2012 included:

- Eliminating and reducing livestock access to .nine miles of Price Creek and its tributaries.
- Reducing bacteria loading by installing two sets of shallow water wetlands that will intercept feedlot runoff and a waste storage system that will replace an existing feedlot. Bacteria reduction monitoring was scheduled for these sites but is incomplete due to drought conditions. Monitoring will continue in 2013.
- Installing in field erosion control practices that reduced sediment delivery by 4,754 t/y and phosphorus delivery by 5,705 lb/y.
- One failing septic system (solid human feces, household waste) was replaced.

In addition to WIRB funding, the project had financial and staff support from the IDALS-Division of Soil Conservation's WPF/WSPF program, the DNR/EPA's Section 319 program and the USDA-NRCS's Environmental Quality Incentives Program. The combination of support from these agencies allowed the project to continue improvements in Price Creek's water quality. Due to changes within the EPA's program, an emphasis was made on spending the Section 319 funds first; therefore a plan was made to spend WIRB allocation on FY13 and FY14 projects.

Water monitoring continued to show extremely high bacteria levels throughout the watershed. The drought compounded the problem as low flow offered little dilution to flush out impurities. Price Creek saw its highest recorded bacteria levels in 2012, but these conditions allowed us to identify a failing septic system and an ag waste issue, both of which have been corrected.

Future plans for the project (see WMP) include installation of additional conservation practices, continued water monitoring and an emphasis on partnerships, outreach and education.

Project Name: Rathbun Lake Special Project BMPs for Priority Land in Targeted Sub-Watersheds 2009 9018-011

Project Sponsor: Rathbun Land and Water Alliance

Length of Project: January 1, 2010 to December 31, 2014

Counties included in the project area: Appanoose, Clarke, Decatur, Lucas, and Wayne

Total Watershed Improvement Funds awarded for this project:	\$491,800.00
Total Watershed Improvement Funds spent:	\$266,816.30
Total Watershed Improvement Funds obligated:	<u>\$ 25,123.98</u>
Watershed Improvement Funds unobligated balance as of 12/31/2012:	\$199,859.72

Project Objectives:

- Apply best management practices for priority land that will reduce annual sediment and phosphorus delivery to Rathbun Lake by 6,000 tons and 20,000 pounds respectively.
- Conduct geographic information system analysis, water quality monitoring, and watershed outreach activities to support the application of best management practices for priority land.
- Perform all administrative requirements as per grant agreement and approved application.

Summary of Accomplishments and Water Quality Outcomes

Rathbun Land and Water Alliance members and partners used geographic information systems and field work to identify 4,375 acres of priority land owned and/or farmed by landowners in the Lower Chariton Creek, Chariton River #3, Sandy Branch, Hamilton Creek, and Goodwater Creek targeted sub-watersheds. The Alliance assisted 54 landowners plan best management practices for 3,504 acres. Practices have been applied by 46 of these landowners for 2,392 acres, approximately 1,200 acres of which was priority land. These practices will reduce sediment and phosphorus delivery to Rathbun Lake by an estimated 4,751 tons and 20,166 pounds per year respectively. Practices applied by landowners included terraces, debris basins, water and sediment control basins, grade stabilization structures, and grassed waterways. The Alliance continued to contact landowners in the targeted sub-watersheds to help them evaluate the need for, and benefits of, applying practices for the priority land that they own and/or farm.

The Alliance's outreach efforts included one-on-one contacts with landowners; recognized seven landowners as *Rathbun Lake Protectors* at the 2012 *Protect Rathbun Lake* meeting, which brings the total number of landowners in the watershed selected as *Rathbun lake Protectors* to 41; interviews of *Rathbun Lake Protectors* on WHO radio; installed *Rathbun Lake Protectors* signs; articles on *Rathbun Lake Protectors* in Wallaces Farmer; watershed tours for the US Army Corps of Engineers' District Commander and staff as well as the Iowa Environmental Protection Commission and Department of Natural Resources' staff; prepared newsletter for Alliance members and partners; and maintained the Alliance's Internet site at <http://www.rlwa.org/>. Alliance partners also completed activities associated with the water quality monitoring program for Rathbun Lake and tributaries in the lake's watershed.

Alliance members and partners worked with the project's team of experts to plan, carry out, and assess activities. The Alliance's board and team members regularly reviewed progress in project implementation. The Alliance submitted required project progress reports and financial ledgers.

**Project Name: Rathbun Lake Special Project:
Strategic Use of Sediment Basins and Terraces * 1004-002
Project Sponsor: Rathbun Land and Water Alliance
Length of Project: November 24, 2010 to June 30, 2014 ***

Counties included in the project area: Lucas and Wayne

Total Watershed Improvement Funds awarded for this project *:	\$100,000.00
Total Watershed Improvement Funds spent:	\$ 43,043.13
Total Watershed Improvement Funds obligated:	\$ <u>0.00</u>
Watershed Improvement Funds unobligated balance as of 12/31/2012:	\$ 56,956.87

Project Objectives:

- Assist landowners to construct five sediment retention basins to reduce annual sediment and phosphorus delivery to Rathbun Lake by 1,500 tons and 5,000 pounds respectively *
- Assist landowners to construct 28,500 feet of terraces to reduce annual sediment and phosphorus delivery to Rathbun Lake by 430 tons and 1,425 pounds respectively *
- Conduct watershed outreach and water quality monitoring activities to support the construction of sediment retention basins and terraces as well as the application of associated best management practices for priority land.
- Perform all administrative requirements as per grant agreement and approved application.

Summary of Accomplishments and Water Quality Outcomes

Rathbun Land and Water Alliance members and partners used geographic information system analysis and field evaluations to identify 6,800 acres of priority land in five targeted sub-watersheds of the Rathbun Lake watershed. Project staff assisted eight landowners to plan and install an estimated 38,925 feet of terraces for approximately 346 acres. The constructed terraces will reduce annual sediment and phosphorus delivery to Rathbun Lake by an estimated 732 tons and 3,367 pounds respectively. Unanticipated challenges will not allow the construction of sediment retention basins to be completed as originally proposed before the end of the project. This change in project activities has resulted in a budget modification, amendment to the grant agreement, and a revised plan of work reflected in items identified above with an asterisk.

The Alliance's outreach efforts included one-on-one contacts with landowners; recognition of selected landowners as *Rathbun Lake Protectors* at the 2012 *Protect Rathbun Lake* meeting; interviews of *Rathbun Lake Protectors* on WHO radio; articles on *Rathbun Lake Protectors* for Wallace Farmer and local media; materials and presentations for Rathbun Lake watershed tours; project annual report and board briefs newsletter; the *Protect Rathbun Lake* signage program; and Alliance's Internet site at <http://www.rlwa.org/>. Alliance partners also completed water quality monitoring program activities for Rathbun Lake and tributaries in the lake's watershed.

Alliance members and partners worked with the project's team of experts to plan, carry out, and assess activities. The Alliance's board and team members regularly reviewed progress in project implementation. The Alliance submitted required project progress reports and financial ledgers.

**Project Name: Rathbun Lake Special Project:
BMPs for Priority Land in Targeted Sub-Watersheds 2011 1103-002
Sponsor Name: Rathbun Land and Water Alliance
Length of Project: March 1, 2012 to February 28, 2017**

Counties included in the project area: Lucas and Wayne

Total Watershed Improvement Funds awarded for this project:	\$125,300.00
Total Watershed Improvement Funds spent:	\$ 0.00
Total Watershed Improvement Funds obligated:	<u>\$ 15,331.88</u>
Watershed Improvement Funds unobligated balance as of 12/31/2012:	\$109,968.12

Project Objectives:

- Apply best management practices for priority land that will reduce annual sediment and phosphorus delivery to Rathbun Lake by 1,050 tons and 3,490 pounds respectively.
- Conduct geographic information system analysis, water quality monitoring, and watershed outreach activities to support the application of best management practices for priority land.
- Perform all administrative requirements as per grant agreement and approved application.

Summary of Accomplishments and Water Quality Outcomes

Rathbun Land and Water Alliance members and partners used geographic information systems and field work to identify priority land owned and/or farmed by landowners in the Upper and Lower Dick Creek and Chariton River #4 and #8 targeted sub-watersheds. The Alliance has assisted five landowners plan best management practices for 199 acres. Practices have been applied by three of these landowners for 137 acres, approximately 70 acres of which was priority land. These practices will reduce sediment and phosphorus delivery to Rathbun Lake by an estimated 274 tons and 1,829 pounds per year respectively. Practices applied by landowners included terraces and grade stabilization structures. The Alliance continued to contact landowners in the targeted sub-watersheds to help them evaluate the need for, and benefits of, applying practices for the priority land that they own and/or farm.

The Alliance's outreach efforts included one-on-one contacts with landowners; recognized seven landowners as *Rathbun Lake Protectors* at the 2012 *Protect Rathbun Lake* meeting, which brings the total number of landowners in the watershed selected as *Rathbun lake Protectors* to 41; interviews of *Rathbun Lake Protectors* on WHO radio; installed *Rathbun Lake Protectors* signs; articles on *Rathbun Lake Protectors* in Wallaces Farmer; watershed tours for the US Army Corps of Engineers' District Commander and staff as well as the Iowa Environmental Protection Commission and Department of Natural Resources' staff; prepared newsletter for Alliance members and partners; and maintained the Alliance's Internet site at <http://www.rlwa.org/>. Alliance partners also completed activities associated with the water quality monitoring program for Rathbun Lake and tributaries in the lake's watershed.

Alliance members and partners worked with the project's team of experts to plan, carry out, and assess activities. The Alliance's board and team members regularly reviewed progress in project implementation. The Alliance submitted required project progress reports and financial ledgers.

Project Name: Sands Timber Watershed 1201-001
Project Sponsor: Taylor Soil and Water Conservation District
Length of Project: January 15th, 2013- January 15th, 2014

Counties included in the project area: Taylor

Total Watershed Improvement Funds awarded for this project:	\$ 70,500
Total Watershed Improvement Funds spent:	\$ 0
Total Watershed Improvement Funds obligated:	<u>\$ 70,500</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	<u>\$ 0</u>

Project Objectives:

Construct one Rock Chute Wetland above Sands Timber Lake to stop 1,296 tons of sediment from being deposited in the lake.

Summary Of Accomplishments And Water Quality Outcomes

Engineering is complete for the rock chute Wetland. We are currently waiting on archaeology. Once archaeology is completed then the structure will be sent off for permits. A spring bid letting should be expected. Once complete the structure will completely protect Sands Timber Lake from sediment sources in the uplands. The Taylor County Conservation Board is also actively pursuing grants for in-lake work that would improve the fishery.

Project Name: Silver Creek Watershed Project 9005-002
Project Sponsor: Clayton Soil & Water Conservation District
Length of Project: January 1, 2010 to December 31, 2013

Counties included in the project area: Clayton

Total Watershed Improvement Funds awarded for this project:	\$ 365,950
Total Watershed Improvement Funds spent:	\$ 153,590
Total Watershed Improvement Funds obligated:	\$ 44,755
Watershed Improvement Fund unobligated balance as of 12/31/2012	\$ 167,605

Project objectives:

- Reduce sediment delivery to Silver Creek by at least 3,000 tons.
- Promote stream corridor and sinkhole protection along critical areas of the watershed, and install buffer practices on an additional 30% of Silver Creek and its tributaries.
- Develop a series of news articles, newsletters, field days, and demonstrations to increase public understanding of water quality issues and to encourage public involvement and participation in water quality programs.

Summary of Accomplishments and Water Quality Outcomes

The WIRB Grant Agreement has provided a critical source of cost share dollars for conservation practices within the Silver Creek watershed over the last three years. These funds have complemented financial incentives from several state and federal resources that have been available since January 1, 2007. Silver Creek landowners have made a major investment in conservation improvements on their farms. A wide range of conservation practices have been completed:

Table 1: Conservation Practices Installed through the Silver Creek Watershed Project

<i>Practice</i>	<i>Completed 1/1/10 to 12/31/12</i>	<i>Total Completed 1/1/07 to 12/31/12</i>	<i>Completed with WIRB Assistance</i>
Continuous CRP Buffers (New)	5.3 Acres	34.6 Acres	
CRP Buffers (Reenrolled)	30.7 Acres	30.7 Acres	
Pasture Management		60 Acres	
Streambank Protection		450 Feet	
Terraces	85,875 Feet	190,440 Feet	40,180 Feet
Grade Stabilization Structures	2 Structures	4 Structures	1 Structure
Grassed Waterways	7,360 Feet	12,465 Feet	
Animal Waste Mgmt. Systems	1 System	1 System	

The conservation practices installed since 2007 will reduce sediment delivery from sheet, rill, gully, and streambank sources by an estimated 7,365 tons (roughly 460 dump truck loads). New and reenrolled filter strips buffer 16,825' of Silver Creek and its tributaries. Cattle have been removed from 4,900' of the stream channel. A variety of information and education initiatives have produced a core group of project cooperators. Continued support will expand project efforts and will allow landowners to progress toward the reductions of sediment and ammonia that will ultimately remove Silver Creek from Iowa's list of impaired waters.

Project Name: Storm Lake Watershed 8009-005
Project Sponsor: Lake Preservation Association for Storm Lake, Inc.
Length of Project: February 1, 2009 – January 31, 2013

Counties included in the project area: Buena Vista

Total Watershed Improvement Funds awarded for this project:	\$200,000
Total Watershed Improvement Funds spent:	\$ 29,460
Total Watershed Improvement Funds obligated:	<u>\$170,540</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$0

Project Objectives:

- Administer and implement all activities and objectives of the Little Storm Lake Watershed Improvement Project.
- Reduce the sediment transport by 75% and phosphorous transport by 58% from Little Storm Lake watershed (via Little Storm Lake) into Storm Lake.
- Conduct water quality monitoring and sediment analysis.
- Conduct educational and informational activities to keep the project partners and the public informed.

Summary Of Accomplishments And Water Quality Outcomes

The construction work was completed in 2012 and the project was considered complete and operational on June 20, 2012. The drought conditions allowed the department to keep the basin dry from June through the present to allow revegetation of the basin.

The sediment and phosphorous transport was reduced to zero due to no flow of water from Little Storm Lake into Storm Lake. The revegetation of the area will reduce the movement when there is water flow in the future. Since there was no flow, the post construction sampling could not be completed to determine the actual reduction in sediment and phosphorous transport. Sampling in the future would be helpful in determining the effectiveness of the project.

Samples were collected at three locations every two weeks from April into June prior to the ceasing of the water flow. These samples were analyzed by the State Hygienic Lab (SHL) for the nitrogen series, phosphorous and total suspended solids.

Information has been provided to the two local newspapers and both have done articles at a regular frequency to inform the local residents of the project and the progress. Information on the project was provided to Lake Preservation Association members in the annual newsletter and at their annual meeting. Updates have been provided on a regular basis to the Lake Improvement Commission. Presentations have been made about the project to the local Kiwanis and Rotary groups. Tours of the area have been provided and an open house was held in June.

Project Name: Twelve Mile Watershed Project
Project Sponsor: Creston City Water Works
Length of Project: 2 Years (January 1, 2012 – December 31, 2013)

Counties included in the project area: Union and Adair

Total Watershed Improvement Funds awarded for this project:	\$ 169,925
Total Watershed Improvement Funds spent:	\$152,932.50
Total Watershed Improvement Funds obligated:	\$ 169,925
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 0

Project objectives:

- Administer the Twelve Mile Lake Watershed Improvement Project and work with all stakeholders to ensure all objectives and activities planned are implemented as scheduled.
- Using BMPs, and involving as many local stakeholders and landowners as possible, reduce sediment delivery 50% and nutrient delivery 30-40% to the water source lake through land acquisition and practices funded by the WIRB.
- Leverage other resources to build BMPs that local groups plan to do upon completion of the WIRB project.
- Educate the public, including civic groups, homeowners, farmers, and business owners in the Twelve Mile Lake Watershed about the BMPs and establish comprehensive education and communication strategies to promote environmental awareness.
- Assist the Twelve Mile Lake Watershed Committee with inventory, evaluation, and water monitoring activities for water quality improvements on Twelve Mile Lake.

Summary of accomplishments and water quality outcomes

The main feature of the WIRB funded project was the surveying and acquisition by the project sponsor of 97.78 acres of land at \$3,100 per acre for the future installation of a sediment retention pond with a surrounding wetland. This project, to be located directly above the main arm of the water source lake, will capture sediment and nutrients from farmland and open space areas upstream, thereby improving lake water quality and reducing the rate of lake siltation. The land is now publicly owned and secured by fencing. There has been a full year of water monitoring in the watershed. The results are not very conclusive since the structure has not been added yet. The IDNR plans to install the improvements in 2013. The engineering of the structure and surrounding improvements is completed and bidding is planned for early in 2013. Also in the autumn of 2012, there was a public meeting to review the project and present plans for the future and there was a bus field tour provided by the county's soil and conservation district. To date the sponsor has spent a total of \$306,537.70 has been expended on the project, including the WIRB expended to date. The IDNR's investment on the structure is likely to be similar to the amount expended to date.

In 2013, there will be continued education and water monitoring along with the IDNR's activities. The final report will show the trends of water monitoring through the entire project. If the WIRB funds were more robust, more structures could be built, as more farmers are interested. While some of the structures and other BMPs will be funded by other cost-share programs, more WIRB funds would benefit the efforts the committee is doing in the watershed.

Project Name: Upper Buffalo Creek Watershed 9007-004
Project Sponsor: Buchanan County Soil and Water Conservation District
Length of Project: January 2010 – December 2013

Counties included in the project area: Buchanan and Fayette Counties

Total Watershed Improvement Funds awarded for this project:	\$494,569.00
Total Watershed Improvement Funds spent:	\$242,654.43
Total Watershed Improvement Funds obligated:	<u>\$ 72,308.54</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$123,660.48

Project objectives:

- Objective 1:** Administration of the watershed project (to attain goals and objectives).
- Objective 2:** Reduce sediment delivery in the watershed by 40% (8,672 tons in four years) through implementing structural and management practices.
- Objective 3:** Reduce nutrient loading (30% reduction in phosphorus). Conduct water quality monitoring and sediment delivery calculator to identify nutrient reductions.
- Objective 4:** Increase aquatic habitat through recovery of the riparian corridor, prevent Stream bank erosion, and improve pre-existing in-stream habitat.
- Objective 5:** Conduct an information and education program to increase landowner awareness and knowledge. Provide technical and financial assistance for implementing structural and management practices.

Summary:

All project reporting (bi-annual, annual, ledger, funding requests, and cover sheets) was submitted to WIRB on/before deadlines. All progress has been reported to Buchanan and Fayette SWCD Commissioners. The annual project review will be held (with sponsoring agencies) on January 24, 2012. The Watershed Advisory Committee provided insight on selling contour farming, contour grassed strips, and quail buffers. The Technical Advisory Committee was consulted on projects implemented, sediment delivery reduction, and provided information to aid in development of a WIRB grant submitted for the Middle Buffalo Watershed. The Project Coordinator discussed conservation/management options during field visits with 20 landowners. Outside funding sources (CRP and EQIP) were used when possible to implement practices. The Project Coordinator surveyed and designed 19 grassed waterways, four contour grass strips, and one contour farm. The Project Coordinator figured cost-share for 24 projects. There were a total of 22 projects implemented: 17 waterways (20 acres), 2 contour grass strips (2.4 acres), 1 native seeding (10 acres), 1 contour farm (21.4 acres), and 1 winter cover crop (100 acres). The 22 completed practices have reduced sediment delivery by 916 tons/year and reduced phosphorus loading by 1,190.8 lbs/year. The Project Coordinator has followed the IDNR water quality monitoring plan (bi-monthly sampling). Information and education outreach has been carried out through mailings, news releases, county fair booth, public watershed meeting, and one-on-one field visits.

Project Name: Walnut Creek Watershed Improvement Project 9011-008
Project Sponsor: Poweshiek County Soil & Water Conservation District
Length of Project: Jan. 1, 2010 – June 30, 2013

Counties included in the project area: Poweshiek County

Total Watershed Improvement Funds awarded for this project:	\$ 213,000.00
Total Watershed Improvement Funds spent:	\$ 145,326.61
Total Watershed Improvement Funds obligated:	\$ <u>0.00</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 67,673.39

Project objectives: 1. Administer the Walnut Creek Watershed Improvement Project to ensure all objectives and activities planned are implemented. 2. Install Conservation Practices on areas where 50% or more of the land has 1 ton/year soil loss or more. 3. Reduce sediment delivery to Walnut Creek by 1,015 tons of sediment per year. 4. Continue an Information and Education program to increase awareness and knowledge of Walnut Creek water quality issues to watershed residents, and the local community.

The watershed coordinator vacated his position in May 2012 and his responsibilities have been absorbed by a part-time employee and other staff. An amendment was approved by SWCD in October 2012 and by the board in November 2012 to move \$8,000 from the salary line item to the water & sediment control basins line item. This changed the current salary budget goals from \$55,890 to \$47,890 and basins goals from 40 basins at \$61,770 to 47 basins at \$69,770. Since EQIP and IFIP funds were not available, 75% WIRB funds were used for the fall 2012 practices for an overall WIRB contribution of 23%.

Twelve waterway projects have completed 54.4 acres of waterway with an estimated sediment delivery reduction of 711 tons/year, which includes 2 projects totaling 3.9 acres in 2012 that had an estimated reduction of 126 tons/year. Eight basin projects have completed 50 basins with an estimated sediment delivery reduction of 178 tons/year, which includes 4 basin projects in 2012 that built 21 basins with an estimated reduction of 115 tons/year. Three terrace projects totaling 2,975 feet was completed and had an estimated sediment delivery reduction of 55 tons/year, which included 2 terrace projects totaling 1,075 feet in 2012 with an estimated reduction of 42 tons/year. One prescribed grazing practice was completed in 2012 that totaled 52 acres and reduced sediment delivery about 5 tons/year. All together, these completed practices are estimated to have reduced sediment delivery in Walnut Creek Watershed by about 949 tons/year. The 2012 projects had an estimated sediment delivery reduction of 288 tons/year.

Seven news releases were done, one in 2012, and two flyers were posted at local elevators, stations, and stores to keep landowners aware of watershed cost share. Phone calls were made to 32 landowners to notify them of cost share for 2012. A SWCD employee monitored 8 Walnut Creek sites in 2008 and 2009. Three volunteers conducted IOWATER monitoring and collected water samples in 2010. Iowa DNR provided a person to collect water samples for State Hygienic Lab testing on 10 different days, about every 2 weeks in 2011. A SWCD employee, SWCD summer intern, and volunteers conducted monitoring on 3-8 sites in 2012. An IOWATER Introductory Workshop was held on October 6, 2012 at Grinnell College, and 2 volunteers were recruited to monitor sites in the spring of 2013.

Project Name: Walnut Creek Watershed Project 1014-008
Project Sponsor: Montgomery & East Pottawattamie SWCD's
Length of Project: January 15th, 2011- January 15th, 2014

Counties included in the project area: Montgomery, Pottawattamie

Total Watershed Improvement Funds awarded for this project:	\$ 200,000
Total Watershed Improvement Funds spent:	\$ 171,773.71
Total Watershed Improvement Funds obligated:	\$ <u>26,250</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 1,976.29

Project objectives:

- Reduce sediment delivered to Walnut Creek by 200 tons

Summary of accomplishments and water quality outcomes

Over the life of this grant we have installed 50,700 feet of terraces and three grade stabilization structures. These structures prevent 1,662 tons of sediment from being deposited in Walnut Creek every year.

Interest in the watershed continues to climb, especially in Pottawattamie County where it was tough finding people to do work at first. We now have many more applications than we have money for.

This past fall was a decent construction season despite dry conditions at the beginning of the fall. A timely rain moistened soils just enough to allow for good compaction. Another grant was submitted this fall to hopefully acquire more funding for conservation practices. The number of conservation practices installed the past three years in the watershed is quite amazing. Over 1.8 million dollars has been spent in the watershed on practices the past three years through multiple WIRB grants and other conservation programs.

Project Name: Walnut Creek Watershed Project 1114-006
Project Sponsor: Montgomery & East Pottawattamie SWCD's
Length of Project: July 15th, 2012-January 15, 2015

Counties included in the project area: Montgomery, Pottawattamie

Total Watershed Improvement Funds awarded for this project:	\$ 335,600
Total Watershed Improvement Funds spent:	\$ 118,081.50
Total Watershed Improvement Funds obligated:	<u>\$ 94,177.49</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 123,341.01

Project Objectives:

Reduce the delivery of sediment by 1,800 tons and phosphorus by 2,340 pounds to Walnut Creek.

This was a busy fall in the Walnut Creek Watershed. Dry conditions delayed construction briefly however we still managed to construct 55,085 feet of terraces and one grade stabilization structure through this grant, state cost share, and the EQIP program. These practices capture 579 tons of sediment and 353 pounds of phosphorus.

Many other jobs have been constructed however bills have not been turned in or processed therefore the jobs could not be accounted for by the completion date of this report.

Interest for conservation in the Walnut Creek Watershed remains extremely high. Interest in Pottawattamie County has grown tremendously over the past year. There was originally much less interest in that portion of the watershed. We have many more applications which are good projects in need of funding.

Project Name: Waterloo Creek Watershed Project 1209-006
Project Sponsor: Allamakee Soil and Water Conservation District
Length of Project: October 15, 2012 – February 28, 2015

Counties included in the project area: Allamakee

Total Watershed Improvement Funds awarded for this project:	\$100,000
Total Watershed Improvement Funds spent:	\$0
Total Watershed Improvement Funds obligated:	<u>\$100,000</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$100,000

Project Objectives:

- Administer the Waterloo Creek Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- Expand upon current partnering and develop a formal working relationship amid technical staff in both states to allow consistent, focused BMP implementation.
- Identify specific locations for BMP implementation.
- Install 20,000 feet of new terraces and 5 grade stabilization structures, which will reduce sediment delivery by approximately 1125 tons/year by reducing upland sheet and rill erosion and trapping sediment before it leaves the field.

Summary Of Accomplishments And Water Quality Outcomes

Landowner Meetings

Door-to-door meetings with landowners are being conducted to spread the word about funding availability, discuss potential best management practices (BMPs) on their property, and get applications signed to secure funding. Cost estimates have been calculated for several landowners.

BMPs

One sediment control structure has been constructed in the watershed, although it was able to be constructed without the WIRB funding due to other available funding. Another landowner has signed up for three practices, which will be surveyed as soon as weather conditions allow. More applications are anticipated in the coming months.

Public Outreach

In late October, a newsletter was mailed to all landowners (200+) in the watershed to provide an update on watershed activities. The Allamakee SWCD's website is also being updated to keep the public informed.

Training

Jeff Tisl, IDALS-DSC Regional Coordinator, provided training on the Sediment Delivery Calculator in early November.

Project Name: Williamson Pond 1003-001
Project Sponsor: Watershed Improvement Review Board
Length of Project: November 22, 2010 to April 30, 2013

Counties included in the project area: Lucas

Total Watershed Improvement Funds awarded for this project:	\$ 116,500.00
Total Watershed Improvement Funds spent:	\$ 17,102.38
Total Watershed Improvement Funds obligated:	<u>\$ 32,811.73</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 66,585.89

Project Objectives:

- OBJECTIVE 1.** Administer the Williamson Pond Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- OBJECTIVE 2.** Construct three grade stabilization structures and seventeen water and sediment basins on State Owned land.
- OBJECTIVE 3.** Reduce sediment delivery to Williamson Pond by 453 tons of sediment and 589 pounds of phosphorus per year.
- OBJECTIVE 4.** Conduct an information and education program to increase awareness and knowledge of Williamson Pond water quality issues to watershed residents, lake users, and the local community.
- OBJECTIVE 5.** Miscellaneous activities.

Summary Of Accomplishments And Water Quality Outcomes

All Semi-Annual, Annual Reports, and I-Job Reports have been submitted in a timely fashion. A Project Coordinators meeting was attended; Sediment Delivery training was received. Quarterly progress reports to the Advisory Committee and monthly reports were given to Lucas County Soil and Water Conservation District commissioners informing of the project's progress. All Lucas County SWCD meetings are open to the public. The Plan of Work was reviewed monthly.

Two easements were obtained from private landowners adjoining east side of State land. The bid letting was held August 8th. Kinman Construction Company, Inc. began construction on State land October 24th. Two water/sediment basins and 75% of one grade stabilization structure are built on State land. The west side of State land structures have been cancelled as landowner would not grant an easement. Water monitoring reports were submitted from Iowa Department of Natural Resources concerning data analysis and interpretation and expenses.

The pond's drainage is 1,499 acres. Terraces and water/sediment structures have thus far treated 83 acres reducing sediment and phosphorous to the Pond 105 tons per year and 137 lbs/yr, respectively, using Public Owned Lakes funding.

Lucas County SWCD annual newsletter mentioned a table at the local county fair held information on the project. Project coordinator, Kim Williams, personally visited the public about the project at that table.

Project Name: Yellow River Headwaters
Project Sponsor: Winneshiek SWCD
Length of Project: December 15, 2010 - December 31, 2014

Counties included in the project area: Winneshiek & Allamakee

Total Watershed Improvement Funds awarded for this project:	\$200,000.00
Total Watershed Improvement Funds spent:	\$ 57,332.44
Total Watershed Improvement Funds obligated:	<u>\$ 22,222.00</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$120,445.56

Project objectives:

Goal 1: Decrease sediment delivery to the YRHW by 50% over the next 4 years.

- **Objective I:** Work with landowners in targeted areas of the YRHW to implement the most effective BMPs to reduce sediment delivery to the stream, thus reducing turbidity

Goal 2: Decrease bacteria loading to the YRHW by 35% over the life of the project.

- **Objective 1:** Work with landowners in the YRHW to implement BMPs to reduce bacteria run-off from open feedlots
- **Objective II:** Work with landowners in the YRHW to change grazing practices to reduce bacteria delivery.
- **Objective III:** Work with landowners in the YRHW to update/improve septic system function to reduce bacteria loading.

Goal 3: Reduce livestock access to the stream by 75% over the life of the project.

- **Objective 1:** Work with landowners in the YRHW to restrict livestock access to the stream.

Goal 4: Increase the culture of conservation among landowners in the YRHW.

- **Objective 1:** Highlight producer's contributions and investment into project participation and promotion of conservation participation.

Summary Of Accomplishments And Water Quality Outcomes

The watershed project has been an openly embraced by landowners and producers from the priority portion of the watershed. The district continues to focus efforts of implementation of best management practices that get the most practices established for the funds available through outreach efforts and the changing of culture of conservation. Funding continues to be the largest impediment to implementation of practices. Although this year our excessively dry summer and fall didn't allow for further construction of BMP's this calendar year. A greater emphasis has been placed on the use summer construction funding for the next construction season.

The Yellow River Watershed has completed a Watershed Management Plan that will further improve our ability to target BMP's within the priority areas. The project has been selected for additional funding via the Iowa DNR 319 program; this will help supplement current funding from WIRB and IDALS-DSC WSPF dollars. Though funding is all based on the tenuous support from funding sources; landowners are very willing to invest into projects as reflected by their 27% share of the total project dollars thus far. Three large drainage grade stabilization structures have been completed. These sediment/nutrient traps will control 12% of the drainage from within the priority sub-basins of the watershed.

One fortunate aspect of the drought was our ability to survey and now design BMP's that can and will be implemented when favorable conditions arise.