



IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

Bill Northey, Secretary of Agriculture

January 30, 2015

Governor Terry E. Branstad
State Capitol
LOCAL

Dear Governor Branstad:

The Watershed Improvement Review Board is pleased to provide this annual report. This report is required by Iowa Code Section 466A.4. A copy of this report has also been submitted to the Legislature.

The Watershed Improvement Review Board is an independent, self-governing body which awards grants for water quality improvement in the state. Eligible applicants include soil and water conservation districts, local watershed improvement committees, public water supply utilities, counties, county conservation boards and cities. These grants are funded by the Watershed Improvement Fund. Funding for these grants comes from annual appropriations and funds from the Animal Agriculture Compliance Fund Penalties.

The Board awarded six grants totalling \$1,406,178 this year. In addition to providing environmental benefits, these implementation projects help stimulate economic activity and create jobs through the purchase of local goods and services. Additional grants will be awarded this spring.

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

Sincerely,

A handwritten signature in black ink that reads "Jane A. Weber".

Jane A. Weber, Chair
Watershed Improvement Review Board

Cc: Bill Northey
Michael Naig
Members, Watershed Improvement Review Board

JAW:JGN

Watershed Improvement Review Board Calendar Year 2014 Annual Report

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 eight meetings throughout the year in-person or via teleconference. Meetings were held January 29, February 28, March 28, May 13, June 27, August 25, September 30 and November 3. Attachment 2 lists the board members and their organization affiliation.

The Board completed one Request For Applications (RFA) for the Watershed Improvement Fund. The RFA was announced December 13, 2013 and closed February 28, 2014.

February 28, 2014 Closing Date Request For Applications: The Board received 17 applications in response to this RFA. These applications requested \$4.4 million in Watershed Improvement Funds and leveraged an additional \$6.7 million for a total of \$11.1 million of watershed project activity proposed.

On March 28, after reviewing and ranking the applications individually from this RFA, the Board met and selected six applications for funding. The six applications were approved for \$1,406,178 of Watershed Improvement Funds. Data on the six selected projects in this RFA include the following:

- These projects included portions of 7 counties.
- The \$1.40 million requested of Watershed Improvement Funds leveraged an additional \$1.96 million for a total of \$3.36 million in watershed improvements.
- Approved projects ranged in funding from \$150,835 to \$300,000.

Attachment 1 lists the approved projects' name, applicant name, project length, county or counties where located, and funding amount for the February 28, 2014 closing date RFA. A second RFA was issued November and will closed December 29, 2014. The disposition of the applications received for this RFA will be reported on in the 2015 annual report.

There are currently 104 completed projects and 44 active projects.

In cooperation with the Treasurer of State, submitted the 2014 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 3 contains the 2014 annual progress reports submitted from active projects or projects finished in 2014.

Attachment 1. Watershed Improvement Fund Grants Awarded From the RFA Ending February 28, 2014.

Watershed Name	Organization	Project Length	Counties	Grant Amount
Little Lick Creek Watershed	Van Buren Soil and Water Conservation District	3 years	Van Buren	\$270,762
Lake Miami Watershed	Monroe County Conservation Board	2.5 years	Monroe	\$150,835
Miller Creek Watershed	Monroe Soil and Water Conservation District	3 years	Monroe	\$213,836
Rapid Creek Watershed	Johnson Soil and Water Conservation District	3 years	Johnson	\$247,650
Walnut Creek Watershed	Montgomery Soil and Water Conservation District	3 years	Montgomery, Pottawattamie	\$300,000
Hickory Grove Lake Watershed	Story County Conservation Board	2.5 years	Story	\$223,095
Funding Approved by the Watershed Improvement Review Board				\$1,406,178

**Attachment 2. Appointed Members of the Watershed Improvement Review Board
January 1 - December 31, 2014, Iowa Code Chapter 466A**

Name	City	Term Ending	Sponsoring Organization
Robert Ballou	Monticello	2016	Iowa Soybean Association
Jane Weber	Bettendorf	2015	Soil and Water Conservation Districts of Iowa
Greg Rinehart	Boone	2015	Iowa Farm Bureau
Carol Sweeting	Iowa City	2016	Iowa Association of Water Agencies
Dave Coppess	West Des Moines	2015	Agribusiness Association of Iowa
Jim Gillespie (January—April)	Earlham	2014	Representative of IDALS
Jacob Hansen (May—December)	Des Moines	2017	Representative of IDALS
Larry Gullett	Oxford	2015	Iowa Association of County Conservation Boards
Susan Heathcote	Des Moines	2015	Iowa Environmental Council
Steve Hopkins	Des Moines	2017	Representative of DNR
Carrie Keppy	Davenport	2017	Iowa Pork Producers
Lisa Walters	West Des Moines	2016	Iowa Rural Water Association
Dennis Black	Grinnell	2015	State Senator
David Johnson	Ocheyedan	2015	State Senator
Jarad Klein	Keota	2015	State Representative
Todd Prichard (January--October)	Charles City	2015	State Representative
Bruce Bearinger (Nov--December)	Oelwein	2015	State Representative

Attachment 3. 2014 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>
1228	Center Lake	Dickinson SWCD	Dickinson	6
1210	Central Park Lake	Jones County Conservation Board	Jones	7
1311	Central Park Lake	Jones County Conservation Board	Jones	8
1302	Clear Creek Watershed	City of Coralville	Johnson	9
1214	Clear Lake	Hancock SWCD	Hancock, Cerro Gordo	10
1224	Competine Creek	Wapello SWCD	Wapello, Jefferson, Keokuk	11
1206	Dry Run Creek	Black Hawk SWCD	Black Hawk	12
1248	Dry Run Creek	Dry Run Creek Watershed Improvement Association	Winneshiek	No Report Submitted
1243	Fox River	Fox River Ecosystem Development Board	Appanoose, Davis, Van Buren	13
9020	Fox River	Fox River Ecosystem Development Inc.	Appanoose, Davis	14
9008	Hewitt Creek	Hewitt Creek Watershed Improvement Association, Inc.	Dubuque	No Report Submitted
1335	Hickory Grove Lake	Story County Conservation		15
1234	Honey Creek-Lindsey Creek-Dry Run Creek	Delaware SWCD	Delaware, Clayton	16
1304	Honey Creek-Lindsey Creek-Dry Run Creek	Delaware SWCD	Delaware, Clayton	17
1321	Hurley Lake / McKinley Lake	City of Creston	Union	18
1242	Lake Meyer	Winneshiek SWCD	Winneshiek	19
1325	Lake Miami	Monroe County Conservation Board	Monroe	20
1240	Little Bear Creek Watershed	Poweshiek SWCD	Poweshiek	21
1323	Little Lick Creek Watershed	Van Buren SWCD	Van Buren	22
9009	Lost Creek Watershed	Lee SWCD	Lee	23
1246	Middle Buffalo Creek (Phase I)	Buchanan SWCD	Buchanan, Delaware	24
1312	Middle Sub Watershed of the West Fork of the Middle Nodaway River	Adair SWCD	Adair, Cass	25
1315	Mill Creek - Gere Creek	Cherokee SWCD	Cherokee	26
1328	Miller Creek	Monroe SWCD	Monroe	27
1320	Mosquito Creek	West Pottawattamie SWCD	West Pottawattamie	28
1204	North Fork Maquoketa	Dubuque SWCD	Dubuque, Delaware	29

<u>Project ID</u>	<u>Watershed Name</u>	<u>Organization</u>	<u>Counties Where Located</u>	<u>Page Number</u>
1208	North Raccoon	Buena Vista SWCD	Buena Vista, Pocahontas	30
1112	Price Creek Watershed	Iowa SWCD	Iowa, Benton	31
1330	Rapid Creek	Johnson SWCD	Johnson	32
9018	Rathbun Lake Watershed	Rathbun Land and Water Alliance	Appanoose, Clarke, Decatur, Lucas, Monroe, Wayne	33
1103	Rathbun Lake Watershed	Rathbun Land and Water Alliance	Appanoose, Clarke, Decatur, Lucas, Monroe, Wayne	34
1221	Rathbun Lake Watershed	Rathbun Land and Water Alliance	Appanoose, Lucas, Wayne	35
1318	Rathbun Lake Watershed	Rathbun Lake and Water Alliance	Appanoose, Lucas, Wayne	36
1201	Sands Timber	Taylor SWCD	Taylor Howard,	37
1319	Silver Creek	Howard SWCD	Winneshiek	38
1223	South Chequest Creek	Davis SWCD	Davis	39
1102	Twelve Mile Creek Lake Watershed	Creston City Water Works	Adair, Union	40
1231	Twelve Mile Creek Lake Watershed	Union SWCD	Union	41
1202	Upper Otter Creek	Fayette SWCD	Fayette	42
1114	Walnut Creek	Montgomery and East Pottawattamie SWCDs	Montgomery, Pottawattamie	43
1331	Walnut Creek	Montgomery SWCD	Montgomery, Pottawattamie	44
1209	Waterloo Creek	Allamakee SWCD	Allamakee, Houston (MN)	45
1245	West Tarkio River Watershed	Page SWCD	Page	46
1301	Yellow River Headwaters	Winneshiek SWCD	Decorah, Iowa	47

Project Name: 1228 Center Lake Watershed Project
Project Sponsor: Dickinson Soil and Water Conservation District
Length of Project: July 1, 2013 through August 31, 2015

Counties included in the project area: Dickinson

Total Watershed Improvement Funds awarded for this project: \$ 100,000.00
Total Watershed Improvement Funds spent: \$ 87,652.94
Total Watershed Improvement Funds obligated: \$ 12,347.16
Watershed Improvement Fund unobligated balance as of 12/31/2014: \$ 0

Project objectives:

- Reduce nutrients, primarily phosphorus, in one of the priority sub-watersheds identified in the Iowa Great Lakes WMP.
- Construct seven keystone low impact development practices to filter pollutants, meter water quantity, and thereby, neutralize the temperature spikes which contribute to algal growth.
- Construction of these LID practices includes the installation of pervious paver systems, bio-retention cells, rain gardens, and bio-swales.

Summary of accomplishments and water quality outcomes

To-date, nine urban practices supported by WIRB grant dollars have been constructed within the Center Lake watershed. These practices will slow down storm water and intercept in excess of 5 tons of sediment, 35 pounds of phosphorous, and 88 pounds of nitrogen each year. These urban practices are an initial phase for the improvement of Center Lake. Work continues on updating septic systems to be connected to sanitary sewer districts, a large shoreline stabilization project on publicly owned land, and continued implementation of urban practices within the watershed. A new fish barrier system is being designed to stop the migration of rough fish from West Okoboji upstream to Center Lake, and two barriers are being constructed between Center Lake and upstream marsh areas suitable for rough fish spawning. Once all the fish barriers have been put in place and watershed practices complete, a renovation of the fishery is being discussed. Additional project money will need to be made available before some of these practices can move forward. The ultimate goal of this project is to improve water quality of Center Lake and the water bodies downstream, improve recreational value for the lake, which in turn will increase the economic potential for this area.

Project	Practice	Actual Cost	Funding Sources				
			WIRB	319	WQC	LRF	Landowner
Lakes Regional Hospital	Pervious Pavers	\$ 11,643.00	\$ 5,000.00	\$ 6,643.00	\$ -	\$ -	\$ -
Lakes Regional Hospital	Pocket Wetland	\$117,506.00	\$12,347.16	\$ 46,472.41	\$ -	\$ -	\$58,686.43
Lakes Regional Hospital	Bio-retention Cell	\$ 34,079.79	\$34,079.79	\$ -	\$ -	\$ -	\$ -
Eyecare Center	Bio-retention Cell	\$ 64,075.97	\$10,587.00	\$ 53,285.00	\$ -	\$ -	\$ 203.97
Immanuel Luthern Church	Bio-retention Cell	\$ 95,860.28	\$17,986.05	\$ 77,874.23	\$ -	\$ -	\$ -
Highway Right of Way	Bio-swales	\$103,588.10	\$10,000.00	\$ 24,216.94	\$22,921.00	\$46,450.16	\$ -
	Totals:	\$426,753.14	\$90,000.00	\$ 208,491.58	\$22,921.00	\$46,450.16	\$58,890.40
**\$10,000 of WIRB grant for salary							

Project Name: 1210 Central Park Lake Watershed
Project Sponsor: Jones County Conservation Board
Length of Project: November 1, 2012 to January 31, 2016

Counties included in the project area: Jones

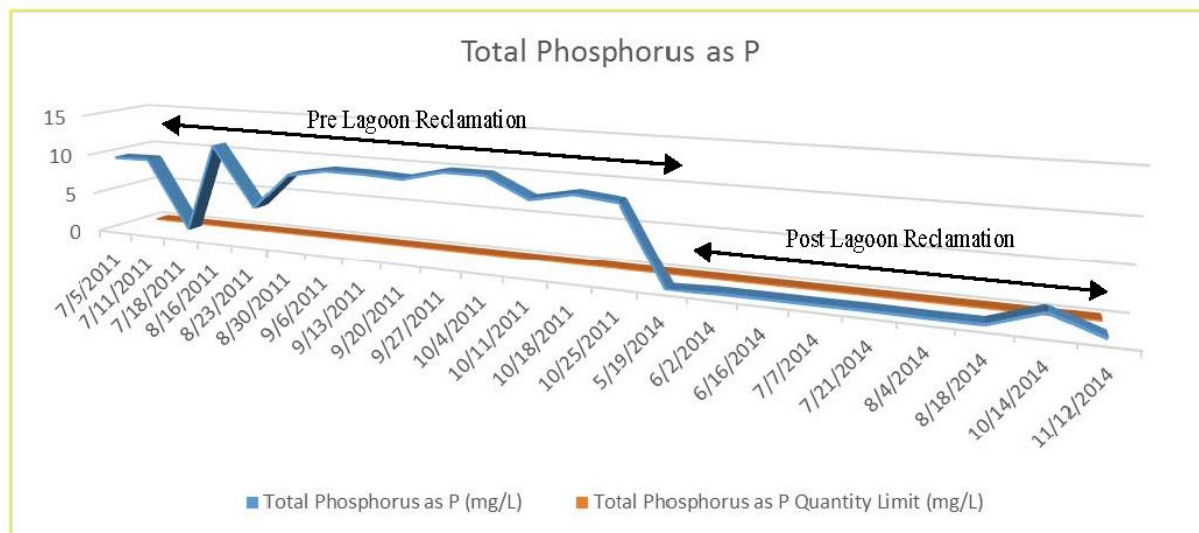
Total Watershed Improvement Funds awarded for this project: \$ 3,194.00
Total Watershed Improvement Funds spent: \$ 815.26
Total Watershed Improvement Funds obligated: \$ 0
Watershed Improvement Fund unobligated balance as of 12/31/2014: \$ 2,378.74

Project objectives:

1. Improve water quality by reducing bacteria levels to provide water safe for full body immersion when participating in water based recreational activities.
2. Improve water quality to support a healthy, self-sustaining fishery.
3. Improve water quality so the lake can be removed from Iowa’s 303(d) List of Impaired Waters.
4. Provide a lake basin that will sustain a healthy fishery, improved water quality and recreation for 50 years.

Summary of accomplishments and water quality outcomes

The first season of water monitoring of the reclaimed lagoon that has been converted to a wetland is complete. This reclaimed lagoon/new wetland is a pivotal improvement to the Central Park Lake Watershed. A diversity of plant and animal life have begun to re-inhabit the site. In particular, large numbers of visitors to our park have enjoyed observing a pair of wood ducks utilizing the wetland throughout the fall. Below is one example of water quality improvements that have occurred at the site. Phosphorus levels were collected in 2011 prior to reclaiming the lagoon and converting it to a wetland. When the new wetland was complete in the spring of 2014 the phosphorus levels had dropped dramatically, improving both its water quality and that of the downstream lake which is a recreational focal point in Jones County.



Project Name: 1311 Central Park Lake Watershed Project
Project Sponsor: Jones County Conservation Board
Length of Project: January 10, 2014 – February 28, 2016

Counties included in the project area: Jones

Total Watershed Improvement Funds awarded for this project:	\$ 121,698.00
Total Watershed Improvement Funds spent:	\$ 0.00
Total Watershed Improvement Funds obligated:	\$ 59.34
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ 121,638.66

Project objectives:

5. Improve water quality by reducing bacteria levels to provide water safe for full body immersion when participating in water based recreational activities.
6. Improve water quality to support a healthy, self-sustaining fishery.
7. Improve water quality so the lake can be removed from Iowa's 303(d) List of Impaired Waters.
8. Provide a lake basin that will sustain a healthy fishery, improved water quality and recreation for 50 years.

Summary of accomplishments and water quality outcomes

The two sediment and nutrient retention basins have been fully engineered by our local Natural Resource Conservation Service offices. The basins are designed to capture sediment and nutrients and be easily drained to allow for the contaminants' removal in the future.

All required Iowa Department of Natural Resources and U.S Army Corps of Engineers permits have been attained. All wetland determinations and environmental, historical, and cultural evaluations have been completed.

Construction bids were being accepted at the end of 2014.

Project Name: 1302 Clear Creek Watershed
Project Sponsor: City of Coralville
Length of Project: January 1, 2014 – February 28, 2016

Counties included in the project area: Johnson

Total Watershed Improvement Funds awarded for this project: \$ 263,540
Total Watershed Improvement Funds spent: \$ 0
Total Watershed Improvement Funds obligated: \$ 0
Watershed Improvement Fund unobligated balance as of 12/31/2014: \$ 263,540

Project objectives:

- Administer the Coral Ridge Ave Stormwater Project to ensure all objectives and activities planned are implemented.
- Construct seven bio-retention cells and two bioswale to manage the water quality and quantity volumes generated from a four lane highway
- Conduct cost feasibility study to determine cost differences between traditional and green infrastructure.
- Conduct watershed tour to highlight Coral Ridge Avenue Stormwater Project and agricultural projects within the Clear Creek Watershed.

Summary of accomplishments and water quality outcomes

The Coral Ridge Avenue Stormwater Project is currently in the construction phase. The bio-retention cells and bioswale implemented into this road reconstruction project will receive stormwater runoff, generated by a 4 lane section of roadway. The water quality practices in this project will reduce total suspended solids by 81 tons per year. The Coral Ridge Avenue Stormwater Project will serve as model streetscape that can be mimicked on other roadways in Coralville and in other towns in Iowa. Part of this project includes the creation of a cost feasibility study, to determine the actual cost ensued by creating green infrastructure versus traditional gray or storm drain and gutter systems. During the month of November the City Engineer and City Stormwater Coordinator were interview by Municipal “Water and Sewer Magazine” regarding innovative practices planned for this project. Coralville expects to be notified when the magazine publishes the article.

Currently, the practices have been excavated and are awaiting completion this spring and summer. The Coral Ridge Avenue Stormwater Project will be fully completed by 1/1/16.



Project Name: 1214 Clear Lake Beach Bacteria Improvement Project

Project Sponsor: Hancock Soil and Water Conservation District

Length of Project: January 1, 2014- December 31, 2014

Counties included in the project area: Hancock and Cerro Gordo

Total Watershed Improvement Funds awarded for this project: \$ 20,000

Total Watershed Improvement Funds spent: \$ 20,000

Total Watershed Improvement Funds obligated: \$ 20,000

Watershed Improvement Fund unobligated balance as of 12/31/2014: \$ 0

Project objectives:

- Reduce beach bacteria levels at all three Clear Lake public swim beaches
- Continue source tracking of beach bacteria
- Determine the effectiveness of the improvements
- Educate the public about the project
- Septic system improvements
- Conduct more frequent beach cleaning

Summary of accomplishments and water quality outcomes

Goose deterrents were used at McIntosh Woods Beach between Memorial Day and Labor Day to reduce the goose usage and waste. IDNR park staff and volunteers were able to clean the beach at least twice a week and more as needed.

Tracking of beach bacteria continued this year which seemed to show success of the project during most of the time between Memorial Day and Labor Day. There was at least one time that the beach was posted to warn of high bacteria count but this was probably due to heavy rainfall during the height of geese numbers on the beach. During this time frequent cleaning of the beach for goose waste was conducted and the waste did not sit on the beach to break down and run into the lake.

Displays of the beach cleaner and how it was funded, has helped to educate the public on the purpose and importance of keeping the geese away and the beach free of waste and garbage. The public has shown a large interest in how the goose waste affects water quality and beach bacteria. They also have an understanding of WIRB and how the funds are used across the state.

There have been 3 septic updates done during this grant cycle and the APCL will continue to offer this to landowners in the Clear Lake Watershed that need to update their septic systems.

The CLEAR Project coordinator will continue to work with the staff at McIntosh State Park to make sure that the goose waste is disposed of in a proper place and to see that the beach is cleaned every time that goose waste and garbage builds up and causes a problem.

Project Name: 1224 Competine Creek Partnership Watershed Project
Project Sponsor: Wapello County Soil & Water Conservation District
Length of Project: January 1, 2013 to June 30, 2015

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

Total Watershed Improvement Funds awarded for this project:	<u>\$100,000.00</u>
Total Watershed Improvement Funds spent:	<u>\$ 16,459.24</u>
Total Watershed Improvement Funds obligated:	<u>\$ 82,590.76</u>
Watershed Improvement Fund unobligated balance as of 12/31/2014:	<u>\$ 950.00</u>

Project objectives:

- Establish 50,943 feet of tile outlet terraces, 5 grade stabilization structures and 10 water and sediment basins over the 2 years of the project
- Reduce sediment delivery to Competine Creek by 2,016 tons/year and control runoff water on 500 acres for flood control.
- Conscientious administration ensuring objectives planned are implemented
- Conduct an information and education program to increase awareness and knowledge of Competine Creek water quality issues to watershed residents, and the local community

Summary of accomplishments and water quality outcomes

- Completed 72,240 feet of tile outlet terraces, one grade stabilization structure, and four water and sediment basins.
- Five terrace projects and three large grade stabilization structures are scheduled to be completed in the following year.
- Reduced sediment delivery to Competine Creek by an estimated 1508 tons/year
- Partnered with WSPF, WPF, EQIP, IFIP and landowner funds to complete these projects.
- Held annual cover crop field day to teach landowner about the economic and conservation benefits of cover crops.
- Received \$288,000 WQI grant to promote nutrient reduction practices within Competine, Buckeye, and Wolf sub watersheds. These funds will be used for cost share incentives and educational activities.
- Held a booth at the annual Cow Calf Conference in Ottumwa Iowa.
- Met with advisory board to review progress and set guidance for the next year.

Project Name: 1206 Dry Run Creek Watershed
Project Sponsor: Black Hawk Soil and Water Conservation District
Length of Project: January 1, 2013 – December 31, 2015

Counties included in the project area: Black Hawk

Total Watershed Improvement Funds awarded for this project:	\$ 19,853
Total Watershed Improvement Funds spent:	\$ 0
Total Watershed Improvement Funds obligated:	\$ 19,853
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ 0

Project objectives:

1. Effectively administer the Dry Run Creek Watershed Project to ensure all objectives and activities planned are implemented and progress is reported to partners.
2. Implement one 3,100 sq ft bioretention cell for the University of Northern Iowa Baker parking lot.
3. Document water quality and other environmental benefits of the practices installed.
4. Conduct an 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

The 3,100 square foot bioretention cell was designed to treat the Water Quality Volume of a 1.26 acre parking lot on the University of Northern Iowa campus. Permits were obtained, project bids were received and contract was awarded at the end of January 2014. The project began in March of 2014 with the demolition of an original building. The new parking lot was graded and completed. The bioretention cell was dug; the rock chamber and amended soils were added. The native plants and/or sod have not yet been installed. This is scheduled for the spring of 2015.

The Water Quality Volume being treated by the cell is 42,764 gallons and will also treat about 1,454,000 gallons of water annually which is equivalent to about 2.2 Olympic-sized swimming pools of runoff annually. After running the practice through the Urban Stormwater Runoff Calculator, the practice will treat 231 lbs./yr. of TSS; 0.83 lbs/yr. of TP and 4.95 lbs./yr. of TN. A news article was written and submitted informing local newspapers of the current status of the project and the environmental benefits it will provide to the Dry Run Creek.

Project Name: 1243 Fox River Water Quality Project
Project Sponsor: Fox River Ecosystem Development Board
Length of Project: July 1, 2013 to June 30, 2015

Counties included in the project area: Appanoose, Davis, and Van Buren Counties

Total Watershed Improvement Funds awarded for this project: \$ **100,000.00**
Total Watershed Improvement Funds spent: \$ **33,859.49**
Total Watershed Improvement Funds obligated: \$ **6,516.97**
Watershed Improvement Fund unobligated balance as of 12/31/2014: \$ **59,623.54**

Project objectives:

- Administer the Fox River Water Quality Improvement Project to ensure all objectives and activities planned are implemented.
- Construct 13 grade stabilization structures on treating 455 acres.
 Construct 10 water and sediment control basins treating 50 acres.
 Construct 7,000 feet of terraces treating 40 acres.
 Install 600 acres of cover crops.
- Reduce sediment delivery to Fox River by 2,060 tons of sediment per year.
- Conduct an information and education program to increase awareness and knowledge of Fox River Watershed water quality issues to watershed residents, and the local community.

Summary of accomplishments and water quality outcomes

During the course of this WIRB agreement the following Best Management Practices (BMP's) have been installed in the priority area:

Practice	Unit	Goal	Achieved 2013	Achieved 2014	Percent Complete
Grade Stab	No.	13	1	5	46%
W&S Basin	No.	10	2	20	220%
Terrace	Ft.	7,000	750	10,975	167.5%
Cover Crop	Acre	600	432.5	245	113%

- Six (6) grade stabilization structures installed treat 376 acres and withhold 1,150 tons of sediment and 1,495 pounds of phosphorus per year.
- Twenty two (22) water and sediment control basins installed treat 125 acres and withhold 259 tons of sediment and 337 pounds of phosphorus each year.
- Eleven thousand seven hundred twenty five (11,725) feet of tile outlet terrace installed treat 124 acres and withhold 283 tons of sediment and 368 pounds of phosphorus per year.
- Seven (7) bridges had signs installed to identify and educate the public about the location of Fox River.
- Project coordinator attended field day for local 6th grade students, educating them about the importance of clean water and erosion prevention. Methods locally applied for resource protection were demonstrated on site.

Project Name: 9020 Fox River Water Improvement Project
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: \$ 422,844.77
Total Watershed Improvement Funds obligated: \$ 0.00
Watershed Improvement Fund unobligated balance as of 12/31/2013: \$ 70,905.23

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 30,000ft. 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 35 grade stabilization structures controlling 1,764 acres and reducing sediment delivery by 4,796 tons per year.
- Construction has been completed on 92 water and sediment basins controlling 362 acres and reducing sediment delivery by 1,210 tons per year.
- Construction has been completed on 42,974ft of terraces controlling 353 acres and reducing sediment delivery by 828 tons per year.

Additional accomplishments:

- Fox River Impairment project received the CDI's "outstanding watershed Award" in 2010.
- A watershed tour of Fox River took place in 2013 that included guest Secretary Bill Northey, commissioners, landowners and watershed coordinators Craig Foster and Felicia Campbell.
- 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: 1335 Hickory Grove Lake Watershed

Project Sponsor: Story County Conservation Board

Length of Project: July 1, 2014 – December 31, 2016

Counties included in the project area: Story

Total Watershed Improvement Funds awarded for this project:	\$ 223,095.00
Total Watershed Improvement Funds spent:	\$ 5,670.00
Total Watershed Improvement Funds obligated:	\$ 0
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ 217,425.00

Project objectives:

- Reduce bacterial loading by providing cost share to replace nine septic systems and eliminate livestock access to 1,640 feet of streambed by providing alternative water sources and fencing the stream.
- Reduce sediment loading by 285.97 tons/year (42.24% of the WMP goal) by reshaping and stabilizing 1,640 feet of streambank, installing grass buffers, and constructing a grade stabilization structure.
- Reduce nitrogen into the lake through the installation of one bioreactor.

The WIRB project for Hickory Grove Lake began July 1, 2014. During the first six months of the project we were able to make significant reductions in the bacterial and phosphorus loading into the lake through septic system replacement. Progress was also made pertaining to survey and design work for the following practices: streambank stabilization, grade stabilization structure, and cattle exclusion. The public was informed of project progress through several media outlets.

Fox Engineering was selected to provide the design elements for the project. Topographic and wetland surveys were completed in October. Soil samples and soil boring were collected in December for the grade stabilization structure. Preliminary (60%) design is complete for: stream restoration/stabilization, cattle exclusion, grade stabilization structure and the bioreactor.

Three septic systems were upgraded for an estimated *E. Coli* load reduction of $1.75E + 13$ orgs/year and a reduction in Total P loading of 50 lbs/year. Load reductions were calculated using guidelines set by the Iowa Department of Natural Resources for failing septic systems, which assumes each household is approximately 2.5 persons. Although 3 septic systems were replaced, calculations were made for four septic systems since one of the three systems serves two households.

In December, a project update article was posted on the Story County Conservation website and Facebook page. The article was also included in two Story County newsletters, one which is distributed internally and another which is distributed externally.

Project Name: 1234 Honey-Lindsey-Dry Run Creeks Watersheds
Project Sponsor: Delaware Soil and Water Conservation District
Length of Project: July 1, 2013 to June 30, 2015

Counties included in the project area: Delaware, Clayton

Total Watershed Improvement Funds awarded for this project:	\$ 100,000.00
Total Watershed Improvement Funds spent:	\$ 85,790.90
Total Watershed Improvement Funds obligated:	\$ 0
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ 14,209.10

EQIP-MRBI Funds Obligated Jan. 1, 2014 to Dec 31, 2014	\$ 941,060
EQIP-MRBI Funds Obligated Since July 1, 2013	\$ 1,715,750

Project objectives:

Administer the project and implement all activities and objectives in the Honey-Lindsey- Dry Run Watershed, using primarily NRCS-MRBI funds to implement conservation practices. Specifically, the goal is to improve water quality in the entire watershed by reducing surface runoff of sediment and nutrients, including lowering the nitrates in Manchester’s well to below Iowa’s drinking water standard.

Summary of accomplishments and water quality outcomes

In 2014, six local farmers built 17 acres of waterways using project funds, with all of them being built in the fall due to a short construction window in the spring. One grade stabilizing structure was constructed in the spring in a critical northern area of the watershed. One producer used project funds to build 2960 feet of narrow-base terraces; two used no-till, three used cover crops. Two pitted beef buildings were built this year with project funds to replace outdated and contributing beef facilities. All of this cost-share assistance required the development of nutrient management plans, and in 2014 the project contracted for 16 of them to be written. **Completed projects in 2014 decreased annual sediment delivery to the watershed by 913 Tons, with a corresponding cut in phosphorous delivery by 1190 pounds annually. Additional nutrients and bacteria kept out of the stream by treating contributing feedlots have not been accounted for by the delivery calculator.**

Much more has been contracted for installation in the watershed for the upcoming year. Five more producers have agreed to place another 25 acres into waterways using EQIP-MRBI funds. Another producer has signed 10.9 acres into CRP waterways for 2015 construction; another family is giving serious consideration to 4.5 acres of CRP waterways. After lengthy discussions with multiple landowners and the City of Manchester, the project contracted to construct a wetland at the edge of the city limits with 7 acres of permanent storage and an additional 12 acres of temporary storage, which will yield water quality benefits as well as helping to address residential flooding issues in the Dry Run area of Manchester. A pitted beef barn has been contracted to be built to replace an open feedlot very near to the main stem of Honey Creek, and another lot near to a waterway system will be put under roof, and manure storage added.

The coordinator continues to make contacts to promote the project, with the assistance of staff funded by additional WIRB Project #1304-003, also for the Honey-Lindsey watershed, as direct, personal contact continues to prove to be the best way to advance watershed goals.

Project Name: 1304 Honey-Lindsey-Allison Creeks Watersheds
Project Sponsor: Delaware Soil and Water Conservation District
Length of Project: January 1, 2014 – February 28, 2017

Counties included in the project area: Delaware

Total Watershed Improvement Funds awarded for this project:	\$ <u>60,000</u>
Total Watershed Improvement Funds spent:	\$ <u>11,987</u>
Total Watershed Improvement Funds obligated:	\$ <u>0</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ <u>48,013</u>

Project objectives:

- Administer the project and implement all activities and objectives in the Honey-Lindsey-Allison Watersheds, using primarily NRCS-MRBI funds to implement conservation practices.
- Implement the Mississippi River Basin Initiative (MRBI) program by assisting landowners to install approved MRBI practices.

Summary of accomplishments and water quality outcomes

The Honey-Lindsey-Allison Watershed project has been making great progress. This WIRB project is coupled with the Mississippi River Basin Initiative (MRBI) partnership and another WIRB project #1234-016. The addition of an additional WIRB coordinator has allowed the project to identify priority areas based on water quality sampling and soil erosion. Successful outreach efforts have been made in the priority areas, with MRBI funds being obligated towards best management practices. Projects completed in 2014 decreased annual sediment delivery to the watershed by 794 tons and phosphorous delivery reduction by 1036 pounds. Additional nutrients and bacteria are being kept out of the stream by treating contributing feedlots. These have not been accounted for by the delivery calculator.

The Delaware County Fair is located within the City of Manchester (in the middle of the watershed area). The MRBI coordinator and the WIRB coordinator manned the booth the entire week and showcased the MRBI watershed area and spoke with individuals about water quality and best management practices.

A wetland is planned to be constructed on the north side of the City of Manchester. This wetland will provide water quality improvements as well as providing some flood mitigation for the city. This project continues to work harmoniously with the numerous partners in order to meet water quality improvements and flooding mitigation.

There are numerous locations within the watershed that could use some streambank stabilization work. Unfortunately there are no funds for this practice at this time. The upland treatment projects that are currently being installed would couple nicely with stabilizing the banks and preventing soil from directly sloughing into the creek. If streambank stabilization were included in the scope of this project the waters downstream would show greater benefits.

Project Name: 1321 Hurley Creek McKinley Lake Watershed

Project Sponsor: City of Creston

Length of Project: January 2, 2014 -- February 28, 2017

Counties included in the project area: Union County

Total Watershed Improvement Funds awarded for this project:	\$ <u>300,000</u>
Total Watershed Improvement Funds spent:	\$ <u>0</u>
Total Watershed Improvement Funds obligated:	\$ <u>0</u>
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ <u>300,000</u>

Project objectives:

- Administer the Hurley Creek Watershed Improvement Project and work with all stakeholders to ensure all objectives and activities planned are implemented as scheduled.
- Educate the public about the Best Management Practices (BMP) and the benefits of work in the watershed.
- Implement wetland restoration (7 acres), riparian buffer plantings (3 acres), and grass waterways (252 feet). Document the environmental benefits of the practices in stalled.
- Assist the Hurley Creek Watershed Committee with inventory, evaluation, and water monitoring activities for water quality improvements on Hurley Creek and at McKinley Lake.

Summary of accomplishments and water quality outcomes

The project started in 2014 and is only 12 months old. In the first year, we completed several committee meetings, a public meeting, and a mailing with brochures. We started work on the ledger, plan of work, water monitoring, and engineering/permitting. An engineering contract, a project management contract, and the State's WIRB contract were signed. Work is now beginning on final design, permits, and a project website. Several people have signed up to have a tour of their property for possible urban and/or agricultural practices to be built. So far no practices have been installed, but meetings with property owners will occur in 2015. The wetland project is scheduled to occur in 2015 also.

Project Name: 1242 Lake Meyer Water Quality Project
Project Sponsor: Winneshiek Soil and Water Conservation District
Length of Project: September 1, 2013 - September 30, 2016

Counties included in the project area: Winneshiek

Total Watershed Improvement Funds awarded for this project:	\$ 63,357.00
Total Watershed Improvement Funds spent:	\$ 0.00
Total Watershed Improvement Funds obligated:	\$ 59,570.00
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ 4,000.00

Goal 1: Reduce delivery of sediment and nutrients to Lake Meyer by target placement of BMP's on Winneshiek CCB lands

- **Objective I:** Expand upon achievements thus far in targeted areas of the LMP and in the progression of watershed project is to construct a Rock Chute Retention Wetland and associated Grade Stabilization BMPs to reduce sediment/nutrients delivered to the lake, pinpoint construction on lands of the Winneshiek CCB thus reducing impacts by sediment and nutrient loading

Goal 2: Increase the culture of conservation among all landowners, producers, urban residents, and visitors to the Lake Meyer Watershed.

- **Objective 1:** Highlight producer's contributions and investment into project participation and promotion of conservation participation. This will be done to ensure the longevity of the Lake Meyer Area and us promotional materials to highlight the importance of water quality projects and BMP's

Summary of accomplishments and water quality outcomes

The Winneshiek SWCD and Winneshiek CCB anticipate utilizing funds dedicated to the completion of the sediment and nutrient loading BMPs to be built during our next construction season. The Lake Meyer Project advisory board has met and immediate activities for the completion of the project have been discussed and approved. Surveying, design and staking of construction points have been completed. Currently the final design is being approved; along with county conservation board has received a letter from the Army Corps of Engineer permitting the construction to be being completed. This includes the drawing down of the lake to implement construction. Almost fortuitously further work within the lake is warranted as 4 sinkholes have open in various parts of the lake bank area that has resulted in a need to lower the lake next spring to fix these trouble spots this will allowing for timely drawdown; also completing the anticipated rock chute wetland. The district and its partners have worked extensively on getting all aspects of this project going since funding was secured for the LMP. The Winneshiek SWCD has applied and has been accepted to receive funding for a WSPF funded project within the Lake Meyer watershed to help address the final large livestock operation within 1500 feet of the lake itself to build manure management system's to BMP NRCS specifications. This watershed lies within the Central Turkey River Nutrient Reduction Demonstration Project focus area that will feature management practices that specialize in reducing nutrients in accordance to the state of Iowa Water Quality Initiative. There has been an active approach to sell management practices such as nutrient reduction wetlands, cover crops, contour buffer strips and filter strips currently.

Project Name: 1325 Lake Miami Watershed Project
Project Sponsor: Monroe County Conservation Board
Length of Project: July 1, 2014 – December 31, 2016

Counties included in the project area: Monroe

Total Watershed Improvement Funds awarded for this project:	\$ 150,835.00
Total Watershed Improvement Funds spent:	\$ 600.00
Total Watershed Improvement Funds obligated:	\$ -0-
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ 150,235.00

Project objectives:

- Reduce sediment delivery to Lake Miami by 1,167 tons per year.
- Reduce phosphorus delivery to Lake Miami by 802 pounds per year.
- Evaluate use of Publically Owned Lakes (POL) and EQIP funds for private lands within the watershed.
- Development and implementation of Forestry Stewardship Plan for the Wildlife Area at Lake Miami.
- Host 1 kickoff meeting and 1 field day to inform the public
- Develop a photographic journal documenting installation, construction or implementation of key practices.

Summary of accomplishments and water quality outcomes

This project began in July 2014. Over the past six months, a kickoff meeting was held and environmental assessments and permits were completed for the installation of Lake Shoreline Protection. A road was also constructed around the lake to prepare for Lake Shoreline Protection installation. At the end of December 2014, 10% (or 1,000 feet) of the Lake Shoreline Protection is installed. The remaining Lake Shoreline Protection will be installed by April 2015. Soil samples were taken and analyzed for the locations of the planned sediment basins. Installation of sediment basins will begin in summer/fall of 2015.

Monroe SWCD was awarded \$25,000 in Public Owned Lake Funds in 2014. In 2014, four water and sediment control basins were installed. **These four structures benefitted six acres and reduced sediment delivery to Lake Miami by 22 tons/year and phosphorous delivery by 30 pounds/year.**

Project Name: 1240 Little Bear Creek Watershed Improvement Project
Project Sponsor: Poweshiek County Soil and Water Conservation District
Length of Project: July 1, 2013 to July 1, 2015

Counties included in the project area: Poweshiek County

Total Watershed Improvement Funds awarded for this project:	<u>\$ 99,999.00</u>
Total Watershed Improvement Funds spent:	<u>\$ 44,373.57</u>
Total Watershed Improvement Funds obligated:	<u>\$ 11,762.23</u>
Watershed Improvement Fund unobligated balance as of 12/31/2014:	<u>\$ 43,863.20</u>

Project objectives:

- Reduce annual sediment delivery by roughly 16.3% or 1,058 tons and associated phosphorus delivery by 1,375 pounds
- Develop an information and education program aimed at producers and residents within the headwaters of Grant and Chester townships

Summary of accomplishments and water quality outcomes

In the last year the Poweshiek County SWCD completed 3 acres of grassed waterways, 800 feet of terrace, 2 water and sediment control basins, and 72 acres of cover crops for a total estimated sediment delivery reduction of 352 tons/year and phosphorus reduction of 458 pounds/year. Four water and sediment control basins are planned for the spring, which provides an additional estimated sediment delivery reduction of 126 tons/year and phosphorus reduction of 163.8 pounds/year. These reductions along with the 875 feet of terrace and 70 acres of cover crops completed in the first 6 months of the project will provide a total estimated sediment delivery reduction of 548 tons/year and phosphorus reduction of 712.8 pounds/year. Three landowners also desire to install practices including a terrace, basin and grassed waterways; however, they were late submitting their applications and no matching funds are available for an up to 75% cost share incentive during the remainder of this project.

Two demonstration permeable paver practices totaling 2,454 square feet were implemented treating 8,628 square feet of impervious surface, reducing total suspended solids by 414 pounds/year, and treating 151,997 gallons of stormwater per year. Signage was added to the permeable paver practice at the Grinnell Library to educate the public on benefits of the practice. A landowner is planning a 144 square foot rain garden, and the library is planning an additional 960 square feet of permeable pavers and a 1,440 square foot bioswale in the spring.

The information and education goals for the last year were exceeded with the assistance of supporting organizations. Public outreach activities included 3 radio interviews, 8 newspaper articles, a watershed awareness display (with handouts and display books) at the Grinnell Library, distribution of 100 watershed awareness door hangers, volunteers labeled 200 storm drains, rain garden workshop, creek cleanup event, and youth nature exploration camp. The project coordinator also held 2 advisory board meetings, gave updates at 8 SWCD Commissioner meetings, and gave presentations and/or had a booth at the Poweshiek County Fair, cover crop field day, NRCS/SWCD contractors meeting, Sustainable Living Event, Youth Summer Science Program at the Grinnell Library, Trees Forever Stewards of a Beautiful Land Class, Women Caring for the Land meeting and Malcom City Council meeting.

Project Name: 1323 Little Lick Creek Watershed Project
Project Sponsor: Van Buren Soil and Water Conservation District
Length of Project: July 1, 2014 through June 30, 2017

Counties included in the project area: Van Buren

Total Watershed Improvement Funds awarded for this project: \$ 270,762.00
Total Watershed Improvement Funds spent: \$ 530.72
Total Watershed Improvement Funds obligated: \$ 12,024.00
Watershed Improvement Fund unobligated balance as of 12/31/2014: \$ 258,207.28

Project objectives:

- Establish 1,000 acres of **cover crops** to protect soil quality and reduce storm water driven phosphorous loading as well as demonstrate nitrogen management benefits.
- Establish 7 **grade stabilization structures** to protect 560 high priority acres and trap 4,480 tons of sediment and 5,824 lbs. of Phosphorous per year.
- Establish 6 **water and sediment control basins** to protect 210 high priority acres and trap 1,512 tons of sediment and 1,965 lbs. of Phosphorous per year.
- Establish 6,000 feet of **terraces** to protect 60 high priority acres and prevent the loss of 1,512 tons of sediment and 156 lbs. of Phosphorous per year.
- Establish 10 acres of **wildlife habitat and native perennial vegetation** in critical CRP areas to increase water infiltration and reduce soil erosion.

Summary of accomplishments and water quality outcomes

This project started July 1st, 2014. A watershed coordinator, Ted Daugherty, was hired by the Van Buren SWCD. Ted spent most of his time making landowner contacts and field visits to plan for conservation projects to be completed within the watershed. So far, the SWCD has received 23 applications for projects in the watershed. One grade stabilization project has been approved, surveyed, and designed. During the coming months, Ted will be making more one-on-one landowner contacts to increase interest in the available WIRB funding in order to meet the goals of this project.

Project Name: 9009 Lost Creek Watershed
Project Sponsor: Lee Soil and Water Conservation District
Length of Project: January 1, 2010 – December 31, 2014

Counties included in the project area: Lee

Total Watershed Improvement Funds awarded for this project: \$ 445,800
Total Watershed Improvement Funds spent: \$ 350,335
Total Watershed Improvement Funds obligated: 0
Watershed Improvement Fund unobligated balance as of 12/31/2013: \$ 95,465

Project objectives:

- Install BMP's 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 in the water body.
- Implement an information and education campaign for the Lost Creek Watershed.

Summary of accomplishments and water quality outcomes

- Seventeen Grade Stabilization Structures completed controlling 1453 acres – sediment delivery reduced by 6639 tons/yr. and phosphorous loading reduced by 8631 pounds/yr.
- 57 acres of CRP buffers completed – sediment delivery reduced by 74 tons/yr. and phosphorous loading reduced by 96.2 pounds/yr.
- 132.7 acres of continuous CRP completed – sediment delivery reduced by 358 tons/yr. and phosphorous reduced by 465.4 pounds/yr.
- Tile Outlet Terraces installed protecting 495 acres – sediment delivery reduced by 1576 tons/yr. and phosphorous loading reduced by 2049 pounds/yr.
- 105 acres of Prescribed Grazing applied – sediment delivery reduced by 40 tons/yr. and phosphorous loading reduced by 52 pounds/yr.
- 8 roadside signs and 8 bridge signs installed to identify and educate the public about Lost Creek and the Lost Creek watershed.
- 3 field days have been held concerning buffer strips, CRP program availability, and installation of Grade Stabilization Structures.
- 6 press releases distributed to local media promoting the Lost Creek Watershed project and raising public awareness for the project.

Project Name: 1246 Middle Buffalo Creek (Phase 1)
Project Sponsor: Buchanan Soil and Water Conservation District
Length of Project: January 1, 2014 to January 31, 2016

Counties included in the project area: Buchanan and Delaware

Total Watershed Improvement Funds awarded for this project:	\$ <u>100,000</u>
Total Watershed Improvement Funds spent:	\$ <u>43,660</u>
Total Watershed Improvement Funds obligated:	\$ <u>0</u>
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ <u>56,340</u>

Project objectives:

- Administration of the watershed project will be conducted to ensure all activities, goals, and objectives are implemented as planned.
- Reduce sediment delivery in the watershed by 30% through the implementation of structural and management water quality improvement practices. Sediment loading will have to be reduced by 3,238 tons/year in two years to achieve this reduction.
- Reduce nutrient loading by implementing structural and management water quality improvement practices. Attain a 30% reduction in phosphorus (as calculated by sediment delivery calculator). Water monitoring results will be compared to previous results to identify attained nutrient reductions.
- Increase aquatic habitat through the implementation of conservation and management practices that promote recovery of the riparian corridor, prevent streambank erosion, and improve pre-existing in-stream habitat.
- Conduct an information and education program to increase awareness and knowledge of the watershed's biological, chemical, and physical importance. Additionally, provide information in regard to technical and financial assistance for implementing structural and management water quality improvement practices.

Summary of accomplishments and water quality outcomes

The Middle Buffalo Creek (Phase 1) – Water Quality Project has completed 18 grassed waterways (totaling 26.9 acres), while reducing sediment delivery 1,012 t/y. Phosphorus was reduced by 1,317 lbs./y. Seven grassed waterways are ready for construction and several CRP native grass plantings are being finalized for spring. The most recent DNR mussel assessment showed recovery, which may result in delisting from the 303(d) in the near future. Additional work in the watershed would ensure water quality improvement and mussel recovery.

The State Revolving Fund - Sponsored Project funds that were to be received in conjunction with the City of Coggon waste water treatment plant fell through (approximately \$131,320). The Division of Soil Conservation was able to allocate extra IFIP funding to get practices on the ground. The District plans on utilizing other funding sources (as available) in 2015.

Project Name: 1312 Middle Sub Watershed of the West Fork Middle Nodaway River Watershed

Project Sponsor: Adair Soil and Water Conservation District

Length of Project: January 1 2014 – February 28, 2017

Counties included in the project area: Adair and Cass Counties

Total Watershed Improvement Funds awarded for this project:	\$ <u>298,563.00</u>
Total Watershed Improvement Funds spent:	\$ <u>44,562.09</u>
Total Watershed Improvement Funds obligated:	\$ <u>390.00</u>
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ <u>253,610.91</u>

Project objectives:

- Reduce the amount of sediment produced by gully erosion using grade control structures.
- Reduce the amount of sediment produced by sheet and rill erosion using terraces, waterways, no-till hay establishment, cover crops, contour grass strips and filter strips.

Summary of Accomplishments and Water Quality Outcomes

Our targeted watershed includes 23,327 acres in the middle HUC12 sub-watershed of the West Fork of the Middle Nodaway River (WFMNR). 2,127 acres are situated in Cass County and 21,200 acres in Adair County. The priority resource concerns in the watershed area are: 1) stream bed instability resulting in a high number of actively eroding gullies that annually contribute approximately 66% of the sediment entering the Middle West Fork of the Middle Nodaway River and followed by 2) sheet and rill erosion producing approximately 34% of the sediment entering the river from the uplands. Our goal for this project is for the proposed structures to decrease the annual sediment load reaching the WFMNR from the sub-watershed by 2500 tons/year or 7.2% of the estimated total annual amount of sediment delivered.

Through our conservation planning efforts, we are working together to come up with solutions to the soil erosion problems in the watershed. The first project included a 1,125 feet terrace, 1.4 acres of waterways and a 2.6 acres buffer strip. This field had areas of ephemeral erosion on the side hills that were 1 to 2 feet in depth and width. We will further our efforts on the site by adding a basin below the terraces and waterways. The second project included 50 acres of cover crops in a crop field. The cover crops will help improve soil health and sheet & rill erosion. Another project included 4,100 feet of terraces and a grade stabilization structure with an approximate 1 acre pool area. This farm also showed signs of ephemeral erosion and through our calculations, the active gully at the bottom of the hill showed a soil loss of 152 tons per year and was rapidly increasing in size. It was an excellent area for a grade stabilization structure. There will be a filter strip around the pool area of this structure installed this spring, which will slow down runoff from the crop field, trapping and filtering sediment, nutrients, pesticides and other potential pollutants before they reach the surface water. For our first year of WIRB funding, we reduced the sediment going into the WFMNR by 440 tons per year and decreased phosphorus by 574 pounds per year, helping to improve water quality in the watershed. Although the reduction numbers were low, the first year of the project has been focused on establishing relationships, identifying soil erosion resource concerns in the field and creating solutions. We are in the planning stages for more grade control structures and also other types of practices to control sheet & rill. We will keep working towards our goals of reducing sediment and phosphorus.

Project Name: 1315 Mill Creek-Gere Creek Watershed Improvement

Project Sponsor: Cherokee Soil & Water Conservation District

Length of Project: January 1, 2014 – February 28, 2017

Counties included in the project area: Cherokee County

Total Watershed Improvement Funds awarded for this project:	\$ <u>299,942.00</u>
Total Watershed Improvement Funds spent:	\$ <u>34,193.21</u>
Total Watershed Improvement Funds obligated:	\$ <u>59,108.24</u>
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ <u>206,640.55</u>

Project objectives:

- Reduce sediment loading and phosphorus loading with quality conservation practices.

Summary of accomplishments and water quality outcomes

Accomplishments for 2014 included installing 6 projects for a total of \$21,156.35 through WIRB and State Cost Share in the fall of 2014. This included 5875 feet of terraces, 1 WASCOP project, and 50.9 acres of new cover crops. These practices control 147 tons of sediment and 193 pounds of phosphorus per year. We also have planned 2 waterway projects, and one waterway project carryover from fall 2014 for the spring of 2015 and 3 terrace projects, 2 waterways, 1 grade stabilization structure and 1 WASCOP project in the fall of 2015 so far in the watershed.

We have had multiple education and information outreach programs in 2014, including articles in local newspapers and KICD AM 1240, several appearances on The What's Happening Show on KCHE 92.1 FM to talk about Gere Creek, multiple mailings were sent out to all the landowners and producers in the watershed letting them know about the project and meetings, displayed information about the watershed at the Cherokee Ag Show on February 11th, attended the No-Till/Strip Till Conference in Le Mars on February 20th, attended Iowa Water Conference and the Spring Project Coordinators meeting March 3rd – 5th, hosted a cover crop field day on April 9th a letter of invitation was sent to all the producers in the watershed, attended IDNR's IOWATER training at Silver Sioux Park on May 31st, attended Conservation for New Employees – Application training at the Neil Smith National Wildlife Refuge in Prairie City from June 16th – 20th, and also wrote an article for the SWCD 2015 Annual report about the Gere Creek watershed, attended trainings and meetings such as underground outlet EFT training, the fall project coordinators meeting in Greenfield, and the Pollutant Reduction Calculator training in Atlantic.

With all the interest for installing waterways in the watershed, we are encouraging producers to utilize CCRP, EQIP and State Cost Share to extend the very limited project funds allocated to this practice. A ranking criteria specifically for the Gere Creek Watershed project has been developed and will be implemented to insure the best projects get funded to meet the project goals.

This project is supported in part by the Iowa Watershed Improvement Fund administered by the Iowa Watershed Improvement Review Board and with support from the Iowa Department of Agriculture and Land Stewardship, Division of Soil Conservation.

Project Name: 1328 Miller Creek Phase III Nutrient and Sediment Reduction Project

Project Sponsor: Monroe Soil and Water Conservation District

Length of Project: July 1, 2014 to June 30, 2017

Counties included in the project area: Monroe

Total Watershed Improvement Funds awarded for this project:	\$ 213,489.00
Total Watershed Improvement Funds spent:	\$ 20,496.53
Total Watershed Improvement Funds obligated:	\$ <u>11,203.24</u>
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ 182,136.23

Project objectives:

- Install BMP's aimed at trapping, treating and tying up phosphorus and nitrate loads in surface water entering Miller Creek using grade stabilization structures, sediment basins and terraces benefitting an estimated 176 acres of high priority land.
- Maximize nutrient efficiency with grid soil sampling to gain knowledge of nutrient levels
- Improve soil health by implementing cover crops @240ac/year/ for three years benefitting 720 acres.
- Implement nutrient mgt. practices in high priority areas based on the 4R concept utilizing soil sampling & nitrate testing methods to ensure proper applications.
- Monitor treated waters from selected BMP's and in the main channel of Miller Creek to get a base line to help determine future reduction & benefits.
- Demonstrate a denitrifying bioreactor and field day training to show the effectiveness of nitrogen reduction practices at the edge of

Summary of accomplishments and water quality outcomes

- Worked with the Albia FFA Advisor and students to gather stalk samples that were sent to the ISU lab to determine nitrogen remaining in the stalk. This determines application rates the producer may choose to apply next growing season.
- Worked with MESI a certified water testing lab and the FFA students to collect and test water samples from 4 designated sites in the main channel of Miller Creek.
- 240 acres of cover crops were introduced helping producers' soil health and nutrient reductions.
- Surveyed and designed 4 basins and 1 terrace with 4 more basins and 1 terrace planned for winter construction or early spring.

We currently have all WIRB funding delegated for Terraces and Basins with more requests coming in. Landowners desired to install more terraces along with water & sediment control practices, but the project doesn't have enough funds to meet the demand. Mark Carlton with ISU Extension will meet with producers in early February to review their individual results and create a plan for the upcoming planting season. We will also be working with the FFA students to create data reports of results of the FSNT and Water Monitoring testing to be utilized in the final report. We are currently working with NRCS Engineers on the planning and installation of a Denitrifying Bioreactor this spring. We will host a field day mid spring at the completion of the bioreactor demonstrating the how this BMP can possibly reduce nitrates leaving the field through tiled outlets.

Project Name: 1320 Mosquito Creek Watershed Project
Project Sponsor: West Pottawattamie Soil and Water Conservation District
Length of Project: January 1, 2014 - February 28, 2017

Counties included in the project area: Pottawattamie

Total Watershed Improvement Funds awarded for this project:	\$ 279,811
Total Watershed Improvement Funds spent:	\$ 13,598
Total Watershed Improvement Funds obligated:	\$ 37,362
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ 228,851

Project objectives:

- Reducing runoff and thus delivery of nutrients, sediment and other pollutants.
- Reduce intermittent flooding in the cities of Neola and Underwood.
- To educate residents of the watershed on how their actions and land use practices affect watershed health.
- Promote the Iowa Nutrient Reduction Strategy; Federal, State, SWCD cost share programs; and State Revolving Fund loans

Summary of accomplishments and water quality outcomes

In addition to the totals above, there is \$51,810 obligated to, and \$10,475 spent on conservation practices from other funding sources; IFIP, REAP, LOST.

A severe storm June 3 caused extensive hail and wind damage to crops, vehicles, buildings, and other infrastructure. There was moderate to severe damage over the entire watershed project area. 238,000 acres were affected in the West Pottawattamie Conservation District alone. This storm, along with a wet fall and an early freeze had an effect on participation and construction.

Project Name: 1204 North Fork Maquoketa River Watershed
Project Sponsor: Dubuque Soil and Water Conservation District
Length of Project: January 1, 2013 – June 30, 2015

Counties included in the project area: Dubuque, Delaware

Total Watershed Improvement Funds awarded for this project:	\$ 99,570.00
Total Watershed Improvement Funds spent:	\$ 57,615.80
Total Watershed Improvement Funds obligated:	\$ 0.00
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ 41,954.20

Project objectives:

- To help landowners and operators in the three selected sub-watersheds of the North Fork Maquoketa River Watershed voluntarily implement conservation systems that reduce nutrient loss; protect, restore, and enhance wetlands; maintain agricultural productivity; improve wildlife habitat; and achieve other objectives, such as flood prevention.

Summary of accomplishments and water quality outcomes

The Headwaters of the North Fork Maquoketa River Watershed is a 75,000-acre watershed located to the north of Dyersville, Iowa including parts of Dubuque and Delaware counties. Watershed landowners are adopting Natural Resources Conservation Service (NRCS) practices to address excessive nutrient runoff and implement the Iowa Nutrient Reduction Strategy.

In 2012 the Watershed Improvement Review Board (WIRB) approved a proposal to fund personnel to assist the Dubuque Soil & Water Conservation District implement their Mississippi River Basin Initiative (MRBI) project. The final year for MRBI project funding was 2014. Numerous MRBI contracts will continue beyond 2014 and will need survey and design assistance. The Pollutant Reduction Calculator was unavailable until September, when training was provided, so we are currently in process of updating the WIRB ledger with those calculations as payments are made.

To date, \$2,307,630.26 in contracts has been paid through the MRBI project to 72 watershed landowners in 109 contracts to address water quality concerns on 11,001.1 acres.

The Dubuque SWCD has conducted education within the watershed. Such activities included: attending Hewitt Creek and North Fork Maquoketa Watershed meetings to discuss MRBI updates and upcoming events, creating and updating a project Facebook page to spread word about project, and posting flyers in watershed area to inform public of funding available for practices. Outreach included a manure spreader calibration demonstration with ISU Extension and a cover crop meeting with private business, Three Rivers Farm Service and Cover Crop Solutions, to address nitrogen and phosphorus reduction practices implemented in the watershed.

Project Name: 1208 North Raccoon River Watershed
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:	\$50,144.40
Total Watershed Improvement Funds obligated:	\$ 0
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$13,755.60

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 10,931 acres of Cover Crops planted in the North Raccoon River Watershed fall 2014.
Certified 811 acres of No-Till/Strip-Till farming practiced.
Certified 1337 acres of land with Nutrient Management practices applied.
Two Waste Storage Facilities were under construction this year with certification expected next year.

We are seeing a heightened awareness for the need to apply conservation practices and more interest in putting practices on the ground, in particular cover crops and a desire to improve overall soil health.

With implementation of the above practices it is estimated that we will achieve a significant reduction of: Nitrate, Phosphorus and Sediment loss.

A very general estimate of the environmental benefit achieved from the practices implemented through this program can be made for the reduction of soil loss due to erosion. In Buena Vista and Pocahontas counties there is an approximate average soil loss of 2 tons/ac/year and it can be estimated that the average reduction of soil loss with the use of cover crops is 50% or more (reference : “Cover Crops for Soil and Water Quality” by Tom Kasper). With 10,930 acres of cover crop planted in 2014, we can approximate a reduction of soil loss of one ton/ac/year or preventing 10,930 tons of soil loss.

Project Name: 1112 Price Creek Watershed Project
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:	\$ 35,831
Total Watershed Improvement Funds obligated:	\$
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ <u>66,864</u>

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

2014 was a successful year for the Price Creek Watershed Project. The new outreach program resulted in 25 new project applications, many from first time participants. Construction was completed on 9 practices and several will be completed during spring construction. Important achievements in 2012 included:

- Commitments from 3 producers for large rotational grazing projects that will involve nearly 500 acres of the Price Creek Watershed. We are currently waiting on special cultural resource clearances and federal funding for these projects. These will eliminate livestock access from an additional 2 miles of Price Creek and its tributaries.
- Replaced 3 failing septic systems that were contributing bacteria directly to Price Creek. Several more applications have been received and are waiting for funding and cultural resources clearances.
- Installed in field erosion control practices that reduced sediment delivery by 419 t/y and phosphorus delivery by 544 lb/y.
- 477 acres of cover crops were installed throughout the watershed during fall of 2014.
- The Iowa Department of Transportation chose Price Creek as a mitigation site and plans to spend \$500,000 on a stream restoration project.

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.

The project has had an outstanding number of participants in the last year. Waste Storage Facilities continue to be a difficult practice to sell. The district is doing additional outreach on the benefits of waste storage systems. 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: 1330 Rapid Creek Watershed Project
Project Sponsor: Johnson Soil and Water Conservation District
Length of Project: July 1, 2014 – June 30, 2017

Counties included in the project area: Johnson County

Total Watershed Improvement Funds awarded for this project: \$ 247,650.00
Total Watershed Improvement Funds spent: \$ 19,147.73
Total Watershed Improvement Funds obligated: \$ 23,850.00
Watershed Improvement Fund unobligated balance as of 12/31/2014: \$ 204,652.27

Project objectives:

- Implement water quality initiative BMPs to reduce nutrients to Rapid Creek
- Reduce sediment delivery by 2,103 tons/year or 21%
- Reduce phosphorus by 2,734 lbs/year or 21%
- Reduce/limit livestock access by 10% (or 1 mile)
- Increase water quality by implementing infiltration practices.

Summary of accomplishments and water quality outcomes

The Rapid Creek Watershed Project saw good progress in the first six months. 1,030 acres of cover crops were planned for fall seeding by seven landowners/producers. A watershed newsletter is prepared for mailing to over 1,000 residents. Two informational and educational meetings are planned for 2015 so far including a project informational meeting and a nutrient management and reduction meeting. The latter will include a range of speakers including Iowa Secretary of Ag. Bill Northey, NRCS, ISU Extension, and Iowa Soybean Association experts, as well as a producer in the Rapid Creek watershed practicing nutrient management on their family farms. The project has applications in for grassed waterways, grade stabilization structures, cover crops, and other projects slated for 2015. Other plans for 2015 include meeting with HOA's in the watershed, holding a cover crop meeting/field day, meeting with City of Iowa City officials on potential collaborations with the project, and working towards installing watershed boundary and BMP signage, among other objectives.

In August the watershed project received funding through the Iowa Nutrient Reduction Center to study the effects of stacked BMP's on a subwatershed scale. The project coordinator has been working with Keith Schilling with the Iowa Geological Survey and Doug Schnoebelen with the University of Iowa to implement this innovative research project. Two paired sub basins have been identified and sensors have been installed at two outlet points to monitor changes in nitrates, turbidity and flow. Four of the landowners in the "treatment" basin attended a meeting with the project coordinator and researchers as well as Wendell Jones, District Conservationist in Johnson County. Discussion revolved around possible practices for their respective properties including bioreactors, filter strips, nutrient management practices, and grassed waterways, among others. This study will coincide with the length of the overall watershed project.

**9018 Rathbun Lake Special Project:
BMPs for Priority Land in Targeted Sub-Watersheds 2009
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:	\$ 454,900.00
Total Watershed Improvement Funds spent:	\$ 327,013.99
Total Watershed Improvement Funds obligated:	\$ 80,135.88
Watershed Improvement Funds unobligated balance as of 12/31/2014:	\$ 47,750.13

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 90 landowners in the Lower Chariton Creek, Chariton River #3, Sandy Branch, Hamilton Creek, and Goodwater Creek targeted sub-watersheds. The Alliance assisted 61 landowners plan best management practices for 4,011 acres. Practices have been applied by 53 of these landowners for 2,907 acres, approximately 1,450 acres of which was priority land. These practices will reduce sediment and phosphorus delivery to Rathbun Lake by an estimated 5,717 tons and 25,142 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; five landowners recognized as *Rathbun Lake Protectors* at the 2014 *Protect Rathbun Lake* meeting, bringing the number of landowners selected as *Rathbun Lake Protectors* to 52; interviews of *Rathbun Lake Protectors* on WHO radio; installed *Rathbun Lake Protectors* signs; articles on *Rathbun Lake Protectors* in *Wallaces Farmer*; 20 *Rathbun Lake Protectors* have now received the Governor's Iowa Farm Environmental Leader Award; displays for Iowa Water Day and Conservation Districts of Iowa Partnership Day; newsletters for Alliance members and partners; and the Alliance's Internet site at <http://www.rlwa.org/>. The Alliance received both the 2014 Governor's Water Quality Special Project Award and the 2014 Governor's Environmental Education Special Project Award. 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.

**1103 Rathbun Lake Special Project:
BMPs for Priority Land in Targeted Sub-Watersheds 2011
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:	\$ 50,723.07
Total Watershed Improvement Funds obligated:	\$ 13,072.25
Watershed Improvement Funds unobligated balance as of 12/31/2014:	\$ 61,504.68

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 have 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 nine landowners plan and apply best management practices for 432 acres, approximately 215 acres of which was priority land. These practices will reduce sediment and phosphorus delivery to Rathbun Lake by an estimated 737 tons and 4,941 pounds per year respectively. Practices applied by landowners included terraces, water and sediment control basins, grade stabilization structures, and the conversion of priority land to grassland. 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; five landowners recognized as *Rathbun Lake Protectors* at the 2014 *Protect Rathbun Lake* meeting, bringing the number of landowners selected as *Rathbun Lake Protectors* to 52; interviews of *Rathbun Lake Protectors* on WHO radio; installed *Rathbun Lake Protectors* signs; articles on *Rathbun Lake Protectors* in *Wallaces Farmer*; 20 *Rathbun Lake Protectors* have now received the Governor's Iowa Farm Environmental Leader Award; displays for Iowa Water Day and Conservation Districts of Iowa Partnership Day; newsletters for Alliance members and partners; and the Alliance's Internet site at <http://www.rlwa.org/> . The Alliance received both the 2014 Governor's Water Quality Special Project Award and the 2014 Governor's Environmental Education Special Project Award. 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.

**1221 Rathbun Lake Special Project:
BMPs for Priority Land in Targeted Sub-Watersheds 2012
Rathbun Land and Water Alliance
Length of Project: January 1, 2013 to February 28, 2016**

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

Total Watershed Improvement Funds awarded for this project:	\$ 97,790.00
Total Watershed Improvement Funds spent:	\$ 47,707.58
Total Watershed Improvement Funds obligated:	\$ 11,034.75
Watershed Improvement Funds unobligated balance as of 12/31/2014:	\$ 39,047.67

Project Objectives:

- Apply best management practices for priority land that will reduce annual sediment and phosphorus delivery to Rathbun Lake by 1,800 tons and 6,000 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 have used geographic information systems and field work to identify priority land owned and/or farmed by landowners in the Middle Wolf Creek #2 and Chariton River #5 and #10 targeted sub-watersheds. The Alliance has assisted eight landowners plan and apply best management practices for more than 400 acres, approximately 200 acres of which was priority land. These practices will reduce sediment and phosphorus delivery to Rathbun Lake by an estimated 630 tons and 2,100 pounds per year respectively. Practices planned and applied by landowners included terraces, water and sediment control basins, 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; five landowners recognized as *Rathbun Lake Protectors* at the 2014 *Protect Rathbun Lake* meeting, bringing the number of landowners selected as *Rathbun Lake Protectors* to 52; interviews of *Rathbun Lake Protectors* on WHO radio; installed *Rathbun Lake Protectors* signs; articles on *Rathbun Lake Protectors* in *Wallaces Farmer*; 20 *Rathbun Lake Protectors* have now received the Governor's Iowa Farm Environmental Leader Award; displays for Iowa Water Day and Conservation Districts of Iowa Partnership Day; newsletters for Alliance members and partners; and the Alliance's Internet site at <http://www.rlwa.org/> . The Alliance received both the 2014 Governor's Water Quality Special Project Award and the 2014 Governor's Environmental Education Special Project Award. 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.

**1318 Rathbun Lake Special Project:
BMPs for Priority Land in Targeted Sub-Watersheds 2013
Rathbun Land and Water Alliance
Length of Project: January 1, 2014 to February 28, 2017**

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

Total Watershed Improvement Funds awarded for this project:	\$144,000.00
Total Watershed Improvement Funds spent:	\$ 0.00
Total Watershed Improvement Funds obligated:	\$ 0.00
Watershed Improvement Funds unobligated balance as of 12/31/2014:	\$144,000.00

Project Objectives:

- Apply best management practices for priority land that will reduce annual sediment and phosphorus delivery to Rathbun Lake by 1,500 tons and 5,000 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 have used geographic information systems and field work to identify priority land owned and/or farmed by landowners in the Middle Wolf Creek #1 and South Fork Walker Branch targeted sub-watersheds. The Alliance is currently working with ten landowners to plan best management practices for priority land that they own and/or farm. These practices will reduce annual sediment and phosphorus delivery to Rathbun Lake and the lake’s tributaries. Practices being planned by landowners include terraces, water and sediment control basins, and grade stabilization structures. The Alliance has continued to contact additional landowners in the targeted sub-watersheds to help them evaluate the need for, and benefits of, applying practices for priority land.

The Alliance’s outreach efforts included: one-on-one contacts with landowners; five landowners recognized as *Rathbun Lake Protectors* at the 2014 *Protect Rathbun Lake* meeting, bringing the number of landowners selected as *Rathbun Lake Protectors* to 52; interviews of *Rathbun Lake Protectors* on WHO radio; installed *Rathbun Lake Protectors* signs; articles on *Rathbun Lake Protectors* in *Wallaces Farmer*; 20 *Rathbun Lake Protectors* have now received the Governor’s Iowa Farm Environmental Leader Award; displays for Iowa Water Day and Conservation Districts of Iowa Partnership Day; newsletters for Alliance members and partners; and the Alliance’s Internet site at <http://www.rlwa.org/> . The Alliance received both the 2014 Governor’s Water Quality Special Project Award and the 2014 Governor’s Environmental Education Special Project Award. 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: 1201 Sands Timber Watershed Project
Project Sponsor: Taylor Soil and Water Conservation District
Length of Project: November 1, 2012- December 31, 2014

Counties included in the project area: Taylor

Total Watershed Improvement Funds awarded for this project:	\$ 70,500
Total Watershed Improvement Funds spent:	\$ 13,000
Total Watershed Improvement Funds obligated:	\$ 57,500
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ 0

Project objectives:

- Construct one rock chute wetland in the upper reaches of Sands Timber Lake which will catch 1296 tons of sediment per year as well as 1684 pounds of phosphorus.

Summary of accomplishments and water quality outcomes

The Taylor SWCD has requested a one year time extension for the Sands Timber Watershed grant to be completed. We experienced significant delays in the permitting process with the ARMY CORP and State Historical Preservation Officer. All permits were obtained by the beginning of the summer but large timely rains did not allow construction to take place since the structure is located in the upper reach of the permanent pool of the lake. Currently we have held a pre-construction meeting and the contractor's equipment is on site. We were hoping to construct this fall however in order for the concrete grout to be placed we must have had a minimum temperature of 40 degrees for 48 hours which did not happen.

The Taylor County Conservation Board applied for a North American Wetland Conservation Act grant and was awarded \$60,000 for the project. The excess money budgeted by the county is being leveraged with a REAP grant for in-lake restoration work and shoreline armoring which was recently completed.

Project Name: 1319 Silver Creek Watershed
Project Sponsor: Howard Soil and Water Conservation District
Length of Project: January 1, 2014 to February 28, 2017

Counties included in the project area: Howard & Winneshiek

Total Watershed Improvement Funds awarded for this project:	\$ 240,000.00
Total Watershed Improvement Funds spent:	\$ 0.00
Total Watershed Improvement Funds obligated:	\$ 103,400.00
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ 136,400.00

Project objectives:

- Construct 6 manure structures to reduce open lot runoff and improve management of manure application.
- Limit livestock access to Silver Creek and its tributaries.
- Reduce bacteria loading by breaking the delivery network on the most critical areas.
- Reduce bacteria loading from failing septic systems.

Summary of accomplishments and water quality outcomes

2014 was a very productive year for the project. Two WIRB funded ag waste projects broke ground. The first project is a mono-slope building that will house 265 head of feeder cattle removing them from open lot. Construction of this project was completed during the fall of 2014. The second project is a concrete 100' by 100' by 8' manure pit with ramp. This 250 head dairy operation will now have 6 months storage for manure scraped from their free stall barn. Earth work began fall 2014 and some concrete was poured before cold weather halted construction. The funding for this project will be leveraged with EQIP funding. We expect this project to be completed by early summer of 2015.

A total of six Comprehensive Nutrient Management Plans (CNMPs) were funded with EQIP in 2014. This is a requirement before any EQIP funds for an ag waste structure can be contracted and will pave the way for additional projects in 2015. At least 2 additional ag waste projects are expected to be awarded EQIP funding in 2015. Surveys of the proposed sites have been completed and design work has begun on the third project. As soon as estimates for additional projects are completed, we will submit applications for WIRB funding.

Promotion of other conservation practices continues with a total of 14 Conservation Reserve Program (CRP) contracts awarded in 2015 with approximately 200 acres enrolled. An additional 297 acres of No-till/Strip-till and cover crops were funded with EQIP. A manure/nutrient management field day was held in October 2014 in cooperation with ISU Extension. The event was held at a 250 head dairy operation like others in the watershed. There were 30 individuals participating. Bi-monthly water monitoring continued at six sites with IA DNR and IOWATER.

Interest remains high throughout the watershed for conservation practices. Due to the high cost of ag waste structures we have several individuals on a waiting list. As soon as funding sources are secured for each project we will move forward so that the positive benefits will be achieved.

Project Name: 1223 South Chequest Creek Watershed
Project Sponsor: Davis Soil and Water Conservation District
Length of Project: January 1, 2013 to April 30, 2015

Counties included in the project area: Davis County

Total Watershed Improvement Funds awarded for this project: \$100,000.00
Total Watershed Improvement Funds spent: \$ 53,828.73
Total Watershed Improvement Funds obligated: \$ 0.00
Watershed Improvement Fund unobligated balance as of 12/31/2013: \$ 46,171.27

Project objectives:

- Administer the South Chequest Creek Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- Construct six grade stabilization structures on treating 1,060 acres.
- Construct thirty water and sediment control basins treating 120 acres.
- Construct 5,000 feet of terraces treating 20 acres.
- Reduce sediment delivery to South Chequest Watershed by 2,541 tons of sediment per year.
- Conduct an information and education program to increase awareness and knowledge of South Chequest Watershed water quality issues to watershed residents, and the local community.

Summary of accomplishments and water quality outcomes

During the course of this WIRB agreement the following Best Management Practices (BMP's) have been installed in the priority area:

Practice	Unit	Goal	Achieved 2013	Achieved 2014	Percent Complete
Grade Stab	No.	6	3	4	116%
W&S Basin	No.	30	4	0	13%
Terrace	Ft.	5,000	5,100	1,250	127%

- Seven (7) grade stabilization structures installed treat 175 acres and withhold 362.6 tons of sediment and 471 pounds of phosphorus per year.
- Four (4) water and sediment control basins installed treat 8 acres and withhold 72 tons of sediment and 94 pounds of phosphorus each year.
- Six thousand three hundred fifty (6,350) feet of tile outlet terrace installed treat 46.7 acres and withhold 183 tons of sediment and 238 pounds of phosphorus per year.

There has been one bid letting completed for the projects being built with the Flood Center/CDBG funds. Another bid letting is scheduled for February followed by a cleanup bid letting to utilize remaining funds. Planned projects include 17 additional grade stabilization structures and 102 water and sediment control basins. The Flood Center/CDBG funded projects must be complete by December 2015.

Project Name: 1102 Twelve Mile Watershed Project
Project Sponsor: Creston City Water Works
Length of Project: January 1, 2012--December 31, 2014

Counties included in the project area: Union and Adair County

Total Watershed Improvement Funds awarded for this project:	\$ <u>169,925.00</u>
Total Watershed Improvement Funds spent:	\$ <u>160,364.60</u>
Total Watershed Improvement Funds obligated:	\$ <u>0</u>
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ <u>9,560.40</u>

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 in 2012 for the future installation of a sediment retention structure with a surrounding wetland. The 40-acre structure is funded by the IDNR in a partnership where the City Waterworks purchased the land and the IDNR built the structure. This project, now located directly above the main arm of the regional 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. Projected is a soil loading reduction of 1,895 tons per year and phosphorus loading reduction of 2,463 pounds per year into Twelve-Mile Lake. At that time, 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. Minimal activities using WIRB funds occurred in 2013, because the IDNR's plans for the basin were shelved for one year. In 2014, there was continued education, including a Creston High School student tour of the area and education on water quality and how to complete a water sample, and water monitoring along with the IDNR's activities. To date the sponsor and partners have spent a total of \$776,595.54 on the project, including WIRB. Two-plus year of water monitoring has occurred. The results are not very conclusive since the structure was just completed this November. 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 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: 1231 Twelve Mile Creek Lake Watershed
Project Sponsor: Union Soil and Water Conservation District
Length of Project: July 1, 2013-September 30, 2015

Counties included in the project area: Adair, Union Counties

Total Watershed Improvement Funds awarded for this project: \$ 97,350
Total Watershed Improvement Funds spent: \$ 18,669
Total Watershed Improvement Funds obligated: \$ 51,994
Watershed Improvement Fund unobligated balance as of 12/31/2014: \$ 26,687

Project objectives:

- Install 5 grade stabilization structures (GSS) and 6 water & sediment control basins (WASCOB) with WIRB funding and 3 GSS, 6 WASCOB, 10,350 feet terraces, and 4 acres grassed waterways with other funding sources to reduce sediment delivery to the lake by a total of 103.6 tons per year and phosphorus delivery by 134.7 pounds per year.
- Contact 10 landowners per year to discuss practice implementation identified by the SWCD.
- Conduct 2 Information & Education activities per year.

Summary of accomplishments and water quality outcomes:

Practices:

A total of 4 GSS, 4 WASCOBs funded by WIRB and 3 GSS, 1 WASCOB, 45,000' terraces, 9 acres of waterways, and 6 acres of buffer strips funded from other sources have either been completed or are currently under construction. Since July 1, 2013, 1 GSS and 1 WASCOB have been installed with WIRB funding. Three GSS and 3 WASCOB funded by WIRB are under construction and expected to be completed this winter. Three GSS, 24,500' terrace, 9 acres of waterways, 1 WASCOB, and 6 acres of streamside buffer strips have been installed using Publicly Owned Lakes, CRP, and EQIP funds. 20,500' terraces funded by Publicly Owned Lakes are under construction and expected to be completed yet this winter or early spring. These practices should reduce sediment delivery to the lake by 2336 tons/yr and phosphorus delivery by 3038 lbs./yr.

Landowner contacts:

Eleven landowners have been contacted during 2014. A biennial newsletter with information on cover crops, tillage options, upcoming field days, manure management, and cost share for practices is sent to all landowners.

Information & Education:

A pasture walk was held in the watershed in June 2014 with 12 people attending. The SWCD hosted a display at the county fair in July 2014 showing different watersheds in Union County including 12-Mile and had a demonstration of how a watershed works. Union SWCD helped host a 4-county meeting about cover crops in Feb. 2014 with 48 participants. A soil health & cover crop meeting for women landowners was conducted in May 2014 with 25 participants.

Project Name: 1202 Upper Otter Creek Watershed
Project Sponsor: Fayette Soil and Water Conservation District
Length of Project: January 1, 2013 to February 28, 2015

Counties included in the project area: Fayette County

Total Watershed Improvement Funds awarded for this project: \$ 100,000.00
Total Watershed Improvement Funds spent: \$ 49,064.18
Total Watershed Improvement Funds obligated: \$ 16,249.18
Watershed Improvement Fund unobligated balance as of 12/31/2014: \$ 34,686.64

Project objectives:

- Protect and improve water quality to establish sustainable population of trout.
- Reduce sediment delivery to Otter Creek by 20% (3,900 tons/year).
- Address manure runoff issues on 15% of priority livestock sites.
- Conduct an information and education campaign to increase public participation.

Summary of accomplishments and water quality outcomes

The Upper Otter Creek Watershed Project, 16,740 acre watershed, encompasses the City of West Union and a rural agricultural community. Otter Creek is a class B(CW) HQ trout stream, which provides significant economic and recreational opportunities for the area.

Through WIRB funding, 1 terrace project, 3 waterway projects and 2 basin projects were able to be constructed, with funding obligated for another basin project and terrace project. Through IFIP and CRP, 4 more waterway projects were completed in the watershed. Additional practices that have been implemented are 103.1 acres of cover crop, 113.6 acres of strip till and 61 acres of hay. The water quality benefits from all of implemented projects are a reduction of 839 tons/year of sediment and 1132.8 lbs/year of phosphorus to Otter Creek. These reductions benefit landowners, the stream system, recreational users, downstream communities and municipalities.

The project has had one on one interaction with 37 landowners, 7 newspaper articles, 2 newsletters, watershed conservation practice tour. The project experienced staff changes in the first year of the project with the hiring of a new project coordinator.

In regards to outreach and education, the current coordinator had presentations at two different elementary schools covering the importance of water quality. The Fayette SWCD also conducted its annual third grade field day, providing hands on natural resource conservation learning. Another educational component of the watershed effort was using Otter Creek signage on stream crossings in the Upper Otter watershed, which involved a total of fourteen signs on state and county roads. A cover crop field day was also hosted in 2014.

Water quality monitoring continues with Upper Iowa University. The Iowa DNR has assisted with installation of 4 temperature monitors along Otter and Glovers Creek. The Iowa Flood Center has installed 4 stream-stage sensors in Otter Creek and 2 shallow ground water wells.

Project Name: 1114 Walnut Creek Watershed Project
Project Sponsor: Montgomery and East Pottawattamie Soil and Water Cons. Districts
Length of Project: January 1, 2012--February 15, 2015

Counties included in the project area: Montgomery, Pottawattamie

Total Watershed Improvement Funds awarded for this project: \$ 335,600.00
Total Watershed Improvement Funds spent: \$ 253,768.25
Total Watershed Improvement Funds obligated: \$ 81,831.75
Watershed Improvement Fund unobligated balance as of 12/31/2014: \$ 0

Project objectives:

- Construct 100,000 feet of terraces.
- Construct 2 grade stabilization structures.
- Reduce sediment delivery to Walnut Creek by 1,800 tons per year and phosphorus by 2,340 pounds.

Summary of accomplishments and water quality outcomes

The 1114-006 Walnut Creek Watershed Project is near completion with only two grade stabilizations structures left to construct. Both structures require concrete so work was not possible this fall due to cold temperatures. Farmers continue to apply for conservation work and many are doing the work without cost share instead of waiting years for their project to receive money. The following tables summarize work completed thus far through this grant.

Summary of Completed Practices

Grant Agreement Conservation Practices & Activities	Unit	Approved Application Goal	Accomplishments	% Completion
Terrace Systems	Feet	100,000	141,465	141%
Grade Stabilization Structures	Num	2	1 completed-2 obligated	50%
Sediment Delivery Reduction	Tons /Year	1,800	1083	60%
Phosphorous Reduction	Lbs/ Year	2,340	1408	60%

Funding Source	Cash		In-Kind Contributions		Total	
	Approved Application Budget (\$)	Actual (\$)	Approved Application Budget (\$)	Actual (\$)	Approved Application Budget (\$)	Actual (\$) Expended.
WIRB	\$0	\$0			\$335,600	\$253,768.25
IFIP	\$0	\$0			\$110,000	\$44,996.33
EQIP						\$48,065
Landowners	\$0	\$0			\$92,500	\$326,047.86
HC	\$0	\$0			\$0	\$5,000
Totals	\$0	\$0	\$0	\$0	\$538,100	\$677,847.44

Project Name: 1331 Walnut Creek Watershed Project
Project Sponsor: Montgomery Soil and Water Conservation District
Length of Project: July 1, 2014- June 30, 2017

Counties included in the project area: Montgomery, Pottawattamie

Total Watershed Improvement Funds awarded for this project: \$ 300,000.00
Total Watershed Improvement Funds spent: \$ 33,207.08
Total Watershed Improvement Funds obligated: \$ 225,014.00
Watershed Improvement Fund unobligated balance as of 12/31/2014: \$ 41,778.92

Project objectives:

- Educate landowners and operators on Nutrient Reduction Practices
- Demonstrate and install Nutrient Reduction Practices in accordance with goals set forth in the grant.

Summary of accomplishments and water quality outcomes

Many activities have taken place since July which is helping our demonstration project get off the ground. In July a watershed mailing and survey was sent to all the landowners and operators in the watershed which discussed upcoming events, the new grant, and determined the interest and knowledge of landowners in relation to the Nutrient Reduction Strategy. Also in July we had a watershed meeting with many knowledgeable presenters and a great landowner turnout. We also had a booth at the Montgomery County Fair where we made a cover crop display for landowners and operators to view.

In September we established a cover crop plot with the help of the local UFMC and green cover seed. The plot has many different types of seeding's for landowners to view. A big sign was also erected which shows the sponsors of the plot. Seed in the plot grew well and should be a good representation of what to expect from cover crops in our area. We also scheduled soil tests to be taken so we can monitor the soil health of the plots.

Cover crop plot signs were also erected on private land throughout the watershed where landowners are experimenting with cover crops for the first time.

Other sources of funding are being used in our project to make project funds go further. Federal EQIP dollars and local option sales tax money is being utilized in combination with project dollars for terraces.

Thus far promotion efforts seem to be working. This fall we had over 65 terrace applications. We obligated money for 19 terrace jobs this fall, one grade stabilizations structure, 447 acres of cover crops, 2,264 acres of nitrogen inhibitor, and 1,787 acres deep placement of phosphorus. We also signed up 19.3 acres of filter strips.

We had a slow start to the fall with cold temperatures but were relieved when the frost came out and contractors could start working. Many jobs were completed but currently we are waiting on bills and checkout notes.

Project Name: 1209 Waterloo Creek Watershed Project
Project Sponsor: Allamakee Soil and Water Conservation District
Length of Project: October 15, 2012--December 31, 2015

Counties included in the project area: Allamakee

Total Watershed Improvement Funds awarded for this project:	\$ 100,000.00
Total Watershed Improvement Funds spent:	\$ 28,501.99
Total Watershed Improvement Funds obligated:	\$ 20,120.32
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ 51,377.69

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 5,000 feet of new terraces and 5 grade stabilization structures, 1,000 feet of streambank and pasture management practices to reduce sediment and nutrient delivery to the stream.

Summary of accomplishments and water quality outcomes

Public outreach continues throughout the watershed on a regular basis. Newsletters were mailed to landowners in February, May and December. Press releases were published in local newspapers in January and May. The Allamakee Soil and Water Conservation District website was updated often with articles about available funding and completed projects. On site visits were conducted with 20 landowners to evaluate site-specific BMPs and discuss funding opportunities.

A new project coordinator was hired on May 12, 2014 and has been out working closely with the landowners to discuss available cost-share and to try to match BMPs with the site conditions and landowner/operator desires.

In 2014, one streambank stabilization project was constructed through EQIP totaling 421 feet. No WIRB funds were used on this project because the WIRB stream assessment guidelines had not yet been approved at the time the landowner wanted construction of the project to begin. There was one grade stabilization structure constructed. We also have another 1,350 feet of terraces signed up but had to push them back to 2015 due to an early freeze in November. There is another grade stabilization structure that is approved, but construction will not be completed until 2015. There is a landowner working on his pasture management practices. He has installed over 7,000 feet of fence this year and will finish the rest of the plan in 2015. Cumulatively for the entire project, sediment loading has been reduced by about 631 tons per year and phosphorus loading by about 820 tons per year in the watershed.

Project Name: 1245 West Tarkio Watershed
Project Sponsor: Page Soil and Water Conservation District
Length of Project: July 1, 2013 to February 28, 2016

Counties included in the project area: Page

Total Watershed Improvement Funds awarded for this project:	\$ 52,633.43
Total Watershed Improvement Funds spent:	\$ 15,554.57
Total Watershed Improvement Funds obligated:	\$ 0.00
Watershed Improvement Fund unobligated balance as of 12/31/2014:	\$ 37,078.86

Project objectives:

- Complete 1 terrace project
- Install 3 water sediment control basins
- Install 1 grade stabilization structure
- Calculate run off saving of each project using the Pollutant Reduction Calculator

Summary of accomplishments and water quality outcomes

To date we have completed 1 terrace project and we have completed 2 basins so far. Of the projects completed landowners have spent \$25,519.24 of their own money to further the projects along. Of the 2 basins completed we were able to close off a large drainage area that was draining directly into a main stream. In previous years this location has had large rain events washing away large amount of soil, therefore it was a great accomplishment to get this area treated before farther damage was done.

We continue to use the Iowa Pollutant Reduction Calculator for our projects. We are showing great strides in reducing the amount of runoff due to the amount of work that is being done from our landowners and WIRB funding. We calculated 192 tons per year of sediment reduction and 250 lbs per year of phosphorous reduction with the installation of the 2 basins. With the terrace project completion we calculated a sediment reduction of 144 tons per year and a phosphorous reduction of 187 lbs per year.

As always there is always a larger need for terracing and basins. With 35 applications there are plenty of landowners looking to do terrace/basin projects to keep this watershed project rolling for many more years to come.

Project Name: 1301 Yellow River Headwaters Watershed
Project Sponsor: Winneshiek Soil and Water Conservation District
Length of Project: January 1, 2014 thru February 28, 2017

Counties included in the project area: Winneshiek and Allamakee

Total Watershed Improvement Funds awarded for this project: \$ 300,000.00
Total Watershed Improvement Funds spent: \$ 23,809.29
Total Watershed Improvement Funds obligated: \$ 5,400.00
Watershed Improvement Fund unobligated balance as of 12/31/2014: \$ 270,790.71

Project objectives:

Goal 1: Decrease sediment delivery to the YRHW by 50% over the next 3 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 impact to water quality to the stream

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, change grazing techniques and work on updating/improving septic systems 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.

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

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

Summary of accomplishments and water quality outcomes

The Yellow River Headwaters Water Quality project has been ongoing since 2009. Motivated partners such as WIRB, producer and landowners in the watershed have invested over \$300,000 (WIRB 8%) into stewardship practices this past year. These dollars don't include the funds invested from the now completed WIRB funded Yellow River project 1201-007 that was finished in July. These funds amounts have been kept separate to avoid double counting of investment and pollutant reductions to show a true representation of the completed work.

Best Management Practices installed this past year have resulted in the reduction of 3,625 t/y of sediment and 4,713 lbs. of phosphorus from being loaded in the Yellow River annually. Continued focusing of limited resource dollars to BMP implementation allows the project to specifically highlight the completion projects within the watershed such as over 5,200 ft. of streambank stabilization on eroding banks that averaged 6.5 ft. of sluffing cut banks and over a foot of recession annually. This same producer has started to install over 3 miles of stream corridor fencing to implement rotational grazing system that compliments over 10 acres of riparian buffer, 5 acres of native grass filter strips and 3 acres of wetland buffers to the adjacent Yellow River. This is just an example of how we focus our commitment with producers. The enthusiastic willingness of the producer to install practices this far into a project illustrates the grassroots support towards the long-term success of the watershed project and bodes well to the continuation of support to install BMPs that endure.