

## Final Project Report for Silver Creek Water Quality Project

### Project No. 1319-008

**Project Name:** Silver Creek Water Quality Project

**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:** \$178,400.00

**Total Watershed Improvement Funds obligated:** \$0

**Watershed Improvement Fund unobligated balance as of 02/28/2017:** \$61,600.00

#### Financial Accountability

#### **Watershed Improvement and Leveraged Funds:**

Table 1.

<b>Grant Agreement Budget Line Item</b>	<b>Total Funds Approved (\$)</b>	<b>Total Funds Expended (\$)</b>	<b>Available Funds (\$)</b>
Ag Waste Structures (WIRB)	240,000.00	178,400.00	61,600.00
Ag Waste Structures (EQIP)	0	375,446.00	0
Ag Waste Structures (319)	0	20,000.00	0
Ag Waster Structures (Land Owners)	0	350,948.00	0
Totals:	240,000.00	924,794.00	61,600.00

Figure 1.

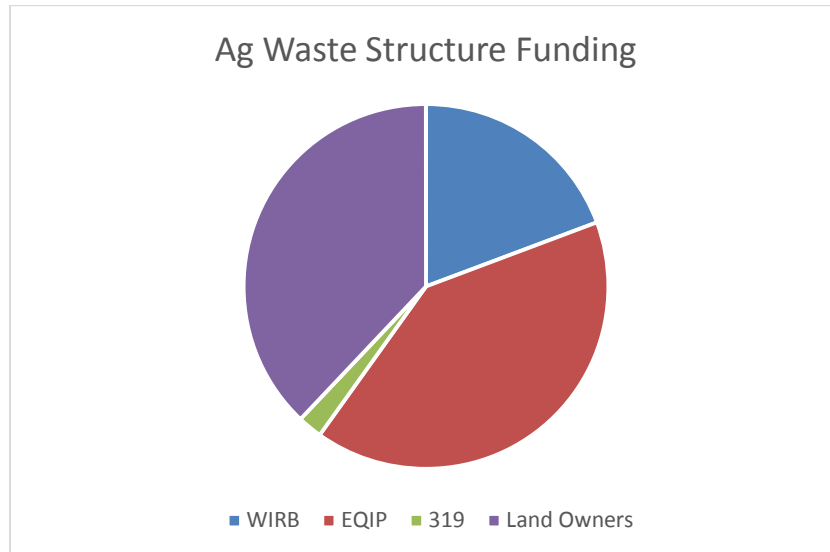


Table 1 documents how the progress in the watershed was completed by leveraging different funding sources to accomplish the goals of the project. Figure 1 shows the mixture of WIRB, Environmental Quality Incentive Program (EQIP), IADNR Section 319 and landowner contributions were used. Each Ag Waste Structure was evaluated and then matched to the best funding source. This allowed the project to use multiple programs and utilize the WIRB funds as needed.

### Total Project Funding:

Table 2.

<b>Funding Source</b>	<b>Approved Application Budget (\$)</b>	<b>Total Actual (\$)</b>
WIRB	240,000.00	178,400.00
Land Owner		444,553.63
EQIP		375,445.56
CRP		712,787.00
319	242,160.00	259,847.25
WSPF	64,750.00	51,066.56
<b>Totals</b>	<b>546,910.00</b>	<b>2,022,100.00</b>

Figure 2.

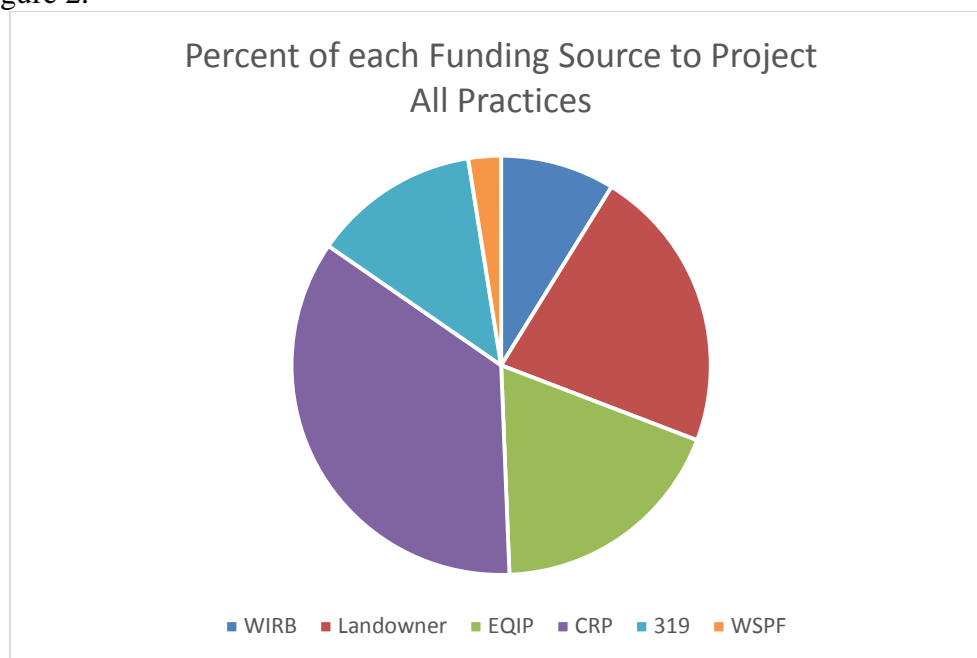


Table 2 shows how we used other funding sources in addition to those planned to exceed our overall budget estimate. The largest increase came from CRP & EQIP. The CRP continues to be one of the most widely used conservation program in Howard County. Howard County ranks number three in the State of Iowa in the number of CRP contracts. This program also has a 90% cost share rate for installation and rental payments for 10 to 15 years. Figure 2 illustrates how dollars were leveraged from all the different funding sources. In addition to the CRP, funds from EQIP, 319 and WSPF were used to complete projects during the years WIRB supplemented the project. By leveraging multiple funding sources with project dollars we were able reduce the WIRB contribution from an estimated 44% to 9% of total dollars spent.

Watershed Improvement Fund contribution: Approved application budget: **44%**  
Actual **9%**

### Environmental Accountability

#### **Practices and Activities:**

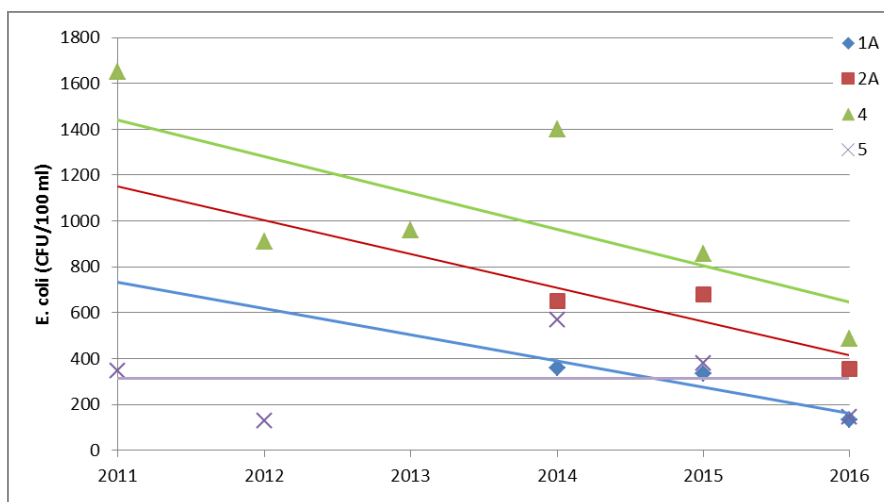
Table 3.

<b>Practice</b>	<b>Unit</b>	<b>Approved Application Goal</b>	<b>Accomplishments</b>	<b>Percent Completion</b>
Fencing	Ft.	0 ac.	0	0%
Ag Waste Structures	No.	6	5	83%
Pasture Management	Ac.	100 ac.	0	0%
Grassed Waterways WSPF	Ac.	15 ac.	17.6 ac.	117%
Terraces WSPF	Ft.	6,000	0	0%
Urban Practices WSPF	No.	12	1	8%
Wetland Developments	No.	6	7	116%
CRP	Ac.	75 ac.	1,266.27 ac.	592%
No till/Cover Crops EQIP	Ac.	100 ac.	375 ac.	267 %

Table 3 represents the break down by practice what was planned and how much was accomplished. Four practices that were underutilized were: Fencing, Terraces, Urban Practices and Hay Pasture management. Those practices proved not to be popular in the watershed or have not been promoted as much as the other programs. The CRP program allowed us the most impact on the environment. The wetlands creations, native seeding, pollinator habitat, buffers and grassed waterways have significant sediment delivery reductions and the wetland creations also have dramatic impacts on reducing nitrate levels in Silver Creek. Sediment delivery reductions total 5,425 tons annually and phosphorus reductions of 7,335 lbs. per year have been documented. The work completed in the watersheds by the Soil and Water Conservation District has also documented with water monitoring lab results a reduction in E.coli bacteria in the Silver Creek. The waste storage structures reduced nutrient runoff significantly. They also improved the operators' ability to store and apply the manure in a more environmentally friendly way. By creating six month storage capacities producers can now apply manure timely and in a way that

maximizes the value of the nutrients and reduces runoff by incorporating the manure after application in the spring or fall. We had expected to complete a sixth ag waste structure during the summer of 2016 but due to the economy the farmer decided no to go forward with his mono-slope building. We do have 2 EQIP/319 funded ag waste projects planned for the summer of 2017. The projects will consist of a 100'x100' manure pit and two dry pack buildings to eliminate open lots.

Annual Median E. Coli Reductions per site 2011 to 2016



Wetland Creation



Wetland Creation



Waste Storage Structure





Waste Storage Structure



IADOT & IADNR Creek Labeling Project



Ag Waste Structure Tour July 2015



Governor Terry Branstad Tours Ag Waste Structure July 2016



Program Accountability

This project is currently in phase one of this Iowa DNR Section 319/WSPF funded project. The first year of implementation had the most obstacles including low utilization of USDA conservation programs and a tradition of higher tillage. We overcame these obstacles by holding several field days for practices completed early in the project, by promotion of the practices in newsletters and media, promoting CRP at wildlife club meetings, meeting face to face with landowners and building trust with them by using good communications skills. We have worked with 88 different individual landowners to implement conservation practices in the watershed during the first phase of the watershed project. The project has evolved to now include funding for the replacement of outdated faulty septic systems. Another funding source for federal FY17 is for implementation of a special high priority funding by EQIP for stream bank, vortex weirs and cover crops. In 2016 our office applied for the Driftless region EQIP funding. Close to \$900,000.00 will be obligated for practices implemented over the next 3 years.

The WIRB funds became available to the project at a very important time when EQIP funds were short and access to WIRB funding was instrumental in moving forward all 5 of these Ag waste structures. The reductions in E/ Coli is evidence of the progress to reduce bacteria in Silver Creek the Ag waste structures WIRB helped to fund are a significant contribution to this improvement in water quality.

The Howard Soil and Water Conservation District is very pleased with the progress of the project and considerate it a huge success. We found the reporting, funding, and implementation of the WIRB grant very efficient. We would be very interested in working with the Watershed Improvement Review Board again in the future if funding was adequately made available for the program.