

**Middle Buffalo Creek Watershed
1246-022
Final Report**

**Sponsored by the
Buchanan Soil and Water Conservation District**

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Introduction

The main channel of Middle Buffalo Creek has been identified on Iowa's 303(d) List of Impaired Waters as having a biological impairment (i.e., greater than 50% decrease in mussel species) due to habitat modification, stream alteration, nutrients, and/or siltation. The District identified this as a priority watershed because the presence of a diverse and reproducing mussel population indicates a healthy aquatic ecosystem, resulting in good fishing, good water quality for wildlife, and assurance water is safe for recreation. Dan Cohen, Buchanan Conservation Board, stated "should water quality conditions improve, and fishing holes and habitat be enhanced, there is no doubt that many people would take advantage of the renewed recreational opportunities."

This project continues watershed project work on Buffalo Creek. A recently-completed watershed project on the Upper Buffalo Creek stream reach will continue the efforts downstream, to the Middle Buffalo Creek reach of the stream.

The application was written and approved by the Watershed Improvement Review Board (WIRB) for WIRB to provide the cost-share funds primarily for water quality improvement practices. However, an opportunity arose to partner with the State Revolving Fund Water Resources Restoration Sponsored Project and the City of Coggon. An amendment was requested and approved by the WIRB to shift WIRB funds into primarily salary and benefits and utilize the SRF funds to cost-share on the water quality improvement practices.

However, difficulties arose obtaining SRF funding and those funds did not materialize. The SRF funding project was rescinded on August 19, 2014. Efforts were made to obtain funding from other funding sources, but with the short notice and immediacy of the funding need, limited funding was obtained. The project coordinator left the project on February 2, 2015 for other employment. The SWCD agreed to continue the project and implement the practices that were committed prior to the exit of the coordinator.

This report shows the progress that was made and practices applied.

Financial Accountability

Table 1 summarizes how funds awarded by the WIRB were utilized in the project. With the approved amendment at the beginning of the project, the budget line items changed as well as the distribution of funds among the budget line items.

Table 1: Watershed Improvement Funds

Grant Agreement Budget Line Item	Total Funds Approved (\$)	Total Funds Approved—Amended (\$)	Total Funds Expended (\$)	Available Funds (\$)
Salary and Benefits	-0-	\$87,320.00	\$26,561.57	\$60,758.43
Travel and Training	\$1,000.00	\$1,000.00	\$196.56	\$803.44
Information/Education	\$1,500.00	\$1,500.00	-0-	\$1,500.00
Equipment—water monitoring equipment	\$1,800.00	-0-	-0-	-0-
Supplies	\$1,500.00	\$1,500.00	-0-	\$1,500.00
Grass Waterways	\$86,400.00	\$8,680.00	\$6,634.22	\$2,045.78
Grade Stabilization Structures	\$3,000.00	-0-	-0-	-0-
Contour Farming	\$2,800.00	-0-	-0-	-0-
Critical Area Seeding	2,000.00	-0-	-0-	-0-
Totals	\$100,000.00	\$100,000.00	\$33,392.35	\$66,607.65

As explained above, due to limited partner funding being obtained and the loss of the SRF funding, the WIRB funds were under-utilized. The project coordinator left the position after one year on the project. Table 2 summarizes all funding sources originally committed to the watershed project.

Table 2: Total Project Funding

Funding Source			Actual (\$)
	Approved Application Budget (\$)	Approved Application—Amended (\$)	
WIRB	100,000.00	100,000.00	33,392.35
CRP	104,400.00	104,400.00	9,590.00
WPF/WSPF	216,270.00	83,150.00	43,660.00
EQUIP	76,000.00	76,000.00	-0-
Landowner	71,600.00	71,600.00	42,611.75
SRF (City of Coggon)	-0-	131,320.00	-0-
DNR	-0-	\$1,800.00	-0-
Other (IFIP)	-0-	-0-	12,092.53
Totals	568,270.00	568,270.00	141,346.63

Watershed Improvement Fund contribution: Approved application budget: 18%
 Actual: 24%

In the first year of the project, the project coordinator was able to generate landowner interest to apply practices. Some grass waterways were installed. However, after the project coordinator left, the landowners' interest in pursuing practice application and with limited technical assistance available, very few practices were installed in the second year of the project.

Environmental Accountability

The goal of the project was to reduce delivery of sediment to Buffalo Creek by 3,328 tons per year and reduce phosphorus delivery by 4,209 pounds per year. Documented sediment reduction achieved is 1,102 tons per year and phosphorus reduction of 1,317 pounds per year. Table 3 summarizes the practices installed during the life of the project.

Water quality monitoring was planned to be completed monthly using IOWATER methodology and measure field parameters including dissolved oxygen, pH, water temperature, turbidity and chloride. Four sample locations within the watershed were sampled. Monitoring was completed 11 times. The data collected was uploaded to the IOWATER database.

Efforts to engage local citizen volunteers were not successful.

Table 3: Practices

Practice or Activity	Unit	Approved Application Goal	Accomplishments	Percent Completion %
Grass Waterways	Acres	52	26.9	52
Waterway Outlet Structures	Number	2	0	0
Contour Farming	Acres	80	0	0
Critical Area Seeding	Acres	8	0	0
Livestock Waste Storage Structure	Number	1	0	0
Streambank Stabilization	Feet	800	0	0
Contour Grass Strips	Acres	8	0	0
Field Borders	Acres	20	0	0
Filter Strips	Acres	20	0	0
Wetlands	Acres	8	0	0

In addition to the practices with established goals for the project, one additional practice was installed and documented within the project area. This practice was a Conservation Reserve Program contract on 82.96 acres for pollinator habitat (CP-42).

Program Accountability

Informational and outreach activities were completed to promote the project and available resources to watershed landowner and farm operators. A mailing list of approximately 214 Buffalo Creek landowners and operators was developed and utilized several times. Mailings were completed 3/24/14, 6/19/2014 and 9/8/2014. One news release was submitted to the local newspaper in April 2014. An information booth at the 2014 Buchanan County Fair was developed and handouts available regarding the watershed project.

Appendix A

The map below illustrates the impaired waters located in the Buffalo Creek Watershed above the Coggon Impoundment, as identified in Iowa's 303(d) List of Impaired Waters.

