Final Project Report for Staff and Beaver Creek Water Quality Project

Project No. 8019-011

Project Name: Staff and Beaver Creek Watersheds
Project Sponsor: Howard Soil and Water Conservation District
Length of Project: July 1, 2009 to June 30, 2012

Counties included in the project area: Howard

Total Watershed Improvement Funds awarded for this project: **$392,950.00**
Total Watershed Improvement Funds spent: **$232,043.00**
Total Watershed Improvement Funds obligated: **$0**
Watershed Improvement Fund unobligated balance as of 06/30/2012: **$160,907**

Financial Accountability

Watershed Improvement Funds:

Table 1.

Grant Agreement Budget Line Item	Total Funds Approved ($)	Total Funds Expended ($)	Available Funds ($)
Salary/Benefits	176,250	176,250	0
Travel Training	3,000	1,249	1,751
Supplies	3,000	523	2,477
Information/Education	3,000	484	2,516
Contractual (Water Monitoring)	3,000	3,000	0
No-Till	15,000	0	15,000
Nutrient Management	13,500	2,561	12,439
Terraces	16,200	2578	13,622
Grassed Waterways	15,000	13,284	1,716
Waste Storage Structure	100,000	24,114	75,886
Wetlands Development	45,000	8,000	37,000
Totals	392,950	232,043	160,907

Table 1 documents how the progress in the watershed was completed by leveraging different funding sources to accomplish the goals of the project. A mixture of WIRB, Environmental Quality Incentive Program (EQIP), Conservation Reserve Program (CRP), Conservation Stewardship Program (CSP), Resource Enhancement and Protection (REAP) and landowner contribution were used. Each Best Management Practice (BMP) 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.

- Nutrient Management/No-Till - We utilized the CSP program which has a five year contract and requires participants to reduce tillage and follow nutrient application guidelines. This fulfilled our goals of reducing tillage and reducing over application of nutrients.

- Terraces – We utilized EQIP funds for 50% of the cost and used WIRB as an additional 25% cost share. This allowed us to exceed our goal for terraces and use fewer WIRB dollars.

- Waste Storage Structures – We leveraged EQIP funds in addition to WIRB dollars to fund 5 structures. The EQIP program paid over 50% of the cost for these BMPs. The economy of the livestock industry also played a role in using fewer funds. The 2 dairies that were in the watersheds both sold their herds and several smaller livestock producers also sold their herds in the face of higher feed costs. This reduced the number of livestock operations in the watersheds and reduced the need for this BMP.

- Wetland Development – We used the CRP, 319, WSPF programs to construct 10 wetland developments and 2 using WIRB funds. We also kept the cost of each project lower by designing excavated wetlands rather than constructing wetlands with structures reducing cost per project. We met our goal of 12 wetland creations using multiple funding sources.

Total Project Funding:

Table 2.

Funding Source	**Approved Application Budget ($)**	**Total Actual ($)**
WIRB	392,950	232,043
Land Owner	169,722	152,678
EQIP	216,200	92,654
CRP	274,726	352,335
REAP	25,200	14,757
Other Funding Sources	0	448,405
Totals	1,078,798	1,292,872

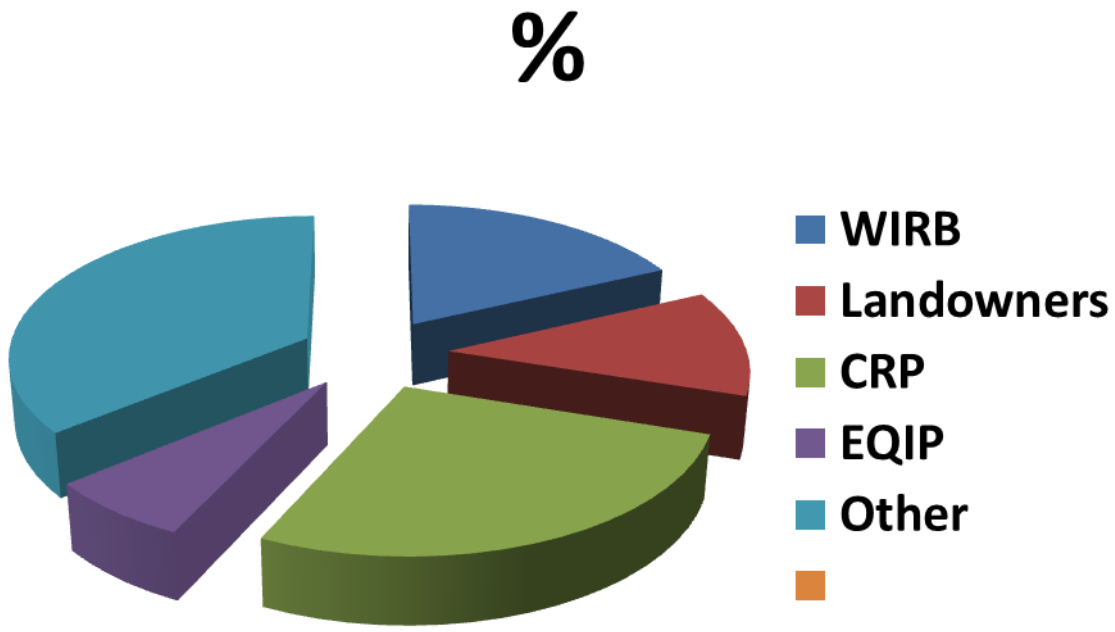

Figure 1.

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 and CSP. The CRP continues to be one of the most widely used conservation program in Howard County. Howard County ranks number five 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 1 illustrates how dollars were leveraged from the different funding sources. The other major funding source was the Conservation Stewardship Program (CSP). The CSP program became available for producers in the Staff and Beaver watersheds in 2010. We now have 13 producers with 7,667 acres enrolled. Annually this program will pay 13 operators $153,128 to manage the nutrients and reduce tillage on their land. Each CSP contract is for five years. In addition to the CRP and CSP, funds from 319 and WSPF were used to complete projects in the first year of the WIRB project. By leveraging multiple funding sources with project dollars we were able reduce the WIRB contribution from an estimated 36% to 18% of total dollars spent.

Watershed Improvement Fund contribution:	Approved application budget:	36%
	Actual:	18%

Environmental Accountability

Practices and Activities:

Table 3.

Practice	Unit	Approved Application Goal	Accomplishments	Percent Completion
No-Till	Ac.	750 ac.	0 ac.	0%
Nutrient Management	Ac.	750 ac.	142 ac.	19%
Terraces	Feet	18,000 ft.	19,910’	111%
Grassed Waterway	Ac.	15 ac.	29.1 ac.	194%
Water Storage Structure	No.	8	5	63%
Wetland Development	No.	12	6	50%
CP22 Riparian Buffer	Ac.	45 ac.	0 ac.	0%
CP8A Grassed Waterway	Ac.	75 ac.	102.5 ac.	137%
CP27&28 Wetland Development	Ac.	30 ac.	123 ac.	244%
CP21 Filter Strip	Ac.	60 ac.	88.4 ac.	147%
CP38 & 25 Tall Grass Habitat	Ac.	75 ac.	435 ac.	580%
CP30 Wetland Buffer	Ac.	30 ac.	24.2 ac.	81%
CP5A	Ac.	15 ac.	13.7 ac.	91%
CP33 Song Bird Buffer	Ac.	25 ac.	73 ac.	342%
Farmstead Windbreak	AC.	6 ac.	6 ac.	100%

Table 3 represents the break down by practice what was planned and how much was accomplished. Three practices that were underutilized were: No-Till, Nutrient Management and CP22 Riparian Buffer. We utilized the CSP program for reducing tillage and nutrient management. The benefit of 7,667 acres enrolled into CSP far outweighed the proposed 750 acres of No-Till and Nutrient Management. The CP22 riparian buffer program has been dramatically reduced since the introduction of the CP29/30 CRP grass buffer practice. Instead of planting trees the landowner also has the choice to plant native grasses along streams and wetlands. The CRP program allowed us the most impact on the environment. The wetlands creations, buffers and grassed waterways have significant sediment delivery reductions and the wetland creations also have dramatic impacts on reducing nitrate levels in the Staff and Beaver Creeks. Sediment delivery reductions total 7,384 tons annually and phosphorus reductions of 10,333 lbs. per year have been documented. The work completed in the watersheds by the Soil and Water Conservation District has also documented a 46% reduction in nitrates in the Staff and

Beaver Creeks, surpassing the goals of the initial project. 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.

Wetland Creation

Wetland Creation

Waste Storage Structure

Waste Storage Structure

Creek Labeling Project

Program Accountability

The activity the Howard Soil and Water Conservation District under took that had the greatest impact on the watershed project was the promotion of the Conservation Stewardship Program (CSP). This program involves a very detailed assessment of the operation and payment is based on the enhancement of their conservation farming practices. Nutrient management, maximizing wildlife habitat, reduced tillage and erosion control are all components of CSP. We held a CSP informational meeting for the operators of the watershed in 2009. To date we have 13 operators with contracts totaling 7,667 acres. This represents nearly 25% of the cropland acres in the watershed.

This project was phase two for the watershed. Three years prior to the WIRB project beginning the district had been working in the watershed with a 319/WSPF grant. 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 a field day of practices completed early in the project, by promotion of the practices in newsletters and media, promoting CSP, meeting face to face with landowners and building trust with them by using good communications skills. We have worked with 57 different individual landowners to implement conservation practices in the watershed during the WIRB grant.

The Howard Soil and Water Conservation District is very satisfied with 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.