

Final Report

Fox River Water Improvement Project:
Fox River Ecosystem Development Board
6033-015

2007-2009

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Financial Accountability

Description of the expenditure of watershed improvement funds and total project funds.

The Iowa Watershed Improvement Review Board (WIRB) financial support enabled the Fox River Ecosystem Development Board (FRED) to reach our goals that were stated in our original application for the Fox River Water Improvement Project. The 2007 WIRB funding helped the FRED Board and its partners, including producers in the watershed, to implement several practices across the landscape to contain and filter out sediment and nitrogen from entering the Fox River. Funding through WIRB also allowed the FRED Board to hire a full time temporary employee to administer technical activities within the impaired segment of the Fox River Watershed.

The FRED Board expended WIRB Funds for project activities as planned in the original application submitted to the Iowa Watershed Improvement Review Board. The Summary of Watershed Improvement Funds lists Funds Approved, Funds Expended, and Available Funds not expended in Table 1. A complete administrative spreadsheet for the term of the grant agreement is included with this report.

Financial Accountability

Table 1. Summary of Watershed Improvement Funds			
Grant Agreement Budget Line Item	Total Funds Approved (\$)	Total Funds Expended (\$)	Available Funds (\$)
Personnel	99,000.00	91,858.57	7,141.43
Water Quality Monitoring	49,500.00	47,357.00	2,143.00
Grade Stab Structure	135,000.00	121,113.66	13,886.34
Fencing	7,876.00	4,804.93	3,071.07
Water Sediment Basins	67,500.00	60,082.63	7,417.37
Terraces	20,250.00	15,022.11	5,227.89
Streambank Stabilization	24,000.00	11,006.50	12,993.50
Wildlife Habitat	11,250.00	2,627.14	8,622.86
Totals	414,376.00	353,872.54	60,503.46

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The total project financial and non-financial resources were utilized for project activities as planned in the original application submitted to the Iowa Watershed Improvement Review Board. In the Total Project Funding table lists the funding sources, and funds provided by partners of the FRED Board. A complete administrative spreadsheet for the term of the grant agreement is included with this report.

Table 2.			
Total Project Funding			
Funding Source	Approved Application Budget (\$)	Totals Spent	% of Total Funding Spent on Fox Projects
WIRB	414,376.00	353,872.54	24%
319	321,938.00	88,925.32	6%
WSPF	300,000.00	112,390.82	8%
WPF	165,710.00	164,848.07	11%
EQIP	240,640.06	240,640.06	17%
IFIP	10,378.00	10,378.00	1%
CRP	30,186.78	30,186.78	2%
USGS	40,500.00	35,571.00	2%
Other	NA	7,473.00	1%
Recipient	407,805.95	407,805.95	28%
Total		1,452,091.54	100%

Watershed Improvement Fund Contribution: Approved application budget: 28%
 Actual: 24%

Environmental Accountability

Description of the water quality improvement practices applied and results achieved.

The FRED Board and its partners, with the financial support from WIRB assisted landowners in constructing several BMP's within the impaired segment of the Fox River Watershed. In most cases with the implementation of practice, the WIRB funding allowed the FRED board to exceed its goals that were included in the original application. The original project objective called for the implementation of: 6 sites for water monitoring, thirty- five grade stabilization structures, 28,000 feet of fencing to exclude livestock from entering streams to the Fox River, fifty-one water and sediment basins, 9,000 feet of terraces, 2,200 feet of streambank stabilization along the Fox River, and 25 acres of native grass planting for wildlife habitat.

The FRED board along with it partners took samples at only 4 of the original 6 sites. This was due to the fact that two sites were not included in impaired segment of the Fox River. The Fred Board along with WIRB amended the original application of sampling only 4 of the original 6 sites in 1998-99. 33 grade stabilizations sites were constructed. There was

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19,152 feet of fencing installed within the watershed to excluded livestock from waterways entering Fox. Fencing was also included in rotational grazing practices to better manage pastures in the area. 94 water and sediment basins were constructed. There was 8,161 feet of terraces that was constructed, 132.8 acres of cropland, and 63.2 feet of terraces were constructed on pastureland. The project constructed 450 feet of streambank stabilization along the main channel of the Fox River, and due to costs of these practices and the wet weather the last three years to give us time for construction, streambank stabilization was difficult to implement within the Fox River Watershed. The project seeded 23 acres of warm season grasses to be used to hold soils in highly erodible areas, filter out impurities before entering the stream and to provide wildlife habitat. Even though our accomplishments didn't meet our goals in some areas, we surpassed our overall goals containing water quality impurities dealing with animal wastes and sediment issues.

Table 3.				
Practices and Activities				
Practice	Unit	Approved Application Goal	Accomplishment	Percent Completion
Water Monitoring	Sites	4	4	100%
Grade Stab	No.	35	33	94%
Fence	Ft.	28,000	30,009	107%
W&S Basin	No.	51	105	205%
Terraces	Ft.	9,000	8,836	98%
Streambank Stab	Ft.	2,200	450	20%
Wildlife Habitat	Ac.	25	23	92%

The FRED Board and partners have determined that practices installed across the landscape within the impaired segment reduced sediment delivery by 7,580t/y, phosphorus by 9,892.5 lbs/y, and total acres treated was 1,410.15 acres.

Results of the Water Quality Monitoring in 2009 and compared to the 1998-99 monitoring came back with different results. Levels of dissolved oxygen between the two periods are the somewhat stronger levels at the West Grove station in 2009 compared to those in the 1998-99 period when two violations of the aquatic life criterion of 5 mg/l occurred. Ammonia levels suggest a significant decline in ammonia in 2009 compared to the 1998-99 period. This pattern is especially true for the West Grove station where ammonia levels were quite high at times during the 1998-99 period when several violations of Iowa's chronic criteria to protect aquatic life use occurred. Levels at this station in 2009 were very low and were often less than the analytical detection level of 0.02 mg/l. Graphs comparing 2009 to 1998-99 water sampling results in the impairment are attached to this report.

Additional monitoring is planned to start in July of 2011. Mico invertebrate habitat traps will be set out in the impaired segment of the Fox River and Iowa Hygienic labs are

placing 2 water monitoring stations in the Fox River (Ice Ave & Flora Ave) to determine progress in the Fox River. Funding will be provided by 319. Total cost \$5,085.72.

Program Accountability

Description activities completed to support the application of water quality improvement practices.

FRED Board members and partners completed the following activities in support of the original application, as well as reaching project goals in reducing livestock runoff and sediments loads from entering the Fox River.

- Hired a one full time temporary employee added to a team of technical advisors, field staff, FRED Board members, and partners who were responsible for planning, implementing, and assessing the completion and impact of project activities.
- Contacted 104 landowners within the impaired reach of the Fox River Watershed, also including over 256 other landowners within the whole watershed in Appanoose, Davis, and Van Buren Counties. Assisted 86 landowners in an assessment of their farms, to determine what practices would be beneficial to them as well as the priorities of the FRED Board. As a result, 43 landowners worked with the FRED Board and partners to complete a number of BMP's on their farms. (Table 3.)
- Put together information and presentations to show the progress and accomplishments as part of the FRED Boards information and education efforts made in the project. Set up and displays at various site's including: County fairs and Pheasant Forever banquets, along with sending out press releases, articles, and posting signage around the watershed showing the support and appreciation of all our partners.
- FRED Board members, partner representatives, and project coordinators, reviewed projects and the implementation of project activities and accomplishment of project objectives. The FRED Board submitted the required project plans of work, narrative reports, and financial ledgers.