

Little River Watershed Improvement Review Board Final Report
9012-009

Financial Accountability

Summary Table 1: Watershed Improvement Funds

Grant Agreement Budget Line Item	Total Funds Approved (\$)	Total Funds Approved-Amended (\$)	Total Funds Expended (\$)	Available Funds (\$)
Water Quality Monitoring	18,000	6,102.00	6,102.00	0
Information and Education	1,500	0.00	0.00	0
Salary and Benefits	52,500	8,639.36	8,639.36	0
Terraces (ft)	118,750	163,551.33	163,551.33	0
Grade Stab. Struc. (no)	188,000	107,832.88	107,832.88	0
Water Sedi. Cntrl Basin (no)	6,750	111,338.43	111,338.43	0
Improved Graz. Mgt. (ac)	23,400	24,709.42	24,709.42	0
Silt Basin (no)	15,000	0.00	0.00	0
Totals	423,900	422,173.42	422,173.42	0
Difference				0

The original amount of water quality monitoring funds was greater than the expended amount. At the time of the application, we were planning on monitoring the project on a yearly basis. After consulting with the Watershed Improvement Section of the DNR, we decided it was more appropriate to monitor the project at the beginning to get a baseline, and then again at the end of the project. This reduced the amount of funds expended. The funds for information and education were not needed because the partners funded the needed amount. The funds for salary and benefits were reduced because the project coordinator took a different position, so the funds were moved to fund practices in the project. The amount needed for terraces increased. There was a need for more terraces than originally predicted. Also, the price to construct terraces rose significantly due to rising fuel prices. There was not as much of an interest in constructing grade stabilization structures as anticipated. The total funds approved for water and sediment control basins were lower than the actual need for the project. The original fund was amended so more basins could be constructed to help treat the resource concern in the project. The improved grazing management amount was increased slightly to reflect what the project costs actually

were. The watershed fund did not contribute to the silt basin project. The DNR funded the silt basin restoration. There was a difference between the approved application and the total fund expended is a remaining \$1,726.58.

Summary Table 2: Total Project Funding

Funding Source	Cash		In-Kind Contributions		Total	
	Approved Application Budget (\$)	Actual (\$)	Approved Application Budget (\$)	Actual (\$)	Approved Application Budget (\$)	Actual (\$)
WIRB	423,900	422,173.42	0	0	423,900	422,173.42
Partners	60,000	329,734.16	261,008	297,710.20	321,008	627,444.36
EQIP	269,300	232,452.93	0	0	269,300	232,452.93
IFIP	40,000	110,794.60	0	0	40,000	110,794.60
CRP	27,000	0	0	0	27,000	0
REAP	30,000	14,793.37	0	0	30,000	14,793.37
POL	0	244,852.67	0	0	0	244,852.67
Landowners	222,400	315,901.14	0	0	222,400	315,901.14
Totals					1,333,608	1,968,412.49

Watershed Improvement Fund Contribution: Approved application budget: 32%

Actual: 21.4%

Funding is important to construct practices for this project. Many sources were used to construct practices to protect the lake. The amount of funding for the project greatly increased from the application by over \$400,000. In the approved application budget, WIRB was going to fund the silt dam restoration project. At this time, the project was estimated to be around a \$15,000 project. When the NRCS and the Iowa DNR were designing the project, it proved to be advantageous to not only restore, but also to raise the dam by a foot. The Iowa DNR ended up funding the silt dam which was a major expense, greatly increasing the actual money spent for the partners. The actual EQIP funds were lower than the application budget, because it is hard to estimate, beforehand, how much money will be available from this source. The actual IFIP funds increased. After the project was approved, the SWCD revised the ranking for IFIP. This gave projects in the Little River Watershed higher priority than the rest of the county, increasing the actual amount of funds for IFIP. There turned out to not be any interest for the CRP filter strip program due to high corn prices. In the application the REAP funds were going to be used to piggyback the projects to 75% cost-share. It turned out that REAP funds could not be used this way. As a result of this, there was not as much interest in REAP funds. When the application was approved the project did not have any POL funds approved. The following year, POL funds were approved for the project. The POL funds increased the funds for the project greatly. The landowner's budget turned out to be higher than the application budget. More projects were completed, increasing the total amount of money for the project. Also, construction prices increased, making the landowners out of the pocket share higher. The approved and actual application percentages for WIRB were 32% and 21.4%, respectively.

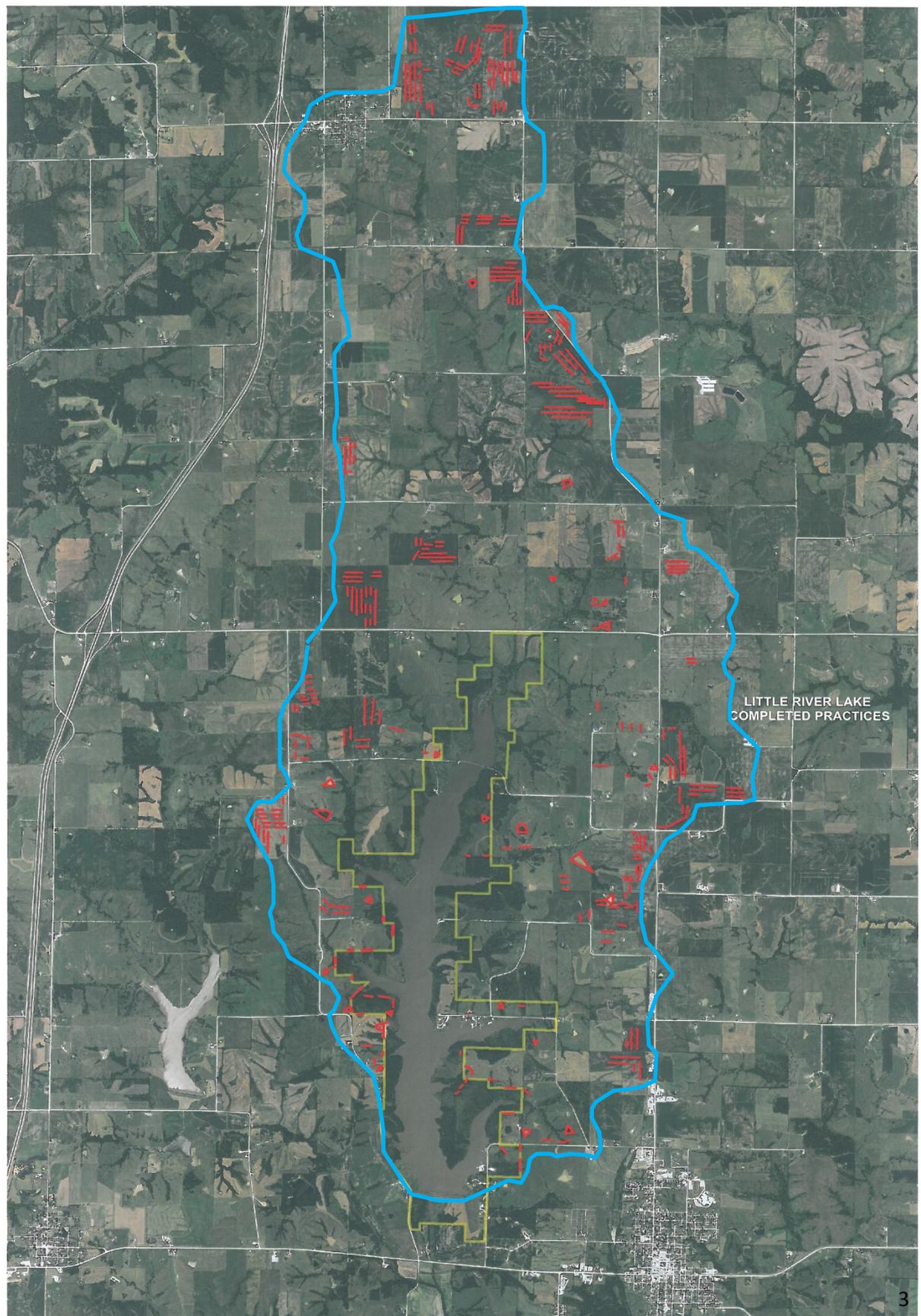


Figure 1: Little River Completed Structures

Environmental Accountability

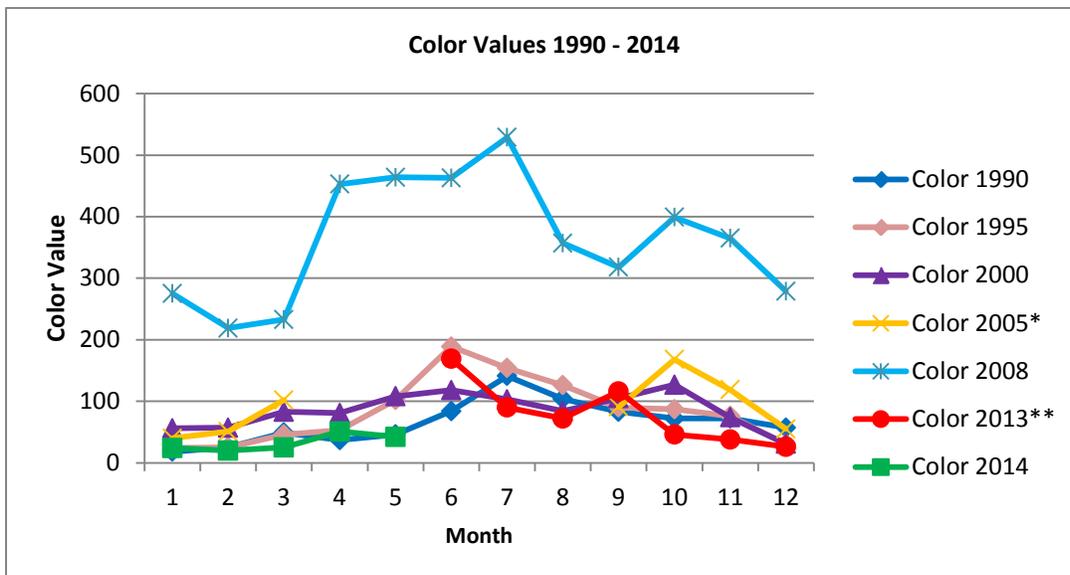
The Decatur SWCD, Iowa DNR and the Hygienic Lab worked together to sample the two main tributaries and the lake. This established a solid baseline for the lake. The DNR installed a flow meter and Hygienic Laboratories took samples. Additional samples will not need to be taken until after the project is completed. Two newspaper articles explaining the cleanup project were published. Displays at the Decatur County Fair told about the project, as well. A public meeting was held on July 27, 2011. This meeting informed the public of the fish kill and construction projects that would occur. The board of supervisors toured the lake project in November 2011. A meeting on April 9, 2012; discussed the progress of the lake. A summary of the lake renovations appeared in the newspaper after the meeting. There was a pasture field day, showing proper pasture management. A presentation on the Little River Lake Restoration was given at the Ground Water Association Annual Meeting. At the public meeting in October 2013, the DNR discussed the TMDL study, and a project update was given. The Ruby Smith family received the watershed protection award for all the conservation work they have done in the watershed for the project.

Summary Table 3: Practices and Activities

Practice or Activity	Unit	Approved Application Goal	Accomplishments	Percent Completion (%)	Acres	Sediment Loading Reduction	P Loading Reduction
Terraces	Feet	95,000	113,600	120	1244	4669	6070
Private Grade Stabs.	No.	17	18	106	400.2	3243	4218
Public Grade Stabs	No.	10	4	40	97	505	655
WASCOB	No.	3	66	2200	518	6333	8237
IGM	Ac.	673	737	110	737	1741	2264
Riparian Buffer	Ac.	15	0	0	0	0	0
Oak Savanna	Ac.	28	332	1186	-	-	-
Silt Basin Restoration	No.	1	1	100		2994	3892
Total:						19,485	25,336

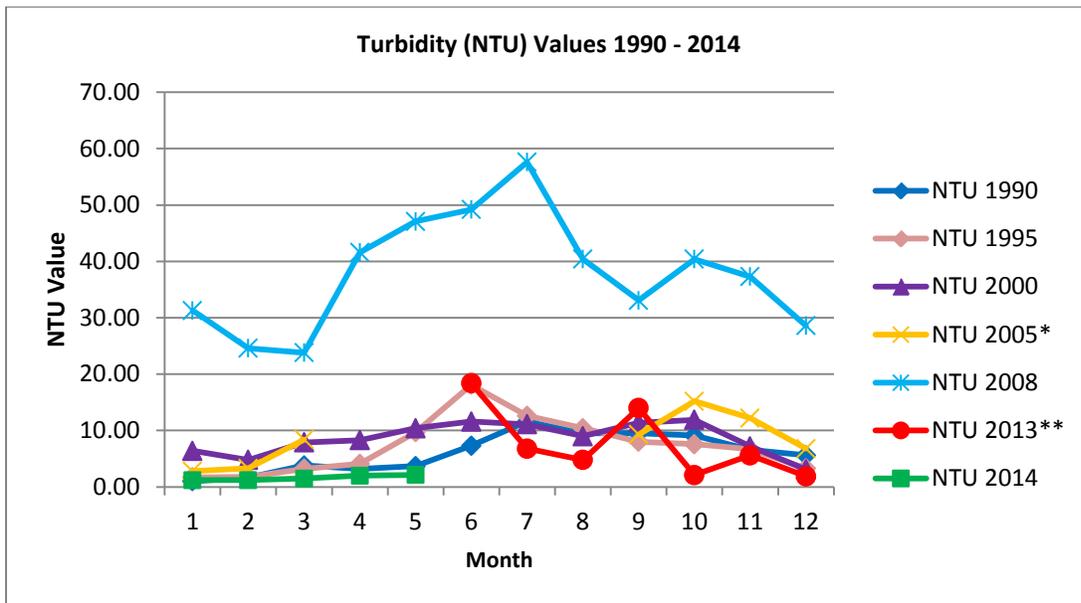
There was good producer response for the Little River Watershed Project. The landowners in the watershed have a vested interest in the watershed. Many get their drinking water from the lake and were aware of the poor water quality of the water. They were very interested in contributing to fix the problem. High corn prices made it feasible for more of the producers to complete the project. The terrace completion rate is 120% of the application goal. More cropland producers were willing to spend money on their ground, because of high commodity prices. The terraces treated 1,244 acres, greatly reducing the sheet and rill erosion delivery to the lake. The terraces reduced the annual sediment delivery to the lake by 4,669 tons/year, and reduced the phosphorus delivery by 6,070 pounds/year. The goal for the application was to construct 27 grade stabilization structures on private and public land. Twenty-two grade stabilization structures were constructed. These reduced gully erosion delivery by treating 497 acres in the watershed. The structures reduced the sediment delivery by 3,748 tons/year; and reduced the phosphorus

delivery by 4,873 pounds/year. Sixty-six water and sediment control basins were constructed. This is a 2200% completion percentage, treating 468 acres. They reduced the sediment delivery by 6,333 tons/year and reduced the phosphorus by 8,236 pounds/year. The integrated grazing management completion rate was 110%, treating 737 acres. These are projects that help livestock producers make the most of their resources, while reducing soil erosion. These practices include: cattle crossings, prescribed grazing, fencing, and livestock water facilities. This reduced sediment delivery and phosphorus delivery by 1,741 tons/year and 2,264 pounds/year, respectively. No riparian buffers were implemented in the watershed. 332 acres of oak savanna was implemented in the project. This surpassed the application goal. The oak savanna projects reduce the invasive species in the watershed, such as red cedar. Cedars create a cover over the ground, so few grasses can grow, and bare ground is exposed, increasing runoff. In an oak savanna, many grasses and forbs are able to flourish. They cover the ground increasing infiltration, soil quality and reduce erosion. The silt basin was restored at the top of the lake. The basin reduces the amount of silt that reaches the lake. The restoration of the silt basin reduced sediment delivery by 2,994 tons/year and phosphorus delivery by 3,892 pounds/year. The lake was lowered nineteen feet to allow the fish to be killed, thus eliminating the carp. All upstream water sources were treated to prevent future contamination of the lake. Water levels were held at ten feet below the normal pool to allow the shoreline to be reshaped and rip rap was placed around the lake's waterline. The WIRB project goals were met in this watershed. The sediment delivery goal was to reduce it by 11,280 tons/year and the phosphorous delivery goal was to reduce it by 14,664 pounds/year. Sediment delivery was reduced by 19,485 tons/year and phosphorous delivery was reduced by 25,336 pounds per year. As a result of the practices implemented, erosion was reduced and the water quality of the lake has improved significantly. The desirable fish population in the lake has flourished. The water treatment cost has been reduced by one-half. The color and turbidity readings from the Water Treatment Plant this past fall and winter have been as good, or better, than when the lake was first constructed, according to Junior Jennings, City of Leon Water Superintendent.



* The Leon Water Treatment Plant was Offline for Improvements from April through August 2005.

**After Renovation, the Lake filled 12 feet in May 2013 to return to normal pool. Readings resumed in June 2013.



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Program Accountability

It was important to have an assessment for the watershed, prior to the WIRB application. The project received an assessment grant. This identified the concerns and showed a need for the project. Developing a lake plan had a big impact on the lake project. This plan identified all the resource concerns in the project beyond the scope of the WIRB project. It was important to get support for the project. The partners were contacted and became involved early on in the project. This early participation made them devoted throughout the whole project. One of the biggest impacts for the project was the successful fish kill. While, not being in the WIRB application, it was critical for the project. This reestablished a healthy aquatic ecosystem in the lake, reducing the turbidity of the water. Working with different groups proved to be challenging at times. The project had to meet the money sources needs, while keeping the local participants interested. A balance has to be maintained in this relationship. Public support was important for the project as well. The public meetings kept everyone informed and involved in the project. The community was interested in the project and was able to implement many conservation practices.