

WIRB Final Report

Project Name: **Lake Icaria Watershed Project**

Project Number: **1119-008**

Huc # : **1024001001 East Nodaway River Watershed**

Soil and Water Conservation District: **Adams**

Planning Period: **January 1, 2012 to February 15, 2015**

Date Report Prepared: **December 13, 2013**

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INTRODUCTION

Lake Icaria is a 660 acre man-made lake in rural Adams County. Lake Icaria is a popular recreational attraction providing ample fishing, boating, and swimming opportunities. Constructed in 1977 for water supply, Lake Icaria continues to provide reliable drinking water to nineteen-hundred households in Adams and Montgomery counties. No stranger to the water quality world, Lake Icaria was the primary lake in the 3Lakes Water Quality Project(1996-2004), an eight year water quality effort which came to be known as one of Iowa’s first great water quality successes.

At time of construction the Lake Icaria watershed was primarily grass. A shift towards maximizing crop production in the 1980’s brought about the end of dairy farms and a concern for sediment loss and how that would affect water quality. This change in land use set the stage for the first water quality project at Lake Icaria. Since the conclusion of the 3Lakes Water Quality Project in 2004 land use in the watershed has made yet another monumental shift towards crop production. Nearly 2,000 acres of land that was once in the conservation reserve program is now being planted to a crop. This change in land use once again brought about serious concerns for the quality of water being provided by Lake Icaria. In 2011 Lake Icaria received a Watershed Improvement Review Board Grant. This report depicts work performed as part of the WIRB project.

FINANCIAL ACCOUNTABILITY

The primary cost share mechanism used in this grant was the Watershed Improvement Review Board funds contributing \$309,025 or 34% of the total funds expended. Private landowners contributed \$118,146.06 and the Adams County Conservation Board provided \$55,065.58 or 19%. Iowa DNR Lake Restoration program contributed \$215,503 or 23%. In addition, \$220,063.55 of Publicly-Owned Lakes funds were also utilized. Total dollars expended equaled \$917,803.19.

WIRB Funds Expended by Line Item

Grant Agreement Budget Line Item	Total Funds Approved(\$)	Total Funds Approved- Ammended (\$)	Total Funds Expended (\$)	Available Funds (\$)
Grade Stabilization Structures	\$22,500	\$22,500	\$22,500	\$0
Terraces	\$75,000	\$75,000	\$75,000	\$0
Rock Chute Wetland Repair	\$106,150	\$170,525	\$170,525	\$0
1/4 time project coordinator	\$41,000	\$41,000	\$41,000	\$0
Totals	\$244,650	\$309,025	\$309,025	\$0
Difference				\$0

Funding Expended by Source

Funding Source	Cash		In-Kind Contributions		Total	
	Approved Application Budget as amended (\$)	Actual (\$)	Approved Application Budget (\$)	Actual (\$)	Approved Application Budget (\$)	Actual (\$) Expended
WIRB	\$309,025	\$309,025			\$309,025	\$309,025
POL (other2)*	\$0	\$170,070.29			\$0	\$220,063.55
Lakes Restoration	\$170,525	\$215,503			\$170,525	\$215,503
Landowners	\$32,500	\$171,411.64			\$32,500	\$173,211.64
Totals	\$512,050	\$917,803.19			\$512,050	\$917,803.19

*as reflected on proj admn spreadsheet

Approved WIRB contribution percentage 60 %

Actual WIRB contribution percentage 34%

ENVIRONMENTAL ACCOUNTABILITY

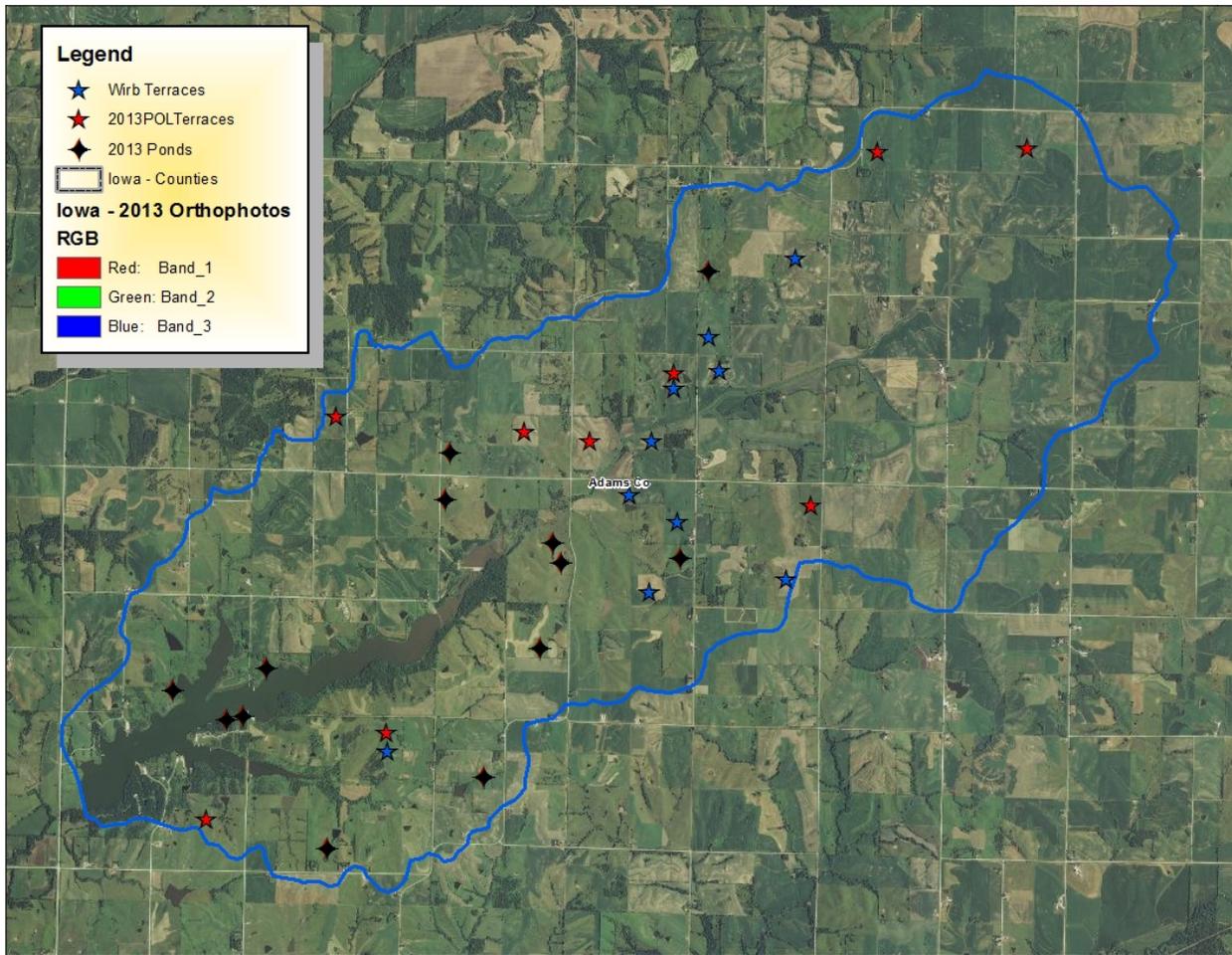
Project Goals:

Goals for the project were to reduce sediment delivery to Lake Icaria by 400 tons through the implementation of 1 grade stabilization structure and 25,000 feet of terraces. Another goal for the project was to repair the rock chute wetland which is an important practice which drains 10,000 acres acting as a last catchment basin for sediment and phosphorus stemming from those acres. Goals were achieved and or exceeded for the grade stabilization structures and the rock chute. Four structures were constructed with WIRB funds instead of the planned amount of one. The rock chute was repaired. 88% of the application footage of terraces were constructed. Only 5,331 feet of terrace was constructed with WIRB funds however the difference was obtained through the use of POL funds. Average cost for terraces have increased dramatically since the WIRB project began thus the dramatic decrease in footage. We also have several POL projects that did not get completed this winter or did not have bills submitted before the submission of this report. 23,850 feet of terraces are either built but don't have bills submitted or are in progress through the use of POL funding.

Practices Installed/Environmental Benefits:

The following table quantifies the types and number of practices actually installed and their sediment delivery reduction:

Grant Agreement Conservation Practices & Activities	Unit	Approved Application Goal	Accomplishments	% Completion
Terrace Systems	Feet	25,000	22,211	88%
Grade Stabilization Structures	Num	1	13	1300%
Rock Chute Spillway Repair	Num	1	1	100%
Sediment Delivery Reduction	Tons/Year	400	952.1	238%
Phosphorous Reduction	Lbs/Year	520	1,236.1	238%



PROGRAM ACCOUNTABILITY

Administration:

Practices were surveyed and designed according to NRCS specifications by qualified technical staff. Cost share applications were administrated by the SWCD who had administrated these types of projects on numerous occasions in the past. Maintenance agreements for all practices were notarized and kept on file in the office.

Deviations from original grant:

Three deviations from the original grant occurred throughout the project. First the Rock Chute wetland repair cost more than anticipated due to engineering decisions. Second the average price of terraces rose \$1 per foot which made achieving our goal of 25,000 feet impossible without securing another source of cost share. Luckily a POL grant was obtained which provided the cost share necessary to accomplish our goals. Third we constructed more grade stabilization structures than what was called for in the original grant. Four structures were constructed through the use of WIRB funds and 9 more were constructed through POL.

Future Watershed Work:

Future watershed work should involve installing conservation on the uplands whenever and wherever possible. Soaring ag commodity prices affects land uses. Many acres of the watershed continue to be converted to row crop. Conversion of sensitive land to crop production could have a profound effect on the amount of sediment delivered to the lake if conservation practices are not installed.