

Project length: July 1, 2013- Sept. 30, 2015

Background: Twelve-Mile Creek Lake is a 660 acre Significant Publicly Owned Lake with a watershed area of 14,820 acres that was constructed in 1984 as a water source for the City of Creston and seven counties served by the Southern Iowa Rural Water Association. In recent years, frequent algae blooms and recurrent spikes in suspended solid concentrations increased water treatment costs for Creston Municipal Utilities. In 2012, CMU approached the Union SWCD to assist in evaluating potential upland treatments.

Financial Accountability:

Watershed Improvement Funds--WIRB

Grant Agreement Budget Line Item	Total Funds Approved (\$)	Total Funds Expended (\$)	Available Funds (\$)
Personnel	15,000	15,000	0
Grade Stabilization Structures	58,500	53,830.05	4,669.95
Water and Sediment Control Basins	23,850	14,032.50	9,817.50
Totals	97,350	82,862.55	14,487.45
Difference			14,487.45

The interest in terraces from landowners was greater than anticipated at the beginning of the project. This also led to an increase in the amount of waterways. Higher crop commodity prices in the first year of the project led to pasture conversion to cropland which needed to be terraced. The amount of water and sediment control basins constructed is less than what is needed in the project. However, much of the land where these need to be located is controlled by just a few landowners who have already done much of the conservation work indicated above.

Total Project Funding

Funding Source	Approved Application Budget (\$)	Actual (\$)
WIRB	97,350	82,862.55
Public Owned Lakes (POL)	104,394	212,286.21
CRP	---	14,528.00
EQIP	---	20,046.50
Recipient	53,417	132,220.94
Totals	255,161	461,944.20

Watershed Improvement Review Board contribution: Approved application budget: 36%

Actual: 18%

We were fortunate in that the POL was well-funded during the project period and we were able to use these funds for terraces. There was also some interest in filter strips and grazing projects and we were able to use federal CRP and EQIP funds for these projects.

Environmental Accountability:

Practices & Activities	Unit	Approved Application Goal	Actual Accomplishments	Percent Completion
Information/Education	No.	4	8	200%
Landowner Contacts	No.	20	29	145%
Grade Stabilization Structures	No.	8	6 (one repair)	75%
Water & Sediment Control Basins	No.	12	5	41%
Terraces	Ft.	10,350'	45,200'	437%
Waterways	Ac.	4	10.1	253%
Grass Filter strips	Ac.	--	10.87	

The Iowa DNR Pollutant Reduction Calculator was used to determine sediment and phosphorus reduction. The sediment delivery reduction and phosphorus reduction goals on the approved application were 2,241 tons/yr. and 2,913 lbs. /yr. The cumulative loading reductions calculated from applied practices is 2,463 tons/yr. sediment and 3,204 lb. /yr. phosphorus.

Program Accountability:

With our information and education outreach efforts, we saw the beginning of interest in cover crops and other management techniques to decrease sediment and nutrient delivery. Producers were asking questions and showing up to field days although they were not yet adopting these techniques themselves. Plans are to continue this watershed project and to encourage no-till and cover crop practices in the watershed. Producers may also be interested in more construction in a year or two.

We learned that as important as it is to determine where conservation practices (basins, grade stabilization structures) are needed, it is also a good idea to look at how many land owners are affected. Their ability to cash flow is important. It is much easier to talk to five landowners about building one basin or structure than it is to convince one landowner to build five in just a year or two. However, there are several landowners who did a great amount of work in the last two years, and we are very excited to see the improvements in the watershed.

Ideas to overcome some of the obstacles we noted include better planning as indicated previously to consider the number of landowners involved. Whole farm conservation planning could also be useful to develop a comprehensive plan for landowners who would be able to use a variety of funding sources and spread costs out over several years. This would probably necessitate further training for the project coordinator in conservation planning and possibly technical areas. This could also help decrease workload for other field office employees.

12-Mile Lake Watershed Practices Installed July 2013- Sept 2015

Watershed Area: 14,820 ac.
Land Area: 13,984 ac.
Waterbody Area: 856 ac.

