

# Final Report - Long Prairie River DO TMDL Implementation

Project title: Long prairie River DO TMDL Implementation  
Organization (Grantee): Todd Soil and Water Conservation  
Project start date: April 1, 2014 Project end date: August 31, 2017 Report submittal date: August 18, 2017  
Grantee contact name: Tim Stieber Title: Division Director  
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Basin (Red, Minnesota, St. Croix, etc.)  
/Watershed & 8 digit HUC:: 07010108 County: Todd, Douglas, Morrison

## Project type (check one):

- Clean Water Partnership
- Total Maximum Daily Load (TMDL)/Watershed Restoration or Protection Strategy (WRAPS) Development
- 319 Implementation
- 319 Demonstration, Education, Research
- TMDL/WRAPS Implementation

## Grant funding

Final grant amount: \$ 300,000.00 Final total project costs: \$593,070.29  
Matching funds: Final cash: \$293070.29 Final in-kind: \$293,070.29 Final Loan: \$  
MPCA project manager: Anna Bosch

## For TMDL/WRAPS development or TMDL/WRAPS implementation projects only

Impaired reach name(s): Long Prairie River  
AUID or DNR Lake ID(s): 77-0005-00  
Listed pollutant(s): Dissolved Oxygen  
303(d) List scheduled start date: \_\_\_\_\_ Scheduled completion date: DO in 2005  
*AUID = Assessment Unit ID*  
*DNR = Minnesota Department of Natural Resources*

## Executive summary of project (300 words or less)

This summary will help us prepare the Watershed Achievements Report to the Environmental Protection Agency. (Include any specific project history, purpose, and timeline.)

**Problem** - The Long Prairie River has problems with low dissolved oxygen (DO) levels that occasionally fall below the state standard of 5 ppm. The river is listed as an impaired water for dissolved oxygen. Land use along the river is diverse and treating problems that are causing low DO levels will require a wide range of technical ability. Other water quality problems serve as indicators such as impaired biota, ammonia toxicity, CBOD, and NBOD.

**Waterbody improved** - Long Prairie River is improving slowly based on water quality data.

**Project highlights** – the levels of pollution reduction established prior to project implementation were exceeded with the implementation of 10 field projects.

**Results** – Ten projects resulted in reductions in BOD 5 being reduced by 133 lbs. per year, sediment by 2,043 tons per year, Ecoli by 19 x 10<sup>12</sup> power CFU was reduced going into the river, 1,752lbs. per year phosphorus, soil reduced by 1,222 tons per year, nitrogen reduced by 95 lbs. per year.

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**Partnerships** Todd SWCD staff worked with landowners on completing the 10 projects. In addition, several landowners were referred to USDA-NRCS to have their projects funded through their programs since they paid a higher percentage cost-share. Staff worked closely with technical service area engineers on all the projects – building a stronger relationship with them going forward. Four of the completed projects were in Morrison and Douglas counties which also have a portion of the Long Prairie Watershed. Staff built relationships with counterparts in those counties as projects were funded and completed.

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**Pictures**

See photos of before and after at the end of this report.



**Before**  
**After**



**Streambank**

**Field**



**Before**  
**After**





Lake Shoreline

### Pit Closure





Before



After



Ag Waste System

## Section I – Work Plan Review

Three small amendments were made to the original work plan. These were submitted and approved by MPCA. The changes were minor fiscal changes to allow expenditures under the ag/waste and /or soil erosion categories.

### 1. Goals, Objectives, Tasks, and Subtasks

**Goal:** Increase dissolved oxygen levels such that they are consistently above 5 mg/l throughout the Long Prairie River Watershed.

**Objective 1:** Animal Agriculture BMP's

**Task A:** Provide cost share to approximately 10-15 landowners for the construction and installation of completed and certified best management practices including but not limited to: properly abandoning waste ponds, vegetated filter strips and nutrient management plans, to bring existing livestock operations into compliance with current feedlot regulations.

**Responsible Party(ies):** Todd, Morrison and Douglas SWCD, WCTSA, County Feedlot Officers

**Objective 1 Timeline:** 4/2014 – 8/2017

**Objective 1 Cost:** Grant Funds: \$182,300.00      Match Funds: \$117,171.63.00      Total: \$299,471.63

**Objective 1 Deliverables:** Completed cost share projects

**Results:** Five projects were cost-shared using \$182,300 in 319 funds. Several landowners were referred to USDA-NRCS cost share programs for funding. Cost of projects completed limited the number of individuals that could be worked with.

**Objective 2:** Nutrient & Sediment BMP's

**Task A:** Provide cost share to approximately 10-15 Landowners for the construction and installation of completed and certified best management practices including but not limited to: stabilizing eroding river banks, lakeshore erosion control and riparian plantings, to prevent nutrient and sediment delivery to the Long Prairie River and tributaries.

**Responsible Party(ies):** Todd, Morrison and Douglas SWCD, WCTSA

**Objective 2 Timeline:** 4/2014 – 8/2017

**Objective 2 Cost:** Grant Funds: \$87,700.00      Match Funds: \$73,048.66.00      Total: \$160748.66

**Objective 2 Deliverables:** Completed cost share projects

**Results:** Five projects were cost shared using \$87,700 in 319 funds. Water and sediment basins, shoreland projects, and field erosion projects were cost shared. Again – cost of projects was under-estimated and resulted in less number of projects.

**Objective 3:** Technical Assistance & Engineering Assistance

**Task A:** Provide technical and engineering support for the development, design, installation and implementation of best management practices.

**Responsible Party(ies):** Todd, Morrison and Douglas SWCD, Morrison and Douglas County, WCTSA Engineers

**Objective 3 Timeline:** 4/2014 – 8/2017

**Objective 3 Cost:** Grant Funds: \$25,000.00      Match Funds: \$95,150.00      Total: \$120,150.00

**Objective 3 Deliverables:** Engineered Design Plans, before and after project photos

**Results:** These services were provided as planned.

**Objective 4:** Administration/ Semi Annual and Final Reports

**Task A:** Grant Administration

**Subtask 1:** Fiscal Management

**Subtask 2:** Cost Share Program Management

**Responsible Party:** Todd SWCD

**Task B:** Grant Reporting

**Subtask 1:** Semi-Annual & Final Progress Report Development

**Subtask 2:** Financial Tracking Spreadsheets

**Responsible Party:** Todd SWCD

**Objective 4 Timeline:** 4/2014 – 8/2017

**Objective 4 Cost:** Grant Funds: \$5,000.00      Match Funds: \$7,700.00      Total: \$12,700.00

**Objective 4 Deliverables:** Reports, Financial Tracking Spreadsheets, Cost Share Disbursement Logs

**Results:** Completed as planned.

## Section II – Grant Results

### Measurements

BWSR approved programs were used to calculate reductions in nutrients and sediment for each of the 10 projects cost shared through the program. The results totalled over all 10 projects are summarized in the table below. The totals exceeded the amounts set forward in the grant proposal.

Indicator Name	Goal Set In Project Application	Estimated Using MinnFarm and other BWSR calculators
BOD5	Not set	103 lbs/yr
Sediment (TSS)	716 tons/year	2,043 tons/year
Pathogens (ecoli)	Not set	19 x 10 <sup>12</sup> CFU
Phosphorus (est Reduction)	1409 lbs/year	1,752 lbs/year
Soil (est saving)	Not set	1,223 tons/year
Nitrogen (est. reduction)	6771 lbs / year	95 lbs/year

### Public Outreach and Education

During the 2017 – 2017 period of the 319 grant many different outreach and education events and activities were undertaken. During the grant period 357 people attended feedlot meetings, two newsletters per year were distributed to 9500 households per issue. Site visits and one-on-one contacts were made with landowners throughout the project that will result in future projects.

### Long Term Results

Completing the projects and grant successfully during a period of new staff at the SWCD served as an opportunity to train and develop processes and skills related to getting these types of projects identified, developed and completed.

No new partnerships were formed – existing ones were strengthened.

There are plans to identify additional projects in the Long prairie watershed with the idea to seek additional funding once the projects are prioritized and landowners are approached.

## Section III – Final Expenditures

Final expenditures and match closely matched expected levels.

Long Prairie River DO TMDL Implementation																	
Todd SWCD																	
FINAL REPORT & REQUEST																	
ITEMIZED PROJECT BUDGET AND EXPENDITURES	Cost Category	Unit Cost	Rate	Quantity	Grant	In-Kind Match	Budget Total	Grant Cash Expended Previous Periods	Grant Cash In-Kind Expended Previous Period	Grant Cash Expended This Period	Grant Cash In-Kind Expended This Period	Cumulative Expended	Budget Balance	Cash Expended	Cash Balance	In-Kind Expended	In-Kind Balance
<b>OBJECTIVE 1 - Animal Agriculture BMP's</b>																	
BMP Installation	Cost Share				\$ 480,000.00	\$ 97,000.00	\$ 577,000.00	\$ 21,346.79	\$ 20,689.72	\$ 27,206.40	\$ 21,418.70	\$ 400,064.69	\$ 476,698.39	\$ 86,634.19	\$ 121,466.89	\$ 41,808.43	\$ 85,911.58
<b>OBJECTIVE 1 - TOTAL</b>					\$ 182,300.00	\$ 97,000.00	\$ 279,300.00	\$ 58,553.19	\$ 41,508.42	\$ 123,546.81	\$ 75,663.21	\$ 299,471.63	\$ 20,171.63	\$ 182,300.00	\$ -	\$ 117,171.63	\$ 20,171.63
<b>OBJECTIVE 2 - Nutrient &amp; Sediment BMP's</b>																	
BMP Installation	Cost Share				\$ 90,000.00	\$ 36,000.00	\$ 126,000.00	\$ 21,300.40	\$ 22,023.47	\$ 61,605.70	\$ 44,631.69	\$ 130,693.36	\$ 143,663.36	\$ 37,000.00	\$ 12,000.00	\$ 66,705.16	\$ 30,705.16
<b>OBJECTIVE 2 - TOTAL</b>					\$ 87,700.00	\$ 36,000.00	\$ 123,700.00	\$ 72,898.50	\$ 66,705.16	\$ 14,801.50	\$ 6,343.50	\$ 160,748.66	\$ 37,048.66	\$ 87,700.00	\$ -	\$ 73,048.66	\$ 37,048.66
<b>OBJECTIVE 3 - Technical Assistance &amp; Engineering Assistance</b>																	
Todd SWCD	Technician	80.00	\$50.00/hr.	600	\$ 15,000.00	\$ 15,000.00	\$ 30,000.00	\$ 14,375.00	\$ 20,000.00	\$ 625.00	\$ 2,725.00	\$ 37,725.00	\$ (7,725.00)	\$ 15,000.00	\$ -	\$ 22,725.00	\$ (7,725.00)
Memison SWCD	Technician	50.00	\$50.00/hr.	200	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ -	\$ 8,900.00	\$ -	\$ 8,900.00	\$ 1,100.00	\$ -	\$ -	\$ -	\$ 8,900.00	\$ 1,100.00
Memison County	Technician	50.00	\$50.00/hr.	40	\$ 2,000.00	\$ 2,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,000.00	\$ -	\$ -	\$ -	\$ -	\$ 2,000.00
Douglas SWCD	Technician	50.00	\$50.00/hr.	200	\$ 10,000.00	\$ 10,000.00	\$ -	\$ 5,000.00	\$ -	\$ -	\$ 5,000.00	\$ 5,000.00	\$ -	\$ -	\$ -	\$ 5,000.00	\$ 5,000.00
Douglas County	Technician	50.00	\$50.00/hr.	40	\$ 2,000.00	\$ 2,000.00	\$ -	\$ 5,075.00	\$ -	\$ -	\$ 5,075.00	\$ (3,075.00)	\$ -	\$ -	\$ -	\$ 5,075.00	\$ (3,075.00)
WCTCA Engineers	Engineer	100.00	\$100.00/hr.	750	\$ 10,000.00	\$ 65,000.00	\$ 75,000.00	\$ 6,550.00	\$ 43,200.00	\$ 3,450.00	\$ 10,150.00	\$ 63,450.00	\$ 11,550.00	\$ 10,000.00	\$ -	\$ 53,450.00	\$ 11,550.00
<b>OBJECTIVE 3 - TOTAL</b>					\$ 25,000.00	\$ 104,000.00	\$ 129,000.00	\$ 20,925.00	\$ 82,375.00	\$ 4,075.00	\$ 12,875.00	\$ 110,150.00	\$ 8,850.00	\$ 25,000.00	\$ -	\$ 95,150.00	\$ 8,850.00
<b>OBJECTIVE 4 - Administration / Semi Annual and Final Reports</b>																	
Grant Administration	Staff	80.00	\$50.00/hr.	220	\$ 1,000.00	\$ 10,000.00	\$ 11,000.00	\$ 1,000.00	\$ 6,300.00	\$ -	\$ 1,250.00	\$ 8,550.00	\$ 2,450.00	\$ 1,000.00	\$ -	\$ 7,550.00	\$ 2,450.00
Grant Reporting	Staff	80.00	\$50.00/hr.	80	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 150.00	\$ 150.00	\$ -	\$ 4,150.00	\$ (150.00)	\$ 4,000.00	\$ -	\$ 150.00	\$ (150.00)	
<b>OBJECTIVE 4 TOTAL</b>					\$ 5,000.00	\$ 10,000.00	\$ 15,000.00	\$ 5,000.00	\$ 6,450.00	\$ -	\$ 1,250.00	\$ 12,700.00	\$ 2,300.00	\$ 5,000.00	\$ -	\$ 7,700.00	\$ 2,300.00
<b>TOTAL</b>					\$ 300,000.00	\$ 247,000.00	\$ 547,000.00	\$ 157,376.69	\$ 196,938.58	\$ 142,623.31	\$ 96,131.71	\$ 593,070.29	\$ 46,070.29	\$ 300,000.00	\$ -	\$ 293,070.29	\$ 46,070.29