



# 319/Clean Water Partnership/ Total Maximum Daily Loads

Semi-Annual Report for Reporting Year 2010

Reporting Period:  January 1 through June 30, 2010 (Due August 1, 2010)  
 July 1 through December 31, 2010 (Due February 1, 2011)

All information is required by U.S. Environmental Protection Agency (EPA). Do not leave blanks. This report form can be typed using your computer. Use the "tab" key to move through the fields of this form. Enter responses using text and check boxes as indicated. Keep a copy for your records.

I. General Report Information			
1.	Project Title:	<b>Redwood and Cottonwood River Watershed Conservation and Nutrient Reduction Project</b>	
2.	Project Sponsor:	<b>Redwood-Cottonwood Rivers Control Area (RCRCA)</b>	
3.	Project Representative:	<b>Douglas A. Goodrich, Director, RCRCA</b>	
4.	Email Address:	Douglas.goodrich@mn.nacdnet.net	
5.	Loan Sponsor (if applicable):	<b>Brown, Cottonwood, Lyon, Murray and Redwood counties</b>	
6.	Contract Number:	<b>B39161</b>	Loan Number: <b>SRF0179 – SRF0183 (remainder)</b>
7.	MPCA Project Manager:	<b>Mark Hanson</b>	
8.	Contract Start Date:	<b>July 1, 2009</b>	Contract End Date: <b>August 30, 2013</b>
9.	Best Management Practice (BMP) Name (Refer to BMP List):		
10.	<b>319/Clean Water Partnership (CWP) only - Nonpoint Source (NPS) Category (Refer to NPS Definition of Categories):</b>		
		<b>Primary</b>	<b>Secondary</b>
	<b>Category</b>	<b>Agriculture, Animal Feeding Operations, Urban Runoff, Hydromodification, Historical Pollutants</b>	<b>Non-Irrigated Crop Production, Pasture Grazing, Municipal and Residential Runoff, Channel Erosion/Incision</b>
			<b>Others</b>
			<b>Resource Extraction</b>
11.	<b>319/CWP only - NPS Functional Category (Refer to NPS Definition of Categories):</b>		
		<b>Primary</b>	<b>Secondary</b>
	<b>Category</b>	<b>BMP Design/Implementation, Water Quality Monitoring</b>	<b>BMP Performance Assessment, Water Quality Trend Assessment, BMP Effectiveness Monitoring</b>
			<b>Others</b>
			<b>Nonpoint Source Program Coordination, Watershed Modeling/Planning</b>
12.	Waterbody type (refer to NPS Waterbody Type):		<b>Rivers</b>
13.	Hydrologic unit code (12 digits):	<b>07020006(0000-9999), 07020008(0000-9999)</b>	Latitude-longitude: <b>Lat. 44°17'29" Long. 99°26'24"</b>
14.	<b>319/ CWP only:</b> Type of pollutant(s) addressed (refer to NPS Pollutants):		<b>Nutrients, Pathogens, and Sedimentation</b>
15.	Ecoregion (refer to NPS Ecoregion):	<b>Western Corn Belt Plains</b>	
16.	Basin name (check all that apply):		
	<input type="checkbox"/> Lake Superior <input type="checkbox"/> Lower Mississippi/Cedar <input type="checkbox"/> Upper Mississippi		

- Minnesota
- Rainy
- Red River
- Des Moines
- Missouri
- St. Croix

## II. Project Description

1. Project Description Summary (taken from work plan summary) – Include at least two paragraphs that briefly summarize the project scope, the processes and the events that occurred **before** this reporting period.
 

**The watersheds of the Redwood River and Cottonwood River encompass approximately 2,020 square miles in the Minnesota River Basin. The major tributaries of the Redwood and Cottonwood Rivers originate on the Coteau des Prairies, flowing eastward approximately 152 miles to the Minnesota River with a drop in elevation of about 750 feet. This topography results in periodic spring and summer flooding in the central portion of the watershed. At times, damages are severe. A related implication is rapid transport of sediment and attached nutrients from inadequately treated cropland during spring snowmelt and spring and summer rainfall events.**

**The 1992 (Redwood River) and the 1999 (Cottonwood River) MPCA approved diagnostic studies and implementation plans defined characteristics of specific pollutants, the processes affecting their transport, and appropriate measures to reduce their delivery to both rivers. Priority management areas were selected based on relative contributions to the total sediment and nutrient load in the Rivers. These locally developed Implementation Plans were created to direct restoration activities in the watersheds until individual TMDL(s) are created and approved. The purpose of this project is to facilitate watershed land-use changes within these watersheds that will lead to reductions necessary to meet goals set forth in the Lower Minnesota River Dissolved Oxygen TMDL. Implementing groundwater infiltration and phosphorus reducing conservation practices through new funded best management practices will help achieve reductions outlined in the TMDL plan and the respective rivers' implementation plans.**

**The project is administered by the Redwood-Cottonwood Rivers Control Area (RCRCA). RCRCA, established in 1983, is a Joint Powers Organization of eight counties and their Soil and Water Conservation Districts. (For additional information, go to [www.rcrca.com](http://www.rcrca.com) ) RCRCA has a proven history backed with an extensive database, a long-term monitoring program, and an organizational structure that remains supportive and flexible to ensure that projects such as the Redwood River Clean Water Project and the Cottonwood River Restoration Project are successful. This success can be viewed in the 2001 Final Report, "Evolution of Watershed Restoration", which can be found at [www.rcrca.com](http://www.rcrca.com).**

**Annual FLUX estimates from the Redwood River sampling site above Lake Redwood showed a total phosphorus delivery of 116.8 tons annually to the Minnesota River. This is equal to .19 tons per square mile loss of phosphorus included with 114.5 tons per square mile loss of sediment. This is directly related to the turbidity impairment and contributes to the Minnesota River phosphorus loading (See <http://www.pca.state.mn.us/water/tmdl.html>).**

**Annual FLUX estimates from the Cottonwood River sampling site at New Ulm showed an average total phosphorus delivery of 180.51 tons annually to the Minnesota River. This is equal to .14 tons per square mile loss of phosphorus included with 139.67 tons per square mile loss of sediment. This is directly related to the turbidity impairment and contributes to the Minnesota River phosphorus loading (See <http://www.pca.state.mn.us/water/tmdl.html>).**

**Recreational opportunities in the project area are limited by degraded water quality, channel obstructions, limited access, and a general lack of awareness by watershed residents. Potentially, the project area can be a major recreational resource.**

**Long term monitoring efforts from 1990 to present have identified TMDL impairments and the current/pending (2008) listings show that the work is not finished. With the TMDL plan approved on the lower Minnesota River for phosphorus reduction, it is important to continue the implementation of best management practices that will reduce the total phosphorus contribution from the project area and work to de-list the lower Minnesota River Dissolved Oxygen TMDL impairment.**

**Nearly all wetlands have been drained by a highly efficient and interconnected artificial drainage system. This drainage system has allowed agriculture, the primary land use, to flourish. Corn and soybeans are the main crops grown in the watershed.**

**The study's primary research tool was a water quality monitoring program used to gather data at 4 main stem locations and 10 tributary sites. Stream bank erosion assessments were made at several locations along the lower**

reach of the Redwood and Cottonwood Rivers. Fishery surveys were used to assess populations and species diversity. Land use and physical characteristics of the watersheds were analyzed through application of Geographic Information System (GIS) data layers. These evaluations were supplemented in the Cottonwood River by field observations using the tailored integrated stream and watershed assessment (TISWA) methodology.

The Redwood and Cottonwood River Phase I Diagnostic Studies and their Implementation Plans are on file at MPCA. Please refer to them and the Quality Assurance Project Plans (QAPP's) which are also on file for further information.

2. Specific Project Goals – Include numeric, quantifiable goals for environmental improvement, the number of Best Management Practices to be installed, **pollutant reductions** as well as programmatic and social goals.
- The goal of this project is to continue best management implementation according to the Phase I Implementation Plans and implement phosphorus reducing conservation practices that will help achieve the Lower Minnesota River dissolved oxygen TMDL. This work plan is projected to reduce phosphorus reaching the Minnesota River by 1.139 tons annually or 911,683 pounds of aquatic plant growth annually (plus 1,960.50 tons of sediment). This work plan will administer grant funds from 2009 through 2013 to achieve the implementation goals through these objectives: 1. BMP Technical Assistance and Implementation, and 2. Fiscal Management and Administration.**
- 1. BMP Technical Assistance and Implementation:**
- **Promote cost-share availability and identify erosion sensitive projects in priority area.**  
Task A Cost: Grant- \$33,060.00 Match- \$0.00
  - **BMP cost share, incentives, and project implementation.**  
Task B Cost: Grant- \$197,340.00 Match- \$0.00
  - **Promote and Implement MPCA low interest loan program.**  
Task C Cost: Grant- \$0.00 Match- \$270,000.00
- Objective 1 Cost: Grant- \$230,400.00 Match- \$270,000.00 Total- \$500,400.00**
- 2. Grant Facilitation, Report Writing and Public Input/Rollout Sessions**
- **Conduct public involvement/informational meetings and meet all grant requirements**
- Objective 2 Cost: Grant- \$23,040.00 Match- \$0.00 Total- \$23,040.00**

### III. Semi-annual Report Information

1. Project activities completed during last six (6) months according to the program elements or tasks:  
**Initial Report/ No Activities**
2. Challenges faced (optional):
3. Summary of monitoring data collected:  
N/A
4. Have all monitoring stations been established in STORET?  Yes  No
5. Is the data being routinely submitted for storage into STORET?  Yes  No Last submittal date: **N/A**
6. Is the data being annually entered into E-Link?  Yes  No Date last entered: N/A
7. Identify any significant **findings** and **results** of the project to date, as well as any unanticipated findings:  
**See Question 1.**
8. Describe specific (quantifiable, if possible) results achieved during this period: **See Question 1.**
9. Summarize any work plan changes:
10. List anticipated activities for next six (6) months:  
Over the next 6 months, we will continue to develop and implement BMP projects.
11. List all products (documents, pamphlets, videos, maps, etc.) produced in this reporting period.

### IV. Expenditure Information for this Period

CWP: Provide a copy of the Expenditure Report with cumulative expenditures and this period's expenditures budget balances by work plan program element. The format for the Semi-Annual Expenditure Report is available on the Web at: <http://www.pca.state.mn.us/publications/wq-cwp7-09.xls>.

Expenditure Report attached

CWP, 319, and TMDL - Complete the table below:	Amount
Total Grant Amount:	\$253,440.00
Total Match Amount (if applicable)	\$270,000.00

	<b>Total Project Amount:</b>	<b>\$523,440.00</b>
	Cumulative Grant Expenditures through this period:	\$0.00
	Cumulative Match Expenditures through this period:	\$213,535.53
	<b>Total Cumulative Expenditures through this period:</b>	<b>\$213,535.53</b>
	Date form completed:	<b>7/22/2010</b>
	Please submit to:	Your project manager <b>Mark Hanson</b>

PROJECT TITLE: Clean Water Legacy-Redwood and Cottonwood River Watershed Conservation and Nutrient Reduction Project #B39161  
 BUDGET/EXPENDITURES AS OF July 1, 2010

<b>Objectives</b>	unit cost	Quantity Exp/budget	Inkind Budgeted	Cash Budgeted	Loan Budgeted	Total Budgeted	Cumulative Inkind Expended	Cumulative Cash Expended	Cumulative Loan Expended	Cumulative Total Expended	Inkind Budget Balance	Cash Budget Balance	Loan Budget Balance	Total Budget Balance
<b>Objective 1) BMP Technical Assistance and Implementation</b>														
<b>Task A.</b> Promote, contacts, and install selected BMP's						\$0.00				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
RCRCA Technical Assistance from Clean Water Legacy	\$30.00/hr.	1102 hr.		\$33,060.00		\$33,060.00				\$0.00	\$0.00	\$33,060.00	\$0.00	\$33,060.00
						\$0.00				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Task B.</b> BMP Cost –Share, Incentives, and Implementation						\$0.00				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Grassed Waterway	\$5.00/ft	4,100 ft		\$20,500.00		\$20,500.00				\$0.00	\$0.00	\$20,500.00	\$0.00	\$20,500.00
Terraces	\$5.00/ft	2,000 ft		\$10,000.00		\$10,000.00				\$0.00	\$0.00	\$10,000.00	\$0.00	\$10,000.00
Sediment Control Basins	\$5,000.00 per	\$ 12.00		\$60,000.00		\$60,000.00				\$0.00	\$0.00	\$60,000.00	\$0.00	\$60,000.00
Ponds	\$16,670.00 per	\$ 2.00		\$33,340.00		\$33,340.00				\$0.00	\$0.00	\$33,340.00	\$0.00	\$33,340.00
Alternative Intakes	\$225.00 per	\$ 60.00		\$13,500.00		\$13,500.00				\$0.00	\$0.00	\$13,500.00	\$0.00	\$13,500.00
Filter Strips	\$2,000.00/acre	\$ 30.00		\$60,000.00		\$60,000.00				\$0.00	\$0.00	\$60,000.00	\$0.00	\$60,000.00
						\$0.00				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Task C.</b> (SRF0179-183) Septic Match	\$7,500.00 per	\$ 36.00	\$270,000.00			\$270,000.00	\$213,535.53			\$213,535.53	\$56,464.47	\$0.00	\$0.00	\$56,464.47
<b>Total Objective 1</b>			\$270,000.00	\$230,400.00	\$0.00	\$500,400.00	\$213,535.53	\$0.00	\$0.00	\$213,535.53	\$56,464.47	\$230,400.00	\$0.00	\$286,864.47
<b>Objective 2) Grant Facilitation</b>														
<b>Tasks A; B</b>														
Executive Director	\$26.00/hr	513.85 hr.		\$13,360.00		\$13,360.00				\$0.00	\$0.00	\$13,360.00	\$0.00	\$13,360.00
Support Staff	\$26.00/hr	252.68 hr.		\$5,180.00		\$5,180.00				\$0.00	\$0.00	\$5,180.00	\$0.00	\$5,180.00
Office Supplies	\$500.00	3 yrs		\$1,500.00		\$1,500.00				\$0.00	\$0.00	\$1,500.00	\$0.00	\$1,500.00
Misc. Admin. Services/Expenses	\$1,000.00	3 yrs		\$3,000.00		\$3,000.00				\$0.00	\$0.00	\$3,000.00	\$0.00	\$3,000.00
						\$0.00								
<b>Total Element 2</b>			\$0.00	\$23,040.00	\$0.00	\$23,040.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$23,040.00	\$0.00	\$23,040.00
<b>Element 3</b>														
<b>Total Element 3</b>														
<b>ITEMIZED PROGRAM ELEMENT BUDGET</b>														
	<b>Total Element 1</b>		\$270,000.00	\$230,400.00	\$0.00	\$500,400.00	\$213,535.53	\$0.00	\$0.00	\$213,535.53	\$56,464.47	\$230,400.00	\$0.00	\$286,864.47
	<b>Total Element 2</b>		\$0.00	\$23,040.00	\$0.00	\$23,040.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$23,040.00	\$0.00	\$23,040.00
	<b>Total Element 3</b>		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Project Grand Total</b>			\$270,000.00	\$253,440.00	\$0.00	\$523,440.00	\$213,535.53	\$0.00	\$0.00	\$213,535.53	\$56,464.47	\$253,440.00	\$0.00	\$309,904.47