



**Minnesota Pollution Control Agency**

520 Lafayette Road  
St. Paul, MN 55155-4194

# 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.

<b>I. General Report Information</b>			
1.	Project Title:	<b>Redwood River Watershed (07020006) Turbidity TMDL</b>	
2.	Project Sponsor:	<b>Redwood-Cottonwood Rivers Control Area (RCRCA)</b>	
3.	Project Representative:	<b>Doug Goodrich, Director</b>	
4.	Email Address:	<b>douglas.goodrich@racgroup.net</b>	
5.	Loan Sponsor (if applicable):		
6.	Contract Number:	<b>B14885</b>	Loan Number:
7.	MPCA Project Manager:	<b>Mark Hanson</b>	
8.	Contract Start Date:	<b>May 23, 2008</b>	Contract End Date: <b>June 30, 2011</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>1000 (Agriculture)</b>	<b>1100 (Non-Irrigated Crop Production)</b>
			<b>Others</b>
			<b>7100, 7800 (Channelization, Tile Drainage)</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>TMDL Design/Implementation</b>	<b>Technical Assistance</b>
			<b>Others</b>
			<b>Effectiveness Monitoring</b>
12.	Waterbody type (refer to NPS Waterbody Type):		<b>Rivers and Streams</b>
13.	Hydrologic unit code (12 digits):	07020006(0000-9999)	Latitude-longitude: <b>LONG 44 31'25" -LAT 95 10'20"</b>
14.	<b>319/ CWP only:</b> Type of pollutant(s) addressed (refer to NPS Pollutants):		<b>Turbidity, Sediments</b>
15.	Ecoregion (refer to NPS Ecoregion):	<b>4700 (Western Corn Belt Plains)</b>	
16.	Basin name (check all that apply): <b>Redwood River Watershed</b>		
	<input type="checkbox"/> Lake Superior		
	<input type="checkbox"/> Lower Mississippi/Cedar		
	<input type="checkbox"/> Upper Mississippi		
	<input checked="" type="checkbox"/> Minnesota		
	<input type="checkbox"/> Rainy		
	<input type="checkbox"/> Red River		
	<input type="checkbox"/> Des Moines		
	<input type="checkbox"/> Missouri		
	<input type="checkbox"/> St. Croix		

II.	<b>Project Description</b>
1.	<p>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 <b>before</b> this reporting period.</p> <p><b>Five reaches within the RRW are included on a 303(d) list as impaired with turbidity. Four of them are the focus of this proposed TMDL project. Several stream monitoring stations are already in operation. These stations have been used to collect an extensive amount of turbidity, transparency, TSS and peak streamflow data. Collection of the data from the active stations (baseline investigative monitoring) will be continued. However, staff gages should be installed and repeated streamflow measurements taken at each of the major stream monitoring stations. The collected stream discharge and stage data (also data collected from stations in the neighboring Cottonwood watershed) shall, then, be used to develop rating tables that relate stream stage to discharge. These rating tables will, then, be used in combination with stream stage data in the TMDL calculations.</b></p> <p><b>This TMDL project will include several other tasks like: data gap analysis, data review, analysis and summary (carried out with employment of statistical tools and GIS technology), development of TMDL components, development (and refinement of the existing) implementation strategies, project meetings, public outreach, and development of the project report. The project tasks are discussed in the following sections of this proposal.</b></p> <p><b>This is a work plan to address the turbidity pollutant stressor. This work plan will follow steps 2 through 8 of the 12 steps TMDL process as well as an implementation plan, required by MPCA. The outcome of the work plan will result in a Turbidity TMDL to be submitted to MPCA for adoption and presented to EPA for review and approval.</b></p>
2.	<p>Specific Project Goals – Include numeric, quantifiable goals for environmental improvement, the number of Best Management Practices to be installed, <b>pollutant reductions</b> as well as programmatic and social goals.</p> <p><b>The Redwood River work plan will address the approved 2008 303(d) turbidity impairment listings. TMDL process will be followed, turbidity samples will be collected at the STORET established sites. Source inventories will be conducted using GIS data and NPDES monthly loading and water quality reports . Additional land use data will be collected via GIS sources. Loading results will be reported to the established Redwood River Restoration Project Technical Advisory Team for peer review.</b></p>
3.	Methods to achieve goals:
III.	<b>Semi-annual Report Information</b>
1.	<p>Project activities completed during last six (6) months according to the program elements or tasks:  <b>The past six months activities have been spent accomplishing the following work plan tasks:</b></p> <p><b>Task 1: Preliminary Data Review and Compilation, Initial Problem Assessment, Development of SAP and QAPP</b>  Completed prior to this reporting period.</p> <p><b>Task 2: Collection of Current Conditions Data:</b>  RCRCA is handling all sample collection and analysis.</p> <p><b>Task 3 Laboratory Analysis</b>  RCRCA is handling all sample collection and analysis.</p> <p><b>Task 4: Data Evaluation</b>  We have continued contact with various other projects occurring within the Minnesota River basin related to turbidity and sediment transport including meetings/correspondence involving modeling procedures used in the Minnesota River Turbidity TMDL.</p> <p><b>Task 5: Develop TMDL Components</b>  Waste load allocation, load allocation, reserve capacity, and margins of safety values have also been calculated. These load tables match all data produced for the Minnesota River Turbidity TMDL.</p> <p><b>Task 6: Develop Implementation Strategies</b>  The WRC has a generalized strategy for implementation with supporting</p>

documents. We also promote the adoption of various implementation strategies and timeline developed for the Minnesota River Turbidity TMDL document.

**Task 7: Project Meetings, Public Outreach**

Public roll-out meetings were held in Marshall and Lamberton over the past year. The staff of the RCRCA and WRC have met and discussed various aspects of the project, as well as future goals.

**Task 8: Reports**

Sections of the report are still in the development stage. Editing and drafting will continue, and are designed to include information from the projects above, as they are completed.

2. Challenges faced (optional):

3. Summary of monitoring data collected:

**Fourteen monthly samples (2 samples /site /month) per parameter have been collected at each station starting in April 2009 with additional background data.**

**Selected Parameters for Laboratory Analysis and Frequency of Sampling**

STORET Code S002-	S001-679	310	313	S001-199
Turbidity (twice monthly)	M	M	M	M
TSVS (twice monthly)	M	M	M	M
TSS (twice monthly)	M	M	M	M

**Selected Parameters for Field Analysis and Frequency of Sampling**

STORET Code S001-	S001-679	310	313	S001-199
Water Temperature	M	M	M	M
Dissolved Oxygen	M	M	M	M
pH	M	M	M	M
Turbidity Tube	M	M	M	M

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: **Was submitted as specified 12-31-09**

6. Is the data being annually entered into E-Link?  Yes  No Date last entered: NA

7. Identify any significant **findings** and **results** of the project to date, as well as any unanticipated findings:  
**This project is in the collection and formulation phase.**

8. Describe specific (quantifiable, if possible) results achieved during this period:  
**See # 7.**

9. Summarize any work plan changes:

10. List anticipated activities for next six (6) months:

**RCRCA**

Baseline Contiguous Monitoring  
Laboratory Analysis  
Public Meetings  
Report Finalization  
Implementation Plan Formulation

**WRC:**

Continue to work with local groups and organizations to answer questions about water quality and the project.

11. List all products (documents, pamphlets, videos, maps, etc.) produced in this reporting period.

See #7.

**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:

120,000.00

Total Match Amount (if applicable)

NA

**Total Project Amount:**

**\$120,000.00**

Cumulative Grant Expenditures through this period:

\$63,793.13

Cumulative Match Expenditures through this period:

NA

**Total Cumulative Expenditures through this period:**

**\$63,793.13**

Date form completed:

**07/15/10**

Please submit to:

Your project manager **MARK HANSON**

**TMDL DEVELOPMENT PROJECT TITLE: Redwood River Turbidity TMDL Project**  
 WORK PLAN BUDGET/EXPENDITURE: 05/28/08 - 06/30/10

<b>Work Plan Task or Objective</b>	<b>unit cost (salary per hour, mileage, etc.)</b>	<b>unit type</b>	<b># units</b>	<b>Original Project Budget</b>	<b>Project Expenditures</b>	<b>Project Balance</b>
<b>Objective 1: Data Aquisition and Development</b>						\$0.00
<b>Task 1: Preliminary Data Review and Compilation, Initial Problem Assessment &amp; Development of SAP and QAPP</b>						\$0.00
						\$0.00
<b>Minnesota State University, Mankato Water Resources Center</b>	\$28.57	hours	273	\$7,800.01	\$7,800.01	\$0.00
Expenses are Minnesota River Board in-kind on behalf of RCRCA member counties						\$0.00
<b>RCRCA</b>	\$32.00	hours	425	\$13,586.97	\$9,609.62	\$3,977.35
						\$0.00
						\$0.00
<b>Total Objective 1</b>				<b>\$21,386.98</b>	<b>\$17,409.63</b>	<b>\$3,977.35</b>
<b>Objective 2: Continuous Conditions Monitoring and Geomorphology</b>						\$0.00
<b>Task 1: Collection of Current Conditions Data</b>						\$0.00
						\$0.00
<b>RCRCA</b>	\$20.00	hours	1332	\$26,634.00	\$8,908.99	\$17,725.01
						\$0.00
						\$0.00
<b>Total Objective 2</b>				<b>\$26,634.00</b>	<b>\$8,908.99</b>	<b>\$17,725.01</b>
<b>Objective 3: Laboratory Analysis</b>						\$0.00
<b>Task 1: Laboratory Analysis</b>						\$0.00
						\$0.00
<b>RCRCA</b>						\$0.00
<b>TSS samples 14 months April-October for years 08 and 09 (.275)</b>	\$8.80	samples	140	\$1,232.00	\$507.26	\$724.74
<b>TSVS samples 14 months April-October for years 08 and 09 (.450)</b>	\$14.40	samples	140	\$2,016.00	\$830.07	\$1,185.93
<b>Turbidity samples 14 months April-October for years 08 and 09 (.275)</b>	\$8.80	samples	140	\$1,232.00	\$507.26	\$724.74
						\$0.00
						\$0.00
<b>Total Objective 3</b>				<b>\$4,480.00</b>	<b>\$1,844.59</b>	<b>\$2,635.41</b>
<b>Objective 4: Current and Historical Monitoring Evaluation</b>						\$0.00
<b>Task 1: Data Evaluation</b>						\$0.00
						\$0.00
<b>Minnesota State University, Mankato Water Resources Center</b>	\$28.57	hours	328	\$9,375.00	\$8,085.00	\$1,290.00
Expenses are Minnesota River Board in-kind on behalf of RCRCA member counties						\$0.00
<b>RCRCA</b>	\$20.00	hours	696	\$13,918.00	\$12,526.46	\$1,391.54
						\$0.00
						\$0.00
<b>Total Objective 4</b>				<b>\$23,293.00</b>	<b>\$20,611.46</b>	<b>\$2,681.54</b>

<b>Objective 5: TMDL Development</b>											\$0.00
<b>Task 1: Develop TMDL Components</b>											\$0.00
											\$0.00
<b>Minnesota State University, Mankato Water Resources Center</b>						\$28.57	hours	328	\$9,375.00	\$8,375.00	\$1,000.00
Expenses are Minnesota River Board in-kind on behalf of RCRC member counties											\$0.00
<b>RCRCA</b>						\$20.00	hours	487	\$9,730.60	\$1,689.52	\$8,041.08
Expenses											\$0.00
											\$0.00
<b>Total Objective 5</b>									\$19,105.60	\$10,064.52	\$9,041.08
<b>Objective 6: TMDL Implementation Recommendations</b>											\$0.00
<b>Task 1: Develop Implementation Strategies</b>											\$0.00
											\$0.00
<b>Minnesota State University, Mankato Water Resources Center</b>						\$28.57	hours	40	\$1,150.00	\$0.00	\$1,150.00
Expenses are Minnesota River Board in-kind on behalf of RCRC member counties											\$0.00
<b>RCRCA</b>						\$32.00	hours	220	\$7,047.36	\$2,383.65	\$4,663.71
											\$0.00
											\$0.00
<b>Total Objective 6</b>									\$8,197.36	\$2,383.65	\$5,813.71
<b>Objective 7: Technical Advisory and Stakeholder Involment</b>											\$0.00
<b>Task 1: Project Meetings, Public Outreach</b>											\$0.00
											\$0.00
<b>Minnesota State University, Mankato Water Resources Center</b>						\$28.57	hours	40	\$1,150.00	\$400.00	\$750.00
Expenses are Minnesota River Board in-kind on behalf of RCRC member counties											\$0.00
<b>RCRCA</b>						\$32.00	hours	160	\$5,120.00	\$1,000.00	\$4,120.00
Expenses: Meeting room rental&supplies, publishing									\$1,000.00	\$134.80	\$865.20
											\$0.00
<b>Total Objective 7</b>									\$7,270.00	\$1,534.80	\$5,735.20
<b>Objective 8: Semi-Annual Reporting and Final TMDL Report</b>											\$0.00
<b>Task 1: Report Development</b>											\$0.00
											\$0.00
<b>Minnesota State University, Mankato Water Resources Center</b>						\$28.57	hours	40	\$1,150.00		\$1,150.00
Expenses are Minnesota River Board in-kind on behalf of RCRC member counties											\$0.00
<b>RCRCA</b>						\$32.00	hours	134	\$4,283.07	\$1,035.49	\$3,247.58
											\$0.00
<b>Total Task 8</b>									\$5,433.07	\$1,035.49	\$4,397.58
<b>Objective 9: TMDL Implementation Plan</b>											\$0.00
<b>Task 1: Deveop and Publilsh Final TMDL Implementation Plan</b>											\$0.00
											\$0.00
<b>RCRCA</b>						\$20.00	hours	160	\$3,200.00		\$3,200.00
Expenses: Meeting room rental&supplies, publishing									\$1,000.00		\$1,000.00
											\$0.00
											\$0.00
<b>Total Task 9</b>									\$4,200.00	\$0.00	\$4,200.00
<b>Task 10</b>											\$0.00
											\$0.00
											\$0.00

