



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:	Redwood River Watershed Nonpoint Pollution Reduction Project	
2.	Project Sponsor:	Redwood-Cottonwood Rivers Control Area (RCRCA)	
3.	Project Representative:	Douglas A. Goodrich, Director, RCRCA	
4.	Email Address:	Douglas.goodrich@racgroup.net	
5.	Loan Sponsor (if applicable):	LINCOLN, LYON, MURRAY, PIPESTONE, REDWOOD, AND YELLOW MEDICINE	
6.	Contract Number:	B42179	Loan Number: SRF 163- SRF 168
7.	MPCA Project Manager:	Mark Hanson	
8.	Contract Start Date:	October 01, 2009	Contract End Date: August 29, 2014
9.	Best Management Practice (BMP) Name (Refer to BMP List):	Stream Bank and Shoreline Protection, Grassed Waterway, Water and Sediment Control Basin, Subsurface Drain, Onsite Wastewater Treatment System	
10.	319/Clean Water Partnership (CWP) only - Nonpoint Source (NPS) Category (Refer to NPS Definition of Categories):		
		Primary	Secondary
	Category	Agriculture	Non-Irrigated Crop Production
			Others
			Channelization
11.	319/CWP only - NPS Functional Category (Refer to NPS Definition of Categories):		
		Primary	Secondary
	Category	BMP Design/Implementation	Technical Assistance
			Others
			Effectiveness Monitoring
12.	Waterbody type (refer to NPS Waterbody Type):	Rivers and Streams	
13.	Hydrologic unit code (12 digits):	07020006(0000-9999)	Latitude-longitude: LAT. 44o31'25"; LONG. 95o10'20"
14.	319/ CWP only: Type of pollutant(s) addressed (refer to NPS Pollutants):	Excess Nutrients, Sediment, Pathogens (E.Coli)	
15.	Ecoregion (refer to NPS Ecoregion):	Western Corn Belt Plains	
16.	Basin name (check all that apply): Redwood River Watershed		
	<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		

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 Redwood River Watershed includes portions of Redwood, Lyon, Yellow Medicine, Murray, Lincoln, and Pipestone Counties in Minnesota and is one of the tributaries of the Minnesota River in the Minnesota River Basin. The headwaters of the Redwood River main stem begin in the Northern Glaciated Ecoregion on top of the Coteau des Prairies, an impressive morainal plateau and important drainage divide. The Redwood River wanders around the corners of Lincoln, Pipestone, Murray, and Lyon counties as a temporary stream, then flows northeast toward the slope of the Coteau, characterized by landscapes with long northeast facing slopes of moderate steepness, the majority of the Coteau (72%) is classified as having moderate to high water erosion potential. Between Russell and Marshall, the Redwood drops off the Coteau and falls nearly 300 feet over a span of approximately fifteen miles. At Marshall, the Redwood River enters the lowlands of the Blue Earth Till Plain. The gradient of the river along this reach is only two to three feet per mile. Soils are predominantly loamy within the till plain and landscapes having a complex mixture of well drained and poorly drained soils. Water erosion potentials are moderate on the majority of these lands.

Currently the goals and objectives that are presented in the 1992 Diagnostic Report and Implementation Plan are as relevant today as they were when the report was published. Long term monitoring has identified encouraging trends with the restoration that has taken place, but with Total Maximum Daily Load (TMDL) Clean Water Act Section 303(d) listings, of which twelve TMDL impairments are listed in the Redwood River watershed for bacteria and turbidity, the work is not done. 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 (BMP's) will help achieve reductions outlined in the Lower Minnesota River Dissolved Oxygen TMDL Implementation Plan and the Redwood River Clean Water Project implementation plan.

The Redwood River Clean Water 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 our website at www.rcrca.com. RCRCA has a proven history backed with an extensive database, long term monitoring program and an organizational structure that remains supportive and flexible that insures 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" (included and at www.rcrca.com).

The sample period Total Suspended Solids (TSS) loading from the Redwood River in 2008 was estimated at 28,157 tons per year, or 44.77 tons per square mile. Total phosphorus (TP) was estimated at 89.21 tons per sample period. Additionally, the highest flow-weighted mean concentrations (FWMC's) of total suspended solids and total phosphorus of all sampling stations were found on the main stem at site RR1 where cumulative FWMC's of 106.00 mg/L for 2008. Throughout the study period, FWMC's of and nutrients on the main stem and most tributaries exceeded expected values for minimally impacted ecoregion streams.

Annual FLUX estimates from the Redwood River sampling site above Lake Redwood showed a total phosphorus delivery of 115.26 tons annually to the Minnesota River. This is equal to .18 tons per square mile loss of phosphorus included with 110.7 tons per square mile loss of suspended solids. 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 on the Redwood River are limited by degraded water quality, channel obstructions, limited access, and a reservoir (Lake Redwood) that is full of suspended solids and in need of reclamation (increase capacity) for hydro electric power generation. Potentially, the river is a major recreational resource including the reservoir for fishing and boating.

Long-term monitoring has identified encouraging trends with the restoration that has taken place, but the new TMDL impaired reach designations 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 BMPs that will reduce the total phosphorus contribution from the Redwood River Major Watershed and work to de-list the lower Minnesota River phosphorus TMDL impairment.
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 Redwood River Clean Water Project Phase I Diagnostic Study and Implementation Plan approved in 1992 and implement phosphorus

reducing conservation practices that will help achieve the Lower Minnesota River Low Dissolved Oxygen TMDL. This 4 year work plan is projected to reduce phosphorus reaching the Minnesota River by 675.74 pounds annually or 270,400.00 pounds of aquatic plant growth annually (plus 350 tons of suspended solids). This work plan will administer grant funds from 2010 and into 2014 to achieve the implementation goals through these objectives:

1. BMP and ISTS Implementation:

- Replace 7 non-compliant (EMHT) ISTS systems -\$55,056.83 Loan Match*
- Provide \$99,000.00 in cost share up to 75% installing BMPs in the watershed reducing 3,500 pounds of phosphorus annually for an average life expectancy of 10 years (35,000 pounds)
- Provide \$63,845.45 in technical assistance to install ISTS and BMPs watershed wide

*These systems are accounted for from previous loans (SRF0163-0168)

Total Budget: \$99,000.00 Grant; \$143,652.28 Loan/Grant Match

2. Monitoring (Sampling Analysis)

- Provide \$24,150.00 in technical assistance and water quality evaluation
- Provide \$9,000.00 in sample analysis of TSS, TP, TN, TSVS, Turbidity and Ecoli

Total Budget: \$33,150.00 Grant

3. Administration:

- Provide \$43,425.00 in grant facilitation and administration over 4 years by adhering to all grant agreement requirements, submitting semi-annual and annual reports, water quality modeling, outreach and final report generation, technical assistance and water quality monitoring alternate

Total Budget: \$43,425.00 Grant

3. Methods to achieve goals:

The Redwood River as a result of the 19 years of continuous monitoring has been divided into priority areas that have been identified as contributing a disproportionate share of suspended solids and nutrients. With this prioritization, a ranking sheet has been developed to rank each project application to ensure that it will provide a substantial reduction of pollutants. Since 1994, the projects that have been implemented have been tracked by total cost of the project, the landowners' share of the cost, and the reductions achieved by each project. With this data, a matrix has been developed to estimate the total cost per pollutant reduction. This matrix is used to estimate the number of projects needed and the pollutant reductions that can be achieved. By implementing projects in priority areas selected by a long-term monitoring program and using implemented project information to estimate cost and effectiveness of each type of BMP, the project can ensure that the goals and objectives will be met and the efficiency and pollutant reduction benefits of each BMP will be maximized.

An established best management practice (BMP) tracking system will be used to measure BMP adoption rates within this project area. Information contained in this system will include records of initial contacts with landowners or operators; the status of each BMP from initial sign-up to construction; and the potential suspended solids and nutrient reduction obtained as a result of the BMP, using the BWSR/MPCA e-LINK program. This information will be entered into the watershed GIS system maintained by RCRC.

Measures for Success:

- Number of installed new SSTS's and conservation BMPs on land
- Number of installed filter strips and buffer strips on land
- Number of acres of land enrolled in conservation programs
- Number of manure management plans developed and implemented
- Number of residents and officials who receive information on conservation practices available to landowners.
- Number of residents involved in volunteer water quality monitoring
- Comprehensive data set of water quality monitoring results
- Reduced levels of phosphorus found in waters of targeted areas

III. Semi-annual Report Information

1. Project activities completed during last six (6) months according to the program elements or tasks:
Best Management Practices – One (1) cost share contract for a water and sediment control basin was installed in the Redwood River Watershed to reduce direct sediment and phosphorus delivery to the Redwood River and its

	receiving tributaries. These BMPs have the potential to reduce phosphorus losses by 31.9 pounds per year and reduce net sediment in surface water by 31.9 tons per year.		
2.	Challenges faced (optional): Flood waters and early snowfall made for a challenging construction season		
3.	Summary of monitoring data collected: Preliminary returns on the July- December data show that Redwood watershed streams remained turbid with many storm events. Major flooding occurred in September with stage readings in parts of the Redwood River watershed set modern records. Rivers were extremely turbid and high concentrations of phosphorus were measured but nitrate concentrations were tempered during this period. Period loadings through 2009 are available in STORET & RCRCAs website www.rcrca.com. Final 2010 data is forthcoming.		
4.	Have all monitoring stations been established in STORET? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
5.	Is the data being routinely submitted for storage into STORET? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Last submittal date:	12/31/2010
6.	Is the data being annually entered into E-Link? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date last entered:	12/31/2010
7.	Identify any significant findings and results of the project to date, as well as any unanticipated findings:		
8.	Describe specific (quantifiable, if possible) results achieved during this period:		See Question 1.
8a.	Sediment Load Reduction	31.9 tons/yr	
	Phosphorus Load Reduction:	31.9 lbs./yr	
	Nitrogen Load Reduction:	_ lbs./yr	
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. We will work to install the encumbered projects, promote and advertise available services and funds, and meeting reporting requirements to all agencies involved with this project.		
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:		\$175,575.00
Total Match Amount (if applicable)		\$143,652.28
Total Project Amount:		\$319,227.28
Cumulative Grant Expenditures through this period:		\$26,256.56
Cumulative Match Expenditures through this period:		\$70,398.46
Total Cumulative Expenditures through this period:		\$96,655.02
Date form completed:	01/25/2011	
Please submit to:	Your project manager Mark Hanson	

PROJECT TITLE: Redwood River Watershed Nonpoint Pollution Reduction Project B42179
 WORK PLAN BUDGET/EXPENDITURES AS OF: December 31, 2010

Objectives	unit cost	unit	Quantity Exp/budget	Local Match Budgeted	Grant Cash Budgeted	Total Budgeted	Cumulative Local Match Expended	Cumulative Grant Cash Expended	Cumulative Total Expended	Local Match Budget Balance	Grant Cash Budget Balance	Total Budget Balance	
Objective 1) BMP Technical Assistance and Implementation						\$0.00			\$0.00	\$0.00	\$0.00	\$0.00	
Task A: Implement cost share through planning, design, survey, and technical oversight of projects in priority areas(BWSR Match Funds)	\$26.00	2455.59 hrs	\$63,845.45	\$63,845.45		\$63,845.45	\$9,921.99		\$9,921.99	\$53,923.46	\$0.00	\$53,923.46	
Task B: BMP cost sharing, prioritization and ranking.			\$99,000.00	\$24,750.00	\$99,000.00	\$123,750.00	\$5,419.64	\$21,678.56	\$27,098.20	\$19,330.36	\$77,321.44	\$96,651.80	
Task C: Promote and Implement MPCA low interest loan program	\$7,500.00	7.34	\$55,056.83	\$55,056.83		\$55,056.83	\$55,056.83		\$55,056.83	\$0.00	\$0.00	\$0.00	
Total Objective 1			\$217,902.28	\$143,652.28	\$99,000.00	\$242,652.28	\$70,398.46	\$21,678.56	\$92,077.02	\$73,253.82	\$77,321.44	\$150,575.26	
Objective 2) –Maintain Continuous Water Quality Monitoring						\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Task A: Water Quality Tech. Asst.- Annually re-establish sites and collect water quality samples according to the Redwood River Restoration Project QAPP (on file with MPCA)	\$23.00	1050 hrs	\$24,150.00		\$24,150.00	\$24,150.00		\$0.00	\$0.00	\$0.00	\$24,150.00	\$24,150.00	
Task B: Monitoring Analysis	\$3,000.00	3yrs	\$9,000.00		\$9,000.00	\$9,000.00		\$4,578.00	\$4,578.00	\$0.00	\$4,422.00	\$4,422.00	
Total Objective 2			\$33,150.00	\$0.00	\$33,150.00	\$33,150.00	\$0.00	\$4,578.00	\$4,578.00	\$0.00	\$28,572.00	\$28,572.00	
Objective 3) –Grant Administration and Facilitation						\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
RCRCA Executive Director	\$28.00/hr	600 hrs	\$16,800.00		\$16,800.00	\$16,800.00			\$0.00	\$0.00	\$16,800.00	\$16,800.00	
RCRCA Support Staff	\$21.00/hr	625 hrs	\$13,125.00		\$13,125.00	\$13,125.00			\$0.00	\$0.00	\$13,125.00	\$13,125.00	
Office Supplies	\$1500/yr	3 yr.	\$4,500.00		\$4,500.00	\$4,500.00			\$0.00	\$0.00	\$4,500.00	\$4,500.00	
Rent/Professional Services/Mileage	\$3000/yr	3 yr.	\$9,000.00		\$9,000.00	\$9,000.00			\$0.00	\$0.00	\$9,000.00	\$9,000.00	
						\$0.00			\$0.00	\$0.00	\$0.00	\$0.00	
Total Objective 3			\$43,425.00	\$0.00	\$43,425.00	\$43,425.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43,425.00	\$43,425.00	
ITEMIZED PROGRAM ELEMENT BUDGET													
			Total Element 1	\$217,902.28	\$143,652.28	\$99,000.00	\$242,652.28	\$70,398.46	\$21,678.56	\$92,077.02	\$73,253.82	\$77,321.44	\$150,575.26
			Total Element 2	\$33,150.00	\$0.00	\$33,150.00	\$33,150.00	\$0.00	\$4,578.00	\$4,578.00	\$0.00	\$28,572.00	\$28,572.00
			Total Element 3	\$43,425.00	\$0.00	\$43,425.00	\$43,425.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43,425.00	\$43,425.00
Project Grand Total					\$143,652.28	\$175,575.00	\$319,227.28	\$70,398.46	\$26,256.56	\$96,655.02	\$73,253.82	\$149,318.44	\$222,572.26

BMP Septic Loan Match Tracking as of December 2010

Loan #	Project Name	Project Sponsor	Loan Sponsor	Actual Amount	Disbursed	% Disb/Actual	Loan Outstanding	Loan Balance	End Date
SRF0163	Redwood River Watershed Phosphorus TMDL Compliance Continuation	RCRCA	Lincoln County	\$ 230,000.00	\$ 146,742.51	63.80%	\$ 146,742.51	\$ 83,257.49	9/17/2011
SRF0164	Redwood River Watershed Phosphorus TMDL Compliance Continuation	RCRCA	Lyon County	\$ 340,000.00	\$ 241,631.27	71.07%	\$ 241,631.27	\$ 98,368.73	10/12/2011
SRF0166	Redwood River Watershed Phosphorus TMDL Compliance Continuation	RCRCA	Pipestone County	\$ 70,000.00	\$ 6,329.00	9.04%	\$ 6,329.00	\$ 63,671.00	9/18/2011
SRF0167	Redwood River Watershed Phosphorus TMDL Compliance Continuation	RCRCA	Redwood County	\$ 190,000.00	\$ 31,593.55	16.63%	\$ 31,593.55	\$ 158,406.45	8/24/2011
SRF0168	Redwood River Watershed Phosphorus TMDL Compliance Continuation	RCRCA	Yellow Med County	\$ 70,000.00	\$ 9,364.00	13.38%	\$ 9,364.00	\$ 60,636.00	9/18/2011
				\$ 900,000.00	\$ 435,660.33	48.41%	\$ 435,660.33	\$ 464,339.67	
SRF0179	Cottonwood River Watershed Non-point Pollution Reduction Project	RCRCA	Brown County	\$ 110,000.00	\$ 110,000.00	100.00%	\$ 110,000.00	\$ -	9/10/2010
SRF0180	Cottonwood River Watershed Non-point Pollution Reduction Project	RCRCA	Cottonwood County	\$ 110,000.00	\$ 110,000.00	100.00%	\$ 110,000.00	\$ -	10/1/2010
SRF0181	Cottonwood River Watershed Non-point Pollution Reduction Project	RCRCA	Lyon County	\$ 110,000.00	\$ 110,000.00	100.00%	\$ 110,000.00	\$ -	10/12/2010
SRF0182	Cottonwood River Watershed Non-point Pollution Reduction Project	RCRCA	Redwood County	\$ 78,978.87	\$ 78,978.87	100.00%	\$ 78,978.87	\$ -	8/27/2010
SRF0183	Cottonwood River Watershed Non-point Pollution Reduction Project	RCRCA	Murray County	\$ 27,385.25	\$ 27,385.25	100.00%	\$ 27,385.25	\$ -	10/8/2010
				\$ 436,364.12	\$ 436,364.12	10000%	\$ 436,364.12	\$ -	
SRF0208	Cottonwood River Watershed Phosphorus TMDL Continuation	RCRCA	Brown County	\$ 200,000.00	\$ 14,501.88	7.25%	\$ 14,501.88	\$ 185,498.12	12/9/2012
SRF0209	Cottonwood River Watershed Phosphorus TMDL Continuation	RCRCA	Cottonwood County	\$ 100,000.00	\$ 57,337.94	57.34%	\$ 57,337.94	\$ 42,662.06	12/9/2012
SRF0210	Cottonwood River Watershed Phosphorus TMDL Continuation	RCRCA	Lyon County	\$ 100,000.00	\$ 38,394.69	38.39%	\$ 38,394.69	\$ 61,605.31	12/9/2012
SRF0211	Cottonwood River Watershed Phosphorus TMDL Continuation	RCRCA	Redwood County	\$ 100,000.00	\$ 34,261.15	34.26%	\$ 34,261.15	\$ 65,738.85	12/21/2012
SRF0212	Cottonwood River Watershed Phosphorus TMDL Continuation	RCRCA	Murray County	\$ 45,000.00	\$ -	0.00%	\$ -	\$ 45,000.00	12/9/2012
				\$ 545,000.00	\$ 144,495.66	26.51%	\$ 144,495.66	\$ 400,504.34	

Septic Match = (SRF0163 – 0168) – (Grant #A93758 Match (\$370,788.39)) up to \$55,056.83

BMP Cost Share Tracking as of December 2010

GRANT: B42179 "Redwood 4" **Grant Expire**
SPOKEN FOR/NOT SPENT: \$ 34,608.60 **8/31/2014**
SPENT: \$ 21,678.56 **Grant Value**
LEFT TO SPEND: \$ 42,712.84 **\$99,000.00**

county	wtrshd_name	grant_id	cont_num	coop_l_name	coop_f_name	coop_adrss	city	state	zip	twنشp_namesec	ws_id	actual_cost	cost_share	final_pay	final_pay_date	bmp	num_install
Lincoln	Redwood	B42179	RP319-14-03 (01-04)	Possail	Ila	2277 280th Ave	Tyler	MN	56178	Lake Stay 26	27001		\$ 8,801.25			638	1
Lincoln	Redwood	B42179	RP319-15-03 (02-04)	Krog	Kenneth	2145 US Hwy 75	Lake Benton	MN	56149	Drammen 03	27005		\$ 24,562.35			638	8
Lincoln	Redwood	B42179	RP319-18-03 (03-04)	Nibbe	John	2177 Cty Road 117	Lake Benton	MN	56149	Lake Benton 35	27007	\$ 9,000.00	\$ 6,750.00	\$ 6,750.00	5/17/2010	638	3
Lincoln	Redwood	B42179	RP319-18-03 (03-04)	Nibbe	John	2177 Cty Road 117	Lake Benton	MN	56149	Lake Benton 35	27007	\$ 10,329.75	\$ 7,788.75	\$ 7,747.31	5/17/2010	638	
Redwood	Redwood	B42179	RP319-21-03 (04-04)	Dolan	Jeremy	29717 Crown Ave	Vesta	MN	56292	Vesta 29	27031	\$ 1,040.00	\$ 2,025.00			620	9
Redwood	Redwood	B42179	RP319-22-03 (05-04)	Dolan	Dallas	18259 300 Street	Vesta	MN	56292	Underwood 12	27023	\$ 520.00	\$ 450.00	\$ 390.00	5/17/2010	620	2
Redwood	Redwood	B42179	RP319-06-04	Rohlik	Neal	27395 Fairview Ave.	Vesta	MN	56292	Granite Rock 11	27030	\$ 8,015.00	\$ 6,750.00	\$ 6,011.25	12/11/2010	638	1