



319/Clean Water Partnership/ Total Maximum Daily Loads Semi-Annual Report for Reporting Year 2010

Reporting Period: January 1 through June 30, 2009 (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:	Middle Fork Crow River Watershed Restoration and Enhancement Project Continuation	
2.	Project Sponsor:	Middle Fork Crow River Watershed District	
3.	Project Representative:	Chad Anderson	
4.	Email Address:	Chad@mfcrow.org	
5.	Loan Sponsor (if applicable):	Same as above	
6.	Contract Number:	B40796	Loan Number: SRF0169
7.	MPCA Project Manager:	Margaret Leach	
8.	Contract Start Date:	3/9/10	Contract End Date: 6/30/13
9.	Best Management Practice (BMP) Name (Refer to BMP List):	(357) Barnyard Run-Off Control, (393) Filter Strip, (410) Grade Stabilization Structure, (412) Grassed Waterway, (647) Habitat Development/Management, (643) Habitat Restoration, (472) Livestock Exclusion, (590) Nutrient Management, (329C) Residue Management, (570) Runoff Management System, (350) Sediment Basin, (580) Streambank and Shoreline Protection, (606) Subsurface Drain, (638) Water/Sediment Control Basin, (657) Wetland Restoration, (possible BMPs)	
10.	319/Clean Water Partnership (CWP) only - Nonpoint Source (NPS) Category (Refer to NPS Definition of Categories):		
		Primary	Secondary
	Category	(1000) Agriculture	(7400) Flow Regulations/Modification
			8592 (Other Historical Pollutants), 4000 (Urban Run-off Stormwater)
11.	319/CWP only - NPS Functional Category (Refer to NPS Definition of Categories):		
		Primary	Secondary
	Category	(11) BMP Design/Implementation	(101) Local (Specific Target) Education/Information Programs, (201) Nonpoint Source Program Overall Coordination
			(510) Water Quality Trend Assessment, (600) BMP Effectiveness Monitoring, (620) Watershed Assessments
12.	Waterbody type (refer to NPS Waterbody Type):	LK, RI, RS, ST	
13.	Hydrologic unit code (8 digits):	07010204	Latitude-longitude: 45°7'38"N/94°31'40" W
14.	319/ CWP only: Type of pollutant(s) addressed (refer to NPS Pollutants):	(2210) Algal Growth/Chlorophyll, (910) Phosphorus, (1100) Sedimentation-Siltation, (2100) Suspended solids, (2500) Turbidity (2200) Plants (Noxious Aquatic)	
15.	Ecoregion (refer to NPS Ecoregion):	5100 (North Central Hardwood Forest)	

16. Basin name (check all that apply):

- Lake Superior
- Lower Mississippi/Cedar
- 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 Middle Fork Crow River watershed contains a number of economically and ecologically important lakes with increasing population and development pressures. The hydrology of the watershed has been highly altered with nine dams creating reservoirs rather than natural lake systems, 15 ditches totaling nearly 140 miles of open channels, and a significant number of drained or filled in wetlands. The land use pressures and hydraulic changes have led to the degraded water quality for many of the lakes, while others are in need of protection from non-point sources of pollution (Phase I CWP, Oct 2002; updated by Wilson et al, 2004). This project continues the efforts initiated under the previous Clean Water Partnership grant to protect high quality lakes and restore lakes with poor water quality by: working to restore the hydraulic regime by restoring wetlands, providing educational opportunities that link people to the resources, implementing best management projects in areas identified as ecologically sensitive to reduce non-point pollution sources, and targeting specific lake management projects identified in the diagnostic studies which will harness internal loading in lakes where this is a significant problem.

The scope of the project is to improve and preserve water quality throughout the watershed focusing on three major efforts. 1) Provide educational programs which engage citizens in active resource management. 2) Continue to examine the overall water quality of the watershed via permanent river and lake monitoring stations as well as seasonal (temporary) stations. 3) Improve water resources by assisting individuals, groups and units of government to implement best management practices. The fourth element of this grant allows for the overall administration of the grant project.

Prior to the current reporting period: no activities were conducted prior to the current reporting period.

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.

Water Quality Goals: This project aims to improve water quality by utilizing a comprehensive approach that involves citizens actively engaging in their local resources through monitoring, provides for educational opportunities in all age groups and interests, and implements BMP projects in areas with the greatest impact in improving water quality where needed and protecting those resources with good water quality. The goals for specific lake and stream areas are provided below. Lakes with non-degradation goals are currently well within ecoregion values. Stream and watershed loading reductions are aimed at preserving high quality waters and enhancing those in need of rehabilitation.

Lake Water Quality Status and Goals

Lake	TP Status and goal	Secchi Status and Goal	Chlorophyll a Status and Goal	Overall Goal
Calhoun	↓ from 33 to 25 ppb	↑ from 5 to 8 feet	Remain at < 10 ppb	Improve
Diamond	↓ from 87 to <50 ppb	↑ from 5 to > 7 feet	↓ from 47 to <12 ppb	Improve
Elkhorn	Remain at 20 ppb	Remain at > 9 feet	Remain at < 10 ppb	Non-degradation
George	Remain at 28 ppb	Remain at >10 feet	Remain at < 10 ppb	Non-degradation
Green	Remain at < 20 ppb	Remain at 10 +/- 1.5 feet	Remain at 3-6 ppb range	Non-degradation
Long	Remain at 21 ppb	Remain at 9.5 feet	Remain at 6 ppb	Non-degradation
Monongalia	↓ from 38 to <35 ppb	↑ from 6 to 7 feet	Remain at < 10 ppb	Improve
Nest	↓ from 44 to <25 ppb	↑ from 7 to 8 feet	↓ from 13 to <12 ppb	Improve

Stream Total Phosphorus Loading Reduction Goals by Watershed Area

Watershed area	Current TP Range	Goal TP Range	Percent Reduction
Upper Watershed	75-90	56-67	25%
Nest Lake Watershed	51-60	38-45	50%
Calhoun Watershed	193-219	96-109	50%
Alvig Slough Watershed	132	66	50%
Diamond Lake Watershed	>200	108	50%

Education and Outreach Goals: Nine visits to area elementary and high schools per school year to implement water quality classes into school curricula. Two educational wksp/year offered to area residents; one volunteer training wksp/year with 10-12 citizens collecting stream and lake data; continued maintenance, development and improvement of the District website; 8-10 newsletters and/or newspaper articles; annual report of results and progress.

Monitoring and Evaluation: Monitoring efforts will continue at 14 stream/river sites and at 7 lake sites (these numbers may change as needed); frequency will range from 7-17 times per year, while lake monitoring will be conducted from 7-12 times per year. To promote additional interest in lake water quality monitoring, some local lake associations are increasing the frequency of sampling on their lakes by contributing 50% of the laboratory costs. To encourage volunteerism and watershed activism, much of the water quality monitoring will be conducted by locally trained volunteers. All water quality samples will be analyzed at certified labs and results will be submitted to STORET.

Best Management Practice Goals: Various agricultural, rural, shoreline, riparian, urban, stormwater and residential best management practices will be considered. Between 10 and 20 projects installed each year, depending on complexity and costs. Focus will be on reducing sedimentation and non-point runoff to reach the overall project reduction and protection goals. Up to \$200,000 in low interest loans will be available to increase landowner participation.

3. Methods to achieve Goals:

Education and Outreach Goals: The MFCRWD is working closely with local elementary and secondary school teachers to incorporate water quality education directly into the teachers' curricula. These efforts are part of an education initiative that the MFCRWD is undertaking. The initiative will be titled "STREAMS: Student-Targeted Resource Education, Awareness and Management in Schools. When appropriate education topics are identified for watershed residents, appropriate steps will be made to advertise, and if necessary, contract with consultants to assist with the delivery of the education. Website will be updated regularly and likely overhauled. Newsletters and news articles will be written by MFCRWD staff and/or newspaper staff.

Monitoring and Evaluation: A previously instituted volunteer monitoring program will continue - including training sessions to ensure proper collection and processing methods - allowing a number of volunteers to monitor area lakes on a schedule basis and a schedule/event basis for river/stream monitoring.

Best Management Practice Goals: the District's availability to cost share on qualifying best management practices and septic upgrades will be advertised via press releases, word of mouth, presentations, newsletters and newspaper articles. Projects will be designed and implemented using qualified consultants/engineers when necessary, and funds from other organizations and grants will be leveraged to the extent possible.

III. Semi-annual Report Information

1. Project activities completed during last six (6) months according to the program elements or tasks:

Education and outreach: The first 3 months of grant implementation were heavily focused on the education component. Several water quality lessons were planned with the teachers from the 4th grade class at ACGC elementary, 5th, 6th, 7th and 8th grade classes in New London-Spicer, and 7th and 8th grade classes at BBE; in total, lessons were delivered on 10 occasions. An open house was held in honor of the 5th Anniversary of the establishment of the MFCRWD, in which approximately 50 people attended; displays of the CWP Continuation grant and other projects were on display. An Earth Day event sponsored in-part by the MFCRWD was attended by approximately 800 people; a display of MFCRWD activities was put together and presented by staff. An article outlining the District's education activities, the collaborative donation by the Diamond Lake Association and the availability of cost share funds under the grant was written by MFCRWD staff and published in the Association's newsletter. A presentation on shoreland restoration activities in the MFCRWD was put together and delivered to approximately 20 members of the public at the DNR's "Our Water, Our Choices" conference. One article about the District's education efforts with the BBE school was written for submittal to the Belgrade, MN newspaper (publishing pending). One article summarizing 2009 lake water quality results was written for the Green Lake Association (publishing pending). One water quality lesson was delivered to children at the Spicer Library hour. One staff member attended the Minnesota Erosion Control Association's annual conference.

Monitoring: Preparatory work for the monitoring season was completed (ordering supplies, attending MPCA-required equipment training, arranging volunteers for the season, establishing monitoring plan, planning and delivery of training session for volunteers, etc.). Equipment was installed at permanent monitoring stations. Monitoring was conducted by

MFCRWD staff and volunteers on area lakes on 35 occasions and on area streams/river on 70 occasions (including replicate and blank samples). Two MFCRWD staff members canoed the upper reaches of the watershed to examine springtime flow conditions.

BMPs: A kickoff meeting for the Belgrade stormwater project was held with most potential partners present. Assistance was provided to the cities of Spicer and New London on their respective shoreland restoration projects. Additional stabilization on a private owner's shoreline was provided, and live stakes were installed at a shoreland restoration project. Site visits to property owner inquiries of 10 potential projects were conducted; cost share contracts for 4 BMP projects were signed, including three shoreland restoration projects on private property and one stormwater management project with the City of Belgrade. One site inspection for a septic upgrade was conducted.

Administration: Regular grant administrative duties were carried out as required, including budget monitoring and project tracking. The CWP Continuation work plan was submitted to the MPCA project manager and approved.

2. Challenges faced (optional):

3. Summary of monitoring data collected: Monitoring was conducted by MFCRWD staff and volunteers on area lakes on 35 occasions and on area streams/river on 70 occasions.

Lake data collected (excluding replicate/blank samples):

Lake	Site	TP (ppm) --- date	Secchi (ft)	Chl-a (ppb) --- date
Calhoun	CL 1	0.041 5/6/10	Not reported yet	7 5/6/10
		0.026 5/24/10		3 5/24/10
		0.020 6/2/10		5 6/2/10
		0.025 6/16/10		9 6/16/10
		0.019 6/28/10		4 6/28/10
Diamond	DL 3	0.041 5/7/10	Not reported yet	14 5/7/10
		0.044 5/17/10		11 5/17/10
		0.034 5/31/10		17 5/31/10
		0.089 6/21/10		80 6/21/10
Elkhorn	EL 1	0.014 5/6/10	Between 15-17.5 ft	4 5/6/10
		0.014 6/3/10		1 6/3/10
		0.016 5/3/10	Not reported yet	6 5/3/10
George	GeoL 1	0.014 5/16/10		5 5/16/10
		0.016 5/31/10		3 5/31/10
		0.011 6/27/10		4 6/27/10
		0.016 6/11/09		3 6/11/09
		0.012 5/2/10	Between 10-16.5 ft	6 5/2/10
Green	GL 1	0.012 5/17/10		2 5/17/10
		0.014 6/1/10		2 6/1/10
		0.009 6/16/10		6 6/16/10
		0.012 6/29/10		3 6/29/10
		0.010 5/17/10	Not reported yet	1 5/17/10
Long	LL 1	0.014 5/31/10		6 5/31/10
		0.011 6/15/10		3 6/15/10
		0.030 5/6/10	Between 6-9 ft	3 5/6/10
Monongalia	ML 1	0.037 6/3/10		9 6/3/10
		0.026 5/3/10	Not reported yet	3 4/27/09
Nest	NL 1	0.017 5/16/10		4 5/10/09
		0.016 5/31/10		4 5/26/09
		0.020 6/13/10		9 6/9/09
		0.025 6/27/10		10 6/22/09

4. Have all monitoring stations been established in STORET? Yes No

5. Is the data being routinely submitted for storage into STORET? Yes No To be submitted: November, 2010

6. Is the data being annually entered into E-Link? Yes No To be entered: November, 2010

7. Identify any significant findings and results of the project to date, as well as any unanticipated findings: As the project is in its first few months of implementation, no significant findings have occurred.

8. Describe specific (quantifiable, if possible) results achieved during this period:
 One work plan was submitted to MPCA, and approved. Water quality classes were delivered to area 4th, 5th, 6th and 8th grade classes on 10 occasions. One open house was held in honor of the 5th Anniversary of the establishment of the MFCRWD, with approximately 50 people in attendance. One Earth Day event sponsored in-part by the MFCRWD was attended by approximately 500 people. One article outlining the District's education activities was published in the Diamond Lake Association newsletter. One article about the District's education efforts was submitted to the Belgrade newspaper (publishing pending). One article summarizing 2009 lake water quality results was written for the Green Lake Association (publishing pending). One presentation on shoreland restoration activities in the MFCRWD was put together and delivered to approximately 20 people at the DNR's "Our Water, Our Choices" conference. The availability of funding and the leveraging of local lake association money was advertised during a presentation at the Diamond Lake Association's annual meeting. One

water quality lesson was delivered to 35 children at the Spicer Library hour. One staff member attended a Minnesota Erosion Control Association annual conference. One training session on the procedures and techniques of proper water quality sampling was delivered to 6 volunteer monitors; individualized training was provided to 3 additional volunteers. Monitoring was conducted by MFCRWD staff and volunteers on area lakes on 70 occasions and on area streams/river on 35 occasions (including replicate and blank samples). One kickoff meeting for the Belgrade stormwater project was held. Site visits to property owner inquiries of 10 potential projects were conducted; cost share contracts for 4 BMP projects were signed, including three shoreland restoration projects on private property and one stormwater management project with the City of Belgrade. One site inspection for a septic upgrade was conducted.

Current reporting period:

Phosphorus Load Reduction	0	lbs./year
Nitrogen Load Reduction	0	lbs./year
Sediment Load Reduction	0	lbs./year

9. Summarize any work plan changes:
None

10. List anticipated activities for next six (6) months:
Three shoreland restoration projects will be completed during the month of July. The Belgrade stormwater project is expected to be completed by the end of 2010. Additional formalization of the MFCRWD's education initiative, "STREAMS", will take place, and lessons in area schools will be delivered. Further advertising of the availability of cost share funds and low interest loans for BMPs and septic loans will occur. Weather permitting (low flows), steps will be made to conduct the first geomorphologic assessments. Data will be prepared for submittal to STORET, and steps will be made to conduct FLUX and possibly BATHTUB modeling. A summary of CWP activities will be written for the annual report. Project tracking, accounting and general grants management will be conducted.

11. List all products (documents, pamphlets, videos, maps, etc.) produced in this reporting period.
One newspaper article about the District's education efforts was written and submitted to a local newspaper while another article was published in a lake association newsletter; another article summarizing 2009 lake water quality results was written and submitted to a different lake association newsletter (publishing pending). Four BMP cost share contracts were drafted and signed.

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:

350,000

Total Match Amount (if applicable)

574,300 (in-kind and loan)

Total Project Amount:

924,300

Cumulative Grant Expenditures through this period:

8,724.29

Cumulative Match Expenditures through this period:

15,840.29

Total Cumulative Expenditures through this period:

24,564.58

Date form completed: 7/28/10

Please submit to: Margaret Leach