Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

WPLMN Final Progress Report

Watershed Pollutant Load Monitoring Network (WPLMN)

Doc Type: Contracts Final Report

Instructions on Page 5

I. Project information

Project title: Mississippi River (St. Cloud) Watershed Partnership Monitoring

Local Partner information:

Organization name: Sherburne SWCD

Street address: 14855 Highway 10

City: Elk River State: MN Zip code: 55330

Primary contact name: Francine Larson Phone: 763-241-1170 x131

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Field contact name: Frances Gerde Phone: 763-241-1170 x133

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Reporting period:

Start date: 1/15/2015 *(mm/dd/yyyy)* End date: 6/30/2016 *(mm/dd/yyyy)*

Project details:

Basin (check all that apply):

☐ Red River ☐ Rainy River ☐ Lake Superior ☐ Minnesota ☐ Lower Mississippi ☐ St. Croix ☒ Upper Mississippi

Major Watershed(s): Mississippi River (St. Cloud) Hydrologic unit code(s): 07010203

Name of eligible laboratory: MVTL

How many full-time equivalents (FTEs) worked on this project (total project hours/2,088 hours):

II. Activities completed

Table 1: Workplan activities

1. **Please list activities completed during the reporting period. Include task level detail as appropriate. Please separate activities by calendar year, if applicable.** Refer to the instructions for examples. (Insert more rows as needed by hitting the tab key in the last row/column.)

Objective	Description
1: Project oversight, Task A: Subcontract with CRWD	2015: Subcontract was executed with the CRWD to monitor at the S004-508 location. 2016: N/A, Sherburne SWCD took over monitoring for S004-508.
1: Project oversight, Task B: Expenditures and Invoices	2015: The District Manager submitted 17 invoices during the reporting period to our MPCA Project Manager. The District Manager and Water Resource Specialist participated in a WebEx training on invoicing. 2016: The District Manager submitted 5 invoices under the old contract in 2016 to our MPCA Project Manager. The District Manager participated in a WebEx training on invoicing.
1: Project oversight, Task C: Weekly telephone conference	2015: The District Technician participated in a majority of the weekly telephone conferences to update the MPCA Project Manager 2016: The District Technician participated in a majority of the weekly telephone conferences to update

	the MPCA Project Manager
1: Project oversight, Task D: Final Report	2016: The District Technician and District Manager completed and submitted the final progress report to the MPCA Project Manager on June, 30th 2016.
2: Stream monitoring, Task A: Field Training	2015: District Technician and Water Resource Specialist attended MPCA training in St. Cloud on February 8th which included data entry, monitoring procedures and program information. The District Technician and Water Resources specialist visited the three sites in February. In March the District Technician met with the MPCA project manager and DNR staff at the three sites. 2016: The District Technician participated in 3 WebEx trainings. District Technician met with DNR staff at the sites in June.
2: Stream monitoring, Task B: QAPP	2015: The Water Resource Specialist submitted the Quality Assurance Project Plan to Roger Fisher in February. Ice out occurred early March and samples were collected shortly after that. Field meter was calibrated according to the QAPP.
2: Stream monitoring, Task C: Acquire Supplies	2015: The Water Resource Specialist made arrangements with MVTL laboratories, Inc. for testing water quality samples. Monitoring equipment and supplies were purchased throughout the reporting period. 2016: The District Technician made arrangements with MVTL laboratories, Inc. for testing water quality samples. Monitoring equipment and supplies were purchased throughout the reporting period.
2: Stream monitoring, Task D: Sample Collection	2015: Ice out occurred first week in March, 2015. Depending on the site 16-22 samples were collected with 2 field duplicates at each site, see table 2 for specific details on samples collected. 2016: Ice out occurred first week in March, 2016. The first 7 samples collected were under this contract. No field duplicates were collected.
2: Stream monitoring, Task E: Calibration	2015: The field meter was calibrated in accordance to the WPLMN SOP. Sensors were checked regularly to ensure they were in good operational order. 2016: The field meter was calibrated in accordance to the WPLMN SOP. A new pH probe and DO membrane were purchased in February, 2016.
3: Data management, Task A: EQuIS	2015: Field data was submitted bi-weekly into the EQuIS template throughout the monitoring period. Final information was submitted to the MPCA Project Manager on October 30th, 2015. 2016: Field data was submitted bi-weekly into the EQuIS template throughout the monitoring period.
2: Data management, Task B: Compile Logs	2015: The District Technician entered site inspection information regulary into the template, organized sampling photos, and entered data into the calibration log accurately. A midterm site inspection form was submitted June 1st, 2015. A final site inspection form with photos and calibration log was submitted October 30th, 2015. 2016: The District Technician entered field data into the Canvas program and submits regular reports.

2. Please answer the following questions relating to the deliverables for the project.

a. Were any changes made to the Quality Assurance Project Plan during the reporting period?

☒ Yes ☐ No Revision date (mm/dd/yyyy): 2/1/2015

If yes, please summarize:

Excecution date

b. Was an Interim Progress Report submitted?

☐ Yes ☒ No Submittal date (mm/dd/yyyy): _____

If no, please describe why:

c. If applicable, were FLUX32 pollutant loads submitted to your MPCA Project Manager?

☐ Yes ☐ No ☒ N/A

Please list the sites and years where loads were calculated:

If no, please describe why:

The partner staff have not received FLUX32 training

d. Were you able to attend a majority of the weekly check-in telephone conferences during the project period?

☒ Yes ☐ No

If no, please describe:

e. Was a backup sampler used to collect any of the samples?

☒ Yes ☐ No

If yes, please describe when, who, if they were trained, and any other details:

4/10/15-Tiffany Determan sampled because main field staff was not available, she was trained.

Table 2: Lab analyte summary

3. Please enter the number of samples collected at each site for each analyte over the reporting period. Refer to the instructions at the end of this report for an example of the completed table. Please describe conditions when either sample count was more or less than what is specified in the workplan. A Microsoft Excel template is also available to complete this table. Please see instructions for more information. (Insert more rows as needed by hitting the tab key in the last row/column.)

Year	Site Type	Stream Name	EQuIS ID	TSS	SVS	Turbidity	OP	TP	NOx	TKN	Comments
2015	Subwatershed	Elk River	S000-278	24	24	24	24	24	24	24	All major events had adequate samples and did not require the use of all samples outlined in the workplan
2015	Subwatershed	St. Francis	S002-952	24	24	24	24	24	24	24	All major events had adequate samples and did not require the use of all samples outlined in the workplan
2015	Subwatershed	Clearwater	S004-508	18	18	18	18	18	18	18	All major events had adequate samples and did not require the use of all samples outlined in the workplan
2016	Subwatershed	Elk River	S000-278	7	7	7	7	7	7	7	first 7 samples of 2016 were included in this contract
2016	Subwatershed	St. Francis	S002-952	7	7	7	7	7	7	7	first 7 samples of 2016 were included in this contract
2016	Subwatershed	Clearwater	S004-508	7	7	7	7	7	7	7	first 7 samples of 2016 were included in this contract

Table 3: QA/QC samples summary

4. Please complete the table below. The table should include actual results for the original and duplicate samples over the project period. The RPD should be calculated. Provide additional information in the comments about site conditions, sampling error, etc., if known. A Microsoft Excel template is also available to complete this table. Please see instructions for more information. (Insert more rows as needed by hitting the tab key in the last row/column.)

Stream Name	Date		TSS	RPD	SVS	RPD	Turbidity	RPD	DOP	RPD	TP	RPD	NOx	RPD	TKN	RPD
Elk River	6/22/15	Sample	17.0	5.7	11.0	9.5	10.0	0.0	0.014	7.4	0.120	1.7	0.50	2.0	1.00	46.2
		QA/QC	18.0		10.0		10.0		0.013		0.122		0.51		1.60	
St. Francis	6/22/15	Sample	7.0	15.4	4.0	40.0	3.6	8.7	0.010	26.1	0.062	0.0	0.05	0.0	1.60	13.3
		QA/QC	6.0		6.0		3.3		0.013		0.062		0.05		1.40	

Clearwater	5/26/15	Sample	2.0	85.7	2.0	85.7	2.8	19.6	0.005	0.0	0.023	4.3	0.05	0.0	0.50	46.2
		QA/QC	5.0		5.0		2.3		0.005		0.024		0.05		0.80	
Elk River	10/20/15	Sample	2.0	0.0	2.0	0.0	7.9	63.3	0.021	4.9	0.045	0.0	1.01	8.5	0.70	0.0
		QA/QC	2.0		2.0		4.1		0.020		0.045		1.10		0.70	
St. Francis	10/20/15	Sample	2.0	0.0	2.0	0.0	8.5	2.3	0.020	0.0	0.047	4.2	0.13	7.4	0.70	54.5
		QA/QC	2.0		2.0		8.7		0.020		0.049		0.14		0.40	

Comments:

6/22/2015 - Water was full of debris from earlier storm. Sample temperatures were not to standard upon arrival from being shipped.

10/20/2015 - quite a bit of debris from leaves in the water could have accounted for high Turbidity RPD value.

5. Please answer the following questions *and* provide comments.

Were you comfortable with your level of training and current ability to:

a. Collect stream samples over the entire range of the hydrograph? ☒ Yes ☐ No

Comments:

It got easier to judge the best times to grab samples before, during and after storm events in order to get the full range of the hydrograph as the sampling season went on. The number of storms in the spring made it a little tricky to collect

b. Calibrate and use the field meter and equipment? ☒ Yes ☐ No

Comments:

Field meter was calibrated as needed

c. Enter data and information into the MPCA templates and logs? ☒ Yes ☐ No

Comments:

2015: Bi-weekly Equis templates were sent to Jim MacArthur. Mid term site inspection form was sent in June. Final equis template, site inspection form, pictures, and calibration forms were sent the 1st of November.
2016: Bi-weekly Equis templates were sent to Jim MacArthur. Data and photos is submitted to Canvas.

d. Use the FLUX32 model and submit pollutant load data and supporting information? ☐ Yes ☒ No

Comments:

FLUX32 was not used

e. Complete and submit invoices? ☒ Yes ☐ No

Comments:

f. Complete the Interim Progress Report? ☐ Yes ☒ No

Comments:

6. Describe in detail any problems, delays, or difficulties that occurred in fulfilling the requirements of the workplan. How did you resolve these problems?

My biggest sampling issue was the 6/22/15 sample that arrived below temperature standard. I packed the cooloer with more ice after that incident.

7. Were there any change orders and/or amendments to the contract and workplan? If yes, summarize the changes.

☒ Yes ☐ No

Comments:

Change orders were made to move funds in order to spend more during the contract period as we had extra after the 2015 monitoring season.

8. If there are unspent funds, please list the Objective and Task and explain the reason for the unspent funds:

There are unspent funds in Project oversight and Data management, the simple answer is an over estimation when calculating

9. Please provide any constructive feedback regarding the WPLMN (training, forms, program directives, etc.):

III. Budget information

Budget item	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Total expended
Objective title:	Project Oversight	Stream Monitoring	Data Management			
Personnel: wages and benefits						
Staff #1: No. of hours 78	$ 3120.00	$ 0.0	$ 0.0	$	$	$ 3120.00
Staff #2: No. of hours 207	$ 2040.00	$ 4640.00	$ 1600.00	$	$	$ 8280.00
Staff #3: No. of hours 59	$ 513.20	$ 1302.00	$ 550.00	$	$	$ 2365.20
Laboratory analyses: No. of stream samples 87	$	$ 8373.50	$	$	$	$ 8373.50
Travel reimbursement: No. of miles 951.54	$ 46.17	$ 467.66	$	$	$	$ 513.83
Equipment	$	$ 2735.40	$	$	$	$ 2735.40
Monitoring supplies	$	$	$	$	$	$
Shipping	$	$ 540.54	$	$	$	$ 540.54
Training and materials	$	$	$	$	$	$
Other *(describe the activity and cost – be specific):*						
	$	$	$	$	$	$
	$	$	$	$	$	$
Column total:	**$5,719.37**	**$18,059.10**	**$2,150.00**	**$ 0.00**	**$ 0.00**	**$25,928.47**