

### Project information

Local partner: Kanabec SWCD Contact name: Deanna Pomije  
 Contact phone number: 320-679-3982 Budget amount: \$46,410.85  
 Contact email: Deanna@KanabecSWCD.org  
 Project title: Snake Watershed - Cycle 2  
 Reporting time period: Start date (mm/dd/yyyy): 1/1/2018 End date (mm/dd/yyyy): 12/31/2018

### Section I – Workplan

1. **Were the following deliverables submitted to the Minnesota Pollution Control Agency (MPCA) by the due dates listed within your workplan?**

Quality Assurance Project Plan	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date submitted (mm/dd/yyyy):	<u>4/27/2017</u>
Field and Laboratory Data	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date submitted (mm/dd/yyyy):	<u>10/05/2018</u>
Stream Photos (If applicable)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date submitted (mm/dd/yyyy):	<u>10/5/2018</u>
Interim Progress Report	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date submitted (mm/dd/yyyy):	<u>12/31/2017</u>

2. **Describe progress monitoring each of your stream and/or lake sites over the course of the entire time period. Complete Table 1 describing the number of scheduled samples, by parameter, and indicate the number of samples actually collected (include QA/QC sampling).**

**In the comments field of Table 1, provide details regarding missed sampling events, noteworthy or adverse site conditions (i.e. drought or low flow, upstream construction, high waterfowl activity, beaver impoundments, or feedlot activity), field meter malfunction, sampling errors, or flagged laboratory samples (holding time or temperature exceedances). Add rows as necessary by placing cursor in the last row of last column and hit tab.**

**Table 1. Monitoring summary**

Site ID#	Scheduled sampling		Actual sampling		Comments
	Parameter	No.	Parameter	No.	
33-0033-00-202	TP, Chl-A, Sulfate	6	TP, Chl-A, Sulfate	6	Make up sample in May for missed 2017
33-0033-00-202	Chloride, Hardness	1	Chloride, Hardness	1	
33-0034-00-201	TP, Chl-A	6	TP, Chl-A	6	Make up sample in May for missed 2017
33-0034-00-201	Chloride, Hardness	1	Chloride, Hardness	1	
58-0118-00-201	TP, Chl-A	11	TP, Chl-A	7	Landowner availability changed. MPCA dropped site. Sample over temp guidelines.
58-0118-00-201	Chloride, Hardness	1	Chloride, Hardness	1	
30-0057-00-201	TP, Chl-A	11	TP, Chl-A	11	One sample exceeded temp guidelines
30-0057-00-201	Sulfate	6	Sulfate	6	
30-0057-00-201	Chloride, Hardness	1	Chloride, Hardness	1	
01-0064-00-201	TP, Chl-A	11	TP, Chl-A	10	Extra sample made up in Sept. for 2017, two samples exceeded temp guidelines, dropped

01-0064-00-201	Sulfate	6	Sulfate	5	Make up sample in Sept. from 2017, dropped missed sample from May 2017, because of late ice out in 2018 only one sample could be taken that month.
01-0064-00-201	Chloride, Hardness	1	Chloride, Hardness	1	
S003-638, S003-533, S004-066, S003-528	TSS, TP	11	TSS, TP	11	
S003-638, S003-533, S004-066, S003-528	Chloride, Hardness	2	Chloride, Hardness	2	
S003-638, S003-533, S004-066, S003-528	Ecoli	16	Ecoli	16	Made up sample in mid-June from 2017 from equipment malfunction
S001-727, S004-067	TSS, TP	11	TSS, TP	11	
S001-727, S004-067	Chloride, Hardness	2	Chloride, Hardness	2	
S009-455	TSS	11	TSS	11	
S009-455	TP	19	TP	19	Make up mid-sept from 2017, equipment malfunctions
S009-455	Chl-A	17	Chl-A	17	Make up mid-sept from 2017, equipment malfunctions
S009-455	Chloride, Hardness	2	Chloride, Hardness	2	
S009-455	Ecoli	16	Ecoli	16	Make up mid-June from 2017, equipment failure
S004-103	TSS	11	TSS	11	
S004-103	Sulfate	11	Sulfate	12	Late July and Mid-Sept make up from 2017 equipment failure and Sept. deadline missed
S004-103	TP	19	TP	19	
S004-103	Chl-A	17	Chl-A	17	Mid-Sept make up from 2017, equipment failure
S004-103	Chloride, Hardness	2	Chloride, Hardness	2	
S003-531	TSS, NO <sub>2</sub> +NO <sub>3</sub> , TP	11	TSS, NO <sub>2</sub> +NO <sub>3</sub> , TP	11	
S003-531	Chloride, Hardness	2	Chloride, Hardness	2	
S003-531	Ecoli	16	Ecoli	16	Make up mid-June from 2017, equipment failure
S006-131	Sulfate	9	Sulfate	9	
S006-131	TP, Chl-A	17	TP, Chl-A	17	Make up mid-Sept from 2017, sept deadline missed
S003-529	TP, Chl-A	17	TP, Chl-A	17	Make up mid-Sept from 2017, sept deadline missed
					Approximately 13 sample events (coolers) resulted in sample temperatures ranges, where all samples did not fall within protocol guidelines. Ranges of samples varied and weren't specific to which sample they corresponded. All outliers were flagged by the lab.

**3. Were you successful in fulfilling the measures for success using the methods detailed within your workplan?**

Overall yes we were successful. Shipping was constant manageable struggle. Once we learned the schedule of the two local shipping options; we were better equipped to handle shipping. We tried to follow the QAPP plan. When called by the lab on a questionable sample; we rejected them when not within the allowable quality control parameters. At times this was unclear when discussing this with MPCA staff. With samples outside the quality control parameters; are the results discarded or is the discrepancy just noted in the record. We will be very interested in seeing the end results of all this monitoring. We will be curious to see; if there are any waters taken off the impairment list or sadly added.

**4. Were there any changes to your workplan that were specific to staff and/or monitoring locations? If yes, describe the related change order(s).**

Yes, for 2018 we planned to hire a summer conservation assistant to help with SWAG monitoring. This increased our pay rate for staff 3 from \$10 to \$12/hr. Our 2017 summer conservation assistant was at a lower rate, as this was a Conservation Corps Intern. So our work plan amendment effective 6/15/18, increased staff 3 time for objective 1-3. We also lowered our staff time under volunteer recruitment for 2018, as we already had most of our lake monitoring volunteers in place. This amendment, under objective 2, lowered staff 1 funds and increased staff 2 funds, based on who is doing work under the specific workplan objectives. Devils Lake in Pine County (58-0118-00-201) was dropped as a monitoring site mid-summer 2018, due to our volunteer not able to continue monitoring. In 2017 we had a different volunteer on Devils Lake, whom did not live on the lake.

**5. Provide an annual quality assurance assessment that includes the following elements. Please note, a quality assurance assessment is only required with this report if duplicate samples were collected during the second year of monitoring.**

- A. Submit field meter calibration records as an attachment to this report (records not previously submitted with Interim Report).
- B. Complete Table 2 presenting quality control sample results with columns showing comparison to lab method detection limit for sampler blanks, and the relative percent difference (RPD) for field duplicates (see the *SWAG Quality Assurance Project Plan*). Use the “maximum expected relative percent difference” values presented below to assess RPD on field duplicates. Field duplicates with values in excess of the expected RPD may be an indication of high variability within the lake or stream, which is useful for data interpretation. Use the comment field to note RPD or sampler blank results outside of expectations.

$$RPD = (Sample\ Result - Duplicate\ Result) / ((Sample\ Result + Duplicate\ Result) / 2) \times 100$$

**Example:** Sample result = 0.112 Duplicate result = 0.099

$$RPD = (0.112 - 0.099) / ((0.112 + 0.099) / 2) \times 100 = 0.013 / (0.211 / 2) \times 100 = 12\%$$

**Note:** Add rows as necessary by placing cursor in the last row of last column and hit tab.

**Table 2. Quality control sample results and analysis**

Date (mm/dd/yyyy)	Site ID#	Analyte	Sampler blanks		Field duplicates		RPD	Comments
			Result	Detection limit	Sample result	Duplicate result		
	Quality control samples	not taken in 2018.	All done in 2017.					

## Section II – Participants in project

**6. Complete Table 3 if volunteers were involved with lake and/or stream monitoring.**

**Tennessen warning:** Pursuant to Minn. Stat. § 13.43, information you are asked to provide is classified as private data on individuals as described in Minn. R. 1205.0200, subp. 9, Minn. R. 1205.0400 and Minn. Stat. § 13.02, subd. 12 (home contact information). You are not legally required to submit private citizen data; however, if provided, the MPCA will contact and invite citizens to join the Citizen Monitoring Program (CMP) at the conclusion of your agreement. All private citizen information is kept secure and is not released to parties or individuals outside of SWAG or CMP.

**Table 3. Volunteer contact information**

Waterbody	Site ID#	Contact name	Address	Telephone	Email address
Bear Lake	01-0064-00-201	Lois & Dick Moroney	25151 160 <sup>th</sup> Ln McGrath MN 56350	320-592-3033	Imoroney@citlink.net
Devils Lake, Kanabec	33-0033-00-202	Suzanne & Jim Brothen	1565 Devils Lake Dr Mora MN 55051	651-785-6908	

Upper Rice	30-0057-00-201	Paul Weingart	1618 140 <sup>th</sup> Ave Ogilvie MN 56358	320-272-9951	Jpesk9@gmail.com
Mora Lake	33-0034-00-201	Randy Renalds	424 Wood St N Mora MN 55051	320-679-6402	

### Section III – Budget

**7. Were there any changes to your budget or equipment and supplies list? If yes, describe the related change order(s) and/or amendments.**

See the attached final budget, where the total summary showed a 68% expenditure. It is worth noting that all water monitoring (sonde or other) units need a new pH probe every year, due to their ~9 month life expectancy. A workplan revision effective 6/15/18 adjusted our travel reimbursement to the federal mileage rate of \$0.545/mi. So the mileage amount for 2018 was increased, while we lowered shipping expenses only slightly and lowered our training materials as this was over estimated initially. With the anticipated workplan budget we fully spent down the following categories: staff 2 under volunteer recruitment and lab testing on the streams. The following items we came close to spending down completely: staff 2 time under data management and lab testing on the lakes. There were concerns initially of staying within all the objective budget line items. The workplan revision this year helped ensure we had enough funds in each category. Also the periodic phone check-ins with MPCA staff were helpful to ensure we were following the varied monitoring schedule, workplan and staying within budget.