



ADMINISTRATIVE OFFICE: 3235 Fernbrook Lane N • Plymouth, MN 55447  
763.553.1144 • Fax: 763.553.9326

February 13, 2020

Representatives  
Pioneer-Sarah Creek Watershed  
Management Commission  
Hennepin County, Minnesota

*The meeting packet for this meeting  
may be found on the Commission's website:  
[http://www.pioneersarahcreek.org/minutes--  
meeting-packets.html](http://www.pioneersarahcreek.org/minutes--meeting-packets.html)*

Dear Representatives:

A regular meeting of the Pioneer-Sarah Creek Watershed Management Commission will be held Thursday, February 20, 2020, at 6:00 p.m., at the Discovery Center, 5050 Independence Street, Maple Plain, MN.

A light supper will be served at the regular meeting. **RSVPs are requested** so that the appropriate amount of food is available. At the time of your response, please let us know if you will be eating supper with us.

In order to ensure a quorum for the regular meeting, please telephone 763.553.1144 or email me at [judie@jass.biz](mailto:judie@jass.biz) to indicate if you or your Alternate will be attending. It is your responsibility to ascertain that your community will be represented at the regular meeting.

Regards,

Judie A. Anderson  
Administrator  
JAA:tim

cc:	Alternates	Andrew Vistad, Kaci Fisher, Hakanson-Anderson
	Paul Stewart, Kirsten Barta, HCEE	City Clerks
	Brian Vlach, TRPD	Met Council
	Joel Jamnik, Attorney	official newspapers
	Ed Matthiesen, Diane Spector, Wenck Assocs.	

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**REGULAR MEETING AGENDA**  
**February 20, 2020 • 6:00 p.m.**  
**Maple Plain City Hall • The Discovery Center**  
**5050 Independence Street, Maple Plain**

*The meeting packet can be found on the Commission's website:*

<http://pioneersarahcreek.org/pages/Meetings/>

1. Call to Order.
2. Approve Agenda.\*
3. Consent Agenda.
  - a. January meeting minutes.\*
  - b. Monthly Claims/Treasurer's Report.\*
4. Open forum.
5. Action Items.
  - a. Election of officers. *Currently:*

1) Chair – Joe Baker	2) Vice Chair – John Fay
3) Secretary – Benda Daniels	4) Treasurer – John Tschumperlin
6. Old Business.
7. New Business.
  - a. Cost Share Projects
    - 1) Presentation\*
    - 2) Overview\*
8. Watershed Management Plan. *(also see next page.)*
  - a. Homework.\*
  - b. Agency responses
 

1) BWSR*	2) DNR*	3) MPCA*	4) Met Council*
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  - c. Progress update.\*
9. Education.
  - a. 2020 Salt Symposium.\*
    - 1) Sponsorsip.\*
10. Grant Updates.
  - a. Baker Ravine 2019 Update and Construction Photos.\*  
Links to all contract documents are available on the website.  
  
In answer to a query from the January meeting, both the Commission and the Park District are owners of this project and would share in any overruns. Since no percentage of ownership is indicated in the agreement, their shares would be 50% each.
11. Communications.

12. Staff Report.\*
  - a. The 2019 and 2020 Works Plans will be emailed to the Commissioners by February 28. Please review them and be prepared to comment and accept at the March 19 meeting.
13. Commissioner Reports.
14. Other Business.
15. Adjournment. (Next scheduled meeting: March 19, 2020.

#### **Watershed Management Plan – timeline:**

November 13, 2019	Commission 60-day notice of plan kickoff and request for information
November 21, 2019	Award contract
<b>December-January 2020</b>	<b>Compile data, background work</b>
January 16, 2020	Kickoff meeting
<b>Feb-Mar-Apr</b>	<b>Commission, TAC, CAC meetings, Open House</b>
<b>April 16, 2020</b>	<b>Preliminary draft for informal review</b>
<b>May 21, 2020</b>	<b>Review preliminary comments and revise plan</b>
<b>June 18, 2020</b>	<b>Review final draft plan and authorize start of 60 day review</b>
<b>August 21, 2020</b>	<b>Approximate end of 60-day review</b>
<b>Sept 17, 2020</b>	<b>Public Hearing</b>
<b>Sept-Oct-Nov 2020</b>	<b>Agency review and approval</b>
<b>Dec -Jan 2021</b>	<b>Commission adoption</b>

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## REGULAR MEETING MINUTES January 16, 2020

**1. CALL TO ORDER.** A regular meeting of the Pioneer-Sarah Creek Watershed Management Commission was called to order at 5:33 p.m., Thursday, January 16, 2020, by Chair Joe Baker at Maple Plain City Hall, 5050 Independence Street, Maple Plain, MN.

**Present:** Mark Workcuff, Greenfield; Joe Baker, Independence; Brenda Daniels, Loretto; John Fay, Maple Plain; Pat Wulff, Medina; John Tschumperlin, Minnetrista; Andrew Vistad, Hakanson-Anderson, Brian Vlach, Three Rivers Park District (TRPD); and Judie Anderson, JASS.

**Also Present:** Karen Galles and Paul Stewart, Hennepin County Environment and Energy (HCEE); and Diane Spector, Wenck Associates.

**2. AGENDA.** Motion by Wulff, second by Fay to approve the revised agenda. *Motion carried unanimously.*

**3. CONSENT AGENDA.** Motion by Tschumperlin, second by Wulff to approve the Consent Agenda, items a, b, and b2):

- a. **November Regular Meeting Minutes.\***
- b. **January Monthly Claims/Treasurer's Report/Quarterly Financials.\*** Claims total \$23,647.58.
- b.2) **Wenck Associates claim\*** in the amount of \$613.50.

*Motion carried unanimously.*

**b.1) Minnesota Native Landscapes claim\*** in the amount of \$91,615.72. Staff responded to questions from Fay regarding this claim. Motion by Fay, second by Tschumperlin to approve the MNL claim. *Motion carried unanimously.*

**4. OPEN FORUM.**

**5. ACTION ITEMS.**

a. **Schedule Fourth Generation Plan Technical Advisory Committee (TAC) and Citizen Advisory Committee (CAC) meetings.** Spector and Amy Juntunen, JASS, will contact the cities to schedule these meetings, ideally prior to the next regular meeting on February 20.

b. **Annual Appointments.** Motion by Daniels, second by Wulff to make the following appointments for the year 2020.

- 1) Official depositories - 4MFund/US Bank
- 2) Deputy Treasurer -Judie Anderson
- 3) Auditor - Johnson & Company
- 4) Official newspaper – *Crow River News*.

*Motion carried unanimously.*

c. Included in the meeting packet is the **2019 Work Plan.\*** The Commissioners were asked to review the plan in anticipation of the Fourth Generation Plan kickoff meeting which follows this meeting. The plan will be updated by Staff with the activities that were undertaken in 2019. Staff will also begin to develop the **2020 Work Plan** for the Commission's input.

**6. OLD BUSINESS.**

Greenfield • Independence • Loretto • Maple Plain • Medina • Minnetrista

\*Included in meeting packet.



7. **NEW BUSINESS** (see Staff Report\*).

8. **EDUCATION.** The Board of Water and Soil Resources (BWSR) has been awarded \$900,000 from the Environment and Natural Resources Trust Fund (ENRTF) to fund the **“Lawns to Legumes” program.\*** The program was described at the November meeting. More information is included in this month’s meeting packet and can also be found at <https://bwsr.state.mn.us/lawns-legumes-your-yard-can-bee-change>. Staff will update the Commission’s website and Facebook to include this information and also contact cities to request that they promote the individual grants program to their residents.

9. **GRANT OPPORTUNITIES.**

**Baker Park Ravine.** Wenck weekly updates\* were included in the packet along with links to project photos. Vlach reported that the channel work is substantially completed. He also provided a spreadsheet showing budgeted vs actual costs to date and a copy of Change Order 1 increasing the contract amount by \$7,502.00. CO #1 consists of stabilizing an additional area of erosion discovered at the outlet of the existing settling pond, reducing the amount of sediment entering the lake. Currently, the project is over budget. Staff was asked to review the contract to determine who the owners of the project are and who would share in any loss at project-end.

10. **WATERSHED MANAGEMENT PLAN.** *Working Schedule.*

- a. ~~November 13, 2019 – 60 day notice to cities, agencies, other stakeholders.~~
- b. ~~November 21, 2019 – Award contract.~~
- c. December-January 2020 - Compile data, background work
- d. ~~January 16, 2020 – Kickoff meeting~~
- e. Feb-Mar-Apr Commission, TAC, CAC meetings, Open House
- f. April 16, 2020 - Preliminary draft for informal review
- g. May 21, 2020 - Review preliminary comments and revise plan
- h. June 18, 2020 - Review final draft plan and authorize start of 60 day review
- i. August 21, 2020 - Approximate end of 60-day review
- j. Sept 17, 2020 - Public Hearing
- k. Sept-Oct-Nov 2020 - Agency review and approval
- l. Dec -Jan 2021 - Commission adoption

11. **COMMUNICATIONS.**

12. **STAFF REPORT.\***

a. **Cost Share Projects.** Two projects are in development in the watershed – one in Independence on Lake Independence and the other in Greenfield along an unnamed stream. More information will be provided at the February meeting.

b. **Zuhrah Shrine Horse Facility.** Baker, Vlach, Galles and Stewart, along with Danny Nadeau from County Commissioner Jeff Johnson’s office, met with Zuhrah Shrine Horsemen Ranch Manager Steve Pool and Zuhrah Shrine Horsemen Board Members to explore solutions to the wetland flooding. The goals are to provide the Horsemen with more predictable pasturing and feeding conditions year-to-year, while also benefitting natural resources. Next steps will be to look at hydrologic restoration options, BMPs for the pasture, and a farm management plan. A follow-up meeting where additional information will be presented on wetland banks and other wetland restoration approaches will be scheduled for early February. The Horsemen also agreed to work with County staff to get their wetland complex formally delineated.

**13. COMMISSIONER REPORTS.**

- a. **Greenfield.**
- b. **Independence.** Baker noted that two snowmobilers have gone through the ice on Lake Independence already this winter.
- c. **Loretto.**
- d. **Maple Plain.** Fay announced that the Iron Exchange Brewery is open. The Maple Plain Council approved a general fund balance that remained level with the preceding year and a tax levy with less than a \$1,000 increase.
- e. **Medina.**
- f. **Minnetrista.**

**14. OTHER BUSINESS.**

- a. **Election of Officers** will occur at the February meeting. Current officers are:

- 1) Chair – Joe Baker
- 2) Vice Chair – John Fay
- 3) Secretary – Benda Daniels
- 4) Treasurer – John Tschumperlin

- b. The **next regular meeting** is scheduled for February 20, 2020.

**15. ADJOURNMENT.** There being no further business, motion by Daniels, second by Fay to adjourn. *Motion carried unanimously.* The meeting was adjourned at 6:42 p.m.

Respectfully submitted,



Judie A. Anderson, Recording Secretary  
JAA:tim

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**Pioneer-Sarah Creek Watershed  
Cash Disbursements Journal  
For the Period From Feb 1, 2020 to Feb 29, 2020**

Filter Criteria includes: Report order is by Date. Report is printed in Detail Format.

<b>Date</b>	<b>Check #</b>	<b>Account ID</b>	<b>Line Description</b>	<b>Debit Amount</b>	<b>Credit Amount</b>
2/14/20	1563	21000	Invoice: 2019 HAA	468.70	
		10100	Hakanson Anderson		468.70
2/14/20	1564	64003	Baker Ravine Stabilization	5,137.45	
		58200	4th Generation Management Plan	4,223.40	
		10100	Wenck Associates, Inc.		9,360.85
2/14/20	1565	51100	Administration	1,681.55	
		51100	Meeting-related	2,065.95	
		51100	Bookkeeping/TR/Audit	571.27	
		51100	Annual Report	172.00	
		58210	Management Plan	535.69	
		51400	Website	32.50	
		57000	Education	10.44	
		51120	Project Reviews	54.61	
		51125	Baker Ravine	155.77	
		10100	Judie Anderson's Secretarial Service		5,279.78
2/14/20	1566	21000	Invoice: 2019 HCEE	6,264.38	
		10100	Hennepin County Treasurer		6,264.38
<b>Total</b>				<b>21,373.71</b>	<b>21,373.71</b>



3601 Thurston Avenue  
Suite 101  
Anoka, MN 55303

Pioneer Sarah Watershed Management Commission  
3235 Fernbroke Lane  
Plymouth, MN 55447

Invoice number 43451  
Date 01/31/2020

Project **PSC901-2019 GENERAL ENGINEERING  
FOR PIONEER SARAH WMC 2019**

Professional Services Provided Through 12/31/2019

## GENERAL ENGINEERING

### Professional Fees

	Date	Hours	Rate	Billed Amount
Andrew Vistad	12/13/2019	5.00	92.00	460.00
<i>TECHNICAL ADVISOR TRANSITION MEETING</i>				
<b>PROFESSIONAL FEES SUBTOTAL</b>				<b>460.00</b>

### Reimbursables

	Date	Units	Rate	Billed Amount
MILEAGE	12/13/2019	15.00	0.58	8.70
<b>REIMBURSABLES SUBTOTAL</b>				<b>8.70</b>
<b>GENERAL ENGINEERING SUBTOTAL</b>				<b>468.70</b>
<b>AMOUNT DUE THIS INVOICE</b>				<b>468.70</b>

Invoice Summary		Current Billed	Prior Billed	Total Billed
Total		468.70	0.00	468.70

**Invoice**

February 7, 2020

Invoice No: 12000528

Ms. Judie Anderson  
 Pioneer-Sarah Watershed Management Comm.  
 3235 Fernbrook Lane  
 Plymouth, MN 55447



Responsive partner.  
 Exceptional outcomes.

Project Manager Lucius Jonett

Project B1508-0007 Baker Ravine Stabilization

**Professional Services Through January 31, 2020**

Phase 08 Construction Observation

Construction Observation

**Professional Personnel**

	<b>Hours</b>	<b>Rate</b>	<b>Amount</b>	
Bossert, Seth	30.10	114.00	3,431.40	
Jonett, Lucius	8.70	151.00	1,313.70	
Matthiesen, Edward	1.90	195.00	370.50	
Totals	40.70		5,115.60	
<b>Total Labor</b>				<b>5,115.60</b>

**Unit Billing**

00-WAI Vehicle Golden Valley

**21.85**

**Phase Total \$5,137.45**

**Total Invoice Amount \$5,137.45**

	<b>Current</b>	<b>Prior</b>	<b>Total</b>
<b>Billing Summary</b>	<b>5,137.45</b>	<b>64,807.83</b>	<b>69,945.28</b>

**Invoice**

February 10, 2020

Invoice No: 12000556

Amy Juntunen  
 Pioneer-Sarah Watershed Management Comm.  
 3235 Fernbrook Lane  
 Plymouth, MN 55447



Responsive partner.  
 Exceptional outcomes.

Project Manager Diane Spector

Project B1508-0008 4th Generation Watershed Management Plan

**Professional Services Through January 31, 2020****Professional Personnel**

	<b>Hours</b>	<b>Rate</b>	<b>Amount</b>	
Spector, Diane	19.50	190.00	3,705.00	
Stone, Alicia	8.10	64.00	518.40	
Totals	27.60		4,223.40	
<b>Total Labor</b>				<b>4,223.40</b>
<b>Total Invoice Amount</b>				<b>\$4,223.40</b>

	<b>Current</b>	<b>Prior</b>	<b>Total</b>
<b>Billing Summary</b>	<b>4,223.40</b>	<b>613.50</b>	<b>4,836.90</b>



# Technical Memo

**To:** Pioneer-Sarah Creek WMO Commissioners

**From:** Diane Spector

**Date:** February 14, 2020

**Subject:** Fourth Generation Plan Update

This report details Fourth Generation Watershed Management Plan project progress through January 2020.

**Budget status:**

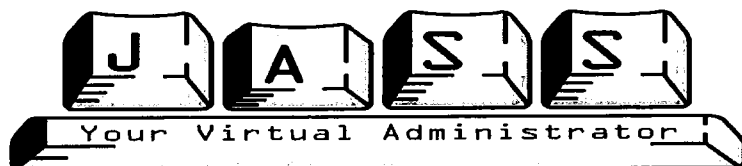
Budget	\$24,038.00
Through 1/31/20	\$4,836.90
Balance	\$19,201.10

**January 2020 Activities:**

- Review annual reports and begin preparing summary of progress
- Update lake water quality database and perform trend analysis
- Prep for and attend Commission kickoff meeting
- Review input submitted by agencies

**Expected February 2020 Activities:**

- Attend one TAC and one Commission meeting
- Review and summarize member city Comp Plans and LWMPs
- Review goals and policies
- Update problems and issues section of Plan
- Initiate public input process



Pioneer-Sarah Creek Watershed Management Commission  
3235 Fernbrook Lane Plymouth, MN 55447

3235 Fernbrook Lane  
Plymouth MN 55447

February 14, 2020

				Total Project Area	
<b>General Administration</b>					
Administrative		55.00	0.000		
Administrative	12.82	65.00	833.300		
Administrative - offsite	3.00	70.00	210.000		
Office Support	7.50	60.00	450.000		
Public storage	1.00	80.08	80.080		
Data Processing/File Mgmt	0.17	55.00	9.350		
General filing		60.00	0.000		
Archiving	1.23	65.00	79.950		
Reimbursable Expense	18.87	1.00	18.870	1,681.550	Administration
<b>Meeting packets, attendance, Minutes and Meeting follow-up</b>					
Administrative	1.83	60.00	109.800		
Administrative	18.28	65.00	1,188.200		
Admin - Offsite	6.17	70.00	431.900		
Reimbursable Expense	336.05	1.00	336.050	2,065.950	Meeting related activities
<b>Bookkeeping</b>					
Bookkeeping, budget, audit requests	6.58	65.00	427.700		
Treasurer's Reports	1.25	65.00	81.250		
Audit Prep	0.42	65.00	27.300		Bookkeeping/TRs
Reimbursable Expense	35.02	1.00	35.020	571.270	Audit Prep
<b>Annual Report/Work Plans</b>					
Secretarial		55.00	0.000		
Administrative	2.60	65.00	169.000		
Reimbursable Expense	3.00	1.00	3.000	172.00	Annual Report Work plans
				0.000	
<b>Management Plan and Amendments</b>					
Administrative		55.00	-		
Administrative	3.92	65.00	254.80		
Offsite	3.25	70.00	227.50		
Reimbursable Expense	53.39	1.00	53.39	535.69	Management Plan
<b>Website</b>					
Pages, links, uploads		55.00	0.000		
Administrative	0.50	65.00	32.500	32.500	Website
<b>Education, Strategic Planning</b>					
Administrative		55.00	0.000		
Administrative		65.00	0.000		
Offsite		70.00	0.000		
Reimbursable Expense	10.44	1.00	10.440	10.440	Education
<b>Project Reviews</b>					
Administrative		55.00	0.000		
Administrative	0.75	65.00	48.750		
File Management/Archiving		50.00	0.000		
Reimbursable Expense	5.86	1.00	5.860	54.610	Project Reviews
<b>Baker Campground Ravine</b>					
Secretarial		50.00	0.000		
Administrative	0.68	65.00	44.200		
Reimbursable Expense	111.57	1.00	111.570	155.770	Baker Ravine
				<b>5,279.780</b>	<b>5,279.780</b>




**Hennepin County**  
 Public Works

**Department of Environment and Energy**  
 701 Fourth Avenue South, Suite 700  
 Minneapolis, Minnesota 55415-1842

 612-348-3777, Phone  
 612-348-8532, Fax  
[hennepin.us/environment](http://hennepin.us/environment)
**Bill To:**
**Pioneer-Sarah Creek Watershed Management  
 Commission**  
**3235 Fernbrook Lane**  
**Plymouth, MN 55447**
**Invoice**
**Date**

1/21/20

**Contract**
**A199744**

Description	County Contribution	Total Amount
4th quarter 2019 invoice (October 1, 2019 to December 31, 2019)		
<ul style="list-style-type: none"> <li>Plan Review, Meeting Attendance, and other TA (62.5 hours)</li> </ul>		\$4,087.50
<ul style="list-style-type: none"> <li>WCA (10 hours)</li> </ul>		\$1,308.00
<ul style="list-style-type: none"> <li>Conservation promotion (4 hours)</li> </ul>	\$118.88	\$118.88
Education and Volunteer Monitoring Program		
<ul style="list-style-type: none"> <li>2 WHEP sites</li> </ul>	\$1,250.00	\$750.00
2019 Payments and other credits to-date		\$24,102.52
Accrued 2019 costs to-date		\$29,712.90
<b>AMOUNT DUE</b>		<b>\$6,264.38</b>

Make check payable to: Hennepin County Treasurer

Remit to: Hennepin County Accounts Receivable  
 300 South 6<sup>th</sup> Street  
 Mail Code 129  
 Minneapolis, MN 55487

Direct questions to: Karen Galles 612-348-2027



# HENNEPIN COUNTY

MINNESOTA



# Cost Share Projects 101

Pioneer-Sarah Creek Watershed Commission

# What is a cost share project?

- Projects that benefit soil and water health, traditionally offered through SWCDs with BWSR (state) funds
- Usually 75% reimbursed/25% landowner match cash or in kind
- Installed on private property using design standards and working with the landowner
- Usually a 10+ year life span with the landowner responsible for maintenance

# How it (basically) works

Generally the landowner will identify a problem and get in touch with staff:

1. Site visit with staff to go over the issue and possible ideas, decide if it's a project that will be pursued
  - If the project isn't a candidate for cost share, staff can still give advice or point the landowner in another direction
2. Design and contracting – landowner hires the contractors needed or does the work to design specs
3. Work is completed, inspected, and certified for payment
4. Projects are inspected at 1, 5, and 9 year intervals



# Common qualifying project types:

- Lakeshore restorations, buffers, streambank projects
- Nutrient/manure management
- Cover crops
- Windbreaks, shelterbelts
- Grassed waterways
- Alternative tile intakes
- Exclusion fencing/rotational grazing set up





# Agricultural projects





# Residential projects





# Questions

Kirsten Barta

[Kirsten.barta@Hennepin.us](mailto:Kirsten.barta@Hennepin.us) , 612-543-3373

Paul Stewart

[paul.stewart@Hennepin.us](mailto:paul.stewart@Hennepin.us) , 612-543-9409

Kris Guentzel

[Kristopher.guentzel@Hennepin.us](mailto:Kristopher.guentzel@Hennepin.us) , 612-596-1171

701 Building

701 4<sup>th</sup> Ave S, Suite 700

Minneapolis, MN 55415



# Cost Share Project Overview

## What is a cost share project?

Conservation practices installed (usually) on private land the benefit water quality and soil health. These projects are traditionally run through Soil and Water Conservation Districts (SWCDs) and funded by the Board of Water and Soil Resources (BWSR).

These projects are a traditional SWCD service and a great opportunity to get conservation on the land where it might not always be financially feasible or to expand a project to include some more water quality or soil health benefits that might not be included in a project where keeping cost to a minimum was a priority.

## How does it work?

Cost share projects are usually 75% reimbursed and 25% landowner match. Landowner match can be paid in kind or in cash. Match can also come from other sources such as watersheds, cities, lake associations, the only restriction is it cannot be matched with any kind of state funds.

Landowners hire a contractor or perform the work, and then are reimbursed the agreed upon amount with proper documentation after installation and certification that it meets the design specs. Projects usually have 10+ year life spans and must be maintained by the landowner – periodic inspections and operations and maintenance plans are required.

## Where do these projects go?

Most projects are on private lands or a combination of public/private lands. They can be on multiple parcels if that is what is needed to mitigate the source of erosion or pollution. The best location for projects is where there is measurable benefit – TMDLs, SWAs, Stressor ID reports, and local knowledge can all help pinpoint those locations.

## What is eligible?

Any practice found in the NRCS Field Office Technical Guide, additional practices or ideas can be discussed with BWSR and approved. Eligible costs include materials, labor, and equipment. Landowner match can consist of labor, equipment, necessary permit fees, or cash.

## Cost share project process:

1. Landowner has an issue they want the SWCD staff to look at – staff go out on site, talk things over, come up with a few ideas.
2. Staff work on pulling together a design that meets landowner needs as well as follows NRCS practice standards and get a cost estimate. Landowner can use this to get bids or estimates from contractors, but not work can proceed until contract is signed.
3. Landowner signs contracts, work can begin.
4. During the work, staff will come out and help make sure everything is being installed to spec, then afterwards will certify completion and prepare reimbursement paperwork. Staff go over the operations and maintenance plan with the landowner and both parties sign it to make sure it is understood how to properly maintain it.
5. Practices are inspected at the 1, 5, and 9 year marks. Additional inspections can be arranged if the practice is required to last longer than 10 years.
6. Staff report the pollution reduction numbers, dollars spent, and staff time to BWSR in January where it is all collected together in a statewide map.

## Common project types

**Grassed waterways:** wide, shallow graded areas seeded with perennial grasses. Generally used to control rill erosion or runoff on agricultural fields. The grass slows the water and collects sediment before it can reach water bodies/ways. Slope is designed in such a way that the water flows gently, equipment can drive over it, and the roots hold soil in place. On a residential property this might take the form of a designed swale and be much smaller/more manicured or might have perennial flowering plants instead of grass. Similar to but not the same as a rain garden which is designed to infiltrate, swales carry water.

**Manure storage:** most often a 3-sided bunker in an upland area where manure can be piled without getting washed away by rains. In areas where there is concern about nutrients washing into water bodies, a concrete pad may be added. Other options include concrete pits, 3 section compost bins, or manure lagoons (usually for large livestock operations – often funded with EQIP or Ag BMP loans since the cost exceeds cost share means).

**Cover crops:** planted around cash crops such as corn and soybeans to provide soil cover which reduces water /wind erosion, nutrient loss, and can return key nutrients to the soil depending on the cover crop used. Cover crops can be used as forage for livestock or tilled back into the soil to provide organic matter.

**Exclusion fencing, rotational grazing:** exclusion fencing keeps livestock out of waterbodies/ways preventing direct pollution from waste, bank degradation and erosion, allows shoreland plants to grow without grazing, and allows for a buffer that can filter nutrients. It also is better for the safety and health of livestock in most cases. Alternative water sources and cooling spots can be added onto the project. Rotational grazing helps keep pastures healthy and reduces the stress of animal pressures. Properly designed and combined with pasture and nutrient management, rotational grazing benefits livestock health by providing better quality forage, reduces erosion, nutrient pollution and other stressors.

**Alternative drain tile intakes:** buffering open tile intakes, putting in rock structures, or having alternative intakes can help by trapping sediment before it gets into the tile system and drains out into waterways. Often drain tile systems empty directly into ditches or streams causing sedimentation and nutrient pollution. Closed tile intakes, buffers, and rock inlets are relatively simple and inexpensive to install.

**Shoreline or streambank restorations and buffers:** restoring erosion along the edges of lakes and streams can take a number of forms. Sometimes extensive engineering is required, but often it can be as simple as planting a buffer of native plants. For an agricultural operation it could be a hay crop that can be mowed and sold or used, or a pollinator strip that maintains itself. Homeowners might prefer something that flowers and looks nice – buffers can be highly customized and provide habitat and forage for wildlife. Lake shore restorations might include aquatic plants to dissipate wave energy and provide habitat. Hard armoring can exacerbate problems and should be used sparingly.

**Shelterbelts and windbreaks:** lines of trees planted to break up long distances where wind can pick up speed and erode soil. Shelterbelts can be used to shelter houses and outbuildings from wind and weather – this often helps with heating and cooling expenses or can act as a living fence. Windbreaks can be used to slow prevailing winds, shelter livestock, and provide habitat. Living snow fences along roads (usually corn or other crops) can reduce the number of plow passes needed and reduce blowing snow.



# Technical Memo

**To:** Pioneer-Sarah Creek WMO Commissioners

**From:** Diane Spector

**Date:** February 14, 2020

**Subject:** Fourth Generation Plan Work Session One:  
Problem and Opportunity Identification

At the February 20, 2020 meeting we will work through a visioning and problem-identification process that will help you evaluate your Third Generation Goals for any Fourth-Generation revisions. We will use this and input from initial TAC and agency comments to start to shape some priorities for the coming ten years. As we move into the public input part of the plan, stakeholders will help to flesh out the priorities and specific actions that could be considered in the Implementation Plan. Our first work session will be a roll-up-your-sleeves session, so please spend some time doing your homework ahead of time.

## Homework

*First Assignment.* To prepare for our discussion, your first homework assignments is to review the attached agency input letters. As you read through them, you'll find a lot of stock language, but underline anything you think is particularly relevant to Pioneer-Sarah.

*Second Assignment.* Your second assignment is to come prepared to answer the following questions. There is a handy worksheet attached for you to jot down your notes ahead of time.

- 1) What to you are the five top problems or issues within the watershed/cities relating to surface waters? These can be physical problems, political issues, knowledge gaps – anything that relates to the management of surface water.
- 2) What are the five top opportunities, methods, or advantages that can be leveraged to better manage surface water. These can be resources, development, engaged residents, anything that helps you to accomplish your goals.
- 3) What are the five top things you'd like to accomplish in the next ten years as a watershed organization? Make them as specific as possible, things that you can clearly check off your list of things to do.
- 4) What are the top five things you believe have been accomplished in the past several years?

*Third Assignment.* Also attached are your Third Generation identified priorities and goals and policies. Are these still relevant? Have they been useful at achieving your desired outcomes?

# Homework worksheet

- 1) What to you are the five top problems or issues within the watershed/cities relating to surface waters? These can be physical problems, political issues, knowledge gaps – anything that relates to the management of surface water.
- 2) What are the five top opportunities, methods, or advantages that can be leveraged to better manage surface water. These can be resources, development, engaged residents, anything that helps you to accomplish your goals.
- 3) What are the five top things you'd like to accomplish in the next ten years as a watershed organization? Make them as specific as possible, things that you can clearly check off your list of things to do.
- 4) What are the top five things you believe have been accomplished in the past several years?

### Third Gen Management Plan Priorities and Goals

Through the identification of issues in the watershed, the PSCWMC developed the following priorities and goals to guide water resources planning and management functions:

#### Priorities:

1. Educate the Commissioners and member City Councils and Planning Commissions regarding watershed and water resources management.
2. Undertake a monitoring program to monitor water quality trends and to track progress toward meeting TMDLs.
3. Partner with member cities and other parties to conduct subwatershed assessments and other studies to identify feasible and cost-effective Best Management Practices to protect and improve water quality.

#### Goals:

##### Goal Area A. Water Quantity

- Goal A. 1. Maintain the post-development 2-year, 10-year, and 100-year peak rate of runoff at pre-development level for the critical duration precipitation event.
- Goal A. 2. Maintain the post-development annual runoff volume at pre-development volume.
- Goal A. 3. Prevent the loss of floodplain storage below the established 100-year elevation.

##### Goal Area B. Water Quality

- Goal B. 1. Improve water clarity in the impaired lakes by 10% over the average of the previous ten years by 2023.
- Goal B. 2. Maintain or improve water quality in the lakes and streams with no identified impairments.
- Goal B. 3. Conduct a TMDL/WRAPS progress review every five years following approval of the TMDLs and WRAPS study.
- Goal B. 4. Foster implementation of Best Management Practices in the watershed through technical and financial assistance.

##### Goal Area C. Groundwater

- Goal C. 1. Promote groundwater recharge by requiring abstraction/infiltration of runoff from new development and redevelopment.
- Goal C. 2. Protect groundwater quality by incorporating wellhead protection study results into development and redevelopment Rules and Standards.

##### Goal Area D. Wetlands

- Goal D. 1. Preserve the existing functions and values of wetlands within the watershed.
- Goal D. 2. Promote the enhancement or restoration of wetlands in the watershed.

##### Goal Area E. Drainage Systems

- Goal F. 1. Continue current Hennepin County jurisdiction over county ditches in the watershed.

Goal Area F. Commission Operations and Programming

- Goal F. 1. Identify and operate within a sustainable funding level that is affordable to member cities.
- Goal F. 2. Foster implementation of TMDL and other implementation projects by sharing in their cost and proactively seeking grant funds.
- Goal F. 3. Operate a public education and outreach program prioritizing elected and appointed officials education and building better understanding between all stakeholders.
- Goal F. 4. Operate a monitoring program sufficient to characterize water quantity and quality and biotic integrity in the watershed and to evaluate progress toward TMDL goals.
- Goal F. 5. Maintain rules and standards for development and redevelopment that are consistent with local and regional TMDLs, federal guidelines, source water and wellhead protection requirements, nondegradation, and ecosystem management goals.
- Goal F. 6. Serve as a technical resource for member cities.





January 10, 2020

Pioneer-Sarah Creek Watershed Management Commission  
Attn: Amy Juntunen  
JASS  
3235 Fernbrook Lane  
Plymouth, MN 55447

**RE: Pioneer-Sarah Creek Watershed Management Commission Comprehensive Plan Update**

Dear Ms. Juntunen:

This letter is in response to your email from November 13, 2019 soliciting input on the Pioneer-Sarah Creek Watershed Management Commission (PSCWMC) Fourth Generation Comprehensive Water Resources Management Plan (Plan).

The Board of Water and Soil Resources (BWSR) expectations for the Plan update focus on: 1) Process – an opportunity to talk about the right things and affirm, align, or change direction based on the upfront input and issue identification that is brought forward; 2) Coordination – good planning feels collaborative from the beginning, involving multiple local government units and stakeholders, and multiple levels of planning; 3) Plan Contents – revolving plans around priority issues, capturing clear 5-10 year intent, data analysis with trends, short/mid/long-term measurable goals based on science, priorities and frequently updated targeted implementation plans; and 4) Organization Capacity – increased self-evaluation, accountability and efficiency of implementation.

The *One Watershed One Plan (1W1P) State Strategies Summary, Identifying and Prioritizing Resources and Issues, Setting Measurable Goals, and Targeting Implementation Activities* documents located on the BWSR 1W1P webpage (<http://www.bwsr.state.mn.us/planning/1W1P/index.html>) may be helpful planning resources.

Implementation Actions (*please refer to MN Rule 8410 for additional requirements*):

- Prioritized Implementation Program (Capital Improvement Program). The implementation program should be clear in identifying what implementation actions the PSCWMC will accomplish in the next ten years regardless of whether or not they receive any new grant funding. Be realistic in what the PSCWMC has the capacity to accomplish, but at the same time, do not be afraid to stretch those capabilities.
- Include a procedure to evaluate progress for implementation activities at a minimum of every two years.
- Define the PSCWMC's process for evaluating implementation of local water plans.
- Define who is responsible for inspection, operation and maintenance of stormwater facilities in the PSCWMC.

- If the PSCWMC has or proposes an incentive type program it needs to be defined in the plan (the plan can also include a reference to PSCWMC website for more detailed information on the program).
- Continue to utilize information from State studies developed for the Crow River including TMDLs and WRAPS to drive implementation programs and targeting.
- Continue to utilize locally led studies, such as the Dance Hall Creek and Ardmore Subwatershed Assessments.
- The PSCWMC should include a reference to the Twin Cities Metropolitan Area Chloride TMDL and incorporate elements of the Chloride Management Plan.

We appreciate the opportunity to provide comments and preliminary input. I look forward to continuing to work with you through the rest of the plan development process.

Please invite me to Board workshops, Citizen Advisory Committee meetings, public input events and opportunities, and Technical Advisory Committee (TAC) meetings. My priority will be the TAC meetings, but I will likely try to attend some of the other input meetings and opportunities as well. If you have questions or need additional information, feel free to contact me by phone at 651-249-7519 or via email at [steve.christopher@state.mn.us](mailto:steve.christopher@state.mn.us)

Sincerely,

A handwritten signature in black ink, appearing to read 'Steve Christopher', with a stylized, flowing script.

Steve Christopher

Board Conservationist

cc: Karen Galles, Hennepin County (via email)  
Jeanne Daniels, MnDNR (via email)  
John Freitag, MDH (via email)  
Jeff Berg, MDA (via email)  
Judy Sventek, Metropolitan Council (via email)  
Jeff Risberg, MPCA (via email)  
Beth Neuendorf, MnDOT (via email)  
Kevin Bigalke, BWSR (via email)

**Minnesota Department of Natural Resources  
Ecological and Water Resources Division  
Central Region Headquarters  
1200 Warner Road, St Paul MN 55106**

January 12, 2020

Amy Juntunen  
Pioneer Sarah Creek Watershed Management Organization  
3235 Fernbrook Lane  
Plymouth, MN 55447

RE: Pioneer Sarah Creek Watershed Management Organization (PSCWMO) Plan Update

Dear Ms. Juntunen:

In accordance with your email dated 11/13/2019 and MN Rules Chapter 8410, I am writing to advise the PSCWMO of the DNR's priority concerns, management goals and expectations for the Watershed Management Organization Plan update, along with summaries and web links to natural resource information that we would like the WMO Board to consider when updating the Plan.

### **Integrated Water Resource Management**

In general, DNR's water management goals and expectations focus on achieving healthy watersheds through a "whole-system" approach. Various ecological processes interact to provide services such as clean water, available groundwater, and diverse plant and animal communities. All components of the system should work together to provide a healthy watershed.

As the PSCWMO begins its watershed management plan update process, it is important that water resource issues and goals be addressed not as independent prescriptions, but as integrated activities strategically applied toward the improvement of the entire watershed system. DNR's **Watershed Health Assessment Framework** uses a five component framework (**hydrology, biology, connectivity, geomorphology, and water quality**) to address the interdependent nature of ecological systems that operate within a watershed. The five components of watershed health interact with each other. For example, less perennial vegetation (**biology**) on the land means more runoff as less water permeates the soil or evaporates (**hydrology**). This can accelerate streambank erosion, causing stream channels to deepen (**geomorphology**) and get disconnected from their floodplains (**connectivity**). This can lead to more sediment in streams, carrying excess nutrients that lower the amount of dissolved oxygen, leading to stress on fish and other aquatic life.

Placing the goals and actions identified by the WMO into this framework can help to:

- Identify gaps between goals and actions
- Prioritize chosen actions effectively
- Examine the potential for unintended consequences

Please refer to the Watershed Health Assessment Framework webpage at

<http://www.dnr.state.mn.us/whaf/index.html> for additional information and data sets.

We recommend the following general watershed management strategies which align well with DNR's watershed health goals:

- Keep water where it falls by protecting and restoring wetlands, ensuring water courses are connected to their floodplains, and managing stormwater runoff with rate control and volume reduction standards
- Protect and create buffers of native perennial vegetation along watercourses and water bodies
- Reduce the flow of water volume and nutrients through ditches and drainage systems
- Design culverts and bridges to retain floodplain functions and bank stability on natural channels and other drainage systems
- Support land use planning and practices that protect, restore, and enhance priority resources
- Maintain and enhance perennial vegetation including protection of working forest lands
- Promote conservation practices on agricultural lands and drainage systems
- Use water efficiently and implement conservation measures that further reduce water demand

Additional, more specific recommendations by topical area and DNR goals follows:

**DNR water management goal: stormwater management to improve water quality of public water resources**

The PSCWMO is fully developed and its landscape is dominated by impervious surfaces. To reduce the resultant impact of increased runoff and pollutant loading to water bodies and the Mississippi River requires improvements to existing urban stormwater management infrastructure.

DNR Recommended Action: PSCWMO plays an important role in urban stormwater management and DNR encourages the WMO to continue to work with its partners to:

- Monitor and protect the water quality of the WMO's water resources
- Implement best management practices to reduce stormwater runoff
- Investigate new stormwater management techniques
- Promote green infrastructure
- Address storm sewer infrastructure capacity and corresponding flooding problems

One of the primary drivers of degraded water quality and habitat in rivers, streams, lakes and wetlands is nutrient and sediment-laden runoff from surrounding commercial, residential, and agricultural land uses. Minimum Impact Design Standards (MIDS) were developed by the Minnesota Pollution Control Agency to minimize stormwater runoff, minimize the amount of pollution reaching lakes, rivers, and streams, and to recharge groundwater. The development of MIDS is based on low impact development (LID), an approach to storm water management that mimics a site's natural hydrology as the landscape is developed.

DNR Recommended Action: Continue to support the incorporation of MIDS (and the LID approach) into future development and redevelopment in the watershed.

### **Fisheries**

Fisheries staff appreciate the WMO's previous and continuing work to improve water quality and fisheries resources. Please continue to focus on minimizing the impacts of shoreline development and improving water quality.

For more information and coordination on fisheries management, please contact Daryl Ellison (daryl.ellison@state.mn.us; 952-496-4141), West Metro Area Fisheries Supervisor.

### **Groundwater Sustainability**

#### DNR Priority Issues and WMO Expectations:

A. The DNR is concerned that the use of water from aquifers within the Watershed does not deplete the aquifer, but will preserve water in the aquifer for future generations.

B. The DNR is concerned that the use of water from aquifers will deprive lakes and streams of water during periods of drought.

C. The DNR issues many permits for temporary groundwater appropriation for construction dewatering every year. There are concerns that the discharge of water from these projects will cause erosion and flooding downstream of the point of discharge.

#### Relevant Water Management Goals:

A. The Pioneer-Sarah Creek WMO should play a stronger role in promoting water conservation by: including educational materials on its website; promote the use of storm water for landscape irrigation; and promote the use of drought tolerant plants for landscaping.

B. The use of groundwater in a manner that does not make the wetlands, lakes, and streams in the Pioneer-Sarah Creek WMO boundaries vulnerable to low water levels during the summer should be a goal of the WMO.

C. The Pioneer –Sarah WMO should advise the DNR when it is believed that the discharge from dewatering would cause flooding problems and erosion problems downstream of the point of discharge.

Pertinent Water Resources Information:

A. The DNR Cooperative Groundwater Management Website contains information on the groundwater levels throughout Minnesota. The site can be reached at <https://www.dnr.state.mn.us/waters/cgm/index.html>. Should one of the water level observation wells in the Pioneer-Sarah WMO show long-term water level declines, then the WMO can alert the communities of the area of the problem.

B. The water levels of many lakes within Minnesota have been measured by the DNR. These water levels have been noted at: <https://www.dnr.state.mn.us/lakefind/showlevel.html?downum=27019100>. Should one of the lakes in the WMO show unusually low water levels, the WMO can alert the communities in the area of the low water levels.

C. The DNR advises the Pioneer-Sarah Creek WMO of the draft water appropriation permits within the watershed boundaries.

**Consideration of plant communities, rare species, and special features**

Information on the biology, distribution, ecology, habitat use, conservation, and management of rare species of interest is available in the [DNR's Rare Species Guide](#). The locations of state-listed species maintained in the Rare Features Database are considered sensitive information and is protected under the Minnesota Data Practices Act. This information is only available through a Natural Heritage Information System (NHIS) data request or by license agreement, and should be used for internal planning purposes only.

The NHIS is continually updated as new information becomes available and will include current records and surveys. An NHIS review is considered valid if performed within one year of project implementation. The [NHIS data request form](#), used to obtain a NHIS review, and the [license agreement form](#) to enter into a license agreement with DNR to receive the Rare Features Database as a GIS data file are both available online. Questions regarding the NHIS should be directed to endangered species review coordinator Lisa Joyal ([lisa.joyal@state.mn.us](mailto:lisa.joyal@state.mn.us), 651-259-5109).

DNR Recommended Action: DNR recommends using assessment data of watershed characteristics and natural resource features when completing long-range watershed planning efforts. The assessment of watershed characteristics and natural resource features is valuable for evaluating landscape functions

and guiding land management decisions. These assessments provide important information on a landscape's integrity and its ability to provide benefits to ecosystems. For example, assessment data can be used to examine how projects will improve or affect flora and fauna, determine the cumulative impacts of land use, make regional scale land use decisions, and to balance land use development and natural resource protection.

**DNR Recommended Action:** The presence of rare species can be an indication of the health of a watershed, and plant and animal diversity helps landscapes to maintain important watershed functions. DNR recommends that the PSCWMO include goals and policies to address how rare species and habitat will be protected.

DNR data layers have been developed that are helpful in watershed planning. These are free and available to the public from the [Minnesota Geospatial Commons](#). Some key data layers include:

- DNR managed lands such as Scientific and Natural Areas, Wildlife Management Areas, and Aquatic Management Areas
- DNR native plant communities
- Karst features
- Minnesota Biological Survey (MBS) Sites of Biodiversity Significance
- Central Region Regionally Significant Ecological Areas (CRRSEA) – The purpose of this data is to inform regional scale land use decisions, especially as it relates to balancing development and natural resource protection.
- Regionally Significant Ecological Areas and Regional Ecological Corridors – Identifies potential habitat movement corridors that may be important for wildlife connections.

**DNR Recommended Action:** DNR encourages the use of site-appropriate native plants for shoreline stabilization, buffers, and erosion control for all watershed projects. These species provide important stabilization and erosion control functions, have the greatest chance of establishment success, and contribute to biodiversity of landscape vegetation. Query the DNR's [Restore Your Shore Native Plant Encyclopedia](#) for a list of plants tailored to specific site characteristics.

**DNR Recommended Action:** DNR recommends the establishment of native grassland and herbaceous plant communities in the place of mowed turf grasses on watershed and highway projects as a means to support native insect pollinator communities. Interest in pollinators has grown since the term Colony Collapse Disorder appeared in 2006. This phrase refers to the puzzling disappearance of honey bees from their hives. While this disorder does not affect native pollinators, many of the challenges that face honey bees also affect native insects, including pesticide use, habitat loss, pathogens, parasites, climate change, and invasive species. DNR has developed a [Best Management Practices Guide](#) for restoring and enhancing native plant community habitat for native insect pollinators

## Forest management considerations

The importance of forested riparian areas to water resources cannot be understated. Forested riparian areas provide an array of goods and services for plant diversity, wildlife and fish habitat, nutrient, sediment, and water interception, storage, and transformation and recreational opportunities. Keeping riparian areas intact so that the functions and roles of terrestrial and aquatic ecosystems can continue to provide these services is imperative. We recommend keeping forested riparian areas forested, which does not necessarily preclude forest management activities. If riparian forests are managed in the WMO area, we highly recommend consulting and using the Minnesota Forest Resource Council's Voluntary Site-Level Forest Management Guidelines for Landowners, Loggers, and Resource Managers to protect these valuable ecosystems into the future.

Emerald ash borer (EAB) will likely have an impact on communities in the WMO area within the next 10 year watershed plan cycle. Communities should start planning for EABs arrival and take action now to reduce the sudden financial burden that comes with EAB. One can find information at this website. You can visit this interactive website to see the status of EAB in Minnesota. The WMO area is not yet in the "EAB Generally Infested Area" but all of Hennepin County is within the quarantine area. At a city level, large amounts of dead ash trees will need to be dealt with about 6 years after the initial infestation is noticed in a community. For example, EAB was discovered in Winona in 2010. Massive numbers of ash trees started dying in that area in about 2015. To minimize pesticide exposure in the environment and to save people's money, we would not recommend applying insecticides to save ash trees in yards until symptoms of EAB infestation are within about ¼ - ½ mile of any given location. Note that ash trees can still be saved from EAB if they are lightly infested (they must still have over 50% of their normal number of leaves that are normally sized). Ideally ash trees should be treated when they are 100% healthy and not infested at all, so there is some risk of waiting until EAB infestation symptoms are visible within a ½ mile. In natural areas, forested wetlands with ash dominant in the canopy will experience a more drastic change in plant community composition and hydrology than upland communities with a minor ash component.

The Forest Stewardship Program at the DNR provides private landowners with at least 20 acres of forested land (or land that will have trees) professional forest management advice from a qualified DNR forester or private land forestry consultant. For a fee, landowners will consult with a forester to talk about their goals for forest management. The forester will write a forest management plan and the land will be eligible for property tax relief programs and state cost-share assistance for management work. For more information on the DNR's professional forest management assistance for private landowners, please visit our webpage.

Communities interested in caring for and managing their urban and community forests can find helpful information at the DNR's website on the Community Forestry webpage. Information and links about grant programs, DNR Arbor Month, and best management practices for preventing spreading invasive species and conserving wooded areas can be at this website.



In closing, if PSCWMO intends to utilize a Technical Advisory Committee for this Plan update process, I would welcome the opportunity to participate as the DNR representative. If you have questions regarding the content of this letter or would like to discuss individual topics or recommendations further, please do not hesitate to contact me. I look forward to working with the WMO on your next generation Plan and future projects.

Sincerely,

A handwritten signature in black ink that reads "Jason Spiegel". The signature is written in a cursive, flowing style.

Jason Spiegel  
DNR North Metro Area Hydrologist  
[Jason.spiegel@state.mn.us](mailto:Jason.spiegel@state.mn.us)  
651-259-5822

CC:

Dan Lais, DNR Ecological and Water Resources (EWR) Region 3 Manager  
Jeanne Daniels, DNR EWR South District Manager  
Daryl Ellison, DNR Area Fisheries Supervisor  
Joe Richter, DNR District Appropriations Hydrologist  
Nick Proulx, DNR EWR Clean Water Specialist  
Michelle Martin, DNR Forestry Ecological Classification Systems Specialist  
Steve Christopher, BWSR

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1/12/2020

Judie Anderson  
Pioneer-Sarah Creek Watershed Management Commission  
3235 Fernbrook Lane  
Plymouth MN , MN 55447

RE: Response to Request for Priority Concerns for the **Error! Reference source not found.** Local Water Plan: 2020-2029

Dear Judie Anderson,

The Minnesota Pollution Control Agency (MPCA) appreciates the opportunity to provide input at the outset of the Local Water Plan Process in the Pioneer-Sarah Creek Watershed Management Commission located within the Mississippi River – Twin Cities Watershed. The MPCA has developed technical information, reports, TMDL studies, tools, and potential strategies for the protection and restoration of waterbodies that may be useful for inclusion in a local water plan. A summary of select products are included below along with their respective links on the MPCA's webpage. While there are many partner agencies and organizations that produce other products that also support our goals of clean water, below are only those for which the MPCA is the direct author.

- Pioneer-Sarah Creek Watershed TMDL: <https://www.pca.state.mn.us/sites/default/files/wq-iw8-55e.pdf> - This Total Maximum Daily Load (TMDL) study addresses 10 impairments in the Pioneer-Sarah Creek Subwatershed of the North Fork Crow River (Hydrologic Unit Code (HUC) 07010204) and South Fork Crow River Watersheds(HUC 07010205), located in the Upper Mississippi River Basin. These include nutrient impairments in Lake Ardmore, Peter Lake, Spurzem Lake, Half Moon Lake, North Whaletail Lake, and South Whaletail Lake, and Escherichia coli (E. coli) bacteria impairments in Sarah Creek, Pioneer Creek, Unnamed Creek, and Deer Creek.
- Pioneer-Sarah Creek Watershed Restoration and Protection Strategy (WRAPS) Report This Watershed Restoration and Protection Strategy (WRAPS) report summarizes past efforts to monitor water quality, identifies impaired water bodies and those in need of protection, and includes strategies for restoring and protecting lakes and streams in the watershed. In general, most lakes in the watershed are impaired by excess nutrients and need to be restored, and the streams are impaired by bacteria. Little Long Lake and Lake Rebecca are currently meeting water quality standards and fully support recreation use. Protection strategies are included in this report to ensure that these lakes continue to be high quality lakes in the watershed. <https://www.pca.state.mn.us/sites/default/files/wq-ws4-32a.pdf>
- Point Source Phosphorus Mapping Tool: This tool provides summaries of annual phosphorus loads and flow volumes discharged from NPDES/SDS permitted facilities since 2005. Upon review, it appears there are currently 3 facilities with active NPDES permits within the boundaries of the Pioneer-Sarah WMC.

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<https://www.pca.state.mn.us/water/phosphorus-loads-and-flow-volumes>

[http://mpca.maps.arcgis.com/apps/Compare/storytelling\\_compare/index.html?appid=5e26e6c6756d4d0885da0ccadcb84737](http://mpca.maps.arcgis.com/apps/Compare/storytelling_compare/index.html?appid=5e26e6c6756d4d0885da0ccadcb84737)

- Minnesota Nutrient Reduction Strategy  
<https://www.pca.state.mn.us/water/nutrient-reduction-strategy#nutrient-strategy-718f1971>
- Minnesota Stormwater Manual -  
[https://stormwater.pca.state.mn.us/index.php?title=Main\\_Page](https://stormwater.pca.state.mn.us/index.php?title=Main_Page)

### **Priority Concerns for the Pioneer-Sarah Creek WMC**

#### **Impairments**

We have identified 22 water body impairments that are completely or partially within the boundary of the Comfort Lake – Forest Lake sub-watershed boundary as of the approved 2018 EPA approved 303(d) impaired waters list and 2020 draft list (See Table 1 below).

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*Table 1: Impaired Lakes and Stream in the Pioneer-Sarah WMC Boundaries*

WID	TYPE	NAME	REACH_DESCRIPTION	IMPAIRMENT_PARAMETER	TMDL_APPROVED	TMDL_INCOMPLETE
07010204-502	Stream	Crow River	S Fk Crow R to Mississippi R	FC; FishesBio; InvertBio; Nutrients; T	FC; T	FishesBio; InvertBio; Nutrients
07010204-628	Stream	Sarah Creek	Lk Sarah to Crow R	E.coli	E.coli	None
07010205-508	Stream	Crow River, South Fork	Buffalo Cr to N Fk Crow R	FC; FishesBio; Hg-F; InvertBio; Nutrients; T	Hg-F	FC; FishesBio; InvertBio; Nutrients; T
07010205-593	Stream	Unnamed creek	Mud Lk (10-0094-00) to Rice Lk (86-0032-00)	DO; E.coli	E.coli	DO
07010205-594	Stream	Deer Creek	Unnamed cr to Ox Yoke Lk	DO; E.coli	E.coli	DO
07010205-653	Stream	Pioneer Creek	Lk Independence to T118 R24W S30, south line	DO; E.coli	E.coli	DO
07010205-654	Stream	Pioneer Creek	T118 R24W S31, north line to T118 R24W S31, south line	FishesBio; InvertBio	None	FishesBio; InvertBio
07010205-593	Stream	Unnamed creek	Mud Lk (10-0094-00) to Rice Lk (86-0032-00)	DO; E.coli	E.coli	DO
27-0184-02	Lake	South Whaletail	IN MINNETRISTA	Hg-F; Nutrients	Hg-F; Nutrients	None
27-0184-01	Lake	North Whaletail	IN MINNETRISTA	Hg-F; Nutrients	Hg-F; Nutrients	None
27-0179-02	Lake	South Little Long	IN MINNETRISTA	Hg-F	Hg-F	None
27-0179-01	Lake	North Little Long	IN MINNETRISTA	Hg-F	Hg-F	None
27-0189-00	Lake	Irene, Lake	None	Nutrients	None	Nutrients
27-0152-00	Lake	Half Moon	IN MEDINA	Hg-F; Nutrients	Hg-F; Nutrients	None
27-0176-00	Lake	Independence	1 MI N OF MAPLE PLAIN	Hg-F; Nutrients	Hg-F; Nutrients	None
27-0153-00	Lake	Ardmore	IN MEDINA	Nutrients	Nutrients	None
27-0149-00	Lake	Spurzem	1 MI SE OF LORETTO	Hg-F; Nutrients	Hg-F; Nutrients	None
27-0191-02	Lake	East Sarah	None	Hg-F; Nutrients	Hg-F; Nutrients	None
27-0147-02	Lake	PETER (NORTH BAY)	IN MEDINA	Nutrients	Nutrients	None
27-0192-00	Lake	Rebecca	4 MI NW OF MAPLE PLAIN	Hg-F	Hg-F	None
27-0191-01	Lake	West Sarah	None	Hg-F; Nutrients	Hg-F; Nutrients	None
27-0199-00	Lake	Hafften	3 MI E OF ROCKFORD	Hg-F; Nutrients	Nutrients	Hg-F

### Chloride Reduction

The MPCA has identified reducing chloride from entering surface and groundwater as part of the agency's strategic plan. The major sources of chloride around the state include application of chloride based salts for winter maintenance activities, residential and commercial water softening, and agricultural inputs.

<https://mpca.maps.arcgis.com/apps/webappviewer/index.html?id=f5baf4d28e2f43ba804938136e1bd534>

Chloride reduction at the source is key to protecting water quality, as there are currently no known economically feasible remediation strategies to remove chloride once it enters the environment. The MPCA maintains resources, technical, educational, and financial, that may be of use to our local partners in designing ways to reduce chloride. The draft statewide chloride management plan, Smart Salting Assessment Tool and chloride applicator training/certifications, and CWP loans, are all examples of current resources available, though many other tools are currently being developed as well. Please visit the agency's website to see the full list of resources available to help local governments work on chloride reduction within their watershed. <https://www.pca.state.mn.us/water/statewide-chloride-resources>.

### Stormwater

The MPCA recommends that the Pioneer-Sarah WMC work with communities within their boundary to develop and adopt next-generation stormwater management strategies to minimize stormwater runoff and pollution and preserve natural resources. This could be through supporting the inclusion of low impact design (LID) standards, Minimal Impact Design Standards (MIDS), and redevelopment standards into local ordinance and establishment of performance goals where appropriate. See Table 2 below for current MS4 entities within the boundary of the Pioneer-Sarah WMC.

*Table 2. MS4 Entities within Pioneer-Sarah Boundaries*

Permit_ID	MS4_Name	MS4_Type
MS400030	Loretto City MS4	City or Township
MS400081	Corcoran City MS4	City or Township
MS400095	Independence City MS4	City or Township
MS400103	Maple Plain City MS4	City or Township
MS400105	Medina City MS4	City or Township
MS400106	Minnetrista City MS4	City or Township
MS400286	Hanover City MS4	City or Township
MS400095	Independence City MS4	City or Township
MS400106	Minnetrista City MS4	City or Township

MS400095	Independence City MS4	City or Township
MS400103	Maple Plain City MS4	City or Township
MS400105	Medina City MS4	City or Township
MS400106	Minnetrista City MS4	City or Township
MS400170	MNDOT Metro District MS4	MNDOT
MS400138	Hennepin County MS4	County

### Commitment

The MPCA is committed to partnering with the Pioneer-Sarah WMC in the continued development of the local water plan updates as well as assistance with other products and services that we provide toward the goals of improved water quality. Thank you again for the opportunity to provide our comments toward the development of the updates to your local water plan.

Sincerely,



Eric Alms  
Watershed Project Manager  
MPCA – St. Paul  
520 Lafayette Road  
St. Paul, Minnesota 55155  
651-757-2589  
Eric.Alms@state.mn.us



December 12, 2019

Judie Anderson  
Pioneer-Sarah Watershed Management Commission  
3235 Fernbrook Lane  
Plymouth, MN 55447

RE: Information request and issue prioritization for Pioneer-Sarah Watershed Management Commission's 2020 Watershed Management Plan update

Dear Ms. Anderson:

I am providing information as requested for the preparation of the Pioneer-Sarah Creek Watershed Management Commission's (PSCWMC) Watershed Management Plan update.

The direction and policy that follows comes from the Council's *Thrive MSP 2040* Regional Development Framework and the *2040 Water Resources Policy Plan*, both of which can be found on the Council's web page ([www.metrocouncil.org](http://www.metrocouncil.org)).

In particular, the *2040 Water Resources Policy Plan* (Policy Plan) includes policies and strategies to achieve the following goal:

*To protect, conserve, and utilize the region's groundwater and surface water in ways that protect public health, support economic growth and development, maintain habitat and ecosystem health, and provide for recreational opportunities, which are essential to our region's quality of life.*

The Policy Plan takes an integrated approach to water supply, water quality, and wastewater issues. This approach moves beyond managing wastewater and stormwater only to meet regulatory requirements by viewing wastewater and stormwater as resources, with the goal of protecting the quantity and quality of water our region needs now and for future generations.

The Policy Plan includes policies and strategies to:

- Maximize regional benefits from regional investments in the areas of wastewater, water supply and surface water management and protection.
- Pursue reuse of wastewater and stormwater to offset demands on groundwater supplies.
- Promote greater collaboration, financial support, and technical support in working with partners to address wastewater, water quality, water quantity and water supply issues.
- Promote the concept of sustainable water resources through collaboration and cooperation, with the region

taking steps to manage its water resources in a sustainable way with goals of:

- ✓ Providing an adequate water supply for the region,
- ✓ Promoting and implementing best management practices aimed at protecting the quality and quantity of our resources,
- ✓ Providing efficient and cost-effective wastewater services to the region,
- ✓ Efficiently addressing nonpoint and point sources pollution issues and solutions, and,
- ✓ Assessment and monitoring of lakes, rivers, and streams to direct adequate management, protection, and restoration of the region's valued water resources.

The updated watershed management plan should include policies related to the protection of area water resources with these strategies in mind, with the end goal of water sustainability.

In addition to being consistent with the Council's policy plan, the Plan also should include quantifiable and measurable goals and policies that address water quantity, water quality, recreation, fish and wildlife, enhancement of public participation, groundwater, wetlands, and erosion issues.

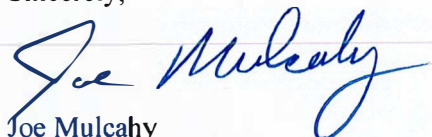
Council staff will be looking for the Plan to address the issues and problems in the watershed and to include projects or actions and funding to address them. At a minimum the Plan should address:

1. Any problems with lake and stream water quality and quantity including information on impaired waters in the watershed and the Commission's role in addressing the impairments,
2. Flooding issues in the watershed,
3. Storm water rate control issues in the watershed,
4. Impacts of water management on the recreation opportunities,
5. Impact of soil erosion problems on water quantity and quality,
6. The general impact of land use practices on water quantity and quality,
7. Policies and strategies related to monitoring of area water resources,
8. Policies and strategies related to use of best management practices,
9. Issues concerning the interaction of surface water and groundwater in the watershed,
10. Erosion and sediment control standards and requirements,
11. Volume reduction goals at least as restrictive as requirements in the NPDES construction general permit, and,
12. Capital improvement plan with itemized list of actions, estimated costs, and timeline.
13. Specifics on long-term maintenance of projects identified in the capital improvement plan, including identification of entities responsible for funding and conducting maintenance, as well as how long-term maintenance will be documented.

The Council also has some historic monitoring data on Pioneer Creek and Sarah Creek, and on Independence, Little Long, Sarah, Rebecca, and Whaletail lakes. These lakes are on the Council's Priority Lakes List for their recreational value. More detail on the criteria used for inclusion on the list can be found in the 2040 Water Resources Policy Plan, which can be found on the Council's web page (<http://www.metrocouncil.org/Wastewater-Water/Planning/2040-Water-Resources-Policy-Plan.aspx>). Please contact Jen Keville ([Jennifer.Keville@metc.state.mn.us](mailto:Jennifer.Keville@metc.state.mn.us)) to request lake data.

Please feel free to me call at 651-602-1104 with questions about the comments above or for any assistance during the plan preparation.

Sincerely,



Joe Mulcahy

Environmental Analyst

Metropolitan Council – Environmental Services

651-602-1104

[joe.mulcahy@metc.state.mn.us](mailto:joe.mulcahy@metc.state.mn.us)

# Technical Memo

**To:** Pioneer-Sarah Creek WMO Commissioners  
**From:** Diane Spector  
**Date:** February 14, 2020  
**Subject:** Fourth Generation Plan Update

This report details Fourth Generation Watershed Management Plan project progress through January 2020.

## Budget status:

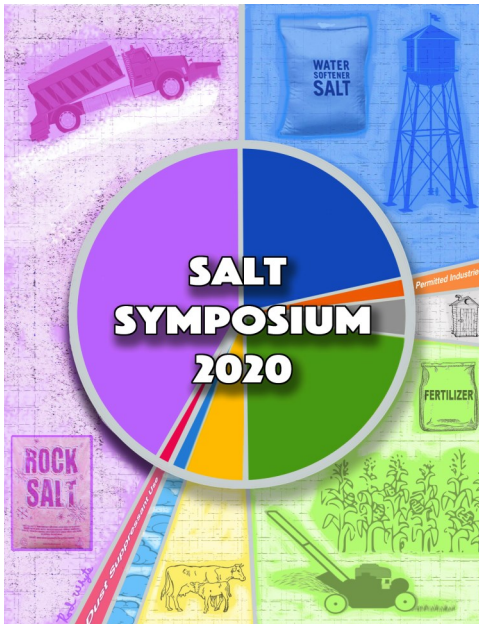
Budget	\$24,038.00
Through 1/31/20	\$4,836.90
Balance	\$19,201.10

## January 2020 Activities:

- Review annual reports and begin preparing summary of progress
- Update lake water quality database and perform trend analysis
- Prep for and attend Commission kickoff meeting
- Review input submitted by agencies

## Expected February 2020 Activities:

- Attend one TAC and one Commission meeting
- Review and summarize member city Comp Plans and LWMPs
- Review goals and policies
- Update problems and issues section of Plan
- Initiate public input process



**SAVE THE DATE!**

# Salt Symposium

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PROMOTE YOUR ORGANIZATION. PROTECT THE WATER.



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**fci@fortinconsulting.com**

To send checks and forms by mail, address the materials to:  
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*Thank you!*

# Pioneer-Sarah Creek Watershed Management Commission



## Baker Campground Ravine Stabilization

### Annual Progress Report

2019



Submitted

To



Submitted

By



**Baker Campground Ravine Stabilization Project**  
**Annual Progress Report**  
**2019**

**Background**

Lake Independence is among one of the most visible and highly valued recreational water bodies in Hennepin County. The Three Rivers Park District owns and operates the Baker Park Reserve that provides 4,500 feet of public accessible shoreline on Lake Independence. The Baker Park Reserve has two swimming beaches, a public watercraft access, fishing piers, picnic and playground areas, trails, and a campground area. The lake was listed as impaired for excessive nutrients by the MPCA in 2002. The Lake Independence Total Maximum Daily Load and Implementation Plan was completed by Three Rivers Park District in partnership with the Pioneer-Sarah Creek Watershed Management Commission in 2007. The TMDL study identified phosphorus loading from the watershed as the main cause of the impairment, and emphasized phosphorus load reductions from the watershed as the primary means to improve water quality in the lake to meet state water quality standards.

A sub-watershed assessment was completed in 2014 by the City of Independence in partnership with Hennepin County Environmental Services and the Anoka County Conservation District to identify areas within the Lake Sarah and Lake Independence watersheds that were considered significant sources of nutrient loading (Lake Sarah and Lake Independence Stormwater Retrofit Analysis 2014). The sub-watershed assessment identified an eroding ravine within the City of Medina and the Baker Park Reserve as a potentially significant source of phosphorus and sediment loading to Lake Independence. A subsequent joint effort between the Pioneer-Sarah Creek Watershed Commission (PSCWMC), the cities of Medina and Independence, and Three Rivers Park District completed a more detailed feasibility study in 2016 that evaluated the ravine as a source of pollutant loading to Lake Independence, assessed the cost-effectiveness of multiple watershed and in-ravine management options to decrease those loads, and generated recommendations on how to proceed to address the issue (Baker Park Reserve Campground Ravine and Sub-watershed Assessment 2016). The sub-watershed assessment estimated the eroding channel contributes approximately 277 pounds of total phosphorus and 300 tons of sediment loading annually to Lake Independence.

The most cost-effective approach to decrease phosphorus and sediment loading to Lake Independence from the project area is to stabilize 1,800 linear feet of the main channel and an additional 400 feet in two tributary ravines adjacent to the Baker Park Reserve Campground. A series of rock grade control structures would be installed throughout the main ravine and two tributary ravines to control the channel grade. In addition, the channel reaches would be lined with combination of rounded field stone and angular rip-rap up to the expected 10-year flood elevation. It is anticipated that average annual phosphorus loads to Lake Independence would be reduced by an estimated 134 pounds, at a cost per pound of phosphorus load reduction of less than \$130/pound based on an estimated project life of 30 years. This reduction in annual phosphorus load would accomplish 15% of the total watershed phosphorus load reduction that was required in the TMDL to meet state water quality standards.



Three Rivers Park District and the Pioneer-Sarah Creek Watershed Management Commission have taken the initiative to implement the Baker Campground Ravine Stabilization Project. It is estimated that the total costs to complete the project is \$520,000. The TMDL study and the two sub-watershed assessments/feasibility studies were valuable for acquiring grant funding that was necessary to proceed with the project. The Pioneer-Sarah Creek Watershed Management Commission received \$416,000 in Clean Water Legacy Funds from the Board of Water and Soil Resources, and received an additional \$59,500 in grant funding from the Hennepin County Opportunity Grant. The remaining portion of the funding will be cost-shared (\$44,500) between the Pioneer-Sarah Creek Watershed Management Commission, City of Independence, City of Medina, Three Rivers Park District, and Lake Independence Citizens Association. The specific details of the annual progress on the project for 2019 is provided in the following section.

### **Project Status 2019**

- January 2019 – The permit application was approved by the U.S. Army Corp of Engineers and the Pioneer-Sarah Creek Watershed Management Commission (Appendix D).
  - January 17, 2019 – Received the U.S. Army Corp of Engineers permit approval notification letter
  - January 17, 2019 – Pioneer-Sarah Creek Watershed Management Commission approved the project at their monthly Board Meeting.
- February 2019 – The construction documents have been finalized after receiving permit approval from the U.S. Army Corp of Engineers and the Pioneer-Sarah Creek Watershed Management Commission.
- March 2019 – It was determined that Three Rivers Park District and Wenck Associates would go out for formal bid on behalf of the Pioneer and Sarah Creek Watershed Management Commission. The Three Rivers Park District submitted a template that is typically used for the formal bid process to Wenck Associates. Wenck Associates worked on a draft for the bid specifications required for the bid document over the next several months.
- April 2019 – Wenck Associates worked on the bid specifications that will be needed for the development of the request for bid document.
- May 2019 – Wenck Associates submitted a draft of request for bid document with bid specifications for Three Rivers Park District to review. Three Rivers Park District reviewed the bid packet and specifications. A meeting was scheduled for Wenck Associates and Three Rivers Park District to review the bid packet and bid specifications.

- June 2019 – Three Rivers Park District attended a meeting with Wenck Associates to review the bid packet and project specifications. Revisions to the bid packet were made based on the recommendations from the meeting. At the meeting, a future project schedule and time line was determined for moving forward on the bid process, pre-bid meeting, awarding the contract, pre-construction meeting, and project construction start date. The project schedule was incorporated into the bid packet.
  - June 14, 2019 – Wenck Associates & Three Rivers Park District Meeting to review Bid Packet and Specification. The project schedule was determined for the bid process, pre-bid meeting, awarding the contract, pre-construction meeting, project construction start date, and project substantial/final completion dates.
  - June 21, 2019 – Wenck provides a revised draft of the Bid Packet for Three Rivers Park District to review. Three Rivers Park District will review the bid document the remaining portion of June and provide comments early July.
- July 2019 – Three Rivers Park District water resources and design department reviewed the bid packet and provided comments to Wenck Associates for final edits. Wenck Associates and Three Rivers Park District finalize the request for bid packet (Appendix A). Wenck Associates posted project advertisement for request for bid on Quest CDN. Wenck Associates and Three Rivers Park District hosted a mandatory on-site pre-bid meeting to discuss pertinent details and project specifications of the bid packet.
  - July 12, 2019 – Three Rivers Park District reviewed and provided comments for final edits on the bid packet to Wenck Associates.
  - July 15, 2019 – Wenck Associates posted project advertisement for bid on QuestCDN.
  - July 17, 2019 – Baker Ravine Stabilization Bid Packet finalized and uploaded to QuestCDN for contractors to review.
  - July 18 – 29, 2019 – Wenck Associates monitored plan holders list on QuestCDN to determine which contractors downloaded the bid documents. They recorded any contractor questions that were brought up prior to the pre-bid meeting. They also prepared the draft agenda for the pre-bid meeting.
  - July 30, 2019 – Wenck Associates and Three Rivers Park District hosted the pre-bid meeting at the Baker Campground Ravine site to discuss project details and specifications. Three Rivers Park District and Wenck Associates uploaded Addendum #1 to QuestCDN that provided answers to contractor questions from the meeting.
- August 2019 – Three Rivers Park District and Wenck Associates received and opened bids. All of the bids were recorded and all of the estimates for each unit item on the submitted bid forms were confirmed to be accurate (Appendix B). Based on the bid estimates, Wenck Associates and Three Rivers Park District recommended to Pioneer and Sarah Creek Watershed Management Commission for approval of awarding the project contract to Minnesota Native Landscape. Three Rivers Park District sent notice and contract agreement to Minnesota Native Landscape.

- August 6, 2019 – Bid Opening-Three Rivers Park District Administrative Center at 10:00 AM.
  - August 15, 2019 – Pioneer and Sarah Creek Watershed Management Commission awards project contract to Minnesota Native Landscape at their monthly meeting.
  - August 26, 2019 – Three Rivers Park District and Wenck Associates sent notice and contract agreement for Minnesota Native Landscape to be awarded the Base Bid and Alternative #1.
- September 2019 – Three Rivers Park District obtained the necessary signatures for the contract agreement with Minnesota Native Landscape (Appendix C). It was determined during the development of the bid packet that construction could not begin until the campground is closed (October 20, 2019). An on-site pre-construction meeting was scheduled for October 23, 2019.
- October 2019 – Wenck Associates scheduled the pre-construction meeting with Minnesota Native Landscape. Wenck Associates developed an agenda for the meeting. A record of the pre-construction meeting was developed with tasks assigned to work group members to answer questions that came up during the meeting.
    - October 23, 2019 – Pre-construction meeting at 9:00 AM with Minnesota Native Landscape.
    - October 24, 2019 – Wenck Associates developed the record of the pre-construction meeting. Work group members were assigned tasks to answer questions that came up during the pre-construction meeting.
    - October 25, 2019 – Three Rivers Park District verified authenticity for the performance bond and payment bond as well as certificate of liability insurance. Wenck Associates sent the Notice to Proceed to Minnesota Native Landscape.
- November 2019 – Wenck Associates and Three Rivers Park District had an on-site meeting with Minnesota Native Landscape to discuss start date, ravine access, staging locations for mobilization, and general construction questions. Wenck Associates would provide inspection logs (Appendix D) and photos (Appendix E) for the project. A decision was also made to have weekly construction meeting every Thursday at 9:00 AM after project start.
    - November 19, 2019 - Minnesota Native Landscape began site mobilization
    - November 20, 2019 - Wenck Associates provided staking for the construction access, adjacent property boundary, wetland boundary, and constructing limits. There were discussions on tree removal and firewood location.
    - November 21, 2019 – Completed the first weekly construction meeting with Minnesota Native Landscape. The work group completed a site inspection of the construction area. Minnesota Native Landscape began tree removal for site access. The clearing and removal of trees is approximately 1/4<sup>th</sup> completed for the project.
    - November 25, 2019 – Wenck Associates provided staking for construction stabilization practices. Tree clearing has continued and the 2<sup>nd</sup> access road from the campground



has been constructed. The floatation silt curtain has been installed at the bottom of the ravine by the lake. There have been several loads of class 3 riprap delivered to the project site.

- November 26, 2019 - Wenck Associates staked out stabilization practices from the access road to the upstream extents of the project. Piping was placed within the channel to create access for track truck leading upstream from the access road. Submittals have been received from contractor for Geotextiles fabric, Coir Erosion Control Blanket, and Straw Erosion Control Blanket.
- December 2019 - Minnesota Native Landscape continues construction stabilization of the ravine. An area was identified with severe head cutting that was not present during the initial surveys for the project. This new area of erosion was approved and added to the project as change order #1 (Appendix F). There was also an on-site meeting to showcase the project with BWSR, Hennepin County Environmental Services, Pioneer and Sarah Creek Watershed Management Commission, Wenck Associates, and Three Rivers Park District. There has been significant progress made with approximately 33% of the total project completed.
  - December 2, 2019 – Minnesota Native Landscape has been installing rip rap at the head waters of the channel. There have also been construction activities below the gabions and moving of rock to place geotextile fabric.
  - December 4, 2019 – Wenck Associates had discussions with Minnesota Native Landscape about seeding, erosion control blanket and geotextile. Construction activities have been moving and installation of rock into the vegetated riprap area adjacent to the neighbor's driveway. There is concern about an area that has head cutting leading up to the existing settling basin that was not present during the initial surveys for the project. This area should be addressed for erosion control with riprap as change order #1.
  - December 5, 2019 – Weekly construction meeting. The work group completed a site inspection of the construction area. It was decided that straw blanket could be substituted for hydro mulch on the seeded banks of the ravine channel. It was decided that the area experiencing severe head cutting adjacent to the settling basin will be included as part of the project as change order #1. Wenck Associates will provide cost estimates to repair this section of the project. Three Rivers Park District will get approval for change order #1 from Pioneer and Sarah Creek Watershed Management Commission.
  - December 6, 2019 – Hennepin County Environmental Services set up a meeting for a project site visit with the Board of Water and Soil Resources on December 19, 2019 at 10:30 AM. Wenck Associates inspected the first section of vegetated riprap in the upstream section of the side ravine. There was also discussion about installation of cross vanes. Both Class 3 and Class 1 riprap has been delivered to the site.
  - December 9, 2019 – Construction continues on ravine 1 with placement of vegetated riprap toe, cross vanes, and erosion control fabric and seeding. Minnesota Native Landscape has completed 3 cross vane sections within the main channel. It is anticipated there might be a couple days of no work due to extreme cold temperatures.

- December 12, 2019 – Weekly construction meeting. The work group completed a site inspection of the construction area. Construction within the Ravine 1 will be completed. Minnesota Native Landscape will supply rock quantity estimates to Wenck for review. Contractor will submit the first payment application for the project after Wenck reviews quantities.
- December 19, 2019 – Weekly construction meeting. The work group completed a site inspection of the construction area. The construction for Ravine #1 has been completed and work is now taking place in main channel working downstream toward access road. The payment application has been submitted to Three Rivers Park District who will forward to Pioneer and Sarah Creek Watershed Management Commission for payment. There was a meeting with Board of Water and Soil Resources for video filming and photos of the project. There several project partners that attended the meeting that included Steve Christopher and Ann Wessel (BWSR), Jim Kujawa (Hennepin County Environmental Services), Joe Baker (Chair of Pioneer and Sarah Creek Watershed Management Commission), and Ed Matthiesen (Wenck Associates).
- December 23, 2019 – Minnesota Native Landscape is working from the end of the ravine and working upstream to the settling basin. The construction is approximately 33% completed. There will be no weekly construction meeting due to the holidays.
- December 30, 2019 – Three Rivers Park District received approval of change order #1 from Pioneer and Sarah Creek Watershed Management Commission. There was no construction due to poor weather conditions. Construction will resume tomorrow.
- January 2020 – Minnesota Native Landscape continues construction for stabilization of the ravine. The construction for change order #1 has been completed and should eliminate any erosion from the settling basin side channel. There has been another erosion area identified from a side slope adjacent to the campground area. If this area is not addressed, then run-off from this area will compromise and impact the stabilization efforts of the main channel. Wenck Associates provided cost estimates for change order #2. Three Rivers Park District and Pioneer and Sarah Creek Watershed Management Commission approved change order #2. There has been significant progress made with approximately 75% of the total project completed by the end of January. It is estimated the project will be substantially completed by 2<sup>nd</sup> week in February.
  - January 2, 2020 – Weekly Construction Meeting. The work group completed a site inspection of the construction area. Construction is proceeding upstream from the wetland area to the settling basin adjacent to change order #1. Three Rivers Park District is still trying to get signatures from Pioneer and Sarah Creek Watershed Management Commission for change order #1. Wenck Associates went through all the rock delivery slips to the site relative to the construction that has already been completed, and it appears that there is less rock needed for portions of the project in comparison to estimated quantities. The amount in savings due to over estimation of rock is similar to the costs for adding change order #1 to the project.



- January 7, 2020 – Spillway construction is complete from the wetland to the outlet at Lake Independence.
- January 9, 2020 – Weekly Construction Meeting. The work group completed a site inspection of the construction area. Wenck Associates requested that additional vegetated riprap be added above the confluence of change order #1 side ravine and the main channel to protect high flow conditions. It was also requested that Minnesota Native Landscape add additional Class III riprap and geotextile fabric to the riprap spillway before entering into Lake Independence.
- January 16, 2020 – Weekly Construction Meeting. The work group completed a site inspection of the construction area. Three Rivers Park District received payment application #2. Wenck Associates requested that additional riprap is added at the ravine outlet to Lake Independence and downstream of the change order #1 ravine. Three Rivers Park District gave a project update on construction and budget at the Pioneer and Sarah Creek Watershed Management Commission Meeting.
- January 22, 2020 – Wenck Associates walked the construction site and reviewed the rock quantity from the trucking tickets.
- January 23, 2020 – Weekly Construction Meeting. Three Rivers Park District confirmed that payment application #1 has been paid to Minnesota Native Landscape. Minnesota Native Landscape is chipping material next week. The work group completed a site inspection of the construction area. A second area of potential erosion was discovered by Minnesota Native Landscape. Three Rivers Park District requested estimated cost for addressing this new erosion site. Wenck Associates will estimate the cost for a potential change order #2. There has been significant progress on the project with approximately 60% of the project completed.
- January 24, 2020 – Three Rivers Park District reviewed the cost estimates for change order #2. Wenck Associates indicated that the project would still be under budget implementing change order #2. Three Rivers Park District and Pioneer and Sarah Creek Watershed Management Commission approved change order #2.

# **APPENDIX E**

## **Construction Photos**

**Baker Campground Ravine Stabilization  
Construction  
Photos**

## Materials and Equipment



**Bluestem Straw**



**Field Stone Boulders**





Class III Riprap



Class III Riprap





**Geotextile Fabric**



**Erosion Control Blanket**



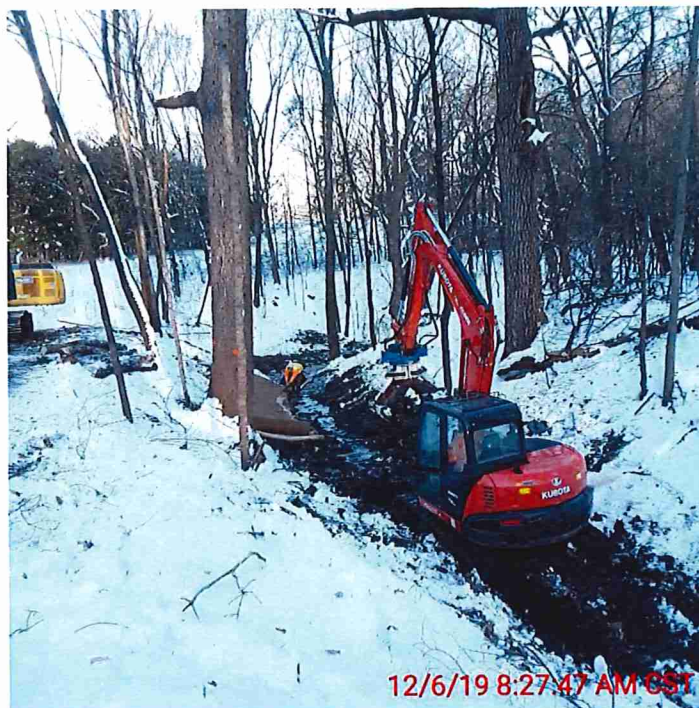


Track Truck



Track Truck

## Construction



Ravine #1



Ravine #1 with Vegetated Erosion Control Blanket





**Headwaters of Main Channel**



**Confluence of Ravine #1 and Main Channel**





Main Channel Construction



Main Channel Construction





**Check Dam with Boulder and Riprap**



**Main Channel Construction**





Main Channel Construction



Main Channel Construction





Main Channel Construction



Main Channel Construction





**Main Channel Construction Upstream of Change Order #1**



**Main Channel Construction**





**Change Order #1 Confluence with Main Channel Looking Upstream**



**Change Order #1 Looking Downstream**



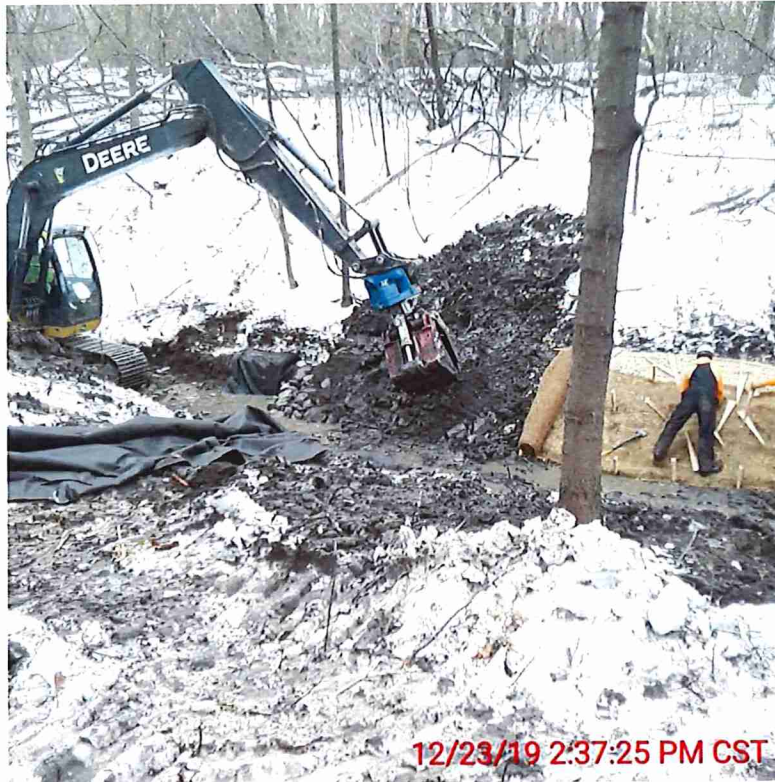


Installation of Geotextile Fabric Main Channel



Installation of Riprap Main Channel





Installation of Soil and Seed on top of Riprap



Installation of Erosion Control Blanket over Soil with Seed





**Main Channel Stabilization**



**Main Channel Stabilization with Riprap Check Dam**





**Main Channel Stabilization with Seeded Stream Bank**



**Main Channel Stabilization with Seeded Stream Bank**





**Main Channel Outlet to Lake Independence prior to Stabilization**



**Main Channel Outlet to Lake Independence after Stabilization**

## MEMORANDUM

**TO:** Pioneer-Sarah Creek Watershed Management Commission  
**FROM:** Andrew Vistad, Commission Consultant  
**DATE:** February 13, 2020 *no updates have been made to the January Tech Memo*  
**SUBJECT:** Staff Report

- 1. 2016-05 Proto Labs Parking Lot Expansion, Maple Plain.** The Commission approved this project contingent upon three conditions. One condition remains open - receipt of an Operation and Maintenance agreement on the biofiltration basin per Staff findings dated September 6, 2016. The agreement has been signed but remains to be recorded on the property title.
- 2. 2017-03 Equestrian Facility (Bel Farms) Independence.** This is a 16.5-acre rural residential parcel located approximately 500 feet north of the intersection of CR6 and Nelson Road. The owner is proposing to construct a new garage/apartment, horse stall barn, indoor arena, outdoor arena, six grass and four sand paddocks for horses. Because this project disturbs greater than 1.0 acre and creates 3.1 acres of additional impervious area, it triggers the Commission's review for Rules D and E. Staff provided grading and erosion control approval contingent upon (1) the applicant assuming the risk and responsibility for any changes to the site plans necessary for final Commission approval and (2) the City of Independence approving a grading permit. In September 2017 the Commission approved the Stormwater Management Plan contingent upon receipt of an approved long-term pond/basin O&M plan between the landowner and City, to be recorded on the land title. No new information has been received.
- 3. 2017-05 Ostberg Equestrian Facility, Independence.** This is a 40-acre agriculture parcel located just southwest of the intersections of CSAH 6 and Game Farm Road. The owner is proposing to construct a new home, two garages, a horse stall barn, indoor arena, outdoor ring, eight horse paddocks and an access drive off of CSAH 6. The project will disturb 7 acres during construction and create 1.69 acres of new impervious areas. Because this project disturbs more than 1.0 acre and creates 1.7 acres of additional impervious area, it triggers the Commission's review for Rules D and E. There are also two wetlands that have been delineated on this site, so the Commission wetland buffer requirements (Rule I) are triggered. The project was approved by the Commission at their November 2017 meeting contingent upon receipt of an approved long-term pond/basin O&M plan between the landowner and the City, to be recorded on the land title. This information has not yet been received.
- 4. 2018-010 Chippewa Estates, Loretto.** This is a 1.54-acre parcel located in the far northeast corner of Loretto on Chippewa Road. The project is proposing to subdivide the lot into four single family residential lots and triggers the Commission's review for Rules D and E. At their August 16, 2018 meeting, the Commission approved Staff findings with three conditions regarding the operations and maintenance plan, sequencing, and retrofitting of the pond. The only remaining item necessary for final approval is the Operation and Maintenance agreement on the stormwater system. If the City chooses not to maintain the filter system, the applicant must provide an O&M maintenance plan that is acceptable to the City and the Commission and must be recorded on the title to the property.
- 5. 2018-017 Crow River Overlook, Greenfield.** This is a 42-acre agriculture parcel located on CR 10 just north of 84th Avenue. Approximately 38 acres are east of CR 10 and 4 acres are located west of CR 10 along the Crow River. The applicant proposes to subdivide the property into an 8 large lot residential development. Lot sizes will range from 2.85 acres up to 10.1 acres. One cul-de-sac street will be constructed for access to the lots, with one street platted for future access to the property east of this project. One additional outlot will remain on the west side of CR 10. This project was reviewed for Rules

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RULE D – STORMWATER MANAGEMENT

RULE E – EROSION AND SEDIMENT CONTROL

RULE F – FLOODPLAIN ALTERATION

*Language in red indicates current updates*

\* indicates enclosure

RULE G – WETLAND ALTERATION

RULE H – BRIDGE AND CULVERT CROSSINGS

RULE I – BUFFERS

D, E, F and I. Staff findings of January 16, 2019 were approved by the Commission at their January 17, 2019 meeting. Approval was contingent upon (1) an Operation and Maintenance agreement with city or HOA, (2) planting and seeding plans for the biofiltration basins and buffer areas that fall into the cropland areas that require seeding and (3) typical emergency overflow details noted on the plans. Items 2 and 3 have been completed; Staff are awaiting the O & M agreement.

**6. 2019-03 John Sega 9255 CR 6, Independence.** This is an existing 78-acre parcel located on CR 6 about one-quarter mile east of the county border. The owner is proposing to construct a new indoor riding arena, parking, drive lanes, future hay barn, shed and hot-walker ring. Because this project disturbs greater than 1.0 acres and creates 1.1 acres of additional impervious area, it triggers the Commission's review for Rules D and E. At their August meeting, the Commission approved this project conditioned on receipt of a long-term O & M plan meeting Commission requirements and recorded on the land title with a copy provided to the Commission.

**7. 2019-05 Green Acres East, Greenfield.\*** This is a six-lot residential subdivision proposed on 34 acres at Schendel Lake Drive and Pioneer Trail. Initial findings found the site plans did not meet the Commission's requirements. An updated wetland replacement plan was received on August 1 and re-noticed per WCA public notice requirements. An updated site plan was received on August 6. In their findings dated September 13, 2019 Staff recommended approval contingent upon (1) an operations and maintenance plan being developed for the infiltration basins and approved by the City of Greenfield and the Commission. The O & M plans must be recorded on the property titles on lots 4, 5 and 6 (unless an HOA will be responsible, then it will be required in the HOA deed documents) and (2) no wetland impacts can occur until (a) wetland replacement credit purchases from BWSR Bank Accounts 1546 and 1542 have been certified by BWSR or (b) a \$21,500 cash or letter of credit escrow is received by the Commission. This plan was originally approved with conditions by the Commission at the September 19, 2019 meeting.

The developer submitted significant site plan changes in October, removing wetland impacts and reducing the number of lots from six to three plus an outlot. An infiltration basin will still be installed on the outlot to mitigate future impervious surface. Because the plan revision is a reduction of the previously approved plan, Staff administratively approved the project contingent on the original requirement, an O&M agreement for the infiltration basin recorded on the property deed or association documents. No wetland impacts can occur from this project and any future wetland impacts will need to be reviewed by the WCA LGU to be approved.

**8. 2019-08 Adams Pest Control, Medina.\*** Adam's Pest Control is planning to expand their current Medina facility. This property is located on the north side of State Highway 55, just west of Willow Drive. The entire parcel is 46-acres, but only the southern portion (Lot 1-26.6 acres) is being proposed for development at this time. This site plan consists of two new buildings which includes an office building and a warehouse/maintenance building with parking. This project will disturb 10.9 acres and create 4.6 acres of new impervious areas. The Commission's stormwater management plan requires compliance with Rules D, E, F and I. At their November meeting, the Commission approved this project conditioned on an O&M plan for the basins being recorded on the title and provided to the Commission; construction sequencing details for the filter basins meeting Commission requirements; and wetland buffer planting and maintenance plans being provided for areas not in permanent vegetative cover.



## RURAL CONSERVATIONIST UPDATES

**Buffer Law:** One parcel within the watershed was referred to the state for enforcement, which is pending the resident working with Hennepin Staff to work on a project that will help them meet the requirements of the law.

**Cost Share:** Two projects are in development in the watershed. One is in Independence on Lake Independence, and one is in Greenfield along an un-named stream.

**Zuhrah Shrine Horse Facility.** Hennepin County (Karen Galles, Paul Stewart and Kristine Maurer), Office of Commissioner Jeff Johnson (Danny Nadeau), Three Rivers Park District (Brian Vlach) and Pioneer Sarah Creek Watershed Commission Chair (Joe Baker) met with Zuhrah Shrine Horsemen Ranch Manager (Steve Pool) and Zuhrah Shrine Horsemen Board Members for a working session to explore solutions to the wetland flooding. The goals are to provide the Zuhrah Shrine Horsemen more predictable pasturing and feeding conditions year-to-year, while also benefitting natural resources. Next steps will be to look at hydrologic restoration options, BMPS for the pasture and a farm management plan. A follow-up meeting where additional information will be presented on wetland banks and other wetland restoration approaches will be scheduled for early February. The Zuhrah Shrine Horsemen also agreed to work with County staff on getting their wetland complex formally delineated.

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