PRIOR LAKE SPRING LAKE WATERSHED DISTRICT

AGENDA

Tuesday, August 20, 2024

6:00 PM

Council Chambers
Prior Lake City Hall

BOARD OF MANAGERS:

Bruce Loney, President; Frank Boyles, Vice President;
Christian Morkeberg, Treasurer; Ben Burnett, Secretary; Matt Tofanelli, Manager

Note: Individuals with items on the agenda or who wish to speak to the Board are encouraged to be in attendance when the meeting is called to order.

Board Workshop 4:00 PM – *Parkview Conference Room*

4:00 – 4:35 PM	W.1	Jan Voit, Executive Director, Minnesota Watersheds and Justin Hanson, Assistant Director for Regional Operations, Minnesota Board of Water and Soil Resources (BWSR) Introduction (Joni Giese)
4:35 – 4:50 PM	W.2	Minnesota Watershed Resolutions Process (Joni Giese)
4:50 – 5:05 PM	W.3	2025 Draft Budget (Joni Giese)
5:05 – 5:15 PM	W.4	District Office Space (Matt Tofanelli)
5:15 – 5:30 PM	W.5	Prior Lake Outlet Structure Operations: An Introduction (Jeff Anderson/Joni Giese)
5:30 – 5:40 PM	W.6	Administrator Report (Joni Giese)
5:40 – 5:55 PM	W.7	Liaison Updates ○ District Partners in Attendance ○ Managers' Summary of other Meetings Attended

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6:00 – 6:01 PM 1.0 **BOARD MEETING CALL TO ORDER & PLEDGE OF ALLEGIANCE**

6:01 – 6:02 PM 2.0 **PUBLIC COMMENT**

If anyone wishes to address the Board of Managers on an item not on the agenda or on the consent agenda, please come forward at this time. Go up to the podium, turn on the microphone and state your name and address. (The Chair may limit your time for commenting.)

6:02 - 6:03 PM **PUBLIC HEARING – Prior Lake-Spring Lake Watershed District Stormwater Pollution Prevention Plan**

If anyone wishes to address the Board of Managers on the PLSLWD Stormwater Pollution Prevention Plan, please come forward at this time. Go up to the podium, turn on the microphone and state your name and address. (The Chair may limit your time for commenting.)

6:03 - 6:04 PM **PUBLIC HEARING – Capital Improvement Project: Swamp Lake Iron Enhanced Sand Filter**

If anyone wishes to address the Board of Managers on the proposed Capital Improvement Project: Swamp Lake Iron Enhanced Sand Filter, please come forward at this time. Go up to the podium, turn on the microphone and state your name and address. (The Chair may limit your time for commenting.)

6:04 - 6:05 PM **PUBLIC HEARING – Capital Improvement Project: Ferric Chloride Site Improvements**

If anyone wishes to address the Board of Managers on the proposed Capital Improvement Project: Ferric Chloride Site Improvements, please come forward at this time. Go up to the podium, turn on the microphone and state your name and address. (The Chair may limit your time for commenting.)

6:05 – 6:06 PM 3.0 **APPROVAL OF AGENDA** (Additions/Corrections/Deletions)

6:06 – 6:45 PM 4.0 **OTHER OLD/NEW BUSINESS**

- 4.1 Programs & Projects Update (Discussion)
- 4.2 Authorization to Proceed with Ferric Chloride Feedline Locating Request for Quotes and Contracting (Vote)
- 4.3 EOR Scope of Services: PLOC Low Flow Gate Standard Operating Procedures (Vote)
- 4.4 EOR Scope of Services: Desilt Pond Outlet & High-flow Bypass Improvement Feasibility Study (Vote)

6:45 – 6:50 PM 5.0 **TREASURER'S REPORT**

5.1 Monthly Financial Reports (Discussion Only)

- Financial Report
- Treasurers Report
- Cash Flow Projections
- Cost Analysis

6:50 – 6:55 PM 6.0 **CONSENT AGENDA**

The consent agenda is considered as one item of business. It consists of routine administrative items or items not requiring discussion. Items can be removed from the consent agenda at the request of the Board member, staff member, or a member of the audience. Please state which item or items you wish to remove for separate discussion.

- 6.1 Meeting Minutes – July 16, 2024, Board Workshop
- 6.2 Meeting Minutes – July 16, 2024, Board Meeting
- 6.3 Meeting Minutes – June 27, 2024, Special Joint CAC/Board Meeting
- 6.4 Meeting Minutes – May 30, 2024, CAC Meeting
- 6.5 Claims List and Bank Purchase Card Expenditures Summary
- 6.6 EOR Scope of Services: Spring Lake Post-Alum Treatment Sediment Core Analysis
- 6.7 EOR Scope of Services: Swamp Iron Enhanced Sand Filter
- 6.8 2025 Watershed Based Implementation Fund Grant Agreement

6:55 – 7:00 PM 7.0 **UPCOMING MEETING/EVENT SCHEDULE:**

- Board of Managers Workshop, Tuesday, September 17, 2024, 4:00 pm (Prior Lake City Hall – Parkview Conference Room)
- Board of Managers Meeting, Tuesday, September 17, 2024, 6:00 pm (Prior Lake City Hall – Council Chambers)
- CAC Meeting, Thursday, September 26, 2024, 6:00 pm (Spring Lake Township – Town Hall)

7:00 PM 8.0 **ADJOURNMENT**

PLSLWD Board Staff Report
August 13, 2024

Subject |	Prior Lake-Spring Lake Watershed District Stormwater Pollution Prevention Plan (SWPPP)		
Board Meeting Date |	August 20, 2024	**Item No:**	**Public Hearing**
Prepared By |	Joni Giese, District Administrator		
Attachment |	PLSLWD MS4 SWPPP		
Action |	No motion required. Discussion only.		

Background

PLSLWD has a Small Municipal Separate Storm Sewer System (MS4) permit for the Prior Lake Outlet Channel. MS4 permitees are required to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) to reduce the discharge of pollutants from their storm sewer system to the maximum extent practicable. The SWPPP must cover six minimum control measures: Public Education & Outreach, Public Participation/ Involvement, Illicit Discharge Detection & Elimination, Construction Site Runoff & Control, Post-Construction Stormwater Management, and Pollution Prevention/Good Housekeeping.

In May 2021, the District submitted an application to the Minnesota Pollution Control Agency (MPCA) for the 2020 Small Municipal Separate Storm Sewer Systems (MS4) General Permit**.** The MPCA reauthorized PLSLWD to operate a small MS4 and to discharge from the small MS4 to receiving waters, in accordance with the requirements of the Small Municipal Separate Storm Sewer Systems General Permit MNR040000 (General Permit), effective October 14, 2021, and expiring on November 15, 2025.

Discussion

The Minnesota Pollution Control Agency's (MPCA) Municipal Separate Storm Sewer System (MS4) General Permit requires permittees to annually invite members of the public to review and comment on the SWPPP. The District chose to hold a public hearing to meet this requirement. Notice of this public hearing was published in the StarTribune newspaper on July 29 and August 5, 2024. Staff shall present a brief overview of the SWPPP and respond to any questions brought forward in public comment.

MINNESOTA POLLUTION CONTROL AGENCY

520 Lafayette Road North
St. Paul, MN 55155-4194

MS4 Part 2 Permit Application

Authorization to discharge stormwater associated with small Municipal Separate Storm Sewer System (MS4)

Stormwater Pollution Prevention Program (SWPPP) Document

Doc Type: Permit Application

Instructions: Submitting this application confirms your intent to receive authorization to discharge stormwater under the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) MS4 General Permit (MNR040000). This application is due within 150 days from the issuance date of the MS4 General Permit (MNR040000). Throughout this application there are text fields with a typical maximum limit of four lines. If you need to provide information in a text field that exceeds the maximum limit, please submit an attachment(s) with supplemental information that is labeled with the corresponding field number (e.g., *9.J.*).

Submittal: This application form and any associated documents (i.e., total maximum daily load (TMDL) application, any supplemental information) must be submitted electronically. To submit this form electronically, open the form using Internet Explorer Web browser or Adobe Acrobat Reader in order for the submit button to work properly. (If you do not have Acrobat Reader, you can download a free version at https://get.adobe.com/reader/.) Send the form to the Minnesota Pollution Control Agency (MPCA) by clicking the submit button at the end of the form (a "send email" window should open with the form attached), you can click on "Send" and then close the form. If you do not see a "send email", save the form to your computer and attach the form to an email message, using "MS4 Part 2 Permit Application" as the subject line to ms4permitprogram.pca@state.mn.us.

Review/Public Notice process: The MPCA will review the application for completeness. Incomplete applications will be returned. If the MPCA determines the application is complete, the MPCA will make a preliminary determination to issue permit coverage and place the application on public notice for 30 days. Once the applicant addresses any applicable comments or hearing requests, the MPCA will make a final determination to issue permit coverage to the applicant.

Please note, this application is intended to provide information about an applicant's existing SWPPP. An applicant that receives permit coverage is responsible for complying with all new applicable requirements set forth in the MS4 General Permit (MNR040000) by deadlines specified in Appendix B of the reissued permit.

Questions: If you have any questions, need additional information, contact MPCA staff. To find the staff assigned to your MS4, refer to the https://stormwater.pca.state.mn.us/index.php?title=MS4_staff_contact_information_and_staff_assignments; or see the staff contact information on the MPCA's MS4 webpage at https://www.pca.state.mn.us/water/municipal-stormwater-ms4.

Note: All questions with an asterisk(*) are **required** fields, and the form will not submit without the fields completed.

General contact information

1. **MS4 Owner** (with ownership or operational responsibility, or control of the MS4)

*MS4 permittee name: 1.A. Prior Lake-Spring Lake Watershed District *County: 1.B. Scott
(City, county, municipality, government agency or other entity)

*Mailing address: 1.C. 4646 Dakota St SE

*City: 1.D. Prior Lake *State: 1.E. MN *Zip code: 1.F. 55372

2. **MS4 General contact** (with SWPPP implementation responsibility)

*Last name: 2.A. Karschnia *First name: 2.B. Maggie
(Department head, MS4 coordinator, consultant, etc.)

*Title: 2.C. Water Resources Project Manager

*Mailing address: 2.D. 4646 Dakota St SE

*City: 2.E. Prior Lake *State: 2.F. MN *Zip code: 2.G. 55372

*Phone (including area code): 2.H. (952) 447-9808 *Email: 2.I. mkarschnia@plslwd.org

3. **Preparer information** (complete if SWPPP application is prepared by a party other than MS4 General contact)

Last name: 3.A. First name: 3.B.
(Department head, MS4 coordinator, consultant, etc.)

Title: 3.C. Organization: 3.D.

Mailing address: 3.E.

City: 3.F. State: 3.G. Zip code: 3.H.

Phone (including area code): 3.I. Email: 3.J.

4. **Certification** (All fields are required)

☒ *Yes - *I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted.*

I certify that based on my inquiry of the person, or persons, who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of civil and criminal penalties.

I have read, understood, and accepted all terms and conditions of the NPDES/SDS MS4 General Permit.

This certification is required by Minn. Stat. §§ 7001.0070 and 7001.0540. The authorized person with overall, MS4 legal responsibility must certify the application (principal executive officer or a ranking elected official).

By typing/signing my name below, I certify the above statements to be true and correct, to the best of my knowledge, and that this information can be used for the purpose of processing my application.

*Signature: 4.A. Joni Giese
(This document has been electronically signed)

*Title: 4.B. District Administrator *Date: 4.C. 04/15/2021

*Mailing address: 4.D. 4646 Dakota Street SE

*City: 4.E. Prior Lake *State: 4.F. MN *Zip code: 4.G. 55372

*Phone (including area code): 4.H. (952) 440-0067 *Email: 4.I. jgiese@plslwd.org

***Note:** The application will not be processed without certification.*

*5. **Which type of MS4 do you represent?** (Check one)

5.A. ☐ City
5.B. ☐ County
5.C. ☐ Corrections
5.D. ☐ Education
5.E. ☐ Healthcare
5.F. ☐ Township
5.G. ☐ Transportation (i.e., Minnesota Department of Transportation [MnDOT])
5.H. ☒ Watershed District

*6. **Permit item 12.3:** Do you have any partnerships with another regulated small MS4(s) to satisfy one or more requirements of the General Permit?

☒ Yes
☐ No (skip to Q8)

7. **If yes in Q6, provide a description of the partnership(s): (Maximum 10 lines of text)**

PLSLWD has a Memorandum of Agreement (MOA) for Operation & Maintenance of the Prior Lake Outlet Channel (PLOC) with City of Prior Lake, Shakopee Mdewakanton Sioux Community (SMSC) and City of Shakopee. The MOA defines maintenance responsibilities and restricts discharge rates. PLSLWD conducts inspections of the culverts on the PLOC, but defers to Prior Lake, SMSC and Shakopee for investigating, locating and eliminating illicit discharges.
PLSLWD has a MOA with the Cities of Prior Lake & Savage and Scott Co. that our Rules are equivalent to their requirements.

PLSLWD partners with the City of Prior Lake to complete outreach events, such as the Clean Water Clean Up which occur twice per calendar year and partially focuses on leaf debris illicit discharge to storm sewer systems. The District also engages with Scott SWCD to conduct outreach & educational events.

MCM 1: Public education and outreach

*8. **Permit item 16.3:** Do you distribute educational materials or equivalent outreach focused on at least two (2) specifically selected stormwater-related issues of high priority? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☒ Yes
☐ No (skip to Q11)

9. **If yes in Q8, what are your high-priority topics?** (Check all that apply)

9.A. ☒ Specific TMDL reduction targets
9.B. ☐ Changing local business practices
9.C. ☒ Promoting adoption of residential best management practices (BMPs)
9.D. ☐ Lake improvements through lake associations
9.E. ☐ Household chemicals
9.F. ☒ Yard waste
9.G. ☐ Construction activities
9.H. ☐ Post-construction activities
9.I. ☐ Other (describe below):
9.J.

Additional information for checked items (optional):
9.K.

10. **If yes in Q8, how do you educate the public about stormwater-related issues?** (Check all that apply)

10.A. ☒ Brochure
10.B. ☒ Newsletter
10.C. ☒ Utility bill insert
10.D. ☐ Newspaper ad
10.E. ☐ Radio ad
10.F. ☐ Television ad
10.G. ☐ Cable access channel
10.H. ☒ Website
10.I. ☒ Stormwater-related event
10.J. ☒ Other (describe below):
10.K. Newspaper articles, social media

Additional information for checked items (optional):
10.L.

*11. **Permit item 16.4:** At least once each calendar year, do you distribute educational outreach focused on illicit discharge recognition and reporting illicit discharges? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☒ Yes
☐ No (skip to Q13)

12. **If yes in Q11, how do you educate the public about illicit discharge recognition and reporting?** (Check all that apply)

12.A. ☒ Brochure
12.B. ☐ Newsletter
12.C. ☐ Utility bill insert

12.D. ☐ Newspaper ad
12.E. ☐ Radio ad
12.F. ☐ Television ad
12.G. ☐ Cable access channel
12.H. ☒ Website
12.I. ☐ Stormwater-related event
12.J. ☒ Other (describe below):
12.K. social media outreach

Additional information for checked items (optional):
12.L.

If you represent a city or township, please answer questions 13-16; ***if you do not*** *represent a city or township, skip to question 17.*

13. **Permit item 16.5:** At least once each calendar year, do you distribute educational materials or equivalent outreach to residents, businesses, commercial facilities, and institutions, focused on deicing salt use? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***
☐ Yes
☐ No (skip to Q15)

14. **If yes in Q13, what does your education or outreach cover?** (Check all that apply)
14.A. ☐ The impacts of salt use on receiving waters
14.B. ☐ Methods to reduce salt use
14.C. ☐ Proper storage of salt or other deicing materials
14.D. ☐ Other (describe below):
14.E.

Additional information for checked items (optional):
14.F.

15. **Permit item 16.6:** At least once each calendar year, do you distribute educational materials or equivalent outreach focused on pet waste? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***
☐ Yes
☐ No (skip to Q17)

16. **If yes in Q15, what do your educational materials or equivalent outreach on pet waste include?** (Check all that apply)
16.A. ☐ Impacts of pet waste on receiving waters
16.B. ☐ Proper management of pet waste
16.C. ☐ Any existing regulatory mechanism(s) for pet waste
16.D. ☐ Other (describe below):
16.E.

Additional information for checked items (optional):

16.F.

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*17. **Permit item 16.7:** Do you have an education and outreach plan?

☒ Yes

☐ No (skip to Q19)

18. **If yes in Q17, which components does your education and outreach plan include?** (Check all that apply)

18.A. ☒ Target audience(s) ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)*** If checked, specify your target audiences:

18.A.1. ☒ Residents

18.A.2. ☐ Businesses

18.A.3. ☐ Commercial facilities

18.A.4. ☒ Institutions

18.A.5. ☒ Local organizations

18.A.6. ☐ Low income residents

18.A.7. ☐ People of color

18.A.8. ☐ Non-native English speaking residents

18.A.9. ☒ Other (describe below):

18.A.10. Students

18.B. ☒ Name or position title of responsible person(s) for overall plan implementation.

18.B.1. If checked, specify the name(s) or position title(s):

Outreach Specialist

18.C. ☒ Specific activities and schedules to reach each target audience.

18.C.1. If checked, provide any additional information (optional):

18.D. ☒ A description of any coordination with and/or use of stormwater education and outreach programs implemented by other entities, if applicable.

18.D.1. If checked, provide any additional information (optional):

Coordinate outreach with Scott SWCD as part of the Scott County Water Education Program (SCWEP). Program plans and implements educational programming and messaging for Scott Co. residents, students, institutions & community groups. Also partner with City of Prior Lake for outreach programs including twice yearly outreach clean-up events.

*19. **Permit item 16.8:** Do you document information relating to MCM 1?

☒ Yes

☐ No (skip to Q21)

20. **If yes in Q19,** what do you document? (Check all that apply)

20.A. ☒ A description of all specific stormwater-related issues you identified in item 16.3

20.B. ☒ All information required under your education and outreach plan in item 16.7

20.C. ☒ Activities held, including dates, to reach each target audience

20.D. ☒ Quantities and descriptions of educational materials distributed, including dates distributed

20.E. ☒ Estimated audience (e.g., number of participants, viewers, readers, listeners, etc.) for each completed education and outreach activity ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

*21. **Permit item 12.4:** Who is responsible for implementation of this MCM? List name(s) or position title(s):

Outreach Specalist

22. **Provide any additional information about your current education and outreach program that you would like to share (optional): (Maximum 10 lines of text)**

MCM 2: Public participation/involvement

*23. **Permit item 17.3:** Do you provide a minimum of one (1) annual opportunity for the public to provide input on the adequacy of the SWPPP?

☒ Yes
☐ No (skip to Q25)

24. **If yes in Q23, describe the opportunity(ies):**

Public hearing held annually at a District Board Meeting

*25. **Permit item 17.4:** Do you provide access to the SWPPP Document, annual reports, and other documentation that supports or describes the SWPPP (e.g., regulatory mechanism(s), etc.) for public review, upon request?

☒ Yes
☐ No (skip to Q27)

26. **If yes in Q25, how can the public access this information?** (Check all that apply)

26.A. ☒ Hardcopy upon request
26.B. ☒ Our website
26.C. ☐ Available at public event
26.D. ☐ Other (describe below):
26.E.

*27. **Permit item 17.5:** Do you consider oral and written input regarding the SWPPP submitted by the public?

☒ Yes
☐ No

*28. **Permit item 17.6:** Each calendar year, do you provide a minimum of one (1) public involvement activity that includes a pollution prevention or water quality theme? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☒ Yes
☐ No (skip to Q30)

29. **If yes in Q28, what are the themes of your public involvement activity/activities?** (Check all that apply)

29.A. ☐ Rain barrel distribution event
29.B. ☐ Rain garden workshop
29.C. ☒ Cleanup event
29.D. ☐ Storm drain stenciling

29.E. ☒ Volunteer water quality monitoring
29.F. ☐ Adopt a storm drain program
29.G. ☐ Household hazardous waste collection day
29.H. ☐ Other (describe below):
29.I.

Additional information for checked items (optional):
29.J.

*30. **Permit item 17.7:** Do you document information relating to MCM 2?
☒ Yes
☐ No (skip to Q32)

31. **If yes in Q30, what do you document?** (Check all that apply)
31.A. ☒ All relevant written input submitted by persons regarding the SWPPP
31.B. ☒ All of your responses to written input received regarding the SWPPP, including any modifications made to the SWPPP as a result of the written input received
31.C. ☒ Date(s), location(s), and estimated number of participants at events held for purposes of compliance with permit item 17.3
31.D. ☒ Notices provided to the public of any events scheduled to meet permit item 17.3, including any electronic correspondence (e.g., website, email distribution lists, notices, etc.)
31.E. ☒ Date(s), location(s), description of activities, and estimated number of participants at events held for the purpose of compliance with permit item 17.6 ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

*32. **Permit item 12.4:** Who is responsible for implementation of this MCM? List name(s) or position title(s):
District Administrator, Outreach Specialist

33. **Provide any additional information about your current public participation/involvement program that you would like to share (optional): (Maximum 10 lines of text)**

MCM 3: Illicit Discharge Detection and Elimination (IDDE)

*34. **Permit item 18.3:** Do you maintain a storm sewer system map?
☒ Yes
☐ No (skip to Q36)

35. **If yes in Q34, which of the following does your storm sewer map include?** (Check all that apply)
35.A. ☐ All pipes 12 inches or greater in diameter, including stormwater flow direction in those pipes
35.B. ☐ Outfalls, including a unique identification (ID) number, and an associated geographic coordinate
35.C. ☒ Structural stormwater BMPs that are part of your small MS4
35.D. ☒ All receiving waters

*36. **Permit item 18.4:** Do you have a regulatory mechanism(s) that prohibits non-stormwater discharges into your MS4?
☒ Yes
☐ No (skip to Q39)

37. **If yes in Q36, what does your regulatory mechanism(s) consist of?** (Check all that apply)
37.A. ☐ Contract language
37.B. ☐ Ordinance
37.C. ☒ Permits
37.D. ☐ Standards
37.E. ☐ Written policies
37.F. ☐ Operational plans
37.G. ☒ Legal agreements
37.H. ☒ Other mechanism(s) (describe below):
37.I. We have a MOA for Use, Operation and Maintenance of the Prior Lake Outlet Channel and Outlet Structure; the agreement defines maintenance responsibilities and restricts discharge rates. Partners use their illicit discharge procedures for situations where they have non-stormwater discharge; District Rules for illicit discharge are enforced within District boundaries.

38. **If yes in Q36,** provide a website address to the regulatory mechanism(s). If the regulatory mechanism is not available online, briefly describe how a copy of the regulatory mechanism can be obtained**:**

https://www.plslwd.org/projects-and-programs/permits/

https://www.plslwd.org/waterbodies/outlet-channel/prior-lake-outlet-system-report/

If you represent a **city, township, or county** please answer question 39. ***If you do not*** *represent a city, township, or county skip to question 42.*

39. **Permit item 18.5:** Do you have a regulatory mechanism(s) that requires owners or custodians of pets to remove and properly dispose of feces from permittee owned land areas? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***
☐ Yes
☒ No

If you represent a **city or township**, please answer questions 40-41. ***If you do not*** *represent a city or township, skip to question 42.*

40. **Permit item 18.6:** Do you have a regulatory mechanism(s) that requires proper salt storage at commercial, institutional, and non-NPDES permitted industrial facilities? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***
☐ Yes
☐ No (Skip to Q42)

41. **If yes in Q40,** what does your regulatory mechanism(s) require? (Check all that apply)
41.A. ☐ Designated salt storage areas must be covered or indoors
41.B. ☐ Designated salt storage areas must be located on an impervious surface
41.C. ☐ Implementation of practices to reduce exposure when transferring material in designated salt storage areas (e.g., sweeping, diversions, and containment)
41.D. ☐ Other (describe below):
41.E.

*42. **Permit item 18.7:** Do you incorporate illicit discharge detection into all inspection and maintenance activities conducted in permit items 21.9, 21.10, and 21.11?
☒ Yes
☐ No (Skip to Q44)

43. **If yes in Q42**: where feasible, do you conduct illicit discharge inspections during dry-weather conditions (e.g., periods of 72 or more hours of no precipitation)?
☒ Yes
☐ No

*44. **Permit item 18.8:** At least once each calendar year, do you train all field staff in illicit discharge recognition (including conditions which could cause illicit discharges), and reporting illicit discharges for further investigation? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☒ Yes
☐ No (Skip to Q47)

45. **If yes in Q44, which field staff do you train?** (Check all that apply)

45.A. ☐ Police
45.B. ☐ Fire department
45.C. ☐ Public works
45.D. ☐ Parks staff
45.E. ☒ Other (describe below):
45.F. All PLSLWD field staff.

46. **If yes in Q44, how do you train staff?** (Check all that apply)

46.A. ☐ Videos
46.B. ☒ In-person presentations
46.C. ☐ Webinars
46.D. ☐ Training documents
46.E. ☐ Emails
46.F. ☐ Other (describe below):
46.G.

*47. **Permit item 18.9:** Do you ensure that individuals receive training commensurate with their responsibilities as they relate to your IDDE program? Individuals includes, but is not limited to, individuals responsible for investigating, locating, eliminating illicit discharges, and/or enforcement. ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☒ Yes
☐ No (Skip to Q50)

48. **If yes in Q47, how are these individuals trained?** (Check all that apply)

48.A. ☐ Videos
48.B. ☒ In-person presentations
48.C. ☐ Webinars
48.D. ☐ Training documents
48.E. ☐ Emails
48.F. ☐ Other (describe below):
48.G.

49. **If yes in Q47, do previously trained individuals attend a refresher-training every three (3) calendar years following the initial training?**

☐ Yes
☒ No

*50. **Permit item 18.10:** Do you maintain a written or mapped inventory of priority areas you identify as having a higher likelihood for illicit discharges? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☒ Yes
☐ No

*51. **Permit item 18.11:** To the extent allowable under state or local law, do you conduct additional illicit discharge inspections in priority areas?

☒ Yes

☐ No (Skip to Q53)

52. **If yes in Q51,** how often do you conduct illicit discharge inspections in priority areas**:**

Multiple times per year.

*53. **Permit item 18.12:** Do you have written procedures for investigating, locating, and eliminating the source of illicit discharges? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☒ Yes

☐ No (Skip to Q55)

54. **If yes in Q53, what do your procedures include? Check all that apply:** ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

54.A. ☐ A timeframe in which you will investigate a reported illicit discharge

54.A.1. If checked, describe:

54.B. ☒ Use of visual inspections to detect and track the source of an illicit discharge

54.C. ☒ Tools to investigate and locate an illicit discharge

If checked, what tools do you use? (Check all that apply)

54.C.1. ☒ Mobile cameras

54.C.2. ☒ Collecting and analyzing water samples

54.C.3. ☐ Smoke testing

54.C.4. ☒ Dye testing

54.C.5. ☒ Other (describe below):

54.C.6 Televising

54.D ☐ Cleanup methods to remove an illicit discharge or spill:

54.D.1. If checked, describe:

54.E ☐ Name or position title of responsible person(s) for investigating, locating, and eliminating an illicit discharge

54.E.1. If checked, specify the name(s) or position title(s):

*55. **Permit item 18.13:** Do you have written procedures for responding to spills, including emergency response procedures to prevent spills from entering the MS4?

☒ Yes

☐ No (Skip to Q57)

56. **If yes in Q55, do your written procedures include the immediate notification of the Minnesota Department of Public Safety Duty Officer at 1-800-422-0798 (toll free) or 651-649-5451 (Metro area), if the source of the illicit discharge is a spill or leak as defined in Minn. Stat. § 115.061?**

☒ Yes

☐ No

*57. **Permit item 18.14:** Do you maintain written enforcement response procedures (ERPs) to compel compliance with your regulatory mechanism(s) in Section 18? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☒ Yes
☐ No (Skip to Q60)

58. **If yes in Q57, which of the following enforcement tools are available to you?** (Check all that apply)

58.A. ☐ Verbal warning
58.B. ☒ Notice of violation
58.C. ☐ Fine
58.D. ☒ Criminal action
58.E. ☐ Civil penalty
58.F. ☒ Other (describe below):
58.G. Payment of District costs for remediation; suspend MS4 discharge access

59. **If yes in Q57, do your ERPs include the following?** (Check all that apply)

59.A. ☐ Timeframes to complete corrective actions
59.B. ☐ Name or position title of responsible person(s) for conducting enforcement

*60. **Permit item 18.15:** Do you document information relating to MCM 3?

☒ Yes
☐ No (Skip to Q62)

61. **If yes in Q60, what do you document?** (Check all that apply)

61.A. ☒ Date(s) and location(s) of IDDE inspections conducted in accordance with permit items 18.7 and 18.11
61.B. ☒ Reports of alleged illicit discharges received, including date(s) of the report(s), and any follow-up action(s) you take
61.C. ☒ Date(s) of discovery of all illicit discharges
61.D. ☒ Identification of outfalls, or other areas, where illicit discharges have been discovered
61.E. ☒ Sources (including a description and the responsible party) of illicit discharges (if known)
61.F. ☒ Action(s) you take, including date(s), to address discovered illicit discharges

*62. **Permit item 18.16:** Do you document training relating to permit item 18.8 and 18.9?

☒ Yes
☐ No (Skip to Q64)

63. **If yes in Q62, what training information do you document?** (Check all that apply)

63.A. ☒ General subject matter covered
63.B. ☐ Names and departments of individuals in attendance
(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)
63.C. ☒ Date of each event

*64. **Permit item 18.17:** Do you document enforcement conducted pursuant to the ERPs in item 18.14, including verbal warnings?

☒ Yes
☐ No (Skip to Q66)

65. **If yes in Q64, what do you document relating to ERPs for MCM 3?** (Check all that apply)

65.A. ☒ Name of the person responsible for violating the terms and conditions of your regulatory mechanism(s)
65.B. ☒ Date(s) and location(s) of the observed violation(s)
65.C. ☒ Description of the violation(s)
65.D. ☒ Corrective action(s) (including completion schedule) that you issued
65.E. ☒ Referrals to other regulatory organizations (if any)
65.F. ☒ Date(s) violation(s) resolved

*66. **Permit item 12.4:** Who is responsible for implementation of this MCM? List name(s) or position title(s):

Maggie Karschnia, Project Manager

67. **Provide any additional information about your current illicit discharge detection and elimination program that you would like to share (optional): (Maximum 10 lines of text)**

#39 was accidentally checked - this question does not apply for watershed districts. (form does not allow you to uncheck a box)

#59 - neither apply so no boxes were checked.

MCM 4: Construction site stormwater runoff control

*68. **Permit item 19.3:** Do you have a regulatory mechanism(s) that establishes requirements for erosion, sediment, and waste controls?

☒ Yes
☐ No (skip to Q73)

69. **If yes in Q68, what does your regulatory mechanism(s) consist of?** (Check all that apply)

69.A. ☐ Contract language
69.B. ☐ Ordinance
69.C. ☒ Permits
69.D. ☒ Standards
69.E. ☐ Written policies
69.F. ☐ Operational plans
69.G. ☐ Legal agreements
69.H. ☐ Other mechanism(s) (describe below):
69.I.

70. **If yes in Q68, provide a website address to the regulatory mechanism(s). If the regulatory mechanism is not available online, briefly describe how a copy of the regulatory mechanism can be obtained:**

https://www.plslwd.org/projects-and-programs/permits/

71. **If yes in Q68, is your regulatory mechanism(s) at least as stringent as the MPCA's most current Construction Stormwater General Permit (MNR100001) for erosion, sediment, and waste controls by incorporating the Construction Stormwater General Permit by reference, or by incorporating all items in Q72?**

☒ Yes (skip to Q73)
☐ No

72. **If no in Q71, which of the following requirements are incorporated into your regulatory mechanism(s)?** (Check all that apply)

72.A. Erosion prevention practices:

72.A.1. ☐ Before work begins, owner(s)/operator(s) must delineate the location of areas not to be disturbed.

72.A.2. ☐ Owner(s)/operator(s) must minimize the need for disturbance of portions of the project with steep slopes. When steep slopes must be disturbed, owner(s)/operator(s) must use techniques such as phasing and stabilization practices designed for steep slopes (e.g., slope draining and terracing).

72.A.3. ☐ Owner(s)/operator(s) must stabilize all exposed soil areas, including stockpiles. Stabilization must be initiated immediately to limit soil erosion when construction activity has permanently or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization must be completed no later than 14 calendar days after the construction activity has ceased. Stabilization is not required on constructed base components of roads, parking lots and similar surfaces. Stabilization is not required on temporary stockpiles without significant silt, clay or organic components (e.g., clean aggregate stockpiles, demolition concrete stockpiles, sand stockpiles) but owner(s)/operator(s) must provide sediment controls at the base of the stockpile.

72.A.4. ☐ For Public Waters that the Minnesota Department of Natural Resources (DNR) has promulgated "work in water restrictions" during specified fish spawning time frames, owner(s)/operator(s) must complete stabilization of all exposed soil areas within 200 feet of the water's edge, and that drain to these waters, within 24 hours during the restriction period.

72.A.5. ☐ Owner(s)/operator(s) must stabilize the normal wetted perimeter of the last 200 linear feet of temporary or permanent drainage ditches or swales that drain water from the site within 24 hours after connecting to a surface water or property edge. Owner(s)/operator(s) must complete stabilization of the remaining portions of temporary or permanent ditches or swales within 14 calendar days after connecting to a surface water or property edge and construction in that portion of the ditch temporarily or permanently ceases.

72.A.6. ☐ Temporary or permanent ditches or swales that are being used as a sediment containment system during construction (with properly designed rock-ditch checks, bio rolls, silt dikes, etc.) do not need to be stabilized. Owner(s)/operator(s) must stabilize these areas within 24 hours after their use as a sediment containment system ceases.

72.A.7. ☐ Owner(s)/operator(s) must not use mulch, hydromulch, tackifier, polyacrylamide or similar erosion prevention practices within any portion of the normal wetted perimeter of a temporary or permanent drainage ditch or swale section with a continuous slope of greater than two percent.

72.A.8. ☐ Owner(s)/operator(s) must provide temporary or permanent energy dissipation at all pipe outlets within 24 hours after connection to a surface water or permanent stormwater treatment system.

72.A.9. ☐ Owner(s)/operator(s) must not disturb more land (i.e., phasing) than can be effectively inspected and maintained.

72.B. Sediment control practices:

72.B.1. ☐ Owner(s)/operator(s) must establish sediment control BMPs on all down gradient perimeters of the site and downgradient areas of the site that drain to any surface water, including curb and gutter systems. Owner(s)/operator(s) must locate sediment control practices upgradient of any buffer zones. Owner(s)/operator(s) must install sediment control practices before any upgradient land-disturbing activities begin and must keep the sediment control practices in place until they establish permanent cover.

72.B.2. ☐ If the downgradient sediment controls are overloaded, based on frequent failure or excessive maintenance requirements, owner(s)/operator(s) must install additional upgradient sediment control practices or redundant BMPs to eliminate the overloading and amend the site plans to identify these additional practices.

72.B.3. ☐ Temporary or permanent drainage ditches and sediment basins designed as part of a sediment containment system (e.g., ditches with rock-check dams) require sediment control practices only as appropriate for site conditions.

72.B.4. ☐ A floating silt curtain placed in the water is not a sediment control BMP to satisfy perimeter control requirements in this part except when working on a shoreline or below the waterline. Immediately after the short term construction activity (e.g. installation of rip rap along the shoreline) in that area is complete, owner(s)/operator(s) must install an upland perimeter control practice if exposed soils still drain to a surface water.

72.B.5. ☐ Owner(s)/operator(s) must re-install all sediment control practices adjusted or removed to accommodate short-term activities such as clearing or grubbing, or passage of vehicles, immediately after the short-term activity is completed. Owner(s)/operator(s) must re-install sediment control practices before the next precipitation event even if the short-term activity is not complete.

72.B.6. ☐ Owner(s)/operator(s) must protect all storm drain inlets using appropriate BMPs during construction until they establish permanent cover on all areas with potential for discharging to the inlet.

72.B.7. ☐ Owner(s)/operator(s) may remove inlet protection for a particular inlet if a specific safety concern (e.g., street flooding/freezing) is identified by owner(s)/operator(s) or the jurisdictional authority (e.g., city/county/township/ MnDOT engineer). Owner(s)/operator(s) must document the need for removal in the site plans.

72.B.8. ☐ Owner(s)/operator(s) must provide silt fence or other effective sediment controls at the base of stockpiles on the downgradient perimeter.

72.B.9. ☐ Owner(s)/operator(s) must locate stockpiles outside of natural buffers or surface waters, including stormwater conveyances such as curb and gutter systems unless there is a bypass in place for the stormwater.

72.B.10. ☐ Owner(s)/operator(s) must install a vehicle tracking BMP to minimize the track out of sediment from the construction site or onto paved roads within the site.

72.B.11. ☐ Owner(s)/operator(s) must use street sweeping if vehicle tracking BMPs are not adequate to prevent sediment tracking onto the street.

72.B.12. ☐ In any areas of the site where final vegetative stabilization will occur, owner(s)/operator(s) must restrict vehicle and equipment use to minimize soil compaction.

72.B.13. ☐ Owner(s)/operator(s) must preserve topsoil on the site, unless infeasible.

72.B.14. ☐ Owner(s)/operator(s) must direct discharges from BMPs to vegetated areas unless infeasible.

72.B.15. ☐ Owner(s)/operator(s) must preserve a 50 foot natural buffer or, if a buffer is infeasible on the site, provide redundant (double) perimeter sediment controls when a surface water is located within 50 feet of the project's earth disturbances and stormwater flows to the surface water. Owner(s)/operator(s) must install

perimeter sediment controls at least 5 feet apart unless limited by lack of available space. Natural buffers are not required adjacent to road ditches, judicial ditches, county ditches, stormwater conveyance channels, storm drain inlets, and sediment basins. If preserving the buffer is infeasible, owner(s)/operator(s) must document the reasons in the site plans. Sheet piling is a redundant perimeter control if installed in a manner that retains all stormwater.

72.B.16. ☐ Owner(s)/operator(s) must use polymers, flocculants, or other sedimentation treatment chemicals in accordance with accepted engineering practices, dosing specifications and sediment removal design specifications provided by the manufacturer or supplier. Owner(s)/operator(s) must use conventional erosion and sediment controls prior to chemical addition and must direct treated stormwater to a sediment control system for filtration or settlement of the floc prior to discharge.

72.C. Dewatering and basin draining:

72.C.1. ☐ Owner(s)/operator(s) must discharge turbid or sediment-laden waters related to dewatering or basin draining (e.g., pumped discharges, trench/ditch cuts for drainage) to a temporary or permanent sediment basin on the project site unless infeasible. Owner(s)/operator(s) may dewater to surface waters if they visually check to ensure adequate treatment has been obtained and nuisance conditions (see Minn. R. 7050.0210, subp. 2) will not result from the discharge. If owner(s)/operator(s) cannot discharge the water to a sedimentation basin prior to entering a surface water, owner(s)/operator(s) must treat it with appropriate BMPs such that the discharge does not adversely affect the surface water or downstream properties.

72.C.2. ☐ If owner(s)/operator(s) must discharge water that contains oil or grease, owner(s)/operator(s) must use an oil-water separator or suitable filtration device (e.g. cartridge filters, absorbents pads) prior to discharge.

72.C.3. ☐ Owner(s)/operator(s) must discharge all water from dewatering or basin-draining activities in a manner that does not cause erosion or scour in the immediate vicinity of discharge points or inundation of wetlands in the immediate vicinity of discharge points that causes significant adverse impact to the wetland.

72.C.4. ☐ If owner(s)/operator(s) use filters with backwash water, they must haul the backwash water away for disposal, return the backwash water to the beginning of the treatment process, or incorporate the backwash water into the site in a manner that does not cause erosion.

72.D. Inspection and maintenance:

72.D.1. ☐ Owner(s)/operator(s) must ensure that a trained person will inspect the entire construction site at least once every seven (7) days during active construction and within 24 hours after a rainfall event greater than one-half inch in 24 hours.

72.D.2. ☐ Owner(s)/operator(s) must inspect and maintain all permanent stormwater treatment BMPs.

72.D.3. ☐ Owner(s)/operator(s) must inspect all erosion prevention and sediment control BMPs and Pollution Prevention Management Measures to ensure integrity and effectiveness. Owner(s)/operator(s) must repair, replace, or supplement all nonfunctional BMPs with functional BMPs by the end of the next business day after discovery unless another time frame is specified below. Owner(s)/operator(s) may take additional time if field conditions prevent access to the area.

72.D.4. ☐ During each inspection, owner(s)/operator(s) must inspect surface waters, including drainage ditches and conveyance systems but not curb and gutter systems, for evidence of erosion and sediment deposition. Owner(s)/operator(s) must remove all deltas and sediment deposited in surface waters, including drainage ways, catch basins, and other drainage systems and restabilize the areas where sediment removal results in exposed soil. Owner(s)/operator(s) must complete removal and stabilization within seven (7) calendar days of discovery unless precluded by legal, regulatory, or physical access constraints. Owner(s)/operator(s) must use all reasonable efforts to obtain access. If precluded, removal and stabilization must take place within seven (7) calendar days of obtaining access. Owner(s)/operator(s) are responsible for contacting all local, regional, state and federal authorities and receiving any applicable permits, prior to conducting any work in surface waters.

72.D.5. ☐ Owner(s)/operator(s) must inspect construction site vehicle exit locations, streets and curb and gutter systems within and adjacent to the project for sedimentation from erosion or tracked sediment from vehicles. Owner(s)/operator(s) must remove sediment from all paved surfaces within one (1) calendar day of discovery or, if applicable, within a shorter time to avoid a safety hazard to users of public streets.

72.D.6. ☐ Owner(s)/operator(s) must repair, replace, or supplement all perimeter control devices when they become nonfunctional or the sediment reaches one-half of the height of the device.

72.D.7. ☐ Owner(s)/operator(s) must drain temporary and permanent sedimentation basins and remove the sediment when the depth of sediment collected in the basin reaches one-half of the storage volume.

72.D.8. ☐ Owner(s)/operator(s) must ensure that at least one individual present on the site (or available to the project site in three (3) calendar days) is trained in the job duties of overseeing the implementation of, revising and/or amending the site plans and performing inspections for the project.

72.D.9. ☐ Owner(s)/operator(s) may adjust the inspection schedule as follows:

a. inspections of areas with permanent cover can be reduced to once per month, even if construction activity continues on other portions of the site; or
b. where construction sites have permanent cover on all exposed soil areas and no construction activity is occurring anywhere on the site, inspections can be reduced to once per month and, after 12 months, may be suspended completely until construction activity resumes. The MPCA may require inspections to resume if conditions warrant; or

c. where construction activity has been suspended due to frozen ground conditions, inspections may be suspended. Inspections must resume within 24 hours of runoff occurring, or upon resuming construction, whichever comes first.

72.D.10 ☐ Owner(s)/operator(s) must record all inspections and maintenance activities within 24 hours of being conducted and these records must be retained with the site plans. These records must include:

a. date and time of inspections; and

b. name of person(s) conducting inspections; and

c. accurate findings of inspections, including the specific location where corrective actions are needed; and

d. corrective actions taken (including dates, times, and party completing maintenance activities); and

e. date of all rainfall events greater than one-half inch in 24 hours, and the amount of rainfall for each event. Owner(s)/operator(s) must obtain rainfall amounts by either a properly maintained rain gauge installed onsite, a weather station that is within one (1) mile of owner(s)/operator(s)r location, or a weather reporting system that provides site specific rainfall data from radar summaries; and

f. if owner(s)/operator(s) observe a discharge during the inspection, they must record and should photograph and describe the location of the discharge (i.e., color, odor, settled or suspended solids, oil sheen, and other obvious indicators of pollutants); and

g. any amendments to the site plans proposed as a result of the inspection must be documented within seven (7) calendar days.

72.E. Inspection and maintenance:

72.E.1. ☐ Owner(s)/operator(s) must place building products and landscape materials under cover (e.g., plastic sheeting or temporary roofs) or protect them by similarly effective means designed to minimize contact with stormwater. Owner(s)/operator(s) are not required to cover or protect products which are either not a source of contamination to stormwater or are designed to be exposed to stormwater.

72.E.2. ☐ Owner(s)/operator(s) must place pesticides, fertilizers and treatment chemicals under cover (e.g., plastic sheeting or temporary roofs) or protect them by similarly effective means designed to minimize contact with stormwater.

72.E.3. ☐ Owner(s)/operator(s) must store hazardous materials and toxic waste, (including oil, diesel fuel, gasoline, hydraulic fluids, paint solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids) in sealed containers to prevent spills, leaks or other discharge. Storage and disposal of hazardous waste materials must be in compliance with Minn. R. ch. 7045 including secondary containment as applicable.

72.E.4. ☐ Owner(s)/operator(s) must properly store, collect, and dispose of solid waste in compliance with Minn. R. ch. 7035.

72.E.5. ☐ Owner(s)/operator(s) must position portable toilets so they are secure and will not tip or be knocked over. Owner(s)/operator(s) must dispose of sanitary waste in accordance with Minn. R. ch. 7041.

72.E.6. ☐ Owner(s)/operator(s) must take reasonable steps to prevent the discharge of spilled or leaked chemicals, including fuel, from any area where chemicals or fuel will be loaded or unloaded including the use of drip pans or absorbents unless infeasible. Owner(s)/operator(s) must ensure adequate supplies are available at all times to clean up discharged materials and that an appropriate disposal method is available for recovered spilled materials. Owner(s)/operator(s) must report and clean up spills immediately as required by Minn. Stat. § 115.061, using dry clean up measures where possible.

72.E.7. ☐ Owner(s)/operator(s) must limit vehicle exterior washing and equipment to a defined area of the site. Owner(s)/operator(s) must contain runoff from the washing area in a sediment basin or other similarly effective controls and must dispose of waste from the washing activity properly. Owner(s)/operator(s) must properly use and store soaps, detergents, or solvents.

72.E.8. ☐ Owner(s)/operator(s) must provide effective containment for all liquid and solid wastes generated by washout operations (e.g., concrete, stucco, paint, form release oils, curing compounds and other construction materials) related to the construction activity. Owner(s)/operator(s) must prevent liquid and solid washout wastes from contacting the ground and must design the containment so it does not result in runoff from the washout operations or areas. Owner(s)/operator(s) must properly dispose of liquid and solid wastes in compliance with Minn. R. ch. 7035. Owner(s)/operator(s) must install a sign indicating the location of the washout facility.

72.F. Temporary sediment basins:

72.F.1. ☐ Where ten (10) or more acres of disturbed soil drain to a common location, owner(s)/operator(s) must provide a temporary sediment basin to provide treatment of the runoff before it leaves the construction site or enters surface waters. Owner(s)/operator(s) may convert a temporary sediment basin to a permanent basin after construction is complete. The temporary basin is no longer required when permanent cover has reduced the acreage of disturbed soil to less than ten (10) acres draining to a common location.

72.F.2. ☐ The temporary basin must provide live storage for a calculated volume of runoff from a two (2)-year, 24-hour storm from each acre drained to the basin or 1,800 cubic feet of live storage per acre drained, whichever is greater.

72.F.3. ☐ Where owner(s)/operator(s) have not calculated the two (2)-year, 24-hour storm runoff amount, the temporary sediment basin must provide 3,600 cubic feet of live storage per acre of the basin's drainage area.

72.F.4. ☐ Owner(s)/operator(s) must design basin outlets to prevent short-circuiting and the discharge of floating debris.

72.F.5. ☐ Owner(s)/operator(s) must design the outlet structure to withdraw water from the surface to minimize the discharge of pollutants. Owner(s)/operator(s) may temporarily suspend the use of a surface withdrawal mechanism during frozen conditions. The basin must include a stabilized emergency overflow to prevent failure of pond integrity.

72.F.6. ☐ Owner(s)/operator(s) must provide energy dissipation for the basin outlet within 24 hours after connection to a surface water.

72.F.7. ☐ Owner(s)/operator(s) must locate temporary basins outside of surface waters and any required buffer zones.

72.F.8. ☐ Owner(s)/operator(s) must construct temporary basins prior to disturbing (10) or more acres of soil draining to a common location.

72.F.9. ☐ Where a temporary sediment basin meeting the requirements of this part is infeasible, owner(s)/operator(s) must install effective sediment controls such as smaller sediment basins and/or sediment traps, silt fences, vegetative buffer strips or any appropriate combination of measures as dictated by individual site conditions. In determining whether installing a sediment basin is infeasible, owner(s)/operator(s) must consider public safety and may consider factors such as site soils, slope, and available area on-site. Owner(s)/operator(s) must document this determination of infeasibility in the site plans.

72.G. Termination conditions:

72.G.1. ☐ Owner(s)/operator(s) must complete all construction activity and must install permanent cover over all areas. Vegetative cover must consist of a uniform perennial vegetation with a density of 70 percent of its expected final growth. Vegetation is not required where the function of a specific area dictates no vegetation, such as impervious surfaces or the base of a sand filter.

72.G.2. ☐ Owner(s)/operator(s) must clean the permanent stormwater treatment system of any accumulated sediment and must ensure the system meets all applicable requirements and is operating as designed.

72.F.3. ☐ Owner(s)/operator(s) must remove all sediment from conveyance systems.

72.G.4. ☐ Owner(s)/operator(s) must remove all temporary synthetic erosion prevention and sediment control BMPs. Owner(s)/operator(s) may leave BMPs designed to decompose on-site in place.

72.G.5. ☐ For residential construction only, permit coverage terminates on individual lots if the structure(s) are finished and temporary erosion prevention and downgradient perimeter control is complete and the residence sells to the homeowner.

72.G.6. ☐ For construction projects on agricultural land (e.g., pipelines across cropland), owner(s)/operator(s) must return the disturbed land to its preconstruction agricultural use.

72.H. If applicable, additional requirements for discharges to special and impaired waters:

72.H.1. ☐ Owner(s)/operator(s) must immediately initiate stabilization of exposed soil areas, and complete the stabilization within seven (7) calendar days after the construction activity in that portion of the site temporarily or permanently ceases.

72.H.2. ☐ Owner(s)/operator(s) must provide a temporary sediment basin for common drainage locations that serve an area with five (5) or more acres disturbed at one time.

72.H.3. ☐ Owner(s)/operator(s) must include an undisturbed buffer zone of not less than 100 linear feet from a special water (not including tributaries) and must maintain this buffer zone at all times, both during construction and as a permanent feature post construction, except where a water crossing or other encroachment is necessary to complete the project. Owner(s)/operator(s) must fully document the circumstance and reasons the buffer encroachment is necessary in the site plans and include restoration activities. Owner(s)/operator(s) must minimize all potential water quality, scenic and other environmental impacts of these exceptions by the use of additional or redundant (double) BMPs and must document this in the site plans for the project.

72.H.4. ☐ Owner(s)/operator(s) must conduct routine site inspections once every three (3) days for projects that discharge to prohibited waters.

*73. **Permit item 19.5:** Does your regulatory mechanism(s) require that owners and operators of construction activity develop site plans that must be submitted to you for review and confirmation that regulatory mechanism(s) requirements have been met, prior to the start of construction activity?

☒ Yes
☐ No

*74. **Permit item 19.6:** Do you have written procedures for site plan reviews to ensure compliance with requirements of the regulatory mechanism(s)? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☒ Yes
☐ No (Skip to Q76)

75. **If yes in Q74, do your procedures include the following?** (Check all that apply)

75.A. ☒ Written notification to owners and operators of the need to apply for and obtain coverage under the CSW Permit.

75.B. ☒ Use of a written checklist, consistent with the requirements of the regulatory mechanism(s), to document the adequacy of each site plan required.

*76. **Permit item 19.7:** Do you have written procedures for conducting site inspections to determine compliance with your regulatory mechanism(s)?

☒ Yes

☐ No

*77. **Permit item 19.8:** Do you maintain written procedures for identifying high-priority and low-priority sites for inspection? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☐ Yes

☒ No (Skip to Q79)

78. **If yes in Q77, do your procedures include the following?** (Check all that apply)

78.A. ☐ A detailed explanation describing how sites will be categorized as either high-priority or low-priority.

If checked, how do you prioritize sites for inspection? (Check all that apply)

78.A.1. ☐ Site topography
78.A.2. ☐ Soil characteristics
78.A.3. ☐ Types of receiving water(s)
78.A.4. ☐ Stage of construction
78.A.5. ☐ Compliance history
78.A.6. ☐ Weather conditions
78.A.7. ☐ Citizen complaints
78.A.8. ☐ Project size
78.A.9. ☐ Other (describe below):

78.A.10.

78.B. ☐ A frequency at which you will conduct inspections for high-priority sites.

If checked, how often will you inspect high-priority sites? (Check only one)

78.B.1. ☐ More than once every seven (7) days
78.B.2. ☐ Once every seven (7) days
78.B.3. ☐ Once every 14 days
78.B.4. ☐ Once every 21 days
78.B.5. ☐ Once every 30 days
78.B.6. ☐ Other (describe below):

78.B.7.

78.C. ☐ A frequency at which you will conduct inspections for low-priority sites.

If checked, how often will you inspect low-priority sites? (Check only one)

78.C.1. ☐ More than once every seven (7) days
78.C.2. ☐ Once every seven (7) days
78.C.3. ☐ Once every 14 days
78.C.4. ☐ Once every 21 days
78.C.5. ☐ Once every 30 days
78.C.6. ☐ Other (describe below):

78.C.7.

78.D. ☐ The name(s) of individual(s) or position title(s) responsible for conducting site inspections:

*79. **Permit item 19.9:** Do you use a written checklist to document each site inspection when determining compliance with your regulatory mechanism(s)? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☒ Yes

☐ No (Skip to Q82)

80. **If yes in Q79, are the following items incorporated in your written checklist?** (Check all that apply)

80.A. ☒ Stabilization of exposed soils (including stockpiles)

80.B. ☒ Stabilization of ditch and swale bottoms

80.C. ☐ Sediment control BMPs on all downgradient perimeters of the project and upgradient of buffer zones

80.D. ☒ Storm drain inlet protection

80.E. ☒ Energy dissipation at pipe outlets

80.F. ☒ Vehicle tracking BMPs

80.G. ☐ Preservation of a 50 foot natural buffer or redundant sediment controls where stormwater flows to a surface water within 50 feet of disturbed soils

80.H. ☒ Owner/operator of construction activity self-inspection records

80.I. ☒ Containment for all liquid and solid wastes generated by washout operations (e.g., concrete, stucco, paint, form release oils, curing compounds, and other construction materials)

80.J. ☒ BMPs maintained and functional

81. **Provide any additional information on your process to document site inspections (optional):**

The District uses the GoCanvas app on mobile devices that export to a pdf directly to contractors/permittees.

*82. **Permit item 19.10:** Do you have written procedures for receipt and consideration of reports of noncompliance or other stormwater related information on construction activity submitted to you by the public?

☒ Yes

☐ No (Skip to Q84)

83. **If yes in Q82, please provide your procedures or a description of your procedures (e.g., how the public may submit concerns, typical timeframe for you to investigate reports):**

Public may submit concerns by calling the main office line as referenced on the bottom of our permit web page: https://www.plslwd.org/projects-and-programs/permits/. Reports are investigated by the next business day.

*84. **Permit item 19.11:** Do individuals receive training commensurate with their responsibilities as they relate to your Construction Site Stormwater Runoff Control program? Individuals includes, but is not limited to, individuals responsible for conducting site plan reviews, site inspections, and/or enforcement.

☒ Yes

☐ No (Skip to Q87)

85. **If yes in Q84, do previously trained individuals attend a refresher-training every three (3) calendar years following the initial training?** ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☒ Yes
☐ No

86. **If yes in Q84, what training do your staff who perform site inspections receive?** (Check all that apply)

86.A. ☒ University of Minnesota Erosion and Stormwater Management Certification Program
86.B. ☐ Qualified Compliance Inspector of Stormwater
86.C. ☐ Minnesota Laborers Training Center Stormwater Pollution Prevention Plan Installer or Supervisor
86.D. ☐ Minnesota Utility Contractors Association Erosion Control Training
86.E. ☐ Certified Professional in Erosion and Sediment Control
86.F. ☐ Certified Professional in Stormwater Quality
86.G. ☐ Certified Erosion Sediment and Storm Water Inspector
86.H. ☐ Other (describe below):
86.I.

*87. **Permit item 19.12:** Do you maintain written ERPs to compel compliance with your regulatory mechanism(s) in Section 19? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☒ Yes
☐ No (Skip to Q89)

88. **If yes in Q87, which enforcement tools are included in your ERPs?** (Check all that apply)

88.A. ☒ Verbal warning
88.B. ☒ Notice of violation
88.C. ☒ Administrative order
88.D. ☒ Stop work order
88.E. ☐ Fine
88.F. ☒ Forfeit of security bond money
88.G. ☐ Withholding of certificate of occupancy
88.H. ☐ Criminal action
88.I. ☐ Civil penalty
88.J. ☐ Other (describe below):
88.K.

*89. **Please specify name or position title of responsible person(s) for conducting enforcement:**

Maggie Karschnia, Water Resources Project Manager

*90. **Permit item 19.13:** Do you document each site plan review you conduct?

☒ Yes
☐ No (Skip to Q92)

91. **If yes in Q90, what do you document in your site plan review process?** (Check all that apply)

91.A. ☒ Project name
91.B. ☒ Location
91.C. ☒ Total acreage to be disturbed
91.D. ☒ Owner and operator of the proposed construction activity
91.E. ☐ Proof of notification to obtain coverage under the CSW Permit or proof of coverage under the CSW Permit ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***
91.F. ☒ Any stormwater related comments and supporting completed checklist, to determine project approval or denial ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

*92. **Permit item 19.14:** Do you document training related to permit item 19.11?
☒ Yes
☐ No (Skip to Q94)

93. **If yes in Q92, what do you document?** (Check all that apply)
93.A. ☒ General subject matter covered
93.B. ☒ Name(s) and departments of individuals in attendance
(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)
93.C. ☒ Date of each event

*94. **Permit item 19.15:** Do you document enforcement conducted pursuant to your ERPs in item 19.12, including verbal warnings?
☒ Yes
☐ No (Skip to Q96)

95. **If yes in Q94, what do you document relating to ERPs for MCM 4?** (Check all that apply)
95.A. ☒ Name of the person responsible for violating the terms and conditions of your regulatory mechanism(s)
95.B. ☒ Date(s) and location(s) of the observed violation(s)
95.C. ☒ Description of the violation(s)
95.D. ☒ Corrective action(s) (including completion schedule) that you issued
95.E. ☒ Referrals to other regulatory organizations (if any)
95.F. ☐ Date(s) violation(s) resolved

*96. **Permit item 12.4: Who is responsible for implementation of this MCM? List name(s) or position title(s):**
Shauna Capron, Water Resources Assistant; Jeff Anderson, Water Resources Technician; Maggie Karschnia, Water Resources Project Manager

97. **Provide any additional information about your current construction site stormwater runoff control program that you would like to share (optional): (Maximum 10 lines of text)**

MCM 5: Post-construction stormwater management

*98. **Permit item 20.3:** Do you have a post-construction stormwater management regulatory mechanism(s)?
☒ Yes
☐ No (skip to Q102)

99. **If yes in Q98, what does your regulatory mechanism(s) consist of?** (Check all that apply)
99.A. ☐ Contract language
99.B. ☐ Ordinance
99.C. ☒ Permits
99.D. ☐ Standards
99.E. ☐ Written policies
99.F. ☐ Operational plans
99.G. ☐ Legal agreements
99.H. ☒ Other mechanism(s) (describe below):
99.I. Memorandums of Agreement with Scott County and municipalities within the District for Local Water Planning and Regulation of development activities (the only projects the District issues permits for are those sponsored by the county and the municipalities, such as road reconstruction and municipal buildings).

100. **If yes in Q98, provide a website address to the regulatory mechanism(s). If the regulatory mechanism is not available online, briefly describe how a copy of the regulatory mechanism can be obtained:**

https://www.plslwd.org/projects-and-programs/permits/

101. **If yes in Q98, which of the following requirements are incorporated into your regulatory mechanism?** (Check all that apply)

101.A. ☒ **Permit item 20.4:** You must require owners of construction activity to submit site plans with post-construction stormwater management BMPs designed with accepted engineering practices to you for review and confirmation that regulatory mechanism(s) requirements have been met, prior to start of construction activity.

101.B. ☒ **Permit item 20.5:** You must require owners of construction activity to treat the water quality volume on any project where the sum of the new impervious surface and the fully reconstructed impervious surface equals one or more acres. ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

101.C. ☒ **Permit item 20.6:** For construction activity (excluding linear projects), the water quality volume must be calculated as one (1) inch times the sum of the new and the fully reconstructed impervious surface. ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

101.D. ☒ **Permit item 20.7:** For linear projects, the water quality volume must be calculated as the larger of one (1) inch times the new impervious surface or one-half (0.5) inch times the sum of the new and the fully reconstructed impervious surface. Where the entire water quality volume cannot be treated within the existing right-of-way, a reasonable attempt to obtain additional right-of-way, easement, or other permission to treat the stormwater during the project planning process must be made. Volume reduction practices must be considered first, as described in item 20.8. Volume reduction practices are not required if the practices cannot be provided cost effectively. If additional right-of-way, easements, or other permission cannot be obtained, owners of construction activity must maximize the treatment of the water quality volume prior to discharge from the MS4. ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

101.E. ☒ **Permit item 20.8:** Volume reduction practices (e.g., infiltration or other) to retain the water quality volume on-site must be considered first when designing the permanent stormwater treatment system. This permit does not consider wet sedimentation basins and filtration systems to be volume reduction practices. If this permit prohibits infiltration as described in item 20.9, other volume reduction practices, a wet sedimentation basin, or filtration basin may be considered.

101.F. ☒ **Permit item 20.9:** Infiltration systems must be prohibited when the system would be constructed in areas:

a. That receive discharges from vehicle fueling and maintenance areas, regardless of the amount of new and fully reconstructed impervious surface. ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

b. Where high levels of contaminants in soil or groundwater may be mobilized by the infiltrating stormwater. To make this determination, the owners and/or operators of construction activity must complete the MPCA's site screening assessment checklist, which is available in the Minnesota Stormwater Manual, or conduct their own assessment. The assessment must be retained with the site plans. ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

c. Where soil infiltration rates are more than 8.3 inches per hour unless soils are amended to slow the infiltration rate below 8.3 inches per hour. ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

d. With less than three (3) feet of separation distance from the bottom of the infiltration system to the elevation of the seasonally saturated soils or the top of bedrock.

e. Of predominately Hydrologic Soil Group D (clay) soils. ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

f. In an Emergency Response Area (ERA) within a Drinking Water Supply Management Area (DWSMA) as defined in Minn. R. 4720.5100, Subp. 13, classified as high or very high vulnerability as defined by the Minnesota Department of Health. ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

g. In an ERA within a DWSMA classified as moderate vulnerability unless you perform or approve a higher level of engineering review sufficient to provide a functioning treatment system and to prevent adverse impacts to groundwater. ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

h. Outside of an ERA within a DWSMA classified as high or very high vulnerability unless you perform or approve a higher level of engineering review sufficient to provide a functioning treatment system and to prevent adverse impacts to groundwater. ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

i. Within 1,000 feet up-gradient or 100 feet down gradient of active karst features. ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

j. That receive stormwater runoff from these types of entities regulated under NPDES for industrial stormwater: automobile salvage yards; scrap recycling and waste recycling facilities; hazardous waste treatment, storage, or disposal facilities; or air transportation facilities that conduct deicing activities.

101.G. ☒ **Permit item 20.10:** For non-linear projects, where the water quality volume cannot cost effectively be treated on the site of the original construction activity, you must identify, or may require owners of the construction activity to identify, locations where off-site treatment projects can be completed. If the entire water quality volume is not addressed on the site of the original construction activity, the remaining water quality volume must be addressed through off-site treatment and, at a minimum, ensure the requirements of permit items 20.11 through 20.14 are met.

101.H. ☒ **Permit item 20.11:** You must ensure off-site treatment project areas are selected in the following order of preference:

a. Locations that yield benefits to the same receiving water that receives runoff from the original construction activity
b. Locations within the same DNR catchment area as the original construction activity
c. Locations in the next adjacent DNR catchment area up-stream
d. Locations anywhere within your jurisdiction

101.I. ☐ **Permit item 20.12:** Off-site treatment projects must involve the creation of new structural stormwater BMPs or the retrofit of existing structural stormwater BMPs, or the use of a properly designed regional structural stormwater BMP. Routine maintenance of structural stormwater BMPs already required by this permit cannot be used to meet this requirement.

101.J. ☒ **Permit item 20.13:** Off-site treatment projects must be completed no later than 24 months after the start of the original construction activity. If you determine that more time is needed to complete the treatment project, you must provide the reason(s) and schedule(s) for completing the project in the annual report.

101.K. ☐ **Permit item 20.14:** If you receive payment from the owner of a construction activity for off-site treatment, you must apply any such payment received to a public stormwater project, and all projects must comply with permit items 20.11 through 20.13.

101.L. ☒ **Permit item 20.15:** You must include the establishment of legal mechanism(s) between you and owners of structural stormwater BMPs not owned or operated by you, that have been constructed to meet the requirements in Section 20. The legal mechanism(s) must include provisions that, at a minimum:

a. Allow you to conduct inspections of structural stormwater BMPs not owned or operated by you, perform necessary maintenance, and assess costs for those structural stormwater BMPs when you determine the owner of that structural stormwater BMP has not ensured proper function.
b. Are designed to preserve your right to ensure maintenance responsibility, for structural stormwater BMPs not owned or operated by you, when those responsibilities are legally transferred to another party.
c. Are designed to protect/preserve structural stormwater BMPs. If structural stormwater BMPs change, causing decreased effectiveness, new, repaired, or improved structural stormwater BMPs must be implemented to provide equivalent treatment to the original BMP.

*102. **Permit item 20.16:** Do you maintain a written or mapped inventory of structural stormwater BMPs that you do not own or operate that meet all of the following criteria? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

a. The structural stormwater BMP includes an executed legal mechanism(s) between you and owners responsible for the long-term maintenance, as required in item 20.15; and
b. The structural stormwater BMP was implemented on or after August 1, 2013.

☐ Yes
☒ No

*103. **Permit item 20.17:** Do you to have written procedures for site plan reviews to ensure compliance with requirements of your regulatory mechanism(s)?

☒ Yes
☐ No

*104. **Permit item 20.18:** Do individuals receive training commensurate with their responsibilities as they relate to your Post-Construction Stormwater Management program? Individuals include, but is not limited to, individuals responsible for conducting site plan reviews and/or enforcement.

☒ Yes
☐ No (Skip to Q106)

105. **If yes in Q104,** do previously trained individuals attend a refresher training every three (3) calendar years following the initial training? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☒ Yes
☐ No

*106. **Permit item 20.19:** Do you maintain written ERPs to compel compliance with your regulatory mechanism(s) required in Section 20? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☒ Yes
☐ No (Skip to Q108)

107. **If yes in Q106, what enforcement tools are included in your ERPs?** (Check all that apply)

- 107.A. ☒ Verbal warning
- 107.B. ☒ Notice of violation
- 107.C. ☒ Administrative order
- 107.D. ☐ Fine
- 107.E. ☐ Criminal action
- 107.F. ☐ Civil penalty
- 107.G. ☒ Other (describe below):
  - 107.H. forfeit of permit security funds

*108. **Please specify name or position title of responsible person(s) for conducting enforcement:**

Maggie Karschnia, Project Manager

*109. **Permit item 20.20:** Do you document each site plan review you conduct?

☒ Yes
☐ No (Skip to Q111)

110. **If yes in Q109, what do you document in your site plan review process?** (Check all that apply)

- 110.A. ☒ Supporting documentation used to determine compliance, including any calculations for the permanent stormwater treatment system.
- 110.B. ☐ The water quality volume that will be treated through volume reduction practices compared to the total water quality volume required to be treated. ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***
- 110.C. ☒ Documentation associated with off-site treatment projects you authorize, including rationale to support the location of permanent stormwater treatment projects in accordance with items 20.10 and 20.11. ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***
- 110.D. ☒ Payments received and used in accordance with permit item 20.14.
- 110.E. ☒ All legal mechanisms drafted in accordance with permit item 20.15, including date(s) of the agreement(s) and name(s) of all responsible parties involved.

*111. **Permit item 20.21:** Do you document training related to your Post-Construction Stormwater Management program?

☐ Yes
☒ No (Skip to Q113)

112. **If yes in Q111, what are you documenting?** (Check all that apply)

- 112.A. ☐ General subject matter covered
- 112.B. ☐ Names and departments of individuals in attendance ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***
- 112.C. ☐ The date of each event

*113. **Permit item 20.22:** Do you document enforcement conducted pursuant to your ERPs in item 20.19, including verbal warnings?

☒ Yes
☐ No (Skip to Q115)

114. If yes in Q113, what do you document relating to ERPs for MCM 5? (Check all that apply)

- 114.A. ☒ The name of the person responsible for violating the terms and conditions of your regulatory mechanism(s)
- 114.B. ☒ The date(s) and location(s) of the observed violation(s)
- 114.C. ☒ A description of the violation(s)
- 114.D. ☒ Corrective action(s) issued
- 114.E. ☒ Referrals to other regulatory organizations
- 114.F. ☐ The date(s) violation(s) are resolved

*115. **Permit item 12.4:** Who is responsible for implementation of this MCM? List name(s) or position title(s):
Maggie Karschnia, Project Manager

116. **Provide any additional information about your current post-construction stormwater management program that you would like to share (optional): (Maximum 10 lines of text)**

MCM 6: Pollution prevention/Good housekeeping for municipal operations

*117. **Permit item 21.3:** Do you maintain a written or mapped inventory of your owned/operated facilities that contribute pollutants to stormwater discharges?
☐ Yes
☒ No (skip to Q119)

118. **If yes in Q117, which of the following facilities do you own and/or operate?** (Check all that apply)
118.A. ☐ Composting
118.B. ☐ Equipment storage and maintenance
118.C. ☐ Hazardous waste disposal
118.D. ☐ Hazardous waste handling and transfer
118.E. ☐ Landfill(s)
118.F. ☐ Solid waste handling and transfer
118.G. ☐ Park(s)
118.H. ☐ Pesticide storage
118.I. ☐ Public parking lot(s)
118.J. ☐ Public golf course(s)
118.K. ☐ Public swimming pool(s)
118.L. ☐ Public works yard(s)
118.M. ☐ Recycling
118.N. ☐ Salt storage
118.O. ☐ Snow storage
118.P. ☐ Vehicle storage and maintenance (e.g., fueling and washing) yard(s)
118.Q. ☐ Materials storage yard(s)
118.R. ☐ Other (describe below):
118.S.

*119. **Permit item 21.4:** Do you implement BMPs to prevent or reduce pollutants in stormwater discharges from municipal operations?
☐ Yes
☒ No (Skip to Q121)

120. **If yes in Q119, provide additional information on the BMPs you implement to address stormwater discharges from municipal operations (e.g., waste disposal, management of stockpiles, road maintenance):**

*121. **Permit item 21.5:** Do you implement BMPs at your owned/operated salt storage areas? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☐ Yes
☒ No (Skip to Q123)

122. **If yes in Q121, what BMPs do you have in place at salt storage areas?** (Check all that apply)

122.A. ☐ Salt is covered or stored indoors
122.B. ☐ Salt stored on an impervious surface
122.C. ☐ Implementation of practices to reduce exposure when transferring material from salt storage areas
122.D. ☐ Other (describe below):
122.E.

*123. **Permit item 21.6:** Do you implement a written snow and ice management policy for individuals that perform winter maintenance activities for you? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☐ Yes
☒ No (Skip to Q125)

124. **If yes in Q123, what practices and procedures for snow and ice control operations are included?** (Check all that apply)

124.A. ☐ Plowing or other snow removal practices
124.B. ☐ Sand use
124.C. ☐ Application of deicing compounds
124.D. ☐ Other (describe below):
124.E.

*125. **Permit item 21.7:** Each calendar year, do all individuals that perform winter maintenance activities for you receive training? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☐ Yes
☒ No (Skip to Q127)

126. **If yes in Q125, what does the winter maintenance training include?** (Check all that apply)

126.A. ☐ The importance of protecting water quality
126.B. ☐ BMPs to minimize the use of deicers
126.C. ☐ Tools and resources to assist in winter maintenance (e.g., deicing application rate guidelines, calibration charts, Smart Salting Assessment Tool)
126.D. ☐ Other (describe below):
126.E.

*127. **Permit item 21.8:** Do you maintain written procedures for determining TSS and total phosphorus (TP) treatment effectiveness of all owned/operated ponds constructed and used for the collection and treatment of stormwater?

☐ Yes
☒ No

*128. **Permit item 21.9:** Do you inspect structural stormwater BMPs (excluding stormwater ponds, which are under a separate schedule) each calendar year to determine structural integrity, proper function, and maintenance needs (excluding structural stormwater BMPs where the inspection frequency has been adjusted)?

☒ Yes
☐ No

*129. **Do you have a different inspection frequency (i.e., more or less than each calendar year) for any of your structural stormwater BMPs?**

☐ Yes
☒ No (Skip to Q131)

130. **If yes in Q129, what led to your adjusted inspection frequency?** (Check all that apply)

130.A. ☐ Complaints received or patterns of maintenance indicated a greater frequency was necessary.
130.B. ☐ Determined maintenance or sediment removal was not required after completion of the first two calendar year inspections.
130.C. ☐ Other (describe below):
130.D.

*131. **Permit item 21.10:** Do you inspect all ponds and outfalls (excluding underground outfalls) each permit term in order to determine structural integrity, proper function, and maintenance needs?

☒ Yes
☐ No (Skip to Q133)

132. **If yes in Q131,** describe the frequency of inspections:

Prior Lake Outlet Channel outfall - inspected once per month during periods of no flow from the Outlet Structure, inspected once per week during periods of flow from the Outlet Structure.

*133. **Permit item 21.12:** Do you implement a stormwater management training program commensurate with individual's responsibilities as they relate to your SWPPP, including reporting and assessment activities? Training materials can be from the U.S. Environmental Protection Agency (EPA), state and regional agencies, or other organizations as appropriate to meet this requirement.

☒ Yes
☐ No (Skip to Q135)

134. **If yes in Q133, what does your stormwater management training program include?** (Check all that apply)

134.A. ☒ The importance of protecting water quality.
134.B. ☒ Cover the requirements of the permit relevant to the responsibilities of the individual.
134.C. ☒ A schedule that establishes initial training for individuals, including new and/or seasonal employees, and recurring training intervals to address changes in procedures, practices, techniques, or requirements.
134.D. ☐ Other (describe below):
134.E.

134.F. Additional information for checked items (optional):

*135. **Permit item 21.13:** Do you document information associated with the operations and maintenance program?

☒ Yes
☐ No (Skip to Q137)

136. **If yes in Q135, what are you documenting?** (Check all that apply)

136.A. ☒ Date(s) and description of findings, including whether or not an illicit discharge is detected, for all inspections conducted in accordance with items 21.9 and 21.10.
136.B. ☒ Any adjustments to inspection frequency as authorized in item 21.9.
136.C. ☒ Date(s) and a description of maintenance conducted as a result of inspection findings, including whether or not an illicit discharge is detected.

136.D. ☒ Schedule(s) for maintenance of structural stormwater BMPs and outfalls when necessary maintenance cannot be completed within one year of discovery ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

136.E. ☒ Stormwater management training events, including general subject matter covered, names and departments of individuals in attendance, and date of each event.

*137. **Permit item 21.14:** Do you document pond sediment excavation and removal activities?

☐ Yes

☒ No (Skip to Q139)

138. **If yes in Q137, what pond sediment excavation and removal activity information is documented?** (Check all that apply)

138.A. ☐ A unique ID number and geographic coordinate of each stormwater pond from which sediment is removed.

138.B. ☐ The volume (e.g., cubic yards) of sediment removed from each stormwater pond.

138.C. ☐ Results from any testing of sediment from each removal activity.

138.D. ☐ Location(s) of final disposal of sediment from each stormwater pond.

138.E. Additional information for checked items (optional):

*139. **Permit item 12.4:** Who is responsible for implementation of this MCM? List name(s) or position title(s).

Water Resource Specialist

140. **Provide any additional information about your current pollution prevention/good housekeeping for municipal operations program that you would like to share (optional): (Maximum 10 lines of text)**

The Watershed District doesn't own and operate any ponds, or own or operate any municipal facilities.

Discharges to Impaired Waters with an EPA-Approved TMDL that Includes an Applicable Waste Load Allocation (WLA)

To determine if you have an applicable WLA(s), please reference the MPCA's MS4 Permit TMDL Application Form webpage at https://stormwater.pca.state.mn.us/index.php?title=Guidance_for_completing_the_MS4_Permit_TMDL_Application_Form.

*141. **Permit item 22.3:** Do you have an applicable WLA where a reduction in pollutant loading is required for bacteria?

☐ Yes

☒ No (Skip to Q146)

142. **If yes in Q141, do you maintain a written or mapped inventory of potential areas and sources of bacteria (e.g., dense populations of waterfowl or other bird, dog parks)? *(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☐ Yes

☐ No (Skip to Q145)

143. **If yes in Q142, do you maintain a written plan to prioritize reduction activities to address the areas and sources identified in the inventory? The written plan must include BMPs you will implement over the permit term.** ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☐ Yes

☐ No (Skip to Q145)

144. **If yes in Q143, which of the following are included in your written plan?** (Check all that apply)

144.A. ☐ Water quality monitoring to determine areas of high bacteria loading.

144.B. ☐ Installation of pet waste pick-up bags in parks and open spaces.

144.C. ☐ Elimination of over-spray irrigation at permittee land owned areas.

144.D. ☐ Removal of organic matter via street sweeping.
144.E. ☐ Implementation of infiltration structural stormwater BMPs.
144.F. ☐ Management of areas that attract dense populations of waterfowl (e.g., riparian plantings).
144.G. ☐ Other (describe below):
144.H.

145. **Permit item 12.9:** If yes in Q141, who is or will be responsible for implementation of this required component (i.e., inventory, plan, and BMP implementation)? List name(s) or position title(s):

*146. **Permit item 22.5:** Do you have an applicable WLA where a reduction in pollutant loading is required for chloride?
☐ Yes
☒ No (Skip to Q151)

147. **If yes in Q146, do you document the amount of deicer applied each winter maintenance season to all your owned/operated surfaces? *(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***
☐ Yes
☐ No

148. **If yes in Q146, each calendar year do you conduct an assessment of your winter maintenance operations to reduce the amount of deicing salt applied to your owned/operated surfaces and determine current and future opportunities to improve BMPs? You may use the MPCA's Smart Salting Assessment Tool or other available resources and methods to complete this assessment. The assessment must be documented. *(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***
☐ Yes
☐ No (Skip to Q150)

149. **If yes in Q148, what does your winter maintenance operations assessment include?** (Check all that apply)
149.A. ☐ Operational changes such as pre-wetting, pre-treating the salt stockpile, increasing plowing prior to deicing, monitoring of road surface temperature, etc.
149.B. ☐ Implementation of new or modified equipment providing pre-wetting, or other capability for minimizing salt use.
149.C. ☐ Regular calibration of equipment.
149.D. ☐ Optimizing mechanical removal to reduce use of deicers.
149.E. ☐ Designation of no salt and/or low salt zones.
149.F. ☐ Other (describe below):
149.G.

149.H. Additional information for checked items (optional):

150. **Permit item 12.9: If yes in Q146, who is or will be responsible for implementation of this required component (i.e., documenting deicer applied and winter maintenance operations assessment)? List name(s) or position title(s):**

*151. **Permit item 22.7:** Do you have an applicable WLA where a reduction in pollutant loading is required for temperature?
☐ Yes
☒ No (Skip to Q155)

152. If yes in Q151, do you maintain a written plan that identifies specific activities you will implement to reduce thermal loading during the permit term? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***

☐ Yes
☐ No (Skip to Q154)

153. **If yes in Q152, what activities does the plan include?** (Check all that apply)

153.A. ☐ Implementation of infiltration BMPs such as bioinfiltration practices
153.B. ☐ Disconnection and/or reduction of impervious surfaces
153.C. ☐ Retrofitting existing structural stormwater BMPs
153.D. ☐ Improvement of riparian vegetation
153.E. ☐ Other (describe below):
153.F.

153.G. Provide any additional information about your written plan (optional):

154. **Permit item 12.9: If yes in Q151, who is or will be responsible for implementation of this required component? List name(s) or position title(s):**

*155. **Permit item 12.8:** Do you have an applicable WLA(s) for oxygen demand, nitrate, TSS, or TP?

☒ Yes - If yes, you **must complete** the corresponding tabs in the *MS4 Permit TMDL Application* (available on the MPCA's website at https://stormwater.pca.state.mn.us/index.php?title=Guidance_for_completing_the_MS4_Permit_TMDL_Application_Form) and submit it with this application.
☐ No

Alum or Ferric Chloride Phosphorus Treatment Systems

*156. **Permit Section 23:** Do you own and/or operate an Alum or Ferric Chloride Phosphorus Treatment System within your MS4?

☐ Yes - If yes, complete questions 157-173 as directed.
☒ No (Skip to Q174)

157. Provide the geographic coordinates of the alum or ferric chloride phosphorus treatment system, in decimal degrees. (Approximate centroid of treatment system within five-foot accuracy):

157.A. Latitude: _____
157.B. Longitude: _____

158. **Who is responsible for the operation of the treatment system? List name(s) or position title(s):**

159.A. **Provide the date the system first became operational (mm/dd/yyyy):** _____

For question 159.B-G, provide information for calendar year 2020.

159.B. **For each month, provide the number of days the system was operational:**

159.B.1. January: _____
159.B.2. February: _____
159.B.3. March: _____
159.B.4. April: _____
159.B.5. May: _____
159.B.6. June: _____
159.B.7. July: _____
159.B.8. August: _____
159.B.9. September: _____
159.B.10. October: _____
159.B.11. November: _____
159.B.12. December: _____

159.C. **What chemical(s) was used for treatment:**

159.C.1. ☐ Alum
159.C.2. ☐ Ferric Chloride

159.D. **Provide the number of gallons of water treated:** _____

159.E. **Provide the number of gallons of alum or ferric chloride treatment used:** _____

159.F. **Provide the calculated pounds of phosphorous removed:** _____

159.G. **Describe any performance issue(s) and the corrective action(s), including the date(s) when corrective action(s) were taken:**

160. **Permit item 23.3: Which of the following requirements are you meeting?** (Check all that apply)

160.A. ☐ Your treatment system is for the treatment of phosphorus in stormwater. Non-stormwater discharges must not be treated by this system.
160.B. ☐ Your treatment system is contained within the conveyances and structural stormwater BMPs of the MS4. The utilized conveyances and structural stormwater BMPs do not include any receiving waters.
160.C. ☐ Phosphorus treatment systems utilizing chemicals other than alum or ferric chloride receive written approval from the MPCA.
160.D. ☐ In-lake phosphorus treatment activities are not authorized.

161. **Permit item 23.3: Which of the following design parameters does your treatment system include?** (Check all that apply)

161.A. ☐ The treatment system is constructed in a manner that diverts the stormwater flow to be treated from the main conveyance system.
161.B. ☐ A high flow bypass is part of the inlet design.
161.C. ☐ A flocculent storage/settling area is incorporated into the design, and adequate maintenance access is provided (minimum of eight feet wide) for the removal of accumulated sediment.

162. **Permit item 23.5:** Do you have a designated person perform visual monitoring of the treatment system for proper performance at least once every seven (7) days, and within 24 hours after a rainfall event greater than 2.5 inches in 24 hours?

☐ Yes
☐ No (Skip to Q164)

163. **If yes in Q162, please list the name(s) of the individual(s) or position title(s):**

164. **Permit item 23.5:** Following visual monitoring which occurs within 24 hours after a rainfall event, do you conduct the next visual monitoring of your system seven (7) days after that rainfall event?
☐ Yes
☐ No

165. **Permit item 23.6:** Does your treatment system utilize three (3) benchmark monitoring stations? Table 1 in Appendix A in the permit must be used for the parameters, units of measure, and frequency of measurement for each station.
☐ Yes
☐ No

166. **Permit item 23.7:** Do you collect grab samples or flow-weighted 24-hour composite samples at your treatment system?
☐ Yes
☐ No

167. **Permit item 23.8:** Are your treatment system samples, excluding potential of hydrogen (pH) samples, analyzed by a laboratory certified by the Minnesota Department of Health and/or the MPCA?
☐ Yes
☐ No

168. **Which of the following do your sample tests include?** (Check all that apply)
168.A. ☐ Sample preservation and test procedures for the analysis of pollutants that conform to 40 CFR Part 136 and Minn. R. 7041.3200.
168.B. ☐ Detection limits for dissolved phosphorus, dissolved aluminum, and dissolved iron that are a minimum of 6 micrograms per liter (µg/L), 10 µg/L, and 20 µg/L, respectively.
168.C ☐ pH that is measured within 15 minutes of sample collection using calibrated and maintained equipment.

169. **Permit item 23.9:** In the following situation(s) do you perform corrective action(s) and immediately notify the Minnesota Department of Public Safety Duty Officer? (Check all that apply)
169.A. ☐ The pH of the discharged water is not within the range of 6.0 and 9.0.
169.B. ☐ Indications of toxicity or measurements exceeding water quality standards which could endanger human health, public drinking water supplies, or the environment.
169.C. ☐ A spill or discharge or alteration resulting in water pollution, as defined in Minn. Stat. § 115.01, subd. 13, of alum or ferric chloride.

170. **Permit item 23.13:** Do you conduct site-specific jar testing using typical and representative water samples in accordance with the most current approved version of ASTM D2035? ***(Note: All or some of this item is a new permit requirement. Compliance with new requirements is required within 12 months after receiving permit coverage.)***
☐ Yes
☐ No

171. **Permit item 23.14:** Do you have baseline concentrations of the following parameters in the influent and receiving waters at your treatment system location? (Check all that apply)
171.A. ☐ Aluminum or iron
171.B. ☐ Phosphorus

172. **Permit item 23.15:** Do you have the following system parameters and how each was determined at your treatment system location? (Check all that apply)
172.A. ☐ Flocculant settling velocity
172.B. ☐ Minimum required retention time
172.C. ☐ Rate of diversion of stormwater into the system
172.D. ☐ The flow rate from the discharge of the outlet structure
172.E. ☐ Range of expected dosing rates

173. **Permit item 23.16:** Have you developed the following site-specific procedures? (Check all that apply)
173.A. ☐ Procedures for the installation, operation and maintenance of all pumps, generators, control systems, and other equipment.
173.B. ☐ Specific parameters for determining when the solids must be removed from the system and how the solids will be handled and disposed of.
173.C. ☐ Procedures for cleaning up and/or containing a spill of each chemical stored on site.

Complete last page and submit using Adobe Acrobat Reader.

(If you do not have Acrobat Reader, you can download a free version at https://get.adobe.com/reader/.)

Additional information

174. **Provide any additional information about your current Stormwater Pollution Prevention Program (SWPPP) that you would like to share (optional): (Maximum 30 lines of text)**

The TMDL study area for South Metro Mississippi TMDL encompasses the entire watershed district. Using the MPCA Simple Estimator tool, the land uses were entered from the entire jurisdictional area to determine initial TSS loads. Then current BMPs were added to evaluate the overall wasteload. The initial load was 86 lb/ac/yr, and with existing BMPs entered, the final load was 72 lb/ac/yr, indicating that the PLSLWD is achieving the WLA of 154 lb/ac/yr.

Complete last page and submit using Adobe Acrobat Reader.

(If you do not have Acrobat Reader, you can download a free version at https://get.adobe.com/reader/.)

Submit Reset

PLSLWD Board Staff Report
August 6, 2024

Subject |	Capital Improvement Project: Swamp Iron Enhanced Sand Filter		
Board Meeting Date |	August 20, 2024	**Item No:**	Public Hearing
Prepared By |	Emily Dick		
Attachments |	Swamp Lake Phosphorus and Peak Flow Reduction Feasibility Study		
Proposed Action |	None.		

Background

The Swamp Lake Iron Enhanced Sand Filter project was identified in the Upper Watershed Blueprint study as a potential project to reduce external loads to Spring Lake. A feasibility study (attached) was conducted by Stantec in 2023 which developed several alternatives and identified a preferred alternative for implementation. The feasibility study was partially supported through a Watershed Based Implementation Fund grant.

An easement was obtained for access and use of the project area for implementation, along with operations and maintenance of the Swamp Lake Iron Enhanced Sand Filter (IESF). The District has applied for multiple grant requests in order to support the implementation of the project. As a result of the 2024 Watershed Based Implementation Fund convening process, $179,935 was designated towards the project. Spring Lake Township has also contributed $2,000 towards the implementation of the project.

Discussion

Minnesota Statute 103B.251 Subd. 4 requires that Watershed Districts hold and notice for a public hearing for any capital improvement project. Notice of this public hearing was published in the Star Tribune newspaper on July 29 and August 5, 2024. Staff shall present a brief overview of the project and respond to any questions brought forward in public comment.

SWAMP LAKE PHOSPHORUS AND PEAK FLOW REDUCTION FEASIBILITY STUDY

STANTEC CONSULTING LTD.
One Carlson Parkway North, Plymouth, MN 55447

Adopted by the Prior Lake-Spring Lake Watershed District Board of Managers December 12, 2023

Reference: Swamp Lake Phosphorus and Peak Flow Reduction Feasibility Study

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Table 1. Option Results Summary

Reference: Swamp Lake Phosphorus and Peak Flow Reduction Feasibility Study

1 EXECUTIVE SUMMARY

The Prior Lake-Spring Lake Watershed District (PLSLWD) authorized the following study to assess the feasibility of a water quality best management practice (BMP) and/or outlet modifications of Swamp Lake to decrease the Total Phosphorus (TP) loads and peak discharge rates from the Swamp Lake Subwatershed into the downstream impaired water bodies of Spring Lake and Prior Lake.

The District PCSWMMM model was used and updated, based on current existing survey data of the outlet of Swamp Lake, to model the existing conditions of the lake more accurately. The updated model was then utilized to model multiple design alternatives to quantify discharge rate and TP load reductions in the downstream flows to Spring Lake and Prior Lake. The designs used in the different alternatives included outlet modifications for Swamp Lake, the addition of an iron-enhanced sand filter (IESF) downstream of Swamp Lake, and additional outlet and filter modifications to provide further rate control for downstream water bodies.

Project costs for each alternative were analyzed and the total costs including construction, land acquisition, annual operation and maintenance, monitoring, and permitting fees are estimated to range from $589,200 to $654,800, net present value. The cost effectiveness of the alternatives ranges from $204 to $221 per pound of TP removed over the 30-year life span of the IESF. Along with project costs, other factors were taken into consideration with each design alternative including amount of land needed, additional permitting costs, and additional benefit to downstream water bodies.

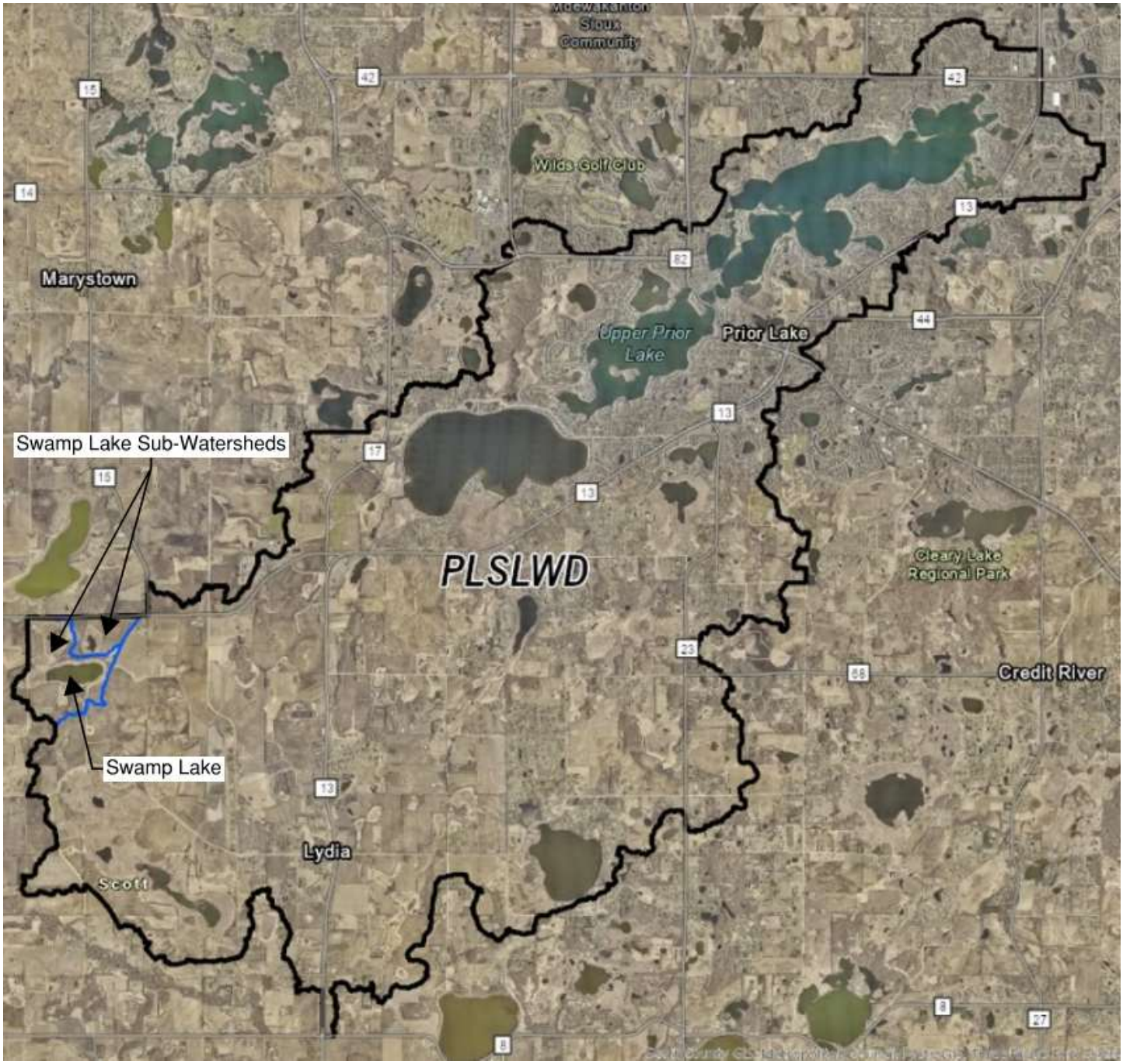
The recommended design alternative was a 64,000-cubic-foot IESF with a diversion berm, diverting the discharge flows from Swamp Lake into the proposed filter. This option is expected to remove 96.3 pounds/year of the 129.5 pounds/year TP load discharging from Swamp Lake.

Sponsoring Agency: MN-BWSR

The funding for this study was provided by the Minnesota Board of Water & Soil Resources. On a bi-annual basis, BWSR distributes State of Minnesota clean water funds through the Watershed-Based Implementation Funding (WBIF) program to implementing agencies. This is a non-competitive process that funds water quality improvement projects. One selected project was the Swamp Lake Phosphorus and Peak Flow Reduction Feasibility Study. The Swamp Lake feasibility study was identified as a project in the Upper Watershed Blueprint report (developed in 2021) and was selected through the WBIF local convening process for it's potential to decrease TP loading and stream flows to Spring Lake and Prior Lake.

Reference: **Swamp Lake Phosphorus and Peak Flow Reduction Feasibility Study**

Figure 1. Swamp Lake Location Within PLSLWD.



Reference: Swamp Lake Phosphorus and Peak Flow Reduction Feasibility Study

2 INTRODUCTION

Spring Lake is included on the state's Impaired Waters List. A lake is placed on this list when an assessment determines that it is not meeting one of its designated uses. Spring Lake and Prior Lake are both considered to be impaired due to excess nutrients, which can lead to algal blooms and low water clarity. Water quality monitoring conducted by the District has identified that phosphorus is the nutrient contributing most to the water quality impairments for these lakes.

Over the years, the District has undertaken significant efforts to improve water quality in Spring Lake and Prior Lake by attempting to control phosphorus loading by managing internal and external sources. The efforts have ranged from small scale raingardens and lakeshore restorations to large public improvement projects. Internal phosphorus sources have been managed through an aggressive carp removal and management program and by performing alum treatments. Alum is used to strip phosphorus from the water column and to create a short-term 'cap' on the lake's bottom sediment to prevent phosphorus release. The District constructed and has been operating a Ferric Chloride treatment system to treat external sources from the largest ditch (County Ditch 13) flowing to Spring Lake since 1998. This system captures an estimated 60% of the total phosphorus from the ditch flows. The District has also worked with watershed farmers to adopt agricultural conservation practices that help control external sources by reducing erosion and nutrient export from their fields.

The purpose of this feasibility study is to assess the viability of water quality BMPs and/or outlet modifications to decrease Total Phosphorus (TP) loads and peak flow rates from the Swamp Lake subwatershed into the downstream impaired water bodies of Spring Lake and Prior Lake. The main efforts of this feasibility study included field reconnaissance (topographic survey and wetland delineation), existing condition PCSWMM model updates per the site survey, revised annual pollutant loading (TP) estimates per District monitoring data, assessment of site and design alternatives, discussions with District staff, Board, agency and landowners, and preparation of this feasibility study report.

3 METHODS & FINDINGS

Swamp Lake is in Sand Creek Township, bordered by Redwing Avenue on the east and southeast, Zumbro Avenue (HWY 71) on the west and County Trail W (HWY 282) on the north. The Lake is approximately 45-acres with a maximum depth of 4-feet (large littoral zone) and encompasses a 393-acre watershed. Swamp Lake primarily discharges into County Ditch 13 (CD-13) and eventually into Spring Lake. A wetland delineation was performed and determined wetlands to be located only on the east side of Redwing Avenue, directly adjacency to Swamp Lake. Wetlands were not identified along CD-13. See Appendix C for the full wetland delineation report. Stantec also completed an updated survey in the Summer of 2023 that confirms the possible outlet elevations and the CD-13 elevations. Swamp Lake's existing primary outlet is a 36" Corrugated Metal Pipe (CMP) that is located on the east side of the lake, flowing under Redwing Avenue.

There is also an equalization culvert located under Zumbro Avenue on the west side of the lake that allows for ponding storage west of Zumbro Avenue. This culvert is not considered an outlet of Swamp Lake, but rather a connection to an adjacent storage area. The additional ponding storage is retained onsite and is accounted for in the modeling. A second culvert (18" CMP) was identified under Zumbro Avenue on the

Reference: Swamp Lake Phosphorus and Peak Flow Reduction Feasibility Study

west side of Swamp Lake; however, this culvert is mostly clogged/blocked by debris and is considered to be an additional outlet for Swamp Lake out of the Prior Lake-Spring Lake Watershed. The modeling accounts for this second culvert and was added to the EOR model to create a modified model. The primary outlet begins discharging water when Swamp Lake's water surface elevation reaches 948.87-feet. The western secondary outlet begins discharging water when Swamp Lake's water surface elevation reaches 949.20-feet (assuming it has been maintained/cleared of debris).

The Prior Lake-Spring Lake Watershed District (PLSLWD) monitored TP concentrations in Swamp Lake from 2014 to 2016. During this time, 54 TP concentration measurements were collected across a variety of storm events and flows. TP concentration ranged from less than 0.1-mg/L up to a maximum of 1.2-mg/L with a mean of 0.36-mg/L and a median of 0.30-mg/L.

3.1 AGENCY AND STAKEHOLDER ENGAGEMENT

Stantec and PLSLWD met with the Minnesota Department of Natural Resources (MNDNR), Scott County, Scott County Soil and Water Conservation District (SWCD), Sand Creek Township and the landowner over the course of the study to gain feedback on the potential for a water quality BMP and/or outlet modification to decrease TP loads and peak flow rates carried from the Swamp Lake subwatershed downstream. Additionally, permitting considerations, available modeling, and other potential restrictions were discussed.

The MNDNR had a number of concerns given they have authority over public waters and floodplains of Swamp Lake. The Area Hydrologist was consulted and was not opposed to a water quality BMP but expressed concerns regarding outlet control modification. Their concerns were related to both possible floodplain and fish and wildlife impacts. If the outlet were to be modified both the ordinary high water level and 100-year flood stage would likely be altered. Flowage easements would need to be obtained from all landowners abutting the ordinary high water level of Swamp Lake. Also, ordinary high water level changes have potential to impact fish and wildlife of Swamp Lake and could necessitate environmental review. Floodplain impacts would require review and permitting at the local (county), state and national level before altering the 100-year floodplain. No existing floodplain models were available from the DNR.

Scott County echoed DNR concerns regarding the floodplain as they have local review authority over any changes in the 100-year base flood elevation. No existing floodplain models were available from Scott County. No other concerns were indicated from Scott County.

Scott County SWCD is both the Local Government Unit (LGU) for wetland considerations and has authority over the downstream channel of Swamp Lake as it is a county ditch (Count Ditch 13 or CD-13). A wetland delineation was required and did not identify any wetlands in the county ditch immediately downstream of Swamp Lake. However, wetlands around Swamp Lake would be impacted from changes in the outlet elevation, if proposed. These changes would require wetland impact permitting. Any modifications, such as diverting drainage, to CD-13 would require a petition to be submitted to the Drainage Authority according to MN 103E.227 during final design. SWCD noted that the project proposed is unlikely to be controversial because it is at the very upstream end, it will be a benefit to water quality, and changes to the ditch will be limited to divert flow into a potential BMP. As a watershed district no petitioners bond would be required although fees of $1500 could be expected.

Sand Creek Township had minimal concerns regarding the project. Sand Creek is the entity responsible for the roadway (Red Wing Trail) dividing Swamp Lake from CD-13. The roadway (gravel) and culvert

underneath (corrugated metal pipe) are in relatively good shape and do not require replacement in the near-term. Any changes to the culvert underneath Red Wing Trail would require coordination with the township if altered. However, no changes to the culvert itself are suggested through this feasibility study.

Landowner's concerns were also minimal and pertain to maintaining the ability to farm remaining land not purchased for the water quality BMP. The landowner noted that any buy out or easement should follow a general east-west trend to prevent the creation of oddly shaped "triangles" that would be difficult to farm.

3.2 EXISTING MODEL UPDATES

Stantec used the PLSLWD PCSWMM model provided by Emmons & Oliver Inc. (EOR) for the hydrologic and hydraulic modeling. It is assumed that the district's existing PCSWMM model is the best available data to determine a Base Flood Elevation (BFE) for the approximate A-Zone FEMA Floodplain. Discussion with Scott County indicated that no other modeling exists for the Swamp Lake Floodplain.

EOR provided Stantec with two District models. One model simulates collected 2014 rainfall data and the other simulates design storms. Both models are from the PLSLWD 2016 Flood Study. Stantec used the 100-year, 30-day design storm at EOR's recommendation to retain conformity with the 2016 flood study that used this event to evaluate flood reductions in Prior Lake and Spring Lake. Any flood reductions noted in this report will be comparable to the results from the original 2016 flood study.

Stantec modified the EOR model with updated survey data of current conditions with the primary culvert invert and the culvert under Zumbro Avenue, that acts as a secondary outlet out of the watershed, corrected to the 2023 survey. The modified model establishes a BFE of 950.99' in the NAVD88 coordinate system.

3.3 WATER QUALITY LOADING UPDATES

This feasibility study was first identified in the Upper Watershed Blueprint (UWB) (developed in 2021) as a priority stormwater management location to decrease TP loading to Spring Lake and Prior Lake. The UWB estimated an annual TP loading of 322-pounds from Swamp Lake. The UWB also estimated that an IESF at the proposed location would provide an annual TP loading reduction of 223-pounds. Water quality measurements taken by PLSLWD were provided to Stantec to refine these previous estimates of annual TP loading from Swamp Lake.

The provided data spanned various storm events from 2014 to 2016. Results for TP concentrations were collected by grab samples during storm events. From this data an event mean concentration (EMC) was estimated by averaging the results. Results varied from less than 0.1-mg/L to 1.2-mg/L with a mean value of 0.36-mg/L and a median value of 0.30-mg/L with a standard deviation of 0.26-mg/L.

For the purposes of this study, Stantec used Minimal Impact Design Standards (MIDS) version 4, a Minnesota-based water quality modeling software, to estimate annual TP loading with an EMC of 0.36-mg/L based on existing measurements of TP concentration in runoff. The watershed consists of a combination of C and D hydrologic soil groups (HSG) or dual classifications that default to D soils for undrained soils. Swamp Lake is 45-acres and the remainder of the 393-acre watershed is largely undeveloped. Therefore, to estimate the TP loading from the Swamp Lake watershed the EMC was adjusted to 0.36-mg/L. Forest/Open Space (HSG C) occupies 148-acres of the watershed, Forest/Open Space (HSG D) occupies

200-acres of the watershed, and impervious area to simulate the Swamp Lake water surface runoff occupies 45-acres.

Stantec used MIDS to estimate the annual TP loading to be 129.5-pounds/year from Swamp Lake. This baseline value was used to evaluate alternatives based on their ability to remove TP downstream. The MIDS showed lower TP loading than specified in the UWB because it is based on actual data rather than approximations based on land uses. Stantec assumed the significant decrease in a refined load estimate (from 322-pounds to 129.5-pounds) may be a result of natural treatment of stormwater runoff within Swamp Lake prior to discharge downstream. While MPCA's Minnesota Stormwater Manual conservatively limits credit given to IESFs to 41% particulate phosphorus (PP) and 40% dissolved phosphorus (DP) or 41% TP, the manual also cites removal efficiencies values that are more reflective of the expected pollutant removal efficiency values of the proposed concepts. For the purposes of this study, 85% PP and 60% DP, or 74% TP removal was assumed for all runoff entering the IESF. As a result of the lower TP loads discharging from Swamp Lake, the removals in pounds are significantly lower than projected in the UWB (from 223-pounds to 83.4-95.8-pounds).

3.4 ALTERNATIVES ASSESSMENT/CONCEPT DESIGN

Stantec began the best management practice (BMP) and outlet alternative identification design by first investigating the existing regulatory framework to better understand feasible modifications to the outlet and downstream channel. This investigation identified constraints that limited available options to adjust the outlet. The primary constraint is the presence of a floodplain for both Swamp Lake and CD-13.

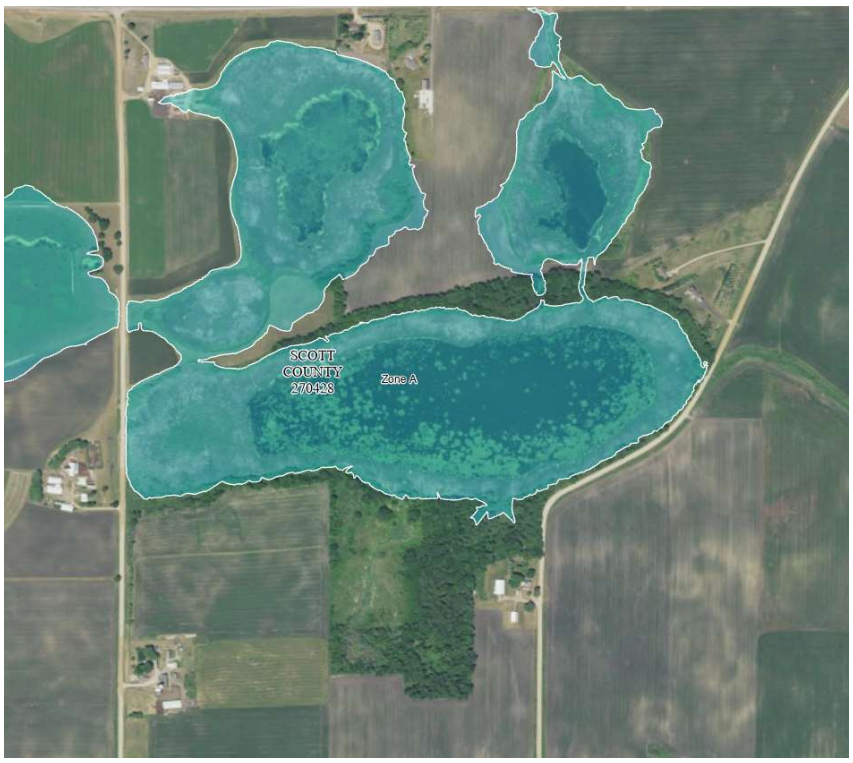


Figure 2. FEMA floodplain of Swamp Lake area.

Reference: Swamp Lake Phosphorus and Peak Flow Reduction Feasibility Study

The floodplain for both is mapped as an A-zone with no established BFEs. FEMA A-zones are areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones. For the purposes of this feasibility study Stantec established a BFE at 950.99' to compare the proposed options. This BFE was established with the modified EOR model as described above. Stantec then created "Proposed" models for each option analyzed. Any option that changes the BFE by more than +/- 0.004' triggers the CLOMR/LOMR (Conditional Letter of Map Revision/Letter of Map Revision) permitting process through FEMA. Any project that triggers the CLOMR/LOMR process is considered undesirable with low feasibility in this situation because of the time commitment and cost associated with it. However, in the interest of providing an option which could reduce flooding in Spring Lake and Prior Lake, one proposed option looked at raising the outlet conditions to increase ponding in Swamp Lake (Option 2).

The county ditch classification for CD-13 adds another regulatory complication as any ditch modification is considered on a case-by-case basis and requires a permit/petition from the County. Since this project is located near the upstream end of CD-13 and is unlikely to increase flows to the ditch (likely a decrease in flow due to detention in a BMP), the complications should be lower for permitting a modification. Additionally, because of PLSLWD's relationship with the County and the purpose/intent of the project, the County is unlikely to disapprove of any of the proposed alternatives unless they significantly impact ditch performance. None of the proposed alternatives documented will significantly impact ditch performance except for the first 100-200-feet to divert flow into the proposed IESF.

BMP types other than the IESF were considered although they were not found viable because TP removal efficiency has been proven to be lower than with the IESF. The proposed IESF basins have been sized to maximize the effective TP removal. Increasing the size of the IESF would not measurably increase TP removal. The TP removal is primarily limited by the modeled loading discharging from Swamp Lake (129.5-pounds) and percent bypass of water entering IESFs. In Option 2, a filter was designed to capture all possible flow into CD-13 with 0% bypass and therefore 74% TP removal was achieved.

Stantec modeled oversized BMPs to assess the flood reduction benefits, but modeling indicated that even when other BMPs were 10 times larger than the proposed IESF, no decrease in flood elevations at Prior and Spring Lakes was expected. Therefore, BMP types other than the IESF were not considered as viable options in the feasibility study because they would not provide as much TP loading removal as an IESF nor provide any additional flood reduction benefit.

The flow bypass percentage is one factor that determines the water quality benefit of the IESF and was estimated based on the rainfall/runoff data in **Figure 3**. The green line represents the fraction of total rainfall volume that would be captured if all rain events below a certain depth are captured. For example, capturing up to the 1.25-inch event results in collecting 73% of all volume with 27% bypassing the IESF. The blue line represents the percentage of storms smaller than a given event. For example, 80% of storms are smaller than a 0.75-inch event. This chart helped inform water quality modeling by determining a flow percentage that would be expected to bypass the IESF for the annual removal estimates.

Reference: Swamp Lake Phosphorus and Peak Flow Reduction Feasibility Study

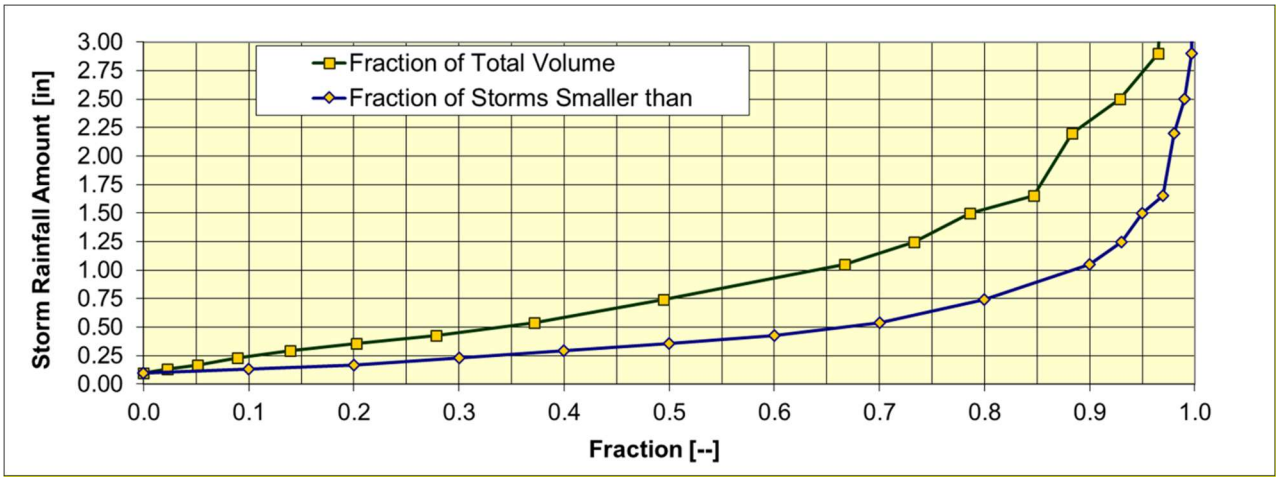


Figure 3. Fraction of Total Rainfall Volume and Storms Smaller than a Given Rainfall Amount. (MSP/Airport Data)

Three main alternatives were developed in this feasibility study with consideration of site constraints and landowner preference. Concept design for each option was used to model expected TP removals, prepare an opinion of probable cost, and to provide a visual understanding of the project footprint and extent. The IESF will cause ponding within the IESF footprint extents shown on the concept figure during storm events ranging in depth from 2 to 5-feet. The three resulting options are as described below:

Option 1: IESF with No Lake Level Rise

The Option 1 concept consists of the construction of a berm within CD-13 to divert ditch flows into a 12” culvert that discharges into a proposed Iron Enhanced Sand Filter that will be located adjacent to the ditch. The IESF is proposed to have a bioretention cell to infiltrate base flow and allow the filter to dry between storm events as this has been proven to provide better IESF performance. The IESF design provides 64,000-cubic-feet (1.5-acre-feet) of storage volume. The proposed configuration of the system would place the diversion berm invert at the same elevation as the Swamp Lake outlet elevation invert (947.52’), which would cause all storms up to a 2-inch rainfall event to flow through the IESF, while larger storm event flows would allow some flow to bypass the filter and flow over the proposed berm. This results in an expected treatment of 87% of flow, while 13% would bypass the system (**Figure 3**). Flow that is diverted into the IESF would be treated by the filter prior to collection in a drain tile and discharge back into CD-13.

This option provides complete water quality treatment for all flows generated by up to the 2-inch rainfall event within the Swamp Lake Watershed, improving the water quality for Spring Lake and Prior Lake downstream. The modeling shows that an estimated 83.4-pounds of TP (~64% of the TP loading of 129.5-pounds) would be removed annually from the Swamp Lake Watershed.

Hydraulic modeling results indicate that the proposed berm and IESF would not impact the high-water levels within Swamp Lake and therefore would not require additional FEMA floodplain permitting through the CLOMR/LOMR process. The modeling results also indicated that the filter did not lower the high-water levels in the downstream water bodies of Spring Lake and Prior Lake. Therefore, the proposed filter would not provide any flood attenuation for these downstream water bodies.

Option 2: IESF with Outlet Modification and Lake Level Rise

Option 2 has a similar concept plan as Option 1, with the added goal of adjusting the elevations of the berm and emergency overflow outlet of the proposed IESF to achieve flood attenuation in Spring Lake and Prior Lake downstream. Stantec performed several model iterations gradually increasing the berm elevation, to determine which elevation provided the optimal flood attenuation. The berm and filter overflow elevations were ultimately adjusted to 951.90', which is 3.03-feet higher than Swamp Lake's current primary outlet. These berm elevations would require steeper side slopes for the IESF without reducing the IESF's footprint.

This concept design would divert all storm flows from Swamp Lake for the 100-year, 30-day rainfall event to pass through the IESF, without any flows bypassing the filter over the berm or filter emergency overflow. The modeling shows that an estimated 95.8-pounds of TP (~74% of the TP loading of 129.5-pounds) would be removed annually from the Swamp Lake Watershed.

Hydraulic modeling results indicated that the 100-year high-water level in Prior Lake would be reduced by approximately 0.06-feet; however, there was no noticeable change in the high-water level in Spring Lake. Additionally, the 100-year high-water level in Swamp Lake is increased by approximately 0.1-feet since the flow discharging from Swamp Lake is constrained by the increased elevation of the berm and filter overflow. This result would trigger the CLOMR/LOMR permitting application process with FEMA. A CLOMR/LOMR application and approval is a long and arduous process that typical takes upwards of one to two years to complete and requires detailed submittals to FEMA and the MNDNR to obtain approval. A CLOMR is the first step that is required pre-construction to ensure that the project is allowable under FEMA and MNDNR regulations. The LOMR is completed post-construction to document as-built conditions and floodplain mapping changes. In addition to the cost of modeling and other documentation for the proposed changes to the floodplain mapping, there are application fees of approximately $8,000 each for the CLOMR and LOMR processing by FEMA. Additionally, all seven of the adjacent property owners that would be impacted by an increase in the BFE of Swamp Lake would need to approve the change, which could stall or completely prevent the project from progressing. This may require additional buyouts besides the land needed for the IESF. Also, because of the secondary outlet, additional flow would be sent out of the watershed which could require additional floodplain permitting in the adjacent watershed.

Option 3: IESF with Outlet Modification and No Lake Level Rise

Option 3 has a similar base concept as Option 1, with the main goal of adjusting the elevation of the CD-13 berm that diverts water to the proposed IESF to achieve maximum water quality treatment without impacting the BFE established for the Swamp Lake floodplain.

Through an iterative process, Stantec determined that the optimal berm overflow elevation is 949.00', 0.13-feet higher than Swamp Lake's current primary outlet invert of 948.87'. This concept design would divert all flows generated up to the 1-year, 30-day rainfall event (2.49") for the Swamp Lake Watershed into the proposed IESF without any flow bypassing over the berm. Only 7% of flow would be expected to bypass the IESF in the modeled storms. The modeling shows that an estimated 89.1-pounds of TP (~69% of the TP loading of 129.5-pounds) would be removed annually from the Swamp Lake Watershed.

Hydraulic modeling results indicated that the proposed berm and IESF would not affect the high-water levels within Swamp Lake and therefore would not require additional floodplain permitting. The modeling results also indicated that the filter did not change the high-water levels in Spring Lake and Prior Lake downstream; therefore, the proposed filter would not provide any flood attenuation for these downstream water bodies. Option 3 maximizes water quality treatment to the extent practicable while also avoiding triggering the CLOMR/LOMR process.

4 CONCLUSIONS

Qualitative and quantitative evaluation criteria were considered to compare the options and inform recommendations. Criteria were discussed and prioritized in collaboration with PLSLWD staff. Three potential project options were evaluated using criteria such as the ability of the project to achieve PLSLWD goals, estimated project capital costs, and permitting needs/complications. The criteria are outlined in additional detail below.

The ability of the project options to remove TP and reduce the effluent load from Swamp Lake was identified as the primary goal of the feasibility study and an overarching goal of PLSLWD. To address this goal, the three concept designs sought to maximize TP removal capacity of each evaluated option. Stantec used MIDS water quality modeling to evaluate the TP removal capacity for the three scenarios. Additionally, to address PLSLWD's flood reduction goals, this study looked at the potential to manage discharge rates and the effective flood elevation impact that could be expected on Spring Lake and Prior Lake (downstream), permitting needs, site constraints, and the engineering complexity of the three proposed options as shown below:

- Option 1 is expected to provide enhanced water quality for County Ditch 13 and Spring Lake and Prior Lake downstream. The TP cost per pound of removal was the highest in comparison with the other two options, and there are minimal site constraints and no federal permitting requirements associated with this option.

- Option 2 is expected to provide flood attenuation for Prior Lake. This option does not require any special access and requires the same land acquisition as the other two options with a similar complexity design. The main complication of Option 2 is that the design elevations capture all flooding events up to the 100-year, 30-day design storm. This causes an increase in Swamp Lake's 100-year floodplain elevation, which would trigger the extensive CLOMR/LOMR permitting process through FEMA. This long and arduous process is not desirable for this project given that the primary goal is the water quality downstream. Additionally, the CLOMR/LOMR process requires all seven affected landowners to agree to the floodplain rise, which adds considerable uncertainty to the likelihood of project completion.

- Option 3 is an optimized form of Option 1 shown above. This option includes an adjustment to both the County Ditch 13 berm and the emergency overflow outlet of the proposed IESF. The adjustment to the proposed berms provides higher TP removal and allows for a greater storage volume in the IESF. Unfortunately, modeling results did not show any measurable flood attenuation at Spring Lake or Prior Lake as Option 2 did, but Stantec has determined that considering the cost,

time, project complexity, and avoidance of federal permitting makes Option 3 the most desirable and feasible option as a future project.

Table 1. Option Results Summary

	Option 1	Option 2	Option 3
Description	**IESF**	**IESF + Outlet**	**IESF + Outlet**
Lake Level Rise?	**No**	**Yes**	**No**
Water Bypassing the IESF (%)	**13**	**0**	**7**
TP Removal (Pound/Year)	**83.4**	**95.8**	**89.1**
TP Removal (Cost/Pound)	**$238**	**$228**	**$220**
Engineer's Opinion of Probable Cost	**$596,400**	**$654,800**	**$589,200**
Flood Attenuation on Prior Lake (ft)	**0.00**	**0.06**	**0.00**
Flood Attenuation on Spring Lake (ft)	**0.00**	**0.00**	**0.00**
CLOMR/LOMR Permitting Required?	**No**	**Yes**	**No**

Reference: Swamp Lake Phosphorus and Peak Flow Reduction Feasibility Study

5 NEXT STEPS

The following are recommended next steps:

- Board approval of the Swamp Lake Phosphorus and Peak Flow Reduction Feasibility Study.
- Submit Feasibility Study to the Board of Water & Soil Resources (BWSR).
- Pursue landowner agreement and easement acquisition.
- Pursue grant funding.
- Authorize final design of the preferred option.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Josh Accola, PE, CFM
Water Resources Engineer
Phone: 952-334-1418
joshua.accola@stantec.com

Ed Matthiessen, PE
Senior Water Resources Engineer
Edward.matthiessen@stantec.com

Attachment: Opinion of Probable Costs, Concept Plan, Wetland Delineation

Stantec Memo

APPENDIX A: ENGINEERS OPINION OF PROBABLE COSTS

Stantec completed a conceptual level opinion of probable cost (OPC) for all three design options. This information is used to evaluate cost efficiency of TP removal associated with each option, as well as to provide insight into the physical configuration and operations & maintenance requirements of each option. Itemized opinion of probable cost and concept design schematics for each option are included in the attachment and total costs in the table below. A 30% contingency was estimated for Options 1 and 3 to account for uncertainty at this planning level and for final design and permitting needs. Because permitting needs are expected to be much more extensive for Option 2, a 40% contingency was estimated. Land acquisition costs were determined based on the estimated market value in 2023 of the parcel acreage needed for Options 1-3. All options would have the same BMP operation and maintenance costs as they all incorporate the same general type of BMP, the proposed IESF. Maintenance for IESF includes raking using manual or mechanical methods to break up surface crusting twice yearly and jetting out the drain tile as necessary. This estimate is primarily a labor cost and doesn't include design and legal fees. For long-term maintenance, the typical life of an IESF is assumed to be 15 years. Every 15 years, either additional iron filings must be tilled in, or all sand/iron media removed and replaced. For the purposes of calculating maintenance costs, a 30-year lifecycle was assumed with one tilling of additional iron filings (5% by weight). These costs are included in the attached opinion of probable cost.

PROJECT 227705785 - SWAMP LAKE IESF
PRIOR LAKE SPRING LAKE WATERSHED DISTRICT
OPINION OF PROBABLE COST
NOVEMBER 2023

PROJECT 227705785 SWAMP LAKE IESF - OPTION 1

NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	MOBILIZATION AND DEMOBILIZATION	LS	1	$ 35,200.00	$ 35,200.00
2	TRAFFIC CONTROL	LS	1	$ 1,500.00	$ 1,500.00
3	COMMON EXCAVATION - OFFSITE	CY	3,900	$ 25.00	$ 97,500.00
4	BIORETENTION SOIL MIX	CY	150	$ 85.00	$ 12,750.00
5	TEMPORARY DEWATERING	LS	1	$ 20,000.00	$ 20,000.00
6	TEMPORARY ROCK CONSTRUCTION ENTRANCE - MAINTAINED	EA	1	$ 1,500.00	$ 1,500.00
7	SEDIMENT CONTROL LOG TYPE STRAW (OR BIOROLL) - MAINTAINED	LF	550	$ 4.00	$ 2,200.00
8	FLOTATION SILT CURTAIN - MOVING WATER	LF	15	$ 30.00	$ 450.00
9	EROSION CONTROL BLANKET CATEGORY 20	SY	1,000	$ 2.00	$ 2,000.00
10	GEOTEXTILE FABRIC TYPE 4 NON-WOVEN	SY	100	$ 4.00	$ 400.00
11	COARSE FILTER AGGREGATE	CY	665	$ 85.00	$ 56,525.00
12	PREMIXED IRON/FINE FILTER AGGREGATE	CY	520	$ 225.00	$ 117,000.00
13	RIP RAP CLASS II	TON	45	$ 100.00	$ 4,500.00
14	6" SLOTTED PVC SCH 40 PIPE	LF	710	$ 30.00	$ 21,300.00
15	10" SOLID PVC SCH 40 PIPE	LF	95	$ 55.00	$ 5,225.00
16	12" CMP CULVERT	LF	38	$ 100.00	$ 3,800.00
17	6" CLEANOUT W/ VENT SCREEN	EA	4	$ 500.00	$ 2,000.00
18	10" CLEANOUT W/ VENT SCREEN	EA	1	$ 1,200.00	$ 1,200.00
19	SAMPLE PORT	EA	1	$ 1,750.00	$ 1,750.00
20	MnDOT SEED MIX 34-261	LB	8	$ 40.00	$ 320.00
21	LAND ACQUISITION COSTS	LS	1	$ 13,000.00	$ 13,000.00
22	OPERATION AND MAINTENANCE COSTS	LS	1	$ 47,000.00	$ 47,000.00
23	MONITORING	LS	1	$ 10,000.00	$ 10,000.00
24	COUNTY DITCH PETITION	LS	1	$ 1,500.00	$ 1,500.00

SUBTOTAL:	$ 458,700.00
30% CONTINGENCY:	$ 137,700.00
TOTAL COST	$ 596,400.00

PROJECT 227705785 - SWAMP LAKE IESF
PRIOR LAKE SPRING LAKE WATERSHED DISTRICT
OPINION OF PROBABLE COST
NOVEMBER 2023

PROJECT 227705785 SWAMP LAKE IESF OPTION 2

NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	MOBILIZATION AND DEMOBILIZATION	LS	1	$ 34,200.00	$ 34,200.00
2	TRAFFIC CONTROL	LS	1	$ 1,500.00	$ 1,500.00
3	COMMON EXCAVATION - OFFSITE	CY	3,500	$ 25.00	$ 87,500.00
4	BIORETENTION SOIL MIX	CY	150	$ 85.00	$ 12,750.00
5	TEMPORARY DEWATERING	LS	1	$ 20,000.00	$ 20,000.00
6	TEMPORARY ROCK CONSTRUCTION ENTRANCE - MAINTAINED	EA	1	$ 1,500.00	$ 1,500.00
7	SEDIMENT CONTROL LOG TYPE STRAW (OR BIOROLL) - MAINTAINED	LF	550	$ 4.00	$ 2,200.00
8	FLOTATION SILT CURTAIN - MOVING WATER	LF	15	$ 30.00	$ 450.00
9	EROSION CONTROL BLANKET CATEGORY 20	SY	1,000	$ 2.00	$ 2,000.00
10	GEOTEXTILE FABRIC TYPE 4 NON-WOVEN	SY	100	$ 4.00	$ 400.00
11	COARSE FILTER AGGREGATE	CY	665	$ 85.00	$ 56,525.00
12	PREMIXED IRON/FINE FILTER AGGREGATE	CY	520	$ 225.00	$ 117,000.00
13	RIP RAP CLASS II	TON	45	$ 100.00	$ 4,500.00
14	6" SLOTTED PVC SCH 40 PIPE	LF	710	$ 30.00	$ 21,300.00
15	10" SOLID PVC SCH 40 PIPE	LF	95	$ 55.00	$ 5,225.00
16	12" CMP CULVERT	LF	38	$ 100.00	$ 3,800.00
17	6" CLEANOUT W/ VENT SCREEN	EA	4	$ 500.00	$ 2,000.00
18	10" CLEANOUT W/ VENT SCREEN	EA	1	$ 1,200.00	$ 1,200.00
19	SAMPLE PORT	EA	1	$ 1,750.00	$ 1,750.00
20	MnDOT SEED MIX 34-261	LB	8	$ 40.00	$ 320.00
21	LAND ACQUISITION COSTS	LS	1	$ 13,000.00	$ 13,000.00
22	OPERATION AND MAINTENANCE COSTS	LS	1	$ 47,000.00	$ 47,000.00
23	CLOMR/LOMR APPLICATION FEES AND ADJACENT OWNER COORDINATION	LS	1	$ 20,000.00	$ 20,000.00
24	MONITORING	LS	1	$ 10,000.00	$ 10,000.00
25	COUNTY DITCH PETITION	LS	1	$ 1,500.00	$ 1,500.00

SUBTOTAL:	$ 467,700.00
40% CONTINGENCY:	$ 187,100.00
TOTAL COST	$ 654,800.00

PROJECT 227705785 - SWAMP LAKE IESF
PRIOR LAKE SPRING LAKE WATERSHED DISTRICT
OPINION OF PROBABLE COST
NOVEMBER 2023

PROJECT 227705785 SWAMP LAKE IESF OPTION 3

NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	MOBILIZATION AND DEMOBILIZATION	LS	1	$ 34,700.00	$ 34,700.00
2	TRAFFIC CONTROL	LS	1	$ 1,500.00	$ 1,500.00
3	COMMON EXCAVATION - OFFSITE	CY	3,700	$ 25.00	$ 92,500.00
4	BIORETENTION SOIL MIX	CY	150	$ 85.00	$ 12,750.00
5	TEMPORARY DEWATERING	LS	1	$ 20,000.00	$ 20,000.00
6	TEMPORARY ROCK CONSTRUCTION ENTRANCE - MAINTAINED	EA	1	$ 1,500.00	$ 1,500.00
7	SEDIMENT CONTROL LOG TYPE STRAW (OR BIOROLL) - MAINTAINED	LF	550	$ 4.00	$ 2,200.00
8	FLOTATION SILT CURTAIN - MOVING WATER	LF	15	$ 30.00	$ 450.00
9	EROSION CONTROL BLANKET CATEGORY 20	SY	1,000	$ 2.00	$ 2,000.00
10	GEOTEXTILE FABRIC TYPE 4 NON-WOVEN	SY	100	$ 4.00	$ 400.00
11	COARSE FILTER AGGREGATE	CY	665	$ 85.00	$ 56,525.00
12	PREMIXED IRON/FINE FILTER AGGREGATE	CY	520	$ 225.00	$ 117,000.00
13	RIP RAP CLASS II	TON	45	$ 100.00	$ 4,500.00
14	6" SLOTTED PVC SCH 40 PIPE	LF	710	$ 30.00	$ 21,300.00
15	10" SOLID PVC SCH 40 PIPE	LF	95	$ 55.00	$ 5,225.00
16	12" CMP CULVERT	LF	38	$ 100.00	$ 3,800.00
17	6" CLEANOUT W/ VENT SCREEN	EA	4	$ 500.00	$ 2,000.00
18	10" CLEANOUT W/ VENT SCREEN	EA	1	$ 1,200.00	$ 1,200.00
19	SAMPLE PORT	EA	1	$ 1,750.00	$ 1,750.00
20	MNDOT SEED MIX 34-261	LB	8	$ 40.00	$ 320.00
21	LAND ACQUISITION COSTS	LS	1	$ 13,000.00	$ 13,000.00
22	OPERATION AND MAINTENANCE COSTS	LS	1	$ 47,000.00	$ 47,000.00
23	MONITORING	LS	1	$ 10,000.00	$ 10,000.00
24	COUNTY DITCH PETITION	LS	1	$ 1,500.00	$ 1,500.00

SUBTOTAL:	$ 453,200.00
30% CONTINGENCY:	$ 136,000.00
TOTAL COST	$ 589,200.00

Stantec

Memo

APPENDIX B: CONCEPT PLANS

FULL BMP FOOTPRINT + EASEMENT/ACCESS + 25' BUFFER = 1.61 AC

Stantec	CLIENT NAME PRIOR LAKE-SPRING LAKE WATERSHED DISTRICT	PROJECT TITLE SWAMP LAKE BMP FEASIBILITY STUDY	
		DWN BY RWN / CHK'D JJOA / APP'D JJOA	DWG DATE SEE CERT. SCALE SEE SCALE BAR
		PROJECT NO. 227705785	SHEET NO. 1 OF 1

LEGEND

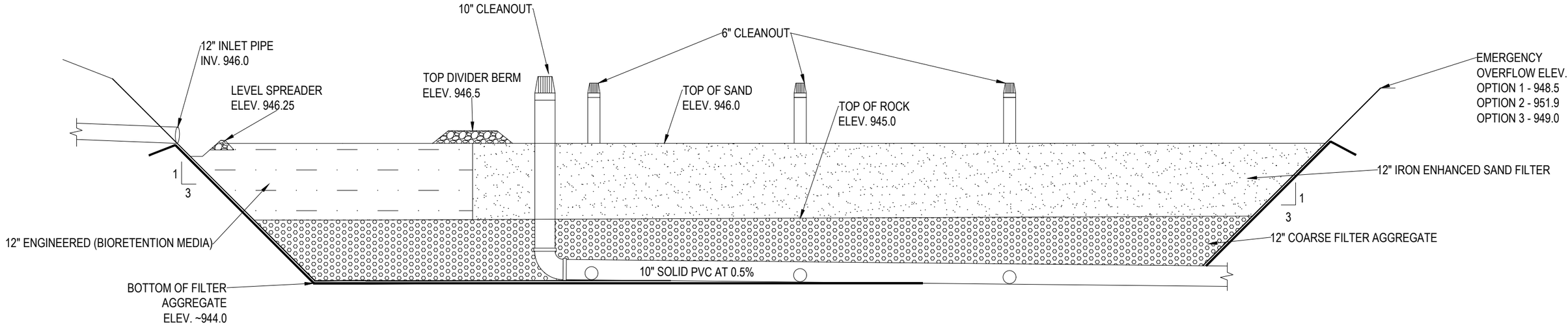
- TRAFFIC SIGN
- FLARED END SECTION
- DECIDUOUS TREE
- STORM SEWER
- TREE LINE

GENERAL NOTES

1. Bearings shown hereon are based on the Scott County Coordinate System relative to the NAD83(11) control adjustment.
2. Elevations and contours shown hereon were established with GPS and are relative to the NAVD88 vertical datum.

N

0 30 60
SCALE IN FEET



1/A CROSS SECTION VIEW
NOT TO SCALE

Stantec

CLIENT NAME
PRIOR LAKE–SPRING LAKE WATERSHED DISTRICT

PROJECT TITLE
DETAILS

DWN BY	CHK'D	APP'D	DWG DATE	SEE CERT.
JTW	XXX	XXX	SCALE	SEE SCALE BAR

PROJECT NO. 227705785

SHEET NO. 1 OF 1

Xref ..\4 REFERENCES\x-TTLB 227704093.dwg

Stantec

Memo

APPENDIX C: WETLAND DELINEATION & ADDENDUM

Swamp Lake Wetland Delineation Report

PLSLWD Swamp Lake IESF
Sand Creek Township, Scott County, MN
Stantec Project #: 227705785

Prepared for:

Prior Lake – Spring Lake Watershed District
4646 Dakota Street Southeast
Prior Lake, MN 55372

Prepared by:

Stantec Consulting Services Inc.
One Carlson Parkway
Suite 100
Plymouth, MN 55447

Sign-off Sheet

This document entitled Swamp Lake Wetland Delineation Report was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of the Prior Lake – Spring Lake Watershed District (PLSLWD) (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by 

(signature)

Mia Bauer, Environmental Scientist

Reviewed by 

(signature)

Tony Kaster, Senior Environmental Scientist

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1.0 INTRODUCTION

Stantec Consulting Services Inc. (Stantec) performed a wetland determination and delineation of the proposed PLSLWD Swamp Lake Iron-Enhanced Sand Filter (IESF) Project site (the "Study Area") on behalf of the PLSLWD. The Study Area is approximately 19.08 acres in size and located in Sections 13 and 24, Township 114 North, Range 23 West, Sand Creek Township, Scott County, Minnesota. The Study Area is located immediately east of Swamp Lake and crosses Redwing Avenue with most of the Study Area located east of the road (**Appendix A, Figure 1**).

The purpose and objective of the wetland determination and delineation was to identify the extent and spatial arrangement of wetlands and waterways within the Study Area. The field investigation was performed on May 9, 2023.

2.0 METHODS

2.1 WETLANDS

Wetland determinations were based on the criteria and methods outlined in the *U.S. Army Corps of Engineers Wetlands Delineation Manual,* Technical Report Y-87-1 (1987) and subsequent guidance documents (USACE 1991, 1992), and applicable Regional Supplements to the *Corps of Engineers Wetland Delineation Manual*.

The wetland determination involved the use of available resources to assist in the assessment such as U.S. Geological Survey (USGS) topographic maps, U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) soil survey, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) mapping, Minnesota Department of Natural Resources (MNDNR) Protected/Public Waters mapping, and aerial photography.

On-site wetland determinations were made using the three criteria (vegetation, soil, and hydrology) and technical approach defined in the USACE 1987 Manual and applicable Regional Supplement. According to procedures described in the 1987 Manual and applicable Regional Supplement, areas that under normal circumstances reflect a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology (e.g., inundated or saturated soils) are considered wetlands.

Additionally, as climate plays an important role in the formation and identification of wetlands, the antecedent precipitation in the months leading up to the field investigations was reviewed. Antecedent precipitation was determined prior to the field investigation utilizing the U.S. Army Corps of Engineers Antecedent Precipitation Tool. The tool compares precipitation totals from the three months prior to the date of the field investigation with 30-year normal amounts, calculating a weighted multi-month score and determining the climate conditions (dry, normal, wet).

The wetland boundaries and sampling points were identified and surveyed with a Global Positioning System (GPS) capable of sub-meter accuracy and mapped using Geographical Information System (GIS) software.

2.2 WATERWAYS

Waterways (streams, channels, rivers, ditches, etc.) were considered separately from wetlands if they exhibited physical evidence of an Ordinary High-Water Mark (OHWM) per the characteristics outlined in the 2005 USACE Regulatory Guidance Letter Number 05-05 (OHWM Identification) but lack wetland criteria. If observed, waterways, waterbodies, culverts, and/or other connections to off-site wetland or aquatic features that may be under federal or state authority were located using a hand-held GPS and mapped using GIS software.

3.0 RESULTS

3.1 SITE DESCRIPTION

The Study Area is located immediately east of Swamp Lake and crosses Redwing Avenue with most of the Study Area located east of the road. The Study Area has slight changes in topography, with high points located along the southern portion of the Study Area (**Appendix A, Figure 5**). The surrounding area consists of cultivated crops, hay/pasture, low-density residential, deciduous/mixed forest, emergent/woody wetlands, and open water features. NRCS soils present within the Study Area and their hydric status are summarized in **Table 1** and mapped in **Appendix A, Figure 2**.

Table 1. Summary of Soils Identified within the Study Area

Soil Symbol:	Soil Unit Name	Acres in Study Area	% Hydric Rating	Hydric Category
Ga	Glencoe silty clay loam, 0 to 1 percent slopes	6.57	100	All Hydric
Wb	Webster-Glencoe silty clay loam	3.93	100	All Hydric
PaA	Klossner muck, 0 to 1 percent slopes	2.48	100	All Hydric
CaB	Clarion loam, 2 to 6 percent slopes	2.23	5	Pre-dominantly non-Hydric
Wc	Webster-Le Sueur silty clay loam	1.47	70	Pre-dominantly Hydric
CaC2	Clarion loam, 6 to 10 percent slopes, moderately eroded	1.42	0	All non-Hydric
LcB	Lester loam, 2 to 6 percent slopes	0.63	10	Pre-dominantly non-Hydric
CaC	Clarion loam, 6 to 10 percent slopes	0.35	0	All non-Hydric

The MNDNR Protected/Public Waters map identifies Swamp Lake (70011100) as a MNDNR Public Waters Basin within the far western portion of the Study Area (**Appendix A, Figure 3**).

The National Wetland Inventory (NWI) map identifies a portion of one emergent wetland (PEM1C) within the western portion of the Study Area (**Appendix A, Figure 4**). The National Hydrology

Dataset (NHD) identifies one stream that flows east/west within the central portion of the Study Area (**Appendix A, Figure 4**).

Precipitation was analyzed using the Army Corps of Engineers Antecedent Precipitation Tool (APT) which calculates a three-month rolling precipitation total. Precipitation was considered *wetter than normal* prior to the site visit on May 9, 2023, as shown in the precipitation figure in **Appendix D** and **Table 2**, below.

Table 2. Antecedent Precipitation Tool Data

Time Period (30-day period ending on)		30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value[1]	Month Weight Value	Product of Previous Two Columns
1st Prior Month	5-9-2023	2.12	4.49	3.04	Normal	2	3	6
2nd Prior Month	4-9-2023	1.22	2.07	3.35	Wet	3	2	6
3rd Prior Month	3-10-2023	0.55	1.43	3.15	Wet	3	1	3
Conclusions[2]	**Prior period has been *wetter than normal***						**Sum**	**15**

Source: Precipitation data was compiled and analyzed using the Army Corps of Engineer Antecedent Precipitation Tool available at: https://www.epa.gov/wotus/antecedent-precipitation-tool-apt (accessed November 2022).
[1] Condition Values are as follows: Dry=1, Normal=2, Wet=3
[2] Conclusions are as follows: If the sum is 6-9 than the period has been drier than normal; if the sum is 10-14 then that period has been normal; if the sum is 15-18 then the period has been wetter than normal.

3.2 WETLANDS

One wetland was identified and delineated within the Study Area during the May 2023 visit. Wetland determination data forms were completed for two sample points along a transect through the wetland and adjacent upland and are contained in **Appendix B**. Photographs of the wetland and adjacent lands are contained in **Appendix C**. The wetland boundaries and sample point locations are shown on **Appendix A, Figure 6**. The wetland is summarized in **Table 3** and described in detail in the following sections.

Table 3. Summary of Wetlands Identified within the Study Area

Wetland	Field Classified Wetland Type	NWI Wetland Type	Adjacent Surface Waters	Acreage (on-site)
Wetland A (WA)	PEM/Type 3 with Type 2 fringe	PEM1C	Swamp Lake (70011100)	0.13

3.2.1 Wetland A

Wetland A (WA) is an emergent wetland community located at the western end of the Study Area on the west side of Redwing Avenue. An upland and wetland sample point were taken as a

representative transect. Wetland A is closely associated with Swamp Lake (70011100), and the corresponding upland is located in the vicinity of a forested area northeast of the wetland.

Vegetation

Dominant plant species identified at the wetland sample point, WA-w, consisted of reed canary grass (*Phalaris arundinacea)* and narrow-leaved cattail (*Typha angustifolia*). The dominant species within the wetland are comprised of hydrophytic vegetation (OBL, FACW, and/or FAC) and meets the hydrophytic vegetation criterion. Dominant plant species identified at WA-u, the upland sample point, consisted of boxelder (*Acer negundo*), American plum (*Prunus americana*), Canada goldenrod (*Solidago canadensis*), and Missouri gooseberry (*Ribes missouriense*). The dominant species at the upland sample point did not meet the hydrophytic vegetation criterion.

Hydrology

The wetland sample point had primary indicators of wetland hydrology, including Surface Water (A1) (approximately three inches), as well as High Water Table (A2) and Saturation (A3) to the surface. The wetland sample point also had secondary indicators of wetland hydrology, including Geomorphic Position (D2) and the FAC-Neutral Test (D5). Therefore, the wetland hydrology criterion was met. No hydrology indicators were observed for the upland sample point, so the hydrology wetland criterion was not met at the upland sample point.

Soils

Soils within the wetland, as well as the upland sample point, were mapped by the NRCS as Glencoe silty clay loam, zero to one percent slopes, which is 100 percent hydric (**Appendix A, Figure 2**). However, no soil samples were taken as sample points were located along a roadside where there is a potential for buried utilities. Soils at the wetland sample point were assumed hydric based on landscape position, hydrology, and the vegetation present. Soils at the upland sample point were assumed to be non-hydric due to lack of hydrology indicators and the vegetation present.

Wetland Boundary

The wetland boundary was determined based on distinct differences in vegetation and hydrology consisting of the following: 1) Transition from a community consisting of reed canary grass (FACW) and narrow-leaved cattail (OBL) to one that contained several UPL and FACU species; and 2) Transition from an area with hydrology indicators to one lacking hydrology indicators.

3.3 UPLANDS

The upland areas within the Study Area on the east side of Redwing Avenue consisted of presently cultivated cropland with a buffer dominated by smooth brome (*Bromus inermis*), with a minor component of reed canary grass, between the farmed fields and Stream A (SA) (see 3.4 Waterways). Historical aerial photos were reviewed prior to the field investigation, and no areas of concern were observed in the cultivated fields. Additionally, there were no mapped NWI wetlands in the cultivated fields. Two upland sample points were taken in the cultivated fields on the east side of Redwing Avenue north of SA: Sample Point A (SPA) and Sample Point B (SPB). Data forms for these upland sample points are included in **Appendix B**.

SPA was determined to be an upland drainage swale that had been effectively drained by tile. Vegetation in the area consisted of FACU species, namely smooth brome, common dandelion

(*Taraxacum officinale*), and red clover (*Trifolium pratense*); and soils consisted of silty clay loam and silty clay that lacked hydric soil indicators. Finally, no hydrology indicators were met.

SPB was determined to be upland. It met the vegetation indicator as a result of a small area dominated by reed canary grass and the hydrology indicator was also met through weak Geomorphic Position (D2) and the FAC-Neutral Test (D5), however the hydric soil indicator was not met.

3.4 WATERWAYS

Two waterways were identified within the Study Area: SA and Stream B (SB). Photographs of the streams are contained in **Appendix C**. The stream boundaries are shown in **Appendix A, Figure 6**. The streams are summarized in **Table 4** and described in detail in the following sections.

Table 4. Summary of Waterways Identified within the Study Area

Waterway	Flow Regime	Length (linear feet)
Stream A (SA)	**Perennial**	**2,157.15**
Stream B (SB)	**Ephemeral**	**236.56**

SA is a perennial stream that runs the length of the Study Area east/west. It was estimated in the field that the banks of the stream were 10-15 feet in height and 20 feet in width. Approximately one-half foot of water was present in the stream at the time of the investigation.

SB is an ephemeral stream that runs north/south just west of Redwing Avenue. It was estimated in the field that the banks of the stream were one-half foot in height and two to five feet in width. Approximately zero to one inch of water was present in the stream at the time of the investigation.

3.5 OTHER ENVIRONMENTAL CONSIDERATIONS

This report is limited to the identification of state and/or federally regulated wetlands and waterways within the Study Area. However, there may be other regulated environmental features within the Study Area, including, but not limited to, historical or archeological features, endangered or threatened species, and/or floodplains, etc. Federal, state, and local units of government and regional planning organizations may have regulatory authority to control or restrict land uses within or in close proximity to these features. Stantec can assist with identification and/or assessment of additional regulated resources at your request.

4.0 CONCLUSION

Stantec performed a wetland and waterway determination and delineation of the proposed PLSLWD Swamp Lake IESF Project for the PLSLWD. The purpose and objective were to identify the extent and spatial arrangement of wetlands and waterways within the Study Area.

On **May 9, 2023**, the boundaries of one emergent wetland were identified and delineated in the Study Area in accordance with state and federal guidelines and were surveyed with GPS and mapped using GIS software. There was a total of **0.13 acres of wetlands** delineated and identified within the Study Area. Adjacent uplands were composed of mixed grassland and upland forest. Two streams were also identified and delineated in the Study Area for a total of **2,393 linear feet of stream**.

Wetlands and waterways that are considered waters of the U.S. are subject to regulation under Section 404 of the Clean Water Act (CWA) and the jurisdictional regulatory authority lies with the U.S. Army Corps of Engineers (USACE). The Minnesota Department of Natural Resources (MNDNR) has regulatory authority over certain public wetlands and waters and adjacent lands under Statute 103G and Rule 6115.0250. All wetlands are protected under the Wetland Conservation Act and administered by a Local Governmental Unit (LGU). LGUs can be a City, County, Watershed District, Soil and Water Conservation District (SWCD) or other entity depending on project location and ownership. For this Study Area the **LGU** is the **Scott County SWCD**. Stantec recommends this report be submitted to the LGU and USACE for a preliminary jurisdictional review and concurrence. Finally, counties, townships and municipalities may have local zoning authority over certain types of wetlands and waterways.

Prior to beginning work at this site or disturbing or altering wetlands, waterways, or adjacent lands, Stantec recommends that the owner obtain the necessary permits or other agency regulatory review and concurrence with regard to the proposed work to comply with applicable regulations. Stantec can assist with identification and/or assessment of additional regulated resources at your request.

The information provided by Stantec regarding wetland boundaries is a scientific-based analysis of the wetland and upland conditions present in the Study Area at the time of the fieldwork. The delineation was performed by experienced and qualified professionals using standard practices and sound professional judgment. The ultimate decision on wetland boundaries rests with the applicable regulatory agencies. As a result, there may be adjustments to boundaries based upon review by a regulatory agency. An agency determination can vary from time to time depending on various factors including, but not limited to recent precipitation patterns and the season of the year. In addition, the physical characteristics of the Study Area can change over time, depending on the weather, vegetation patterns, drainage activities on adjacent parcels, or other events. Any of these factors can change the nature and extent of wetlands on the site. This wetland delineation report and the associated wetland boundaries cannot be depended on until they are approved by the applicable regulatory agencies. It is recommended to review and confirm these approvals before proceeding with any site work.

5.0 REFERENCES

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Appendix A Figures

Figure 1. Project Location

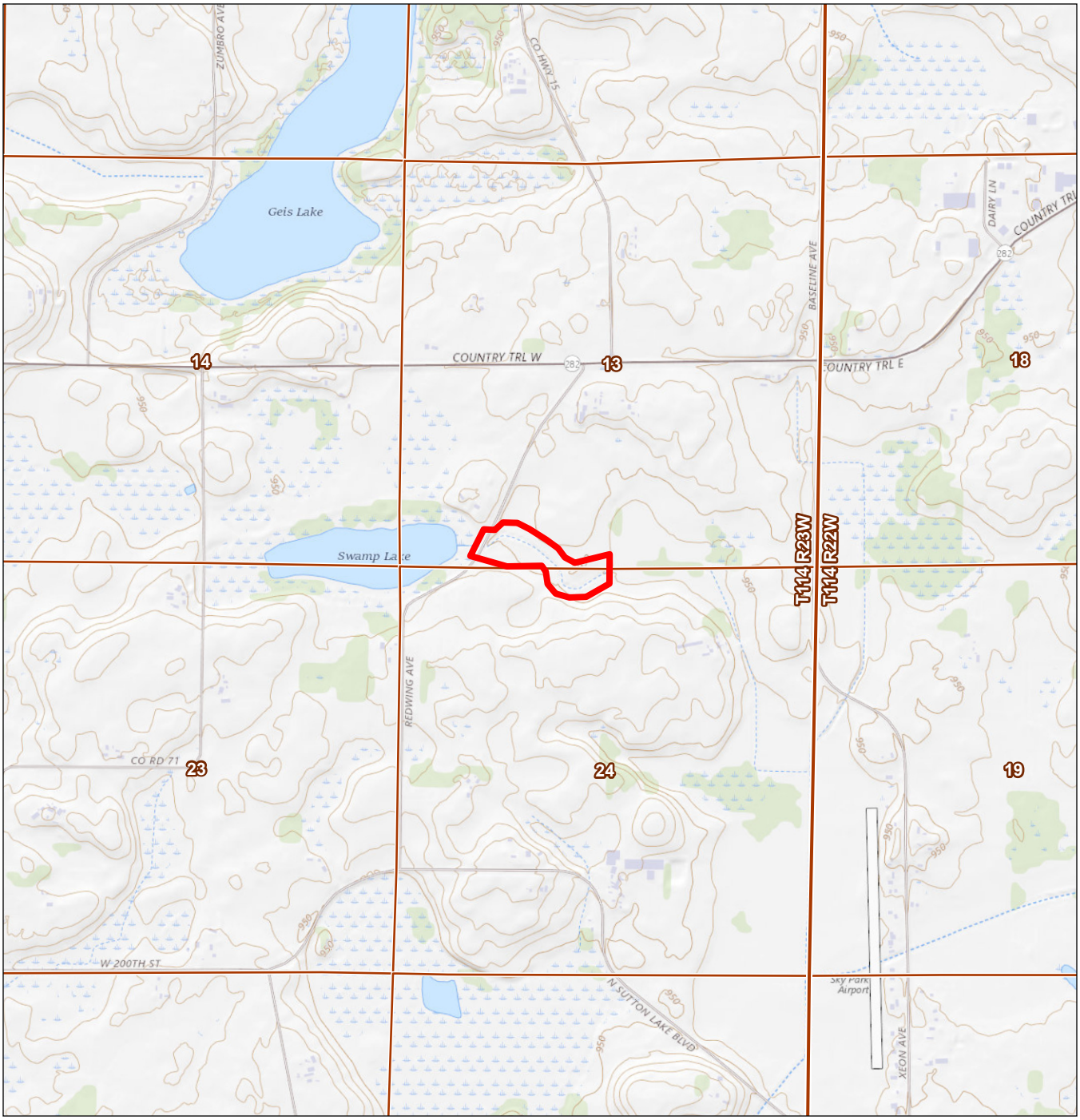
Figure 2. NRCS Soil Survey Data with Hydric Rating

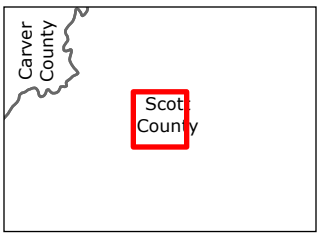
Figure 3. MN Protected/Public Waters Mapping

Figure 4. National Wetlands Inventory (NWI) & National Hydrography Dataset (NHD)

Figure 5. Site Topography

Figure 6. Field Collected Data





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Study Area

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(At original document size of 8.5x11)
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N

Stantec

Notes
1. Coordinate System: NAD 1983 UTM Zone 15N
2. Data Sources: Stantec,PLSLWD, Scott Co.
3. Background: USGS 7.5' Quadrangle

Project Location
T114, R23, S13 & 24
Sand Creek, Scott Co., MN

Prepared by KJM on 2023-05-18

Client/Project
227705785
Prior Lake-Spring Lake Watershed District
PLSLWD Swamp Lake IESF
Wetland Delineation

Figure No.
1

Title
Project Location

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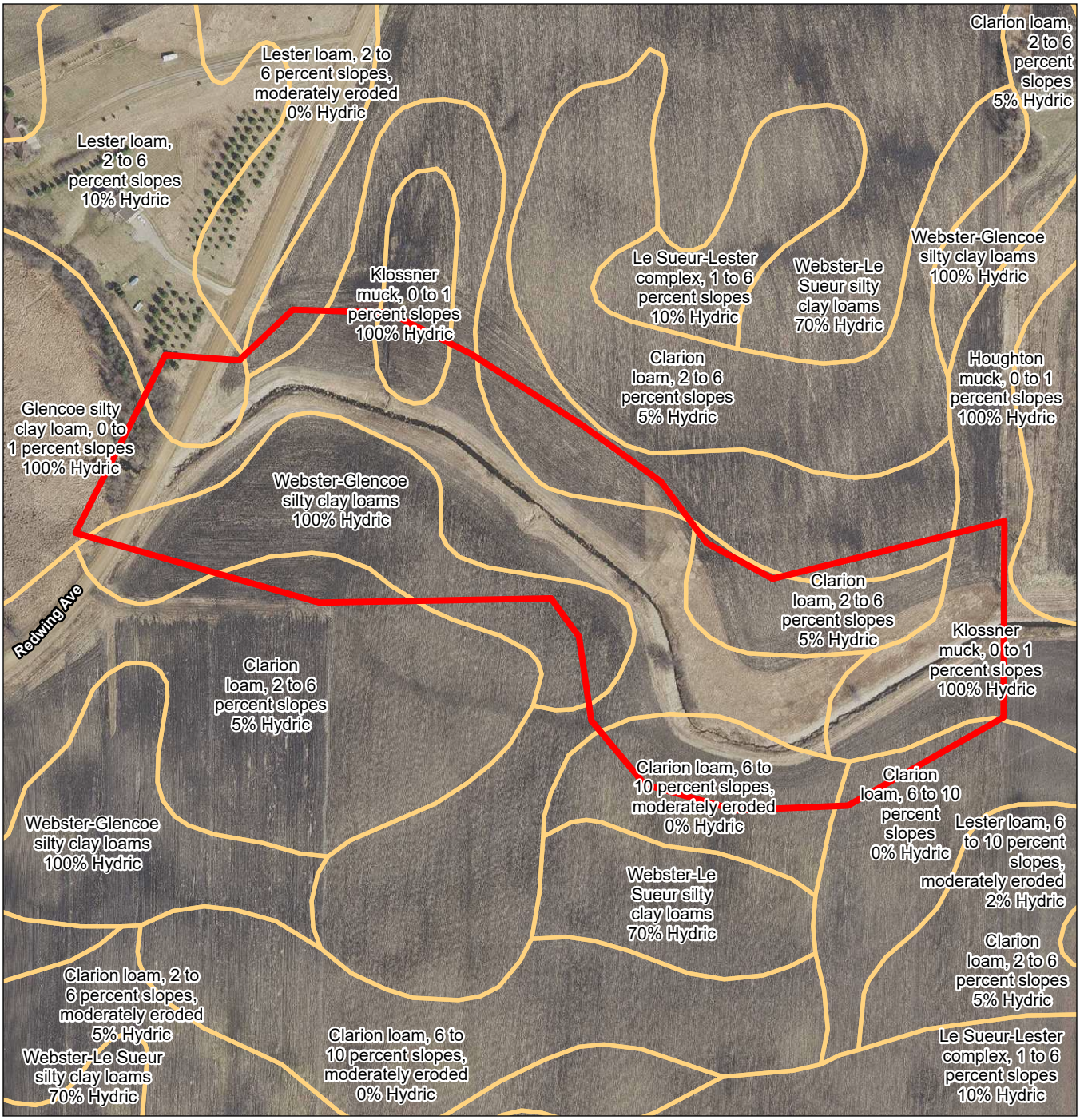

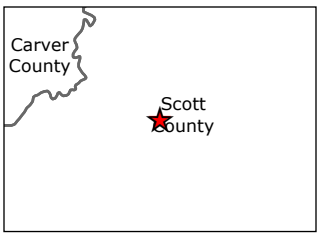

Legend
- Study Area
- Soil Unit and Hydric Rating

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Notes
1. Coordinate System: NAD 1983 UTM Zone 15N
2. Data Sources: Stantec, NRCS, ESRI
3. Background: 2020 color 7-county

Stantec

Project Location
T114, R23, S13 & 24
Sand Creek, Scott Co., MN

Prepared by KJM on 2023-05-18

Client/Project 227705785
Prior Lake-Spring Lake Watershed District
PLSLWD Swamp Lake IESF
Wetland Delineation

Figure No.
2

Title
Soil Survey Data Hydric Ratings

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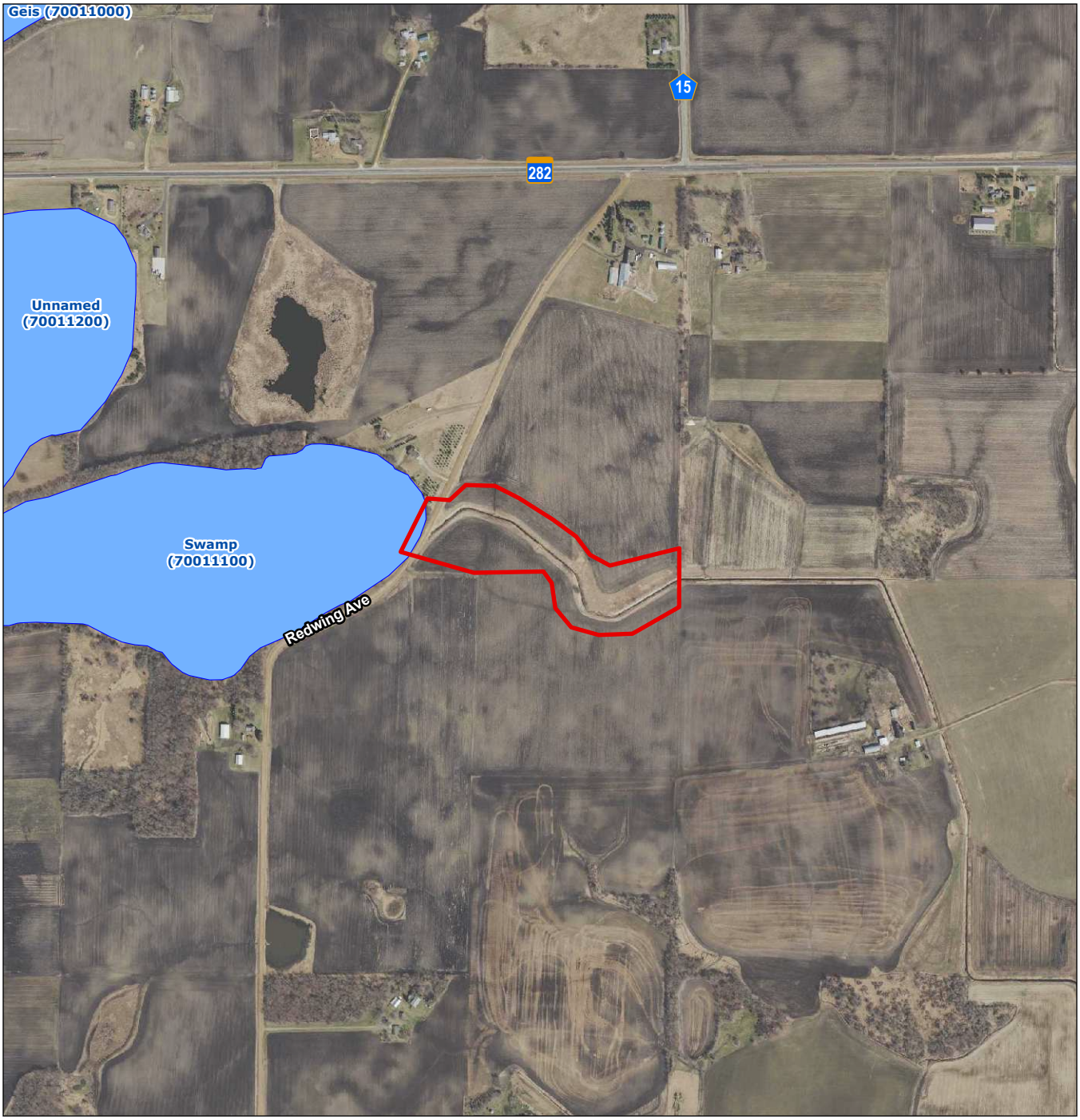

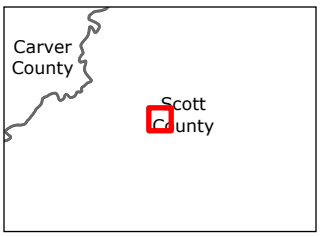

Legend

Study Area

Minnesota Public Waters Delineations

Public Waters Basins

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(At original document size of 8.5x11)
1:12,000

N

Stantec

Project Location
T114, R23, S13 & 24
Sand Creek, Scott Co., MN

Prepared by KJM on 2023-05-18

Client/Project 227705785
Prior Lake-Spring Lake Watershed District
PLSLWD Swamp Lake IESF
Wetland Delineation

Figure No.
3

Title
MN Protected & Public Waters

Notes
1. Coordinate System: NAD 1983 UTM Zone 15N
2. Data Sources: Stantec, MNDNR
3. Background: 2020 color 7-county

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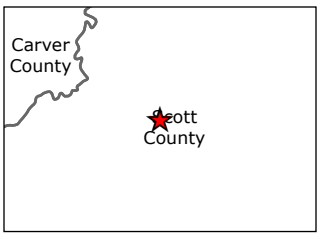

Legend
- Study Area
- National Wetlands Inventory Feature

National Hydrography Dataset
- Stream
- Waterbody

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(At original document size of 8.5x11)
1:6,000

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Notes
1. Coordinate System: NAD 1983 UTM Zone 15N
2. Data Sources: Stantec, MNDNR, USGS
3. Background: 2020 Color 7-county

Stantec

Project Location
T114, R23, S13 & 24
Sand Creek, Scott Co., MN

Prepared by KJM on 2023-05-18

Client/Project
Prior Lake-Spring Lake Watershed District
PLSLWD Swamp Lake IESF
Wetland Delineation

227705785

Figure No.
4

Title
National Wetlands Inventory and National Hydrography Dataset

Page 1 of 1

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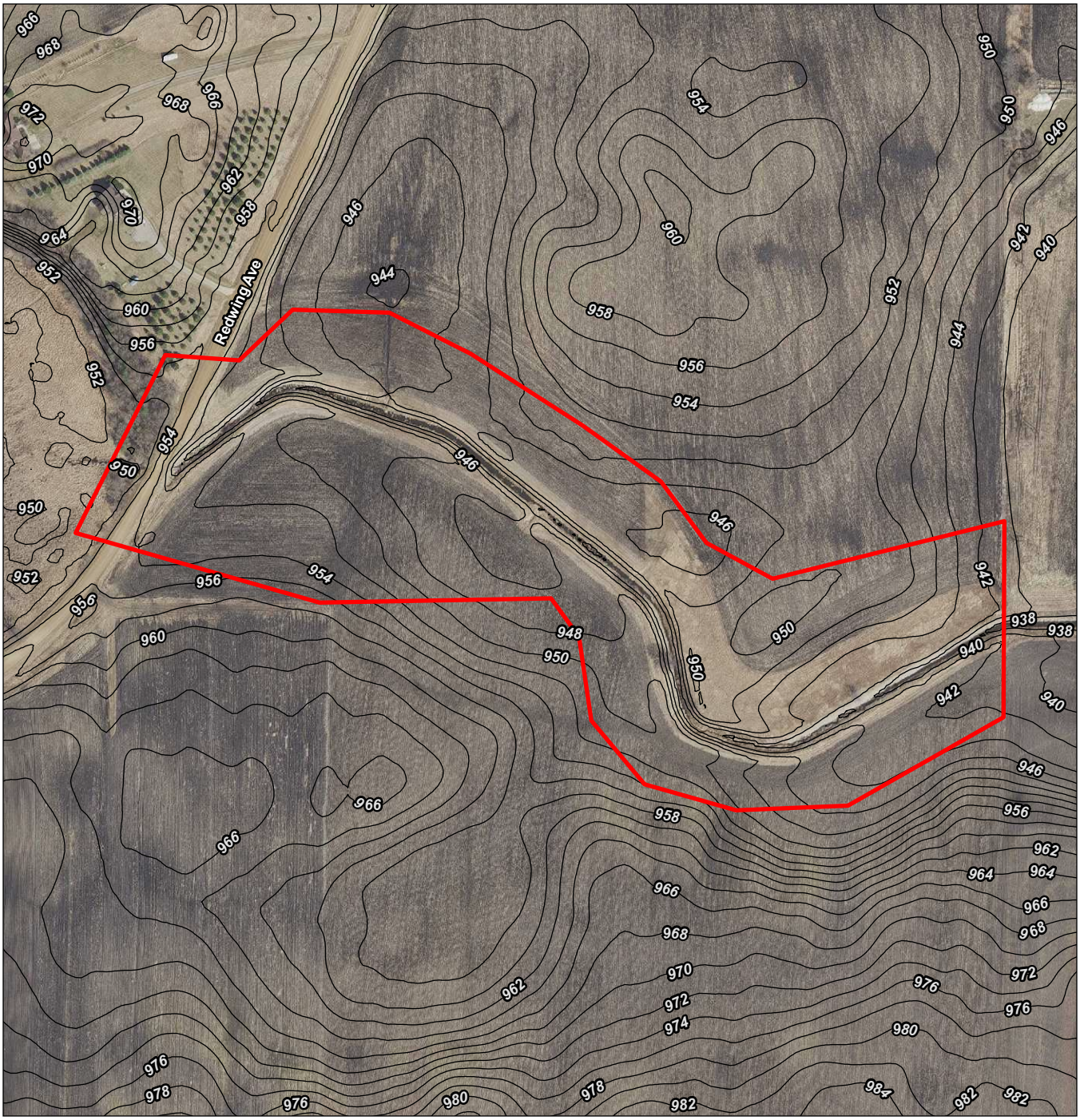

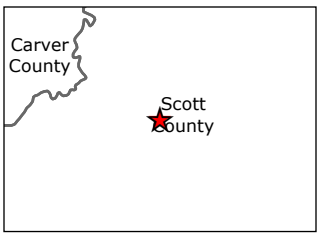

Legend
- Contour 2ft
- Study Area

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(At original document size of 8.5x11)
1:3,600

N

Notes
1. Coordinate System: NAD 1983 UTM Zone 15N
2. Data Sources: Stantec, MNDNR
3. Background: 2020 color 7-county

Stantec

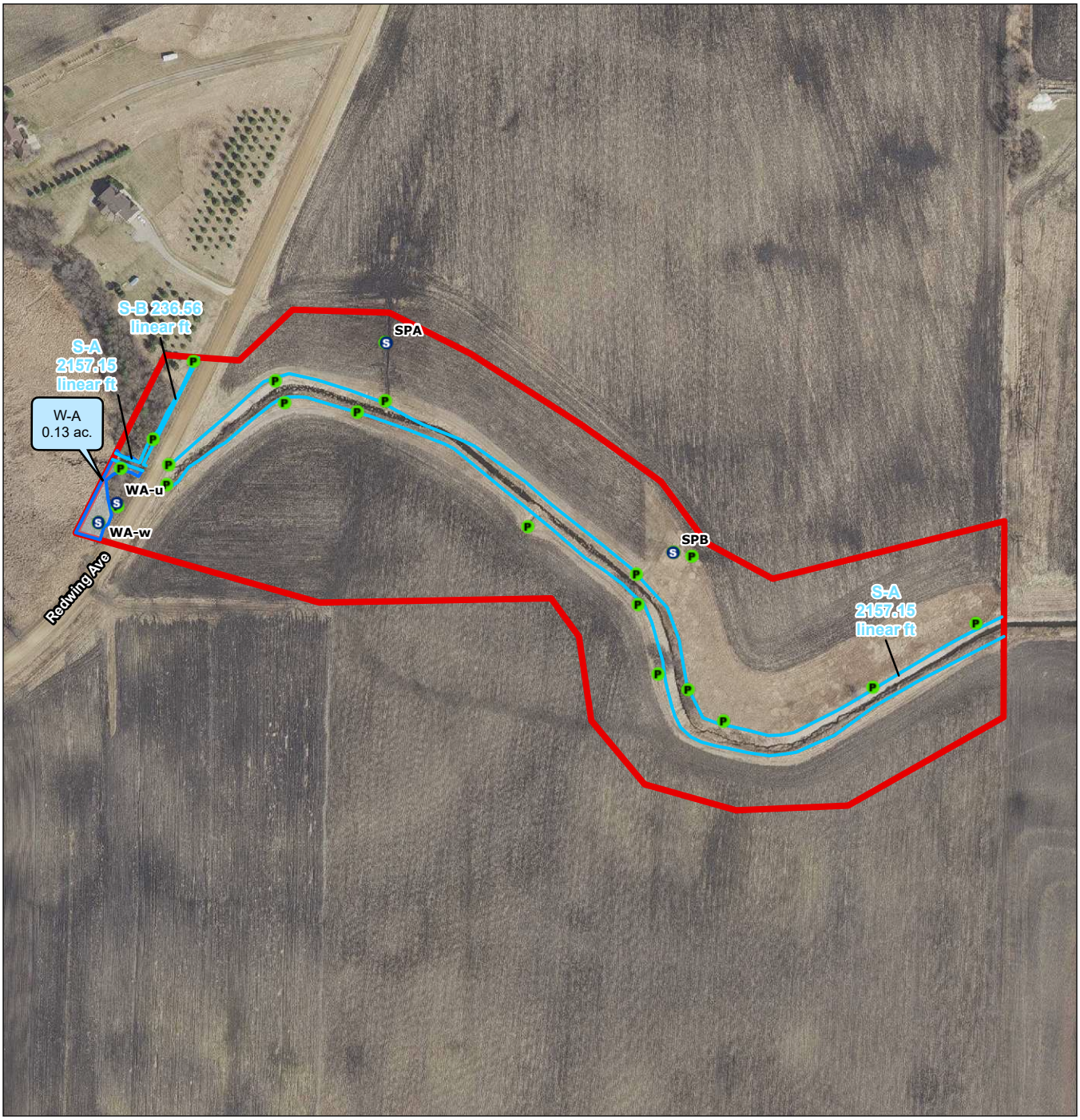
Project Location
T114, R23, S13 & 24
Sand Creek, Scott Co., MN

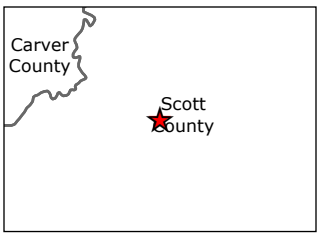
Prepared by KJM on 2023-05-18

Client/Project 227705785
Prior Lake-Spring Lake Watershed District
PLSLWD Swamp Lake IESF
Wetland Delineation

Figure No.
5

Title
Site Topography





Legend
- Sample Point
- Photo Location
- Delineated Waterbody
- Delineated Wetland Area
- Study Area

0 150 300 Feet
(At original document size of 8.5x11)
1:3,600

N

Stantec

Project Location
T114, R23, S13 & 24
Sand Creek, Scott Co., MN

Prepared by KJM on 2023-05-18

Client/Project 227705785
Prior Lake-Spring Lake Watershed District
PLSLWD Swamp Lake IESF
Wetland Delineation

Figure No.
6

Title
Field Collected Data

Notes
1. Coordinate System: NAD 1983 UTM Zone 15N
2. Data Sources: Stantec
3. Background: 2020 color 7-county

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Appendix B Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Swamp Lake Delineation | City/County: Sand Creek Twnshp | Sampling Date: 5/9/23
Applicant/Owner: PLSLWD | State: Minnesota | Sampling Point: WA-w
Investigator(s): Kathryn Keller-Miller and Mia Bauer | Section, Township, Range: T114N R23W S13
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 0 to 1 | Lat: 44.674574 | Long: -93.538268 | Datum: NAD 83
Soil Map Unit Name: Glencoe silty clay loam, 0 to 1 percent slopes | NWI Classification: PEM1C
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y
Hydric soil present?	Y
Indicators of wetland hydrology present?	Y
Is the sampled area within a wetland?	Y
If yes, optional wetland site ID:	Wetland A

Remarks: (Explain alternative procedures here or in a separate report.)

Precipitation was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Staus
1			
2			
3			
4			
5			
	0 = Total Cover		
Sapling/Shrub stratum (Plot size: 15)			
1			
2			
3			
4			
5			
	0 = Total Cover		
Herb stratum (Plot size: 5)			
1 *Phalaris arundinacea*	85	Y	FACW
2 *Typha angustifolia*	15	N	OBL
3			
4			
5			
6			
7			
8			
9			
10			
	100 = Total Cover		
Woody vine stratum (Plot size: 30)			
1			
2			
	0 = Total Cover		

Dominance Test Worksheet
Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet
Total % Cover of:

OBL species	15	x 1 =	15
FACW species	85	x 2 =	170
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	100 (A)		185 (B)

Prevalence Index = B/A = 1.85

Hydrophytic Vegetation Indicators:
- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL **Sampling Point:** WA-w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- X Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

No soil samples taken because sample point was along a roadside where buried utilities may be present. Hydric soils assumed based on observed vegetation and hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes	X	No	___	Depth (inches):	3
Water table present?	Yes	X	No	___	Depth (inches):	0
Saturation present? (includes capillary fringe)	Yes	X	No	___	Depth (inches):	0

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Swamp Lake Delineation | City/County: Sand Creek Twnshp | Sampling Date: 5/9/23
Applicant/Owner: PLSLWD | State: Minnesota | Sampling Point: WA-u
Investigator(s): Kathryn Keller-Miller and Mia Bauer | Section, Township, Range: T114N R23W S13
Landform (hillslope, terrace, etc.): Backslope | Local relief (concave, convex, none): Convex
Slope (%): 1 to 2 | Lat: 44.674679 | Long: -93.538131 | Datum: NAD 83
Soil Map Unit Name: Glencoe silty clay loam, 0 to 1 percent slopes | NWI Classification: None
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	N
Hydric soil present?	N
Indicators of wetland hydrology present?	N

Is the sampled area within a wetland? N
If yes, optional wetland site ID: Upland

Remarks: (Explain alternative procedures here or in a separate report.)

Precipitation was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Staus
1 *Acer negundo*	20	Y	FAC
2			
3			
4			
5			
	20	= Total Cover	

Sapling/Shrub stratum (Plot size: 15)			
1 *Prunus americana*	30	Y	UPL
2 *Lonicera tatarica*	10	N	FACU
3 *Cornus sericea*	7	N	FACW
4 *Acer negundo*	5	N	FAC
5 *Ribes missouriense*	5	N	NI
	57	= Total Cover	

Herb stratum (Plot size: 5)			
1 *Solidago canadensis*	40	Y	FACU
2 *Ribes missouriense*	20	Y	NI
3 *Cornus sericea*	5	N	FACW
4 *Acer negundo*	5	N	FAC
5 *Taraxacum officinale*	5	N	FACU
6			
7			
8			
9			
10			
	75	= Total Cover	

Woody vine stratum (Plot size: 30)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 4 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 25.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	12	x 2 =	24
FAC species	30	x 3 =	90
FACU species	55	x 4 =	220
UPL species	30	x 5 =	150
Column totals	127 (A)		484 (B)

Prevalence Index = B/A = 3.81

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- ____ Dominance test is >50%
- ____ Prevalence index is ≤3.0*
- ____ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL **Sampling Point:** WA-u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

No soil samples taken because sample point was along a roadside where there may be buried utilities present. Non-hydric soils assumed based on observed vegetation and hydro. Possible past fill present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Swamp Lake Delineation | City/County: Sand Creek Twnshp | Sampling Date: 5/9/23
Applicant/Owner: PLSLWD | State: Minnesota | Sampling Point: SPA
Investigator(s): Kathryn Keller-Miller and Mia Bauer | Section, Township, Range: T114N R23W S13
Landform (hillslope, terrace, etc.): Depression/Swale | Local relief (concave, convex, none): Concave
Slope (%): _1 | Lat: 44.675548 | Long: -93.536114 | Datum: NAD 83
Soil Map Unit Name: Klossner muck, 0 to 1 percent slopes | NWI Classification: None
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances"
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	N		
Hydric soil present?	N	**Is the sampled area within a wetland?**	N
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	Upland

Remarks: (Explain alternative procedures here or in a separate report.)

Precipitation was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Staus
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15)			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5)			
1 *Bromus inermis*	70	Y	FACU
2 *Taraxacum officinale*	10	N	FACU
3 *Trifolium pratense*	5	N	FACU
4			
5			
6			
7			
8			
9			
10			
	85	= Total Cover	

Woody vine stratum (Plot size: 30)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	85	x 4 =	340	
UPL species	0	x 5 =	0	
Column totals	85	(A)	340	(B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- ____ Dominance test is >50%
- ____ Prevalence index is ≤3.0*
- ____ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL **Sampling Point:** SPA

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-7	10YR2N	100					Silty clay loam	
7-15	10YR2/1	100					Silty clay loam	
15-24	10YR2/1	90	7.5YR 4/6	10			Silty clay	

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes	X	No		Depth (inches):	19
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	16

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Area is being effectively drained, likely with tile.

Remarks:

Upland drainage swale.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Swamp Lake Delineation | City/County: Sand Creek Twnshp | Sampling Date: 5/9/23
Applicant/Owner: PLSLWD | State: Minnesota | Sampling Point: SPB
Investigator(s): Kathryn Keller-Miller and Mia Bauer | Section, Township, Range: T114N R23W S13
Landform (hillslope, terrace, etc.): Slight Depression | Local relief (concave, convex, none): Convave
Slope (%): _1 | Lat: 44.674433 | Long: -93.533945 | Datum: NAD 83
Soil Map Unit Name: Glencoe silty clay loam, 0 to 1 percent slopes | NWI Classification: None
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y
Hydric soil present?	N
Indicators of wetland hydrology present?	Y

Is the sampled area within a wetland? N
If yes, optional wetland site ID: Upland

Remarks: (Explain alternative procedures here or in a separate report.)

Precipitation was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Staus
1			
2			
3			
4			
5			
	0 = Total Cover		

Sapling/Shrub stratum (Plot size: 15)			
1			
2			
3			
4			
5			
	0 = Total Cover		

Herb stratum (Plot size: 5)			
1 *Phalaris arundinacea*	97	Y	FACW
2 *Ambrosia trifida*	3	N	FAC
3			
4			
5			
6			
7			
8			
9			
10			
	100 = Total Cover		

Woody vine stratum (Plot size: 30)			
1			
2			
	0 = Total Cover		

Dominance Test Worksheet
Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet
Total % Cover of:

OBL species	0	x 1 =	0
FACW species	97	x 2 =	194
FAC species	3	x 3 =	9
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	100 (A)		203 (B)

Prevalence Index = B/A = 2.03

Hydrophytic Vegetation Indicators:
- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL **Sampling Point:** SPB

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-14	10YR2N	100					Silty clay loam	
14-32	10YR2/1	100					Silty clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes	X	No		Depth (inches):	22
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	20

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix C Site Photographs

Photo Log: 227705785: PLSLWD Swamp Lake IESF - May 9, 2023

Stantec

Photo 1: Wetland A (WA)

Photo Taken Facing: West

Photo Description: Photo of Wetland A taken from the west side of Redwing Avenue. Type 3 wetland with reed canary grass and narrow-leaved cattails (Type 2 fringe not visible). Swamp Lake is adjacent further west.

Photo 2: WA

Photo Taken Facing: North

Photo Description: Taken from the same location as Photo 1 but looking north towards the adjacent upland. Type 3 wetland with Type 2 fringe visible to the east.

Photo 3: Sample Point A (SPA) - Upland

Photo Taken Facing: South

Photo Description: Upland drainage swale effectively drained by tile located between cropland and Stream A (SA). Smooth brome was dominant.

Photo Log: 227705785: PLSLWD Swamp Lake IESF - May 9, 2023

Photo 4: Sample Point B (SPB) - Upland

Direction Photo is Taken: Northwest

Photo Description: Upland area with a patch of dominant reed canary grass and a slight depression. Soils were determined to be non-hydric.

Photo 5: Stream A (SA)

Direction Photo is Taken: East

Photo Description: Perennial stream running the length of the Study Area. Tile outlets were located at multiple locations along the length of the steam.

Photo 6: Stream B (SB)

Direction Photo is Taken: South

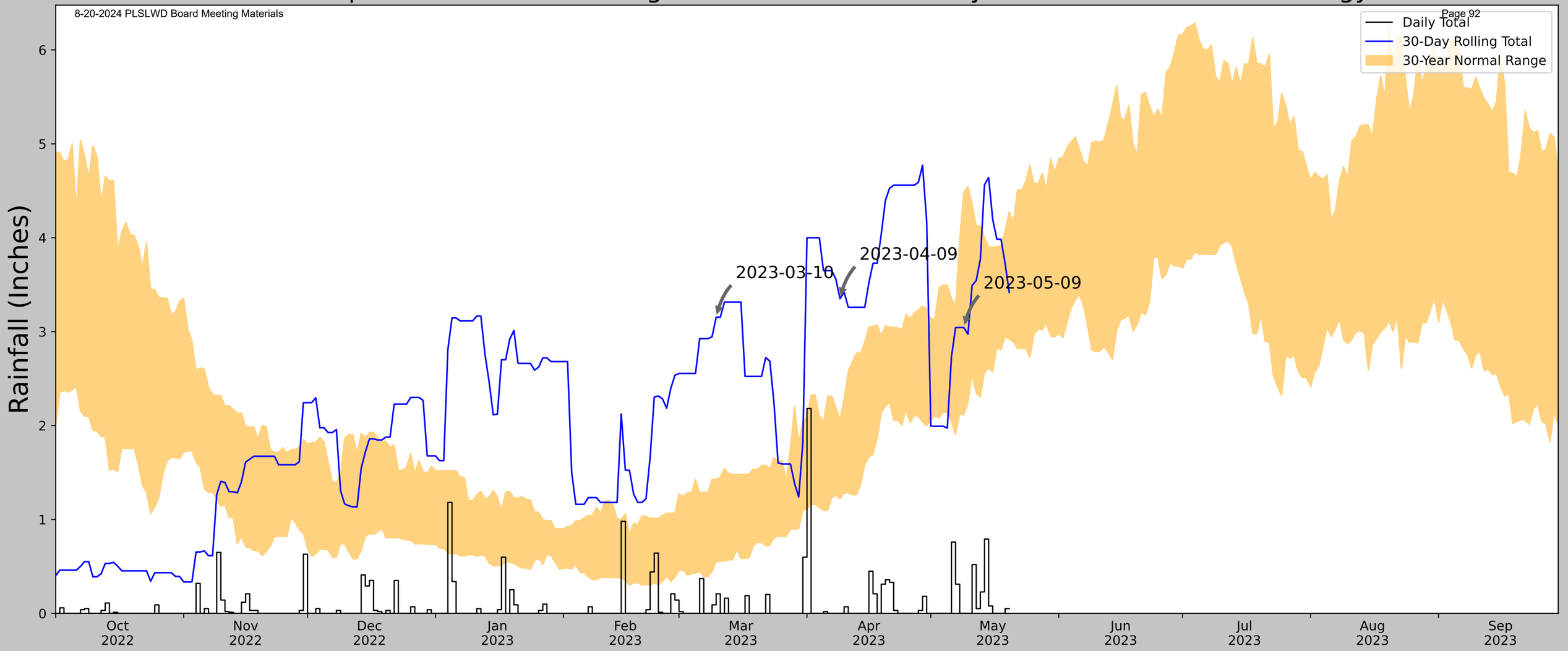
Photo Description: Ephemeral stream located just west of Redwing Avenue. SB connects to SA further south near WA.

Photo Log: 227705785: PLSLWD Swamp Lake IESF - May 9, 2023

	**Photo 7: SA Junction** Direction Photo is Taken: East Photo Description: Meeting point of SA with SB where SB is located to the north just out of view. The pictured culvert brings SA across Redwing Avenue to the large eastern portion of the Study Area.

Appendix D Antecedent Precipitation

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.675240052, -93.536427110
Observation Date	2023-05-09
Elevation (ft)	942.533
Drought Index (PDSI)	Moderate wetness (2023-04)
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-05-09	2.115748	4.489764	3.043307	Normal	2	3	6
2023-04-09	1.218504	2.07126	3.350394	Wet	3	2	6
2023-03-10	0.552362	1.426378	3.153543	Wet	3	1	3
Result							Wetter than Normal - 15

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
JORDAN 1SSW	44.65, -93.6356	899.934	5.176	42.599	2.55	10227	90
JORDAN 4.2 SSE	44.6081, -93.6041	930.118	3.283	30.184	1.576	10	0
JORDAN 2.3 NNE	44.6942, -93.6127	741.142	3.255	158.792	1.982	53	0
CARVER 0.7 W	44.7573, -93.6416	847.113	7.42	52.821	3.731	18	0
BELLE PLAINE 1.9 WSW	44.6075, -93.7991	873.032	8.559	26.902	4.082	1	0
CARVER 1.1 NW	44.7677, -93.6469	962.927	8.151	62.993	4.181	2	0
PRIOR LAKE 2.0 W	44.7125, -93.4636	959.974	9.489	60.04	4.84	9	0
CHASKA 2NW	44.8131, -93.6311	922.9	11.271	22.966	5.331	885	0
CHASKA	44.8, -93.5833	720.144	10.677	179.79	6.724	93	0
MINNEAPOLIS FLYING CLOUD AP	44.8322, -93.4706	904.856	14.968	4.922	6.809	54	0
CHANHASSEN WSFO	44.8497, -93.5644	945.866	14.233	45.932	7.059	1	0

PLSLWD Board Staff Report
August 6, 2024

Subject	Capital Improvement Project: Ferric Chloride Site Improvements
Board Meeting Date	August 20, 2024 **Item No:** Public Hearing
Prepared By	Emily Dick
Attachments	a) May 21, 2024, Scope of Services: Ferric Chloric Site Improvements
Proposed Action	None.

Background

The District's Ferric Chloride Treatment System is an essential part of the District's efforts to reduce phosphorus reaching Spring Lake, and downstream Prior Lake. The District contracted EOR to conduct the Ferric Chloride System Assessment in 2023 in order to recommend system updates, equipment lifetimes, and optimization of the system.

The Board reviewed the lifetime assessment and recommended improvements to the system throughout the end of 2023 and into 2024. Several components of the system had reached, or are near reaching their expected useful lifetimes. At the March 19, 2024, Board meeting, the Board approved retaining a consultant to move towards final design and implementation of the following system enhancements recommended by staff:

Complete Necessary Building Upgrades
- Install Garage Door (~$18,480)
- Seal rodent access points and old PVC drain in containment area (~$600)

Driveway Improvements (~$30,840)
- Driveway needs to be reinforced to avoid damage from deliveries.
- Significant costs can be saved by utilizing the existing easement and drive pattern.

Replace Tank with 3,150 gallon double-walled tank (~$42,480)
- Tank is aged and does not have a compatible lid.
- A single tank provides streamlined management with fewer components to replace and maintain.
- Replacement requires the design and installation of a garage door opening.

Replace other aged parts:
- Pump and chemical feed tubing system (valves, gauges, pressure switch) (~$16,320- requires design)

Update safety equipment:
- Personal protective equipment and appropriate storage (~$2,520)
- Heated, insulated eye wash (~$2,400)

In order to continue to safely operate the Ferric Chloride system site improvements are necessary. The District 2024 budget includes $268,000 for Ferric Chloride system and site improvements. At the May 21, 2024, Board meeting, the Board approved a Scope of Services for EOR to conduct the engineering, bid and construction administration required for the site improvements.

Discussion

Ferric Chloride system and site improvements are generally considered maintenance. However, state statute considers replacements at the end of an expected project lifetime to be “capital improvements.” Minnesota Statute 103B.251 Subd. 4 requires that Watershed Districts hold and notice for a public hearing for any capital improvement project. Notice of this public hearing was published in the Star Tribune newspaper on July 29 and August 5, 2024. Staff shall present a brief overview of the project and respond to any questions brought forward in public comment.

PRIOR LAKE SPRING LAKE WATERSHED DISTRICT

EOR water ecology community

SCOPE OF SERVICES

FECL3 SITE IMPROVEMENTS

PLSLWD	
CLASS:	611 – Hwy 13 Wetland, FeCl System & Desilt Pond
PROJECT:	Ferric Chloride Site Improvements

EOR			
JOB:	00758-0179		
PHASE:	N/A	TASK:	N/A

START DATE: June 1, 2024

END DATE: May 31, 2025

TOTAL PROJECT BUDGET: $39,400

OVERVIEW OF PROJECT SCOPE: This project involves supplementary data collection, design, plans and specifications, permitting, bidding, and construction administration for infrastructure improvements to the existing ferric chloride dosing station and access drive. This scope encompasses all elements of the design process to ensure the successful execution of the project including all system updates recommended by District Staff for engineering services in its March 19, 2024, staff report to the Board.

PROJECT TEAM

PLSLWD	
PROJECT LEAD:	Emily Dick, District Project Manager
OTHER STAFF:	Jeff Anderson, Water Resources Coordinator
EOR	
PROJECT LEAD (HRS):	Kyle Crawford (62)
OTHER STAFF (HRS):	Brett Emmons (3), Carl Almer (9), Anne Wilkinson (7), Kajol Annaduzzaman (17), Ryan Fleming (7), Ellen Kimlinger (52), and John Sarafolean (41), Subconsultant – Adib Amini, Purpose Associates (10)

SUMMARY OF TASKS

TASK 1: Engineering, Design and Permitting	
SUMMARY:	In this phase, any data gaps or needs will be addressed. Preliminary and final design drawings will be prepared for various components such as the building modification, driveway improvements, pump and chemical feed tubing system, one double wall tank, and disposal of the existing tank and obtuberances. The initial construction cost estimate will be revisited and refined with preliminary plans and final plans. Specifications are also to be drafted to outline requirements and standards for the proposed improvements. Permitting assumes the building modification will warrant a Scott County permit, and MPCA will be informed, but a permit update is not anticipated only for replacement of aging equipment. Road authority permits are only anticipated to be simple grading and/or driveway permits. The task includes an allowance for involvement of a structural engineer for the building modifications.

DELIVERABLES:	1. Preliminary and final design drawings for the driveway, tank specifications, building modification, containment wall modification, door details, and other relevant components. 2. Preliminary and final engineers estimate of probable cost. 3. Agency coordination notes, permit application(s) and application support materials. 4. Specifications outlining the requirements and standards for the proposed improvements, facilitating the implementation phase of the project.
TIMELINE:	June 1 to August 1
ESTIMATED COSTS:	$22,800
TASK 2: Bidding Administration	
SUMMARY:	Tasks involve preparing and issuing a Request for Quote (RFQ) package, reviewing received quotes, and managing the project until completion. This includes compiling project details, ensuring clarity in the RFQ package, and recommending a contractor for award consideration.
DELIVERABLES:	1. Request for Quote (RFQ) Package including project details, specifications, and bid item SEQ (statement of quantities). 2. A memo for consideration of award summarizes the review of received quotes, recommends a contractor for award, and includes details pricing and timelines.
TIMELINE:	August 1 to October 1
ESTIMATED COSTS:	$6,100
TASK 3: Construction Administration	
SUMMARY:	This task involves assisting the District in executing contract(s) with the awarded contractor, issuing a Notice(s) to Proceed, reviewing material submittals for compliance with project specifications, pre-construction meeting, processing of pay requests, closeout inspection, punch-list, and project closeout materials. Cost assumes 32 hours of onsite construction oversight.
DELIVERABLES:	1. Executed contract(s) between the District and the awarded contractor(s). 2. Notice(s) to Proceed issued to the contractor, officially authorizing the start of the project. 3. Construction observation reports (e.g., erosion and sediment control inspection forms)
TIMELINE:	October 1 to May 31
ESTIMATED COSTS:	$10,500

ESTIMATED COST SUMMARY

DESCRIPTION		HOURS	ESTIMATED COST
TASK 1:	Engineering, Design and Permitting	111	$22,800
TASK 2:	Bidding Administration	30	$6,100
TASK 3:	Construction Administration	67	$10,500
EXPENSES:	Mileage Equipment rental	****Included in the above estimated costs****	
		TOTAL	**$39,400**

NOTE: Actual costs may differ from the estimated task costs, but the project must not exceed the TOTAL.

ASSUMPTIONS: The estimated cost summary for the execution of the tasks in this Scope of Services is based upon the following assumptions:

1) Scope is inclusive of structural engineering consultation for building modifications, with an allowance of $5,000.
2) Existing concrete containment wall system will be modified. Three of the four containment walls would remain in place and one side would be fully removed for installation of the tank. If the District would like to have a removable containment wall at the opening, this would include additional scope and cost.
3) Permitting and Construction Administration costs that exceed the budgeted amounts due to factors outside of our control (e.g., multiple permitting requests, delayed timelines controlled by contractor) may warrant additional engineering costs, and will be billed hourly, with up front communication with District staff.

SIGNATURES:

The services described in this Scope of Services are being provided in accordance with the Master Services Consulting Agreement between PLSLWD and EOR dated January 17, 2024. Any changes to the project team, tasks, deliverables, timeline, or total cost will require a signed amendment/update to this Scope of Services.

Prior Lake-Spring Lake Watershed District		Emmons & Olivier Resources, Inc.	
Signature:	Joni Giese	Signature:	
Name:	Joni Giese	Name:	Carl K. Almer
Title:	District Administrator	Title:	Water Resources Lead
Date:	05-28-2024	Date:	May 15, 2024

Signature Certificate

Reference number: 58RAY-3YLNR-SE9LF-Q5YDL

Signer	Timestamp	Signature
Joni Giese Email: jgiese@plslwd.org		Joni Giese
Sent:	28 May 2024 22:39:55 UTC	
Signed:	28 May 2024 22:39:55 UTC	

IP address: 156.99.83.141
Location: Prior Lake, United States

Document completed by all parties on:
28 May 2024 22:39:55 UTC

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AUGUST 2024 PROGRAMS AND PROJECTS UPDATE

PROGRAM OR PROJECT	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
Upper Watershed Projects **Buck Stream Stabilization, Spring West IESF, MB CD-13 IESF, Swamp IESF, Fish Lake Mgmt Plan, Sutton IESF, Swamp IESF, Buck Chemical Treatment, Potential Flood Storage Projects** *Project Lead: Emily*	**Buck Stream Stabilization** • Completed contract signing with Smith Partners, landowners and SWCD. • Obtained permits and coordinated necessary permit follow-up. **Spring Lake West IESF** • Planned monitoring after outlet replacement. Waiting for lower waters in order to take distinct water samples. **MB CD-13 IESF** • Attempted to contact landowner. **Swamp IESF** • Confirmed WBIF allotments. • Submitted WBIF application. • Submitted P+P grant application. • Drafted consultant scope of services for Board approval. **Fish Lake Management Plan (FLMP)** • Coordinated with SWCD to scope 200 St Pond improvements. • Held workshop as part of shoreline restoration campaign. • Submitted application for WBIF funds to FLMP projects. **Potential Flood Storage Projects** • SWCD planning surveying for Project 10 in fall.	**Buck Stream Stabilization** • Hold preconstruction meeting, review contractor submissions, and issue notice to proceed. • Record landowner agreements. • Complete construction. **Spring Lake West IESF** • Monitor two rain events. • Assess ideal and feasible IESF or BMP for implementation. **MB CD-13 IESF** • Understand landowner willingness to proceed in investigation. **Swamp IESF** • Obtain grant funds. • Approve Scope of Services for project implementation. • Sign WBIF contract. **Fish Lake Management Plan** • Understand landowner willingness to develop implementation steps. • Obtain grant funds. • Meet with landowners. • Develop budget and scope for feasible projects/studies. • Draft Request for Proposals for Lakeridge Stormwater study. **Potential Flood Storage Projects** • Conduct survey on Project 10 in fall.
Carp Management ***Rough Fish Management (Class 611)*** *Project Lead: Jeff*	• Installed PIT station at the inlet of Pike Lake. • Removal effort at daylight pond • Continued recapture study on Upper Prior Lake. • Performed PIT station maintenance. • Tracked radio tagged carp on Spring and Upper Prior Lakes. • 2025 planning discussion with WSB.	• Collaborate with SMSC on carp management. • Continue mark and recapture study on Upper Prior Lake. • Continue removal efforts on Spring Lake.

AUGUST 2024 PROGRAMS AND PROJECTS UPDATE

PROGRAM OR PROJECT	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
Ferric Chloride System Operations *Project Lead: Jeff and Emily*	• Continue weekly sampling routine. • Original dosing pump died, replaced with newer recommended pump identified in System Assessment O&M. New pump needed warranty work shortly after replacement. Programmed pump to work with level sensor. • Installed new tank level sensor that is integrated with other newer electronic equipment. • Worked with EOR on desilt outlet work orders, as well as a Request for Quotes for feedline locating. • Lots of aquatic vegetation is getting caught on FeCl carp barrier requiring extra maintenance needs. • Reviewed 30% design for FeCl site improvements and noticed public hearing for the intent of construction.	• Continue to review and finalize elements of the system assessment reports. • Review further design refinements and proceed with preparation of RFQ for construction of FeCl site improvements. • Review 50% design for FeCl site improvements
Farmer-Led Council *Project Lead: Emily*	• Continued coordination with Scott SWCD. • Planned August 27 FLC meeting.	• Continue to support and review FLC projects. • Hold August 27 FLC Meeting.
Cost Share Incentives *Project Lead: Emily*	• Provided feedback on potential cost share projects. • Coordinated on Fish Lake shoreline restoration focus area with extra Fish Lake project funds.	• Review cost share applications with Scott SWCD as needed. • Present non-traditional cost share project types for Board approval as applicable.
Sutton Lake Outlet and Lake Management Plan *Project Lead: Emily*	**Lake Management Plan** • None.	**Lake Management Plan** • Plan landowner communications. • Organize drone in fall.
Website and Media *Project Lead: Danielle*	**Social Media** • Continue updating Facebook and Instagram: Recap of Watershed Week, City Hall flooding notice, Starry Trek advertising and recap • Respond to comments and messages as needed **Website** • Update website as needed **Articles** • Review SCENE articles before publication	**Social Media** • Continue updating Facebook and Instagram with relevant topics • Respond to comments and messages as needed **Website** • Update website as needed

AUGUST 2024 PROGRAMS AND PROJECTS UPDATE

PROGRAM OR PROJECT	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
Citizen Advisory Committee *Project Lead: Danielle*	• July CAC Meeting	• Coordinate with CAC members on volunteer opportunities
Education Program *Project Lead: Danielle*	• See Website and Media section. • Shared Education Materials for Fish Lake Nite to Unite • Began planning Fall Events • Host training for Starry Trek • Coordinated with CAMP volunteers	• Plan Fall buckthorn removal and buckthorn wreathmaking events • Prep for and table at Fall Community Fest
Monitoring Program *Project Lead: Jeff and Zach*	• Data processing in WISKI. • Conducted bi-weekly stream and Swamp Lake monitoring regime. • Reviewed current year dissolved oxygen data for Spring Lake in relation to recent fish kill. • Surveying submerged aquatic vegetation (biobase). Completed Spring, Fish, and Pike Lakes.	• Finalize mapping report on historic monitoring site locations and analysis. • Continue QA/QC in WISKI. • Continue uploading historic data from WQDB to WISKI. • Continue collecting stream flow measurements. • Finish summer Biobase surveys.
Aquatic Vegetation Management and Surveys *Project Lead: Jeff*	• Shared historic vegetation survey data MCWD/UMN who are studying carp management responses. • Communicated with SLA on decision to not treat for EWM this year.	• Request grant reimbursement funds.
AIS *Project Lead: Jeff and Zach*	• Coordination between Waterfront Restoration and DNR on inspection coverage, trainings, and violations. • Picked up CD3 station.	• Continue coordinating with DNR on CD3 station installation agreement. • Coordinate with DNR and Waterfront Restorations on boat inspection coverage.
Rules Revisions *Project Lead: Joni*	• No activity this month.	• Finalize City of Prior Lake equivalency MOA. • Finalize City of Savage interim equivalency agreement. • Continue working with Scott County to finalize equivalency MOA and review Scott County rule updates to confirm equivalency.

AUGUST 2024 PROGRAMS AND PROJECTS UPDATE

PROGRAM OR PROJECT	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS

BMPs & Easements
Project Lead: Joni
	• Held monthly coordination meeting with SWCD.	• Wrap up work on outstanding issues associated with:
		  ○ Development Agreement and Conservation Easement establishment process and document templates.
		  ○ Implement first encroachment agreements.
		• Work to resolve outstanding easement violations.

Permitting *Project Lead: Joni*	• Provided permit review comments to LGU partner on five projects. • Performed construction inspections on Permit 23.02. • Worked to close old permits.	• Work with City of Prior to get all conditions met on Permit 24.01 and issue permit. • Continue construction inspections. • Continue to close out old permits. • Continue to provide permit review comments to LGU partners.
Planning Activities *Project Lead: Joni and Emily*	• Provided review comments to Scott County Multi-Hazard Mitigation Plan Update. • Provided formal comments to the proposed Scott County Comprehensive Plan amendment. • Scheduled meeting with City of Prior Lake regarding potential partnerships associated with Parks Plan.	• Print Water Resources Management Plan amendment and circulate to requested parties.
Outlet Channel Projects and Administration *Project Lead: Emily/Jeff*	• Closed low-flow gate. • Conducted outlet channel inspections. • Performed Purple loosestrife management. • Monitored water level conditions and precipitation outlook. • Cleared vegetation from grates. • Discussed outlet structure operations. • Refined 2025 draft budget. • Prepared for and hosted August Project Cooperator meeting.	• Continue channel inspections. • Pipelining construction expected to occur in winter 2024/2025 if MPCA funding awarded.
General Administration *Project Lead: Joni*	• Facilitated office move to Prior Lake Fire Station No. 2. • Purchased new district truck and coordinated insurance modifications associated with old/new truck.	• Continue to participate and learn more about potential Scott County coordinated benefits plan. • Update remainder of personnel policy. • Address outstanding encroachment issue related to a District owned parcel.

PLSLWD Board Staff Report
August 6, 2024

Subject |	Authorization to Proceed with Ferric Chloride Feedline Locating Request for Quotes and Contracting
Board Meeting Date |	August 20, 2024 **Item No:** 4.2
Prepared By |	Emily Dick
Attachments |	None
Proposed Action |	Motion to authorize staff to issue a Request for Quotes and enter into a Contract with successful quote related to the Ferric Chloride Feedline Locating, for a fee not to exceed of $15,000.

Background

The Prior Lake-Spring Lake Watershed District owns and operates a Ferric Chloride surface water quality treatment system which includes a wetland, ferric chloride holding tank, pump, underground feedline, and a desiltation pond. The ferric chloride system is essential to the District's efforts to reduce Phosphorus loading to Spring Lake. The District has pursued a system assessment and is embarking on recommended improvements to continue safe operation. One finding of the system assessment is that the District does not have accurate documentation of the location of the underground chemical feedline.

Discussion

The District has approved a separate work order which will implement the necessary improvements to the access drive, building, and equipment components within the building. District Staff is proposing that a second contract be pursued with a utility locator to document the feedline location in coordination with building construction.

The feedline runs from the ferric chloride holding tank shed north approximately 900-feet to the desiltation pond injection-point. Landcover along the approximate alignment of the feedline is predominantly woods and un-mowed grasses, but the feedline also crosses under MN State Highway No. 13. The feedline is presumed to be housed in a 2-inch PVC containment casing that was directionally drilled and is expected to have a 4.5-foot minimum cover except in MNDOT R/W where 6-foot minimum cover is expected. There is no known tracer-wire in the containment casing. Although it will require consultation with utility locators to establish the most appropriate and feasible methods of location; ground penetrating radar, or feeding a tracer wire are possible methods. It is expected that the feedline could be located (alignment and depth) and documented at a cost not-to-exceed $15,000.

Staff recommends authorizing the request for quotes and contracting for this work in order to keep in timeline with expected site improvement construction, and before ground freeze.

Recommendation

Motion to authorize staff to issue a Request for Quotes and enter into a Contract with successful quote related to the Ferric Chloride Feedline Locating, for a fee not to exceed of $15,000.

Budget Impact

The cost associated with proposed activity is covered under budget item 611-Hwy 13 Wetland, FeCl System and Desilt Pond.

PLSLWD Board Staff Report
August 15, 2024

Subject |	EOR Scope of Services: PLOC Low Flow Gate Standard Operating Procedures
Board Meeting Date |	August 15, 2024 **Item No:** 4.3
Prepared By |	Joni Giese, District Administrator
Attachments |	a) EOR Memorandum: PLOC Low Gate Benefit Analysis & Operational Guidance Task 1 Findings b) EOR Scope of Services: PLOC Low Flow Gate Standard Operating Procedures
Proposed Action |	Motion to approve the EOR Scope of Services to prepare the PLOC Low Flow Gate Standard Operating Procedures.

Background

PLSLWD is responsible for operating the low flow gate of the Prior Lake Outlet Structure under specific zone conditions as identified in the Prior Lake Outlet Control Structure Management Policy and Operating Procedures (MPOP). At the February 15, 2024, PLOC Cooperators meeting, Project Cooperators approved Task 1 of the PLOC Low Gate Analysis & Operation Guidelines Scope of Work, the purpose of which was to estimate the maximum theoretical benefit (in terms of reduction to Prior Lake peak water level and flood duration) of opening the low gate in Discharge Zone 2 during a wet-weather period. At the May 30, 2024, PLOC Cooperators meeting, results of Task 1 were shared with the Project Cooperators (see attached). Authorization was not provided to proceed with Tasks 2 or 3.

Discussion

Per Article 5.1 of the Memorandum of Agreement for Use, Operation, and maintenance of the Prior Lake Outlet Channel and Outlet Structure, all operation and maintenance costs and emergency maintenance costs related to the outlet structure are the sole and exclusive responsibility of the Watershed District. Staff believes there is benefit in preparing a Low Flow Gate Operational Guidance document and is bringing forward a scope of work for its creation to the PLSLWD Board of Managers for approval. The document is envisioned to provide guidance regarding when to open the low flow gate for various rainfall amounts/soil conditions, along with guidance regarding when to pre-emptively open the low flow gate in the spring based on snowpack conditions.

Recommendation

Motion to approve the EOR Scope of Services to prepare the PLOC Low Flow Gate Standard Operating Procedures.

Budget Impact

This project would be funded with budget reserves.

memo

Project Name |	PLOC Low Gate Benefit Analysis & Operational Guidance	**Date** |	5/23/2024
To |	Joni Giese, District Administrator		
Cc |	Jeff Anderson, Water Resources Coordinator		
From |	Carl Almer, Bill Yu, & Mike Talbot		
Regarding |	Task 1 Findings		

The purpose of this memorandum is to illustrate the findings of Task 1 of the PLOC Low Gate Benefit Analysis & Operational Guidance project. This analysis reveals the potential benefits of opening the low gate during wet-weather periods of Discharge Zone 2 of the MNDNR-approved Prior Lake Outlet Control Structure Management Policy and Operating Procedures (MPOP) (see Figure 1).

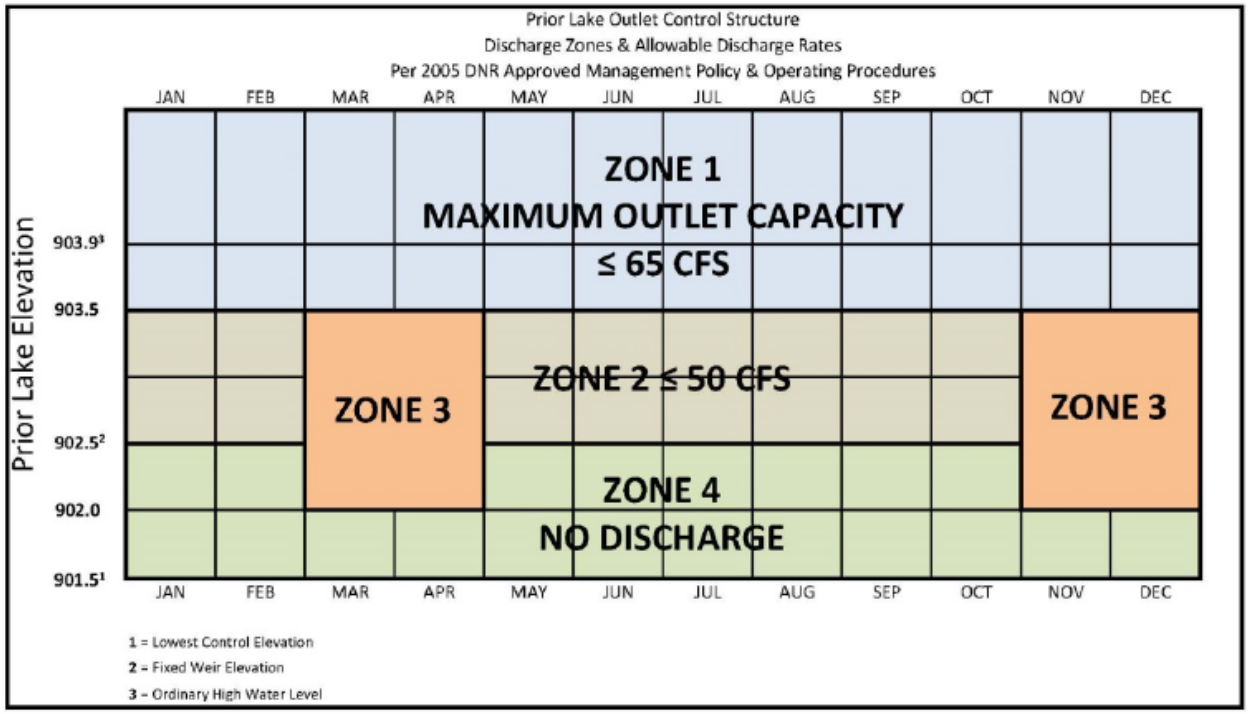


Figure 1. Prior Lake Outlet Channel Discharge Zones.

Purpose and Overview

The Cooperators approved Task 1 of this analysis on February 15, 2024, the purpose of which was to estimate the maximum theoretical benefit (in terms of reduction to Prior Lake peak water level and flood duration) of opening the low gate in Discharge Zone 2 during a wet-weather period. In order to estimate this maximum benefit, the District's PCSWMM model was modified to simulate opening of the low gate preceding the 2014 flooding event. In addition to estimating this maximum benefit, the PCSWMM model was further modified to simulate several hypothetical scenarios of opening the low gate over a range of rainfall forecasts and a range of Prior Lake starting water elevations to give a wider picture of how Discharge Zone 2 low gate operation could reduce Prior Lake peak water levels.

Zone 2 Low Gate Operation Maximum Benefit

The operating procedures for Discharge Zone 2, which is May 1 to October 31 at lake levels between 902.5 and 903.5, aims to minimize the operation of the low gate. However, if there is an immediate threat of Prior Lake rising above 904.0 opening of the low gate is allowed under certain conditions, as stated in MPOP Section III – Operating Procedures (see bold text):

> *It is the intent of the District to operate the low-flow gate minimally during Zone 2 discharge. The low-flow gate was not designed to manage high flows and is not to be expected to manage high water levels. However, as can be seen in Attachment 2, some additional discharge capacity can be realized with the low-flow gate open between the lake elevations of 902.5 and 903.5.* ***Therefore, the District may open the low-flow gate if the Spring Lake discharge rate (minus estimated infiltration and evaporation) exceeds the Outlet Structure discharge rate with the low-flow gate closed and there is an immediate threat of Prior Lake rising above 904.0. If the low-flow gate is opened within this zone, it will again be closed if: a) the lake elevation drops to 902.5, or b) the Spring Lake discharge rate (minus estimated infiltration and evaporation) drops below the Outlet Structure discharge rate with the low-flow gate closed.*** *The low-flow gate will not be opened below the lake elevation of 902.5, except for Zone 3 discharge.*

In order to estimate this theoretical maximum benefit, the District's calibrated PCSWMM model developed for the 2016 Prior Lake Stormwater Management & Flood Mitigation Study (Barr, 2016) was selected as an appropriate base model since the 2014 flood event is representative of an extreme event (roughly equivalent to a 100-year, 30-day event) and the low gate was not opened during the 2014 flood event so model simulation results can be compared to the actual 2014 peak water elevation. It should be noted that the 2004 MPOP in effect in 2014 did not provide operating procedures for the low gate.

The continuous-simulation PCSWMM model was first modified to incorporate the current rating curves for the Prior Lake Outlet Structure developed based on monitoring data (with and without the low gate open). The model was then modified to include operational controls for Discharge Zone 2 in order to simulate the effect of opening the low gate and its impact on (reducing) peak water levels.

The modified model was then run to simulate opening the low gate at the first occurrence of Prior Lake reaching 902.5 during the 2014 flood event. As shown in Figure 2, had the low gate been opened at a lake level of 902.5, which occurred on April 28th, the 2014 peak elevation of Prior Lake would have been reduced from 906.1 (measured) to 905.9 (modeled). Additionally, the date when lake level reached 904.0 ft could have been delayed by approximately 4-days (from June 15th to June 19th).

These reductions, while seemingly small, warrant context. The peak reduction of 0.2-feet is well within the range of projected benefit of upper watershed storage projects contemplated by the District that have flood reduction benefits ranging from less than 0.1-feet to 0.5-feet at estimated costs ranging from $160,000 to $1,000,000. The 4-day delay to reach 904.0 may also seem minor, but this is the elevation at which primary structures and/or access to homes begin to be impacted. The additional time for implementation of flood response measures could be valuable.

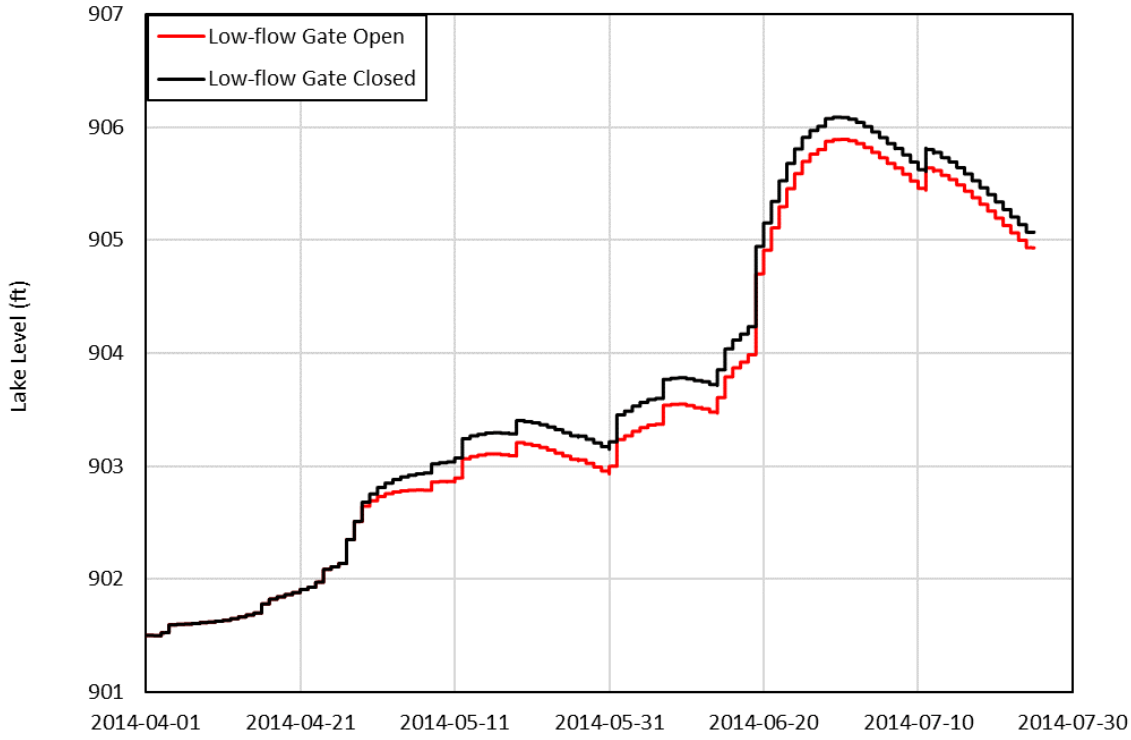


Figure 2. Prior Lake Level Time Series: Low Gate Open and Closed Scenarios for the 2014 Flooding Event

Zone 2 Low Gate Operation Potential Range of Benefit

With the theoretical maximum identified, the next step of Task 1 was to develop a series of PCSWMM model scenarios to assess the effect of opening the low gate (within Discharge Zone 2 operating procedures conditions) for a range of rainfall forecasts and varied initial Prior Lake levels, particularly under wet-weather conditions where upstream lakes and basins are full and watershed soils are saturated, which limits infiltration capacity, thereby converting most rainfall to runoff. This analysis provides further insight into potential guidance to staff in the operation of the low gate, which could enhance decision-making when paired with 7-day rainfall forecasts and current lake conditions and can inform the decision on whether to proceed with Tasks 2 and 3 of this analysis.

For these scenarios, May 31, 2014 was identified as a representative starting condition for wet conditions in the watershed, because there were several minor rainfall events in April and May that saturated soils and filled upstream basins. Based on this date, the PCSWMM Hotstart File function was utilized to initiate 7-day rainfall simulations with initial hydrology and hydraulic settings from the wet-weather period (actual rainfall records of 2014 through May 31st). This approach was employed to generate a representative wet-weather condition. In addition, the Hotstart File was adjusted for additional PCSWMM model runs in order to vary the initial water level of Prior Lake to conduct sensitivity analyses under NOAA Atlas 14, 7-day storm events across various return periods: 1-year, 2-year, 5-year, 10-year, 25-year, 50-year, and 100-year. The rainfall depths used in these scenarios are based on NOAA Atlas 14 Point Precipitation Frequency Estimates, representing different potential 7-day forecast rainfall scenarios.

The results of these model scenarios are summarized in Figure 3. The X-axis (Initial Lake Level) is the level of Prior Lake preceding a 7-day rainfall. The Y-axis (Peak Lake Level) is the predicted peak elevation of Prior Lake in response to the predicted depth of rainfall of a 7-day forecast. In order to estimate the predicted peak lake level given a particular 7-day rainfall forecast, find the current lake level on the X-axis, and draw a vertical line to intersect the solid-colored line matching the predicted 7-day rainfall depth (interpolate as necessary). From this intersection point, draw a horizontal line to the Y-axis. This is the predicted peak lake level assuming no low gate operation (i.e., the low gate remains closed). To predict the peak lake level assuming opening of low gate at a lake elevation of 902.5, repeat this process but instead intersect the dashed-colored line.

The relationship between peak lake level and initial lake level can be divided into four sectors, defined by a predicted peak lake level of 904.0 (the "immediate threat" elevation) and the X-axis 902.5 elevation (lowest elevation of low gate operation in Discharge Zone 2).

In the upper-left sector, the Prior Lake peak lake level exceeds the 904.0 "immediate threat" elevation with a 7-day rainfall forecast rainfall of about 6-inches or more, and the initial water level is below the 902.5 ft minimum operating level for the low gate. For these conditions, monitoring the lake level closely and opening the low gate as soon as the lake reaches 902.5 could be completed to minimize the peak lake level.

In the lower-left and lower-right sectors, the Prior Lake peak lake level would not exceed the 904.0 "immediate threat" elevation with a 7-day rainfall forecast predicting smaller events. Therefore, there would be no justification to operate the low gate. For instance, if the 7-day rainfall forecast is for less than 3.88 inches, the lake would not exceed 904.0 for initial lake elevations less than 903.5. If the 7-day forecast is for less than 4.41 inches, the low gate could only be opened if the current lake level exceeds 903.2 ft.

In the upper-right sector, given a 7-day rainfall forecast with a depth greater than 4.41 inches and a current lake level above 902.5 ft, the low gate could be opened immediately to maximize the potential mitigation benefits of gate operation.

Another observation from this graph it that it would take a 7-day forecasted rainfall depth of approximately 4 inches to 6.4 inches to justify opening the low gate, with an initial lake elevation range between 901.5 and 903.5 as summarized in Table 1.

Table 1. Minimum 7-day Rainfall Depths required for Peak Lake Elevation of 904.0

Initial Lake Elevation	901.5	902.0	902.5	903.0	903.5
7-day Forecast [inches]	6.4	6.0	5.3	4.7	4.0

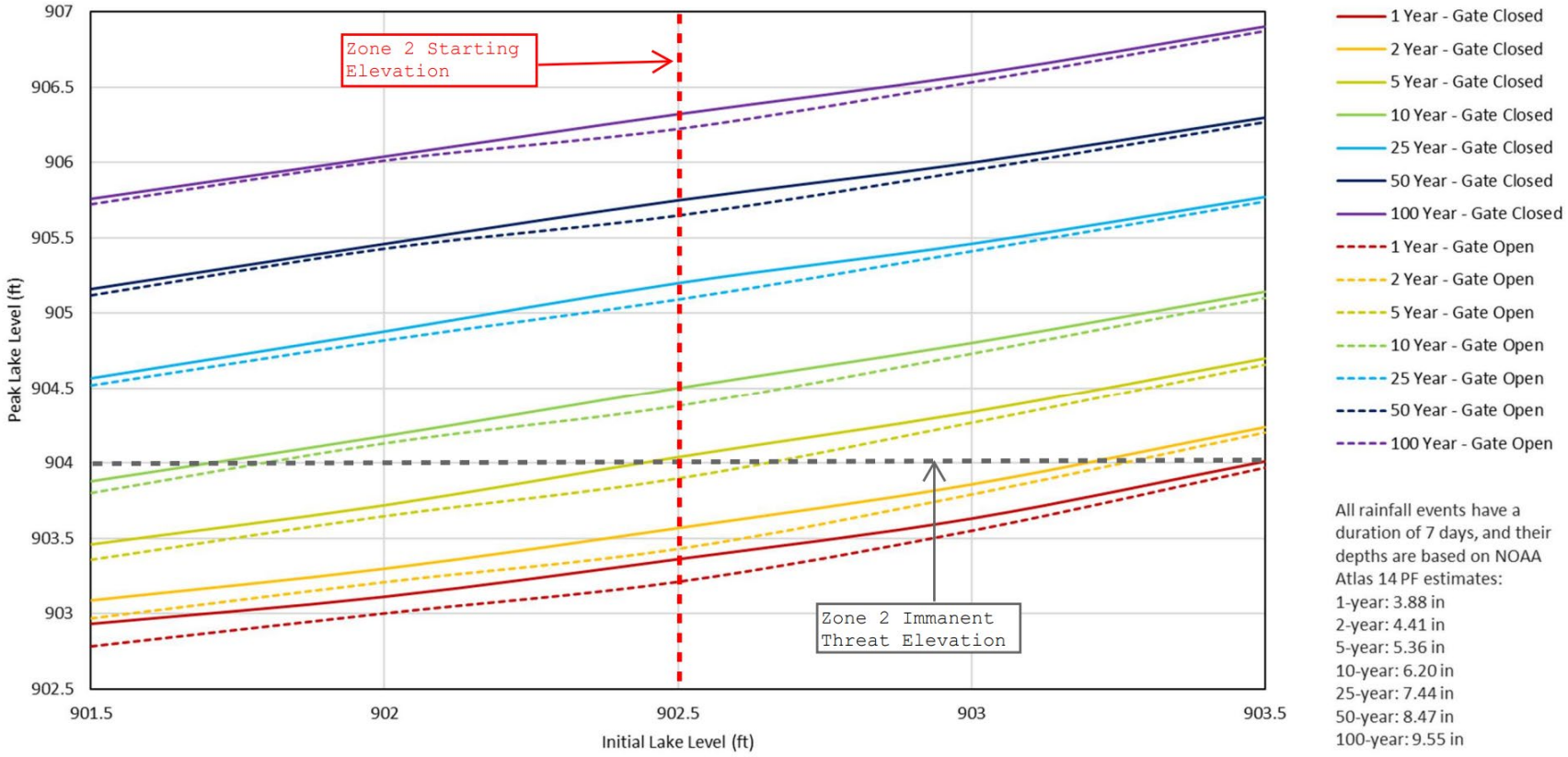


Figure 3. Sensitivity Analysis of Prior Lake Peak Levels under different Initial Water Levels and Atlas 14 Rainfall Events under Wet Soil Conditions

memo

Project Name |	PLOC Low Gate Benefit Analysis & SOPs	**Date** |	8/12/2024
To |	Joni Giese, District Administrator		
Cc |	Jeff Anderson, Water Resources Coordinator		
From |	Carl Almer, Bill Yu, & Mike Talbot		
Regarding |	Revised Scope of Work		

The purpose of this memorandum is to outline a revised scope of services for developing Standard Operating Procedures (SOPs) for operation of the Prior Lake Outlet low gate within the bounds of the MNDNR-approved Management Policy & Operating Procedures (MPOP), last revised March 2, 2023.

Task 1(completed): The PLOC Cooperators previously approved Task 1 of this analysis, the purpose of which was to estimate the maximum benefit of opening the low gate in Discharge Zone 2 during a wet-weather year. This task was completed in May 2024, with findings documented in a technical memorandum prepared by EOR dated May 23, 2024 (attached).

The primary findings of this analysis are that:

1. A peak lake level reduction of 0.2-feet may be realized by opening the low gate in advance of forecasted heavy rainfall during a wet-weather year.
2. It would take a 7-day forecasted rainfall depth of 4.0 to 6.4 inches to justify opening the low gate depending on the initial lake elevation as summarized in Table 1.

Table 1. Minimum 7-day Rainfall Depths required for a Resultant Prior Lake Elevation of 904.0

Initial Lake Elevation	901.5	902.0	902.5	903.0	903.5
7-day Forecast [inches]	6.4	6.0	5.3	4.7	4.0

Revised Task 2: This task has been revised to limit the scope of analysis to replicate Task 1 for an average precipitation year as opposed to a wet-weather year. Like Task 1, the maximum benefit will be reported, and tables and figures will be produced based on PCSWMM model runs an average precipitation year. The estimated cost to complete this task is **$4,750**.

Revised Task 3: This task includes preparation of standard operating procedures (SOPs) for operation of the low gate during Discharge Zones 2 and 3 of the MPOP. Procedures for Zone 2 will be based on the modeling work completed for Tasks 1 and 2. These SOPs will also incorporate snowpack lake level rise forecast calculations for Discharge Zone 3 drawdown. In addition, other best practices, such as requesting that Cooperator public work staff jet frozen culverts, will be memorialized in the SOPs. The estimated cost to complete this task is **$4,250**. This task assumes that EOR will draft the SOPs and respond to one round of District Staff comments.

PLSLWD Board Staff Report
August 13, 2024

Subject |	EOR Scope of Services: Desilt Pond Outlet & High-Flow Bypass Improvement Feasibility Study
Board Meeting Date |	August 20, 2024 **Item No:** 4.4
Prepared By |	Jeff Anderson, Water Resources Coordinator
Attachments |	EOR Scope of Services: Desilt Pond Outlet & High-Flow Bypass Improvement Feasibility Study
Proposed Action |	Motion to approve the EOR Scope of Services for the Desilt Pond Outlet & High-Flow Bypass Improvement Feasibility Study

Background

The ferric chloride (FeCl3) desiltation pond, initiated in 1978 and converted to the primary treatment pond in 2013, is a critical component of the water quality management system designed to reduce sediment deposition and phosphorus from County Ditch 13 into Spring Lake. Enhanced in 1998 with the addition of the Highway 13 Wetland and the FeCl3 Treatment System, the desilt pond functions as a basin for iron-bound phosphorus flocculation. In 2009 the District applied to renew the National Pollutant Discharge Elimination System permit administered by the Minnesota Pollution Control Agency which was approved in 2012. However, the system did not operate in 2011 and 2012 because it did not meet the requirements of the permit as it was exceeding water quality limits in public waters. During the years offline, the District worked on design changes that would meet the new MPCA permit along with options to improve efficiency. Several studies lead to major system modifications in 2013 and 2014 including transfer of FeCl3 approximately 900 feet underground to a new dosing site located in the diversion culvert flowing directly into the desiltation basin. On 2014, EOR developed a scope of service to conduct a retrofit analysis of feasible options at the direction of staff due to concerns from board and staff that the performance of the system was not meeting expectations. The primary concerns were untreated bypass, assessment of tailwater impacts on bypass design, and optimization. No action was taken to assess the feasibility options.

Discussion

Building from the momentum of the 2023 Ferric Chloride System Assessment, District staff has requested EOR to develop a scope of services for a feasibility study assessing performance of the desiltation pond's treatment capacity and infrastructure to allow for greater efficiencies. The current project aims to assess and improve the desiltation pond's performance in its current hydraulic condition. Key objectives include reviewing the pond's treatment capacity, understanding the complex hydrology through modeling, decrease bypass, decrease phosphorus resuspension due to carp activity, and improving monitoring accuracy. This project is also included in the District's 2020-2030 Water Resources Management Plan and involves evaluation of the pond's outlet to enhance flow capacity. The study is projected to take place from September 2024 to March 2025 and be divided into two tasks.

Recommendation

Motion to approve the EOR Scope of Services for the Desilt Pond Outlet & High-Flow Bypass Improvement Feasibility Study.

Budget Impact

The cost associated with proposed activity is $51,000 and is covered under budget item 611-Ferric Chloride System Assessment.

PRIOR LAKE SPRING LAKE WATERSHED DISTRICT

EOR water ecology community

SCOPE OF SERVICES

DESILT POND OUTLET & HIGH FLOW BYPASS IMPROVEMENT FEASIBILITY STUDY

PLSLWD	
CLASS:	611 Highway 13 Wetland, FeCl system & Desilt, O&M
PROJECT:	Desilt Pond Outlet & High-Flow Bypass Improvement Feasibility Study

EOR			
JOB:	00758-XXXX		
PHASE:	N/A	TASK:	N/A

START DATE: 9/1/2024 END DATE: 3/31/2025

TOTAL PROJECT BUDGET: $51,000

OVERVIEW OF PROJECT SCOPE: The Desiltation Pond is one of the earliest PLSLWD projects, constructed in 1978, originally designed to decrease County Ditch 13 sediment deposition into Spring Lake. With excavation of the Highway 13 Wetland and construction of the FeCl3 Treatment System, completed in 1998, the Desiltation Pond was enhanced to serve as the iron-bound phosphorus flocculation basin for the overall treatment system. Since then, the Desiltation Basin has been periodically excavated to restore flocculant storage capacity and two additional low-flow outlet pipes were installed but the basin's primary outlet (grouted riprap) has not been improved.

In 2010, in light of the MPCA concerns and overall cost-benefit questions raised by the District, the Board ordered a study to assess the water quality benefit and cost-effectiveness of the FeCl3 Treatment System (based on past monitoring data and the then, current state of the system). The results of the *Ferric Chloride Treatment System Evaluation* (EOR, October 7, 2010) concluded that operation of the system provided a significant water quality benefit, that the Desiltation Pond needed maintenance, and that a high-flow bypass could be incorporated without significantly decreasing performance if all flows 30 cfs or less continued to pass through the Desiltation Pond. This study also recommended investigating outlet improvements to prevent rough fish (carp) migration to reduce resuspension of floc.

In 2013, the overall FeCl3 Treatment System was modified to address MPCA permit reissuance requirements by installation of an inlet control pipe to the Desiltation Pond, relocation of the FeCl3 injection point to the inlet control pipe, and construction of a high-flow bypass weir to prevent resuspension of accumulated floc by high flows. As-builts completed after these modifications identified construction deficiencies (departures from design). All deficiencies were rectified in 2014 with the exception that the high-flow bypass westerly elevation, built 0.3-feet too low, remained as constructed.

The purpose of this scope of services is to assess the performance of the system in its current hydraulic condition and assess options for modification of the Desiltation Pond outlet and/or high-flow bypass to:

1. decrease bypass of the Desiltation Pond to increase treatment and phosphorus load reduction,
2. decrease resuspension of floc due to carp passage/occupation, and
3. improve the ability to accurately monitor discharge from the Desiltation Pond.

This assessment is included in the District's 2020-2030 Water Resources Management Plan in Section IV.B.2.5 on Page 83 as excerpted below.

> **Desiltation Pond Outlet Improvement**: Develop outlet structure improvement concept plan options to enhance flow capacity and monitoring capability and consider implementation with future maintenance excavation project.

The following sections outline the project team, anticipated tasks, hours, costs, and schedule to advance this feasibility study and provide recommendations for consideration of system improvements.

PROJECT TEAM

PLSLWD	
PROJECT LEAD:	Jeff Anderson, Water Resources Coordinator
OTHER STAFF:	Joni Giese, District Administrator Emily Dick, Water Resources Project Manager
EOR	
PROJECT LEAD:	Carl Almer (50)
OTHER STAFF:	Cecilio Olivier (10), Joey Casteneda (8), Kyle Crawford (18), Ryan Fleming (26), Ellen Kimlinger (20), Paul Nation (70), Bill Yu (120)

SUMMARY OF TASKS

TASK 1: Existing Condition Performance Assessment	
SUMMARY:	Due to the inability to accurately monitor discharge from the Desiltation Pond outlet and high-flow bypass, assessment of performance of the existing FeCl3 Treatment System has assumed that all flow 30-cfs or less, as measured at the Highway 13 weir (Station CD-2), is treated with FeCl3. This assumption is an oversimplification of the system's hydraulics. For instance, flow through a pipe varies with the elevation of water (head). In addition, high water levels on Spring Lake influence the hydraulics of the system (i.e., the relative percent of flow through the Desiltation Pond versus the high-flow bypass can vary based on the tailwater influence of Spring Lake). In order to more precisely assess the existing systems performance, survey data will be collected to model the hydraulic conditions of the built system including the Desiltation Pond outlet cross-section, low-flow outlet pipe inverts and sizes, inlet pipe inverts and overflow berm cross-section, and the high-flow bypass weir cross-section. This information will be used to update the hydraulics of the District's PCSWMM model. In addition, monitored flow data (Station CD-2 from 2015-2024) will be processed to create annual input hydrographs to complete long-term simulations of measured flows. This will allow for accurate calculation of the volume treated versus the volume bypassed. This analysis will also account for tailwater influence when the elevation of Spring Lake is high.

	Based on the results of this modeling, EOR will prepare a technical memorandum summarizing the modeling methods and characterizing the existing system performance (volume treated and P-load reduction). This will form a baseline to compare potential system modifications. Included in this task are routine communications with District staff, one meeting to review findings, and one round of technical memorandum revisions to per District staff input.
DELIVERABLES:	1) Existing conditions basemap 2) Draft and Final technical memo (existing conditions assessment only)
TIMELINE:	September – December, 2024
ESTIMATED COSTS:	$22,200
TASK 2: Outlet Modification Options Analysis	
SUMMARY:	This task includes investigating options to improve system performance, decrease resuspension of floc, and improve the ability to monitor flows. These options will consider alteration of the Desiltation Pond outlet, alteration of the high-flow bypass, and alteration of both structures in combination. Likely modification options include increasing the Desiltation Pond outlet capacity (increased width, lower elevation, alternate construction materials), decreasing the high-flow bypass capacity (increased weir elevation, decreased width, multi-stage design) and various combinations of the aforementioned modifications. These options will be modeled and compared to the treatment performance of existing conditions. Preliminary cost ranges will be estimated for each option and a preferred option will be recommended based on a cost-benefit analysis. Included in this task are routine communications with District staff, one meeting to receive input on potential options before modeling work is completed, and one round of technical memorandum revisions to per District staff input.
DELIVERABLES:	1) 30% Sketch Plan for preferred option 2) SEQ and opinion of probable cost for preferred option 3) Draft and Final technical memo (including options analysis)
TIMELINE:	January – March, 2025
ESTIMATED COSTS:	$28,800

ESTIMATED COST SUMMARY

DESCRIPTION		HOURS/ QUANTITY	ESTIMATED COST
TASK 1:	Existing Condition Performance Assessment	140	$22,200
TASK 2:	Desiltation Pond Outlet & HFB Modification Options Analysis	182	$28,800
EXPENSES:	Equipment rental Mileage Other	****Included in the above estimated costs****	
		TOTAL	**$51,000**

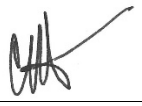
NOTE: Actual costs may differ from the estimated task costs, but the project must not exceed the TOTAL.

ASSUMPTIONS: The estimated cost summary for the execution of the tasks in this Scope of Services is based upon the following assumptions:

1) Outlet modification options analysis will be constrained by avoidance of MNDNR no-rise and FEMA CLOMR/LOMR proceedings and maintaining minimum settling times and a minimum of Desiltation Pond detention time of 4-hours.

SIGNATURES:

The services described in this Scope of Services are being provided in accordance with the Master Services Consulting Agreement between PLSLWD and EOR dated January 17, 2024. Any changes to the project team, tasks, deliverables, timeline, or total cost will require a signed amendment/update to this Scope of Services.

Prior Lake-Spring Lake Watershed District		Emmons & Olivier Resources, Inc.	
Signature:		Signature:	
Name:	Joni Giese	Name:	Carl K. Almer
Title:	District Administrator	Title:	Water Resources Lead
Date:		Date:	8/8/2024

PRIOR LAKE SPRING LAKE WATERSHED DISTRICT
Financial Report - Cash Basis
January 1, 2024 Through July 31, 2024

Reflects bills paid through July 31, 2024

Program Element		2024 Source of Funds					2024 Actual Results		
		2024 Levy	Budget Reserve	Grant Funds/Fees	Budget Adjustment	2024 Budget	July 2024	YTD	YTD % of Budget
	General Fund (Administration)								
	Revenues								
	Property Taxes	$ 252,000	$ -	$ -		$ 252,000	$ -	$ 128,597.09	51%
	Interest	-	-	9,000		9,000	-	4,902	54%
	Total Revenues	**$ 252,000**	**$ -**	**$ 9,000**	**$ -**	**$ 261,000**	**-**	**133,499**	51%
	Expenditures								
	Administrative Salaries and Benefits	$ 145,000	$ -	$ -		$ 145,000	20,541	86,561	60%
	703 · Telephone, Internet & IT Support	7,000	-	9,000		16,000	1,032	7,353	46%
	702 · Rent	27,500	-	-		27,500	1,987	18,133	66%
	706 · Office Supplies	8,000	-	-		8,000	766	2,932	37%
	709 · Insurance and Bonds	13,000	-	-		13,000	-	11,893	91%
	670 · Accounting	33,500	-	-		33,500	2,531	16,520	49%
	671 · Audit	10,500	-	-		10,500	-	10,500	100%
	903 · Fees, Dues, and Subscriptions	1,500	-	-		1,500	-	1,147	76%
	660 · Legal (not for projects)	6,000	-	-		6,000	1,117	3,382	56%
	General Fund (Administration) Expenditures	**$ 252,000**	**$ -**	**$ 9,000**		**$ 261,000**	**27,973**	**158,422**	61%
	Net Change in General Fund	**-**	**-**	**-**	**-**	**-**	**(27,973)**	**(24,923)**	

No assurance is provided on this statement. See selected information.

PRIOR LAKE SPRING LAKE WATERSHED DISTRICT

Financial Report - Cash Basis

January 1, 2024 Through July 31, 2024

Reflects bills paid through July 31, 2024

Program Element		2024 Source of Funds					2024 Actual Results		
		2024 Levy	Budget Reserve	Funds/Fees	Budget Adjustment	2024 Budget	July 2024	YTD	YTD % of Budget
	Implementation Fund								
	Revenues								
	Property Taxes	$ 1,697,000	$ -	$ -		$ 1,697,000	-	865,967	51%
	Grants/Fees	-	-	34,000	75,000	109,000	-	45,935	42%
	Interest	-	-	61,000		61,000	9,074	79,442	130%
	Sales/Other	-	-	-		-	33,213	36,750	#DIV/0!
	Budget Reserves	-	$ 468,500	-	54,856	523,356	-	-	0%
	Total Revenues	**$ 1,697,000**	**$ 468,500**	**$ 95,000**	**$ 129,856**	**$ 2,390,356**	**42,287**	**1,028,093**	43%
	Expenditures								
	Program Salaries and Benefits (not JPA/MOA)	$ 490,500	$ -	$ -	$ (5,000)	$ 485,500	**46,468**	**255,029**	53%
Water Qual	550 Public Infrastructure Partnership Projects	$ -	$ -	$ -	$ -	$ -	-		#DIV/0!
Water Qual	550 - Buck Stream				$ 223,400	$ 223,400	46	46	0.000205909
Water Qual	550 - Swamp Lake				$ 61,000	$ 61,000	-	40,015	0.655983607
Water Qual	611 Farmer-led Council	55,000	-	-		55,000	-	12,880	23%
Water Qual	611 Cost-Share Incentives	68,000	-	-		68,000	-	8,534	13%
Water Qual	611 Highway 13 Wetland, FeCl system & Desilt, O&M	244,000	-	61,000		305,000	13,707	39,130	13%
Water Qual	611 Carp Management	96,500	-	-		96,500	10,864	20,719	21%
Water Qual	611 Spring Lake Demonstration Project Maintenance	1,200	-	-		1,200	-		0%
Water Qual	611 Alum Internal Loading Reserve	230,000	-	-	-	230,000	-		0%
Water Qual	611 Fish Stocking	2,000	-	-		2,000		2,500	125%
Water Qual	637 District Monitoring Program	84,500	-	-		84,500	3,605	16,678	20%
Water Qual	626 Planning and Program Development	27,500	-	-		27,500	359	12,423	45%
Water Qual	626 LGU Plan Review	-	4,000	-		4,000	832	832	21%
Water Qual	626 Engineering not for programs	20,000	-	-		20,000	898	9,232	46%
Water Qual	648 Permitting and Compliance	57,000	-	5,000		62,000	676	16,502	27%
Water Qual	648 Update MOAs with cities & county	-	5,000	-		5,000	-		0%
Water Qual	648 BMP and easement inventory & inspections	25,000	-	2,000	20,875	47,875	216	14,241	30%
Water Qual	626 Upper Watershed Projects	194,000	442,000	-	(209,400)	426,600	9,760	51,914	12%
Water Qual	626 District Plan Update	-	2,500			2,500	-	185	7%
	WQ TOTAL	**$ 1,104,700**	**$ 453,500**	**$ 68,000**	**$ 95,875**	**$ 1,722,075**	**40,962**	**245,831**	14%
Water Storage	550 District-wide Hydraulic & Hydrologic model	$ 5,000	$ -	$ -		$ 5,000	-	-	0%
Water Storage	626 Comprehensive Wetland Plan Update	35,500			-	35,500	-	-	0%
	WS TOTAL	**$ 40,500**	**$ -**	**$ -**	**$ -**	**$ 40,500**	**-**	**-**	0%
AIS	611 Aquatic Vegetation Mgmt	2,000	-	$ 12,000	$ 3,500	$ 17,500	-		0%
AIS	637 Automated Vegetation Monitoring (BioBase)	$ 1,300	-	-		1,300	-	-	0%
AIS	637 Aquatic Vegetation Surveys	15,500	-	-	(3,500)	12,000	-		0%
AIS	637 Boat inspections on Spring, Upper & Lower Prior	19,000	-	15,000	-	34,000	13,401	18,403	54%
	AIS TOTAL	**37,800**	**-**	**27,000**	**-**	**64,800**	**13,401**	**18,403**	28%
Ed & Out	652 Education and Outreach Program	$ 23,500	$ 15,000	$ -		$ 38,500	2,400	22,311	58%
	E&O TOTAL	**$ 23,500**	**$ 15,000**	**$ -**	**$ -**	**$ 38,500**	**$ 2,400**	**$ 22,311**	58%
	PLOC Contribution		**$ -**	**$ -**	**$ 38,981**	**$ 38,981**	**-**	**38,981**	100%
	Debt Payment Reserve		**-**	**-**		**-**	-	-	#DIV/0!
	Total Implementation Fund	**$ 1,697,000**	**$ 468,500**	**$ 95,000**	**$ 129,856**	**$ 2,390,356**	**103,231**	**580,554**	24%
	Net Change in Fund Balance Implementation Fund	**-**	**-**	**-**	**-**	**-**	**(60,944)**	**447,539**	

	Grant Funds/Fees Anticipated				2024 Budget
	Interest Income (general fund & Implementation fund)			$ 70,000	$ 70,000
	648 New Easement Acquisition Fees			5,000	5,000
Water Qual	**648 Easement amendment/violations fees**			2,000	2,000
AIS	**611 Aquatic Vegetation Mgmt. (Scott County)**			27,000	27,000
	Total Grant Funds/Fees Anticipated			**$ 104,000**	**$ 104,000**

Budget Summary

Fund Sources/Fund Expenditures	2024 Levy	Budget Reserves	Grants/Rev	Amendments	Budget Total	2023 Levy	Levy Increase	% Increase
General Fund	$ 252,000		$ 9,000	$ -	$ 261,000	249,200		
Implementation Fund	$ 1,697,000	$ 468,500	$ 95,000	$ -	$ 2,260,500	1,670,736		
Total Fund Sources	**$ 1,949,000**	**$ 468,500**	**$ 104,000**	**$ -**	**$ 2,521,500**	**1,919,936**	**$ 29,064**	**1.5%**
Expenditures								
General Fund					261,000			
Implementation Fund					2,390,356			
Total Expenditures					**2,651,356**			

Fund Balance Commitments/Assingments		2024 (Budget)				
		12-31-23 Bal	Additions	Reductions	Amendments	12-31-24 Bal
	611 Alum Internal Loading Reserve	$ 700,000	$ 230,000	$ -	$ -	$ 930,000
	626 Upper Watershed Projects	$ 442,000	$ 194,000	$ (636,000)	$ -	$ -
	Debt Payment Reserve	$ 180,000	$ -	$ -	$ -	$ 180,000
		$ 1,322,000	**$ 424,000**	**$ (636,000)**	**$ -**	**$ 1,110,000**

No assurance is provided on this statement. See selected information.

PLSLWD Monthly Treasurers Report Treasurer: Christian Morkeberg

Account balances as of 07/31/24

4M Fund (Checking Account)	$	1,995,810
4M Fixed Income	$	1,899,200
Total Uncleared Transactions	$	-
SUBTOTAL	**$**	**3,895,010**

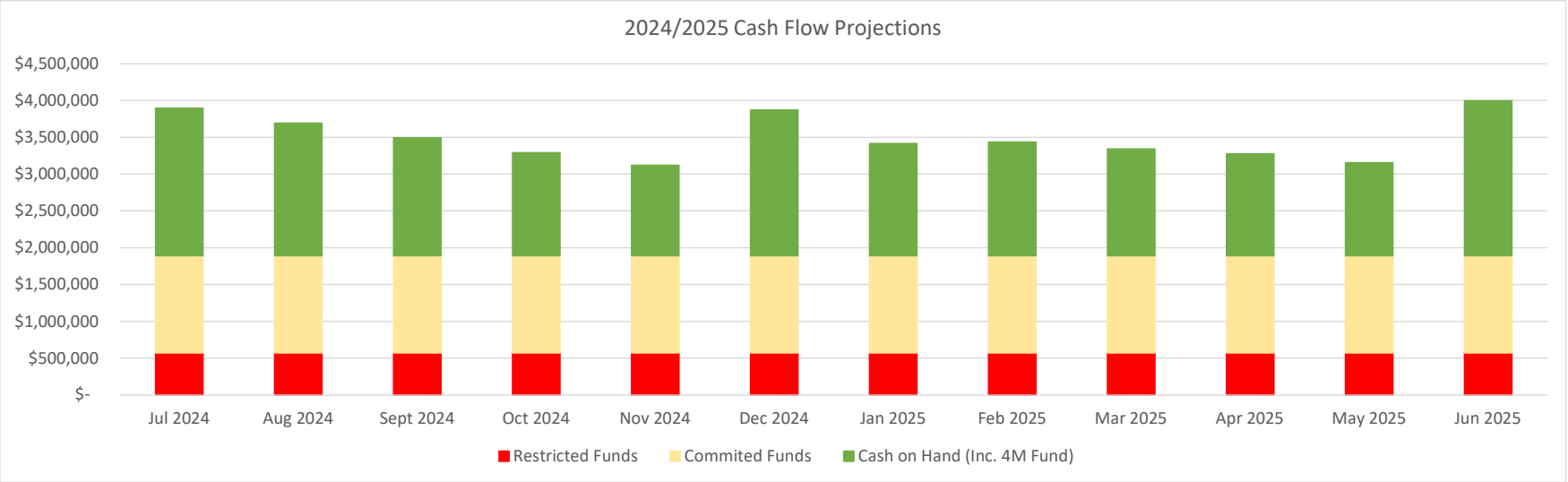
RESTRICTED/COMMITTED FUNDS		
Restricted - Permit Deposits, etc. (350 & 360)	$	128,302
Restricted - PLOC Contingency Reserve (850)	$	263,097
Restricted - PLOC O&M Funds (830)	$	178,615
Committed - Alum Internal Loading Reserve	$	700,000
Committed - Upper Watershed Fund Balance	$	442,000
Committed - Debt Payment	$	180,000
TOTAL DISTRICT/PLOC RESTRICTED OBLIGATIONS	**$**	**1,892,014**

Available cash at end of July 2024	**$**	**2,002,996**
75.5%	*of 2024 Amended Budget*	

No assurance is provided on this statement. See selected information.

Cash Flow Chart

Month (End of Month)	Jul 2024	Aug 2024	Sept 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025
Restricted Funds	$ 570,014	$ 570,014	$ 570,014	$ 570,014	$ 570,014	$ 570,014	$ 570,014	$ 570,014	$ 570,014	$ 570,014	$ 570,014	$ 570,014
Commited Funds	$ 1,322,000	$ 1,322,000	$ 1,322,000	$ 1,322,000	$ 1,322,000	$ 1,322,000	$ 1,322,000	$ 1,322,000	$ 1,322,000	$ 1,322,000	$ 1,322,000	$ 1,322,000
Cash on Hand (Inc. 4M Fund)	$ 2,002,996	$ 1,802,239	$ 1,601,481	$ 1,400,724	$ 1,226,967	$ 1,980,646	$ 1,523,837	$ 1,544,179	$ 1,451,764	$ 1,383,093	$ 1,264,772	$ 2,105,644
Total Cash on Hand	$ 3,895,010	$ 3,694,253	$ 3,493,495	$ 3,292,738	$ 3,118,981	$ 3,872,660	$ 3,415,851	$ 3,436,193	$ 3,343,778	$ 3,275,107	$ 3,156,786	$ 3,997,658



Draft Amounts subject to chanbge during audit preparation

No assurance is provided on these financial statements. See selected information

PLSL Watershed District

Starting cash on hand

Cash Minimum Balance Alert $ 150,000

	Jul 2024	Aug 2024	Sept 2024	Oct 2024	Nov 2024	Dec 2024	2024 Total	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Total Jan-Jun 2025
Cash on hand (beginning of month)	$ 3,380,474	$ 3,277,826	$ 3,090,303	$ 3,007,748	$ 2,820,225	$ 2,659,702		$ 3,659,456	$ 3,415,851	$ 3,165,196	$ 2,914,541	$ 2,727,886	$ 2,570,705	
Cash Receipts														
Property Tax Levy	$ -	$ -	$ -	$ -	$ -	$ 888,576	$ 888,576	$ 7,050	$ -	$ -	$ -	$ -	$ 1,060,424	$ 1,067,474
BWSR WBIF	-	-	104,968	-	-	-	104,968	-	-	-	-	83,974	-	83,974
Grants - Other	-	-	-	-	27,000	75,000	102,000	-	-	-	-	9,500	-	9,500
PLOC Contributions	-	-	-	-	-	-	-	-	-	64,000	64,000	-	-	128,000
Interest Income	9,074	13,465	13,465	13,465	13,465	13,465	76,399	12,700	12,700	12,700	12,700	12,700	12,700	76,200
Other Receipts	33,213	375	375	375	375	375	35,088	375	375	375	375	375	375	2,250
Total Cash Reciepts	$ 42,287	$ 13,840	$ 118,808	$ 13,840	$ 40,840	$ 977,416	$ 1,207,031	$ 20,125	$ 13,075	$ 77,075	$ 77,075	$ 106,549	$ 1,073,499	$ 1,367,398
Total Cash Available	$ 3,422,761	$ 3,291,666	$ 3,209,111	$ 3,021,588	$ 2,861,065	$ 3,637,118		$ 3,679,581	$ 3,428,926	$ 3,242,271	$ 2,991,616	$ 2,834,435	$ 3,644,204	
Cash Paid Out														
Salaries and Per Diems	$ 67,009	$ 47,300	$ 47,300	$ 47,300	$ 47,300	$ 47,300	$ 303,509	$ 53,800	$ 53,800	$ 53,800	$ 53,800	$ 53,800	$ 53,800	$ 322,800
Office Expense, Audit, Accounting	4,541	7,708	7,708	7,708	7,708	7,708	43,081	9,960	9,960	9,960	9,960	9,960	9,960	59,760
PLSLWSD Program Costs	63,981	136,505	136,505	136,505	136,505	136,505	746,506	164,303	164,303	164,303	164,303	164,303	164,303	985,818
PLOC Contribution							-			64,000		-	-	64,000
PLOC Operations	9,404	9,850	9,850	9,850	9,850	9,850	58,654	10,667	10,667	10,667	10,667	10,667	10,667	64,002
Debt Service							-	25,000	25,000	25,000	25,000	25,000	25,000	150,000
Other Disbursements							-							-
Subtotal	$ 144,935	$ 201,363	$ 201,363	$ 201,363	$ 201,363	$ 201,363	$ 1,151,750	$ 263,730	$ 263,730	$ 327,730	$ 263,730	$ 263,730	$ 263,730	$ 1,646,380
Cash on Hand (end of month)	$ 3,277,826	$ 3,090,303	$ 3,007,748	$ 2,820,225	$ 2,659,702	$ 3,435,755		$ 3,415,851	$ 3,165,196	$ 2,914,541	$ 2,727,886	$ 2,570,705	$ 3,380,474	

Draft amounts subject to change during audit

No assurance is provided on these financial statements

PLSLWD
Cost Analysis
Year to Date 07/31/2024

	Year to Date 07/31/2024 Amount	% of total
Program staff costs	**255,029**	**34.5%**
Consultants		
EOR	68,479	
Hawkins, Inc.	10,298	
WSB & Associates	16,102	
Scott Soil and Water Cons.	44,539	
RMB Environmental Labs	13,312	
HDR Engineering Inc.	18,008	
Waterfront Resorations	15,526	
	186,265	**25.2%**
Hard costs, exclusive of prog staff & consultant costs	100,279	
	100,279	**13.6%**
Overhead and Administration		
Staff costs	86,561	
Audit/Accounting/Legal	30,402	
Other admin overhead	35,554	
IT Support (Rymark)	5,904	
	158,422	**21.4%**
Bonds payments	**-**	**0.0%**
PLOC Contribution	38,981	**5.3%**
Expenses excluding PLOC expenses per manager report	**738,976**	**100.0%**

No assurance is provided on this statement. See selected information.
This statement omits required disclosures.
This statement is prepared on the cash basis of accounting.

PRIOR LAKE SPRING LAKE WATERSHED DISTRICT

WORKSHOP MEETING MINUTES
Tuesday, July 16, 2024
Prior Lake City Hall
4:00 PM

Members Present: Bruce Loney, Frank Boyles, Ben Burnett, Christian Morkeberg, Matt Tofanelli

Staff & Consultants Present: Joni Giese, District Administrator
Emily Dick, Water Resources Project Manager
Jeff Anderson, Water Resources Program Coordinator
Danielle Studer, Water Resources Specialist
Carl Almer, District Engineer, EOR

Others Present: Loren Hanson, Citizen Advisory Committee
Lisa Quinn, Spring Lake Township

The meeting was called to order at 4:04 PM.

2025 Budget Draft
District Administrator Giese presented a draft budget to the Board of Managers for discussion. The draft budget is very high, with the intent and understanding that Managers would provide refinement and prioritization. Administrator Giese also provided an initial assessment of budget task items which could be reduced or removed from the budget and maintain essential function of the District. The four major elements which could be reduced or removed to be equivalent with the 2024 levy are: Prior Lake Outlet (PLOC) Pipelining, Public Infrastructure Project- Prior Lakes Park Projects, Geis and Desilt Ferric Chloride System Improvements, and the proposed Land Acquisition Reserve. The budget will be further refined based on Scott County tax implications, Board manager feedback and future learnings.

The merit and urgency of large projects was discussed in relation to levy budget and other funding mechanisms. Bonding was discussed as an option beyond the levy that may help reduce levy spikes for big projects. There are several larger projects such as PLOC Pipelining which were discussed as potential reasoning for reallocating the debt reserve, bonding, and/or increasing the levy. There was discussion on combining reserves for into one “Capital Project Reserve.” District

Administrator will look into the feasibility of combining these reserves. A revised budget will be brought forward to the Board in subsequent meetings, and be presented to the Citizen Advisory Committee for consideration.

Legal Counsel Follow-up
The District's legal counsel, Chuck Holtman, at Smith Partners introduced himself at the June Board workshop. Since that introduction, he has provided the District a list of instances or topics in which legal counsel would be advisable. Discussion was held on how the District should utilize legal counsel in the future. Administrator Giese will review 2025 budget to ensure budget includes adequate funds to reflect legal counsel effort commensurate with the recommended list.

Prior Lake Outlet Structure Operations: An Introduction
Agenda item was removed from the agenda.

SCALE Employee Benefits Cooperative
Scott County Association for Leadership & Efficiency (SCALE) is funding a committee to investigate whether a shared employee benefit program between Scott County, Cities within Scott County and the Prior Lake-Spring Lake Watershed District would be cost effective and desirable. The benefits of creating an employee benefit pool can be seen in more reliable healthcare costs and control in benefits. The District could maintain its high deductible plan and program setup within the pool. A governance structure for the pool would need to be developed, and carefully considered, as the District currently is the smallest employer within the pool. The District is currently in a pool of employers with less than ten employees. Administrator Giese will research the rate increases of the small employer pool to inform District decision making. If the District is interested, a commitment period is expected.

Administrator Report
- The District launched a new website last week. Initial comments have been positive. Administrator Giese acknowledged and thanked Administrative Assistant, Patty Dronen, for successfully leading the website update project.
- The basement of City Hall flooded on July 12, 2024. Staff has packed up the office and will relocate to an alternate location for likely six months or more. Several locations are being considered for a temporary office location. In the meantime, staff are reachable by email and phone, and can arrange in-person meetings and drop-offs at City Hall.
- The insurance company determined that the District pickup truck was totaled and valued at approximately $25,000. The District has been using the Cooperative Purchasing Ventures program to get a competitive price, with truck costs quotes received in the 30-45 thousand dollar range. Currently the District is renting a truck to continue District operations. In the past, the District has had poor experience with used cars and recommends purchasing a new vehicle. Manager Tofanelli made a motion to authorize a not to exceed amount of $45,000 ($25,000 from insurance payment, $20,000 from budget) to purchase a new vehicle. Motion was seconded. Motion passed 5-0.
- Board Managers will be given access to the Board presentation folder to review presentations if they are interested.

- The District is currently treating Curlyleaf pondweed with an herbicide. There was discussion on whether the District should consider a different approach including harvesting. It was suggested that the CAC may want to investigate this issue. Further discussion will occur this fall in consideration for 2025's activities.
- The City of Prior Lake's mowing adjacent stormwater ponds and BMPs was discussed. It is understood that the mowing is a proactive brush cutting to reduce tree growth which would inflate future pond maintenance costs.

Liaison Updates

District Partner Reports

- *Scott SWCD*- None. Jim Fitzsimmons sent a note that he was unable to attend but will be at future meetings.
- *Spring Lake Township*- Finished WBIF process and came to an agreement on where funds should be allocated. Lakeridge Stormwaters Study project will be going forward with some supporting funds from the Township.
- *Citizen Advisory Committee*- Thank you to Board and Staff for joint meeting in June. Curlyleaf pondweed discussion can be carried forward to next CAC meeting.

Manager Liaison Reports

- *CAC*- Joint CAC/Board meeting occurred in June. Next meeting is July 25.
- *Scott SWCD*- Discussed easements. $75,000 was contributed to Buck Stream Stabilization project. Upcoming meeting this Thursday.
- *Lower Minnesota Watershed District*- None. Meeting later this week.
- *Sand Creek Township*- Township expressed appreciation for PLSLWD work.
- *Spring Lake Township*- Thank you for support on WBIF funding on Swamp and Fish Lake projects. Hopeful to expand that cooperation.
- *Scott WMO*- Kickoff to start their 10-year Water Resource Plan process this Monday. Currently taking comments as part of the initial 60-day comment period.
- *Shakopee*- None.
- *SCALE*- No meeting in July.
- *Scott County*- None.
- *Metro Watersheds*- None.
- *PLOC Cooperators*- None.
- *Farmer-Led Council*- None.

Respectfully Submitted,
Emily Dick
7/16/2024

REGULAR MEETING MINUTES
Tuesday, July 16, 2024
Prior Lake City Hall
6:00 PM

Members Present:	Bruce Loney, Christian Morkeberg, Frank Boyles, Matt Tofanelli, Ben Burnett
Staff & Consultants Present:	Joni Giese, District Administrator Jeff Anderson, Water Resources Coordinator Emily Dick, Water Resources Project Manager Danielle Studer, Water Resources Specialist Carl Almer, EOR, District Engineer
Others Present:	None

- **1.0 CALL TO ORDER & PLEDGE OF ALLEGIANCE:**
  President Loney called the meeting to order at 6:03 p.m. Everyone present recited the Pledge of Allegiance.

- **2.0 PUBLIC COMMENT**
  - An e-mail from Alanna Spotts (Fish Lake resident) was read into the record; this e-mail had some Board discussion regarding Alum treatment for Fish Lake.

- **3.0 APPROVAL OF AGENDA**
  - Agenda changes:
    - Change 7.0 bullet 1 location to "at the PL library"
  - Motion to approve amended agenda by Manager Burnett; 2nd by Manager Boyles; Passed 5-0.

- **4.0 OTHER OLD/NEW BUSINESS**
  4.1 Programs & Projects Update
  - Staff provided a report of its many activities the preceding month, and some upcoming events.
    - Prior Lake level is 902.69' up 1.5 feet since the last meeting

  4.2 PLOC Pipe Lining Update
  - Emily presented an update

  4.3 Buck Stream Stabilization Quote Award

- Motion to authorize quote award and enter into a contract with Geomorphic Restoration Incorporated, and that the Board authorizes the District Administrator to execute change orders, if necessary, in an amount not to exceed 5% (in total) of the construction contract to prevent construction delays; made **by Manager Boyles; 2nd by Manager Tofanelli; some discussion, Passed 5-0.**

- **5.0 TREASURER'S REPORT**
  - 5.1 Treasurer Morkeberg summarized the financial information contained in the packet including:
    - Monthly Financial Reports
      - Financial Report
      - Treasurers Report
      - Cash Flow Projections
      - Cost Analysis

    Note: some forms were updated from the original Board packet.

- **6.0 CONSENT AGENDA**

  The consent agenda is considered as one item of business. It consists of routine administrative items or items not requiring discussion. Items can be removed from the consent agenda at the request of the Board member, staff member, or a member of the audience.
  - 6.1 Meeting Minutes – June 16, 2024, Board Workshop
  - 6.2 Meeting Minutes – June 16, 2024, Board Meeting
  - 6.3 Meeting Minutes – June 27, 2024, Special Board Meeting
  - 6.4 Claims List, Bank Purchase Card, and VISA Expenditures Summary
  - 6.5 Quarterly Investment Summary
  - 6.6 Scott SWCD Cost Share Contract: Buck Stream Restoration
  - 6.7 Resolution 24-383: Amending the 2024 Budget to Reclass Funds in the 509-Implementation Fund, from 626-Upper Watershed Projects to 550- Buck Stream Stabilization and 550-Swamp Lake IESF
    - Motion to approve consent agenda by Manager Boyles; 2nd by Manager Burnett; Passed 5-0.

- **7.0 UPCOMING MEETING/EVENT SCHEDULE:**
  - CAC Meeting, Thursday, July 25, 2024, 6:00 pm (Prior Lake Library)
  - PLOC Cooperators Meeting, August 15, 2024, 12:00 pm (Prior Lake City Hall - Parkview Conference Room)
  - Board of Managers Workshop, Tuesday, August 20, 2024, 4:00 pm (Prior Lake City Hall – Parkview Conference Room)
  - Board of Managers Meeting, Tuesday, August 20, 2024, 6:00 pm (Prior Lake City Hall – Council Chambers

8.0 ADJOURNMENT
- Motion to adjourn by Manager Tofanelli; 2nd by Manager Burnett; Passed 5-0.
- Meeting adjourned at 7:00 pm

Respectfully Submitted,
Ben Burnett, PLSLWD Secretary, 8/12/24

PLSLWD Board and CAC Joint Meeting Minutes
Thursday, June 27th, 2024
5:00-7:00 PM
City of Prior Lake Library, Large Meeting Room

Board Members Present:	Bruce Loney, Christian Morkeberg, Frank Boyles, Matt Tofanelli, Ben Burnett
CAC Members Present:	Loren Hanson, Ron Hoffmeyer, Ryan Murr, Anna Alswager, Richard Schirber, Amy Butani
Staff & Consultants Present:	Joni Giese, District Administrator Emily Dick, Water Resources Project Manager Danielle Studer, Water Resources Specialist

- **1.0 CALL TO ORDER & PLEDGE OF ALLEGIANCE:**
  President Loney called the joint meeting to order at 5:26 pm.

- **2.0 Dinner and Tour Debrief**

- **3.0 Welcome and Approval of Agenda (by Board of Managers)- Manager Loney**
  - Motion to approve agenda by Manager Boyles; 2nd by Manager Burnett; passed 5-0.

- **4.0 2024 Board Priorities**
  - Manager Loney reviewed PLSLWD project highlights from the past year.

- **5.0 2025 Budget Priorities and Recommendations Exercise**
  - Emily Dick, Danielle Studer, and Administrator Giese took all present through activities and discussion to assess our priorities for the upcoming year
  - Emily Dick kept idea notes on poster papers
  - This serves as the initial input from the Board and community to be used to build the budget for the next budget cycle

- **6.0 Discussion on CAC Interests**
  - CAC members shared their interests and concerns within the PLSLWD.

- **7.0 CAC Annual Report**

    - Loren Hanson reviewed the 2023 highlights, including new members, PLOC legislation help and lobbying, and wake boat recommendations

- **8.0 UPCOMING MEETING/EVENT SCHEDULE:**
    - Board Meeting: July 16, 2024, 6:00 pm (workshop 4:00 – 6:00 pm)
    - CAC Meeting: July 25, 2024, 6:00 – 7:30 pm
    - Board Meeting: August 20, 2024, 6:00 pm (workshop 4:00 – 6:00 pm)

- **9.0 ADJOURNMENT**
    - Motion to adjourn by Manager Morkeberg; 2nd by Manager Tofanelli; Passed 5-0.
    - Meeting adjourned at 7:04 pm.

Respectfully Submitted,
Ben Burnett, PLSLWD Secretary, 7/9/24

CAC Meeting Minutes

Thursday May 30, 2024
6:00 – 7:30 PM

Attendees:

CAC Members: 6 of 7 members present = 86% ***(≥50%)***

- ☒ Loren Hanson
- ☐ Ron Hoffmeyer
- ☒ Curtis Witt
- ☒ Anna Alswager
- ☒ Richard Schirber
- ☒ Amy Butani
- ☒ Ryan Murr

Staff: Danielle Studer, Emily Dick
Board members: Christian Morkeberg
Other: Lisa Quinn (Spring Lake Township)

CAC Business 6:00 (Meeting called to order at 6:00)

- Approval of the agenda: Motion made by Dick, Second by Amy, All Ayes, Motion passes 5-0.

- Approval of March Minutes: Motion made by Dick, Second by Amy, All Ayes, Motion passes 5-0.

- Review of April & May Board Meetings
  - Project updates were given. Prior Lake Outlet Channel Pipelining update- were not successful with the bonding bill, but have two more grant applications live. Talked about proactive outlet channel opening. Discussed whether the Board should have legal counsel at meetings. Report was given by Soil and Water Conservation District on several projects including a stream restoration, dairy farm planning, and conservation easement. Approved CAC request for funding to Prior Lake and Spring Lake Associations for educational materials. Approved 2023 Annual Report. Discussed partnership with Shakopee Mdewakanton Sioux Community on Pike and Arctic Lake. Completed Water Resources Management Plan amendment.
- Outreach event schedule and sign-ups
  - Danielle gave an overview of event sign-ups for the CAC. The Paint and Sip event will be a random selection drawn from the interested CAC members. CAC members should select that box in the Google Sheet by June 7th to be considered.
- CAC recommendation update
  - District Board approved $500 for both Spring Lake Assn and Prior Lake Assn educational materials. The District is working with the associations to go through the process.

- PLOC bonding updates
    - Bonding bill was unsuccessful. Two more funding applications are pending and we will hear in July.

- Sub-committees
    - AIS/Lakeshore/Wake Etiquette and Groundwater are two topics that have come up. CAC Chair requested that CAC members think about those topics and think about what are some things we can do as CAC. If there are other topics those are welcome also.

- CAC/Board Tour and Joint Meeting

    - Budget discussion/updates- Emily walked through the progress of Watershed District in relation to work areas and potential budget items.

    - Agenda suggestions -Potential Annual CAC Report by Chair

- Actions to discuss next meeting:
    - June 18 Board Workshop Attendance
    - July 16 Board Workshop Attendance- Dick

- Motion to adjourn at 7:30 pm – Motion by Amy, Second by Ryan. All Ayes, motion carries 6-0

8/20/2024

Prior Lake Spring Lake Watershed District

Claims list for Invoice Payments due for the prior month

Managers will consider approving this claims list - Staff payroll and benefits, Manager per diems, and Health insurance premiums have already been paid via ACH transfers. After the managers vote, two Managers will approve individual payments via BILL within three days of the meeting for approved claims. Then, staff will release payment via BILL to the claims list parties.

Vendor	Invoice Link	Description	Amount
1. Watershed District Projects (excluding staff payroll)			
EOR	x	General Engineering	$ 1,612.00
		FeCl3 Site Improvements	$ 3,039.30
		Hwy 13 (Geis Wetland) Survey	$ 3,532.00
		Buck Stream Stabilization	$ 1,607.50
		District Monitoring	$ 246.00
		Permitting	$ 2,808.00
The One Transportation, Inc.	x	Bus Tour CAC/PLSLWD	$ 191.25
Scott County Highway Department	x	Surety Payment Permit 18.02	$ 8,276.00
PLM Lake and Land Management	x	Curly Leaf Pond Weed Treatment - Spring	$ 4,246.00
	x	Curly Leaf Pond Weed Treatment - Upper	$ 2,415.60
	x	Curly Leaf Pond Weed Treatment - Lower	$ 4,085.40
Waterfront Restorations	x	July Boat Launch inspections	$ 8,382.18
Vessco	x	On Site Services	$ 1,050.00
	x	Pump Equipment and installation	$ 5,040.00
WSB	x	Carp Management - June 2024	$ 4,786.70
Smith Partners		Water Resource Plan	$ 1,264.30
Scott SWCD Q2	x	Task I - Cost Share	$ 14,356.25
		Task II - Farmer Led Council	$ 17,487.85
		Task III - Monitoring	$ 2,355.00
		Task IV - Permitting	$ 5,465.00
		Task IV - Permitting (Easement expenses)	$ 6,082.00
		Task V - Education	$ 2,152.50
		Task VI - Upper Watershed	$ 3,416.25
Xcel Energy	x	Utilities	$ 17.14
CLA		Bill.com fees	$ 55.00
Blue Water Science	x	CLP Surveys	$ 6,600.00
		Subtotal	**$ 110,569.22**
2. Outlet Channel - JPA/MOA (excluding staff payroll)			
EOR		2024 PLOC Engineering Assistance	208.00
		2024 PLOC XP-SWMM Updates	375.50
		Subtotal	**$ 583.50**
3. Payroll, Office and Overhead			
ADP Manager Per Diems			$ 1,028.28
ADP Staff Payroll			$ 33,317.34
ADP Taxes & Benefits			$ 26,628.89
NCPERS	x	September Premiums	$ 96.00
Reliance Standard	x	August LTD and STD Premiums	$ 939.71
HealthPartners	x	August Health Insurance Premiums	$ 7,266.49
City of Prior Lake	x	Rent (September 2024)	$ 2,458.64
CLA	x	Monthly Accounting (July)	$ 1,290.00
		Technology and Client Support Fee	$ 82.85
		Monthly Payroll Processing Fees	$ 367.00
Smith Partners	x	General Legal Services	$ 1,990.60
Rymark	x	August Billing (7 workstations)	$ 931.80
MetroSales	x	Contract base rate August - September	$ 155.00
	x	Equipment Move	$ 300.00
West Suburban Auto Sales	x	Truck purchase	$ 28,145.00
US Bank		June 26-July 25 Billing	$ 2,276.23
		Subtotal	**$ 107,273.83**
		TOTAL	**$ 218,426.55**

Prior Lake-Spring Lake Watershed District
US Bank Transactions through 7/25/2024

Trans Date	Merchant Name	Amount	Receipt Link	Staff Approval	Class	Customer	Expense	Description
6/27/2024	Ironclad Storage	$ 260.00	x	Jeff Anderson	611 Operations & Maintenance	Fish Mgmt - Equipment, Storage & Maintenance	876 Field Equipment & Maintenance	Equipment storage
6/27/2024	Jimmy Johns	$ 273.65	x	Emily Dick	652 Education & Outreach	CAC	902 Meals and Lodging	CAC/PLSLWD Meal
6/30/3024	Amazon	$ 9.98	x	Zach Nagel	637 Monitoring & Research	Stream Monitoring	876 Field Equipment & Maintenance	6v Batteries
6/30/2024	Amazon	$ 49.49	x	Zach Nagel	637 Monitoring & Research	Stream Monitoring	876 Field Equipment & Maintenance	Waders
7/1/2024	Iceberg	$ 70.00	x	Patty Dronen	405 General Fund		703 Telephone, Internet & IT support	Web hosting
7/1/2024	Group Greeting	$ 5.41	x	Patty Dronen	405 General Fund		710 Office Expense Other	Birthday card - Jeff
7/3/2024	Shell Oil	$ 101.32	x	Zach Nagel	637 Monitoring & Research	Equipment Storage & Maintenance	801 Gas, Mileage	Gas
7/4/2024	Verizon	$ 31.43	x	Jeff Anderson	648 Regulation	Easement Inspections & violations	876 Field Equipment & Maintenance	Cell data
7/8/2024	Cub Foods	$ 11.92	x	Patty Dronen	626 Planning	Planning and Program Development	902 Meals and Lodging	Donuts-staff birthday
7/10/2024	Iceberg	$ (70.00)	x	Patty Dronen	405 General Fund		703 Telephone, Internet & IT support	Refund for Web Hosting service
7/11/2024	Tractor Supply	$ 21.66	x	Zach Nagel	611 Operations & Maintenance	Fish Mgmt - Equipment, Storage & Maintenance	876 Field Equipment & Maintenance	Wire Tester
7/14/2024	Amazon	$ 64.73	x	Zach Nagel	637 Monitoring & Research	Aquatic Vegetation Surveys	876 Field Equipment & Maintenance	Lithium Batteries
7/14/2024	Amazon	$ 19.34	x	Zach Nagel	637 Monitoring & Research	Aquatic Vegetation Surveys	876 Field Equipment & Maintenance	Battery Charger
7/14/2024	Home Depot	$ 159.44	x	Joni Giese	405 General Fund		710 Office Expense Other	Moving boxes
7/16/2024	Home Depot	$ (39.14)	x	Joni Giese	405 General Fund		710 Office Expense Other	Return
7/16/2024	Shell Oil	$ 70.74	x	Zach Nagel	637 Monitoring & Research	Equipment Storage & Maintenance	801 Gas, Mileage	Gas
7/16/2024	Papa Murphys	$ 33.97	x	Patty Dronen	626 Planning	Planning and Program Development	902 Meals and Lodging	Staff Event
7/16/2024	Pizza Hut	$ 52.17	x	Patty Dronen	626 Planning	Planning and Program Development	902 Meals and Lodging	Staff Lunch - Office Flood Move
7/16/2024	Office Max/Depot	$ 37.61	x	Patty Dronen	405 General Fund		710 Office Expense Other	Copies - Office Flood
7/16/2024	Jimmy Johns	$ 105.38	x	Patty Dronen	626 Planning	Planning and Program Development	902 Meals and Lodging	Board Manager Meal
7/17/2024	Everetts Food Inc	$ 27.82	x	Emily Dick	405 General Fund		902 Meals and Lodging	Staff Event sodas
7/9/2024	Microsoft	$ 4.83	x	Patty Dronen	626 Planning	Planning and Program Development	903 Dues/Fees/Subscriptions	Software
7/20/2024	PayPal-Canva	$ 14.99	x	Patty Dronen	626 Planning	Planning and Program Development	903 Dues/Fees/Subscriptions	software
7/23/2024	Adobe	$ 111.57	x	Patty Dronen	626 Planning	Planning and Program Development	903 Dues/Fees/Subscriptions	Software
7/22/2024	Good Stuff Moving	$ 51.40	x	Patty Dronen	405 General Fund		710 Office Expense Other	Down payment for move
7/23/2024	Good Stuff Moving	$ 599.15		Patty Dronen	405 General Fund		710 Office Expense Other	Balance due for move
7/23/2024	Walmart	$ 84.72	x	Patty Dronen	405 General Fund		710 Office Expense Other	Office materials
7/23/2024	Google	$ 0.49	x	Patty Dronen	626 Planning	Planning and Program Development	903 Dues, Fees, Subscriptions	Photo storage - one month
7/23/2024	Target	$ 88.69	x	Joni Giese	405 General Fund		710 Office Expense Other	Office materials
7/24/2024	Holiday StationStore	$ 7.49	x	Zach Nagel	637 Monitoring & Research	Stream Monitoring	876 Field Equipment & Maintenance	Ice
7/24/2024	Amazon	$ 15.98	x	Zach Nagel	405 General Fund		710 Office Expense Other	Monitor cord - Office Flood
	TOTAL	**$ 2,276.23**						

PLSLWD Board Staff Report
August 7, 2024

Subject |	EOR Scope of Services: Spring Lake Post-Alum Treatment Sediment Core Analysis		
Board Meeting Date |	August 20, 2024	**Item No:**	6.6
Prepared By |	Jeff Anderson, Water Resources Coordinator		
Attachments |	EOR Scope of Services: Spring Lake Post-Alum Treatment Sediment Core Analysis		
Proposed Action |	Motion to approve the EOR Scope of Services for Spring Lake Post-Alum Treatment Sediment Core Analysis		

Background

As the District continues to monitor lake water quality, questions have been raised whether it is time to perform alum treatments on select District lakes. Hypolimnetic water quality data is used as indicator of how long an alum treatment is effectively capturing sediment phosphorus release. Spring Lake's data set has been trending upwards over the past few years prompting increased interest. At the March 19, 2024, board meeting, the Board of Managers a motion to conduct coring on Spring Lake in 2024.

Discussion

Following board approval, staff requested EOR to develop a Scope of Services to conduct the sediment core collection, 3rd party lab coordination, analysis, and technical memorandum discussing current conditions, effectiveness of past treatments, and deliver recommendations for future adaptive management.

Staff anticipate a similar request for sediment coring, lab analysis and a technical memo for Upper Prior Lake in early 2025. Comparing the results between the two lakes will give insights on how to prioritize lakes for future alum treatments.

Recommendation

Motion to approve the EOR Scope of Services for Spring Lake Post-Alum Treatment Sediment Core Analysis.

Budget Impact

The cost associated with the proposed activity is $24,035 and will be covered under budget item 611 Alum Internal Loading Reserve.

PRIOR LAKE SPRING LAKE WATERSHED DISTRICT

EOR water ecology community

SCOPE OF SERVICES

SPRING LAKE POST-ALUM TREATMENT SEDIMENT CORE ANALYSIS

PLSLWD	
CLASS:	611 Alum Internal Loading Reserve
PROJECT:	Spring Lake Post-Alum Treatment Sediment Core Analysis

EOR			
JOB:	00758-XXXX		
PHASE:	N/A	TASK:	N/A

START DATE: 9/1/2024 END DATE: 3/31/2025

TOTAL PROJECT BUDGET: $24,035

OVERVIEW OF PROJECT SCOPE:

Hypolimnetic phosphorus in Spring Lake is increasing faster than projected after the 3rd dose of alum applied in 2020. In response, District staff requested EOR to prepare a scope of services to conduct follow up sediment coring and evaluation of alum treatment effectiveness on Spring Lake following the series of alum treatments. EOR will conduct the sediment core sampling, deliver the samples to University of Wisconsin Stout for analysis of phosphorus release rate, phosphorus fractionation, and alum deposition depth. EOR will also analyze District water quality data, climate data, the original alum plan and dosing recommendations, and sediment chemistry results before and throughout the alum treatment series. EOR will provide a memo with an explanation of results and recommendations for future management.

The following scope outlines the anticipated tasks, hours, and schedule to advance this field work, analysis, and technical memorandum for recommended adaptive management.

PROJECT TEAM

PLSLWD	
PROJECT LEAD:	Jeff Anderson, Water Resources Coordinator
OTHER STAFF:	Joni Giese, District Administrator
EOR	
PROJECT LEAD:	Anne Wilkinson (39.5)
OTHER STAFF:	Joey Castaneda (10), Carl Almer (5)

SUMMARY OF TASKS

TASK 1: Sediment Core Collection	
SUMMARY:	EOR will collect nine sediment cores from the locations in Figure 1. EOR will deliver the sediment cores to the University of Wisconsin Stout. Cores from all nine sediment locations will be segmented into six sections: 0-2cm, 2-4cm, 4-6cm, 6-8cm, 8-10cm, 10-20cm. Each section will be analyzed for loosely-bound P, iron-bound P, labile organic P, and aluminum-bound P. In addition, four sediment core locations will be analyzed for soluble reactive phosphorus release rates. Incorporating release rate analysis is imperative to understanding the load reductions achieved by the alum treatment. The four locations represent a cross section of the alum application area. The release rate data from these four locations is the minimum resolution necessary to understand any spatial variability of the alum treatment effectiveness.
DELIVERABLES:	Laboratory results
TIMELINE:	October-December 2024
ESTIMATED COSTS:	$16,260
TASK 2: Analysis and Technical Memorandum	
SUMMARY:	EOR will analyze water quality, climate, fisheries, macrophyte, and sediment core trends and dosing plans to determine the effectiveness of past alum treatments. EOR will evaluate both the temporal and spatial lake response to past alum treatment series. EOR will use this analysis to provide recommendations for adaptive management of internal loading on Spring Lake. EOR will summarize the findings from Task 1 and 2 and provide recommendations for future management on Spring Lake.
DELIVERABLES:	Technical Memorandum
TIMELINE:	January-March 2025
ESTIMATED COSTS:	$7,775

ESTIMATED COST SUMMARY

DESCRIPTION		HOURS/ QUANTITY	ESTIMATED COST
TASK 1:	Sediment Core Collection	12.5	$1,860
LAB EXPENSES:	UW Stout	-	$14,400
TASK 2:	Analysis and Technical Memorandum	42	$7,775
OTHER EXPENSES:	Mileage Equipment rental Other	***Included in the above estimated costs***	
		TOTAL	$24,035

NOTE: Actual costs may differ from the estimated task costs, but the project must not exceed the TOTAL.

ASSUMPTIONS: The estimated cost summary for the execution of the tasks in this Scope of Services is based upon the following assumptions:

1) District staff will accompany EOR staff to collect the sediment cores.
2) EOR will provide the boat and sampling equipment.
3) The sediment core data will be available by the end of 2024.
4) The 2024 water quality data will be available in January 2025.

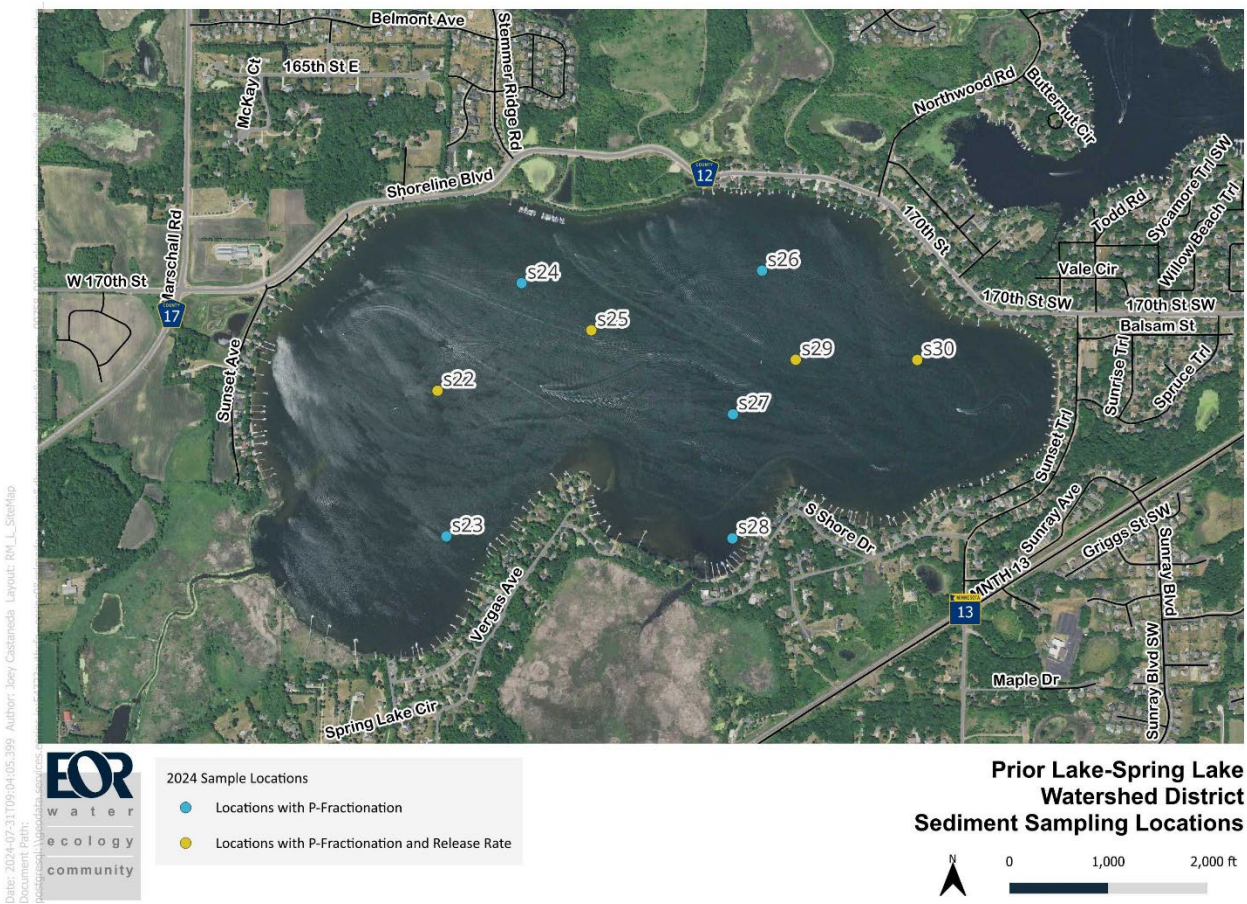


Figure 1: 2024 Sediment Core Locations

SIGNATURES:

The services described in this Scope of Services are being provided in accordance with the Master Services Consulting Agreement between PLSLWD and EOR dated January 17, 2024. Any changes to the project team, tasks, deliverables, timeline, or total cost will require a signed amendment/update to this Scope of Services.

Prior Lake-Spring Lake Watershed District		Emmons & Olivier Resources, Inc.	
Signature:		Signature:	
Name:	Joni Giese	Name:	Carl K. Almer
Title:	District Administrator	Title:	Water Resources Lead
Date:		Date:	8/2/2024

PLSLWD Board Staff Report
August 6, 2024

Subject |	EOR Scope of Services: Swamp Lake IESF Final Design & Construction Management		
Board Meeting Date |	August 20, 2024	**Item No:**	6.7
Prepared By |	Emily Dick		
Attachments |	EOR Scope of Services: Swamp Lake IESF Final Design & Construction Management		
Proposed Action |	Motion to approve the EOR Scope of Services for Swamp Lake IESF Final Design & Construction Management.		

Background

The Swamp Lake Iron Enhanced Sand Filter (IESF) project was identified in the Upper Watershed Blueprint study as a potential project to reduce external loads to Spring Lake. A feasibility study was conducted by Stantec in 2023 which developed several alternatives and identified a preferred alternative for implementation. The feasibility study was partially supported through a Watershed Based Implementation Fund grant.

An easement was obtained for access and use of the project area for implementation and operations and maintenance of the Swamp Lake Iron Enhanced Sand Filter. The District has applied for multiple grant requests in order to support the implementation of the project. As a result of the 2024 Watershed Based Implementation Fund (WBIF) convening process, $179,935 was designated towards the project. Spring Lake Township has also contributed $2,000 towards the implementation of the project.

Discussion

Following staff request, EOR has developed a Scope of Services to conduct the final design, permitting, and bid & construction administration related to the implementation of the Swamp Lake Iron Enhanced Sand Filter. Staff recommends that EOR be contracted as the firm possesses a strong understanding of site hydrology and has demonstrated experience in designing and estimating the efficiencies of iron enhanced sand filter designs.

WBIF funds are anticipated to be contracted and available in August or September. Approving this work order would allow for design and permitting work to occur over the winter and spring of 2024/2025 with construction in 2025. Aside from the 10% required match, the cost of EOR's work will be covered by the pending WBIF grant agreement.

Recommendation

Staff recommends approval of the EOR Scope of Services for Swamp Lake IESF Final Design & Construction Management.

Budget Impact

The cost associated with proposed final design and construction management activity is covered under budget item 550-Capital Projects-Swamp Iron Enhanced Sand Filter, WBIF grant funding and Spring Lake Township contribution.

PRIOR LAKE SPRING LAKE WATERSHED DISTRICT

EOR water ecology community

SCOPE OF SERVICES

SWAMP LAKE IESF FINAL DESIGN & CONSTRUCTION MANAGEMENT

PLSLWD	
CLASS:	550 Swamp Lake IESF
PROJECT:	Swamp Lake IESF Final Design & Construction Management

EOR			
JOB:	00758-XXXX		
PHASE:	N/A	TASK:	N/A

START DATE: 9/1/2024 END DATE: 5/31/2026

TOTAL PROJECT BUDGET: $105,700

OVERVIEW OF PROJECT SCOPE: The District recently approved the *Swamp Lake Phosphorus and Peak Flood Reduction Feasibility Study (Stantec, 2023)* which assessed stormwater BMP options to reduce the phosphorus load and peak flows to Spring Lake from the headwaters of Swamp Lake at a targeted location immediately downstream of the Swamp Lake outlet (Redwing Ave culvert). This study concluded that Option 3 (diversion of County Ditch 13 (CD-13) flows at a control elevation of 949.0 to a 0.32-acre Iron-Enhanced Sand Filter (IESF)) maximizes phosphorus load reduction without raising the Base Flood Elevation (BFE) of Swamp Lake which would require FEMA CLOMR/LOMR proceedings. The District also recently secured an easement for access to and construction of this IESF.

The purpose of this scope of services is to advance the concept design to final design, bidding and construction with the understand that all work shall be completed within the access and project easements, final design must maintain the existing BFE, and that any alteration of CD-13 will require a petition to be submitted to the Drainage Authority (Scott County) according to MN 103E.227. The following provides an overview of the anticipated EOR team, primary tasks and associated hours and cost to complete design plan, bid, and construct the Swamp Lake IESF. In addition, this task includes development of an O&M plan to guide future inspection, maintenance, monitoring, sampling and IESF media replacement.

PROJECT TEAM

PLSLWD	
PROJECT LEAD:	Emily Dick, Water Resources Project Manager
OTHER STAFF:	Joni Giese, District Administrator Jeff Anderson, Water Resources Coordinator Danielle Studer, Water Resources Specialist
EOR	
PROJECT LEAD:	Carl Almer (46)
OTHER STAFF:	Marla Brown (8), Joey Casteneda (31), Kyle Crawford (196), Ryan Fleming (33), Britta Hansen (5), Ellen Kimlinger (136), John Sarafolean (107), Bill Yu (16)

SUMMARY OF TASKS

TASK 1: Data Collection & Concept Design Refinement	
SUMMARY:	EOR staff will collect field data necessary to refine the concept design for the CD-13 diversion, pretreatment measures, and IESF. Data to be collected includes, but is not limited to, soil borings (to characterize soils to exported offsite and for structural considerations for the CD-13 diversion) and supplemental topographic survey with utility locates. A refined concept design will be prepared in consultation with District staff. Potential modifications include, but are not limited to, alternate options for pretreatment, alternate options for the diversion (weir or structure as opposed to a berm), addition of an inlet gate to throttle or turn off flow during maintenance, and knife gates along tile outlet lines to control flow if preferential use of IESF media occurs. Opinions of probable cost will be prepared for alternate design options explored.
DELIVERABLES:	1) Existing conditions survey with easement and property boundaries 2) Geotechnical report – provided by geotechnical subconsultant 3) Updated concept plan and opinions of probable cost
TIMELINE:	September – October, 2024
ESTIMATED COSTS:	$20,500 (inclusive of tree soil borings and geotechnical report)
TASK 2: 60% Plans, Permitting & CD-13 Petition Services	
SUMMARY:	This task includes preparation of a preliminary (60%) plan set for the overall system. Any substantive design changes from Option 3 of feasibility study will be modeled to ensure water quality performance remains at least as good as expected and that there is no change to the existing Swamp Lake BFE. An updated statement of quantities (SEQ) and opinion of probable costs will also be prepared. Supporting exhibits and narratives will be completed for obtaining necessary permits (Scott County Grading is the only permit anticipated). This task also includes a hydrologic and hydraulic modeling summary as required for the ditch alteration petition. A coordination meeting will be convened with District staff to review the 60% plan set. Comments received will be addressed with submittal of the 95% plan set.
DELIVERABLES:	1) 60% plan set 2) Updated SEQ and opinion of probable cost 3) Exhibits and narratives for obtaining permits 4) PCSWMM model summary for ditch alteration petition
TIMELINE:	November -December, 2024
ESTIMATED COSTS:	$25,000

TASK 3: 95% Plans, Specifications & Bid Package	
SUMMARY:	This task includes preparation of a detailed (95%) plan set, specifications and contact documents that will ultimately form the bid package for bidding and construction. The plan set will include a location map, SEQ, existing and proposed contours, plan cross sections and details, construction staging notes, erosion control measures and standard plates, and site access and restoration details. An updated opinion of probable costs will also be prepared. The 95% plans will be transmitted to District staff and attorney for final comments.
DELIVERABLES:	1) 95% plan set, specifications and contract documents 2) Updated SEQ and opinion of probable cost
TIMELINE:	January – February, 2025
ESTIMATED COSTS:	$12,300
TASK 4: Final Bid Package	
SUMMARY:	This task includes addressing all prior plan comments and preparation of the final bid package for bidding and construction. It is assumed the District will hold a public hearing and authorize bids at the February 2025 Board meeting.
DELIVERABLES:	1) Final bid package 2) Advertisement for Bid (Word document) for noticing by District staff in District official newspaper
TIMELINE:	March 2025
ESTIMATED COSTS:	$3,200
TASK 5: Bidding, Contract Management & Construction Observation	
SUMMARY:	This task includes managing all aspects of public bidding (publication in QuestCDN, pre-bid meeting, response to bid questions, addendum(s) as necessary, bid opening, review and tabulation of bids, recommendation for award), managing the construction contract (notice of award, contract submittals, notice to proceed, pay requests, project close-out), and construction services (pre-construction meeting, construction observation, closeout punch list, final inspection, and as-built record drawing). In addition, this task includes development of an O&M plan to guide future inspection, maintenance, monitoring, sampling and IESF media replacement.
DELIVERABLES:	1) Bid tabulation and award recommendation 2) Notice of award and notice to proceed 3) Preconstruction meeting minutes 4) Pay request recommendations 5) Construction observation records 6) Closeout punch list 7) As-built record drawing 8) Operations and Maintenance Plan
TIMELINE:	April 2025 – December 2025 (Construction), May 2026 (Vegetation Est.)
ESTIMATED COSTS:	$38,700

ESTIMATED COST SUMMARY

DESCRIPTION		HOURS/ QUANTITY	ESTIMATED COST
TASK 1:	Data Collection & Concept Design Refinement	70	$20,500
TASK 2:	60% Plans, Permitting & CD-13 Petition Services	160	$25,000
TASK 3:	95% Plans, Specifications & Bid Package	80	$12,300
TASK 4:	Final Bid Package	20	$3,200
TASK 5:	Bidding, Contract Management & Construction Observation	248	$44,700
EXPENSES:	Soil Borings Equipment rental Mileage	****Included in the above estimated costs****	
		TOTAL	**$105,700**

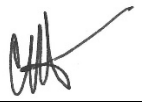
NOTE: Actual costs may differ from the estimated task costs, but the project must not exceed the TOTAL.

ASSUMPTIONS: The estimated cost summary for the execution of the tasks in this Scope of Services is based upon the following assumptions:

1) Existing condition survey data and updated PCSWMM model will be provided by Stantec for use in final design.
2) Jurisdictional wetland was not delineated within the project boundary; therefore ACOE, MNDNR & WCA permitting is not required.
3) Any application/review fees associated with the Drainage Authority petition will be billed directly to the District.
4) The topographic survey completed for the feasibility study identified drain tile outlets to CD-13 from the north, but none from the south. There is no drain tile with the project area.
5) District staff will submit notices of Advertisement for Bid and Public Hearing in District newspaper, as necessary.
6) Anticipated duration of construction is a maximum of 30 days
7) If extended vegetation warranty is desired for proposed buffer, the SWCD will be engaged for inspection of vegetation establishment.

SIGNATURES:

The services described in this Scope of Services are being provided in accordance with the Master Services Consulting Agreement between PLSLWD and EOR dated January 17, 2024. Any changes to the project team, tasks, deliverables, timeline, or total cost will require a signed amendment/update to this Scope of Services.

Prior Lake-Spring Lake Watershed District		Emmons & Olivier Resources, Inc.	
Signature:		Signature:	
Name:	Joni Giese	Name:	Carl K. Almer
Title:	District Administrator	Title:	Water Resources Lead
Date:		Date:	8/6/2024

PLSLWD Board Staff Report
August 15, 2025

Subject |	2025 Watershed Based Implementation Funding Grant Agreement		
Board Meeting Date |	August 20, 2025	**Item No:**	6.8
Prepared By |	Joni Giese, District Administrator		
Attachments |	2025 Watershed Based Implementation Funding Grant Agreement		
Action |	Motion to approve the 2025 Watershed Based Implementation Funding Grant Agreement		

Background

On a bi-annual basis, BWSR distributes State of Minnesota clean water funds through the Watershed-Based Implementation Funding (WBIF) program to implementing agencies. This is a non-competitive process that funds water quality improvement projects.

Discussion

In accordance with program requirements, PLSLWD along with other BWSR-designated watershed planning areas in Scott County jointly initiated a convening process with watershed partner agencies within the Scott County to select projects to submit to BWSR for funding. Projects selected for the Prior Lake-Spring Lake Watershed Planning Area have a total grant fund value of $209,935 and include:

Fish Lake Management Plan External Load Management Actions ($30,000)
This project supports the implementation of external load management actions recommended in the Fish Lake Management Plan.

Swamp Lake Iron Enhanced Sand Filter ($179,935)
This will cover a portion of the implementation cost for the Swamp Lake Iron Enhanced Sand Filter.

Both projects are identified in the implementation section of the PLSLWD's Water Resource Management Plan, which is a requirement to be eligible for funding. Staff completed a two-step process where a budget request is first submitted and approved by BWSR, then a final work plan is submitted and approved.

Recommendation

Motion to approve the 2025 Watershed Based Implementation Funding Grant Agreement.

Budget Impact

Upon entering into the grant agreement with BWSR, 50 percent of the grant ($104,967) will be advanced to the District by BWSR and will be shown as grant revenue in 2024. The remainder will be shown as grant revenue in 2025.

BOARD OF WATER AND SOIL RESOURCES

2025 STATE OF MINNESOTA
BOARD OF WATER and SOIL RESOURCES
WATERSHED BASED IMPLEMENTATION FUNDING
GRANT AGREEMENT

Vendor:	0000195933
PO#:	3000017696

This Grant Agreement is between the State of Minnesota, acting through its Board of Water and Soil Resources (Board) and **Prior Lake-Spring Lake WD,** 4646 Dakota Street SE, Prior Lake MN 55372 (Grantee).

Grant ID	Grant Title	Awarded Amt
C25-0157	**Prior-Lake Spring Lake WBIF 2025**	**$209,935.00**

Total Grant Awarded: $209,935.00

Recitals

1. The Laws of Minnesota 2023, Chapter 40, Article 2, Section 6(a) appropriated funds to the Board for the FY 2024 and 2025 Clean Water Fund Watershed Based Implementation Funding Program.
2. The Board adopted the Watershed Based Implementation Funding FY24-25 Policy and authorized the allocation of funds for the FY 2024 and 2025 Clean Water Fund Watershed Based Implementation Funding Program through Board Order #23-55.
3. The Grantee has submitted a BWSR-approved work plan for this program.
4. The Grantee represents that it is duly qualified and agrees to perform all services described in this Grant Agreement to the satisfaction of the Board.
5. As a condition of the grant, Grantee agrees to minimize administration costs.

Authorized Representative

The State's Authorized Representative is Marcey Westrick, Central Region Manager, BWSR, 520 Lafayette Road North, Saint Paul, MN 55155, (651) 284-4153, or her successor, and has the responsibility to monitor the Grantee's performance and the authority to accept the services and performance provided under this Grant Agreement.

The Grantee's Authorized Representative is:

TITLE
ADDRESS
CITY
TELEPHONE NUMBER

If the Grantee's Authorized Representative changes at any time during this Grant Agreement, the Grantee must immediately notify the Board.

Grant Agreement

1. **Terms of the Grant Agreement.**
   1.1. ***Effective date:*** The date the Board obtains all required signatures under Minn. Stat. § 16B.98, Subd. 5. **The Board will notify the Grantee when this Grant Agreement has been executed. The Grantee must not begin work under this Grant Agreement until it is executed.**
   1.2. ***Expiration date:*** December 31, 2027 or until all obligations have been satisfactorily fulfilled, whichever comes first.
   1.3. ***Survival of Terms:*** The following clauses survive the expiration date or cancellation of this Grant Agreement: 7. Liability; 8. State Audits; 9. Government Data Practices; 12. Governing Law, Jurisdiction, and Venue; 14. Data Disclosure; and 19. Intellectual Property Rights.

2. **Grantee's Duties.**

The Grantee will comply with required grants management policies and procedures set forth through Minn. Stat. § 16B.97, Subd. 4(a)(1). The Grantee is responsible for the specific duties for the Program as follows:

2.1. ***Implementation:*** The Grantee will implement their Board approved work plan. The work plan will be implemented according to the Watershed Based Implementation Funding FY24-25 Policy.

2.2. ***Reporting:*** All data and information provided in a Grantee's report shall be considered public.

2.2.1. The Grantee will submit an annual progress report to the Board by February 1 of each year on the status of Program implementation by the Grantee. Information provided must conform to the requirements and formats set by the Board.

2.2.2. All individual grants over $500,000 require a reporting expenditure by June 30 of each year.

2.2.3. Final Progress Report: The Grantee will submit a final progress report to the Board by February 1, 2028, or within 30 days of fully expending funds, whichever occurs sooner. Information provided must conform to the requirements and formats set by the Board.

2.3. ***Match:*** The Grantee will ensure any local match requirement will be provided as stated in Grantee's approved work plan.

3. **Time.**

The Grantee must comply with all the time requirements described in this Grant Agreement. In the performance of this Grant Agreement, time is of the essence.

4. **Terms of Payment.**

4.1. Funds will be distributed in three installments per grant: 1) The first payment of 50% will be distributed after the execution of the Grant Agreement. 2) The second payment of 40% will be distributed after the first payment of 50% has been expended and reporting requirements have been met. 3) The third payment of 10% will be distributed after the grant has been fully expended and reporting requirements are met.

4.2. Grantees may be required to submit documentation of expenditures reported.

4.3. All costs must be incurred within the grant period. All incurred costs should be calculated or determined before the final report is completed or returning funds.

4.4. Unspent grant funds must be returned within 30 days of the expiration date of the Grant Agreement.

4.5. Once final reporting has been completed funds may not be re-requested as funds may not be available.

4.6. The obligation of the State under this Grant Agreement will not exceed the amount listed above.

4.7. This Grant Agreement includes advance payment. Advance payments allow the grantee to have adequate operating capital for start-up costs, ensure their financial commitment to landowners and contractors, and to better schedule work into the future.

5. **Conditions of Payment.**

All services provided by the Grantee under this Grant Agreement must be performed to the Board's satisfaction, as set forth in this Grant Agreement. Compliance will be determined at the sole discretion of the Board's Authorized Representative and in accordance with all applicable federal, State, and local laws, policies, Watershed Based Implementation Funding FY24-25 Policy, ordinances, rules, and regulations. The Grantee will not receive payment, may be required to repay grant funds, or may have future payments withheld if work is found by the Board to be unsatisfactory or performed in violation of federal, State, or local law. Costs charged to the grant must be direct and necessary to produce the outcomes funded by the grant. Charges to the grant must be itemized and documented.

6. **Assignment, Amendments, Work Plan Revisions, and Waiver.**

6.1. ***Assignment.*** The Grantee may neither assign nor transfer any rights or obligations under this Grant Agreement without the prior consent of the Board and a fully executed Assignment Agreement, executed and approved by the same parties who executed and approved this Grant Agreement, or their successors in office.

6.2. ***Amendments and Work Plan Revisions.*** Any amendments to this Grant Agreement must be in writing and will not be effective until approved and executed by the same parties who approved and executed the original Grant Agreement, or their successors in office. Amendments must be executed prior to the expiration of the original Grant Agreement or any amendments thereto. All work plan revisions must be documented. The Board reserves the right to require a work plan revision or grant agreement amendment for changes in the scope of the grant.

6.2.1. Board approval is required of work plan revisions on grants less than $50,000 if the cumulative budget adjustment is greater than $5,000; on grants $50,000 to $500,000 if the cumulative budget adjustment is greater than 10% of the total grant amount; on grants greater than $500,000 if the cumulative budget adjustment is greater than $50,000.

6.2.2. An amendment to the Grant Agreement is required on grants less than $50,000 if the cumulative budget adjustment is equal to or greater than $20,000; on grants $50,000 to $500,000 if the cumulative budget adjustment is equal to or

greater than 40% of the total grant amount; on grants greater than $500,000 if the cumulative budget adjustment is equal to or greater than $200,000.

6.2.3. Revisions that do not meet the thresholds identified in 6.2.1. or 6.2.2. are permitted without prior approval from the Board provided that such revision is documented and that the total obligation of the Board for all compensation and reimbursements to the Grantee shall not exceed the total grant award amount.

6.3. ***Waiver.*** If the Board fails to enforce any provision of this Grant Agreement, that failure does not waive the provision or its right to enforce it.

7. **Liability.**

The Grantee must indemnify, save, and hold the State, its agents, and employees harmless from any claims or causes of action, including attorney's fees incurred by the State, arising from the performance of this Grant Agreement by the Grantee or the Grantee's agents or employees. This clause will not be construed to bar any legal remedies the Grantee may have for the State's failure to fulfill its obligations under this Grant Agreement.

8. **State Audits.**

Under Minn. Stat. § 16B.98, Subd. 8, the Grantee's books, records, documents, and accounting procedures and practices of the Grantee or other party relevant to this Grant Agreement or transaction are subject to examination by the Board and/or the State Auditor or Legislative Auditor, as appropriate, for a minimum of six years from the end of this Grant Agreement, receipt and approval of all final reports, or the required period of time to satisfy all State and program retention requirements, whichever is later.

8.1. The books, records, documents, accounting procedures and practices of the Grantee and its designated local units of government and contractors relevant to this grant, may be examined at any time by the Board or Board's designee and are subject to verification. The Grantee or delegated local unit of government will maintain records relating to the receipt and expenditure of grant funds.

9. **Government Data Practices.**

The Grantee and State must comply with the Minnesota Government Data Practices Act, Minn. Stat. Ch. 13, as it applies to all data provided by the State under this Grant Agreement, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the Grantee under this Grant Agreement. The civil remedies of Minn. Stat. § 13.08 apply to the release of the data referred to in this clause by either the Grantee or the State.

10. **Workers' Compensation.**

The Grantee certifies that it is in compliance with Minn. Stat. § 176.181, Subd. 2, pertaining to workers' compensation insurance coverage. The Grantee's employees and agents will not be considered State employees. Any claims that may arise under the Minnesota Workers' Compensation Act on behalf of these employees and any claims made by any third party as a consequence of any act or omission on the part of these employees are in no way the State's obligation or responsibility.

11. **Publicity and Endorsement.**

11.1. ***Publicity.*** Any publicity regarding the subject matter of this Grant Agreement must identify the Board as the sponsoring agency. For purposes of this provision, publicity includes notices, informational pamphlets, press releases, research, reports, signs, and similar public notices prepared by or for the Grantee individually or jointly with others, or any subcontractors, with respect to the Program, publications, or services provided resulting from this Grant Agreement.

11.2. ***Endorsement.*** The Grantee must not claim that the State endorses its products or services.

12. **Governing Law, Jurisdiction, and Venue.**

Minnesota law, without regard to its choice-of-law provisions, governs this Grant Agreement. Venue for all legal proceedings out of this Grant Agreement, or its breach, must be in the appropriate State or federal court with competent jurisdiction in Ramsey County, Minnesota.

13. **Termination.**

13.1. The Board may cancel this Grant Agreement at any time, with or without cause, upon 30 days' written notice to the Grantee. Upon termination, the Grantee will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed.

13.2. The Board may immediately terminate this Grant Agreement if the Board finds that there has been a failure to comply with the provisions of this Grant Agreement, that reasonable progress has not been made or that the purposes for which the funds were granted have not been or will not be fulfilled. The Board may take action to protect the interests of the State of

Minnesota, including the refusal to disburse additional funds and requiring the return of all or part of the funds already disbursed.

13.3. The Commissioner of Administration may immediately and unilaterally cancel this grant contract agreement if further performance under the agreement would not serve agency purposes or is not in the best interest of the State.

14. **Data Disclosure.**
Under Minn. Stat. § 270C.65, Subd. 3, and other applicable law, the Grantee consents to disclosure of its social security number, federal employer tax identification number, and/or Minnesota tax identification number, already provided to the State, to federal and State tax agencies and State personnel involved in the payment of State obligations. These identification numbers may be used in the enforcement of federal and State tax laws which could result in action requiring the Grantee to file State tax returns and pay delinquent State tax liabilities, if any.

15. **Prevailing Wage.**
It is the responsibility of the Grantee or contractor to pay prevailing wage for projects that include construction work of $25,000 or more, prevailing wage rules apply per Minn. Stat. §§ 177.41 through 177.44. All laborers and mechanics employed by grant recipients and subcontractors funded in whole or in part with these State funds shall be paid wages at a rate not less than those prevailing on projects of a character similar in the locality. Bid requests must state the project is subject to prevailing wage.

16. **Municipal Contracting Law.**
Per Minn. Stat. § 471.345, grantees that are municipalities as defined in Subd. 1 of this statute must follow the Uniform Municipal Contracting Law. Supporting documentation of the bidding process utilized to contract services must be included in the Grantee's financial records, including support documentation justifying a single/sole source bid, if applicable.

17. **Constitutional Compliance.**
It is the responsibility of the Grantee to comply with requirements of the Minnesota Constitution regarding the use of Clean Water Funds to supplement traditional sources of funding.

18. **Signage.**
It is the responsibility of the Grantee to comply with requirements for project signage as provided in Minnesota Laws 2010, Chapter 361, Article 3, Section 5(b) for Clean Water Fund projects.

19. **Intellectual Property Rights.**
The State owns all rights, title, and interest in all of the intellectual property rights, including copyrights, patents, trade secrets, trademarks, and service marks in the Works and Documents created and paid for under this grant. Works means all inventions, improvements, discoveries, (whether or not patentable), databases, computer programs, reports, notes, studies, photographs, negatives, designs, drawings, specifications, materials, tapes, and disks conceived, reduced to practice, created or originated by the Grantee, its employees, agents, and subcontractors, either individually or jointly with others in the performance of this grant. Work includes "Documents." Documents are the originals of any databases, computer programs, reports, notes, studies, photographs, negatives, designs, drawings, specifications, materials, tapes, disks, or other materials, whether in tangible or electronic forms, prepared by the Grantee, its employees, agents or subcontractors, in the performance of this grant. The Documents will be the exclusive property of the State and all such Documents must be immediately returned to the State by the Grantee upon completion or cancellation of this grant at the State's request. To the extent possible, those Works eligible for copyright protection under the United State Copyright Act will be deemed to be "works made for hire." The Grantee assigns all right, title, and interest it may have in the Works and the Documents to the State. The Grantee must, at the request of the State, execute all papers and perform all other acts necessary to transfer or record the State's ownership interest in the Works and Documents.

***IN WITNESS WHEREOF**, the parties have caused this Grant Agreement to be duly executed intending to be bound thereby.*

Approved:

Prior Lake-Spring Lake WD	**Board of Water and Soil Resources**
By: _____	**By:** _____
_____	_____
(signature)	***(signature)***
Title: _____	**Title:** _____
Date: _____	**Date:** _____