



RAMSEY-WASHINGTON
METRO WATERSHED DISTRICT

March 2024 Board Packet

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Agenda

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Regular Board Meeting Agenda

Wednesday, March 6, 2024

6:30 PM

This month's meeting will be held at the District office (2665 Noel Drive, Little Canada, MN) but also via the video conferencing platform Zoom. Board members, staff, consultants, and general public will be able to join in person OR via video and/or phone. The public will be able to listen to meeting but not participate with the exception of the visitor comments portion of the agenda. Instructions for joining in on the Zoom meeting can be found after the agenda.

1. Call to Order – 6:30 PM
2. **Approval of Agenda (pg. 3)**
3. **Ramsey-Washington Metro Watershed District Board Manager Oath of Office (pg. 7)**
4. **Consent Agenda: To all be approved with one motion unless removed from consent agenda for discussion.**
 - A. Approval of Regular Meeting Minutes February 7, 2024 (pg. 13)
 - B. Treasurer's Report and Bill List (pg. 22)
 - C. Permit Program
 - i. 24-11 MnDOT Courtly Road Improvements, Woodbury
 - D. Stewardship Grant Program
 - i. 24-07 CS Atchison
 - ii. 24-08 CS Woodbury 2024 Street Sweeping
 - iii. 24-09 CS Dunn
5. Visitor Comments (limited to 4 minutes each)
6. Permit Program
 - A. Applications – see consent agenda.
 - B. Enforcement Action Report (pg. 44)
7. Stewardship Grant Program
 - A. Applications – see consent agenda.
 - B. Budget Status Update (pg. 48)
8. Action Items
 - A. **Bylaws and Board Governance Document Approval (pg. 50)**
 - B. **Board of Managers Annual Meeting (pg. 62)**
 - C. **Roosevelt Homes Phase 2 Bid Award (pg. 101)**
 - D. **Woodbury Target Bid Award (pg. 105)**
9. Attorney Report
10. Board Discussion Topics
11. New Reports and/or Presentations
 - A. Community Survey Results Presentation – Lauren Hazenson (*no packet materials*)
 - B. Kohlman Lake Study Presentation – Keith Pilgrim, Barr (pg. 107)
 - C. Shallow Lake Aeration Study Presentation – Keith Pilgrim, Barr (pg. 148)
12. Administrator's Report (pg. 181)
 - A. Meetings Attended

Board Meeting Agenda

- B. Upcoming Meetings and Dates
 - C. Board Action Log and Updates
 - D. Minnesota Watersheds Updates
 - E. Staffing Update
13. Project and Program Status Reports (*pg. 185*)
- Project Feasibility Studies*
 - A. Kohlman Creek Flood Risk Feasibility Study
 - B. Ames Lake Area Flood Risk Reduction Planning Study
 - C. Resiliency Study for non-Beltline Tributary Areas
 - D. Owasso Basin/North Star Estates Improvements
 - E. Street Sweeping
 - F. Watershed Approach to Retrofit Projects (WARP)
 - Lake Studies/TMDL Reports*
 - G. 2024 Grant Applications
 - Research Projects*
 - H. Kohlman Lake Aquatic Plant Management Effects Study
 - I. Shallow Lake Aeration Study
 - Capital Improvements*
 - J. Woodbury Target Store Stormwater Retrofit Project
 - K. Roosevelt Homes
 - L. Stewardship Grant Program
 - M. Arbogast Stormwater Filtration BMP
 - N. Pioneer Park Stormwater Reuse
 - O. Fish Creek Tributary Improvements
 - P. Cottage Place Wetland Regeneration
 - Q. County Road C Culvert Project
 - CIP Project Repair and Maintenance*
 - R. Routine CIP Inspection and Unplanned Maintenance Identification
 - S. 2024 CIP Maintenance and Repairs Projects
 - T. Beltline Mississippi Branch Outfall Replacement Project
 - U. New Technology Mini Case Studies
 - Program Updates*
 - V. Natural Resources Program
 - W. Public Involvement and Education Program
 - X. Communications and Outreach Program
14. Manager Comments and Next Month's Meeting
15. **Adjourn**



RAMSEY-WASHINGTON

METRO WATERSHED DISTRICT

NOTICE OF BOARD MEETING

Wednesday, March 6, 2024

6:30 PM

Hybrid Meeting: In-Person and Web Conference

This month's meeting will be held at the District office (2665 Noel Drive, Little Canada, MN) AND via the video conferencing platform Zoom. Board members, staff, consultants, and general public will be able to join in person or via Zoom. The public will be able to listen to meeting but not participate with the exception of the visitor comments portion of the agenda. Visitor comment may be given in person or via Zoom. Instructions for joining in on the Zoom meeting can be found below.

To access the meeting via webcast, please use this link: <https://us02web.zoom.us/j/87369081047?pwd=MUloQkQvY0gwYVRSWFh2NHNRbzFjZz09>

The meeting room will open at 6:20 pm with the meeting starting at 6:30 pm. To connect to audio, you may choose to use your computer audio options or you may use your mobile device to call. The phone access number is **(312) 626-6799**. The Meeting ID is **873 6908 1047**. The meeting password is **199373**. If you have any questions, please contact Tina Carstens at tina.carstens@rwmwd.org.

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Oaths of Office 2024

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RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
RAMSEY AND WASHINGTON COUNTIES, MINNESOTA

STATE OF MINNESOTA)
) ss.
COUNTY OF WASHINGTON)

OATH OF OFFICE

I, **MATT KRAMER**, do solemnly swear that I support the Constitution of the United States, the Constitution of the State of Minnesota, and that I will faithfully, justly, and impartially discharge the duties of the office of Manager of the Ramsey-Washington Metro Watershed District, Ramsey and Washington Counties, Minnesota, to the best of my judgment and ability.

Dated: _____

Matt Kramer

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
RAMSEY AND WASHINGTON COUNTIES, MINNESOTA

STATE OF MINNESOTA)
) ss.
COUNTY OF WASHINGTON)

OATH OF OFFICE

I, **BENJAMIN KARP**, do solemnly swear that I support the Constitution of the United States, the Constitution of the State of Minnesota, and that I will faithfully, justly, and impartially discharge the duties of the office of Manager of the Ramsey-Washington Metro Watershed District, Ramsey and Washington Counties, Minnesota, to the best of my judgment and ability.

Dated: _____

Benjamin Karp

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
RAMSEY AND WASHINGTON COUNTIES, MINNESOTA

STATE OF MINNESOTA)
) ss.
COUNTY OF WASHINGTON)

OATH OF OFFICE

I, **MARK GERNES**, do solemnly swear that I support the Constitution of the United States, the Constitution of the State of Minnesota, and that I will faithfully, justly, and impartially discharge the duties of the office of Manager of the Ramsey-Washington Metro Watershed District, Ramsey and Washington Counties, Minnesota, to the best of my judgment and ability.

Dated: _____

Mark Gernes

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
RAMSEY AND WASHINGTON COUNTIES, MINNESOTA

STATE OF MINNESOTA)
) ss.
COUNTY OF WASHINGTON)

OATH OF OFFICE

I, **STEPHANIE WANG**, do solemnly swear that I support the Constitution of the United States, the Constitution of the State of Minnesota, and that I will faithfully, justly, and impartially discharge the duties of the office of Manager of the Ramsey-Washington Metro Watershed District, Ramsey and Washington Counties, Minnesota, to the best of my judgment and ability.

Dated: _____

Stephanie Wang

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT
RAMSEY AND WASHINGTON COUNTIES, MINNESOTA

STATE OF MINNESOTA)
) ss.
COUNTY OF WASHINGTON)

OATH OF OFFICE

I, **VAL EISELE**, do solemnly swear that I support the Constitution of the United States, the Constitution of the State of Minnesota, and that I will faithfully, justly, and impartially discharge the duties of the office of Manager of the Ramsey-Washington Metro Watershed District, Ramsey and Washington Counties, Minnesota, to the best of my judgment and ability.

Dated: _____

Val Eisele

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Consent Agenda

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**Ramsey-Washington Metro Watershed District
Minutes of Regular Board Meeting
February 7, 2024**

The Regular Meeting of February 7, 2024, was held at the District Office Board Room, 2665 Noel Drive, Little Canada, Minnesota, and via Zoom web conferencing at 6:30 p.m. A video recording of the meeting can be found at <https://youtu.be/KLjU1bLf2k0>. Video time stamps included after each agenda item in minutes.

PRESENT:

Val Eisele, President
Matt Kramer, Treasurer
Ben Karp, Secretary
Mark Gernes, Manager
Dr. Pam Skinner, Vice President

ABSENT:

ALSO PRESENT:

Tina Carstens, District Administrator
Nicole Maras, Permit Coordinator
Tracey Galowitz, Attorney for District
Dave Vlasin, Watershed Project Coordinator
Mary Fitzgerald, District Inspector
Larry Swope, Shoreview Resident
Stan Krawoski, Washington County Commissioner

Paige Ahlborg, Project Manager
Eric Korte, Water Monitoring Coordinator
Brandon Barnes, Barr Engineering
Tyler Olsen, Barr Engineering
Paul Erdmann, Natural Resources Program Manager
Joe Bester, Lake Owasso Association

1. CALL TO ORDER

The meeting was called to order by President Eisele at 6:30 p.m.

2. APPROVAL OF AGENDA (0:43)

Motion: Manager Karp moved, Manager Gernes seconded, to approve the agenda as presented. Motion carried unanimously.

3. RECOGNITION OF OUTGOING BOARD MEMBER – DR. PAM SKINNER- (0:56)

President Eisele and Tina Carstens gave an introduction to a video honoring Dr. Pam Skinner and her 30 years as a board member. Tina explained that this video was originally created for the Watershed Excellence Awards where you she was give the Roger Lake Stewardship Excellence award in 2023.

President Eisele introduced Washington County Commissioner, Stan Krawoski.

Commissioner Krawoski presented Dr. Pam Skinner with an award for her 30 years of service as a Board member of the District, representing Washington County.

Past board member, Larry Swope gave recognition to Dr. Pam Skinner and her work with the District.

4. CONSENT AGENDA (12:24)

- A. Approval of Minutes from January 3, 2023
- B. Treasurer’s Report and Bill List

- C. Permit Program
 - i. 24-08 Target Woodbury Stormwater Retrofit, Woodbury
 - ii. 24-09 MnDOT Testing Lab Addition, Maplewood
 - iii. 24-10 St. Paul Samuel H. Morgan Trail Reconstruction, St. Paul
- D. Change Order No. 4 – Arbogast Underground Stormwater Filter
- E. District Liability Insurance Coverage Waiver

Motion: Manager Gernes moved, Manager Kramer seconded to approve the consent agenda as presented. Motion carried unanimously.

4. VISITOR COMMENTS (12:59)

No comments.

5. PERMIT PROGRAM (14:11)

A. Applications – See Consent Agenda

B. Monthly Enforcement Report

During January, 2 notices were sent to address: install/maintain perimeter control (2).

Nicole Maras gave an overview of the enforcement report and a staff approved permit. Nicole explained that the staff approval process is in place to streamline small projects such as this shoreline restoration.

Nicole Maras provided a follow up to the Rooney site that was discussed last month and explained that the developer has been responding and will be the one working on the site. Nicole stated the developer is working on getting a trained inspector on site. Nicole stated that the permanent filtration basin on this site is still under review. Nicole explained that the project will be turned over to the city of White Bear Lake once the filtration basin is complete. Nicole stated that it is currently stabilized.

President Eisele ask for more information on the owner not receiving inspection reports.

Nicole Maras confirmed that the owner created a new email address and other people have been included in those emails to insure the inspection reports are received.

President Eisele stated he believes it is an important to continue to monitor this site.

Nicole Maras continued on to discuss a wetland area that has been disturbed by a homeowner in Woodbury. Nicole provided information on the process of the WCA violation and restoration order. Nicole stated the city of Woodbury is on board with the current process and is working on the restoration process of the disturbed wetland. Nicole stated that once the restoration order is delivered, work on restoring the wetland can begin but the timeline is unknown at this time.

President Eisele questioned the role of the District in this matter.

Nicole stated that the District outlined what needs to happen due to this being a WCA violation and described how the enforcement process works through WCA. Nicole explained the Washington County Conservation district has to write the restoration order and the DNR has to deliver the order. Nicole continued to explain that there are many agencies involved in this process.

Manager Gernes questioned if this location is a public water and if the resident is cooperating.

Nicole Maras stated that it is not a public water. Nicole explained that the City of Woodbury is working directly with the resident, delivering the cease and desist, and that she does not have more information on the resident's cooperation.

Nicole stated the City of Woodbury is planning to bring the restoration order to the City Council meeting next month.

Manager Karp asked if the District will be keeping tabs on this process.

Nicole Maras stated that the District would be following the progress of the restoration and could potentially complete an inspection once the restoration is complete.

Manager Karp questioned if there is data showing the wetland historically so that the wetland can be restored to its original state.

Nicole Maras stated the district and BWSR worked together and that wetland was estimated with historical photos going back at least 5 years. Nicole explained that BWSR is letting the City of Woodbury decide if they would like to restore the wetland to what it was originally. Nicole stated they will be required to remove the fill and berm currently present.

Manager Skinner asked if this could be used as an education opportunity to teach other land owners of the consequences of disturbing wetlands.

Manager Karp asked if there is an opportunity to enhance the wetland with the current project that is happening.

Nicole Maras stated she was not sure what the likelihood the of success of improving the wetland would be due to the location but would look into it. Nicole stated that she would also work with communications on a post to make this into a teachable moment about wetlands. Nicole explained that this is a unique situation due to the heavy equipment the homeowner was using in their back yard.

President Eisele asked if the staff approved permit applicant was given information on potential grants available.

Nicole Maras stated that it would have been completed with the Snail Lake Shoreline Outreach and that neighbors on either side also have restorations.

Paige Ahlborg confirmed that the resident would have been given that information.

6. STEWARDSHIP GRANT PROGRAM (25:45)

A. Applications - none

B. Budget Status Update

Paige Ahlborg gave an overview of the budget status.

President Eisele requested more information on the street sweeping program expense noted in the budget status update.

Paige Ahlborg explained that the City of Roseville approached the District about the street sweeping program and whether we would help support the hiring of a city intern who will help the city refine their process.

Tina Carstens stated the intern is supposed to develop a monitoring program for street sweeping looking into how the cities collected material is weighed, determine phosphorus reduction based on that weight as well as the efficiency of the sweeping.

President Eisele questioned if the District would be able to use the data collected.

Paige Ahlborg confirmed that there would be meetings with this intern to discuss their work and findings.

Manager Gernes stated that this internship sounds like a great opportunity. Manager Gernes questioned the length and timing of the internship.

Paige Ahlborg provided more information on the details of the internship.

The Board is looking forward to see what data will be found through this internship.

7. ACTION ITEMS (28:59)

A. Roosevelt Homes Phase 2 Advertise for Bid

Paige Ahlborg provided an overview of the Roosevelt Homes project. Paige detailed what Phase 2 will entail and what work contractors will be doing during phase 2.

Brandon Barnes noted that this is phase 2 of a 3-phase project. Brandon provided information on what work will be completed in phase 3.

President Eisele questioned if there would be overlap between the project sites in phases 2 and 3.

Brandon Barnes confirmed that the work is being done in an order so that work done during one phase will not affect work done in a previous phase.

Manager Gernes questioned if there would be an opportunity for residents to assist with the planting. Manager Gernes stated that he recognized this may be challenging due to the work being completed by contractors.

Paige Ahlborg explained that Roosevelt Homes received a grant for Ash tree removal and are organizing tree planting efforts with the residents as a part of that grant process. Paige explained that due to the tree planting effort happening with the Federal grant it was decided to have the planting in phase 2 completed by the contractor. Paige stated that the plants are warranted when planted by contractors. Paige explained that the District is working to be a part of the Roosevelt Homes tree planting efforts.

Motion: Manager Skinner moved, Manager Karp seconded to approve the preliminary design, estimated cost and proposed project schedule and direct staff to finalize the design and building documents and solicit bid proposals. Motion carried unanimously.

B. Woodbury Target Advertise for Bid

Paige Ahlborg provided an overview of the Woodbury Target project.

Tina Carstens explained that there are funds within the Stormwater Impact Fund for this subwatershed to cover this project.

Motion: Manager Skinner moved, Manager Kramer seconded to approve the design, estimated cost, and proposed project schedule and direct staff to finalize design and bidding documents and solicit bid proposals.

Motion carried unanimously.

8. ATTORNEY REPORT (35:48)

Tracy Galowitz reviewed items being worked on including the publication for soliciting vendor bids to bring to next month's board meeting, and reviewing the Phalen agreement.

9. BOARD DISCUSSION TOPICS (36:36)

President Eisele asked the other Board Members to confirm scheduling for the upcoming closed meeting.

Tracy Galowitz provided information on what a closed meeting entails and explained that in this case they are only used for the purpose of performance review of the administrator.

10. NEW REPORTS AND/OR PRESENTATIONS (40:51)

A. Kohlman Creek Flood Risk Reduction Feasibility Study Presentation

Tyler Olsen provided background on the study as a follow up to the Beltline Resiliency Study. Tyler goes on to explain the flood risk reduction and design goals that were set and the alternative and conceptual designs that were developed to address issues identified throughout the corridor discussed in the study, including impacts to both commercial and residential properties. Tyler gave an overview of past project that were completed in this location. Tyler explained the 100-year floodplain and how the corridor would be affected as well as the solutions that were found to mitigate damage from such an event. Tyler also explained how the importance of mitigating negative impacts on downstream areas.

President Eisele asked for clarification on the meaning of reducing freeboard and if that meant freeboard would be increasing above the 100-year flood plain.

Tyler Olsen confirmed that it does mean that the freeboard would be increasing above the 100-year flood plain.

President Eisele requested clarification on where the ATLAS-14 information comes from and asked if it is pulled from FEMA.

Tyler Olsen explained that 100-year flood plain is being used as defined by the watershed district stormwater model. Tyler went on to further explain that the modeling information is shared with FEMA for their model and that it is more detailed in identifying inundation areas.

Manager Gernes questioned if the freeboard has any buffer concepts or if it is an exact elevation.

Tyler Olsen confirmed that it is an exact elevation with room for error in the modeling and provided more information on what is required by District rules.

Manager Gernes asked for clarification that there is no horizontal consideration and that it is all strictly elevation.

Tyler Olsen confirmed that it is based strictly on elevation. Tyler continued to explain the methodology used to update the model, such as collecting information from the cities that the study area covered, performing surveys, and other data collection methods. Tyler highlighted how the timing of city projects has fast tracked certain projects, such as the County Rd. C culvert, to maximize efficiency. Tyler continues on to provide more information on the findings of the study.

President Eisele asked if the locations being discussed would have the two feet of freeboard.

Tyler Olsen stated that the locations being discussed are not required to have the two feet of freeboard because they are above the 100-year flood plain. Tyler explained that part of the criteria is to make any improvement to the freeboard even though they are not at risk. Tyler continued on to explain details of the conceptual projects in the study area and discussed the projects that were recommended and explained which projects were not recommended and why.

President Eisele questioned if there would be any reason for land owners and public entities to not want the recommended project 1 to occur.

Brandon Barnes explained that conversations have been happening with the cities for quite some time. Brandon detailed some of the work that has been done with the cities and the feedback that was received. Brandon also confirmed that the projects would not be happening on residential properties. Brandon stated that the city has been supportive of the efforts.

Tina Carstens reiterated that the projects would only be placed on public owned land.

Manager Gernes requested more information on the elevation of the berm along PCU Pond and questioned the aesthetics of the berm height.

Tyler Olsen stated that the berm is planned to be manageable and would be around three feet in height. Tyler explained that it will be fine tuned through final planning and the city would be consulted on the aesthetics.

Manager Skinner stated that the District is responsible for doing routine maintenance on the PCU pond being discussed due to it being constructed by the District. Manager Skinner asked if the pond excavation option would be going above and beyond the normal clean out by making the pond deeper.

Tyler Olsen confirmed that the project would be making the pond deeper as well as increasing surface area to provide more live storage and would also include upland grading. Tyler explained that while looking to add storage at the north side of the pond it was found that excavation would not be cost effective due to a historic dump at the location and making changes to the PCU pond was the option.

President Eisele asked for clarification on the phrase recommended vs. not recommended. President Eisele asked if this phrasing is based solely on cost benefit ratio or if other elements are considered.

Tyler Olsen explained that cost is a big driver but environmental concerns and other information is also considered. Tyler goes on to explain in more detail what is looked at for recommended vs. not recommended projects.

Tyler continued on to provide information on the next location in this study on a wetland east of White Bear Ave and highlighted alternatives that were found. Tyler explained that two structures in the area are below the 100-year flood plain and stated that significant improvements would be needed to remove the flood risk. Tyler explained potential improvements such as increasing wetland storage and how those improvements would have permanent complications and environmental considerations as well as having greater impacts downstream. Tyler went on to detail additional improvements that were looked at and the impacts those improvements may have. Tyler stated that due to these concerns they are not recommending improvements at the wetland being discussed due to the impacts. Tyler explained that while improvements in this location are not recommended this location is benefiting from improvements made elsewhere.

President Eisele questioned what the 10- and 50- year flood risks would look like for the structures being discussed.

Brandon Barnes stated that it is currently being looked at through the lens of the 100-year flood plain, which is the maximum regulated, and that the 10- and 50- year flood risks are being added to the feasibility study.

Tyler Olsen continued on to discuss the area west of White Bear Avenue and what alternative is recommended for that location, such as a berm and storm sewer outlet to help drain low areas. Tyler described more alternatives and detailed what benefits they may have.

Manager Gernes requested more information on the berm alternative and the affects it may have on a nearby wetland.

Tyler Olsen stated that an outlet was proposed at the elevation of the impacted homes and that it would be noted for final design to make sure the wetland would not drain too low or have additional water added.

President Eisele questioned if the proposed culvert would have one-way flow.

Tyler Olsen confirmed that the culvert would have a back-flow preventer.

Tina Carstens asked for clarification that the berm would be on Ramsey County property.

Tyler Olsen confirmed that while still being close to the nearby homes the berm would be located on Ramsey County property.

President Eisele asked if the berms would be planted.

Tina Carstens confirmed that they would be planted.

Tyler Olsen continued on to review the modeling and flood elevation changes with the proposed berm along an apartment complex on the south side of the wetland. Tyler gave an overview of the proposed project would not be needed except to meet the District's stormwater rules. Tyler went on to discuss what the details of the proposed projects, emphasizing the need to match existing conditions downstream as to not cause additional issues.

Manager Gernes questioned what the bottom elevation would be for the culvert that was previously discussed and asked if the elevation would allow for aquatic movement and not necessarily to maximize storage.

Tyler Olsen stated the invert elevation of the culvert would be matched and that only the shape and size of it would be changed.

President Eisele asked if the culvert would include any automatic controls.

Tyler Olsen stated that would not be needed to see the benefits. Tyler explained features that could be added temporarily that would help prevent downstream impacts. Tyler went on to discuss the next steps and the recommended order the projects would be completed in and the cost to complete the projects.

President Eisele asked for clarification on the project recommendations.

Brandon Barnes provided more information on what would be looked at in the next steps and what would be brought up for further discussion before moving forward.

Tyler Olsen further discussed the next steps and what would take place in order to develop the final designs as well as finalizing the project report to be shared with the cities and incorporating any feedback that would be received.

President Eisele questioned if residents in the area have been engaged.

Brandon Barnes reiterated that all of these projects are on city or county property and conversations have been had with those entities.

Tina Carstens stated that the District would work with the public agencies involved and those agencies would be in charge of the notification process.

The board appreciated the information provided in this presentation.

B. Watershed Approach to Retrofit Projects (WARP) Scope Summary

Tyler Olsen provided background information on what was looked at in the scope and how it will help identify potential targeted retrofit and stewardship grant projects. Tyler explained the goal is to develop a more systematic and strategic approach for finding projects. Tyler gave an overview of the flow chart that describes how the process would look

utilizing the data available to objectively evaluate locations for potential projects, including data involving equity, flood risk and habitat corridors. Tyler explained that heat maps can be made from the data to create launching point for outreach and finding those interested in participating in the targeted retrofits or stewardship grant program. Tyler continued to explain how the data and partnership with District staff can be utilized to create mapping and scoring methods to target projects that would have the most impact. Tyler stated that this will allow the district to identify projects equitably and objectively.

President Eisele questioned if the updated vulnerability index was in line with WARP.

Tina Carstens confirmed that is was.

President Eisele asked if the 2025 retrofit planning can be moved up so there is time to view how this new tool is working and to make comments.

Tina Carstens explained that the retrofit planning is typically done in the late summer and early fall. Tina stated that this should give time to bring it to the Board for comments.

Paige Ahlborg stated that this should be a better way to track and plan projects.

President Eisele expressed excitement for this new tool and is eager to see it put to use.

11. ADMINISTRATOR'S REPORT (1:22:54)

A. Meetings Attended

No comments.

B. Upcoming Meetings and Dates

Tina Carstens reviewed the upcoming meetings and dates.

C. Board Action Log and Updates

No comments.

D. Minnesota Watersheds Updates

No comments.

E. Staffing Update

No comments.

F. Annual Meeting Reminder

No comments.

12. PROJECT AND PROGRAM STATUS REPORTS (1:31:13)

Project Feasibility Studies

A. Kohlman Creek Flood Risk Feasibility Study

B. Improvements to Phalen Village

C. Ames Lake Area Flood Risk Reduction Planning Study

President Eisele wanted clarification on when a meeting will take place with the HRA.

Brandon Barnes confirmed the meeting had happened and provided more insight into what was discussed in that meeting and the feedback that was received after the meeting. Brandon reviewed the tentative schedule of when the go ahead will be given on this project.

D. Resiliency Study for Non-Beltline Tributary Areas

E. Owasso Basin/North Start Estates Improvements

President Eisele asked for additional information on the recent meetings that have taken place and where things are at with the project.

Brandon Barnes stated that the meeting with the North Star Estates engineer consultant and property management took place. Brandon highlighted what was discussed in that meeting. Brandon explained that they confirmed they are not interested in the project at this time. Brandon stated the next steps taken were to reach out to the city of Little Canada to update them. Brandon explained the City of Little Canada's involvement in this project and explained that the District will work with the city to look into other options.

F. Street Sweeping

G. Retrofit Inventory

Research Projects

H. Kohlman Lake Aquatic Plants Management Effects Study

President Eisele commented that he would like to do a lessons learned on this project.

I. Shallow Lake Aeration Study

Capital Improvements

J. Woodbury Target Store Stormwater Retrofit Project

K. Roosevelt Homes

L. Targeted Retrofit Projects 2024

M. Stewardship Grant Program

N. Arbogast Stormwater Filtration BMP

O. Pioneer Park Stormwater Reuse

P. Fish Creek Tributary Improvements

Q. Cottage Place Wetland Regeneration

Manager Gernes asked to hear the feedback that was received from the community on this project.

Paige Ahlberg provided insight on the feedback that was received. Paige explained that there was a loop trail that was a concern for the residents and that this trail had been removed from the plan. Paige stated that there will be one more meeting to gain approval for the project.

President Eisele questioned if a park or area of play are still being considered for this project.

Paige Ahlberg explained that a park is not a part of the current plan but there is a look-out that would be included.

R. County Road C Culvert Project

CIP Project Repair and Maintenance

S. 2024 CIP Maintenance and Repairs Project

President Eisele questioned if there is any risk to scheduling due to weather.

Dave Vlasin stated that a lot of projects were waiting until spring and that the CIP schedule is in good shape.

T. Beltline Mississippi Branch Outfall Replacement Project

Program Updates

U. Natural Resources Program

V. Public Involvement and Education Program

W. Communications and Outreach Program

President Eisele stated that he would be interested in viewing the community survey.

Tina Carstens confirmed that the survey will be in the packet for next month.

13. MANAGER COMMENTS AND NEXT MONTH'S MEETING (1:46:01)

President Eisele spoke a few words about Manager Skinner's impact on the District and her hard work during her time on the Board.

14. ADJOURN

Motion: Manager Skinner moved, Manager Karp seconded, to adjourn the meeting at 8:17 p.m. Motion carried unanimously.

DRAFT

RWMWD BUDGET STATUS REPORT
 Administrative & Program Budget
 Fiscal Year 2024
 2/29/2024

Budget Category	Budget Item	Account Number	Original Budget	Budget Transfers	Current Month Expenses	Year-to-Date Expenses	Current Budget Balance	Percent of Budget
Manager	Per diems	4355	\$7,000.00	-	-	-	\$7,000.00	0.00%
	Manager expenses	4360	3,000.00	-	-	-	3,000.00	0.00%
Committees	Committee/Bd Mtg. Exp.	4365	4,000.00	-	24.57	347.03	3,652.97	8.68%
	Sub-Total: Managers/Committees:		\$14,000.00	\$0.00	\$24.57	\$347.03	\$13,652.97	2.48%
Employees	Staff salary/taxes/benefits	4010	2,000,000.00	-	118,735.42	249,922.78	1,750,077.22	12.50%
	Employee expenses	4020	10,000.00	-	50.65	129.51	9,870.49	1.30%
	District training & education	4350	75,000.00	-	1,919.96	6,784.12	68,215.88	9.05%
	Sub-Total: Employees:		\$2,085,000.00	\$0.00	120,706.03	\$256,836.41	\$1,828,163.59	12.32%
Administration/ Office	Data Base/GIS Maintenance	4170	20,000.00	-	141.78	1,497.97	18,502.03	7.49%
	Office Equipment Maintenance	4305	2,000.00	-	-	-	2,000.00	0.00%
	Telephone	4310	2,000.00	-	201.38	402.76	1,597.24	20.14%
	Office supplies	4320	7,000.00	-	490.94	597.32	6,402.68	8.53%
	Postage	4330	2,000.00	-	143.55	143.55	1,856.45	7.18%
	Printing/copying	4335	5,000.00	-	508.70	1,217.30	3,782.70	24.35%
	Dues & publications	4338	17,000.00	-	20.00	13,005.00	3,995.00	76.50%
	Janitorial/Trash Service	4341	15,000.00	-	1,802.51	2,152.18	12,847.82	14.35%
	Utilities	4342	20,000.00	-	382.44	2,133.44	17,866.56	10.67%
	Building Maintenance	4343	100,000.00	-	3,627.44	5,584.53	94,415.47	5.58%
	Miscellaneous	4390	5,000.00	-	-	-	5,000.00	0.00%
	Insurance	4480	65,000.00	-	-	-	65,000.00	0.00%
	Office equipment	4703	80,000.00	-	-	16,016.55	63,983.45	20.02%
	District Vehicles/Maintenance	4810-40	60,000.00	-	230.27	1,354.59	58,645.41	2.26%
	Metro INET	4325	100,000.00	-	8,165.38	16,330.76	83,669.24	16.33%
	Outside Consulting Services	4160	40,000.00	-	-	-	40,000.00	0.00%
	Sub-Total: Administration/Office:		\$540,000.00	\$0.00	15,714.39	60,435.95	\$355,894.81	11.19%
Consultants/ Outside Services	Auditor/Accounting	4110	80,000.00	-	2,661.90	3,022.90	76,977.10	3.78%
	Engineering-Administration	4121	122,000.00	-	7,561.00	12,746.50	109,253.50	10.45%
	Engineering-Permit I&E	4122	10,000.00	-	-	-	10,000.00	0.00%
	Engineering-Review	4123	75,000.00	-	3,697.50	5,613.00	69,387.00	7.48%
	Engineering-Permit Application Review	4124	65,000.00	-	9,291.00	12,904.00	52,096.00	19.85%
	Project Feasibility Studies	4129	260,000.00	-	10,464.22	16,057.72	243,942.28	6.18%
	GIS Maintenance	4171	5,000.00	-	-	-	5,000.00	0.00%
	Attorney-permits	4130	5,000.00	-	-	-	5,000.00	0.00%
	Attorney-general	4131	40,000.00	-	2,921.50	6,854.70	33,145.30	17.14%
	Sub-Total: Consultants/Outside Services:		\$662,000.00	\$0.00	36,597.12	\$57,198.82	\$604,801.18	8.64%
Programs	WMP/Lakes/TMDLs/Grants	4661	154,500.00	-	10,766.40	11,417.40	143,082.60	6.88%
	Natural Resources Program	4670	120,000.00	-	707.57	1,264.56	118,735.44	31.61%
	Water Monitoring Program	4520-30	285,000.00	-	3,291.05	5,362.65	279,637.35	0.49%
	Outside Program Support	4683	57,000.00	-	-	10,000.00	47,000.00	17.54%
	Research Projects	4695	150,000.00	-	13,880.00	19,391.50	130,608.50	12.93%
	Project Operations	4650	150,000.00	-	8,803.24	10,152.39	139,847.61	6.77%
	Communication/Outreach/Events	4371	166,000.00	-	2,432.46	7,120.33	158,879.67	4.29%
	Health and Safety Program	4697	4,000.00	-	780.00	780.00	3,220.00	19.50%
	Sub-Total: Programs:		\$1,086,500.00	\$0.00	40,660.72	65,488.83	\$1,021,011.17	6.03%
GENERAL FUND TOTAL			\$4,387,500.00	\$0.00	\$213,702.83	\$440,307.04	\$3,823,523.72	10.04%
CIP's	Project Repair & Maintenance	516	2,125,000.00	-	61,452.88	90,821.88	2,034,178.12	4.27%
	Targeted Retrofit Projects	518	1,950,000.00	-	35,651.00	60,432.00	1,889,568.00	3.10%
	Flood Risk Reduction Fund	520	5,400,000.00	-	34,417.54	62,441.16	5,337,558.84	1.16%
	Debt Services-Beltline/Maplewood Mall	526	394,963.00	-	3,000.15	279,481.40	115,481.60	70.76%
	Stewardship Grant Fund	529	1,250,000.00	-	4,729.00	11,566.77	1,238,433.23	0.93%
	Fish Creek Tributary Improvements	537	1,375,000.00	-	12,953.50	12,953.50	-	0.94%
	Wetland Restoration Projects	540	700,000.00	-	-	-	700,000.00	0.00%
CIP BUDGET TOTAL			\$13,194,963.00	-	152,204.07	517,696.71	\$1,938,433.23	3.92%
TOTAL BUDGET			\$17,582,463.00	\$0.00	\$365,906.90	\$958,003.75	\$16,624,459.25	5.45%

Current Fund Balances:

Fund:	Unaudited Beginning Fund Balance @ 12/31/23	Fund Transfers	Year to date Revenue	Current Month Expenses	Year to Date Expense	Unaudited Fund Balance @ 2/29/24
101 - General Fund	\$3,138,606.76	-	7,062.62	213,702.83	440,307.04	2,705,362.34
516 - Project Repair & Maintenance	872,232.70	-	782.52	61,452.88	90,821.88	782,193.34
518 - Targeted Retrofit Projects	476,410.31	-	71,824.32	35,651.00	60,432.00	487,802.63
520 - Flood Risk Reduction Fund	4,726,296.76	-	212.40	34,417.54	62,441.16	4,664,068.00
526 - Debt Services-Beltline/Maplewood Mall	157,575.04	-	-	3,000.15	279,481.40	(121,906.36)
529 - Stewardship Grant Fund	201,659.15	-	894.31	4,729.00	11,566.77	190,986.69
536 - Stormwater Impact Fund	1,336,819.50	-	-	-	-	1,336,819.50
537 - Fish Creek Tributary Improvements	121,092.62	-	223.58	12,216.50	12,953.50	108,362.70
540 - Wetland Restoration Projects	498,036.00	-	-	-	-	498,036.00
580 - Contingency Fund	1,465,487.00	-	-	-	-	1,465,487.00
Total District Fund Balance	\$12,994,215.84	\$0.00	\$ 80,999.75	\$ 365,169.90	\$958,003.75	\$12,117,211.84

RWMWD BUDGET STATUS REPORT

Administrative & Program Budget

Fiscal Year 2023

12/31/2023-UPDATED 2/29/2024

Budget Category	Budget Item	Account Number	Original Budget	Budget Transfers	Current Month Expenses	Year-to-Date Expenses	Current Budget Balance	Percent of Budget
Manager	Per diems	4355	\$7,000.00	-	-	375.00	\$6,625.00	5.36%
	Manager expenses	4360	3,000.00	-	-	-	3,000.00	0.00%
Committees	Committee/Bd Mtg. Exp.	4365	3,500.00	-	110.88	5,085.56	(1,585.56)	145.30%
	Sub-Total: Managers/Committees:		\$13,500.00	\$0.00	\$110.88	\$5,460.56	\$8,039.44	40.45%
Employees	Staff salary/taxes/benefits	4010	1,860,000.00	-	138,796.92	1,731,096.63	128,903.37	93.07%
	Employee expenses	4020	15,000.00	-	859.09	11,442.52	3,557.48	76.28%
	District training & education	4350	75,000.00	-	8,099.43	30,748.50	44,251.50	41.00%
	Sub-Total: Employees:		\$1,950,000.00	\$0.00	\$147,755.44	\$1,773,287.65	\$176,712.35	90.94%
Administration/Office	GIS system maint. & equip.	4170	10,000.00	-	920.00	4,259.25	5,740.75	42.59%
	Data Base/GIS Maintenance	4171	20,000.00	-	273.94	2,950.76	17,049.24	14.75%
	Equipment maintenance	4305	2,000.00	-	670.00	670.00	1,330.00	33.50%
	Telephone	4310	2,000.00	-	-	593.56	1,406.44	29.68%
	Office supplies	4320	7,000.00	-	60.95	6,877.22	122.78	98.25%
	IT/Internet/Web Site/Software Lic.	4325	85,000.00	-	8,827.30	89,924.13	(4,924.13)	105.79%
	Postage	4330	2,000.00	-	1,307.87	2,306.50	(306.50)	115.33%
	Printing/copying	4335	5,000.00	-	294.00	5,681.48	(681.48)	113.63%
	Dues & publications	4338	15,000.00	-	-	14,860.00	140.00	99.07%
	Janitorial/Trash Service	4341	15,000.00	-	-	8,120.06	6,879.94	54.13%
	Utilities/Bldg.Contracts	4342	30,000.00	-	1,452.21	13,887.68	16,112.32	46.29%
	Bldg/Site Maintenance	4343	125,000.00	-	1,572.99	115,173.26	9,826.74	92.14%
	Miscellaneous	4390	5,000.00	-	-	-	5,000.00	0.00%
	Insurance	4480	60,000.00	-	-	57,143.00	2,857.00	95.24%
	Office equipment	4703	100,000.00	-	22,490.56	42,938.90	57,061.10	42.94%
	Vehicle lease, maintenance	4810-40	20,000.00	-	1,541.00	8,454.91	11,545.09	42.27%
	Sub-Total: Administration/Office:		\$503,000.00	\$0.00	\$39,410.82	\$373,840.71	\$129,159.29	74.32%
Consultants/Outside Services	Auditor/Accounting	4110	75,000.00	-	5,624.10	65,789.81	9,210.19	87.72%
	Engineering-administration	4121	132,000.00	-	9,882.87	87,509.24	44,490.76	66.29%
	Engineering-permit I&E	4122	10,000.00	-	-	1,605.13	8,394.87	16.05%
	Engineering-eng. review	4123	70,000.00	-	8,956.00	62,533.50	7,466.50	89.33%
	Engineering-permit review	4124	59,000.00	-	3,477.50	49,120.50	9,879.50	83.26%
	Project Feasibility Studies	4129	395,000.00	-	40,482.86	271,259.70	123,740.30	68.67%
	Attorney-permits	4130	5,000.00	-	-	110.16	4,889.84	2.20%
	Attorney-general	4131	40,000.00	-	2,880.00	28,822.36	11,177.64	72.06%
	Outside Consulting Services	4160	20,000.00	-	-	-	20,000.00	0.00%
	Sub-Total: Consultants/Outside Services:		\$806,000.00	\$0.00	\$71,303.33	\$566,750.40	\$239,249.60	70.32%
Programs	Educational programming	4370	70,000.00	-	808.07	31,537.47	38,462.53	45.05%
	Communications & Marketing	4371	50,000.00	-	4,451.50	18,855.62	31,144.38	37.71%
	Events	4372	51,000.00	-	257.23	58,823.33	(7,823.33)	115.34%
	Water QM-Engineering	4520-30	240,000.00	-	8,512.52	255,178.70	(15,178.70)	106.32%
	Project operations	4650	200,000.00	-	5,190.29	51,629.09	148,370.91	25.81%
	SLMP/TMDL Studies	4661	142,000.00	-	739.50	7,828.00	134,172.00	5.51%
	Natural Resources/Keller Creek	4670-72	120,000.00	-	43,518.65	87,452.31	32,547.69	72.88%
	Outside Prog.Support/Weed Mgmt.	44683	57,000.00	-	10,600.58	32,208.57	24,791.43	56.51%
	Research Projects	4695	155,000.00	-	11,750.89	171,615.37	(16,615.37)	110.72%
	Health and Safety Program	4697	4,000.00	-	-	2,797.64	1,202.36	69.94%
	Sub-Total: Programs:		\$1,089,000.00	\$0.00	85,829.23	\$717,926.10	\$371,073.90	65.93%
GENERAL FUND TOTAL			\$4,361,500.00	\$0.00	\$344,409.70	\$3,437,265.42	\$924,234.58	78.81%
CIP's	CIP Project Repair & Maintenance	516	1,500,000.00	-	159,019.15	1,226,030.36	273,969.64	81.74%
	Targeted Retrofit Projects	518	1,500,000.00	-	50,445.55	1,235,357.85	264,642.15	82.36%
	Flood Risk Reduction Fund	520	5,200,000.00	-	24,105.81	685,830.78	4,514,169.22	13.19%
	Debt Services-96-97 Beltline/MM/Battle Creek	526	395,404.00	-	550.00	394,333.56	1,070.44	99.73%
	Stewardship Grant Program Fund	529	1,128,000.00	-	313,455.07	1,015,087.12	112,912.88	89.99%
	Double Driveway Water Quality Optimization	537	675,000.00	-	14,434.50	75,909.95	599,090.05	11.25%
	Wetland Restoration Projects	540	500,000.00	-	-	-	500,000.00	0.00%
CIP BUDGET TOTAL			\$10,898,404.00	-	\$562,010.08	\$4,632,549.62	\$6,265,854.38	42.51%
TOTAL BUDGET			\$15,259,904.00	\$0.00	\$906,419.78	\$8,069,815.04	\$7,190,088.96	52.88%

Current Fund Balances:

Fund:	Unaudited Beginning Fund Balance @ 12/31/22	Fund Transfers	Year to date Revenue	Current Month Expenses	Year to Date Expense	Unaudited Fund Balance @ 12/31/23
101 - General Fund	\$2,313,604.42	-	4,262,267.76	344,409.70	3,437,265.42	3,138,606.76
516 - CIP Project Repair & Maintenance	1,143,456.57	-	954,806.49	159,019.15	1,226,030.36	872,232.70
518 - Targeted Retrofit Projects	164,101.49	-	1,547,666.67	50,445.55	1,235,357.85	476,410.31
520 - Flood Damage Reduction Fund	5,075,970.05	-	336,157.49	24,105.81	685,830.78	4,726,296.76
526 - Debt Services-96-97 Beltline/MM/Beltline-Battle Creek Tunnel Repair	551,908.60	-	-	550.00	394,333.56	157,575.04
529 - Stewardship Grant Program Fund	428,736.05	-	788,010.22	313,455.07	1,015,087.12	201,659.15
536 - Stormwater Impact Fund	358,950.00	-	1,004,991.00	0.00	0.00	1,363,941.00
537 - Double Driveway Water Quality Optimization Implementation	-	-	197,002.57	14,434.50	75,909.95	121,092.62
540 - Wetland Restoration Projects	498,036.00	-	-	-	-	498,036.00
580 - Contingency Fund	1,465,487.00	-	-	-	-	1,465,487.00
Total District Fund Balance	\$12,000,250.18	\$0.00	\$ 9,090,902.20	\$ 906,419.78	\$8,069,815.04	\$13,021,337.34

Ramsey Washington Metro Watershed Dist.
Check Register
For the Period From February 1, 2024 to February 29, 2024

Check #	Date	Payee ID	Invoice #	Payee	Description	Amount
EFT	02/05/24	hea002	March 2024	HealthPartners	Employee Benefits	\$12,130.45
EFT	02/02/24	met008	Mar-24	MetLife-Group Benefits	Employee Benefits	1,658.39
EFT	02/21/24	pur001	-	Purchase Power	Postage	11.91
74395V	02/12/24	bol003	0300342	Bolton & Menk, Inc.	Education	(\$666.67)
74388V	02/12/24	erd001	Dec-23	Paul Erdmann	Employee Benefits, Expenses	(331.97)
74438	02/14/24	ada002	3765570	Adam's Pest Control, Inc.	Utilities/Building Services Contracts	94.72
74439	02/14/24	aws001	S1335957-020124	AWS Service Center	Janitorial/Trash/Plowing/Sweeping	347.51
74440	02/14/24	bol003	0294637	Bolton & Menk, Inc.	Education Program	666.66
74441	02/14/24	cit009	February 9, 2024	City of St. Paul	Communications/Outreach/Events	1,200.00
74442	02/14/24	gil001	241900	Gilbert Mechanical Contractors, Inc.	Building/Site Maintenance	1,091.15
74443	02/14/24	gra005	WEB2488318058	Grainger	Natural Resources Program	167.69
74444	02/14/24	inn003	18402	Innovational Water Solutions, Inc.	Utilities/Building Services Contracts	159.00
74445	02/14/24	inn010	February 20, 2024	MN Public Facilities Authority	Loan Repayment	3,000.15
74446	02/14/24	nep001	February 1, 2024	NCPERS Group Life Ins.	Employee Benefits	16.00
74447	02/14/24	pit001	3106524919	Pitney Bowes Global Financial Serv LLC	Postage	143.55
74448	02/14/24	pre003	319903281	Premium Waters, Inc.	Utilities/Building Services Contracts	34.00
74449	02/14/24	sai001	4421	Saint Paul Media	Communications/Outreach/Events	75.00
74450	02/14/24	usb002	February 2024 Statement	U.S. Bank	Jan/Feb Credit Card Expense	6,159.30
74451	02/14/24	usb005	521461400	US Bank Equipment Finance	Copier Lease	508.70
74452	02/14/24	wil002	WF 2024	Wilderness Inquiry	Communications/Outreach/Events	390.00
74453	02/27/24	ada002	3859399	Adam's Pest Control, Inc.	Utilities/Building Services Contracts	94.72
74454	02/27/24	att002	287256653401X02252024	AT & T Mobility - ROC	Project Operations	166.34
74455	02/27/24	bar001	Jan 20 through Feb 16, 2024	Barr Engineering	various	176,305.27
74456	02/27/24	bfg001	2538546-00	BFG Supply Co., LLC	Education Program	59.00
74457	02/27/24	bur002	24-02	Tom Burns Consulting, LLC	Database/GIS Maintenance	700.00
74458	02/27/24	cad001	20302779	Zayo Group, LLC	Water Monitoring Program	202.45
74459	02/27/24	car003	Jan-Dec 2023	Tina Carstens	Employee Benefits, Expenses	1,108.24
74460	02/27/24	erd001	Feb 2024	Paul Erdmann	Employee Benefits, Expenses	100.00
74461	02/27/24	fit001	PP #1	Fitzgerald Excavating & Trucking, Inc.	Construction Imp./Project Maint. & Repair	32,401.27
74462	02/27/24	fit002	Feb-24	Mary Fitzgerald	Employee Benefits, Expenses	680.86
74463	02/27/24	fit003	Feb-24; 0001	Emily F. Kamin	Employee Benefits, Expenses	655.49
74464	02/27/24	gal001	February 21, 2024	Galowitz Olson, PLLC	Attorney-General	2,921.50
74465	02/27/24	gil001	242230	Gilbert Mechanical Contractors, Inc.	Water Monitoring Program	1,494.74
74466	02/27/24	gra005	9025850562	Grainger	Natural Resources Program	87.65
74467	02/27/24	gru001	01-32734	Gruber's Power Equipment	Natural Resources Program	96.79
74468	02/27/24	inn002	IN4463319	Innovative Office Solutions LLC	Building/Site Maintenance	238.13
74469	02/27/24	int001	W24010488	Office of MN, IT Services	Telephone	59.38
74470	02/27/24	kub001	Feb-24	Kyle W. Kubitza	Employee Benefits	40.00
74471	02/27/24	lea003	16-1004	L. Tracy Leavenworth	Education Program	2,983.96
74472	02/27/24	lit002	22-10 MTN	James Litsheim	Stewardship Grant Program	1,000.00
74473	02/27/24	mel001	February 2024	Michelle L. Melser	Employee Benefits, Expenses	77.52
74474	02/27/24	met013	1758	Metro - INET	Roseville IT Services/Web Site/Software/Licenses	8,211.00
74475	02/27/24	pac001	24100441099; 24100442293	Pace Analytical Services, Inc.	Water Quality Monitoring - Staff	2,211.00
74476	02/27/24	pas002	2/22/2024	Carol Passi	Employee Benefits, Expenses	181.04
74477	02/27/24	ram002	PRK-002308	Ramsey County	Stewardship Grant Program	15,117.34
74478	02/27/24	red002	150483824	Redpath & Company, LLC.	Accounting	2,514.00
74479	02/27/24	sod001	Feb 2024	Nicole Maras	Employee Benefits, Expenses	64.12
74480	02/27/24	til002	Feb-24	Joseph S. Tillotson	Employee Benefits	80.00
74481	02/27/24	voy001	8692934232408	US Bank Voyager Fleet Sys.	Vehicle Fuel	216.74
74482	02/27/24	wil007	Mar-24	Patrick Williamson	Employee Benefits	40.00
Total						\$276,964.09
EFT	02/02/24	myp001	02/02/24	February 2nd Payroll	4110-101-000	73.95
EFT	02/16/24	myp001	02/16/24	February 16th Payroll	4110-101-000	73.95
Dir.Dep.	02/02/24	---	Payroll Expense-Net	February 2nd Payroll	4010-101-000	26,804.09
EFT	02/02/24	int002	Internal Rev.Serv.	February 2nd Federal Withholding	2001-101-000	9,477.62
EFT	02/02/24	mnd001	MN Revenue	February 2nd State Withholding	2003-101-000	1,495.12
EFT	02/02/24	per001	PERA	February 2nd PERA	2011-101-000	5,841.87
EFT	02/02/24	emp002	Empower Retirement	Employee Def. Comp. Contributions	2016-101-000	1,798.00
EFT	02/02/24	emp002	Empower Retirement	Employee IRA Contributions	2018-101-000	1,629.00
Dir.Dep.	02/16/24	---	Payroll Expense-Net	February 16th Payroll	4010-101-000	28,788.80
EFT	02/16/24	int002	Internal Rev.Serv.	February 16th Federal Withholding	2001-101-000	10,436.57
EFT	02/16/24	mnd001	MN Revenue	February 16th State Withholding	2003-101-000	1,695.36
EFT	02/16/24	per001	PERA	February 16th PERA	2011-101-000	6,316.76
EFT	02/16/24	emp002	Empower Retirement	Employee Def. Comp. Contributions	2016-101-000	1,848.00
EFT	02/16/24	emp002	Empower Retirement	Employee IRA Contributions	2018-101-000	1,879.00
				Payroll/Benefits:		\$98,158.09
Total				Accounts Payable/Payroll/Benefits:		\$375,122.18

Ramsey Washington Metro Watershed Dist.
Cash Disbursements Journal
For the Period From February 1, 2024 to February 29, 2024

Date	Check #	Vendor ID	Name	Account ID	Description	Amount
02/05/24	EFT	hea002	HealthPartners	4040-101-000	Employee Benefits	\$12,130.45
02/02/24	EFT	met008	MetLife-Group Benefits	4040-101-000	Employee Benefits	1,658.39
02/21/24	EFT	pur001	Purchase Power	4330-101-000	Postage	11.91
01/31/24	74395V	erd001	Paul Erdmann			(331.97)
				4040-101-000	Employee Benefits	
				4350-101-000	Training & Educaiton	
				4370-101-000	Education	(666.67)
01/31/24	74388V	bol003	Bolton & Menk, Inc.	4370-101-000	Education	(666.67)
02/14/24	74438	ada002	Adam's Pest Control, Inc.	4342-101-000	Utilities/Building Services Contracts	94.72
02/14/24	74439	aws001	AWS Service Center	4341-101-000	Janitorial/Trash/Plowing/Sweeping	347.51
02/14/24	74440	bol003	Bolton & Menk, Inc.	4370-101-000	Education Program	666.66
02/14/24	74441	cit009	City of St. Paul	4371-101-000	Communications/Outreach/Events	1,200.00
02/14/24	74442	gil001	Gilbert Mechanical Contractors, Inc.	4343-101-000	Building/Site Maintenance	1,091.15
02/14/24	74443	gra005	Grainger	4670-101-000	Natural Resources Program	167.69
02/14/24	74444	inn003	Innovational Water Solutions, Inc.	4342-101-000	Utilities/Building Services Contracts	159.00
02/14/24	74445	min010	MN Public Facilities Authority	4700-526-000	Loan Repayment	3,000.15
02/14/24	74446	nep001	NCPERS Group Life Ins.	4040-101-000	Employee Benefits	16.00
02/14/24	74447	pit001	Pitney Bowes Global Financial Serv LLC	4330-101-000	Postage	143.55
02/14/24	74448	pre003	Premium Waters, Inc.	4342-101-000	Utilities/Building Services Contracts	34.00
02/14/24	74449	sai001	Saint Paul Media	4371-101-000	Communications/Outreach/Events	75.00
02/14/24	74450	usb002	U.S. Bank			6,159.30
				4343-101-000	Building/Site Maintenance	(29.15)
				4840-101-000	Vehicle Miscellaneous	13.53
				4343-101-000	Building/Site Maintenance	22.20
				4343-101-000	Building/Site Maintenance	24.90
				4343-101-000	Building/Site Maintenance	64.81
				4343-101-000	Building/Site Maintenance	701.73
				4320-101-000	Office Supplies	66.00
				4320-101-000	Office Supplies	7.28
				4320-101-000	Office Supplies	39.83
				4341-101-000	Janitorial/Trash/Plowing/Sweeping	255.00
				4325-101-000	Roseville IT Services/Web Site/Software/Licenses	96.38
				4343-101-000	Building/Site Maintenance	19.67
				4530-101-000	Water Monitoring Program	77.61
				4371-101-000	Communications/Outreach/Events	350.00
				4171-101-000	District Database Proiect	139.00
				4343-101-000	Building/Site Maintenance	165.97
				4343-101-000	Building/Site Maintenance	58.94
				4350-101-000	Training & Educaiton	1,197.00
				4350-101-000	Training & Educaiton	85.00
				4371-101-000	Communications/Outreach/Events	184.46
				4320-101-000	Office Supplies	12.30
				4371-101-000	Communications/Outreach/Events	50.00
				4670-101-000	Natural Resources Program	31.96
				4350-101-000	Training & Educaiton	387.25
				4040-101-000	Employee Benefits	121.75
				4371-101-000	Communications/Outreach/Events	40.00

Ramsey Washington Metro Watershed Dist.
Cash Disbursements Journal
For the Period From February 1, 2024 to February 29, 2024

Date	Check #	Vendor ID	Name	Account ID	Description	Amount
				4350-101-000	Training & Educaiton	100.00
				4350-101-000	Training & Educaiton	100.00
				4350-101-000	Training & Educaiton	100.00
				4320-101-000	Office Supplies	95.92
				4530-101-000	Water Monitoring Program	10.99
				4343-101-000	Building/Site Maintenance	200.00
				4320-101-000	Office Supplies	64.15
				4371-101-000	Communications/Outreach/Events	50.00
				4320-101-000	Office Supplies	15.98
				4370-101-000	Education Program	116.01
				4040-101-000	Employee Benefits	133.75
				4371-101-000	Communications/Outreach/Events	48.00
				4371-101-000	Communications/Outreach/Events	45.00
				4320-101-000	Office Supplies	40.05
				4343-101-000	Building/Site Maintenance	254.80
				4320-101-000	Office Supplies	53.63
				4320-101-000	Office Supplies	61.91
				4320-101-000	Office Supplies	33.89
				4670-101-000	Natural Resources Program	(41.70)
				4670-101-000	Natural Resources Program	86.70
				4343-101-000	Building/Site Maintenance	108.55
				4670-101-000	Natural Resources Program	212.47
				4670-101-000	Natural Resources Program	66.01
				4365-101-000	Committee/Board Meeting Expenses	16.99
				4171-101-000	District Database Prokect	2.78
02/14/24	74451	usb005	US Bank Equipment Finance	4335-101-000	Copier Lease	508.70
02/14/24	74452	wil002	Wilderness Inquiry	4371-101-000	Communications/Outreach/Events	390.00
02/27/24	74453	ada002	Adam's Pest Control, Inc.	4342-101-000	Utilities/Building Services Contracts	94.72
02/27/24	74454	att002	AT & T Mobility - ROC	4650-101-000	Project Operations	166.34
02/27/24	74455	bar001	Barr Engineering			176,305.27
				4121-101-000	Engineering Admin	7561.00
				4697-101-000	Health and Safety Program	780.00
				4123-101-000	Engineering Review	3697.50
				4128-520-000	Engineering -Flood Damage	9331.00
				4129-101-000	Project Feasability	1854.00
				4129-101-000	Project Feasability	70.00
				4129-101-000	Project Feasability	2832.00
				4129-101-000	Project Feasability	4835.72
				4129-101-000	Project Feasability	287.50
				4129-101-000	Project Feasability	585.00
				4520-101-000	WQM-Engineering	2395.00
				4520-101-000	WQM-Engineering	490.00
				4520-101-000	WQM-Engineering	3373.00
				4520-101-000	WQM-Engineering	48.00
				4124-101-000	Eng. Permit Review	9291.00
				4661-101-000	SLMP/TMDL Studies	623.00

Ramsey Washington Metro Watershed Dist.
Cash Disbursements Journal
For the Period From February 1, 2024 to February 29, 2024


Date	Check #	Vendor ID	Name	Account ID	Description	Amount
				4695-101-000	Research Projects	5594.00
				4695-101-000	Research Projects	7938.00
				4695-101-000	Research Projects	348.00
				4650-101-000	Project Operations	62.00
				4650-101-000	Project Operations	8574.90
				4128-518-000	Engineering -Targeted Retrofit	7680.50
				4128-518-000	Engineering -Targeted Retrofit	10668.50
				4128-518-000	Engineering -Targeted Retrofit	781.00
				4682-529-000	Stewardship Grant Program	3729.00
				4128-520-000	Engineering -Flood Damage	8637.27
				4128-518-000	Engineering -Targeted Retrofit	3755.00
				4129-537-000	Driveway Fish Creek Tributary	12216.50
				4128-518-000	Engineering -Targeted Retrofit	11394.50
				4128-520-000	Engineering -Flood Damage	16449.27
				4128-518-000	Engineering -Targeted Retrofit	1371.50
				4128-516-000	Eng. Projects-Maint & Repair	9153.11
				4128-516-000	Eng. Projects-Maint & Repair	5062.50
				4128-516-000	Eng. Projects-Maint & Repair	14836.00
02/27/24	74456	bf001	BFG Supply Co., LLC	4370-101-000	Education Program	59.00
02/27/24	74457	bur002	Tom Burns Consulting, LLC	4170-101-000	Database/GIS Maintenance	700.00
02/27/24	74458	cad001	Zayo Group, LLC	4530-101-000	Water Monitoring Program	202.45
02/27/24	74459	car003	Tina Carstens			1,108.24
				4040-101-000	Employee Benefits	680.00
				4020-101-000	Employee Expenses	428.24
02/27/24	74460	erd001	Paul Erdmann			100.00
				4040-101-000	Employee Benefits	80.00
				4338-101-000	Dues/Publications	20.00
02/27/24	74461	fit001	Fitzgerald Excavating & Trucking, Inc.	4630-516-000	Construction Imp./Project Maint. & Repair	32,401.27
02/27/24	74462	fit002	Mary Fitzgerald			680.86
				4040-101-000	Employee Benefits	58.75
				4020-101-000	Employee Expenses	22.11
02/27/24	74463	fit003	Emily F. Kamin	4341-101-000	Janitorial/Trash/Plowing/Sweeping	600.00
				4040-101-000	Employee Benefits	655.49
				4020-101-000	Employee Expenses	40.00
				4365-101-000	Committee/Board Meeting Expenses	7.91
				4341-101-000	Janitorial/Trash/Plowing/Sweeping	7.58
02/27/24	74464	gal001	Galowitz Olson, PLLC	4131-101-000	Attorney-General	600.00
02/27/24	74465	gil001	Gilbert Mechanical Contractors, Inc.			2,921.50
				4530-101-000	Water Monitoring Program	1,494.74
				4343-101-000	Building/Site Maintenance	789.00
02/27/24	74466	gra005	Grainger	4670-101-000	Natural Resources Program	705.74
02/27/24	74467	gru001	Gruber's Power Equipment	4670-101-000	Natural Resources Program	87.65
02/27/24	74468	inn002	Innovative Office Solutions LLC	4343-101-000	Building/Site Maintenance	96.79
02/27/24	74469	int001	Office of MN, IT Services	4310-101-000	Telephone	238.13
02/27/24	74470	kub001	Kyle W. Kubitz	4040-101-000	Employee Benefits	59.38
						40.00



**Summary of Professional Engineering Services During the Period
January 20 through February 16, 2024**

	Total Engineering Budget (2024)	Total Fees to Date (2024)	Budget Balance (2024)	Fees During Period	District Accounting Code	Plan Implementation Task Number
Engineering Administration						
General Engineering Administration	\$92,000.00	\$12,746.50	\$79,253.50	\$7,561.00	4121-101	DW-13
RWMWD Health and Safety/ERTK Program (Training)	\$2,000.00	\$0.00	\$2,000.00	\$0.00	4697-101	DW-13
RWMWD Health and Safety Manual Update	\$2,000.00	\$780.00	\$1,220.00	\$780.00	4697-101	DW-13
Education Assistance	\$30,000.00	\$605.00	\$29,395.00	\$0.00	4129-101	DW-13
Engineering Review						
Engineering Review	\$75,000.00	\$5,613.00	\$69,387.00	\$3,697.50	4123-101	DW-13
Project Feasibility Studies						
Resiliency Study for non-Beltline tributary areas (pre-planning study and evaluation of existing data)	\$45,000.00	\$23,708.00	\$21,292.00	\$9,331.00	4128-520	DW-9
Kohlman Creek Flood Damage Reduction Feasibility Study	\$5,000.00	\$2,260.00	\$2,740.00	\$1,854.00	4129-101	DW-9, KC-2
Owasso Basin/North Star Estates Improvements Feasibility Study	\$10,000.00	\$6,040.00	\$3,960.00	\$0.00	4129-101	GC-3
Evaluate compliance with South Metro Mississippi River TSS TMDL	\$20,000.00	\$70.00	\$19,930.00	\$70.00	4129-101	MR-2
Street Sweeping	\$20,000.00	\$5,490.00	\$14,510.00	\$2,832.00	4129-101	DW-6, DW-15
Retrofit Inventory	\$60,000.00	\$7,166.22	\$52,833.78	\$4,835.72	4129-101	DW-17, DW-20
Tanners, Battle Creek Lake, McKnight Basin outlet operation plan	\$35,000.00	\$0.00	\$35,000.00	\$0.00	4129-101	DW-9
Ames Lake Feasibility Study	\$5,000.00	\$287.50	\$4,712.50	\$287.50	4129-101	DW-9, BELT-1
Interim Emergency Response Plans	\$5,000.00	\$585.00	\$4,415.00	\$585.00	4129-101	DW-9
Resiliency Study for non-Beltline tributary areas - feasibility studies placeholder	\$50,000.00	\$0.00	\$50,000.00	\$0.00	4129-101	DW-9
Contingency*	\$30,000.00	\$0.00	\$30,000.00	\$0.00	4129-101	
GIS Maintenance						
GIS Maintenance	\$5,000.00	\$0.00	\$5,000.00	\$0.00	4170-101	DW-13
Monitoring Water Quality/Project Monitoring						
Lake Water Quality Monitoring (Misc QA/QC)	\$10,000.00	\$0.00	\$10,000.00	\$0.00	4520-101	DW-2
Annual WQ Report Assistance	\$20,000.00	\$2,779.00	\$17,221.00	\$2,395.00	4520-101	DW-2
Special Project BMP Monitoring	\$30,000.00	\$490.00	\$29,510.00	\$490.00	4520-101	DW-12
Grass Lake Berm Wetland Monitoring	\$15,000.00	\$3,425.00	\$11,575.00	\$3,373.00	4520-101	DW-5, DW-8
Battle Creek Monitoring to address TMDL	\$15,000.00	\$48.00	\$14,952.00	\$48.00	4520-101	DW-1, DW-2
Battle Creek Monitoring to address TMDL (Barr Staff doing the monitoring)	\$15,000.00	\$0.00	\$15,000.00	\$0.00	4520-101	DW-1, DW-2
Permit Processing, Inspection and Enforcement						
Permit Application Inspection and Enforcement	\$10,000.00	\$0.00	\$10,000.00	\$0.00	4122-101	DW-7
Permit Application Review	\$65,000.00	\$12,904.00	\$52,096.00	\$9,291.00	4124-101	DW-7
Watershed Management Plan Update						
Stakeholder Engagement	\$20,000.00	\$0.00	\$20,000.00	\$0.00	4661-101	DW-21
Gaps Analysis/WMP Update Scoping	\$10,000.00	\$0.00	\$10,000.00	\$0.00	4661-101	DW-13, DW-20
Ecosystem Restoration Plan (or "Ecosystem Health Action Plan")	\$50,000.00	\$0.00	\$50,000.00	\$0.00	4661-101	DW-8, DW-14
Lake Studies/TMDL Reports						
West Vadnais Lake Incorporation	\$15,000.00	\$0.00	\$15,000.00	\$0.00	4661-101	DW-2
2024 Grant Applications	\$20,000.00	\$838.00	\$19,162.00	\$623.00	4661-101	DW-13
Prioritization of water quality projects from subwatershed feasibility study	\$5,000.00	\$0.00	\$5,000.00	\$0.00	4661-101	DW-20
Carver Ponds Internal Load Reduction	\$12,000.00	\$0.00	\$12,000.00	\$0.00	4661-101	DW-12
Contingency for Lake Studies	\$22,500.00	\$0.00	\$22,500.00	\$0.00	4661-101	
Research Projects						
New Technology Mini Case Studies (average 6 per year)	\$15,000.00	\$8,116.00	\$6,884.00	\$5,594.00	4695-101	DW-12
Kohlman Lake Aquatic Plant Management Effects Study	\$20,000.00	\$9,275.50	\$10,724.50	\$7,938.00	4695-101	DW-12
Shallow Lake Aeration Study Finalization	\$5,000.00	\$2,000.00	\$3,000.00	\$348.00	4695-101	DW-12
Project Operations						
2024 Tanners Alum Facility Monitoring	\$17,000.00	\$62.00	\$16,938.00	\$62.00	4650-101	TaL-3
Phalen/Keller and Twin Operations Support & Communications	\$5,000.00	\$0.00	\$5,000.00	\$0.00	4650-101	DW-5, DW-13, DW-18
Lake Level Station Operation and Maintenance	\$50,000.00	\$9,310.90	\$40,689.10	\$8,574.90	4650-101	DW-5, DW-18
Capital Improvements						
Woodbury Target	\$180,000.00	\$149,693.56	\$30,306.44	\$7,680.50	4128-518	DW-6
Roosevelt Homes	\$33,600.00	\$15,711.00	\$17,889.00	\$10,668.50	4128-518	DW-6, DW-9
Targeted Retrofit Projects 2024	\$150,000.00	\$3,887.50	\$146,112.50	\$781.00	4128-518	DW-6
Stewardship Grant Program	\$75,000.00	\$9,072.50	\$65,927.50	\$3,729.00	4682-529	DW-6
Owasso Basin Flood Risk Reduction	\$200,000.00	\$8,637.27	\$191,362.73	\$8,637.27	4128-520	GC-3
Pioneer Park Stormwater Reuse	\$50,000.00	\$4,271.50	\$45,728.50	\$3,755.00	4128-518	DW-6
Double Driveway and Fish Creek Tributary Improvements	\$150,000.00	\$88,863.45	\$61,136.55	\$12,216.50	4129-537	FC-2
Cottage Place Wetland	\$113,800.00	\$18,294.50	\$95,505.50	\$11,394.50	4128-518	DW-6, DW-8, DW-14, LE-2, LE-3
Ames Lake improvements	\$250,000.00	\$0.00	\$250,000.00	\$0.00	4128-520	DW-9, BELT-1
PCU Pond improvements	\$150,000.00	\$0.00	\$150,000.00	\$0.00	4128-520	DW-9, KC-2
County Road C culvert capacity	\$50,000.00	\$23,134.27	\$26,865.73	\$16,449.27	4128-520	DW-9, KC-2
Lake Emily Subwatershed BMP	\$175,800.00	\$194,931.05	-\$19,131.05	\$1,371.50	4128-518	LE-3
Kohlman Creek Storage and Detention	\$150,000.00	\$0.00	\$150,000.00	\$0.00	4128-520	DW-9, KC-2
CIP Project Repair & Maintenance						
Routine CIP Inspection and Unplanned Maintenance Identification	\$125,000.00	\$15,673.11	\$109,326.89	\$9,153.11	4128-516	DW-5
2024 CIP Maintenance and Repairs	\$180,000.00	\$46,208.50	\$133,791.50	\$5,062.50	4128-516	DW-5
Beltline long-term fix near river outfall	\$250,000.00	\$27,944.50	\$222,055.50	\$14,836.00	4128-516	BELT-2

Barr declares under the penalties of Law that this Account, **\$176,305.27**
Claim, or Demand is just and that no part has been paid.


 Bratley J. Lindaman, Vice President

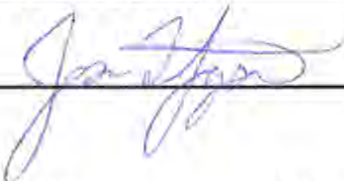
2024 Capital Improvement Project (CIP) Progress Payment Number 1

1.0	Total Completed Through This Period:	<u>\$34,106.60</u>	
2.0	Total Completed Previously Completed:		<u>\$0.00</u>
3.0	Total Completed This Period:		<u>\$34,106.60</u>
4.0	Amount Previously Retained:		<u>\$0.00</u>
5.0	Amount Retained This Period:		<u>\$1,705.33</u>
6.0	Total Amount Retained:	<u>\$1,705.33</u>	
7.0	Retainage Released Through This Period:		<u>\$0.00</u>
8.0	Total Retainage Remaining:	<u>\$1,705.33</u>	
9.0	Amounts Previously Paid:	<u>\$0.00</u>	
10.0	Amount Due This Estimate:		<u><u>\$32,401.27</u></u>

Retainage shall be 5 percent of the value of the Work completed.

SUBMITTED BY:

Name: Jason Fitzgerald Date: 2/22/2024
 Title: President
 Contractor: Fitzgerald Excavating Inc.

Signature: 

RECOMMENDED BY:

Name: Brad Lindaman Date: 2/22/2024
 Title: Project Engineer
 Engineer: Barr Engineering Company

Signature: 

APPROVED BY:

Name: Val Eisele Date: _____
 Title: President
 Owner: Ramsey-Washington Metro Watershed District

Signature: _____

2024 Capital Improvement Project (CIP)
Ramsey-Washington Metro Watershed District
Summary of Work Completed Through February 19th, 2024 for Progress Payment Number 1

Item	Description	Unit	Estimated Quantity	Unit Price	Extension	(1) Total Completed Through This Period		(2) Total Completed Previous Period		(3) Total Completed This Period	
						Quantity	Amount	Quantity	Amount	Quantity	Amount
General											
A	Mobilization/Demobilization	L.S.	1	\$60,000.00	\$60,000.00	0.15	\$9,000.00	0.00	\$0.00	0.15	\$9,000.00
B	Control of Water	L.S.	1	\$2,000.00	\$2,000.00	0.15	\$300.00	0.00	\$0.00	0.00	\$300.00
C	Traffic Control	L.S.	1	\$2,000.00	\$2,000.00	0.15	\$300.00	0.00	\$0.00	0.00	\$300.00
Site 1 - Tamarack Swamp, Woodbury (PFS Basins Cleaning/Sweeping)											
D	Sediment/Muck Cleanout Excavation, Loading, Hauling and Disposal of Regulated Material (SRV Level 2 and 3)	Ton	92	\$30.00	\$2,760.00	0	\$0.00	0	\$0.00	0	\$0.00
E	Site Restoration (Seeding and Erosion Control Blanket)	S.Y.	100	\$2.00	\$200.00	0	\$0.00	0	\$0.00	0	\$0.00
F	Sediment Log (9-Inch Diameter)	L.F.	60	\$2.00	\$120.00	0	\$0.00	0	\$0.00	0	\$0.00
G	Paver Sweeping	S.Y.	1,400	\$5.00	\$7,000.00	0	\$0.00	0	\$0.00	0	\$0.00
Site 2 - Lower Afton Road, Maplewood (Drainageway Sediment Removal)											
D	Sediment/Muck Cleanout Excavation, Loading, Hauling and Disposal of Regulated Material (SRV Level 2 and 3)	Ton	127	\$30.00	\$3,810.00	0	\$0.00	0	\$0.00	0	\$0.00
E	Site Restoration (Seeding and Erosion Control Blanket)	S.Y.	100	\$2.00	\$200.00	0	\$0.00	0	\$0.00	0	\$0.00
Site 3 - West Vadnais Lake, Little Canada (Maintenance Ramp)											
E	Site Restoration (Seeding and Erosion Control Blanket)	S.Y.	50	\$2.00	\$100.00	0	\$0.00	0	\$0.00	0	\$0.00
H	Boat Ramp (Precast Concrete Planks, Rock, Grading, Geotextile Filter Fabric)	L.S.	1	\$35,000.00	\$35,000.00	0	\$0.00	0	\$0.00	0	\$0.00
I	Floating Silt Curtain	L.F.	100	\$17.00	\$1,700.00	0	\$0.00	0	\$0.00	0	\$0.00
K	Clearing and Grubbing	L.S.	1	\$1,000.00	\$1,000.00	0	\$0.00	0	\$0.00	0	\$0.00
L	Sediment/Muck Excavation, Loading Hauling, and Disposal of Unregulated Material)	Ton	20	\$30.00	\$600.00	0	\$0.00	0	\$0.00	0	\$0.00
V	Bollard Access Gate and Sign (with Chain Loops and 20 feet of 3/8" Galvaniz	L.S.	1	\$4,000.00	\$4,000.00	0	\$0.00	0	\$0.00	0	\$0.00
Site 4 - Grass Lake, Little Canada (Maintenance Ramp)											
E	Site Restoration (Seeding and Erosion Control Blanket)	S.Y.	380	\$2.00	\$760.00	0	\$0.00	0	\$0.00	0	\$0.00
F	Sediment Log (9-Inch Diameter)	L.F.	200	\$2.00	\$400.00	0	\$0.00	0	\$0.00	0	\$0.00
H	Boat Ramp (Precast Concrete Planks, Rock, Grading, Geotextile Filter Fabric)	L.S.	1	\$30,000.00	\$30,000.00	0	\$0.00	0	\$0.00	0	\$0.00
I	Floating Silt Curtain	L.F.	90	\$17.00	\$1,530.00	0	\$0.00	0	\$0.00	0	\$0.00
N	Sediment/Muck/Vegetation Excavation with On-Site Disposal	L.S.	1	\$3,000.00	\$3,000.00	0	\$0.00				
W	Ramsey County Parks Entry Gate	L.S.	1	\$9,000.00	\$9,000.00	0	\$0.00				
Site 5 - Kohiman Basin, Maplewood (Weirs Upflow Treatment System)											
M	Place Existing Stockpiled CC17 Material (12 cuyd)	L.S.	1	\$1,000.00	\$1,000.00	1	\$1,000.00	0	\$0.00	1	\$1,000.00
Q	Install PVC Boards on Weir - 12"x0.5"x11.5' (18)	L.F.	215	\$15.00	\$3,225.00	0	\$0.00	0	\$0.00	0	\$0.00
R	Import and Place CC17 Limerock Material	Ton	30	\$70.00	\$2,100.00	25	\$1,778.00	0	\$0.00	25	\$1,778.00

**2024 Capital Improvement Project (CIP)
 Ramsey-Washington Metro Watershed District
 Summary of Work Completed Through February 19th, 2024 for Progress Payment Number 1**

Item	Description	Unit	Estimated Quantity	Unit Price	Extension	(1) Total Completed Through This Period		(2) Total Completed Previous Period		(3) Total Completed This Period	
						Quantity	Amount	Quantity	Amount	Quantity	Amount
Site 6 - White Bear Ave, Maplewood (Splash Block Replacement)											
S	Remove Existing Splashblock Assembly	Each	3	\$1,000.00	\$3,000.00	0	\$0.00	0	\$0.00	0	\$0.00
U	Repair Existing Splash Block Assembly	S.F	160	\$35.00	\$5,600.00	0	\$0.00	0	\$0.00	0	\$0.00
T	Install Rain Guardian Turret	Each	3	\$4,000.00	\$12,000.00	0	\$0.00	0	\$0.00	0	\$0.00
Site 7 - Rice Street, Little Canada (Rice Street Cattail Cleanout)											
L	Sediment/Muck and Vegetation Cleanout, West Vadnais Lake Channel (Unregulated Fill Disposal Off Site)	L.S.	1	\$1,500.00	\$1,500.00	0	\$0.00	0	\$0.00	0	\$0.00
J	Floating Silt Curtain	L.F.	120	\$17.00	\$2,040.00	0	\$0.00	0	\$0.00	0	\$0.00
E	Site restoration (Seeding and Erosion Control Blanket)	S.Y.	60	\$2.00	\$120.00	0	\$0.00	0	\$0.00	0	\$0.00
Site 8 - Arlington Pond, Maplewood (Arlington Pond)											
D	Sediment/Muck Cleanout Excavation, Loading, Hauling and Disposal of Regulated Material (SRV Level 2 and 3)	Ton	1300	\$30.00	\$39,000.00	708	\$21,228.60	0	\$0.00	708	\$21,228.60
E	Site Restoration (Seeding and Erosion Control Blanket)	S.Y.	350	\$2.00	\$700.00	0	\$0.00	0	\$0.00	0	\$0.00
F	Sediment Log (9-Inch Diameter)	L.F.	20	\$2.00	\$40.00	0	\$0.00	0	\$0.00	0	\$0.00
I	Floating Silt Curtain	L.F.	80	\$17.00	\$1,360.00	0	\$0.00	0	\$0.00	0	\$0.00
J	Construction Entrance	Each	1	\$500.00	\$500.00	1	\$500.00	0	\$0.00	1	\$500.00
P	Inlet Protection	Each	1	\$150.00	\$150.00	0	\$0.00	0	\$0.00	0	\$0.00
O	MN/DOT Class III Riprap (Field Stone) with Geotextile Filter Fabric	Ton	30	\$90.00	\$2,700.00	0	\$0.00	0	\$0.00	0	\$0.00
Contract Base Extensions =						\$240,215.00	\$34,106.60	0	\$0.00	0	\$34,106.60
Change Order 1											
						0	\$0.00	0	\$0.00	0	\$0.00
						0	\$0.00	0	\$0.00	0	\$0.00

Change Order Extensions = \$0.00 \$0.00 \$0.00 \$0.00
Contract Grand Total = \$240,215.00 \$34,106.60 \$0.00 \$34,106.60

Galowitz Olson, PLLC
10390 39th Street North
Lake Elmo, Minnesota 55042
Office: (651) 777-6960
Fax: (651) 777-8937

Ramsey-Washington Metro Watershed District
C/O Tina Carstens
2665 Noel Drive
Little Canada MN 55117

Page: 1
February 21, 2024
File No: 9M

	Balance
General Account	\$2,844.00
FISH CREEK PROJECT	\$77.50
	<u>\$2,921.50</u>

Permit Application Coversheet

Date March 06, 2024

Project Name MnDOT Courtly Road Improvements

Project Number 24-11

Applicant Name James Bolton, MnDOT

Type of Development Linear

Property Description

This project is located on Courtly Road, from approximately I-494 to Wooddale Road. The applicant is proposing to complete corridor improvements including ADA improvements and trail resurfacing. The total disturbance area is 0.27 acre. A portion of the roadway is located in the 100-year floodplain, and compensatory storage is being provided through site grading such that there is no net loss of flood storage on the landscape. Due to disturbance area under an acre, permanent stormwater treatment is not required.

Watershed District Policies or Standards Involved:

- | | |
|---|---|
| <input type="checkbox"/> <i>Wetlands</i> | <input checked="" type="checkbox"/> <i>Erosion and Sediment Control</i> |
| <input type="checkbox"/> <i>Stormwater Management</i> | <input checked="" type="checkbox"/> <i>Floodplain</i> |

Water Quantity Considerations

The proposed grading is sufficient to preserve existing flood storage on the landscape.

Water Quality Considerations

Short Term

The proposed erosion and sediment control plan is sufficient to protect downstream water resources during construction.

Long Term

There are no long term water quality considerations.

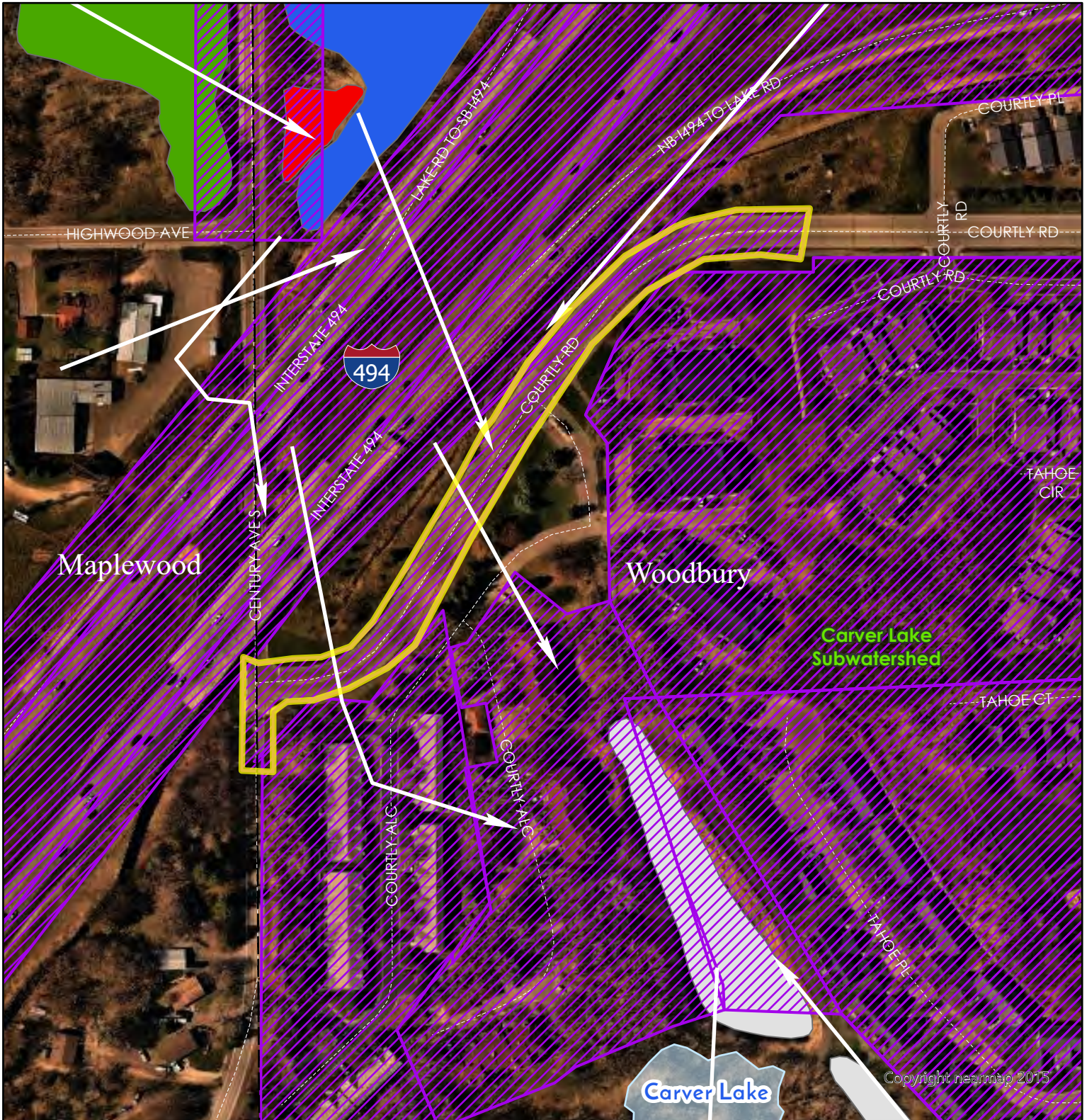
Staff Recommendation

Staff recommends approval of this permit.

Attachments:

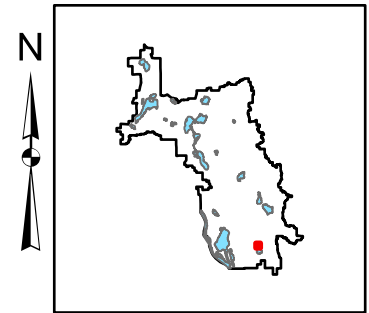
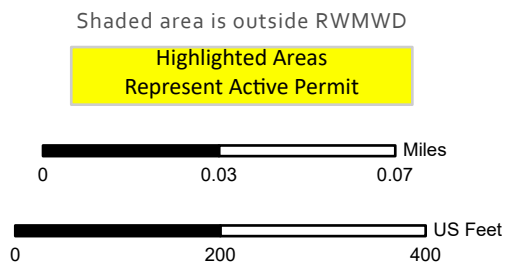
- Project Location Map
- Project Grading Plan

#24-11 MnDOT Courty Road Improvements



Wetlands	
	Manage A
	Manage B
	Manage C
	Lake
	Sediment Pond
	Not Assessed

	Flow Arrows
	Roads
	Permits
	Cities
	Subwatersheds
	Lakes
	RWMWD Boundary



24-11

Special Provisions

None

Stewardship Grant Application Summary

Project Name: Atchison

Application Number: 24-07 CS

Board Meeting Date: 3/6/2024

Applicant Name: Janey Atchison

Residential

Commercial/Government

Project Overview:

This project is located off Hawthorne Ave E and N Cypress St in the City of St. Paul. The applicant is proposing to install two rain gardens to capture roof and sidewalk runoff. They are also proposing to install two native planting areas to reduce turf grass and increase pollinator habitat.

The rain garden work is eligible for 75% grant coverage and the habitat restoration work is eligible for 50% coverage up to \$15,000.

BMP type(s):

Native Habitat Restoration(2), Rain Garden(2)

Grant Request:

\$6,075.00

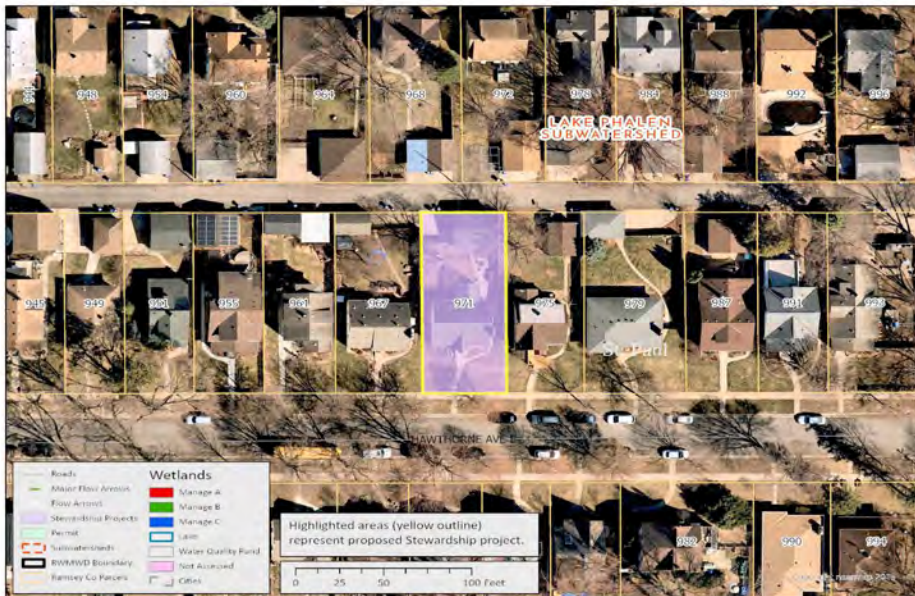
Recommendation:

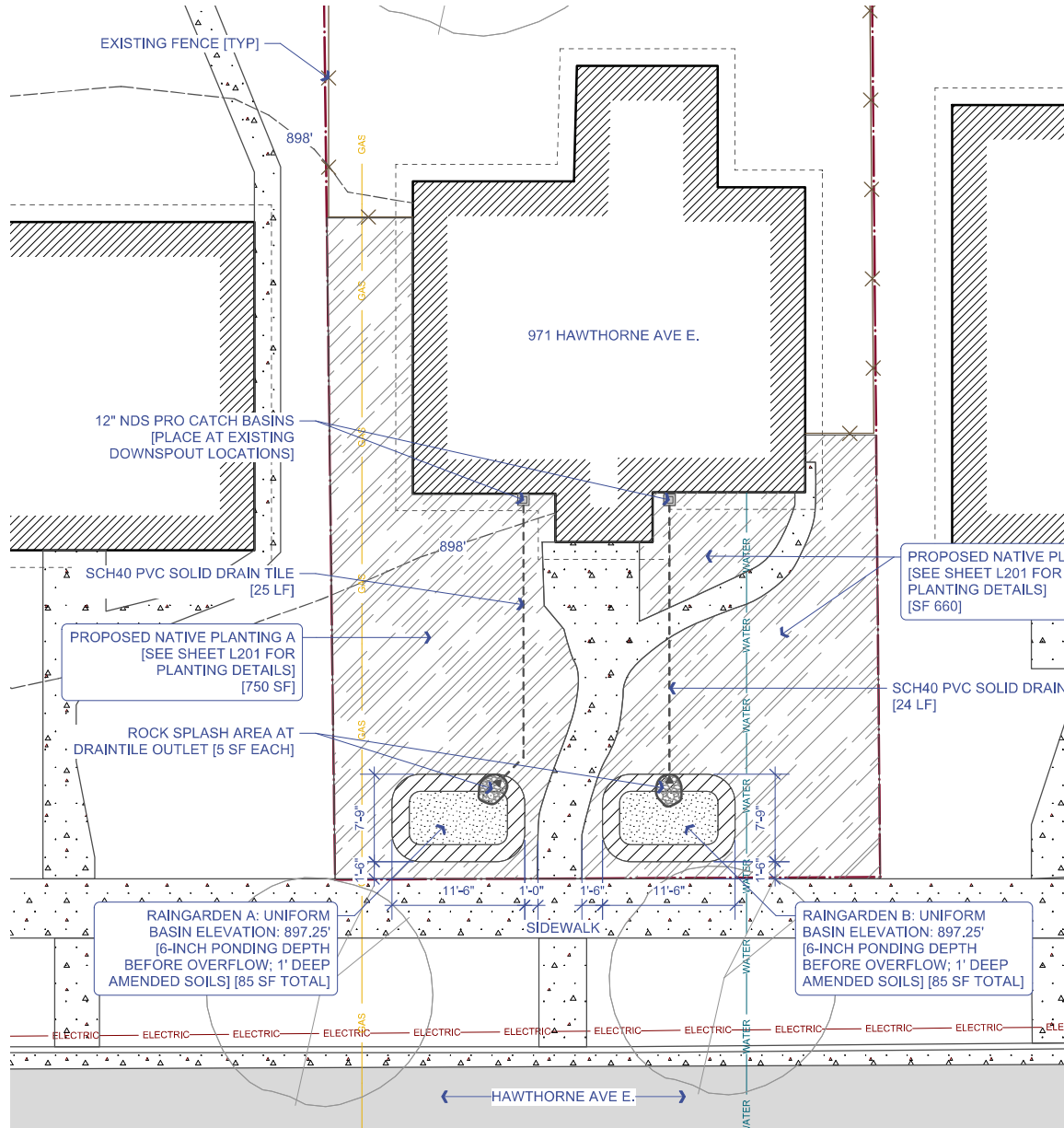
Staff recommends approval of this application.

Subwatershed:

Lake Phalen

Location Maps:





PROJECT NOTES

1. REMOVE EXISTING VEGETATION (TURF) WITHIN PROPOSED RAINGARDEN AND NATIVE PLANTING AREAS.
2. PROTECT RAINGARDEN AREAS FROM COMPACTION. EXCAVATE WITH TRACKED EQUIPMENT ONLY.
3. HAND DIG IN AREAS NEAR EXISTING UTILITY LINES. VERIFY EXACT LOCATION PRIOR TO DIGGING IN AREAS NEAR EXISTING UTILITIES. UTILITY MARKINGS ON PLANS ARE APPROXIMATE.
4. RIP UNDERLYING SOILS 6-12" MINIMUM TO REMOVE COMPACTION IN RAINGARDEN AREAS.
5. GRADE OUT RAINGARDEN AREAS WITH 3H:1V: SIDE SLOPES AND FLAT RAINGARDEN BASINS. INSTALL 12" AMENDED SOILS IN RAINGARDEN BASIN.
6. USE EXCAVATED SOILS ONSITE FOR BERMS OR TO GRADE LAWN TO FLOW INTO RAINGARDEN AREA AS POSSIBLE PRIOR TO SOIL HAUL AWAY.
7. INSTALL NDS CATCH BASINS (2) AT DOWNSPOUT LOCATIONS AS SHOWN ON PLAN. CONNECT CATCH BASINS TO RAINGARDENS WITH SOLID PVC DRAIN TILE. OUTLET INTO SIDE SLOPES OF RAINGARDENS & ARMOR SPLASH AREA WITH RIVER ROCK.
8. EXISTING CANOPY TREES NEAR PROJECT AREA TO BE PROTECTED AND REMAIN IN PLACE. EXACT LOCATIONS AND NUMBER MAY VARY FROM PLANS. SITE VERIFY.
9. PREP NATIVE PLANTING AREAS FOR MULCH AND NATIVE PLUG INSTALLATION.
10. INSTALL 3" THICK TWICE SHREDDED HARDWOOD MULCH OVER ENTIRE PLANTING AREAS PER PLANS.
11. EXACT SIZE/LOCATION/LAYOUT OF RAINGARDEN MAY VARY. VERIFY ANY REQUIRED LAYOUT/SIZING CHANGES WITH RCSWCD STAFF PRIOR TO INSTALLATION. MAINTAIN PROPOSED SQUARE FEET AND PONDING DEPTH.
12. CONTRACTOR/LANDOWNER TO ACQUIRE ANY NECESSARY PERMITS PRIOR TO BEGINNING WORK.
13. ELEVATIONS PROVIDED ARE APPROXIMATE. SITE VERIFY FINAL ELEVATIONS TO ENSURE PROPER PONDING DEPTH, OVERFLOW, ETC.
14. SEE DETAILS ON SHEET L300 FOR RAINGARDENS.
15. PLANT RAINGARDEN AREAS ACCORDING TO PLANTING PLAN PROVIDED ON SHEET L200.
16. PLANT NATIVE PLANTING AREAS PER LIST AND SPECIFICATIONS PROVIDED ON SHEET L201.

LEGEND

- 3H:1V RAINGARDEN SIDE SLOPE
- FLAT RAINGARDEN BASIN
- NATIVE PLANTING
- PARCEL BOUNDARY (APPROX.)
- 2' CONTOUR ELEVATION

RAMSEY COUNTY
 RAMSEY COUNTY SWCD
 2015 VAN DYKE STREET
 MAPLEWOOD, MN 55109
 651-266-7280
 www.ramseycounty.us

PROJECT:
 ATCHISON RESIDENCE
LOCATION:
 971 HAWTHORNE AVE E.
 ST. PAUL, MN 55106
WATERSHED DISTRICT:

DESIGNER: BRIAN T. OLSEN
DATE: 10/24/2023
PAST REVISION:
PAST REVISION:
PAST REVISION:
CHECKED BY:
TAA:

- NOTES:**
- CONTACT GOPHER STATE ONE CALL TO CONFIRM UTILITY LOCATIONS
 - ELEVATIONS ARE APPROXIMATE, SITE VERIFY
 - VERIFY ANY BID ALTERNATES OR ONSITE CHANGES WITH SWCD STAFF PRIOR TO INSTALLATION
 - ORIGINAL SHEET SIZE: 11"x17"

SCALE: 1"=10'-0"

SITE PLAN

L100

Stewardship Grant Application Summary

Project Name: Woodbury 2024 Street Sweeping

Application Number: 24-08 CS

Board Meeting Date: 3/6/2024

Applicant Name: Kristin Seaman

Residential

Commercial/Government

Project Overview:

The City of Woodbury has been working with RWMWD to enhance their street sweeping efforts since Fall 2022. In December 2023, the RWMWD Board of Managers voted to allocate \$250,000 towards 2024 enhanced street sweeping efforts. Woodbury is requesting funds to sweep monthly May-September with an additional 2-3 sweeps after leaf drop. The City will continue to fund two sweepings per season on top of this request. This is similar to their 2023 request with added spring and summer sweepings as recommended by staff. Woodbury has submitted very detailed reports in the past that have helped staff refine our studies and will continue to be beneficial as they continue to improve their sweeping program.

BMP type(s):

Street Sweeping(1)

Grant Request:

\$75,000.00

Recommendation:

Staff recommends approval of this application.

Subwatershed:

Battle Creek

Location Maps:

Stewardship Grant Application Summary

Project Name: Dunn

Application Number: 24-09 CS

Board Meeting Date: 3/6/2024

Applicant Name: Deanna Dunn

Residential **Commercial/Government**

Project Overview:

This project is located off Upper Afton Rd and S Luella St in the City of St. Paul. The applicant is proposing to install a rain garden to capture roof runoff as well as a native planting area to reduce turf grass and increase pollinator habitat.

The rain garden work is eligible for 75% coverage, and the habitat restoration work is eligible for 50% coverage up to \$15,000.

BMP type(s):

Native Habitat Restoration(1), Rain Garden(1)

Grant Request:

\$6,545.00

Recommendation:

Staff recommends approval of this application.





Subwatershed:

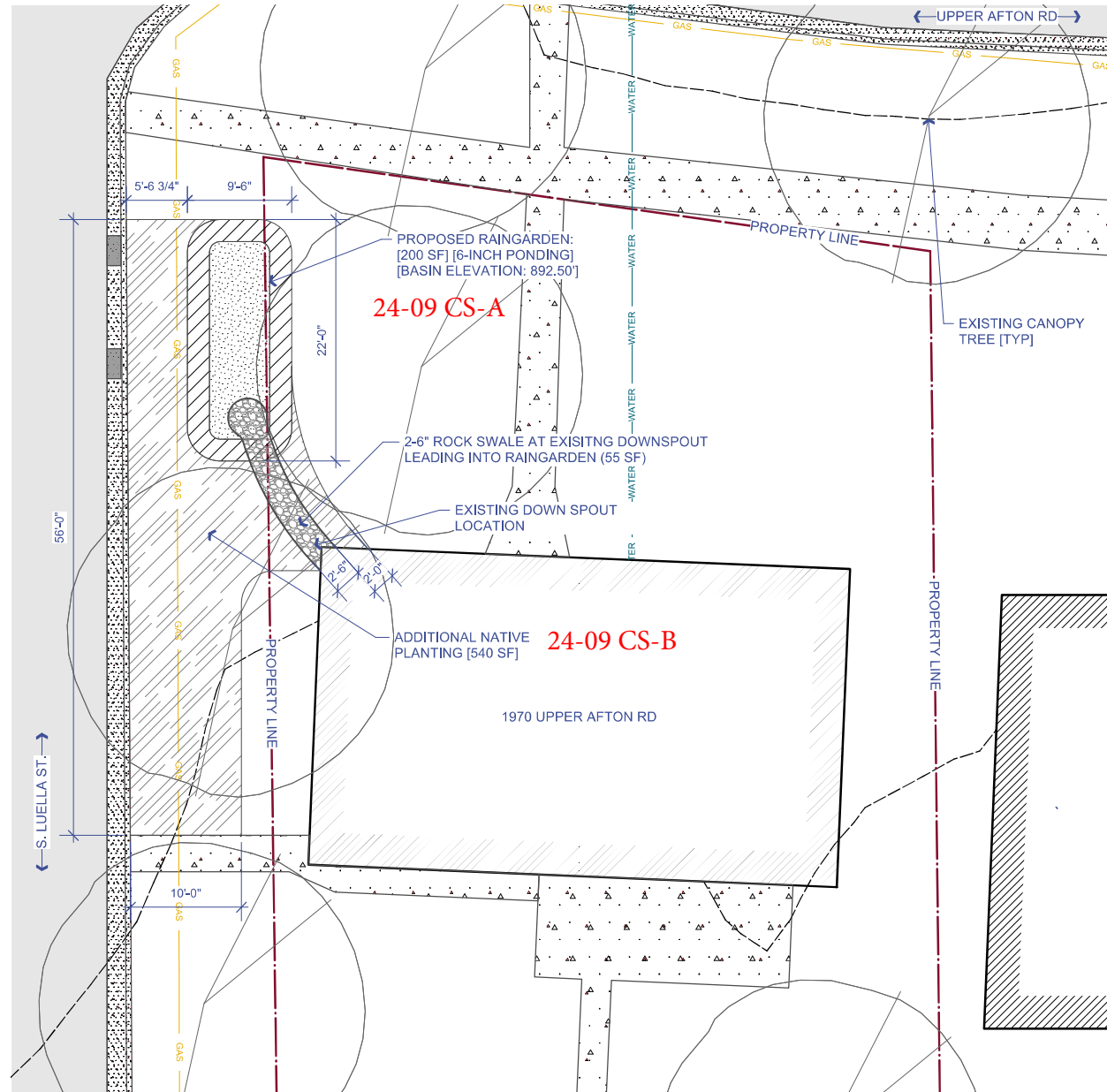
Battle Creek

Location Maps:



SITE PLAN LEGEND

-  FLAT RAINGARDEN BASIN
-  4H:1V RAINGARDEN SIDE SLOPE
-  DRY CREEK BED ROCK
-  NATIVE PLANTING



PROJECT NOTES:

1. ELEVATIONS ARE APPROXIMATE. EXACT ELEVATION OF BASIN/OVERFLOW, ETC. MAY VARY DEPENDING ON FINAL GRADE OF RAINGARDEN.
2. EXCAVATE RAINGARDEN AREA, LOOSEN UNDERLYING SOILS 6-12" TO REMOVE COMPACTION & PROMOTE INFILTRATION, AND INSTALL 1" DEEP AMENDED SOILS IN RAINGARDEN BASIN AREA.
3. GRADE OUT BASIN & SIDE SLOPES PER PLANS. CONTRACTOR TO ENSURE RAINGARDEN BASIN IS FLAT IN ALL DIRECTIONS AND SIDE SLOPES ARE NO GREATER THAN 4H:1V BEFORE PLACEMENT OF MULCH, ROCK AND PLANT MATERIAL.
4. INSTALL TWICE SHREDDED HARDWOOD MULCH OVER ENTIRE RAINGARDEN & NATIVE PLANTING AREAS.
5. PRESERVE ALL EXISTING TREES & SHRUBS UNLESS OTHERWISE DIRECTED BY LANDOWNER.
6. NO CONSTRUCTION MATERIALS TO BE STORED UNDER TREE CANOPIES OR DRIVEN IN THE RAINGARDEN BASIN.
7. CONTRACTOR TO SEED ALL AREAS OF DISTURBED SOIL OUTSIDE PROJECT AREA WITH PESCUE SEED OR SIMILAR UPON COMPLETION OF PROJECT.
8. CONTRACTOR TO PROVIDE APPROPRIATE SEDIMENT & EROSION CONTROLS DURING TIMES OF OPEN SOILS AS NECESSARY.



RAMSEY COUNTY SWCD
 2015 VAN DYKE ST N
 MAPLEWOOD, MN 55109
 651-266-7280
 www.ramseycounty.us

PROJECT: DUNN RESIDENCE
 LOCATION:
 1970 UPPER AFTON RD
 ST. PAUL, MN 55119
 WATERSHED DISTRICT:



DESIGNER: BRIAN T. OLSEN
 DATE: 11/2/2023
 REVISION:
 REVISION:
 REVISION:
 REVISION:
 REVISION:
 CHECKED BY:
 TAA:

NOTES:
 CONTRACTOR TO LOCATE ALL UTILITIES PRIOR TO WORK
 UTILITIES WITHIN OR NEAR CONSTRUCTION AREA SHALL BE POTHOLED

CONTRACTOR MUST ACQUIRE ALL NECESSARY PERMITS

ORIGINAL SHEET SIZE: 11" x 17"

SCALE: 1"=10'-0"



SITE LAYOUT

L100

* * * * *

Permit Program

* * * * *



RAMSEY-WASHINGTON

METRO WATERSHED DISTRICT

MEMORANDUM

Date: March 6th, 2024

To: Board of Managers and Staff

From: Nicole Maras, Permit Coordinator
Mary Fitzgerald, District Inspector

Subject: February Enforcement Action Report

During February 2024:

Number of Violations:	5
Install/Maintain Construction Entrance	2
Install/Maintain Inlet Protection	1
Install/Maintain Perimeter Control	1
General Permit Requirements	1

Permit Staff- Activities, Trainings, and Coordination Meetings:

Active and inactive site monitoring, active site inspections and progress meetings, meetings with permit applicants, rule guidance assistance and misc. inquiries, Wetland Conservation Act (WCA) administration & procedures, permit submittal reviews with Barr Engineering, initial erosion control walk-through, “WCA 101” webinar training, MS4 collaboration meetings with various departments, U of M Environmental Career Fair, Metro Transit Gold Line safety training, MPCA “Enforcement of Construction Stormwater Permit” webinar, informational Interview with U of M student re: watershed districts, MN Water Workforce Pilot Program check-in meeting, Watershed Equity Alliance meeting (formerly known as Watershed DEIA Workgroup), MN Stormwater Seminar Series webinar: “Performance of Stormwater Practices,” BMP Maintenance meeting with MWMO, cost-benefit analysis of 2023 BMPs, Tribal-State Relations Training debrief during the RWMWD DEIA Workgroup meeting, GEOPATHs Youth Program training, discussion with North Carolina Department of Environmental Quality re: RWMWD’s stormwater treatment standards

Single Lot Residential Permits Approved by Staff:

None

Permits Closed:

18-15 Hy-Vee Gem Lake (Gem Lake) –WITHDRAWN
19-05 3M Innovation Blvd/19th St Reconstruction (Maplewood) –WITHDRAWN
19-08 Cornerstone Medical Expansion (Woodbury) –WITHDRAWN
19-20 Buerkle Road Drainage Improvements (Vadnais Heights) –WITHDRAWN
19-35 17th & 3rd Townhomes (North St. Paul) –WITHDRAWN
21-07 RWMWD Ryan Drive/Keller Parkway Conveyance Upgrades (Little Canada)
21-31 RWMWD 2022 CIP Maintenance/Repairs (Various locations)
22-30 Wells Fargo Redevelopment (Woodbury) --WITHDRAWN
22-37 RWMWD 2023 CIP Maintenance/Repairs (Various locations)

Site Violation Updates:

The five violations that occurred in the month of February occurred at 4 different sites: 22-35 (Rosedale Estates Parking), 21-32 (Rooney 2nd Addition), 22-31 (White Bear Lake Apartments II), and 21-16 (Metro Transit Gold Line BRT).

22-35 Rosedale Estates (Roseville)

The apartment parking lot project received 2 violations on their inspection for failure to install inlet protection near their construction entrance and failure to install perimeter control around new disturbed areas. These violations resulted in a non-compliant report. Contractors confirmed a few days later that the violation items had been repaired. Staff also received notice that a new contractor would be taking over sitework and SWPPP responsibilities. Staff will coordinate with these new contacts through the remainder of the project.

21-32 Rooney 2nd Addition (White Bear Lake)

While the Rooney residential subdivision site has made improvements to their erosion and sediment control practices onsite, they were found to be in violation of record-keeping related to their SWPPP and inspection log. This violation resulted in a non-compliant report for the site. Contacts confirmed that they were in the process of hiring a new trained individual to amend their SWPPP and conduct/document all future inspection reports on the developer's behalf. Staff will be reviewing the SWPPP and inspection log during future visits to ensure it's being kept up to date.

22-31 White Bear Lake Apartments II (White Bear Lake)

The apartment construction site received a violation notice for improperly maintaining construction entrances, which had caused excessive sediment tracking onto their parking lots within the project limits. This sediment tracking occurred on an unusually warm winter day, which the site communicated was hard to control, however they were actively sweeping while staff were onsite. Staff noted this effort, which resulted in a compliant report for the site, with the caveat that all

construction entrance maintenance and sweeping efforts must continue to get the paved areas of the site cleaned up and maintained as such.

21-16 Metro Transit Gold Line BRT (Landfall, Maplewood, Oakdale, St. Paul, Woodbury)

During a routine inspection of the bus rapid transit project, staff found many project vehicles and equipment to be using improperly maintained or unofficial construction entrances along the corridor of the project. This type of activity in unusually warm winter weather caused sediment tracking on roadways. The project team was aware of this problem and were working on closing off certain areas to vehicle traffic as well as installing additional rock at existing entrances and continuing their daily sweeping operations. Due to the complexity of site access for this project and difficult weather conditions, staff did not give the site a non-compliant report, with the caveat that this issue must be a daily focus of the project team until conditions improve.

Other Project Updates:

23-23 Bailey Nursery Wetland CAP (Woodbury, Maplewood)

Staff conducted a routine inspection on February 20th at the wetland and pond soil remediation efforts occurring at/near Bailey Nursery in Woodbury and Maplewood. The wetland site excavation is finished, with seed and blanket to be installed soon. The pond site was working on dewatering to allow for soil excavation. The unusually warm winter weather is making this effort difficult, as it's much easier to clean out a pond when the soils are frozen. The site has been diligent in monitoring dewatering discharge and modifying strategies to get the project done while battling the elements.



wetland



pond



dewatering discharge

* * * * *

Stewardship Grant Program

* * * * *

Stewardship Grant Program Budget Status Update

March 6, 2024

Homeowner	Coverage	Number of Projects: 7	Funds Allocated
Habitat Restoration and rain garden w/o hard surface drainage	50% Cost Share \$15,000 Max	5	\$13,098**
Rain garden w/hard surface drainage, pervious pavement, green roof	75% Cost Share \$15,000 Max	2	\$12,620*
MN Water Steward Project	100% Cost Share \$15,000 Max	0	\$0
Shoreland Restoration	100% Cost Share \$15,000 Max	0	\$0

Commercial, School, Government, Church, Associations, etc.	Coverage	Number of Projects: 3	Funds Allocated
Habitat Restoration	50% Cost Share \$15,000 Max	0	\$0
Shoreland Restoration (below 100-year flood elevation w/actively eroding banks)	100% Cost Share \$100,000 Max	0	\$0
Priority Area Projects	100% Cost Share \$100,000 Max	1	\$100,000
Non-Priority Area Projects	75% Cost Share \$50,000 Max	0	\$0
Public Art (\$50,000 Reserved)	50% Cost Share \$15,000 Max/Project	0	\$0
Aquatic Veg Harvest/LVMP Development	50% Cost Share \$15,000 Max	0	\$0
Enhanced Street Sweeping (\$250,000 Reserved)	Varies	2	\$78,000*

Maintenance	50% Cost Share \$7,500 Max for 5 Years	65	\$46,425**
Consultant Fees			\$4,213
Total Allocated			\$254,356

*includes funds to be approved at current board meeting

** includes staff approvals since previous board meeting

2024 Stewardship Grant Program Budget	
Budget	\$1,250,000
Total Funds Allocated	\$254,356
Total Available Funds	\$995,644

* * * * *

Action Items

* * * * *

Request for Board Action

Board Meeting Date: March 6, 2024

Agenda Item No: 8A

Preparer: Tina Carstens, Administrator

Item Description: Bylaws and Board Governance Document Approval

Background:

The board received a draft of the board governance documents at your September 2023 meeting. I received comments from two managers and made changes to the document based on those comments. At the February 2024 meeting, the board saw that revised version. I have since received comments from another board member and our attorney. Many of the board member comments were editing and cleaning up of the document. Our attorney comments made sure it aligns with state statute requirements and language. The version attached to this cover sheet is a final draft for your review and approval.

As noted in the governance document, these documents will be reviewed and accepted by the board at their March meeting on an annual basis.

Applicable District Goal and Action Item:

Goal: Manage organization effectively: The District will operate in a manner that achieves its mission while adhering to its core principles.

Action Item: Implement effective board leadership through continued board education, succession of positions, and maintenance of the District's charter, bylaws, and mission statement.

Staff Recommendation:

Staff recommends approval.

Financial Implications:

None

Board Action Requested:

Approve the Ramsey-Washington Metro Watershed District Bylaws and Board Governance Document.



RWMWD

Ramsey-Washington Metro Watershed District

Governance Manual – Introduction

March 6, 2024

Ramsey-Washington Metro Watershed District (RWMWD) is a special purpose unit of government established under Minnesota Statutes chapters 103B and 103D. RWMWD is governed by a five-member Board of Managers, four of whom are appointed by the Ramsey County Board of Commissioners and one by the Washington County Board of Commissioners. The day-to-day operations of RWMWD are managed and directed by an Administrator, who implements the watershed management plan adopted by the Board of Managers.

The manual will be annually reviewed at the Board of Managers' business meeting (typically in March) and updated as necessary.

RWMWD staff and contractors are expected to conduct RWMWD business per the manual and alert the Board of Managers to improvements and additions needed.

Except as explicitly provided by law, this governance manual is for the internal guidance of the RWMWD and does not create any rights in any third party. Except as constrained by law, the Board of Managers retains its discretion to deviate from a policy herein as in its judgment circumstances warrant.

Bylaws

Ramsey-Washington Metro Watershed District

Originally Adopted: June 27, 1975

Revised: January 7, 2009

Last Revised: March 6, 2024

These bylaws establish rules governing the conduct and procedure of the Managers of the Ramsey-Washington Metro Watershed District.

Section 1. Place of Meeting. The Ramsey–Washington Metro Watershed District's principal place of business shall be 2665 Noel Drive, Little Canada, Minnesota, 55117 (“District Office”). The standard regular meeting place shall be in the Board Room at the above address, provided that the Managers may adjourn to other meeting places within the District by posting notice of the adjourned meeting place at least twenty-four hours before the meeting.

Section 2. Regular Meetings. The Ramsey -Washington Metro Watershed District shall meet on the first Wednesday of the month and at other times as the Managers shall determine.

Section 2A. Posting. Notice of meetings other than the regular monthly meeting shall be posted in a conspicuous place at the District Office at least 72 hours before said meeting, and comply with all requirements of Minnesota Statutes § 13D.04.

Section 2B. Call of Meeting by Manager. Any Manager may call a meeting other than the regular monthly meetings. If a Manager does so, this shall cause written notice of said meeting to be mailed to each Manager at least eight days before the meeting. The eight-day written notice requirement may be waived by any Manager by their consent in a form adopted by the Board either before or after the meeting to which notice was to be given.

Section 2C. Conducting the Meetings. The meetings shall be presided over by the President or Vice President in their absence. In the absence of the President or Vice President, the remaining Managers shall appoint a President Pro Tem. Except where a public meeting is provided by Minnesota Statutes Chapter 103D and 103B, the meetings are of the Managers only, with speaking and voting privileges granted only to them. The meetings of the Managers, however, shall be open meetings, and the President or any two Managers may call upon other persons to speak on any question before the Managers. The meetings of the Managers shall be informal, but questions of parliamentary procedure shall be resolved by the application of Robert's Rules of Parliamentary Law, Current Revised Edition. Unless otherwise specified in the call for meeting, meetings other than the regular monthly meetings are also regular meetings of the District. At a regular meeting, anything that may properly be brought before the managers can be considered.

Section 2D. Minutes. The Secretary shall cause the preparation and distribution of minutes of all meetings of the Managers. The minutes shall constitute an official record of the proceedings and be reviewed and approved by the Managers. The original minutes shall be

filed and recorded in the office of the Managers, and copies shall be furnished to each Manager.

Section 3. Special Meetings. A special meeting of the Managers is called to conduct certain specified business, and the Managers may only consider such matters. In all other respects, Sections 1 and 2 of the bylaws shall also apply to special meetings.

Section 4. Annual Meeting. The annual meeting of the Ramsey-Washington Metro Watershed District will be held at the regular meeting in March of each year. At the annual meeting, the Managers will elect officers for the District for the term of April of the current year through March of the following year. The Managers will elect the following officers among themselves: President, Vice President, Secretary, and Treasurer. In addition to the election of officers, the Managers shall appoint or reappoint for the ensuing year a bank or depository for funds of the District, a consulting engineer, legal counsel, and other professional assistance as the District may require. Upon motion being made and carried out, these appointments may be continued for action at a subsequent meeting, in which event the appointments continue until terminated or renewed. In all other respects, Sections 1 and 2 of the bylaws shall also apply to annual meetings.

Section 5. Public Meetings. Public hearings or meetings of the Ramsey-Washington Metro Watershed District are governed by Minnesota Statutes Chapters 103D, 103B, and 13D, these bylaws, and Robert's Rules of Parliamentary Law, Current Revised Edition. The President may refuse to recognize anyone appearing before the Board who has already spoken twice on any question.

Section 6. Voting. The President has full voting privileges at all times and may vote on any issue and need not confine their voting to break ties in voting by the Managers.

Section 7. Electronic Communication. Providing there is no violation of the open meeting laws pursuant to the State of Minnesota, the Managers may use electronic forms of communication, including, but not limited to, interactive television and computers.

Section 8. Quorum. A quorum shall consist of any three Managers present. No meeting shall be opened without a quorum.

Section 9. Rules of Procedure. The President may appoint a Parliamentarian who may be one of the Managers or the attorney for the District. The function of the Parliamentarian is to advise the President at their request. The conduct and procedure not provided herein are governed by Minnesota Statutes Chapter 103D and 103B and Robert's Rules of Parliamentary Law, Current Revised Edition.

Section 10. Adoption and Revision. A majority vote of the Managers may adopt these bylaws. Thereafter, suspension or revision of these bylaws shall require the affirmative votes of four of the Managers.

Section 11. Compliance. These bylaws are intended to be consistent with applicable provisions of Minnesota Statutes Sections 103D and 103B. In all cases of omission or error, the requirements of Minnesota Statutes or other applicable law will govern.

General Governance of the Board

I. BOARD OF MANAGERS GOVERNANCE PRINCIPLES

The Ramsey-Washington Metro Watershed District board (Board) governs consistently with the District's vision, mission, and goals identified in the watershed management plan.

The Board commits to conducting business adhering to the highest ethical, legal, and fiduciary standards. Board members shall act solely on behalf of and for the benefit of the District, not for the benefit of themselves, their employer, their place of business, or any other individual interest.

A spirit of openness, sincerity, and mutual respect for the input and opinions of others are critical to the Board's ability to govern effectively. Board members are expected to spend the time necessary to be informed on the issues and attend meetings and District events as necessary.

II. ROLE OF THE BOARD

A. As a whole, the Board is expected to fulfill the following roles:

1. Determine and uphold the District's mission.
2. Hire, support, and assess the Administrator.
3. Support the Administrator in determining staff positions.
4. Ensure an effective strategic planning process by setting short- and long-term goals and program and project priorities and documenting them in the watershed management plan.
5. Ensure adequate resources such as structure, funds, time, volunteers, staff, and technology. Complete the required yearly annual budget and levy process.
6. Develop, monitor, and strengthen the District's programs and services.
7. Ensure legal and ethical integrity, maintain accountability, and exercise fiduciary oversight. Disclose potential and actual conflicts of interest.
8. Elect officers of President, vice president, Secretary, and treasurer.

III. ROLE OF AN INDIVIDUAL BOARD MEMBERS

A. General Expectations

1. Know the District's vision, mission, goals, policies, programs, services, strengths, and needs.
2. Perform duties of board membership responsibly and with energy and enthusiasm.
3. Be an active advocate for the District's policies and programs.
4. Approach issues with an open mind, objectively evaluating all input and information.

B. Meetings

1. Prepare for and actively respectively participate in board meetings.
2. Willingly serve on committees as needed.
3. Maintain confidentiality of the Board's executive sessions and protect the disclosure of private and confidential information.
4. Suggest agenda items as needed to ensure that significant, policy-related matters are addressed.

C. Decision-making

1. Each board member is expected to be actively involved in board discussions. Board members must share their opinions, listen to the opinions of others, and make an effort to see the issues from a variety of perspectives other board members may bring. If a board member holds a view that has not been voiced, it is their obligation to share it during the board meeting – not simply before or after a meeting.
2. Any board member who believes that they have a conflict of interest on any decision must disclose it before the discussion begins and recuse themselves from the discussion and vote.
3. In deciding how to vote, board members are expected to consider the collective interests of all residents within the District and vote with what they believe to be the common interest.

4. After a vote, unless the decision violates their core value, each board member is expected to support the Board's majority decision.

D. Speaking on District Board Matters

1. If it is asked or inferred that an individual board member speaks on behalf of the District, board members should defer to the staff administrator and President. All comments should refer to official district policies and positions.
2. When speaking on district matters in a public setting, board members should be clear if they are representing the District or their personal opinions as a resident of the District.

E. Relationships with Staff

1. Provide advice and support to the district administrator. Keep most communication with the Administrator or request to consult with other district staff.
2. Avoid asking for special staff favors, including special requests for extensive information, without prior consultation with the Administrator or President.

F. Managing Conflicts

1. Serve and respect the organization and its mission. Avoid representing any special interest group or constituency.
2. Maintain independence and objectivity and do what a sense of fairness, ethics, and personal integrity dictate.
3. Except in limited circumstances permitted under Minnesota law, never accept or offer gifts from or to anyone who does business with the District.

G. Financial Management

1. Ensure financial solvency and accountability and the efficient and effective use of funds. Seek clarity from the Administrator when questions arise.
2. Ensure an annual audit is conducted.
3. Approve monthly expenses.

IV. ROLE OF MEMBERS SERVING IN OFFICER POSITIONS

A. President

1. Ensure that the Board and individual members fulfill their responsibilities for the governance of the District and adhere to the Board's governance principles.
2. Be a partner to the Administrator in helping to achieve the District's mission. Provide support and encouragement to the Administrator.
3. Facilitate a productive, mutually respectful relationship between the Board and staff.
4. Assist the Administrator in setting the agenda for each meeting.
5. Chair meetings of the Board, ensuring that the Board functions effectively, interacts with staff optimally, and fulfills all its duties, including reaching timely decisions. In leading discussions, work to ensure that all members participate and that all points of view are fully expressed before a vote is taken.
6. Sign and deliver in the name of the District any contracts, deeds, correspondence, or other instruments pertaining to the business of the District, as authorized by the Board.
7. Be a signatory to the District's financial accounts.
8. The President has full voting privileges, may vote on any issue, and does not need to confine their voting to break ties.

B. Vice-President

1. Fulfill any delegable roles and responsibilities of the President as requested by the President. In the absence or disability of the President, the vice president shall act as President.
2. Serve as the personnel committee of the Board and facilitate an annual review of the Administrator's performance and compensation.
3. Be a signatory to the District's financial accounts.

C. Treasurer

1. Be a signatory to watershed accounts and financial records.
2. Primary reviewer of District financial records.

3. The following treasurer responsibilities are delegated to district staff under the direction of the Board of managers: Develop and maintain the District's financial accounts and records; arrange for the annual audit of the District's financial records; and provide the Board with monthly reports of records to describe the financial condition; deposit all monies, drafts, and checks in the name of and to the credit of the District at such banks and depositories as the Board may approve.

D. Secretary

1. Certify levies, records, and proceedings of the District with their signature.
2. Be a signatory on district financial accounts.
3. The following secretary responsibilities are delegated to district staff: oversee the preparation and distribution of the minutes of all meetings of the District; distribute minutes in advance of meetings; suspend oral reading of minutes at regular meetings; maintain all approved and revised meeting minutes at the district office and oversee the preparation and proper notice of all meetings called by the district board.

District Governance Policies

The following general governance policies help ensure the sound administration of the district business and the continued focus of district resources on protecting and improving the water resources in the Ramsey-Washington Metro Watershed District.

I. Contracting

- A. The Board of managers may delegate the authority to approve work change directives and change orders to the Administrator. The Administrator may require a district contractor to secure additional or replacement payment and/or performance bonds to cover any increased price of a district project resulting from a change order approved by the Administrator. A change order approved by the Administrator under delegated authority will be presented to the Board of managers at its next meeting for approval and signature.

II. Per diems

- A. Managers may receive one per diem payment per day for participation in a meeting of the Board of managers and other necessary meetings and duties. Per diem payments will be provided at rates and for activities and necessary duties as established by the Board of Managers and indicated on the per diem request form. The per diem claim forms shall be submitted to district staff for processing.

III. Records Management and Retention

- A. The District will make and preserve all records necessary to ensure the availability of a full and accurate accounting of the District's official activities.
- B. The District will adopt and maintain a records retention schedule to be approved by the state archives office, governing the retention and/or disposal of records created by the District. (document will be in appendix)
- C. In keeping with the direction of the Uniform Electronic Transactions Act, the District will create and retain its records in electronic form to the greatest extent possible.
- D. The Administrator is the responsible authority for purposes of district compliance with the Data Practices Act, Minnesota Statutes chapter 13.
- E. The Administrator is the data practices compliance official for district compliance with the Data Practices Act.

IV. Delegated Authority

- A. No employee of the District may exercise authority beyond that allocated to the Administrator by the district bylaws and policies that constitute the Governance Manual.
- B. Authority delegated to the Administrator may not be delegated to other employees or contractors.
- C. Duties assigned to the Administrator may be delegated to other employees or contractors by the Administrator. However, the Administrator will remain responsible to the Board of Managers for properly executing all delegated duties.
- D. The Administrator may not commit funds outside of the approved budget without the approval of the Board of Managers.

V. Managers' Authority

- A. No manager may speak on behalf of the District unless authorized by the Board of Managers.
- B. No individual manager may provide direction, instructions, or authorization to the Administrator unless specifically authorized by the Board of Managers.

Schedule of Regular Activities

The District will observe the following schedule of required activities to ensure continued compliance with laws and regulations:

- A. The District conducts its annual business meeting in March. At that meeting, the Board of managers:
 - i. Elect officers of President, vice president, treasurer, and Secretary.
 - ii. Approves a schedule of meetings of the Board of Managers for the ensuing year.
 - iii. Names a district depository bank and an official newspaper for publication of notices.
 - iv. Reviews the district Citizen Advisory Committee membership.
 - v. Reviews and, as necessary, directs the preparation of updates to its governance manual.
- B. The District annually publishes at least one newsletter or other watershed-wide communication that explains the District's programs and project activities. The Board of Managers' contact information will be maintained on the district website.
- C. The District biennially solicits engineering, legal, auditing, accounting, and other professional service proposals following Minnesota Statutes.
- D. The District annually audits its accounts and expenditures following Minnesota Statutes.
- E. The District annually submits to the Board of Water and Sewer Resources a financial, activity, and audit report each year by May 1 (within 180 days of the end of the District's financial year) following Minnesota Statutes.
- F. As the Data Practices Act's responsible authority, the Administrator reviews the District's DPA policy and associated protocols annually to ensure harmony with current law following Minnesota Statutes.
- G. Annually, on or before September 30, the District holds a public hearing on its budget for the next year and the total amount of funding necessary to be raised from ad valorem tax levies to meet the budget. After the hearing and considering comments received, the Board adopts the budget and levy, which is then certified to Ramsey and Washington Counties. A final opportunity for citizens to comment on the budget and levy is available at the District's December meeting of the Board before final budget and levy approval.

Request for Board Action

Board Meeting Date: March 6, 2024

Agenda Item No: 8B

Preparer: Tina Carstens, Administrator

Item Description: Board of Managers 2024 Annual Meeting

Background:

The following is official business for the board to take action on at this annual meeting:

1. Elections of Officers

The board must select a president, vice president, treasurer, and secretary. The current officers are as follows:

President	Val Eisele
Vice President	Open (past board member Pam Skinner)
Treasurer	Matt Kramer
Secretary	Benjamin Karp

The **President** will serve as the chairperson for all meetings, be a signatory to the District's account, and sign contracts or correspondence as approved by the board. The president will always have full voting privileges and does not need to confine their voting to break ties of the managers. The president may also work with the administrator to develop monthly meeting agendas.

The **Vice President** will perform the President's duties in the event of an absence. The Vice President is also responsible for being the personnel representative of the board. This means that the Vice President would coordinate the Administrator's review and consult with the Administrator on possible personnel issues.

The **Treasurer** will be a signatory on District accounts and sign the monthly checks at each month's board meeting. The duties of preparing the monthly reports of records to describe the financial condition of the District and arranging for an annual audit are delegated to district staff.

The **Secretary** will ensure meeting minutes are prepared and approved by the board and sign documents requiring multiple signatures. The preparation and distribution of the meeting minutes and proper meeting notice posting is delegated to district staff.

Staff recommendation is for the board to elect its president, vice president, treasurer, and secretary for 2024.

- 2. Community Advisory Committee Membership, Board Liaison Appointment, and Activities**
Attached is a summary of the last CAC meeting as well as some discussion around membership and activities for 2024. Please review the information and discuss. The board should also designate a CAC liaison as well.

Staff recommends the board approve the new and renewing CAC membership, select a board liaison to the committee and approve the 2024 work plan suggestions.

3. Consulting Staff Selection

Every two years we are required to publish a public notice soliciting proposals for our consulting services. We do this for our engineer, attorney and accountant. The proposals are attached to this memo. We received proposals from each of our three current consultants plus an engineering proposal from Black and Veatch.

Staff would recommend that we continue to appoint our existing consultants for 2024 based on the positive experiences and services received from them for many years.

Engineer: Barr Engineering
Attorney: Galowitz Olson
Accountant: Redpath and Company

Staff recommendation is to appoint Barr Engineering, Galowitz Olson, and Redpath and Company as the consultants for 2024.

4. Official Designations

A final item of business is to designate the District's official newspapers and banking institution. Current appointments for each of these items are as follows:

Official Bank of Deposit: 4M Fund with League of Minnesota Cities: US Bank

Official Newspapers: St. Paul Pioneer Press

Staff recommendation is to approve the 4M Fund with LMC: US Bank as our Official Bank of Deposit and the St. Paul Pioneer Press as our Official Newspaper for 2024.

Applicable District Goal and Action Item:

Goal: Manage organization effectively: The District will operate in a manner that achieves its mission while adhering to its core principles.

Action Item: Follow all legal requirements applicable to watershed districts.

Staff Recommendation:

Staff recommends appointing the board officers, consulting staff, citizen advisory committee members, official bank of deposit and official newspapers as shown above.

Financial Implications:

None

Board Action Requested:

Appoint board officers, citizen advisory committee members and designate the desired consulting staff, official bank of deposit, and official newspapers.

Citizen Advisory Committee Meeting Notes and Request of the Board of Managers – Carrie Magnuson

The Citizen Advisory Committee met on February 13th 2024 at 6:30 pm at the RWMWD Office (with a hybrid option on Zoom). In attendance were 8 CAC members, 1 board member, and 4 staff members. The following initiatives were discussed and further developed.

1. 2024 Membership –

- a. The following members would like to continue to serve on the CAC
 - Cliff Aichinger (Representing: At-large)
 - John Chikkala (Representing: Woodbury)
 - Jill Danner (Representing: St. Paul)
 - Randee Edmundson (Representing: Schools)
 - Hallie Finucane (Representing: Roseville)
 - Kathryn Keefer (Representing: At-large/Shoreview)
 - Stuart Knappmiller (Representing: At-large/St. Paul)
 - Dana Larsen-Ramsay (Representing: Business Community)
 - Tammy McCulloch (Representing: At-Large/Woodbury)
 - Gary Nelson (Representing: Maplewood)
 - Glen Olson (Representing: North St. Paul)
 - Scott Ramsay (Representing: Shoreview)
 - Gary Schroeder (Representing: White Bear Lake)
 - Karen Wold (Representing: Master Naturalist)
- b. Two members officially resigned in 2023 to move into board member positions. In order to maintain roughly the same number of volunteers, we are recommending the following applicants be appointed to the CAC.
 - Megan Frisvold (Representing: At-Large/Maplewood)
 - Rachel Finberg (Representing: At-Large/St. Paul)
- c. The CAC votes annually on leadership for a Chair and Vice-Chair position. The following members were elected by their peers for these positions:
 - Karen Wold, Chair
 - Randee Edmundson, Vice-Chair

2. Work Plan - Each year, the CAC uses their time and expertise to assist several projects that help advance RWMWD projects and programs. Table 1 shows the 2024 priorities along with their RWMWD Management Plan action items. Many items are annual efforts that the CAC has been involved in for many years. The items at the top of the spreadsheet include the highest priorities for 2024 for both the CAC and staff.

3. Future meetings: April 23rd, June 11th, September 24th, October 22th, December 3rd

Table 1

Management Plan Action Item	CAC Work Item	Proposed tasks in 2024	Proposed outcomes/signs of success
EC9, IE13	Outreach and engagement volunteer program	Table at 1 event per quarter <ul style="list-style-type: none"> • Winter: Phalen Freeze Fest • Spring: WaterFest • Summer: Farmers' Market, National Night Out • Fall: tbd 	<ul style="list-style-type: none"> • Residents, neighborhoods, and other community stakeholders increasingly participate in District projects and programs and know who RWMWD is and what we do
WQ16, IE3	Adopt-a-drain expansion	Recruit more adoptees in gap areas or priority subwatersheds	<ul style="list-style-type: none"> • More adoptees
WQ3, IE3	Salt-use outreach/education:	Distribute existing information (Low Salt No Salt) to HOAs, residents, faith organizations, (not businesses)	
IE12	East Side stewardship and youth relationship-building	<ul style="list-style-type: none"> • Build on existing relationship with East Side Boys & Girls Club. Have presence at National Night Out 	<ul style="list-style-type: none"> • District events continue to expand their audience, public participation, and partner involvement. • The District's school and community education programs contribute to educating young citizens about watershed issues
Annual and Ongoing CAC Activities Proposed to Continue in 2024			
EC3, EC5, EC8	CAC/LEAP Team rain garden or buckthorn clean-up project	Plan and execute event with NR. Site & timing tbd Could tie to MAWD tour sites	<ul style="list-style-type: none"> • Site improvement; invasive species removal
EC3, EC8	CAC/LEAP Team planting	Keller Regional Park (spring) Goodrich Golf Course (if needed)	<ul style="list-style-type: none"> • Site improvement; native plant restoration/expansion
EC9	Assist staff with WaterFest logistics	Volunteer for exhibit or other shift. Possible topics: Equity grant program, Plastic-free challenge?	<ul style="list-style-type: none"> • Event is staffed by knowledgeable CAC members • If time/interest permits, the CAC hosts topic based table
IE3	LEAP Program nominations and subcommittee	Find, nominate, award, and highlight projects	<ul style="list-style-type: none"> • Residents, neighborhoods, and other community stakeholders increasingly participate in District projects and programs
EC9, IE13	Watershed Excellence Awards & Volunteer Recognition Dinner planning	Support staff as needed	<ul style="list-style-type: none"> • Residents, neighborhoods, and other community stakeholders increasingly participate in District projects and programs
EC9	Rain garden/BMP video series - development by and featuring CAC members.	Lauren will contact CAC as needed for content	
IE15	Education Topics: RWMWD staff or applicable professionals share knowledge.	NA - learning experiences as needed	<ul style="list-style-type: none"> • CAC members are well informed regarding RWMWD programs and projects

Proposal to provide engineering consulting services for
the **Ramsey-Washington Metro Watershed District**



Submitted by:
Barr Engineering Co.

4300 MarketPointe Drive, Suite 200
Minneapolis, Minnesota 55435
952-832-2600

February 14, 2024

resourceful. naturally.

Front cover: This rainwater garden best management practice (BMP) at Mounds Park Academy will treat runoff water that eventually flows to Wakefield Lake. Barr helped the RWMWD with design and construction associated with this water quality BMP. The restored area now serves as an outdoor classroom for students and those who utilize the parking lot.



Fish Creek is an urban stream and a conveyor of surface water into Fish Creek from southwestern Woodbury and the southern portions of Maplewood and Saint Paul. Barr continues to help the RWMWD restore, stabilize, and maintain this important natural resource and improve water quality before it discharges into the Mississippi River.



Over the past few years, Barr has assisted the RWMWD in the design and implementation of stormwater retrofit and green infrastructure features at two Saint Paul Target stores and a third store in Woodbury. The projects included removal of impervious parking spaces, installation of infiltration rain gardens, and construction of tree trenches. This photo shows two rain gardens constructed in the parking lot of the North Saint Paul Target site.



This regional stormwater BMP in the Lake Emily subwatershed helps decrease phosphorus loads to Lake Emily, which is at risk of impairment from excess nutrients. The unique underground filter system utilizes crushed limestone to inactivate the phosphorus and improve the lake's water quality. Barr helped the district assess alternatives and design the treatment system, and we coordinated construction on the RWMWD's behalf.



Installation of the Battle Creek tunnel was one of the RWMWD's first projects in the late 1970s and early 1980s. Barr helped the district with the original study, design, and installation coordination. We continue to assist with monitoring, inspection, and design as well as oversight of maintenance work to enable the over one-mile-long tunnel to continue to convey flows from southern portions of Saint Paul and Maplewood as well as from Oakdale and Woodbury to the Mississippi River.

February 14, 2024

Ramsey-Washington Metro Watershed District
c/o Tina Carstens
2665 Noel Drive
Little Canada, Minnesota 55117



resourceful. naturally.®

Dear managers:

As we approach 49 years of consistently serving the board of managers for the Ramsey-Washington Metro Watershed District (RWMWD), Barr is pleased to express our interest in continuing to serve your organization as your engineering consultant. Since 1975, we have worked to provide the RWMWD with the highest level of engineering services and commitment to your organization. We look forward to working with you to achieve your goals in 2024 and beyond.

In response to your request for proposals, we have outlined Barr's expertise in watershed management and our long history of working with the RWMWD. Some of the benefits Barr has to offer include:

- **Continuity**—Barr has provided continuity to the RWMWD's watershed management for nearly five decades. In addition, the team of engineers and designers that has provided direct engineering services to the district for the past several years will remain largely the same.
- **Familiarity**—We have been with the RWMWD since your inception; we know your past and are well-positioned to help you achieve future success. As the world continues to change, Barr is committed to working with you and RWMWD staff to forge new paths in response to the challenges you face. We are prepared to continue to assist you in implementing your fourth-generation watershed management plan and help you begin the process of developing your next 10-year plan. We also have historical familiarity with the physical characteristics of the watershed district, to the extent that we think of your district as our own backyard.
- **Full service**—Our depth and breadth of staff is unmatched locally, allowing us to provide you with comprehensive water resources management services. Whether the district needs watershed modeling; water quality assessment; landscape architecture; wetland assessment, restoration, and permitting; total maximum daily load (TMDL) preparation; design; or construction administration, Barr can help. We will personally coordinate and manage staff from our talent pool of more than 160 water resources engineers and scientists, ecologists, landscape architects, geographic information system (GIS) experts, and graphic designers to address the RWMWD's specific ongoing needs. Barr's additional full-service capabilities allow us to help with any engineering and environmental issues you encounter.
- **Credibility**—Barr has established a reputation as experts in water resources management, flood control engineering, and ecological design. The RWMWD will continue to benefit from Barr's strong working relationship with governmental agencies, particularly as the board of managers completes and implements the recommendations of the fourth-generation watershed management plan, moves toward your fifth-generation plan, and helps ensure your role as a progressive leader in watershed management.

Thank you for the opportunity to provide information regarding our engineering services. We look forward to continuing our successful working relationship. If you have questions or would like a more in-depth demonstration of Barr's skills and experience, please contact us (Erin: 952-832-2805, eandersonwenz@barr.com; Brad: 952-832-2808, blindaman@barr.com; Brandon: 952-832-2737). We would be happy to deliver a presentation to you.

Sincerely,

Handwritten signature of Erin Anderson Wenz in black ink.

Erin Anderson Wenz, PE, ENV SP
VP, Principal in Charge

Handwritten signature of Brad Lindaman in black ink.

Brad Lindaman, PE
VP, Principal in Charge

Handwritten signature of Brandon Barnes in black ink.

Brandon Barnes, PE
VP, Principal in Charge



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An outcome of the Beltline resiliency study was a feasibility study that addressed flood damage reduction opportunities along Gervais Creek. One opportunity ready for implementation was replacement of the Keller Parkway culvert. Barr helped the RWMWD assess, design, and coordinate installation. The project allows flood flows in Gervais Creek to move more freely into Gervais Lake, reducing flood levels upstream without increasing flood levels downstream.

About Barr Engineering Co.

Barr's roots extend back to the early 1900s with Adolph Meyer, a renowned hydrologist of the early 20th century. Doug Barr began work with Mr. Meyer in the 1950s and built a practice of his own while learning from this highly skilled hydrologist.

By the time the company was incorporated in 1966, it had 16 employees. Today, Barr Engineering Co. has more than 1,000 employees located in offices in Minnesota, North Dakota, Missouri, Michigan, Utah, New Mexico, and Colorado, and in Alberta, Canada.

A focus on water resources—and your needs

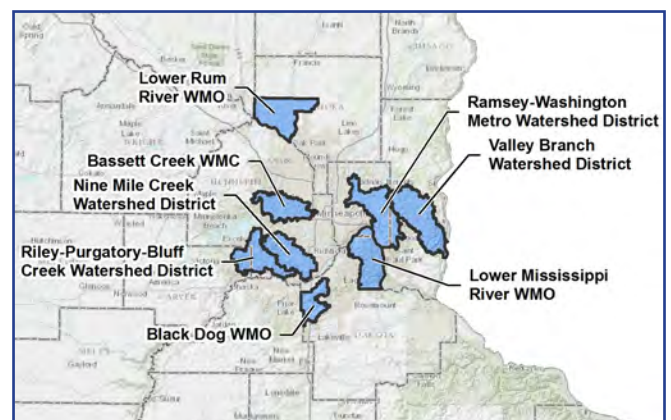
Our commitment to water resources remains strong. More than 100 engineers and scientists in our Minneapolis office are engaged in water resources engineering and planning, wetland management, water quality improvement, ecology, environmental planning, and limnology.



Strong commitment to watershed management organizations

Barr currently serves as primary consultant to:

- Nine Mile Creek Watershed District (since 1960)
- Bassett Creek Watershed Management Commission (since 1969)
- Valley Branch Watershed District (since 1969)
- Riley-Purgatory-Bluff Creek Watershed District (1969-2007, since 2013)
- Ramsey-Washington Metro Watershed District (since 1975)
- Lower Mississippi River Watershed Management Organization (since 1987)
- Lower Rum River Water Management Organization (since 1987)
- Black Dog Watershed Management Organization (since 1996)
- Cedar River Watershed District (since 2007)



Barr serves as the primary consultant to several watershed districts and water management organizations in the seven-county metro area.

Barr has also assisted the following organizations: Capitol Region Watershed District, Carver County Watershed Management Organization, High Island Creek Watershed District, Lake Pelican Water Project District, Lower Minnesota River Watershed District, Minnehaha Creek Watershed District, Mississippi Watershed Management Organization North Fork Crow River Watershed District, Prior Lake-Spring Lake Watershed District, Red Lake Watershed District, Rice Creek Watershed District, Sauk River Watershed District, Scott Watershed Management Organization, Shell Rock River Watershed District, Six Cities Water Management Organization, South Washington Watershed District, Thirty Lakes Watershed District, Turtle Creek Watershed District, Vadnais Lake Area Water Management Organization, Vermillion River Watershed Joint Powers Organization, and Zumbro Watershed Partnership.

Summary of Barr's services to watershed organizations

Watershed organization	Watershed management and planning	Stormwater management	Review of development plans	Stream and ravine stabilization and protection	Stream and lake monitoring	Water quality studies and implementation	Aquatic plant management	Capital improvement program assistance	Innovative stormwater management (low-impact development, bioengineering)	Urban planning
Bassett Creek	X	X	X	X	X	X		X	X	
Black Dog	X	X			X	X	X	X	X	
Capitol Region	X	X				X		X	X	X
Carver County	X	X				X			X	
Cedar River	X	X	X		X	X	X	X	X	X
Elm Creek	X	X	X			X		X		
Lake Pelican	X	X				X		X	X	
Lower Mississippi	X	X		X	X	X	X			
Lower Rum River	X	X		X		X		X		
Mississippi	X	X	X	X		X		X	X	X
Nine Mile Creek	X	X	X	X	X	X	X	X	X	X
North Fork Crow River	X	X		X	X					
Ramsey-Washington Metro	X	X	X	X	X	X	X	X	X	X
Prior Lake-Spring Lake	X	X			X	X				X
Riley-Purgatory-Bluff Creek	X	X	X	X	X	X		X	X	
Sauk River	X	X		X	X	X	X	X		
Scott	X	X		X	X	X		X	X	X
Shell Rock River	X	X	X	X	X	X	X	X	X	X
Thirty Lakes	X	X								
Turtle Creek	X	X			X	X				X
Valley Branch	X	X	X	X	X	X	X	X	X	
Zumbro Watershed Partnership				X	X	X		X		

Barr's water resources team for the Ramsey-Washington Metro Watershed District

Core team members

Core project team members Erin Anderson Wenz, Brad Lindaman, Brandon Barnes, Marcy Bean, Keith Pilgrim, Greg Nelson, Evan Christianson, and Tyler Olson have been a part of the Barr team that has consistently served the district for many years.

The **Ramsey-Washington Metro Watershed District** will also have access to our over 1,000 engineers, scientists, and technical support staff, with over 100 engaged in water resources engineering in our Minneapolis office. The breadth and depth of our team means that we have the capacity to tackle most any water resources or environmental challenge you might encounter. Below is only a partial list of Barr staff members who have helped the district in the recent past.



Program task teams *(task leads listed first)*

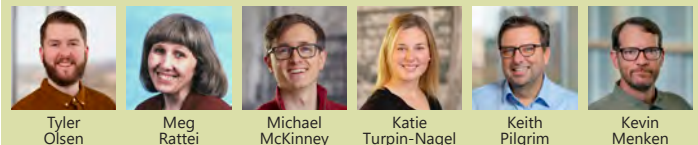
Water resources planning and management

- Watershed management planning
- Rules and regulations preparation
- Permit review
- Governmental agency coordination
- Stakeholder involvement
- Administrative support



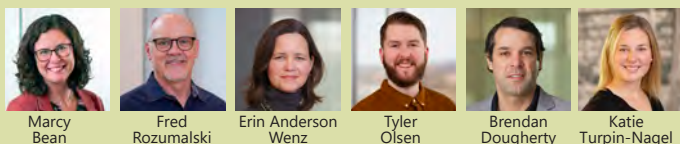
Water quality management

- Lake studies and restoration
- Lake and stream water quality monitoring
- Watershed runoff treatment
- Shoreland restoration
- Ecological use classification
- Hydrologic and hydraulic (H&H) modeling



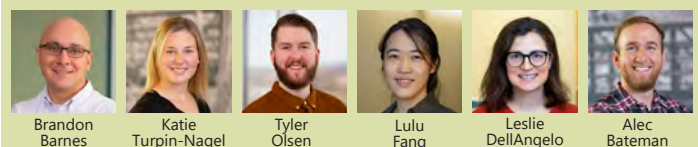
Ecosystem planning, landscape ecology, and landscape architecture

- Rain gardens
- Ecosystem restoration
- Native plant communities
- Master planning
- Site design
- Greenway planning
- Restorative landscaping
- Lakescaping
- Natural resource inventories
- Fish and wildlife management
- Education and interpretive planning
- Environmental review
- Green infrastructure design



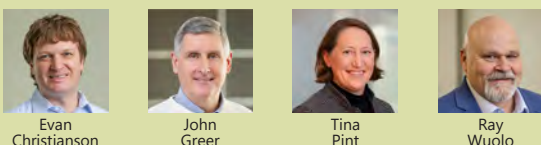
Flood resiliency and stormwater management

- Infiltration and filtration systems
- Stormwater utility design
- Hydrologic and hydraulic modeling
- NPDES permitting
- Flood and erosion control
- Infrastructure inventory and assessment



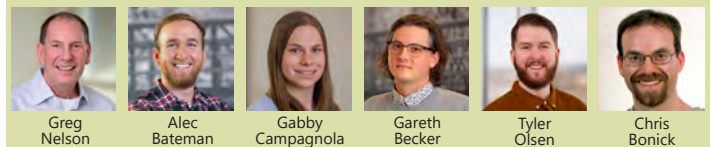
Groundwater

- Groundwater modeling
- Contaminant transport
- Wellhead protection
- Groundwater and surface-water connection analysis
- Well design and abandonment



Project inspection and maintenance

- Inspection
- Prioritization
- Repair design
- Construction administration and oversight



River and stream restoration

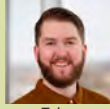
- Channel monitoring and classification
- Erosion protection
- Streambank stabilization
- Sediment transport
- Bioengineering
- Fluvial geomorphology



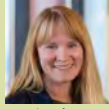
Tom MacDonald



Peter Hinck



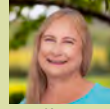
Tyler Olsen



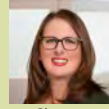
Jessica Olson

Wetlands and environmental review

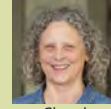
- Delineation
- Classification
- Mitigation
- Restoration
- Functional assessment
- Monitoring and reporting
- Permitting
- Protection and management



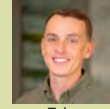
Karen Wold



Shanna Braun



Cheryl Feigum



Tyler Conley

Floodplain management

- Flood insurance studies
- Floodplain mapping and map revisions
- Flood frequency analysis
- Floodplain delineation
- Floodplain permitting
- Dam failure analyses
- Flood control structures



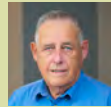
Brandon Barnes



Nathan Campeau



Lulu Fang



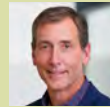
Bill Spycalla



Greg Nelson

Infrastructure design and construction services

- Dams
- Channels
- Sewers, pipes, and culverts
- Detention basins
- Flood protection measures
- Geotechnical design
- Construction observations
- Plans and specifications
- Contract documents



Brad Lindaman



Greg Nelson



Gareth Becker



Alec Bateman

Water quality research and new technologies

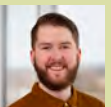
- New technology development and evaluation
- Remote lake level monitoring
- District research program support
- Automated water quality sampling
- Laboratory research
- Alternative water quality and macrophyte management development and testing



Keith Pilgrim



Katie Turpin-Nagel



Tyler Olsen



Gabby Campagnola



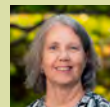
Meg Rattei



Chris Bonick

Information technology and communications

- Geographic information systems (GIS)
- Website creation, housing, and maintenance
- Interpretive, scientific, and technical writing
- Story map development
- Marketing and advertising
- Grant writing
- Graphic design
- Database design
- Public relations



Annie Breitenbucher



Nyssa Nypan



Maureen McFarlane



Josh Vosejka



Lauren Prichard

Health and safety

- Health and safety manual development
- Employee right-to-know training
- Health and safety program consulting



John Loff-Peterson



Mark Kretschmer

Barr's leadership team for the Ramsey-Washington Metro Watershed District

We value our long-term relationship with the Ramsey-Washington Metro Watershed District. For that reason, we strive to provide you with high-quality, consistent service. The following pages include brief resumes of the Barr staff members who have consistently worked on RWMWD projects, or who have served the district extensively in the past. **These same team members will continue to provide the RWMWD with the high level of service you have come to expect from Barr.**

As you know, Barr uses a project team approach that matches our expertise with the unique requirements of each project and client. Directed by our leadership team consisting of Erin Anderson Wenz, Brad Lindaman, and Brandon Barnes, each project team has been created specifically to meet the needs of the RWMWD in 2024 and beyond. In addition to the staff listed here, Barr has a water resources staff of more than 160 practitioners to provide you with comprehensive services.

Erin Anderson Wenz, PE, ENV SP, Vice President

Principal in charge



Erin has 26 years of experience with metro-area watershed management projects, including watershed and municipal stormwater management plans; lake management plans and TMDL studies, including WRAPS; stormwater and lake water quality modeling; and a wide range of low-impact development retrofits. She has managed numerous modeling projects that help clients assess flood vulnerabilities and has facilitated stakeholder workshops to develop climate change resiliency plans. Erin has been involved in many of Barr's projects for the RWMWD since 2002. She served as project manager of the district's watershed management plan and strategic overview update, including cofacilitating community outreach workshops for the update. She also managed development of the RWMWD's WRAPS report and helped implement stormwater features across Maplewood Mall's 35-acre parking lot.

Brad Lindaman, PE, Vice President

Principal in charge: infrastructure design and construction services



Brad's 37 years of experience as a civil engineer emphasize project management, including drainage and surface water quality studies, design development and review, state and local permitting assistance, contract documents development and administration, and construction management and quality control. He has served the RWMWD in a leadership role since 1990. In this role, he oversees and manages Barr's work for the district, including engineering scheduling, administration, and cost control. Brad has reviewed grading permit applications submitted to the RWMWD managers; drafted permit provisions; and advised managers on issues related to erosion control, wetlands, surface water quality, and stormwater drainage. In addition, he oversees the RWMWD's capital improvement program and represents the RWMWD at public meetings.

As a principal and project manager at Barr, Brad has conducted numerous feasibility studies and prepared designs, plans, and specifications for projects involving stormwater runoff, water quality improvement, and flood control.

Brandon Barnes, PE, Vice President

Principal in charge; lead for water resources planning and management, flood resiliency and stormwater management, and floodplain management



Brandon has 17 years of experience in water resources engineering. He creates detailed H&H models, integrates GIS with floodplain studies, conducts interior drainage analyses, and addresses public concerns. He also completes floodplain analyses, coincidental frequency analyses, and stormwater development reviews and develops XPSWMM and PCSWMM models for floodplain and watershed improvement projects for cities and watershed districts. Brandon managed the update to the RWMWD's H&H models to incorporate Atlas 14 rainfall depths, model calibration, and development of flood risk maps. He also served as project manager for the Saint Paul Beltline Interceptor resiliency study.

Marcy Bean, PLA, Senior Landscape Architect

Ecosystem planning, landscape ecology, and landscape architecture lead



Marcy has 20 years of experience focusing on innovative stormwater management, native landscaping and maintenance, and green infrastructure design in urban environments. Her work has involved urban ecosystem restoration, stormwater reuse, BMP design and maintenance, and stakeholder facilitation. Prior to joining Barr, Marcy managed capital projects and supported community-based efforts to manage stormwater at the Mississippi Watershed Management Organization.

Keith Pilgrim, PhD, Senior Water Resources Scientist

Water quality research and new technologies lead



Keith has 28 years of experience on projects involving water quality modeling and monitoring, NPDES permitting, nutrient management, stormwater treatment, aquatic toxicology, and toxicity identification evaluations. He develops surface water quality monitoring programs for watershed districts, cities, state agencies, and large mining developments; designs water and chemical balances for industrial facilities; and conducts thermal balance studies for power plants. Keith invents surface water and stormwater treatment technologies; develops one- and three-dimensional water quality models; and designs large-scale surface water quality monitoring programs. He also assists local governments and state agencies with developing and modifying water quality standards. Keith designed and monitored the performance of spent lime and iron sand filter treatment systems for the RWMWD as part of the Maplewood Mall retrofit.

Greg Nelson, Engineering Technician

Project inspection and maintenance lead



Greg has more than 30 years of experience on projects involving engineering and design services. He conducts and coordinates data collection and provides bidding and contract administration, construction oversight, and project management. His projects frequently involve streambank stabilization and restoration, low-impact development, stormwater quality improvement, and watershed district facility maintenance and repairs. Greg has worked on the RWMWD's Grass Lake flood study and improvements to stormwater runoff and conveyance and has managed annual capital improvement project maintenance and repairs for the district. He was also a member of the design and construction team for the Maplewood Mall stormwater retrofit through four phases of construction.

Evan Christianson, PG, Senior Hydrogeologist

Groundwater lead



Evan has 16 years of experience in hydrogeology. His work focuses on implementing hydraulic models to solve complex water quality and supply issues. Evan specializes in groundwater flow modeling, GIS, aquifer characterization, and development of custom quantitative methods for various modeling applications. He also has experience in geologic mapping, data processing and visualization, and monitoring well installation and sampling. Evan's work has included designing and calibrating a three-dimensional groundwater flow model of all aquifers and aquitards within the 11-county Twin Cities metro area. He has also worked with watershed districts and the Metropolitan Council to evaluate potential long-term impacts to surface water bodies from groundwater pumping.

Tyler Olsen, PE, Water Resources Engineer

Water quality management lead



Tyler has six years of experience working on and managing projects involving H&H modeling, stormwater management and planning, flood risk assessment, surface water quality analysis, and green infrastructure/BMP design. He creates H&H and water quality models for clients to facilitate planning and project design. Tyler has managed studies within impaired and at-risk subwatersheds within the RWMWD to identify potential BMP implementation opportunities and conducted an existing-conditions evaluation of stormwater on the Hillcrest Golf Course for the RWMWD and City of Saint Paul. He has also helped develop H&H and water quality models for several areas in the Mississippi Watershed Management Organization for floodplain management, flood risk reduction, and water quality improvement.

Karen Wold, Senior Environmental Scientist

Wetlands lead



Karen has 25 years of experience in wetland delineations, monitoring, permitting, replacement plans, and functional assessments for Minnesota watershed organizations as well as municipal, county, industry, and commercial clients. She also serves as a technical representative for administration of the Minnesota Wetland Conservation Act and local government wetland rules. Karen's knowledge of federal, state, and local regulations regarding wetlands and her expertise in identifying, classifying, assessing, and planning for protection and use of wetland areas assists clients with their goals of wetland preservation, restoration, and management. She has conducted wetland delineations and assessments and identified potential wetland restoration sites within the RWMWD.

2024 fee schedule

Barr’s fee schedule, presented below, summarizes the range of billing rates for each of our staffing categories. In many cases, these billing rates represent a wide range, based on varying levels of experience and expertise of staff within these categories. When building a team, appropriate staff members are selected with consideration for both applicable experience and staff billing rates to make sure you receive high-value services for a reasonable cost.

Description	2024 rate*
Vice president.....	\$170-350
Consultant/advisor	\$205-325
Engineer/scientist/specialist IV	\$175-200
Engineer/scientist/specialist III	\$145-170
Engineer/scientist/specialist II.....	\$120-140
Engineer/scientist/specialist I.....	\$80-115
Technician IV	\$155-200
Technician III.....	\$125-150
Technician II.....	\$95-120
Technician I.....	\$70-90
Support personnel III.....	\$155-200
Support personnel II	\$95-150
Support personnel I	\$60-90

Rates for litigation support services will include a 30-percent surcharge.

A 10-percent markup will be added to subcontracts for professional support and construction services to cover overhead and insurance surcharge expenses.

Invoices are payable within 30 days of the date of the invoice. Any amount not paid within 30 days shall bear interest from the date 10 days after the date of the invoice at a rate equal to the lesser of 18 percent per annum or the highest rate allowed by applicable law.

Reimbursable expenses including, but not limited to, the actual and reasonable costs of transportation, meals, lodging, parking costs, postage, and shipping charges will be billed at actual cost. Materials and supplies charges, printing charges, and equipment rental charges will be billed in accordance with Barr’s standard rate schedules. Mileage will be billed at the IRS-allowable rate.

**Rates do not include sales tax on services that may be required in some jurisdictions.*

Vice president: includes consultants, advisors, engineers, scientists, and specialists who are officers of the company

Consultant/advisor: includes experienced personnel in a variety of fields; these professionals typically have advanced background in their areas of practice and include engineers, engineering specialists, scientists, related technical professionals, and professionals in complementary service areas such as communications and public affairs

Engineer/scientist/specialist: include registered professionals and professionals in training (e.g., engineers, geologists, biologists, and landscape architects) and graduates of engineering and science degree programs

Technician: includes CADD operators; construction observers; cost estimators; data management technicians; designers; landscape ecologists; drafters; civil engineering technicians; interns; safety technicians; surveyors; and water, air, and waste samplers

Support personnel: includes information management, project accounting, report production, word processing, and other project support personnel

Barr’s DEI and ESG programs

Diversity, equity, and inclusion (DEI) success at Barr means that all dimensions of diversity are celebrated, including gender identity, neurodiversity, race, religion, sexual orientation, and much more. We strive to enable all staff members to feel a strong sense of belonging within the Barr community, and to ensure that individuals are provided equitable access to opportunities, advancement, and resources. As an employee-owned, client-centric organization, Barr believes that our people are our greatest asset—and having a diverse and inclusive workplace is critical to our success. We solve clients’ problems through technical expertise and creative solutions while building and sustaining long-term relationships. Barr recognizes the strong business case for DEI, and we based our DEI initiatives with the goals of recruiting and retaining top talent, fostering innovation and authenticity, and preparing for and adapting to future client needs.

In 2023, Barr’s management evaluated an **environmental, social, and governance (ESG) and sustainability** program and plotted an implementation path for future years. Barr’s ESG and sustainability program will align with our strategic plan as well as our corporate policy and social responsibility program and will include environmental goals and metrics. This initiative will involve publishing a sustainability report in Q1 of 2025, which will report on Barr’s sustainability commitments, goals, and metrics for calendar year 2024.



Above: Roosevelt Homes is a flood-prone multi-family housing area owned by the Saint Paul Public Housing Authority. Barr is currently assisting the RWMWD in implementing a multi-phase flood management and water quality improvement project near this public housing area to help reduce frequency of flooding to the maintenance facility garage, buildings, and other areas where flood waters often result in damage.

Below: The Cottage Place wetland regeneration project is a partnership between the City of Shoreview and the RWMWD. Currently in design, the project will consist of restoring a degraded, historic wetland for the purposes of enhancing safety and habitat and improving water quality to Lake Emily. Barr is facilitating stakeholder input discussions and leading design development on behalf of the RWMWD.




resourceful. naturally.



BLACK & VEATCH

Watershed & Ecosystem Professional Services

February 2024



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Meet Black & Veatch

Black & Veatch is a 100% employee-owned engineering, procurement, consulting and construction company with a track record of more than 100 years of innovation in sustainable infrastructure.

We plan, design and build the energy, water and telecommunications systems that strengthen community resilience, reduce carbon footprints, drive sustainability and enable growth. Our global professionals are committed to serving as your trusted partner with innovative, end-to-end services and full project delivery solutions that are Building a World of Difference®. Regardless of the scope or size of the project, our execution is centered on safety and characterized by cost and schedule certainty.

Elevating Our Commitment to Sustainability

Black & Veatch brings regional and national leaders recognized for promoting resilient outcomes, livability, green infrastructure and environmental conservation.

Our company is committed to understanding and analyzing holistic project benefits to ensure they deliver impact. This approach, aligned with the Institute for Sustainable Infrastructure's Envision® framework, works to minimize infrastructure impact on the natural world and the public while improving long-term community health and safety. We have made it a priority to certify professionals like **Bo Johnston** and **Olivia Sims**, both of whom are in our Minneapolis office, and nationally with more than 60 other professionals nationally, including **Laura Adams** and **Andrew Smith**, national practice leaders for our water resources practice.

Black & Veatch works with our clients to affirm their commitments to promote sustainability and meeting project sustainability and Envision® goals. Our sustainability strategy, outlines our company's environmental, societal and governance policies, while elevating tangible progress to a cleaner, more equitable and prosperous world.



BLACK & VEATCH

OVERVIEW

FOUNDED IN
1915



9,800+ GLOBAL WORKFORCE

100+ professionals in Minneapolis

7,000+

ACTIVE PROJECTS

WORLD-WIDE

2022



4.25B

REVENUE

9

LARGEST
EMPLOYEE-OWNED
COMPANY
IN THE U.S.

EMPLOYEE
OWNED




Matt Scott

*Watershed &
Stormwater
Planning*

Kansas City, MO
16 YRS. EXP.

Matt has worked for more than 16 years as a water resources engineer, and his experience includes project management and technical leadership for the planning and design of flood mitigation projects, green stormwater infrastructure and stormwater asset management systems. He is experienced in working with clients to identify flood risk and develop frameworks to prioritize measures to address this risk.


Olivia Sims

*Nature-Based
Solutions
Engineer*

Bloomington, MN
7 YRS. EXP.

Olivia is a design engineer at Black & Veatch on the Communities and Ecosystems team. Her passion for stormwater and natural solutions has led to experience working on various Nature Based Solutions planning studies, design projects, and large-scale programs throughout the United States. She also has experience working on multiple Combined Sewer Overflow Tunnel projects and various linear water and sewer design projects.


Todd Keniry

*Water Resources
Engineer*

Bloomington, MN
7 YRS. EXP.

Todd is a water planning and water resources engineering professional with experience working on hydraulic and hydrology projects. He holds a B.S. in Environmental Engineering and an M.S. in Civil Engineering with an emphasis in Hydraulics and Water Resources. His professional and academic experience includes remotely sensed and in-situ data processing, scripting languages, GIS, and use of modeling software for evaluation of complex hydrologic and hydraulic systems.


Tricia Christensen

*Distribution &
Collection Planning*

Bloomington, MN
7 YRS. EXP.

Tricia has more than 18 years of consulting engineering experience assisting clients in the areas of water distribution and wastewater collection system analysis and management. Her specific experience includes construction and analysis of computer models, geographical information system (GIS) management, development of capital improvement plans (CIPs), operation and maintenance of assets, and data management for regulatory reporting.


Cheryl Harrelson

*Principal
Geomorphologist*

Tampa, FL
35 YRS. EXP.

Cheryl has managed all aspects of administration and operation and has extensive training and skill including knowledge of professional hydrology and watershed management practices. Her experience has provided her with the ability to obtain and analyze data and maintain familiarity with related resource management disciplines.


Cindy Rolli

*Resilience
Planning Lead*

Kansas City, MO
16 YRS. EXP.

Cindy leverages her experiences across the United States, Caribbean, and Pacific in hydrogeology, hazard mitigation planning, and disaster recovery. She also supports a holistic approach to resiliency planning and helps organizations integrate across planning efforts to maximize project benefits, develop transparent decision frameworks and implement projects that improve community resilience.


Laura Adams

*Communities &
Ecosystems Lead*

Kansas City, MO
21 YRS. EXP.

Laura leads the Communities & Ecosystems Practice for Black & Veatch, working with teams across the country to develop solutions that elevate community resilience, restore ecosystems, and integrate nature-based solutions. She has focused on transformative opportunities that advance equity, climate resilience and connection to the natural world. She is dedicated to collaborating across disciplines and advancing innovative approaches, such as performance-based delivery of infrastructure: providing technical guidance to develop programs, forging innovative partnerships, and leveraging construction expertise to inform design


Andrew Smith

*Watershed &
Stormwater Lead*

Kansas City, MO
23 YRS. EXP.

Andrew leads a team of professionals focused on delivering value-based solutions, specifically in the areas of watershed, stormwater and flooding management for clients throughout the United States. This team of professionals provides leadership on a diverse range of projects, including permitting studies, master plans and detailed design improvements.

Diversity, Equity and Inclusion

OUR COMMITMENT TO DIVERSITY, EQUITY AND INCLUSION

Like CRWD, Diversity, Equity and Inclusion (DEandI) are key values for Black & Veatch. We are proud of our industry-leading diversity initiatives that placed us in Newsweek America's Greatest Workplaces for Diversity four star ranking with plans to grow. We seek to expand our internal awareness and create spaces where all are welcome, deepen our community relationships and outreach, and complete projects that reach beyond solving engineering problems to building up the community and creating a more equitable world.

Black & Veatch published an updated plan for Advancing DE&I in 2021 that focuses on advancing and supporting racial and ethnic diversity; elevating and advancing women; embracing authenticity at work including sexual orientation, gender identity and gender expression; and creating an inclusive and accessible workplace that supports persons with disabilities.

We also choose our partners for their commitments to DEandI. In Kansas City, we are working with Confluence on the Daniel Morgan Boone Project. Apart from its water quality goals, we are also exceeding the target 40% disadvantaged business enterprise (DBE) involvement and working closely with the community to create a product that will provide the most value to them while retaining the character of the greater neighborhood.



Strategic Objectives

What we need to do to achieve our DE&I Vision and fulfill our commitments:



Closing the Diversity Gap

Prioritize diversity at all levels of the organization as a key driver of innovation and growth, especially in our leadership where lack of diversity is most evident.



Increasing our Focus on Equity

Create a barrier-free workplace that allows everyone to thrive and perform at their best with DE&I integrated into our people processes to provide equitable access, opportunity and resources to all professionals.



Creating an Inclusive Experience

Foster an environment built on awareness, empathy and embracing our differences — a place where all professionals can show up as their authentic selves and feel heard, seen, supported and valued.



Investing in our Industries and Communities

Look outside the organization to the work we can do with clients, suppliers and partners that promote diversity and inclusion practices and the impact we can have to reduce inequity and advance social justice, bringing positive change to the world around us.

For the Fontenelle Lagoon project in Omaha, Nebraska, Black & Veatch led the design and managed construction of a community betterment project, informed by deep



stakeholder engagement. Last year, the International Water Association selected this project to feature as part of series about water infrastructure around the world, stories of people working to protect water and connect communities.

Watershed, Subwatershed and Water Resource Management and Planning

Black & Veatch's comprehensive stormwater solutions team successfully blends engineering and science in conserving, protecting and managing our water resources – as well as decades of experience solving communities' most complex stormwater challenges – to provide a full spectrum of expertise across the entire project lifecycle.

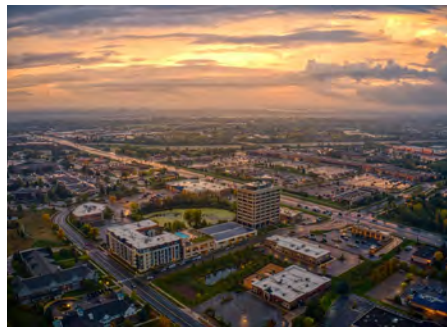
Working at the watershed, community, and project scales, our team creates cost-effective, integrated solutions for projects and programs both large and small. We leverage our experience and lessons learned to tailor solutions that simultaneously provide multiple complimentary benefits including flood protection, water quality improvement, ecological benefits and recreational/educational opportunities while optimizing life-cycle costs and providing operational flexibility.



Blue River Watershed Integrated Plan

Kansas City Metro Area

The City of Kansas City, MO and Johnson County, KS explored the feasibility of developing an integrated plan for the Blue River Watershed according to the six step process developed by the EPA. The Black & Veatch team developed the first phase of an Integrated Plan with the ultimate goal of providing the Blue River Partners an approach that allows them to effectively prioritize and affordably implement wastewater and stormwater programs to comply with Clean Water Act regulations and improve water quality throughout the watershed.



Integrated Water Resource Planning

Eagan, MN

The City of Eagan required an infrastructure improvement plan to mitigate 100-year flooding. Black & Veatch led the development of an integrated water, wastewater and stormwater management plan. This effort included establishing PCSWMM 1D and 2D models of the stormwater conveyance and storage systems that informed planning recommendations. Capital improvements were prioritized with cost estimates.



Stormwater Master Plan

St. Peters, MO

Our design team is trusted to deliver large and small scale projects to improve water quality to cities of all sizes. For the City of St. Peters, MO, Black & Veatch developed a stormwater master plan that focuses on improving water quality, connecting residents to stormwater and diversifying funding options. We evaluated stream habitat and stability, provided water quality modeling and developed over 100 projects for flooding, stream stability, detention and preservation.

OUR AREAS OF FOCUS

Community Equity

Black & Veatch has provided thought leadership to national stormwater programs searching for alternatives to traditional stormwater capital investment prioritization approaches. These approaches, which typically consider return on investment, or a benefit-cost analysis, tend to underrepresent minority and low-income communities because the buildings being protected do not have the same value as those in more affluent communities.



To overcome this significant shortcoming in the ‘status quo’ approach, Black & Veatch worked with Johnson County, Kansas to develop the Risk-Integrated Project Prioritization (RIPP) system. Among other benefits, RIPP drove towards equity by:

- Considering all buildings equally and not determining a monetary return on investment that relies on the building’s market or replacement value.
- Using risk reduction as the basis for prioritization so a project that reduces flooding at five buildings in one part of a city will receive the same credit as the same project in any other part of a city.
- Using the Center for Disease Control’s Social Vulnerability Index (SVI) national dataset to identify areas of the County most vulnerable to flooding impacts.

One Water

Creating sustainable One Water solutions is a long-term mission and passion of the Black & Veatch team. One

Water is a collaborative, innovative and integrated approach to optimize the sustainability of our essential water resources. Its outcome enhances our quality of life by promoting vibrant and engaged community participation, while encouraging responsible stewardship of our social, economic and environmental resources.

We have successfully implemented a One Water approach in this region, as we completed concurrent water, wastewater and stormwater master plans for the City of Egan, yielding insights that created cost efficiencies and environmental benefits for the City.

Implementation Spectrum

The Black & Veatch team is uniquely qualified in all three of the principal pillars that encompass the comprehensive scope of stormwater management:

- **Funding and Finance.** Black & Veatch has the expertise and experience to identify and pursue various funding alternatives, including the turnkey development of stormwater or resiliency utility programs. As the principal author of the biannual National Stormwater Utility Survey, we monitor how the market creatively funds their changing stormwater needs.
- **Planning and Design.** Black & Veatch is recognized for our ability to innovate and develop design concepts that incorporate state-of-the-art practices including smart infrastructure and dynamic/risk integrated asset management planning and capital improvement plan development. As a designer, builder and asset manager, we naturally understand the critical need to develop plans that are constructible, functional and easy to operate and maintain.
- **Infrastructure Delivery.** Black & Veatch has the unique ability and requisite relationships to bring low-risk, collaborative project/program delivery alternatives to efficiently deliver distributed infrastructure over a regional-scale geography.



We found Black & Veatch to be committed to our success, and they remain a valuable resource for Johnson County. They have consistently exceeded our expectations, and I sincerely look forward to working with them in the future.”

- LEE KELLENBERGER, JOHNSON COUNTY STORMWATER PROGRAM MANAGER

Lake, Wetland, Natural Resource and Stream Restoration and Management

Black & Veatch works with clients across the United States to plan, design and implement Lake, Wetland, Natural Resource and Stream Restoration and Management solutions to advance resilience, provide long-term sustainability, address stormwater management needs and transform how natural resources are managed.

This approach to addressing infrastructure challenges aims to maximize project benefits for the community and environment. Our team begins by identifying

opportunities to reserve space for nature: areas that can absorb floods, cleanse water, sustain fisheries, and provide recreation and economic stimulus. We work to modify or restore the available area to improve the water balance and associated co-benefits. We are re-imagining altered drainage networks and transforming the urban ecology to improve community resilience. Stream and Ecological Restoration solutions do not take water from society, they add value to water for social, economic and environmental benefits.



Roy's Branch Stream Restoration

St. Joseph, MO

To address public health, provide green solutions and increase operational efficiencies, Black & Veatch studied and designed this project to intercept and redirect Blacksnake Creek stream flows away from St. Joseph's combined sewer system to a new and dedicated stormwater conveyance system that joins Roy's Branch before confluence with the Missouri River. Black & Veatch also collaborated with the City to coordinate and identify all available funding sources applicable to the program.



Soldier Creek Diversion Unit Repair – Phase 1

USACE, Kansas City District | Topeka, KS

Soldier Creek extends across the north side of the City of Topeka through a partially developed floodplain of the Kansas River. A flood in 2005 severely damaged the levee and channel, particularly the downstream reach near the confluence with the Kansas River. Black & Veatch assisted the District beginning with the geomorphic investigations all the way through design and construction support.



Lake James to Fontenelle Park

Omaha, NE

Black & Veatch partnered with the City of Omaha to design and implement a green infrastructure system that captures stormwater to lessen the stress on the downstream combined sewer system and improve water quality. The design includes an expansive community park for families, fishing enthusiasts and health-minded people from all over the city. Through community engagement during the planning process, the City ensured the park could be leveraged as a resource for nearby community organizations and citizens alike.

Ecosystem Restoration and Natural Resource Experience

Client/Project Name	Services				Nature-Based Solutions								
	Integrated Planning	Design	Construction Services	Funding Support	Ecosystem Restoration	Construction Wetland/Lakes	Bioretention/Infiltration	Pervious Pavement	Subsurface Storage	Coastal and Living Shorelines	Stream and Floodplain Restoration	Carbon Sequestration	Conservation Easements
Clean Water Partnership, Prince George’s County, MD					■	■			■			■	■
Fresh Coast Protection Partnership, Milwaukee, WI	■	■		■		■				■		■	
Nature-Based Adaptation Strategies Study, Mississippi River Cities and Towns Initiative		■	■	■	■		■	■	■	■		■	■
Belt Line Green Infrastructure Program Mgmt, Memphis, TN			■	■	■	■				■		■	■
Mill Creek Park Green Infrastructure Concept Design, Kansas City, MO		■	■	■	■	■		■		■	■		■
Daniel Morgan Boone Park GSI Design, Kansas City, MO			■	■	■		■	■	■	■	■	■	■
Westport Plaza Integrated Stormwater Plan, Kansas City, MO		■	■	■	■	■		■		■	■	■	■
Muddy Creek Integrated Watershed Action Plan, Cincinnati, OH		■	■	■	■	■		■		■	■	■	■
ARRA Green Infrastructure Demonstration, Mission, KS				■	■	■		■	■	■	■	■	■
Alternative Futures Analysis: LID Redevelopment, Mission, KS		■	■	■	■	■	■	■	■	■	■	■	■
Rock Creek Watershed BMP Plan, Mission, KS		■	■	■	■	■		■	■	■		■	■
Low Impact Development Manual, OandM Optimization Strategy, Tulsa, OK		■	■	■	■	■	■	■	■	■	■	■	■
Echo Park Lake Restoration, Los Angeles, CA				■	■	■	■	■	■	■	■	■	■
Green Infrastructure Program Development and Priority Action Plan, Wilmington, DE			■	■	■		■		■	■	■	■	■
Green Streets Capital Improvement Program and Regional Stormwater BMP at La Cienega Park, Beverly Hills, CA		■	■	■	■	■		■	■	■	■	■	■
Rain Garden Program and Standards Development, Ft. Wayne, IN		■	■	■	■	■		■		■	■	■	■
BMP Manual Development, Kansas City, MO			■	■	■					■	■	■	■
Penn Valley Park, Kansas City, MO				■	■		■	■	■	■	■	■	■
Lake Lenexa and Blackhoof Park, Lenexa, KS				■	■		■	■	■	■	■	■	■
Integrated Stormwater Planning for Healthy Streams, Economic Vitality, Sustainable Growth, St. Peters, MO				■	■		■	■	■	■		■	■
Lake James to Fontenelle Park CSO Project, Omaha, NE				■	■		■	■	■	■	■	■	■
Green Infrastructure Implementation, CSO Improvement Study, Grand Rapids, MI				■	■	■			■	■	■	■	■
Clear Creek Stream Geomorphic Assessment, Lenexa, KS		■	■	■	■	■	■	■	■	■		■	■

* Team member experience outside of BV



I would recommend the Black & Veatch wet weather planning and modeling team to others across the country. They have brainstormed new and innovative ideas, served us in a responsive and collaborative way, and have continually helped us address our wet weather challenges over the course of the program.”

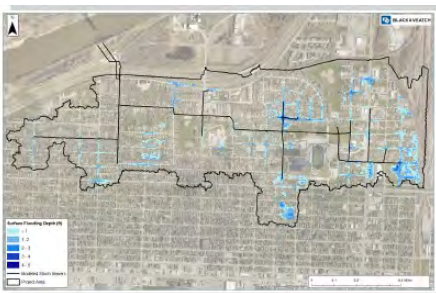
- JIM THEILER, PUBLIC WORKS ASSISTANT DIRECTOR, CITY OF OMAHA, NE

Hydrologic, Hydraulic and Water Quality Modeling and Analysis

Understanding the way stormwater moves through our natural and built systems, and the quality of that stormwater runoff, is critical to identify challenges and opportunities for improving our communities.

Black & Veatch brings depth and breadth of experience using models to characterize hydrology, hydraulics and water quality. Our nationally-recognized practice focuses on computational fluid dynamic modeling, offering access to a robust license suite and high-end computing of complex hydraulics. Our modeling experience

integrates fundamental tasks such as monitoring, data research and interpretation, field reconnaissance, surveying, and interviews with local citizens. We have studied and analyzed a wide variety of system types, from small stormwater management systems to large-scale regional watershed and lake diagnostic/restoration projects. We maintain a comprehensive library of hydrologic and hydraulic computer software that our experts use routinely to solve a variety of water related problems.



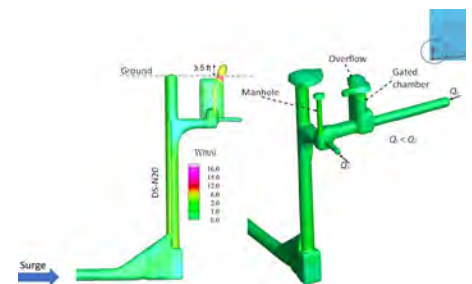
North 28th Street Stormwater Study Council Bluffs, IA

The City of Council Bluffs' North 28th Street neighborhood sits in the historic Missouri River alluvial valley, which results in much of the City having flat topography leading to frequent flooding. Black & Veatch created a 2D model in PC-SWMM to accurately delineate flood flowpaths, calculate flood depths, and develop solutions to reduce the frequency of building and road flooding.



TMDL Planning Johnson County, KS

To understand Total Maximum Daily Load (TMDL) compliance trends, the Black & Veatch team reviewed past water quality analyses and directed additional water quality spatial/temporal analysis. This assessment helped the County identify areas of significant pollutant loading concern and develop a range of improvements to understand impacts of management approaches.



Des Plaines Inflow Tunnel CFD Modeling Metropolitan Water Reclamation District of Greater Chicago, IL

Black & Veatch developed a computational fluid dynamic (CFD) hydraulic model of the proposed gate and outlet structures and performed a CFD analysis to evaluate flow conditions at two structures to determine if adverse conditions could occur. CFD modeling was used to assist with the Black & Veatch design of the energy dissipation structure at the tunnel outlet.

Modeling Capabilities

Some of the models our team uses on a routine basis include:

Surface Water - Event and Continuous Simulation

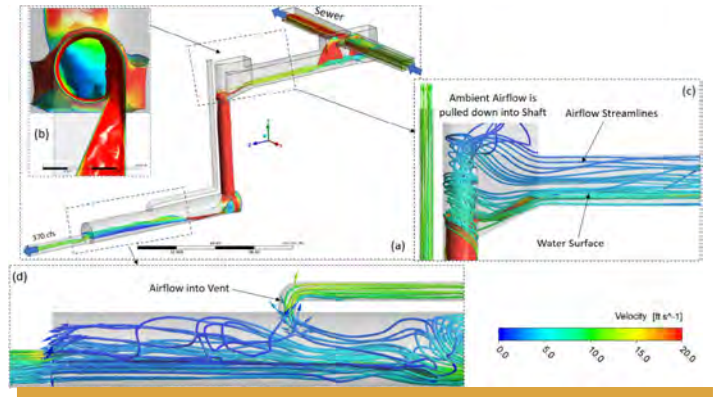
- HSPF
- ICPR4
- SWMM
- EFDC
- CE-QUAL-W2
- QUAL2K
- WASP
- BathTub
- XPSWMM
- HEC-HMS
- SWMM
- QUAL2KW
- QUAL2E
- LAKE2K
- LoadEst

Water Quality Modeling

- HSPF
- WASP
- CEQUAL
- QUAL2EU
- PRZM
- EXAMS
- BASINS
- SWMM
- WAM

Groundwater

- GMS MODFLOW
- AQTESOLV
- GFLOW
- Groundwater Vistas
- Visual MODFLOW



CFD results from Area 4 Tunnel design in South Chicago

Hydraulic/Water Surface Profile EXTRAN

- HEC-RAS
- FLOW2D
- STWAVE
- ACES
- TUFLOW
- EFDC
- CE-QUAL-W2
- ANSYS CFD
- VisualPlumes
- CORMIX

Integrated Modeling

- MikeSHE and Proprietary Spreadsheet Models

Watershed

- LSPC
- HSPF
- WAM
- GWLFe
- MapShed
- STEPL
- ICPRv4
- BASINS
- P8
- PCSWMM
- EPASWMM
- InfoSWMM
- Mike Urban
- Infoworks ICM

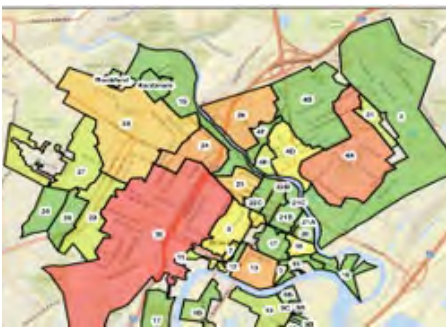
Stormwater BMP Design, Construction Management and Inspection

Natural systems are part of a community's infrastructure. Our team brings decades of experience working with cities across the United States to plan, design and implement innovative, best-management practices and low-impact development to help manage flooding, recharge groundwater and mitigate urban heat island effects in urban areas.

Black & Veatch has led the development of national best practices, applied asset management frameworks to natural resources, optimized the balance of

traditional and green stormwater infrastructure, and successfully managed programs to scale up delivery and track performance.

The foundation of our approach is informed by a multi-disciplinary team that delivers cost-effective integrated solutions. The team blends engineering, science, urban planning, permitting and policy expertise to tailor solutions that provide multiple and complementary benefits.



Green Infrastructure Priority Action Plan Wilmington, DE

To help the City meet long-term control goals of reducing combined sewer overflows and nutrients entering natural water supplies, the team used the City's existing GIS layers and stormwater modeling to develop a priority action plan. The plan included recommendations for target sewersheds and prioritized list of locations for green stormwater infrastructure on public property with preliminary design and construction estimates.



Daniel Morgan Boone Park Kansas City, MO

Black & Veatch advanced the design of the largest green infrastructure project for Kansas City Water's Smart Sewer Program's with a focus on consent decree compliance, elevating engagement to inform the design process, and using infrastructure investment as a catalyst to support communities and development.



Fresh Coast Protection Partnership Milwaukee, WI

With an emphasis on community and developing local contractor capacity, the Fresh Coast Protection Partnership advances 18 projects that include constructed wetlands, bioretention, permeable pavement and native vegetation. Black & Veatch manages the program and construction, coordinating across a team of local design and construction firms.

HOW WE DELIVER BENEFITS

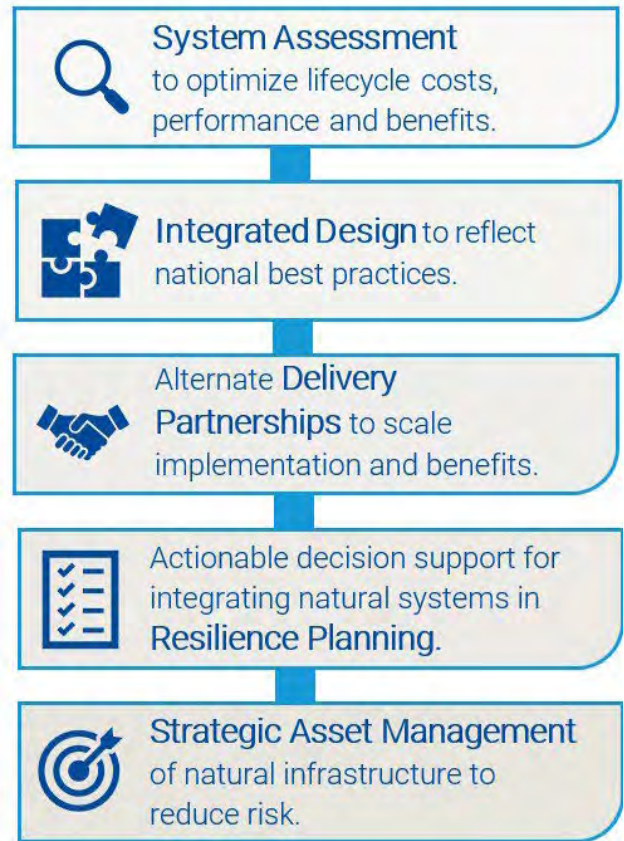
We are delivering best management practices with a focus on transparent outcomes, innovation and sustainability. Our team understands the complexity of integrating infrastructure and natural systems to:

- Elevate Resilient Communities and Ecosystems
- Enable Sustainable Urban Stormwater Management
- Protect and Diversify Water Supplies
- Transform Water Treatment
- Reduce Risk
- Inspire Community Acceptance

From intentional planning to inspired design, our team understands how to characterize and maximize the benefits of best management practices. Our experience with community-based partnerships and strategic asset management enables deliverables that maximize existing infrastructure, align with stakeholder priorities and minimize risk.

CONSTRUCTION MANAGEMENT AND INSPECTION

Across the country, Black & Veatch is providing construction management and inspection support to ensure that best management practices are implemented efficiently and successfully. Our construction management professionals bring diverse experience to inform their approach. With backgrounds in equipment operation, wetland science or environmental engineering, our team brings hands-on field experience to support design plan phasing and permit compliance, to coordinate materials and allocate resources, to establish working schedules, and to provide quality implementation.



The Black & Veatch team has been amazing to work with over the past several years. They have been helping me to advance green infrastructure with the City of Wilmington through planning and design. The team created a transparent process to identify and prioritize areas that will create the largest impact on water quality while adding value and greenspace to disadvantaged neighborhoods in our community. I am really impressed with their expertise and appreciate the approach as collaborators!"

- ALISON QUIMBY, SUSTAINABILITY AND ENVIRONMENTAL COMPLIANCE MANAGER
CITY OF WILMINGTON, DE





GALOWITZ • OLSON PLLC
ATTORNEYS AT LAW
S.T. CROIX TITLE
OLSON MEDIATION CENTER

Tracey A. Galowitz
Susan D. Olson
Susannah Torseth
Laurann J. Kirschner
Cassandra Suchomel

Raymond O. Marshall
Retired
John Scott McDonald
Retired

January 22, 2024

Ms. Tina Carstens
Administrator
Ramsey-Washington Metro Watershed District
2665 Noel Drive
Little Canada, MN 55117

Via Electronic Mail Only

**Re: Ramsey-Washington Metro Watershed District
Application for District Attorney Position**

Dear Ms. Carstens:

Galowitz • Olson, PLLC, respectfully submits this letter as application to be selected as counsel for the Ramsey-Washington Metro Watershed District (“RWMWD”).

This firm has an extensive history working with watershed districts. Our firm has had the privilege of representing RWMWD from its inception more than 40 years ago. This firm also represents the Valley Branch and the Carnelian Marine Watershed Districts, and has represented them since their inception.

Our general practice law firm also includes a title insurance company, which can assist with real estate transactions and related matters. Our experience with watershed law specifically includes, but is certainly not limited to:

- Easements/land/property rights acquisition;
- Contract review for large-scale water management projects;
- Ensuring proper compliance with Minnesota Statutes Chapters 103B, 13D, and other pertinent laws;
- Drafting, recording, and enforcing maintenance and stormwater agreements;
- Reviewing permitting conditions and ensuring compliance with District Rules.

The educational and background information of the attorneys available to provide legal services are as follows:



Tracey A. Galowitz

Partner & Attorney, Galowitz • Olson, PLLC

Tracey is a highly-respected and trusted attorney in the St. Croix Valley, with more than 35 years of experience advising watershed districts. Tracey graduated from Cornell College with a Bachelor of Arts, *Magna cum Laude*, and received her Juris Doctor from University of Minnesota Law School. Tracey has served in a leadership capacity on many professional and community boards and organizations. Tracey is currently serving as lead counsel for the Ramsey-Washington Metro Watershed District.



Susannah Torseth

Partner & Attorney, Galowitz • Olson, PLLC

Susannah is a lifelong resident of the St. Croix Valley and a well-respected real estate attorney, with over 10 years of experience advising watershed districts. Susannah graduated *Magna Cum Laude* from St. Olaf College and received her Juris Doctor *Cum Laude* from William Mitchell College of Law. Susannah is currently serving as lead counsel for Carnelian Marine and Valley Branch Watershed Districts.



Laurann J. Kirschner

Partner & Attorney, Galowitz • Olson, PLLC

Laurann is a passionate and knowledgeable attorney who has been advising watershed districts since joining Galowitz • Olson in 2018. Laurann graduated from Belmont University *Magna Cum Laude* and received her Juris Doctor from Belmont University College of Law, *Magna Cum Laude*, third in her class. Laurann served as the editor-in-chief of the *Belmont Law Review*. Laurann is currently serving as counsel for the Valley Branch and Ramsey-Washington Metro Watershed Districts.

It is anticipated that Attorneys Galowitz and Kirschner would serve as the lead attorneys, with Attorney Torseth assisting on an as-needed basis. The hourly rate proposed for each attorney shall be as follows:

Tracey A. Galowitz:	\$275 per hour
Susannah Torseth:	\$250 per hour
Laurann J. Kirschner:	\$250 per hour

Please do not hesitate to contact us with any questions relating to this proposal of services. We appreciate your consideration.

Sincerely,

/s/Laurann J. Kirschner

Laurann J. Kirschner
Tracey A. Galowitz

Attorneys at Law

Proposal to Provide Accounting Services

RAMSEY-WASHINGTON METRO WATERSHED DISTRICT

February 14, 2024

Submitted By:
Mark C. Gibbs, CPA
Managing Partner

Redpath and Company, LLC
55 5th Street East, Suite 1400
St. Paul, MN 55101
651.426.7000
mgibbs@redpathcpas.com
www.redpathcpas.com



February 14, 2024

Ramsey-Washington Metro Watershed District
c/o Ms. Tina Carstens
2665 Noel Drive
Little Canada, MN 55117

Dear Ms. Carstens:

In response to your request, we are pleased to submit a proposal to perform monthly accounting services for the Ramsey-Washington Metro Watershed District for the years ended December 31, 2024 and 2025.

Firm Background

Redpath and Company is a leading accounting firm providing proactive, innovative and value driven CPA services. We serve closely held businesses, government and not-for-profit entities in the areas of audit & attest, tax, benefits and compensation administration, international consulting, mergers & acquisitions, succession and estate planning, and valuation services. Our offices are located in downtown St. Paul and White Bear Lake with approximately 180 employees. The work on this engagement will be performed by the White Bear Lake office.

Redpath and Company is a full-service accounting firm. We help individuals and organizations – including businesses, local governments and not-for-profits – make decisions that create value and contribute to their financial well-being. Substantial effort of our professional staff is directed toward serving Minnesota local governments. Twenty-five staff members are assigned to governmental and not-for-profit services and devote significant time and effort in providing audit and other services to Minnesota governmental entities.

Redpath and Company is prepared to continue to assist you with your monthly and quarterly accounting needs. Our objective is to make your life easier, save you time and save your staff time.

We have an extensive list of governmental clients. These clients value our service and retain our services for extended periods because we:

1. Provide professional and courteous service in a timely manner.
2. Remain in contact throughout the year to answer questions relative to funding, annual budgeting, compliance matters and other accounting issues.
3. Are available to assist in problem solving and long range planning.
4. When requested, meet with the governing board to explain financial reports and answer questions.

Client References

Entity	Contact
Valley Branch Watershed District	Ed Marchan 612/491-8790
Riley Purgatory Bluff Creek Watershed District	Terry Jeffery 952/607-6512
Capitol Region Watershed District	Mark Doneux 651/644-8888
Rice Creek Watershed District	Nick Tomczik 763/398-3071
Comfort Lake-Forest Lake Watershed District	Mike Kinney 651/395-5855

Accountant Qualifications

The Redpath and Company staff responsible for your account will be:

Mark C. Gibbs, CPA – *Managing Partner*. Responsible for final review. Assists staff with complex technical issues.

Courtney Baskette, CPA – *Senior Manager*. Responsible for review and assistance as needed.

Bonnie Burns – *Accountant*. Responsible for monthly accounting services.

Mark has extensive audit and accounting service experience with the following watershed districts: Ramsey Washington Metro Watershed District, Rice Creek Watershed District, Valley Branch Watershed District, Minnehaha Creek Watershed District, Riley Purgatory Bluff Creek Watershed District, Nine Mile Creek Watershed District, Capitol Region Watershed District.

Courtney manages our accounting and management outsourcing department. She reviews, oversees and performs monthly accounting services for various industries and governmental entities. She is also available for special projects as needed.

Bonnie works exclusively in our not-for-profit and government area. She performs monthly accounting services for the following watershed districts:

- Rice Creek Watershed District
- Ramsey-Washington Metro Area Watershed District
- Capitol Region Watershed District
- Comfort Lake-Forest Lake Watershed District
- Riley Purgatory Bluff Creek Watershed District

Redpath and Company would prepare the monthly accounting as follows:

Monthly Accounting

- District codes invoices and receipts
- District approves each check and signs them at the monthly meeting. District would mail checks to vendors.
- Redpath and Company enters invoices and receipts into Sage accounting system, generates monthly financial statements, including:
 - Cash disbursements detail listing
 - Customized check register
 - Compilation report
 - Administrative and program budget report
 - Statement of revenue, expenditures and changes in fund balance
 - Income statement/balance sheet
 - Budget to actual comparisons for all funds
 - Schedules of each fund

Redpath and Company reconciles all accounts, prepares bank reconciliations and makes journal entries to close the month, allocates interest revenue, allocates administrative expenditures and other such journal entries as may be required. Any journal entries prepared by Redpath will be approved by the District.

Monthly Reporting

- The Watershed District Board meets on the first Wednesday of each month.
- The District will provide Redpath and Company with all monthly financial and payroll information (coded invoices, coded receipts, bank statements, etc.) at an agreed upon time by the District and Redpath. We would then return the monthly accounting packet described above at a time we both agree on.

This process allows us to maintain our independence because we will not be making any management decisions; those decisions (coding of the invoices and receipts) are made by the Administrator.

Payroll

- Redpath and Company prepares payroll in MyPay payroll service on a bi-weekly basis in accordance with District policies.
- Redpath and Company coordinates all payroll related reports (Federal Form 941, State of Minnesota Department of Revenue, Department of Labor, etc.) and files on a timely basis.
- Redpath and Company coordinates the preparation of Federal and Minnesota Department of Revenue payroll tax deposit requirements for semi-weekly deposits.
- Redpath and Company prepares Public Employee Retirement Association Salary Deduction Report, submits payment on a timely basis and files a copy with the PERA office in accordance with District policies.

- Redpath and Company prepares Deferred Compensation listing and submits payment on a timely basis in accordance with District policies.

Financial Review

Redpath and Company will be available for monthly/annual financial review and consulting on an as-needed basis.

Fees

Bonnie Burns would be your primary contact for accounting and payroll services. Our fee estimate is to provide the above services for \$1,550 per month, subject to annual review. The cost of supplies (checks, copies, etc.) will be passed through to the Watershed District.

Our fee to provide financial review and consulting will be at our standard hourly rate, which is \$165 per hour.

We appreciate the opportunity to be of service to you and believe this letter accurately summarizes the significant terms of our engagement. If you have any questions, please let us know.

We are available to discuss this letter with you at any time.

Sincerely,

REDPATH AND COMPANY, LTD.



Mark C. Gibbs, CPA

MCG/bms

Request for Board Action

Board Meeting Date: March 6, 2024

Agenda Item No: 8C

Preparer: Tina Carstens, Administrator
Paige Ahlborg, Project Manager

Item Description: 2024 Targeted Retrofit Project Bid Award-Roosevelt Homes Phase 2

Background:

At the February 2024 meeting, the board was presented with the plans and cost estimate for the 2024 Targeted Retrofit Project for Roosevelt Homes Phase 2. The board directed staff to finalize the design and bidding documents and solicit bid proposals. The engineer's opinion of probable cost for this projects was \$93,600.

This project is planned through our Targeted Retrofit program and will be funded with this project fund.

This bid opening occurred February 22. The results are attached. The managers should consider awarding the project to the lowest responsive and responsible bidder.

Applicable District Goal and Action Item:

Goal: Manage risk of flooding – The District will reduce the public's risk to life and property from flooding through programs and projects that protect public safety and well-being.

Action Item: Cooperate with appropriate stakeholders to identify, assess, and address potential flooding problems in the District.

Staff Recommendation:

Staff recommends the board award the project to the recommended responsive and responsible bidder.

Financial Implications:

This project will be funded from the district's Targeted Retrofit Fund where there are sufficient funds available.

Board Action Requested:

Accept the bids and award the 2024 Targeted Retrofit Roosevelt Homes Phase 2 project to MNL. Direct staff to prepare and mail the notice of award and prepare the agreements, and review the required submittals.

Memorandum

To: RWMWD Board of Managers
From: Marcy Bean, Matt Metzger and Brandon Barnes
Subject: Roosevelt Homes Landscape Improvements- Recommendation to Award Project
Date: February 23, 2024
c: Paige Ahlborg and Tina Carstens

The purpose of RWMWD's Targeted Retrofit program is to design, provide bid assistance for, and oversee the construction of BMP retrofits on previously identified properties throughout the district. In 2023-24, RWMWD staff and Barr Engineering Co. (Barr) have supported the design of stormwater improvements at Roosevelt Homes in St. Paul.

Roosevelt Homes is a 23-acre multi-family public housing development owned and operated by St. Paul Public Housing Agency. The area experiences flooding which impacts the maintenance facility located on the lower level of the Roosevelt Community Center as well as public spaces and resident parking lots on the property.

The first phase of construction in winter 2023 added flood storage volume to an existing dry basin and created a new basin where ash trees are being removed from the site adjacent to Ames Avenue. This phase of work includes permanent vegetation at the newly constructed basins and conversion of turf into native plantings. One final phase of work is planned for 2024, including improvements to overland flow routes on the property.

A concurrent project by the City of St. Paul in Sackett Park will also provide additional flood risk mitigation benefit to Roosevelt Homes.

The RWMWD Board of Managers authorized bidding for the Landscape Improvements for Roosevelt Homes at their February 7, 2024 meeting. Following the Board's authorization, the project was bid for two weeks between February 8 and February 22 to select contractors. Bids were opened on February 22, 2024 at a virtual bid opening. Six bids were received and are listed in Table 1.

Table 1. Summary of Bids Received for Roosevelt Homes Landscape Improvements

Bidder	Total Base Bid Entered on the Bid Form
MNL	\$ 57,664.25
Rock Leaf Water	\$ 62,899.36
Davey Resource Group	\$ 75,000.00
Shoreline Landscaping	\$ 83,516.24
Sandstrom Land Management	\$ 99,995.27
Landbridge	\$ 117,386.10
Engineer's opinion of probable cost was \$93,600 at the February Board Meeting.	

A wide range of costs are captured in the six project bids. The three low bidders have all been involved in RWMWD's vegetation maintenance contracts, so are familiar with the program and expectations for maintenance. The highest bidder has communicated to Barr staff that a few large projects have been secured for this year, so they have less incentive to provide competitive pricing. The engineer's opinion of probable cost was estimated at 90% completion based on average bid prices from recent similar projects. The low bid is significantly lower for herbicide application and vegetation establishment unit costs than the estimate.

RWMWD staff has had good experiences working with MNL on projects of similar scale and scope. MNL has met the bidding requirements and is considered the apparent lowest responsible and responsive bidder and Barr recommends that the RWMWD Board of Managers:

- Consider a motion that awards the project to MNL at the bid price of \$57,664.25 and directs staff to request the required bonds and insurance information and execute the contract for the work.
- Once the necessary submittals are received and reviewed, and the contract is signed by all parties, a required preconstruction meeting will be held and a formal "Notice-to-Proceed" will be issued.

Next Steps

If the Board of Managers approves the motion the following would be completed:

- An Authorized Representative signs the Notice of Award to be sent to the successful bidder
- Successful bidder provides the following information:
 - Fully executed Form of Agreement
 - Performance Bond and Payment Bond
 - Certificate of Insurance verifying adequate insurance per the bidding documents
- Barr and Galowitz-Olsen will review the submittals and, if necessary, request modifications

- Barr will coordinate with the successful bidder regarding the construction schedule and schedule a preconstruction meeting
- The Form of Agreement will be signed by all parties
- Notice to Proceed is anticipated to be issued in April, pending weather conditions.
- All work shall be substantially complete by June 15, 2024
- The vegetation warranty will extend one year post-substantial completion, estimated through June 2025. Vegetation maintenance will then extend through October 2026 to align with the District's other vegetation maintenance contracts.

Request for Board Action

Board Meeting Date: March 6, 2024

Agenda Item No: 8D

Preparer: Tina Carstens, Administrator
Paige Ahlborg, Project Manager

Item Description: 2024 Targeted Retrofit Project Bid Award-Woodbury Target

Background:

At the February 2024 meeting, the board was presented with the plans and cost estimate for the 2024 Targeted Retrofit Project for Woodbury Target. The board directed staff to finalize the design and bidding documents and solicit bid proposals. The engineer's opinion of probable cost for this projects was between \$776,000 and \$898,000.

This project is planned through our Targeted Retrofit program and will be funded through our Stormwater Impact Fund.

This bid opening is scheduled for Thursday, February 29, 2024. The results will be brought to the meeting for your review and approval. The managers should consider awarding the project to the lowest responsive and responsible bidder.

Applicable District Goal and Action Item:

Goal: **Achieve quality surface water** – The District will maintain or improve surface water quality to support healthy ecosystems and provide the public with a wide range of water-based benefits.

Action Item: Implement retrofit water quality improvement projects.

Staff Recommendation:

Staff recommends the board award the project to the recommended responsive and responsible bidder.

Financial Implications:

This project will be funded from the district's Stormwater Impact Fund.

Board Action Requested:

Accept the bids and award the 2024 Targeted Retrofit Woodbury Target project to _____.
Direct staff to prepare and mail the notice of award and prepare the agreements, and review the required submittals.

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New Reports/ Presentations

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Evaluation of the Potential Causes of Declining Water Quality in Kohlman Lake

March 6, 2024

Prepared for
Ramsey Washington Metro Watershed District

Evaluation of the Potential Causes of Declining Water Quality in Kohlman Lake

March 6, 2024

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Abbreviations

µg/L	microgram(s) per liter
Al	aluminum
APM	aquatic plant management
BMP	best management practice
cm	centimeter(s)
Fe	iron
IAPM	invasive aquatic plant management
kg	kilogram(s)
mg/L	milligram(s) per liter
Mn	manganese
MPCA	Minnesota Pollution Control Agency
P	phosphorus
ug/L	microgram(s) per liter
WQ	water quality

1 Introduction

Kohlman Lake was placed on the MPCA's list of impaired waters in 2008 with the 10-year average total phosphorus concentration of 98 µg/L (0.098 mg/L) exceeding the shallow lake eutrophication criterion of 60 µg/L (0.060 mg/L). A significant number of best management practices have been applied in-lake and in the Kohlman Lake subwatershed in an effort to meet state eutrophication criteria. Some of these practices included:

- Whole lake herbicide treatments in 2008 and 2009 to manage invasive aquatic plants including Eurasian water milfoil and curly-leaf pondweed.
- Spot treatments for curly-leaf pondweed control on an as-needed basis through 2023.
- Carp management since 2010 in Kohlman Lake and in upstream ponds and lakes.
- Alum treatment in the spring and fall of 2010 to control internal phosphorus loading in Kohlman Lake.
- Aquatic plant harvesting in 2015 and 2016 to lower overall plant coverage and biomass.
- Construction of several watershed BMPs such as the series of BMPs at Maplewood Mall, dredging of Markham Pond, the Beam Avenue Iron Enhanced sand filter, and most recently (2023) upgrades to the permeable weir in Kohlman Basin.

The combined effect of all the management activities was a notable decline in total phosphorus concentrations beginning in 2010 which corresponded with a whole-lake alum treatment conducted in the spring of that year (Figure 1-1). Total phosphorus concentrations remained low and below eutrophication criteria in Kohlman Lake until 2018. After 2018 phosphorus concentrations have remained above eutrophication criteria. Starting in 2021 and continuing through 2023, total phosphorus increased again to what appears to be a new higher plateau. This report provides an analysis of why phosphorus may be increasing in Kohlman Lake. Increased clarity following the 2010 alum treatment had the effect of increasing the coverage and density of aquatic plants in Kohlman Lake. Coontail in particular was responsive to increased clarity and physically replaced the space previously occupied by invasive species that were curtailed with the 2008 and 2009 whole lake herbicide treatments. Coontail is known to derive nutrients from the water column¹ and it is suspected that the growth of coontail, filamentous algae, and other aquatic plants reinforced the benefits of the alum treatment. A 2015 study conducted by the District estimated that 138 kilograms of phosphorus was taken up by aquatic plants and filamentous algae during the study period of May through October, 2015².

District staff have raised some concern that recent aquatic plant management efforts that target a greater area of Kohlman Lake may be causing or contributing to recent increases in total phosphorus in Kohlman Lake. The observed increases in total phosphorus in 2008 and 2009 (Figure 1-1) that corresponded to

¹ Lombardo, Paola & Cooke, G Dennis. (2003). *Ceratophyllum demersum* - Phosphorus interactions in nutrient enriched aquaria. *Hydrobiologia*. 497. 79-90.

² Bartodziej, B., Pilgrim, K., and S. Blood (2020). Strategic Aquatic Plant Harvesting as a Multi-Faceted In-Lake Management Tool. *Lake Line*. North American Lake Management Society.

whole lake herbicide treatments empirically suggest that whole lake treatments may increase phosphorus by reducing the growth and standing crop of aquatic plants. However, recent increases in phosphorus in Kohlman Lake may also be a result of reduced effectiveness of the 2010 alum treatment. It was expected that the treatment would have an approximately 10-year lifespan and it is possible that internal loading has now returned to pre-alum treatment conditions. Climatic and drought conditions from 2021 to 2023 may have also contributed to higher phosphorus in these years, particularly if internal loading has returned to pre-treatment conditions (less runoff and lake flushing tends to result in higher phosphorus for lakes with high internal loading). Unfortunately, the effect of climate from 2021 to 2023 on Kohlman Lake phosphorus concentrations cannot be determined without the use of a water quality model and there is insufficient data to complete that effort.

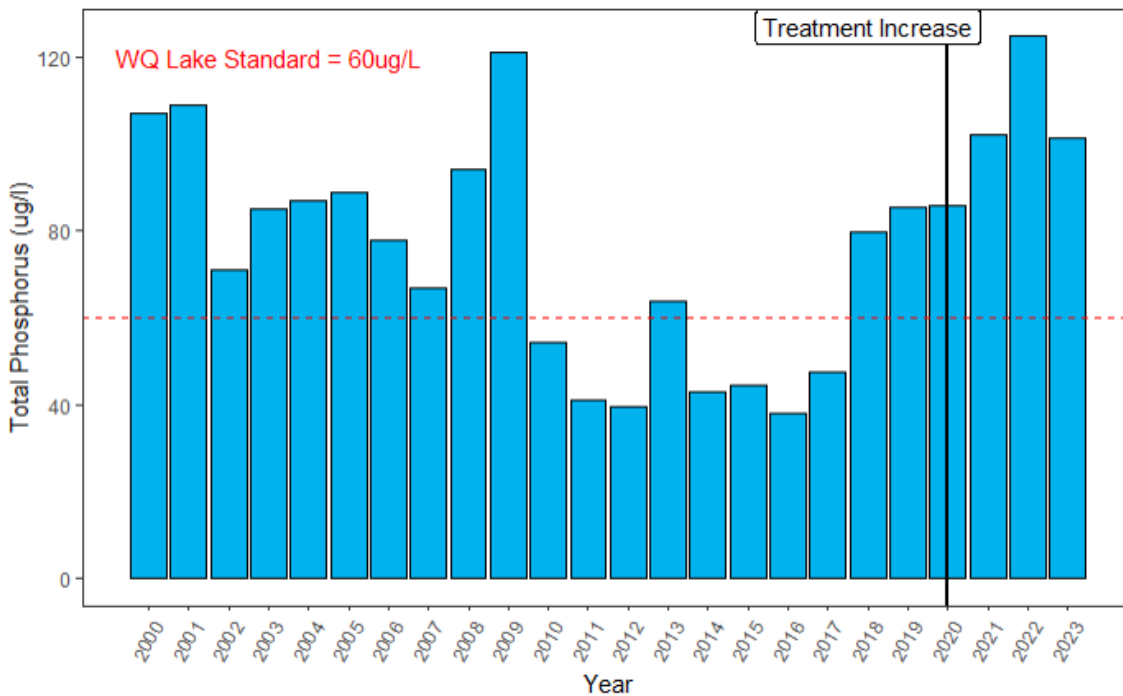


Figure 1-1 Summer average surface total phosphorus concentration in Kohlman Lake. Treatment increase indicates when the acres of herbicide application increased notably.

Data collected in 2023 specifically for this study as well as historical data collected at Kohlman Lake were used to assess the potential causes of recent phosphorus increases in Kohlman Lake. The data used in this analysis include: (1) lake water quality monitoring data, (2) sediment core and phosphorus fractionation data, (3) aquatic plant surveys, and (4) drone imagery and historical aerial images.

2 Water Quality in Kohlman Lake

Figure 1-1 provides a clear picture of average summer total phosphorus prior to and after the implementation of management actions in Kohlman Lake as well as concentration increases after 2017. District and Barr Engineering staff have been observing the evolution of total phosphorus in Kohlman Lake and noticed previously that total phosphorus was increasing in Kohlman Lake but phytoplankton (measured as chlorophyll *a*) populations did not respond to the increase in total phosphorus (see the circled region in Figure 2-1). It was hypothesized that increased density and coverage of aquatic plants in Kohlman Lake were inhibiting phytoplankton growth by shading or other competitive mechanisms (allelopathy³). If this hypothesis is correct, maintenance of an abundant aquatic plant population would be necessary to mitigate a future increase in phosphorus. It can be seen that for 2022 and 2023, the relationship between total phosphorus and phytoplankton populations (chlorophyll *a* concentration) looks similar to the relationship just prior to the alum treatment. Whole lake herbicide treatments were conducted in those years (see Section 4 of this report).

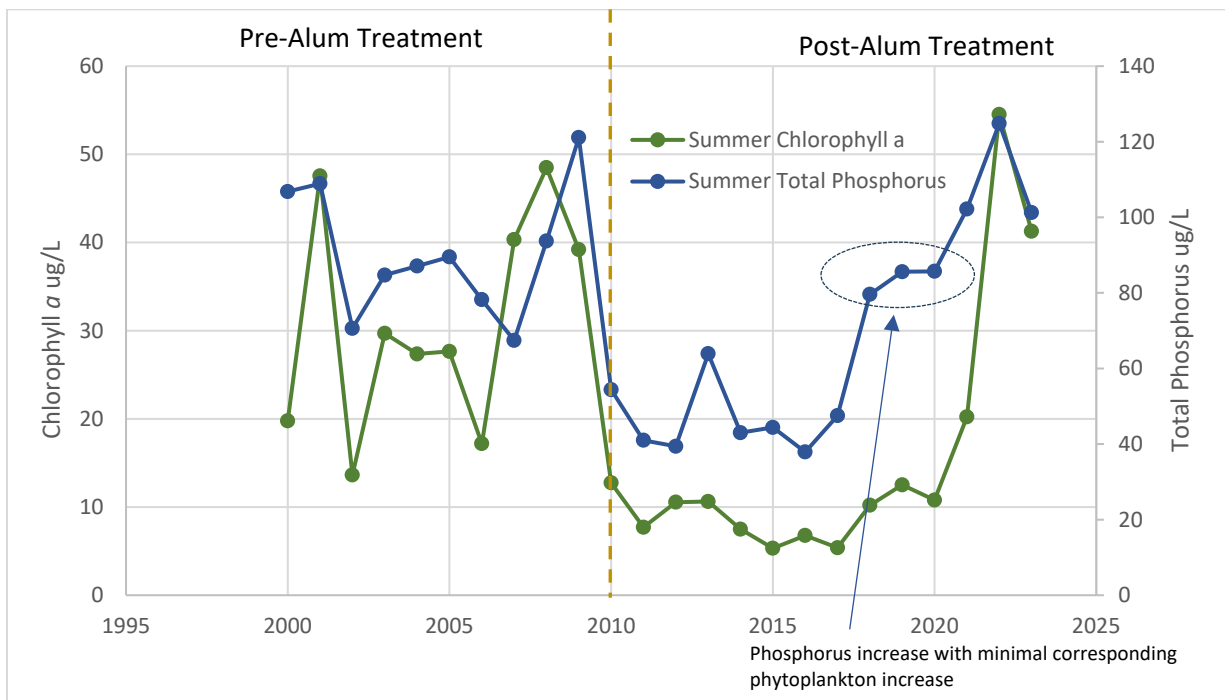


Figure 2-1 Comparison of chlorophyll *a* and total phosphorus before and after alum treatment.

³ Robertson, Evelyn. (2019). Allelopathic relationship between *Ceratophyllum demersum* and *Stratiotes aloides*. Ph.D. Thesis. Trent University.
https://www.researchgate.net/publication/332447856_Allelopathic_relationship_between_Ceratophyllum_demersum_and_Stratiotes_aloides

The results of regression analysis presented on Figure 2-2 shows the relationship between total phosphorus before the alum treatment (Pre-Management) and after the treatment (Post-Management) and through 2019. It can be seen that for equal total phosphorus concentrations for the pre and post-alum treatment periods (pre and post management), higher chlorophyll *a* was measured pre-management (pre-alum treatment). Again, this suggests that shading or some other mechanism associated with abundant aquatic plants has the benefit of limiting phytoplankton growth in Kohlman Lake.

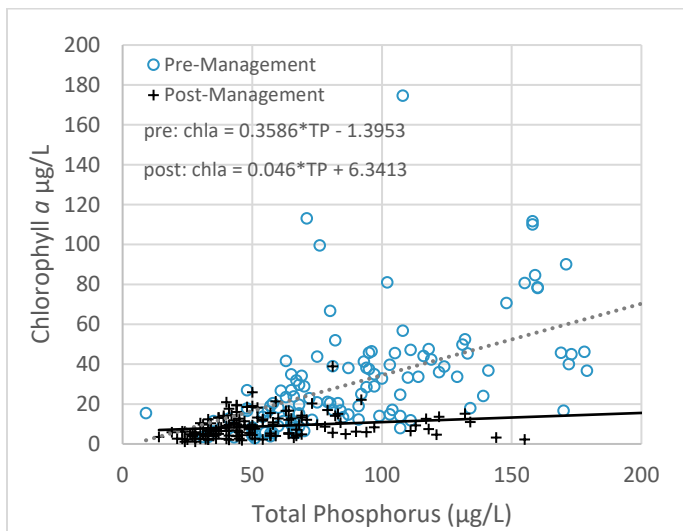


Figure 2-2 Comparison of the relationship between total phosphorus and chlorophyll *a* in Kohlman Lake prior to 2010 (pre-management: 1981 to 2009) and post 2010 (post management: 2010 to 2019).

Regardless of the relationship between phosphorus and phytoplankton growth, it appears likely that the alum treatment is no longer effectively controlling internal loading.

Internal Loading Potential

Although Kohlman Lake is shallow and likely mixes periodically, a comparison of phosphorus concentrations measured at the surface and lake bottom may provide a signature of internal loading change since the alum treatment. From 2010 until 2016, there was very little difference between average summer bottom and surface total phosphorus concentrations (Figure 2-3), suggesting little if any internal loading. Average bottom concentrations were consistently higher than the surface concentrations from 2017 until 2022. The increased bottom concentrations also corresponded with an overall increase in surface total phosphorus. This is a clear indication that internal loading has been returning since 2017.

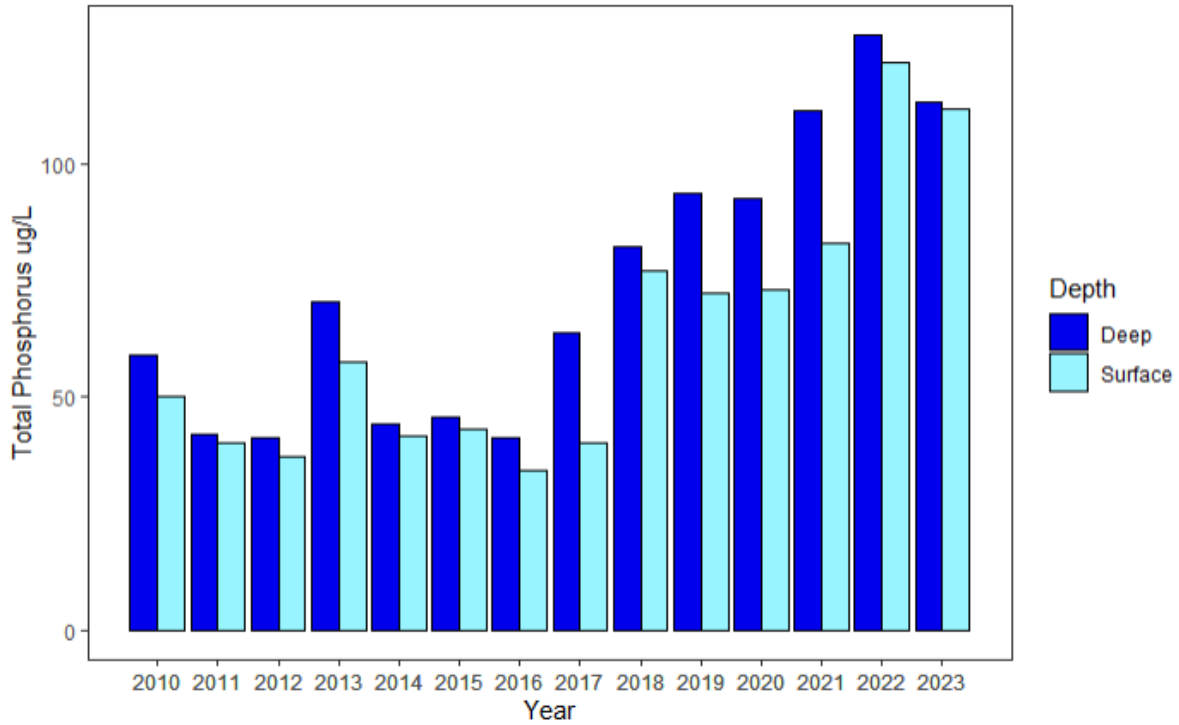


Figure 2-3 Average summer surface and bottom total phosphorus concentrations for Kohlman Lake 2010-2023.

For comparison, bottom and surface total phosphorus concentrations in Kohlman Lake prior to 2010 are shown on Figure 2-4. With a few exceptions, average summer bottom concentrations were largely higher than surface concentrations for most years prior to 2010.

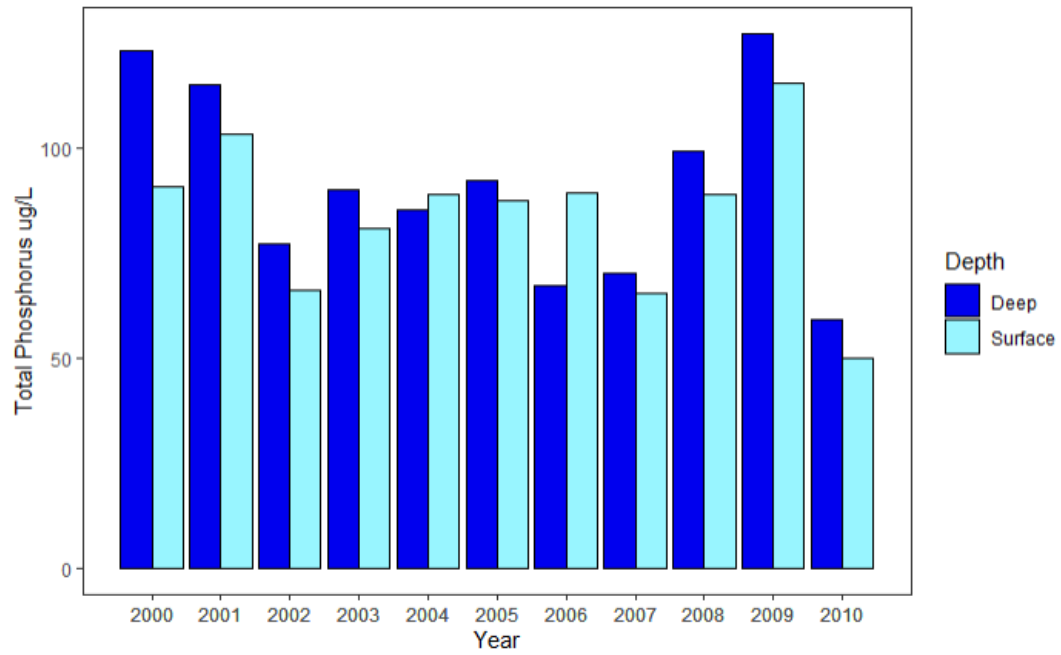


Figure 2-4 Average summer surface and bottom total phosphorus concentrations for Kohlman Lake 2000-2010.

3 Sediment Sampling and Alum Treatment Assessment

Lake bottom sediment was collected and analyzed for phosphorus fractions and aluminum both before and after alum treatment. Figure 3-1 shows concentrations of aluminum extracted from sediment cores collected in 2020. The purple and red lines (S4 and S1) clearly show a signature of the alum treatment where aluminum concentrations were well above background concentrations (vertical dashed black line). Two of the sediment cores (S2 and S3) were collected at shallower depths and show no signature of the 2010 alum treatment. It is likely that by 2020, the aluminum from the treatment had largely migrated to the deep hole (S1) in Kohlman Lake; this may have the effect of reducing the effectiveness of the alum treatment.

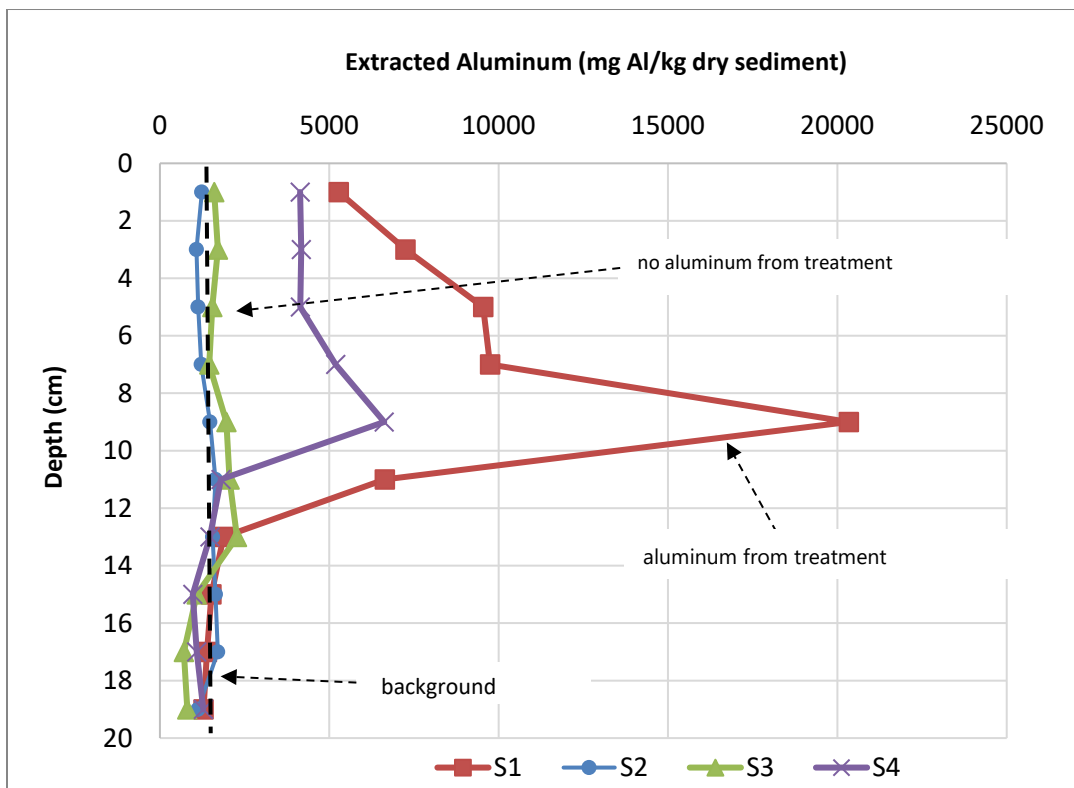


Figure 3-1 Aluminum extracted from lake bottom sediment collected in 2020.

Internal loading occurs when iron and manganese-bound phosphorus (collectively referred as mobile phosphorus) breaks apart and becomes soluble when oxygen becomes low in the sediment (anaerobic conditions). Based upon the work of Pilgrim et. al., 2007⁴, there is little to no potential for internal loading when mobile phosphorus (iron and manganese bound phosphorus) is below 0.047 mg P/cm³. Mobile

⁴ Pilgrim, Keith M., Brian J. Huser, and Patrick L. Brezonik. "A method for comparative evaluation of whole-lake and inflow alum treatment." *Water research* 41.6 (2007): 1215-1224.

phosphorus was above 0.047 mg P/cm³ only for the top six centimeters of core S1 (the deep hole of Kohlman Lake), indicating that the potential for internal loading has returned at that location in Kohlman Lake.

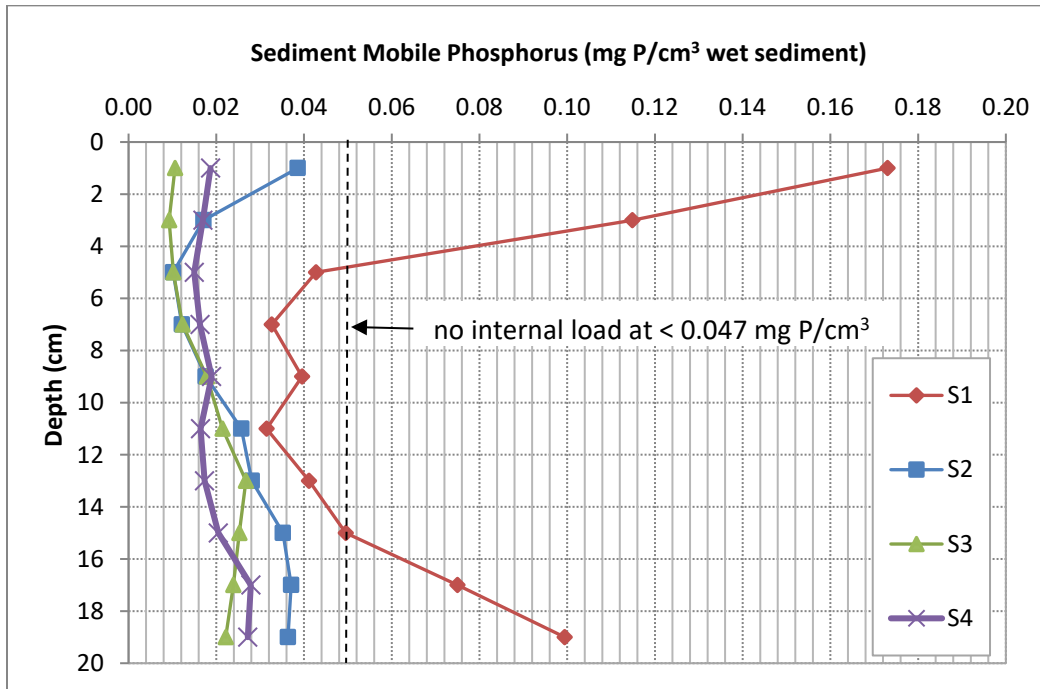


Figure 3-2 Mobile phosphorus in lake bottom sediment collected in 2020.

A statistical analysis was also conducted to assess whether mobile phosphorus concentrations in the lake bottom sediment have returned to pre-alum treatment conditions. This analysis included sediment data placed into three groups including prior to treatment (2005, 2007), immediately after treatment (2010), and most recently (2020, 2023). This analysis was conducted using ANOVA, a post hoc Tukey Test, and a linear model. Coring data were grouped by year. All data sets included both shallow and deep core locations. Data were evaluated for depth intervals of 1-2 cm, 3-4 cm, 5-6 cm, 7-8 cm and 9-10 cm.

The ANOVA showed a significant difference (p -value <0.05) between the treatment groups but not the year or the depth of the core (p -value >0.05). A post hoc Tukey test was performed to determine the differences in treatments and the differences were significant between: (1) the pre-treatment years (2005, 2007) and the post treatment year 2010, and (2) the recent post-treatment years (2020 and 2023) and the post treatment year (2010). There was no significant difference between the pre-treatment years (2005,2007) and the post treatment years (2020, 2023). This suggests that mobile phosphorus concentrations in Kohlman Lake bottom sediments have returned to pre-treatment conditions.

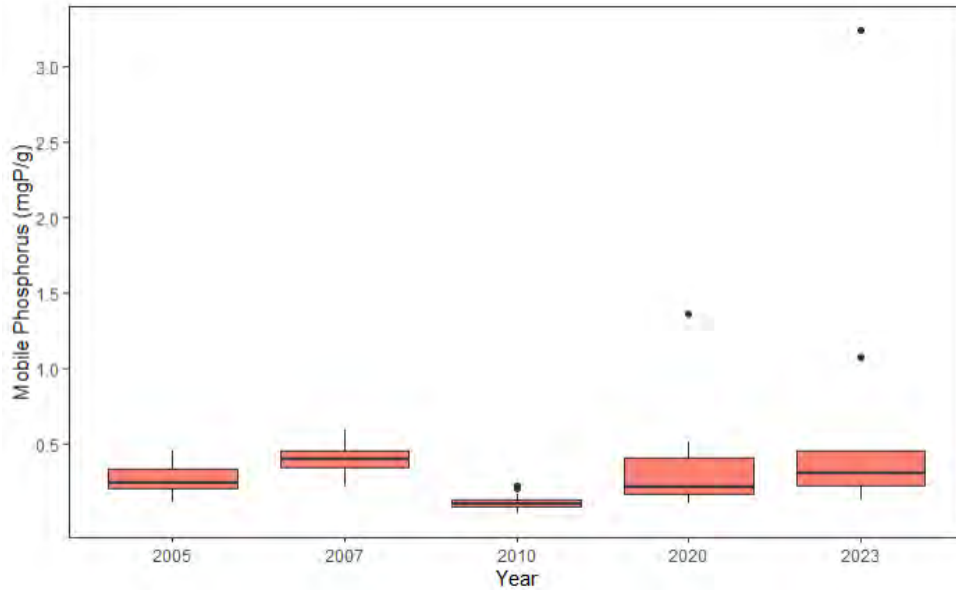


Figure 3-3 Mobile Phosphorus (Fe-P + Mn-P) concentrations in the top four centimeters of sediment cores collected before (2005, 2007), immediately after (2010), several years after the alum treatment (2020, 2023).

Figure 3-3 provides a graphical comparison of mobile phosphorus in Kohlman Lake bottom sediments (top four centimeters) by year. Average concentrations measured in 2020 and 2023 show that mobile phosphorus has returned to pre-treatment conditions. It is also notable that mobile phosphorus concentrations in a few core samples was very high and much higher than concentrations observed pre-treatment.

4 Aquatic Plants in Kohlman Lake

The status and condition of an aquatic plant community is commonly assessed using the point-intercept method. With this method, a large number of evenly spaced sampling locations are established across a lake as a grid. At each point, a rake is tossed and plants are pulled up and assessed for species type and a density ranking is applied. Data considered in this analysis included raw point-intercept data collected by the Ramsey-Washington Metro Watershed District or Dakota County from 2013 to 2018 and 2023 and from Limnopro Aquatic Sciences (previously provided by Bill Bartodziej of the District) for 2019, 2020, and 2022. No surveys were performed in 2021.

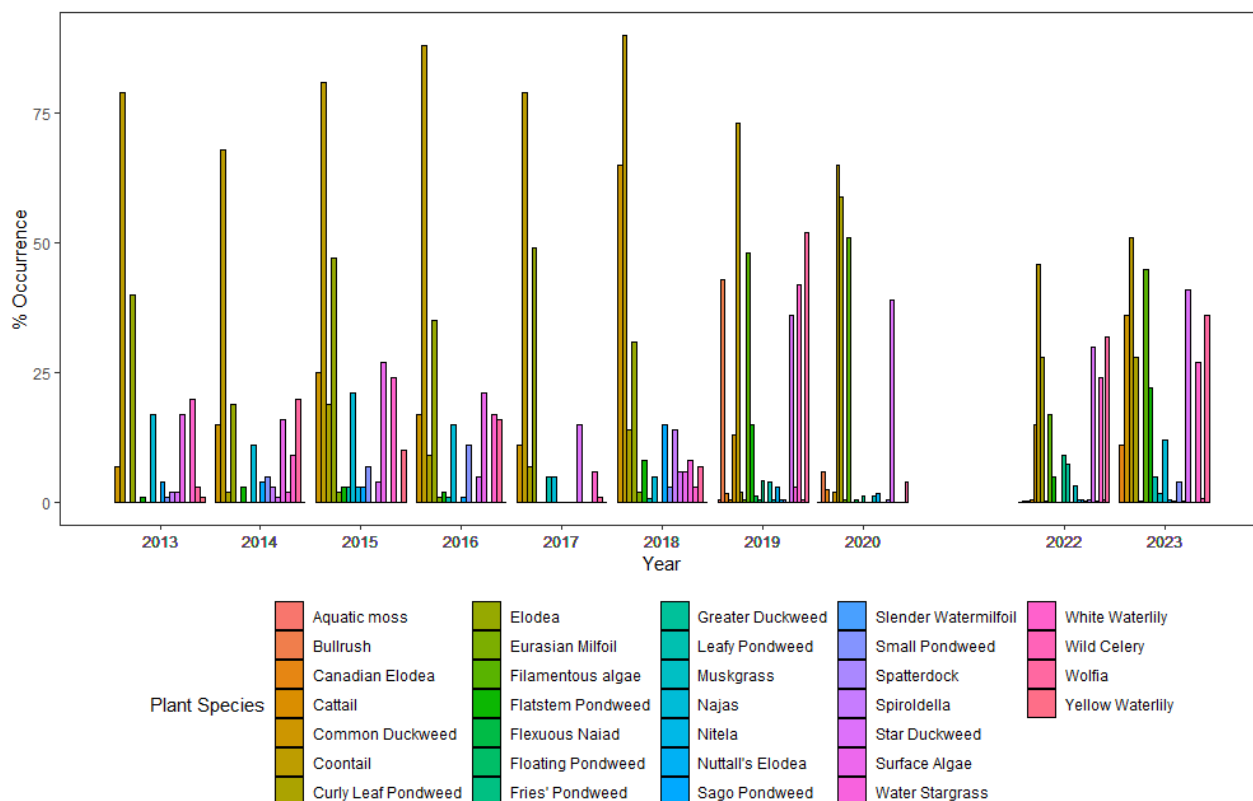


Figure 4-1 Average annual percent occurrence for aquatic plant species in Kohlman Lake

Figure 4-1 shows the percent occurrence across all of the monitoring locations for different species in Kohlman Lake. It is difficult to determine the overall change in diversity following the alum treatment because the Limnopro surveys were more detailed at the species level. However, the groupings by color in Figure 4-1 provides an overall visual image of changes in the aquatic plant population. It does appear that 2022 and 2023 are different from the other years. However, this is a qualitative observation.

Table 4-1 summarizes the Kohlman Lake area subject to invasive aquatic plant management activities (herbicide treatment) from 2010 to 2023.

Table 4-1 Aquatic plant management acres and percent area of Kohlman Lake managed by year.

Year	APM Acres ⁽¹⁾	IAPM Acres ⁽²⁾	Total Acres	% of Lake
2010	0	0	0	0
2011	31.5	0	31.5 ³	37%
2012	1.2	0	1.2	1%
2013	.275	22	22.3 ³	26%
2014	0.36	0.37	0.37	0.4%
2015	0.4	0	0.4	0.4%
2016	0.84	7.4	8.24	9%
2017	1.62	0	1.62	2%
2018	0.72	0	0.72	0.8%
2019	0.98	0	0.98	1.2%
2020	0.70	12.5	13.2 ⁽³⁾	16%
2021	10.7	9.4	20.1 ³	24%
2022	1.34	10.6	11.9	14%
2023	1.2	9	9.2	11%

- (1) APM = aquatic plant management (targets non-invasive plants and a limited area)
- (2) IAPM = invasive aquatic plant management (targets invasive aquatic plants such as curly-leaf pondweed and a larger area of treatment)
- (3) Treatment area greater than 15% of littoral area.

In order to test whether the plant populations were affected by the increase in aquatic plant management (treatment) extent, we focused on coontail (*Ceratophyllum demersum*) as it is a dominant species and is important for water quality because it removes phosphorus directly from the water. Curly-leaf pondweed (*Potamogeton crispus*) was also included in the analysis since this species was the target of management (also because when it dies, it can release phosphorus directly into the water). The percent occurrence of coontail and curly-leaf pondweed were compared using a Welch’s Two Sample T-test. The scenarios tested included: (1) **scenario one** compares the survey years with herbicide spot treatments (2010, 2013, 2016) to years after the increase in herbicide treatment area (2020, 2022, 2023), (2) **scenario two** compares the years directly before the increase in treatment extent (2017-2019) to the years after the increase (2020, 2022,2023), (3) **scenario three** compares a larger data set of eight years pre-increase (2009-2019-RWMWD data) to the smaller sample set of four years post increase (2020,2022,2023), (4) **scenario four** compares the late summer (July/August) survey data before the increase in treatment extent (2009-2014,2016,2018,2019) with the lake summer survey data after the increase in treatment area (2022,2023), and (5) **scenario five** compares the early summer (May/June) survey data before the increase in treatment extent (2009-2017) with the early summer survey data after the increase in treatment area (2022,2023). The results from the statistical analysis are summarized in Table 4-2.

Table 4-2 Results of a statistical analysis to determine whether years with increased acreage of aquatic plant management had significantly different coverage of coontail and curly-leaf pondweed.

Scenario	% Occurrence	p-value	Mean Before Increase in Treatment Area	Mean After Increase in Treatment Area
One	<i>C. demersum</i> (coontail)	0.10	80	55
	<i>P. crispus</i> (curly-leaf pondweed)	0.08	9	38
Two	<i>C. demersum</i> (coontail)	0.03 ⁽¹⁾	81	55
	<i>P. crispus</i> (curly-leaf pondweed)	0.08	8	38
Three	<i>C. demersum</i> (coontail)	0.02 ⁽¹⁾	76	55
	<i>P. crispus</i> (curly-leaf pondweed)	0.106	11	38
Four	<i>C. demersum</i> (coontail)	0.06	73	54
	<i>P. crispus</i> (curly-leaf pondweed)	0.66	3	3.8
Five	<i>C. demersum</i> (coontail)	0.97	65	65
	<i>P. crispus</i> (curly-leaf pondweed)	0.08	65	54

(1) Statistically significant (P-value < 0.05 used to denote a significant difference between means).

In all scenarios, the mean % occurrence of coontail either decreased or showed no change after the increase in treatment extent. In scenarios two and three, the mean before the increase in treatment extent was significantly different than the mean after the increase in treatment extent. In all scenarios there were no statistically significant difference between the % occurrence of curly-leaf pondweed before and after the increase in treatment extent; however, in all scenarios except scenario five, the mean % occurrence after the increase in treatment extent was higher than the mean % occurrence before the increase in treatment size. This analysis could be used to argue that the increase in herbicide treatment extent is not decreasing the overall presence of curly-leaf pondweed but it is decreasing the presence of coontail.

Figure 4-2 shows a summary of the data used in Table 4-1. Empirical evaluation of Figure 4-2 confirms that coontail has declined in Kohlman Lake in recent years compared to the period after alum treatment (2010 to 2019).

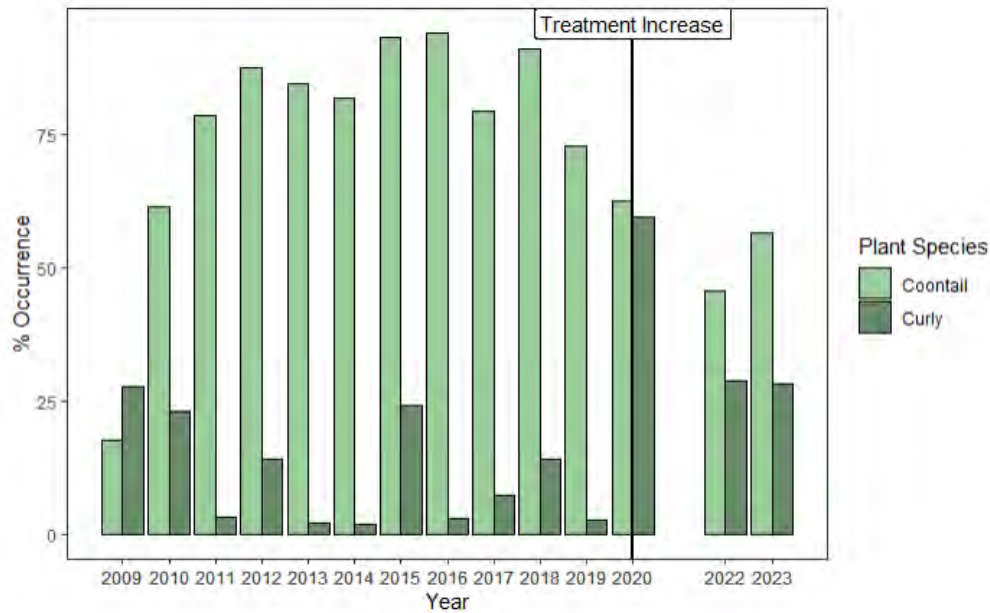


Figure 4-2 Plant survey results on Kohlman Lake before and after the increase in herbicide treatment extent, vertical line indicates treatment area increase in 2020.

Comparison of Aquatic Plant Surveys for Beaver, Keller, and Kohlman Lakes

Climatic variability can have an effect on aquatic plant populations and observed changes in Kohlman in recent years may be a function of climatic changes as well as recent plant management activities. Hence, a comparison of changes in Kohlman Lake and other lakes in the district was conducted to better understand potential climatic effects. Differences in aquatic plant populations for Beaver Lake (which was the control lake in this study), Keller Lake and Kohlman Lake the plant species *Ceratophyllum demersum* (coontail) and *Potamogeton crispus* (curly-leaf pondweed) were compared using a Welch's Two Sample T-test. Available survey dates varied among lakes, Keller and Kohlman included survey data from 2019-2022 and Beaver and Kohlman included survey data from 2010, 2014 and 2023. Because only one survey was performed in Beaver in the years 2010 and 2014 only one survey date was taken from the 2023 data to match when the survey occurred in the previous years. Additionally, more plant surveys occurred in 2023 on both Beaver and Kohlman so a separate T-test was performed for the year 2023 to look for differences between Beaver Lake and Kohlman Lake. In 2023, an herbicide treatment was carried out in May to target curly-leaf pondweed in Kohlman Lake.

Table 4-3 Statistical comparison of Kohlman Lake, Keller Lake, and Beaver Lake aquatic plant populations.

Lake and Period	Species	p-value	Mean % Occurrence for Keller or Beaver	Mean % Occurrence for Kohlman
Keller and Kohlman (2019-2022)	<i>C. demersum</i> (coontail)	0.57	62	54
	<i>P. crispus</i> (curly-leaf pondweed)	0.36	14	30
Kohlman and Beaver (2010,2014,2023)	<i>C. demersum</i> (coontail)	0.006 ⁽¹⁾	87	46
	<i>P. crispus</i> (curly-leaf pondweed)	0.99	23	23
Kohlman and Beaver (2023)	<i>C. demersum</i> (coontail)	0.00 ⁽¹⁾	95	56
	<i>P. crispus</i> (curly-leaf pondweed)	0.10	11	31

(1) Statistically significant (P-value < 0.05 used to denote a significant difference between means).

There is no significant difference between the % occurrence of coontail or curly-leaf pondweed between Keller and Kohlman for all available survey data. There is a significant difference between % occurrence of coontail between Kohlman and Beaver for the years 2010, 2014 and 2023 and for all survey data from the 2023 season. There is no significant difference between the % occurrence of curly-leaf pondweed for either scenarios between Kohlman and Beaver. This analysis suggests that recent changes in coontail populations in Kohlman are not necessarily different than changes that may be occurring in other shallow lakes in the District.

5 Drone and Aerial Imagery

Drone images collected in 2023 for Kohlman Lake and Beaver Lake are provided in Attachment A and aerial photos are provided for Kohlman Lake and Markham Pond from 2015 to 2023 (Attachment B). The drone images provide a comparison of changes in surface coverage of aquatic plants in Kohlman Lake and Beaver Lake. For example, comparison of June and August drone images for Kohlman and Beaver show that surface coverage of aquatic plants is similar between the two lakes, but it appears that coverage increased for Kohlman Lake during this period whereas coverage declined for Beaver Lake. Markham Pond images are provided for comparison since it is a lake shallow pond upstream of Kohlman Lake and has similar water quality. Comparison of the Kohlman Lake and the Markham Pond imagery from 2015 to 2023 shows that there are annual fluctuations in plant coverage. However, it does not appear that coverage in Kohlman Lake has declined relative to coverage in Markham Pond. It should be noted that the period of 2015 to 2023 spans the period where phosphorus and chlorophyll *a* were low in Kohlman Lake (2015 and 2016) and a period where phosphorus and chlorophyll *a* were high in Kohlman Lake (2022 and 2023).

6 Conclusions and Discussion

Water quality has clearly declined in Kohlman Lake in recent years with total phosphorus and chlorophyll *a* returning to concentrations observed prior to the alum treatment in 2010. There is strong evidence that the 2010 alum treatment is no longer controlling internal phosphorus loading and that another treatment is warranted. There is also strong evidence that a robust aquatic plant population in Kohlman Lake has benefitted the lake's water quality by directly competing with phytoplankton for nutrients and by shading the water column, to the extent that phytoplankton growth is reduced even when phosphorus concentrations are not changed, or even increasing due to a returned internal load (see Figure 2-1). It appears that the occurrence of some of the previously dominant aquatic plant species (i.e., coontail) was reduced in 2022 and 2023 but it is not clear that this is a function of herbicide treatments in 2022 and 2023, or if it's a result of increased abundance of invasive aquatic plants crowding out the space typically inhabited by coontail, or a result of high phytoplankton populations which compete with coontail. Drone imagery and aerial photography (Nearmap images available from 2015 to 2023) do not appear to show a clear decline in aquatic plant coverage in Kohlman Lake with a notable decline in water quality.

It is recommended that another alum treatment be conducted to maintain phosphorus concentrations in Kohlman Lake below Minnesota criteria and keep Kohlman Lake off the impaired waters list. Maintaining a diverse and abundant aquatic plant population in Kohlman Lake is critical to the maintenance of good water quality in Kohlman Lake. Hence, to keep a close watch over the condition of aquatic plants in Kohlman Lake, aquatic plant surveys (and biomass measurements) should be conducted annually in Kohlman Lake and a control lake (e.g., Keller Lake) to track the response of aquatic plants and water quality to internal load reduction and future aquatic plant management activities. Going forward, the historical data from 2010 to 2016 can be used to determine if aquatic plant management practices diminish the effectiveness of the repeat alum treatment.

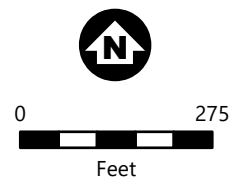
Attachment A

Drone Images for Kohlman and Beaver Lakes (provided as separate files)





Beaver Lake (~83.4 Acres)
August 15, 2023
Vegetation Cover (~15.3 Acres)

Imagery: NearMap April 18, 2023

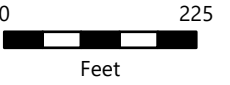


BEAVER LAKE
AUGUST 15, 2023
Vegetation Mapping
RWMWD
FIGURE X



 Kohlman Lake
(~84.6 Acres)
August 15, 2023
 Vegetation Cover
(~25.5 Acres)

Imagery: NearMap April 18, 2023



KOHLMAN LAKE
AUGUST 15, 2023
Vegetation Mapping
RWMWD
FIGURE X



Attachment B

Aerial Images for Kohlman Lake and Markham Pond (provided as separate files)

10/2/2016



9/30/2017



9/7/2018



8/19/2019



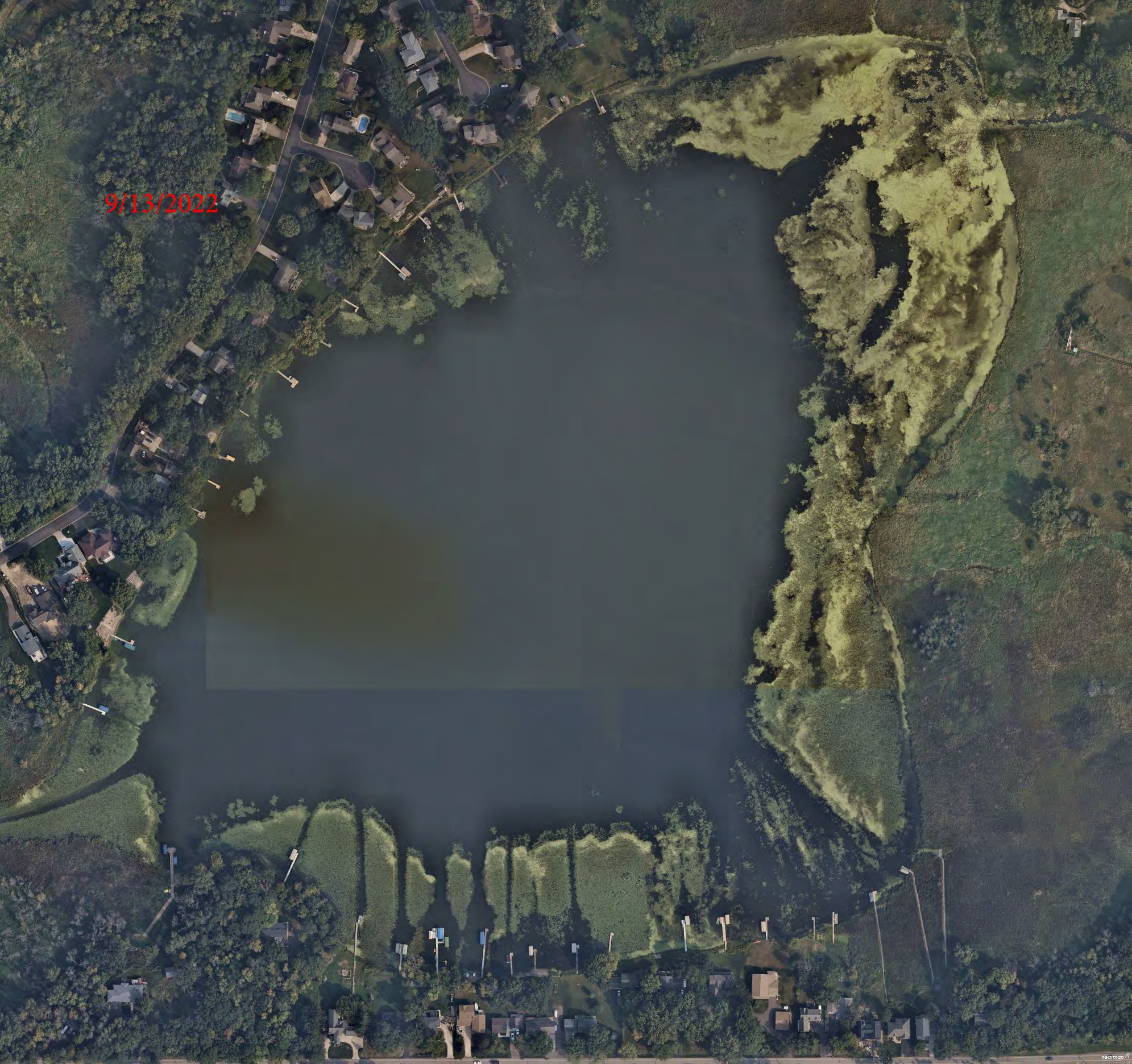
9/4/2020



9/13/2021



9/13/2022



8/23/2023



8/14/2015



10/2/2016



10/17/2017



9/7/2018



8/29/2019



9/4/2020



9/13/2021



9/13/2022



8/23/2023





Shallow Lake Aeration Effectiveness Study

Final Report of Three-Year Study

Prepared for
Ramsey Washington Metro Watershed District



February 20, 2024

Shallow Lake Aeration Effectiveness Study

February 20, 2024

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Figure 1	Map of Bennett Lake
Figure 2	Map of Gervais Mill Pond

1 Introduction

Results of a 2020 study¹ involving sediment coring and analysis of water quality data suggest that most of the shallow lakes in the Ramsey-Washington Metro Watershed District (RWMWD) have internal phosphorus (P) loading rates of approximately 1 to 2 milligrams per square meter per day. These loading rates are high enough to have an effect on lake water quality. Analysis of fluctuating dissolved oxygen concentrations and corresponding changes in total phosphorus (TP) in some of these lakes (e.g., see Beaver Lake in 2019) informed a hypothesis that aeration of shallow lakes may be capable of reducing internal P loading. For some of these shallow lakes, typical alum (active ingredient being aluminum and herein referred to as aluminum treatment) treatments may be less effective due to burial of the treatment with organic material and slow decay of organic-P, requiring multiple doses over time. In some cases, aluminum treatment would be completely ineffective. Given the potential ineffectiveness of aluminum treatments and the observation that higher dissolved oxygen may reduce internal loading, aeration is being considered as it may offer another alternative internal P loading control approach. However, many questions remain about the practical use of aeration for internal load management, particularly in shallow lakes.

Aeration is effective if it is capable of meeting the demand for oxygen in the lake bottom sediments that occurs as part of organic matter decay (this process is called sediment oxygen demand, or SOD). If aeration cannot meet the SOD, then the sediments become anaerobic and the potential for phosphorus release increases.

This study made use of ongoing carp management efforts that included the installation of aeration systems to prevent winter fish kill of panfish that feed on carp eggs. To keep ice off in a small area of the lake or pond during the winter, these forced-air² aeration systems are typically designed with aeration heads placed within 50 to 100 feet of each other in box formation. Operation of these systems was extended through the summer to support this current study and facilitate testing of shallow lake aeration for internal P load control. This study intends to answer questions regarding aerator sizing (e.g., cubic feet per minute of air per acre of lake surface area), aerator placement, potential need to augment bottom sediments with iron, and overall effectiveness.

The study sites in 2023 included Bennett Lake and Gervais Mill Pond. Monitoring was conducted in the water column (surface to bottom), pore water in lake bottom sediments, and lake bottom sediment. Water column monitoring included phosphorus species and chlorophyll-*a*. Porewater was analyzed for water quality parameters pertaining to internal loading. Lastly, the sediment was cored and analyzed for

¹ Barr Engineering, 2020. 2020 Internal Load Analysis of Shallow and Deep Lakes. Prepared for Ramsey Washington Metro Watershed District.

² Forced air aeration systems use atmospheric air, compressors, and bubblers. See https://en.wikipedia.org/wiki/Water_aeration#Coarse_bubble_aeration

phosphorus fractions, density, percent water, reducible-extractable iron, and sodium hydroxide extractable aluminum.

For Bennett Lake and Gervais Mill Pond, 2023 was the second year of monitoring. The Bennett Lake aeration system was placed online starting on July 20, 2022, therefore samples prior to this date are baseline, pre-aeration. The Gervais Mill Pond aeration system was installed just after the 2022 monitoring season. Therefore, the 2022 data are baseline pre-aeration measurements for Gervais Mill Pond, while 2023 data were collected with the aeration system operational.

The purpose of this report is to provide an assessment of the potential benefits of aeration. Shallow lake forced air aeration can be judged as successful if it is capable of:

- (1) improving dissolved oxygen throughout the water column of the aerated water body,
- (2) reducing phosphorus in sediment porewater,
- (3) measurably reducing phosphorus and chlorophyll *a* in surface waters of the target water body.

2 Study Methods and Study Sites

2.1 Study Sites

The 2023 study sites included Bennett Lake and Gervais Mill Pond. The sites were also monitored in 2022.

2.1.1 Bennett Lake

Bennett Lake is the first of a chain of lakes that eventually outflows to Grass Lake. Bennett Lake is a shallow lake that was listed as impaired for excess nutrients in 2006. Monitoring in 2022 was conducted partly to capture the baseline pre-aeration condition of the lake. On July 20, 2022, the aeration system for Bennett Lake went online. The aeration system consists of 4 aerator heads and 2, $\frac{3}{4}$ -hp compressors. The aeration system for Bennett Lake is located on the northern side of the eastern bay.

Sampling data prior to July 20, 2022 can be used as a baseline for Bennett Lake with no effect of aeration while data collected after July 20, 2022 can be considered affected by aeration.

2.1.2 Gervais Mill Pond

Gervais Mill Pond is composed of two small ponds built in 1994 that receive inflow from Gervais Creek and outflows to Gervais Lake. Similar to Bennett Lake, Gervais Mill Pond was first monitoring in 2022 as part of the shallow lake aeration study. After the monitoring season for 2022 was complete, an aeration system was installed and operational by October 8, 2022. The aeration system for Gervais Mill Pond was installed in the north bay and has 8 aerator heads and 2 $\frac{3}{4}$ -hp compressors. Due to timing of aeration system installation, all of the 2022 data are baseline without the effect of aeration, while the 2023 data show the effect of aeration.

2.2 Monitoring Methods

Monitoring was conducted in three media: (1) the lake or pond water column, (2) the sediment porewater, and (3) the sediment solids. The water column monitoring data will provide an assessment of the overall effectiveness of aeration. The sediment porewater was measured to directly measure changes in the concentration of phosphorus and iron in the porewater which should be a function of internal P release from sediment (e.g., higher concentrations equate to higher internal P loading). The concentration of phosphorus on sediment solids provides an indication of internal P loading potential. Attached to this report are Figures 1-2 which provide maps of the two lakes and identifies sampling locations for this study. Below describes the sampling and monitoring that occurred for both lakes.

- From May to September, monthly mid-depth monitoring in at least a half dozen locations per lake. Monitoring at these locations was conducted for dissolved oxygen and temperature.
- Monthly (May to September) pore water sampling in 2 locations per lake. Analyzed for phosphorus and iron.
- From May to September, monthly water quality grab samples in 2 locations per lake. Analyzed for phosphorus, nitrogen, and chlorophyll-*a*.

-
- Continuous dissolved oxygen and temperature probe placed mid-depth in 2 locations per lake.
 - Sediment core collection and analysis for sediment parameters such as water content, organic content, and phosphorus fractionation.

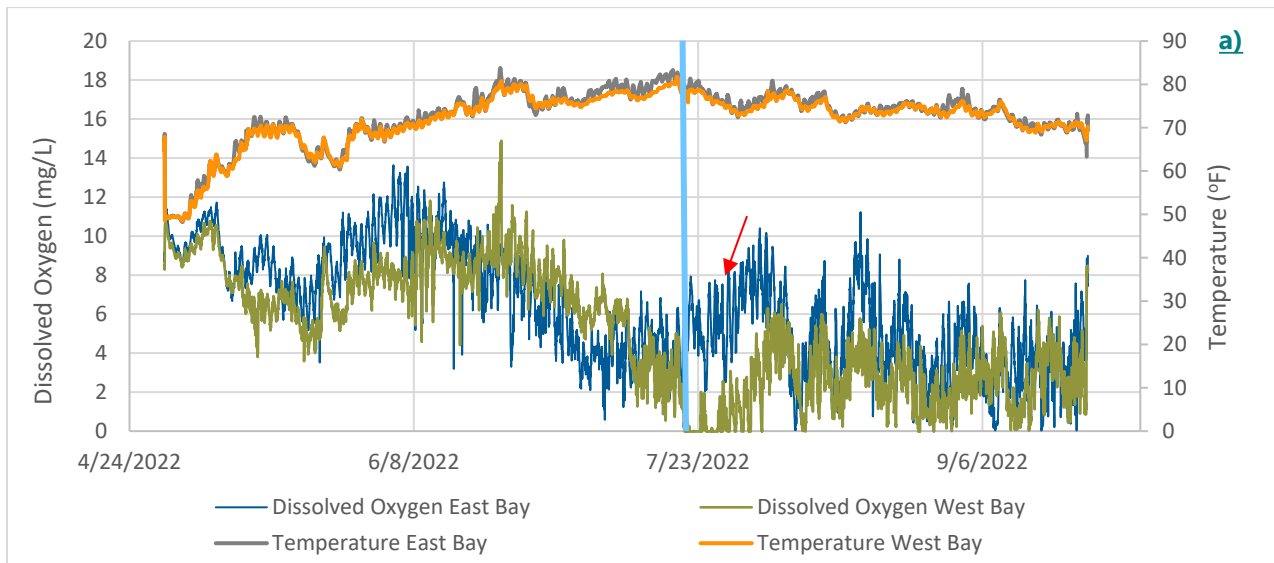
3 Monitoring Results

3.1 Dissolved Oxygen

As part of this study dissolved oxygen probes with data logging capabilities were installed to record dissolved oxygen throughout the monitoring season in both shallow lakes. Bennett Lake had a dissolved oxygen and temperature probe installed in both the east and west bay. Similarly, Gervais Mill Pond had dissolved oxygen probes installed in the northern and southern bay. All of the probes were installed approximately mid-depth. In addition to the dissolved oxygen probes, dissolved oxygen profiles were measured monthly in multiple locations and depths across the shallow lakes.

3.1.1 Bennett Lake

The aerator was put online in the east bay on July 20, 2022. It can be seen in Figure 1a (see red arrow) that dissolved oxygen increased immediately in the east bay after July 20 while it continued to decline in the west bay (no aeration). However, it appears that dissolved oxygen then increased in the west bay (no aeration), mimicking the increase in the east bay. It appears likely that mixing between the bays had the effect of increasing dissolved oxygen in the west bay while suppressing oxygen in the east bay. In 2023, the aerator in Bennett Lake was online the entire summer and dissolved oxygen concentrations and temperature monitored continuously in the east and west bay of Bennett Lake (Figure 1b).



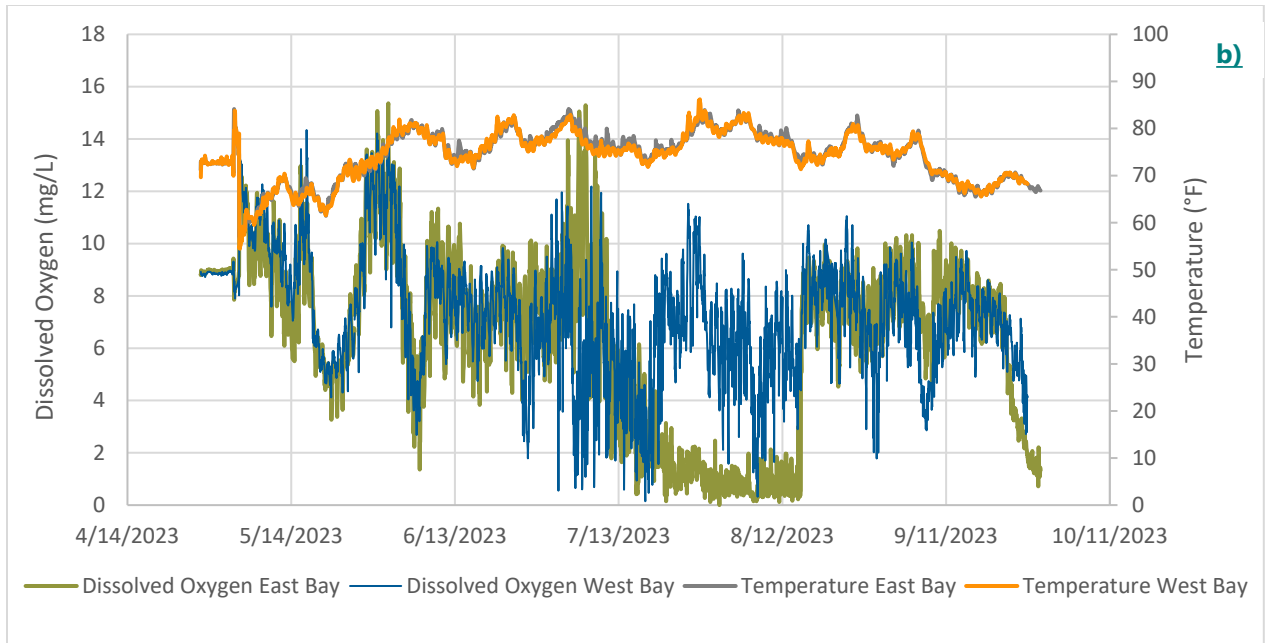


Figure 1 Dissolved Oxygen and Temperature Measurements in Bennett Lake in 2022 (a) and 2023 (b)

From mid-July to mid-August, it appears that the dissolved oxygen concentration drastically decreased in the east bay of Bennett Lake, where the aerator is located. Review of field data indicates the east bay probe was initially installed roughly in the bottom half to bottom two-thirds of the water column at the beginning of the season. Meanwhile, the west probe was installed in the top third to top half of the water column early in the season. Towards the beginning of July, the lake level began to drop due to drought conditions and the east bay probe was at the bottom of the water column. After mid-August there was more consistent rainfall and lake levels increased, moving the east probe further away from the bottom of the lake. Therefore, the low dissolved oxygen concentrations in the east bay may not be accurate due to the depth of the probe.

In general, there does not appear to be a significant difference between dissolved oxygen concentration in the east bay compared to the west bay (Figure 1b), suggesting that the bays could be mixing or

perhaps the operation of a fountain in the west bay limited the useability of the west bay as a “control” for this experimental study in 2023.

Surface to bottom dissolved oxygen measurements (profiles) were also taken on a monthly basis in 2023 (Figure 2) and on July 21 in 2022 just one day after the aerator was put online (Figure 3).

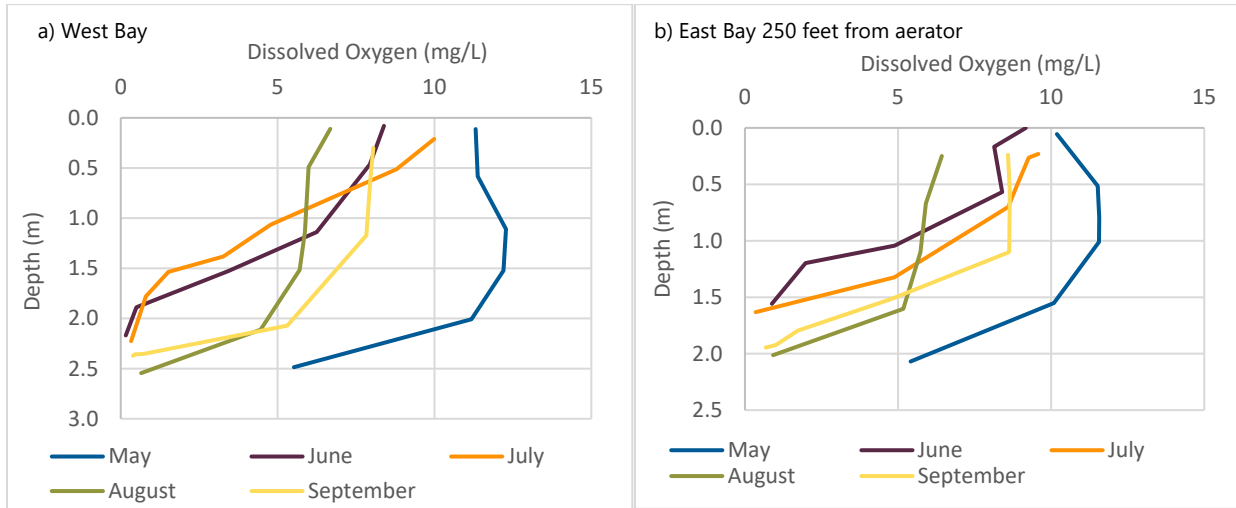


Figure 2 Dissolved Oxygen Profiles for West Bay (a) and East Bay (b) of Bennett Lake in 2023

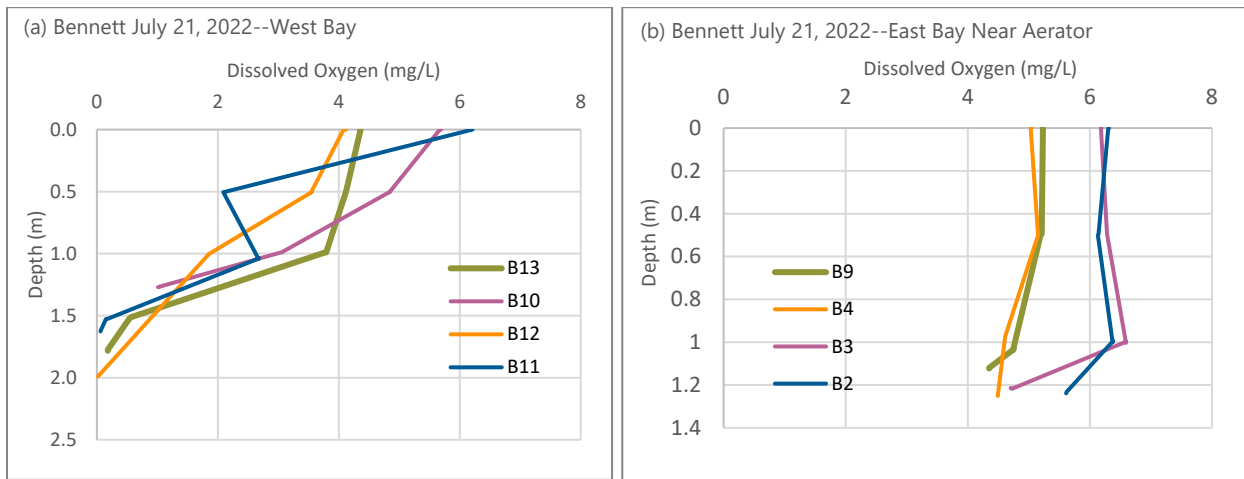


Figure 3 Dissolved Oxygen Profiles for West Bay (a) and East Bay (b) of Bennett Lake on July 21, 2022, one day after the aerator was put online.

It can be seen that for 2022, just after the aerator was activated, there was a dramatic difference between dissolved oxygen in the west bay and the east bay for sites near the aerator. However, in 2023 the dissolved oxygen profile by month for the east and west bay of Bennett Lake were similar. Therefore, this supports the theory that the two bays in Bennett are most likely mixing and the dissolved oxygen from the aerator in the east bay is affecting concentrations in the west bay.

Comparison of dissolved oxygen probe measurements recorded in 2022 and 2023 provides some additional evidence regarding the effect of aeration on dissolved oxygen concentration (Figure 4).

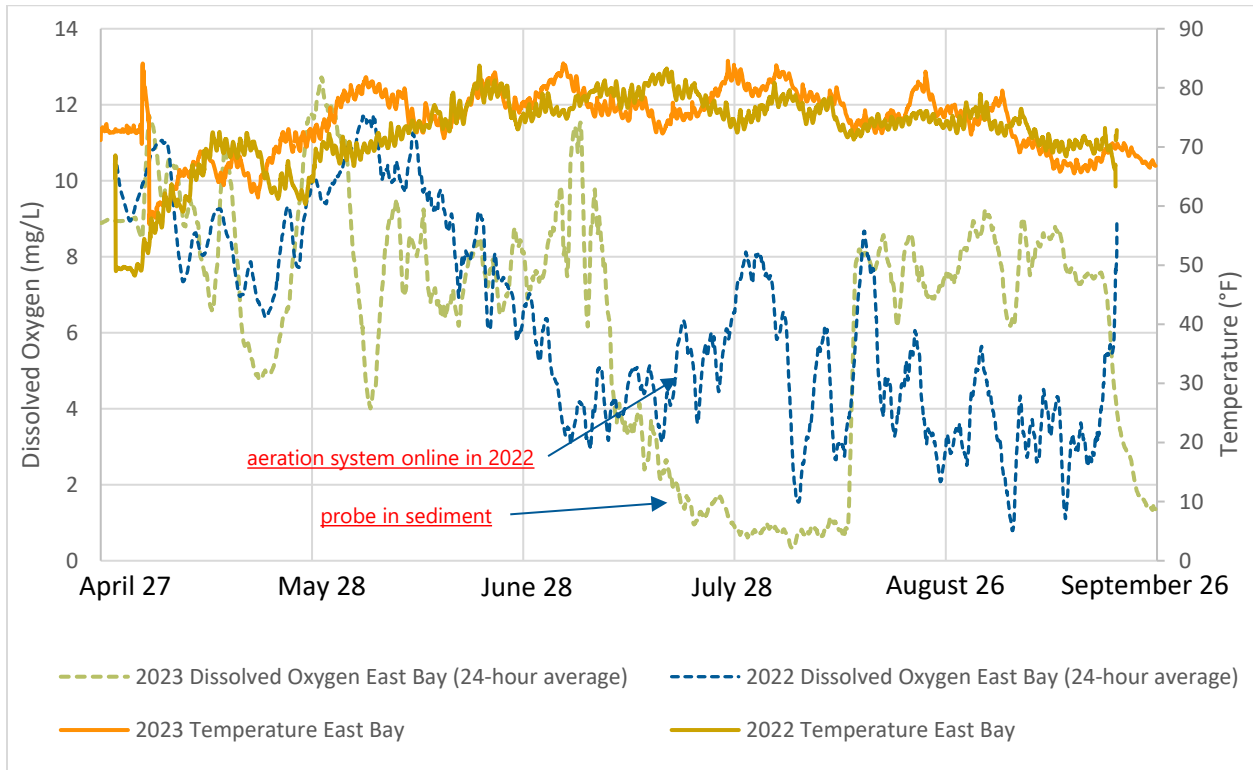


Figure 4 Comparison of Dissolved Oxygen and Temperature in the East Bay of Bennett Lake in 2022 and 2023

As mentioned before, the aerator went online July 20, 2022. Comparison of the April to July 20 data in 2022 (no aeration) to the April to July 20 data in 2023 (aeration) suggests that aeration increased dissolved oxygen in late June to mid-July. However, dissolved oxygen was also high in mid-August and September 2023 compared to the same period in 2022 (the aerator water operating during both periods).

3.1.2 Gervais Mill Pond

The aeration system in the north bay of Gervais Mill Pond clearly improved dissolved oxygen (Figure 5). Dissolved oxygen in the south bay was near zero for much of the summer. Note that the mid to late August 2023 drop in oxygen is likely a result of rainfall and stormwater inflows with oxygen-demanding constituents.

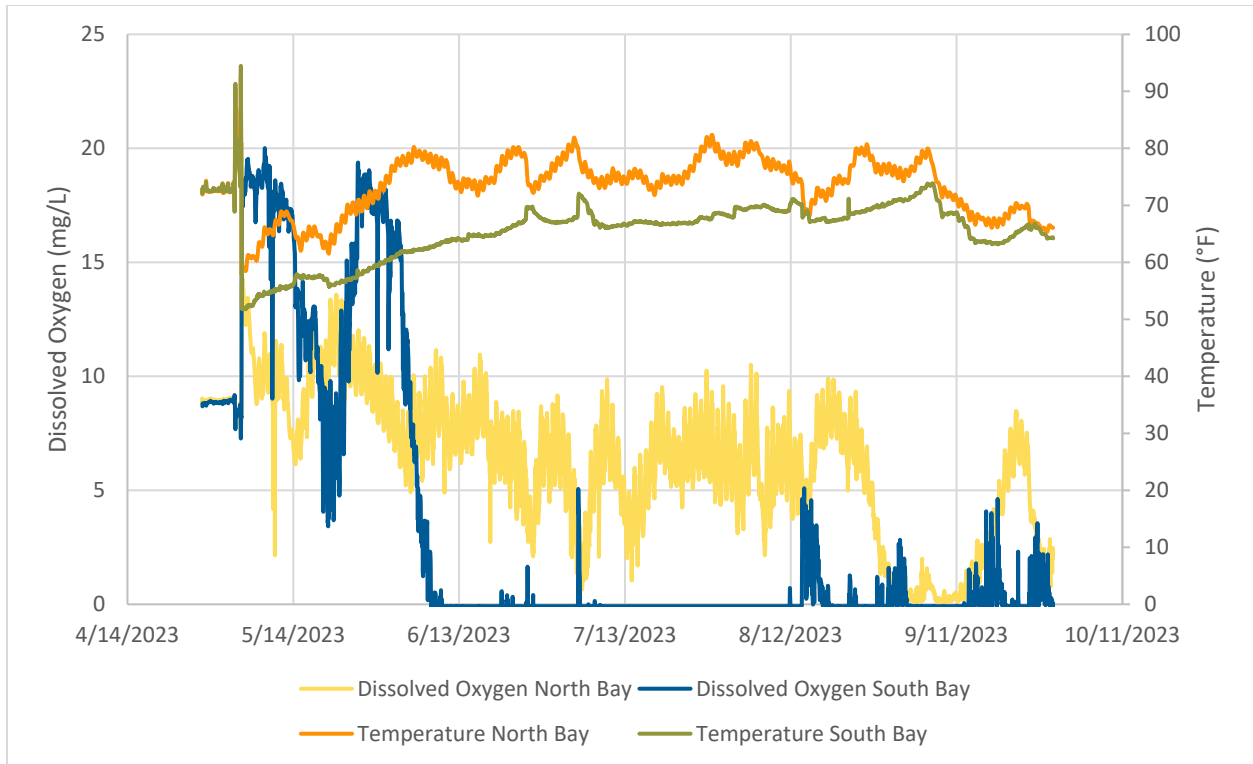


Figure 5 Continuous Dissolved Oxygen and Temperature for Gervais Mill Pond in 2023

Comparison of dissolved oxygen for the aerated north bay (Figure 6a) and unaerated south bay (Figure 6b) clearly shows the effect of the aeration system.

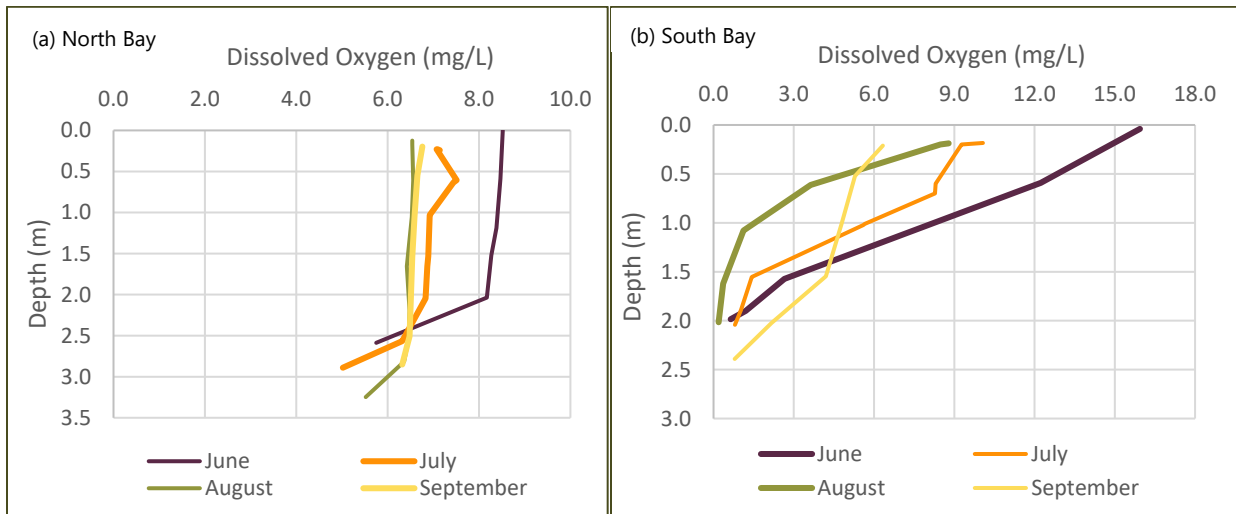


Figure 6 Dissolved Oxygen Profiles for (a) North Bay (with aeration) and (b) South Bay of Gervais Mill Pond in 2023

The north bay had nearly uniform dissolved oxygen concentrations throughout the entire water column (Figure 6a) with only a small decrease at the bottom. For most systems, internal loading should be reduced notably given oxygen concentrations maintained in the water column of the north bay with

aeration. In contrast, the south bay (no aeration) dissolved oxygen decreased in the water column with depth with anoxic conditions towards the bottom of the water column. In 2022, dissolved oxygen was much lower throughout the south bay water column compared to 2023 (compare Figure 6b and Figure 7b). This suggests that the aerator in the north bay increased dissolved oxygen concentrations in the south bay as well.

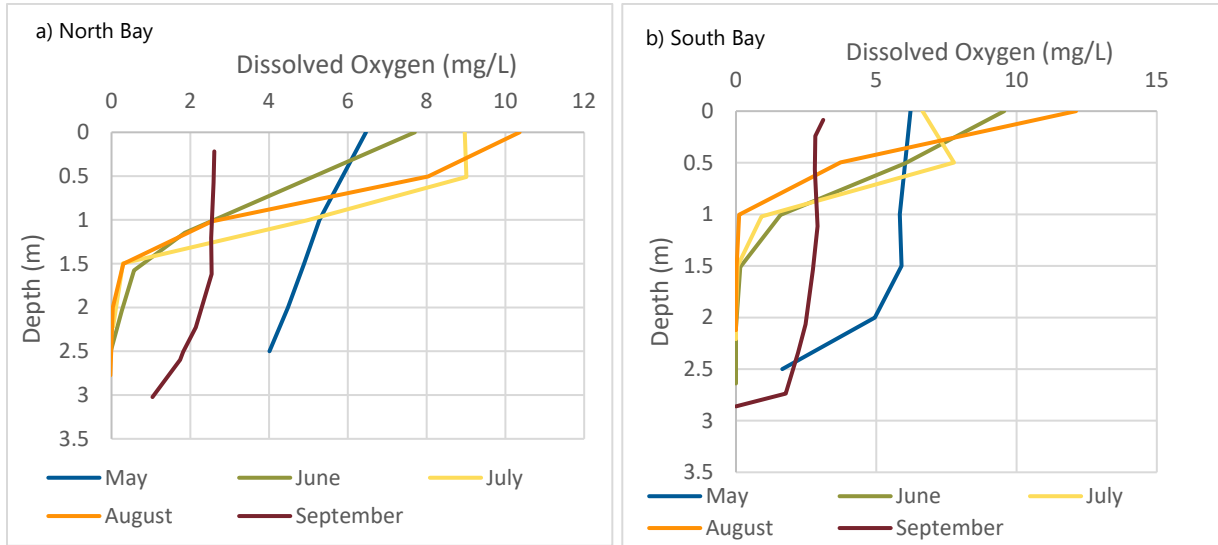


Figure 7 Dissolved Oxygen Profiles for the North Bay (a) and South Bay (b) of Gervais Mill Pond in 2022 Prior to Aerator Installation

Comparison of 2022 and 2023 dissolved oxygen data as monthly averages (Figure 8) reinforces the conclusion that dissolved oxygen in the north bay was significantly increased with aeration.

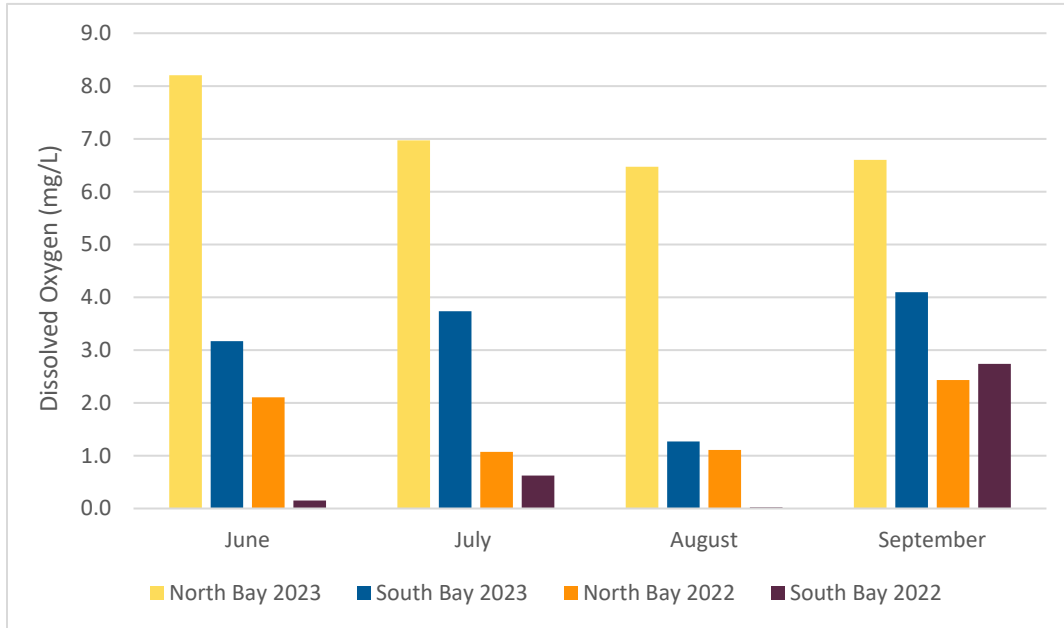


Figure 8 Average Monthly Dissolved Oxygen in Water Column By Year and Bay in Gervais Mill Pond

3.2 Eutrophication Parameters

For this application, reducing TP and phytoplankton growth (measured as chlorophyll *a*) is the primary objective of aeration. Water sample collection was conducted at multiple depths to detect changes in internal loading. Bennett Lake was sampled as a composite and a discrete sample at the bottom while Gervais Mill Pond was sampled as a composite and had discrete samples at the middle and bottom of the water column. Collected samples were analyzed for the TP, total dissolved phosphorus (TDP, orthophosphate (OP), and chlorophyll-*a* (chl *a*).

3.2.1 Bennett Lake

Internal-P loading is clearly responsible for the high P in Bennett Lake. This is supported by the observation that: (1) total phosphorus concentrations were marginally higher in the bottom of the east and west bay compared the surface (Figure 9), (2) phosphorus increased from May to mid-July as is typically of internal P loading-dominated lakes, and (3) there was very little runoff and hence minimal external loading in 2023 with the extreme drought conditions and the only remaining potential P loading source is the lake bottom sediments.

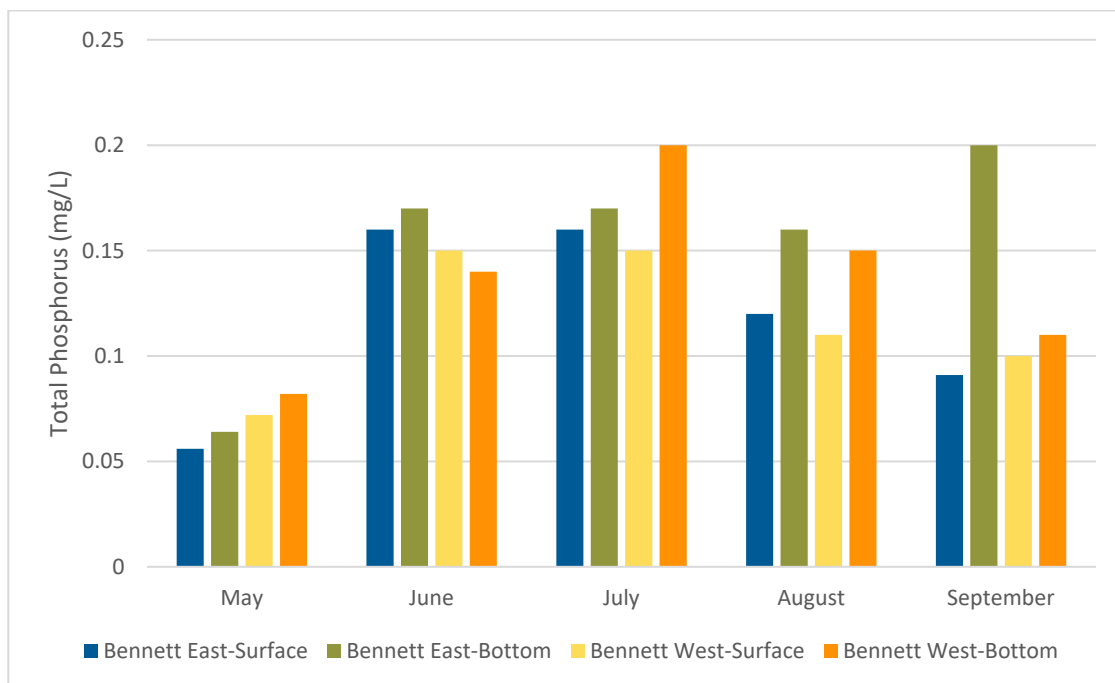


Figure 9 Total Phosphorus in Bennett Lake in 2023

The primary goal of aeration was to reduce internal P loading. Elevated P at the lake bottom is often used as an indication of internal P loading. Figure 9 shows a comparison of total phosphorus at the bottom of Bennett Lake measured during the shallow lake aeration study compared to the 10-year average (prior to the start of the study). Results in Figure 10 indicate that phosphorus at the bottom of Bennett Lake was higher during the shallow lake aeration study for both the west (no aeration) and east (aeration) bays. It is important to note that the 10-year average monitoring location is close to the west bay monitoring point. However, the samples were taken from 1.5 to 2.1 meters depth, while the samples collected as part of the

study were 2 meters or deeper. Therefore, the 10-year average may have lower phosphorus but sampling may have been conducted at shallower depth. Regardless, it can be concluded that aeration did not lead to a measurable reduction in internal P loading.

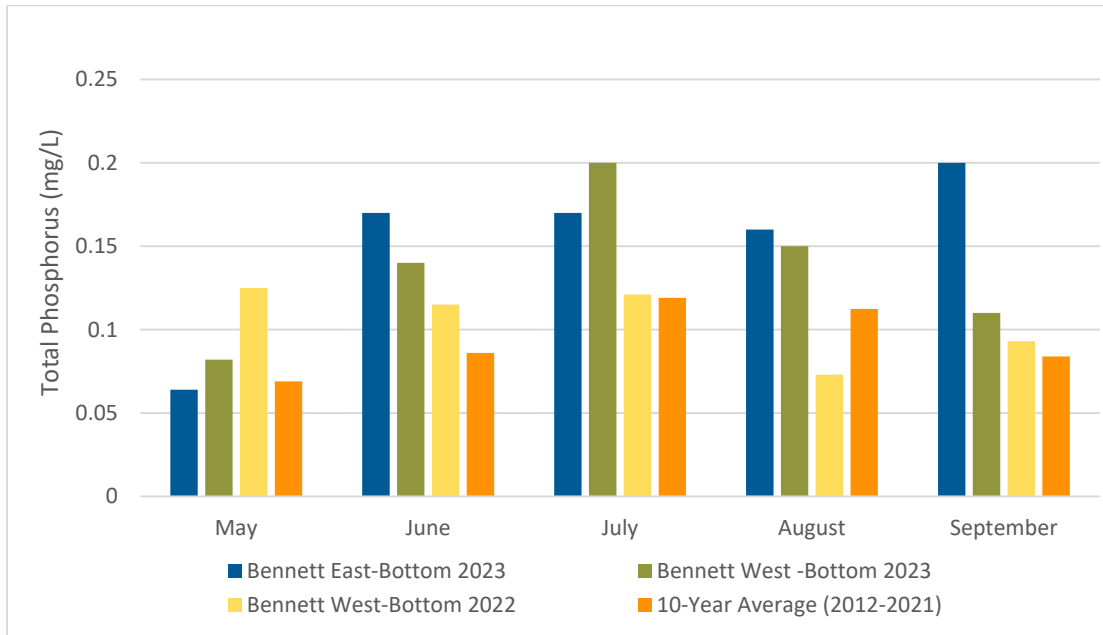


Figure 10 Total Phosphorus in Bennett Lake in 2022 and 2023 Study Compared to 10-Year Average for the Bottom of Bennett Lake

May through September 2023 changes in total dissolved phosphorus were similar to the changes observed for total phosphorus (Figure 11). It is reasonable to expect that if the aeration system in the east bay was significantly reducing internal P loading then dissolved phosphorus should be low (e.g., similar to the observed concentrations in May) in the east bay throughout the summer.

Although TP concentrations were similar for the west bay (no aeration) the east bay (aeration), it appears that chl *a* was consistently lower in the east bay (Figure 12). The difference was particularly notable in July. An improvement in chl *a* without a corresponding decline in TP was not expected, however, the same effect was observed for Gervais Mill Pond (see Section 3.2.2).

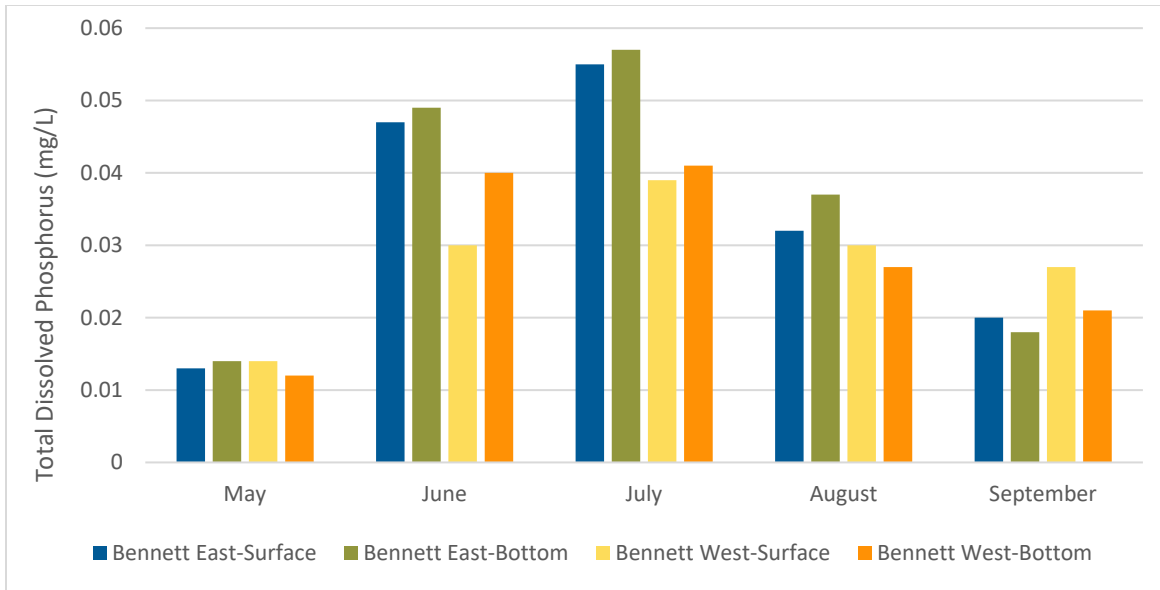


Figure 11 Concentrations of Total Dissolved Phosphorus in Bennett Lake in 2023

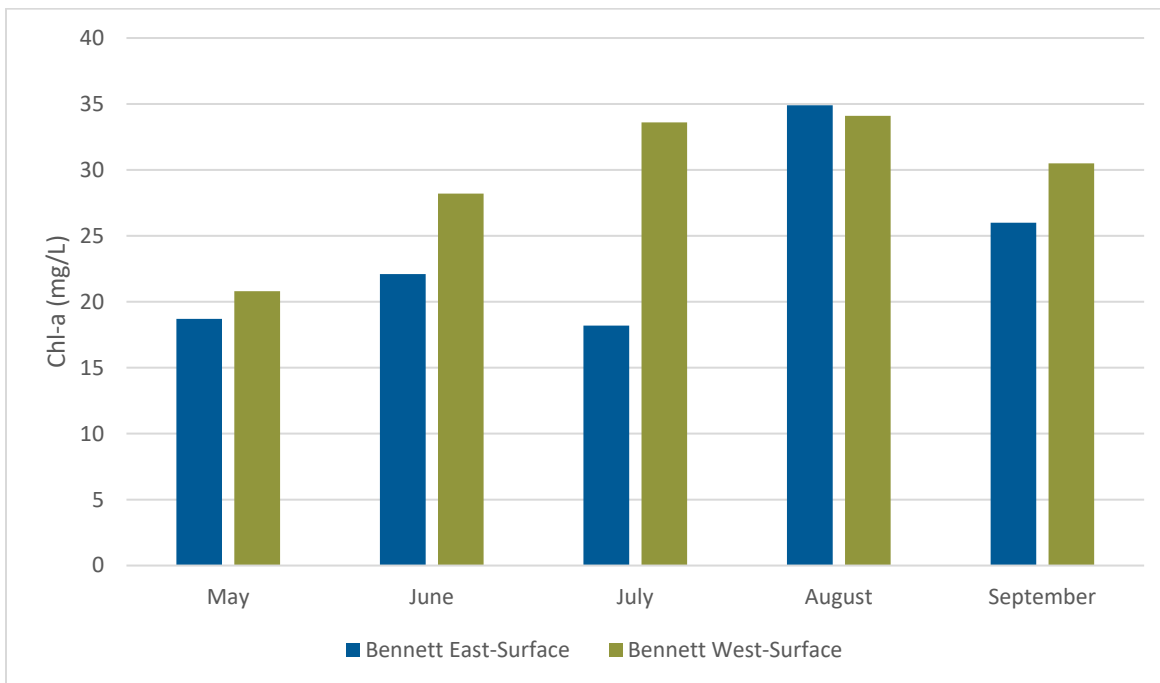


Figure 12 Concentrations of Chlorophyll-a in Bennett Lake in 2023

3.2.2 Gervais Mill Pond

Although total phosphorus concentrations did not increase during the summer period (a typical indication of internal P loading) in the bottom waters of the north bay (Figure 13), concentrations were still high (0.13 to 0.14 mg/L) and indicative of a system with significant internal loading. The entire water column of the north bay was clearly mixed (Figure 14) as surface to bottom TP concentrations were uniform.

TP concentrations were very similar for the north and south bay of Gervais Mill Pond (Figure 15). However, calculation of the average total water column concentration of TP in the north and south bays of Gervais Mill Pond in 2022 and 2023 reveals some valuable findings:

1. *North Bay Gervais Mill Pond*: 27% reduction in TP with aeration (2023) compared to no aeration (2022). Average TP in 2022 was 0.168 mg/L and in 2023 it was 0.130 mg/L.
2. *South Bay Gervais Mill Pond*: 37% reduction in TP with aeration (2023) compared to no aeration (2022). Average TP in 2022 was 0.667 mg/L and in 2023 it was 0.411 mg/L.

Although the south bay did not have an aerator, clearly the aerator in the north bay increased dissolved oxygen in the south bay as well (see Figure 8).

Similar to Bennett Lake, aeration appears to reduce phytoplankton growth measured as chl *a* (Figure 16). Although in 2022 the south bay had occasionally slightly higher chl *a* when compared to the north bay, there was a much more pronounced differential between the north and south bay after the operation of the aerator.

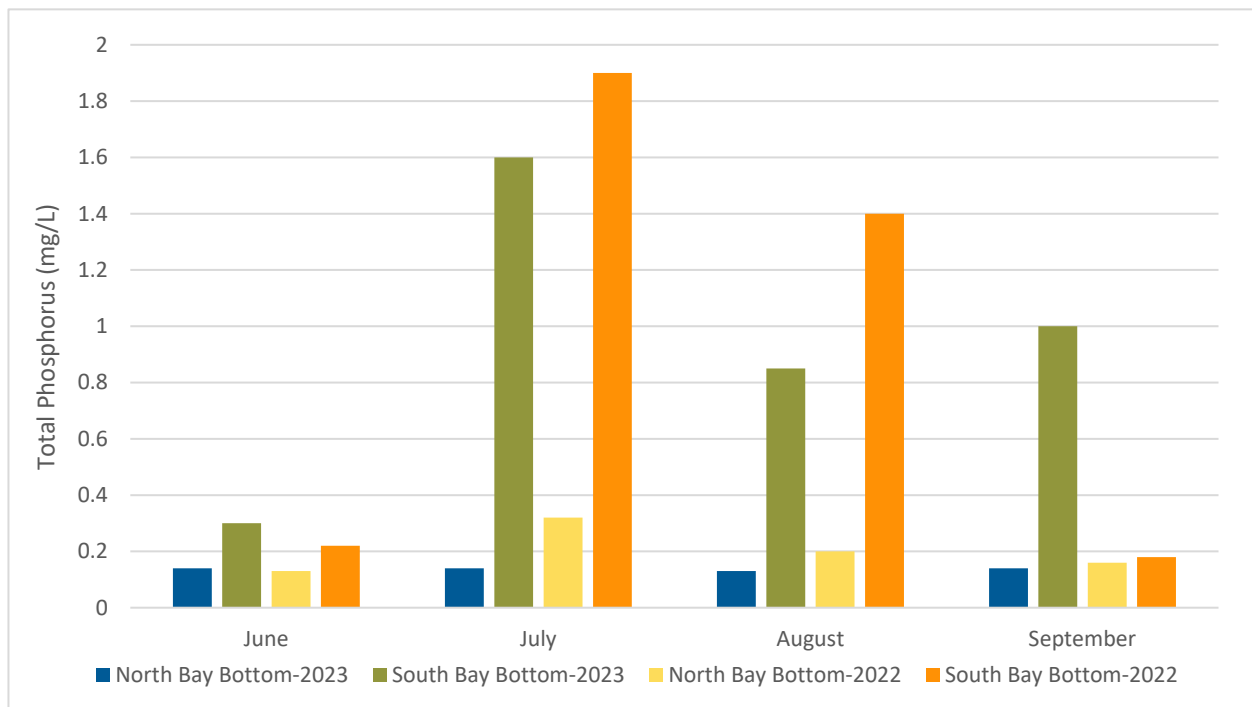


Figure 13 Total Phosphorus Concentration at Bottom of Gervais Mill Pond for 2022 and 2023

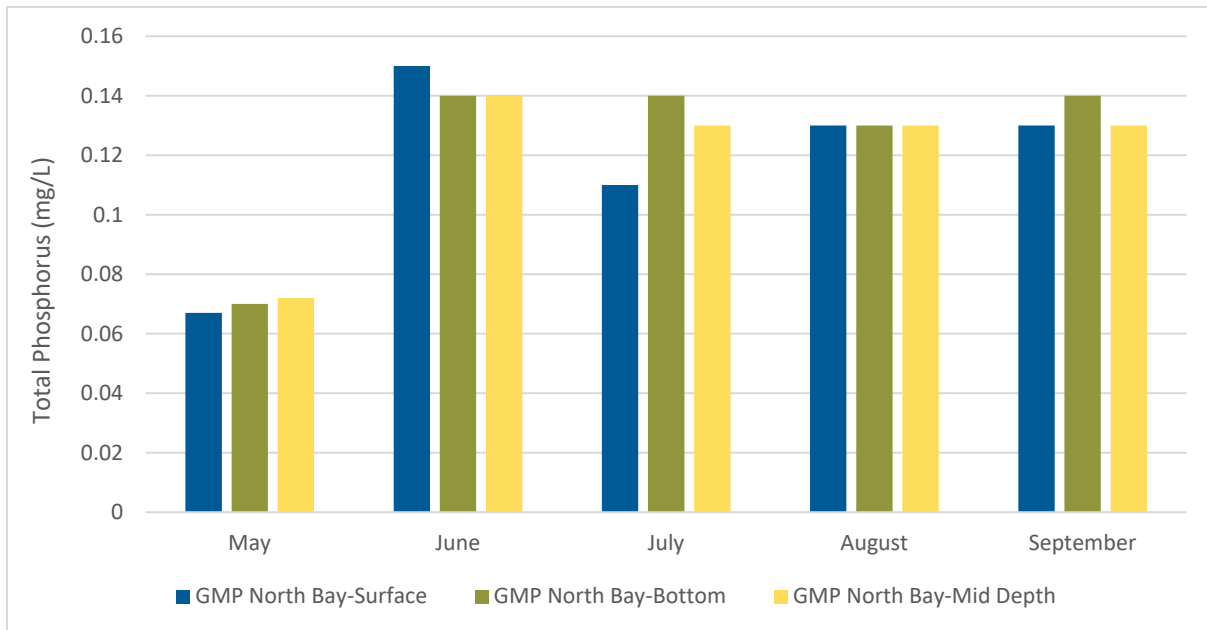


Figure 14 Surface, Mid Depth, and Bottom Total Phosphorus Concentrations in North Bay of Gervais Mill Pond in 2023

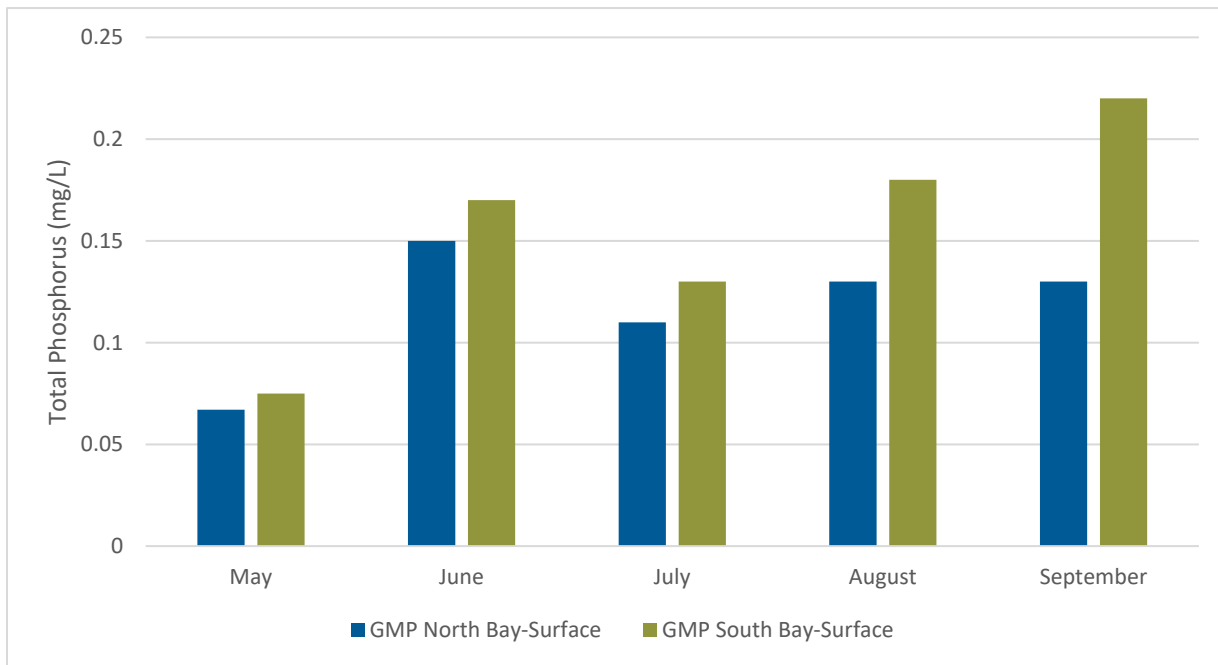


Figure 15 Total Phosphorus Concentration in the Surface of the North and South Bays of Gervais Mill Pond in 2023

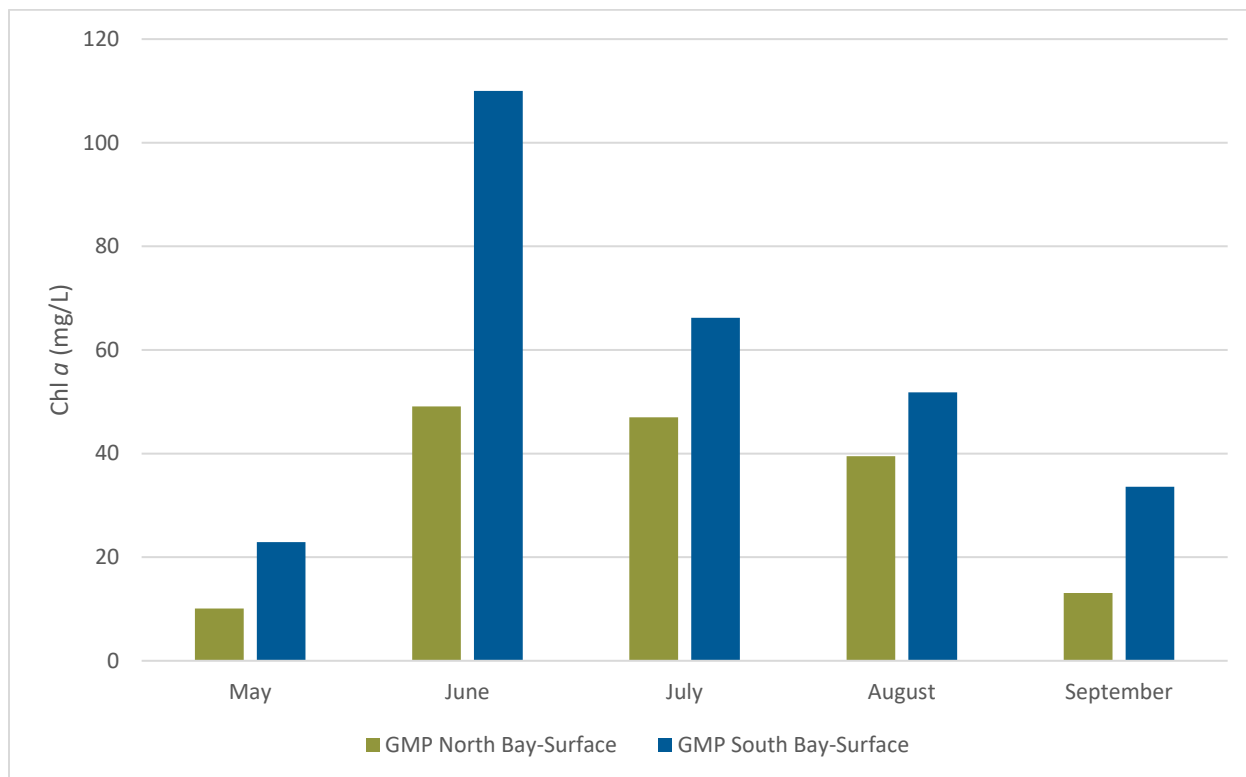


Figure 16 Chlorophyll-a Concentration at the Surface of Gervais Mill Pond in 2023

3.3 Sediment and Porewater Data

3.3.1 Phosphorus Composition in Lake Bottom Sediments

P in sediment is bound as a solid with metals (calcium, iron, and aluminum) or it is incorporated within organic compounds (e.g., DNA). Calcium-bound P (Ca-P) and aluminum-bound P (Al-P) can be considered largely inert or inactive with respect of internal P loading. Iron-bound P (Fe-P) becomes soluble under low oxygen conditions and Fe-P is typically the source of internal P loading. Organically bound P (Org-P) decomposes³ and releases from sediment more rapidly as part of a process called fermentation which occurs under anaerobic conditions. The availability of iron under oxygenated conditions is very important for phosphorus binding. If there is a deficit of iron relative to phosphorus, then it is more likely that internal loading will occur. Hence, in this study the amount of available iron has been analyzed in the sediment and is considered as part of this analysis.

3.3.1.1 Bennett Lake

Both sediment cores in Bennett Lake have significantly more Org-P than Fe-P (Figure 17, Table 1). Based upon the concentration of Fe-P in Bennett Lake sediments, the maximum potential internal load rate

³ Reitzel, Kasper & Ahlgren, Joakim & DeBrabandere, Heidi & Waldebäck, Monica & Gogoll, Adolf & Tranvik, Lars & Rydin, Emil. (2006). Degradation Rates of Organic Phosphorus in Lake Sediment. *Biogeochemistry*. 82. 15-28. 10.1007/s10533-006-9049-z.

(under anoxic conditions) for Fe-P compounds ranges from 0.40 to 1.05 milligrams per meter squared per day. However, it appears that internal loading is much greater than expected with Fe-P alone suggesting that Org-P release from sediment is contributing significantly to internal loading. When Org-P does decay, there may not be enough iron available to bind released phosphate. On a mass basis, the ratio of iron to Org P was 7.2 for the east bay and 8.2 for the west bay. This lack of iron hinders the potential effectiveness of aeration which requires phosphate to be bound to iron as Fe-P.

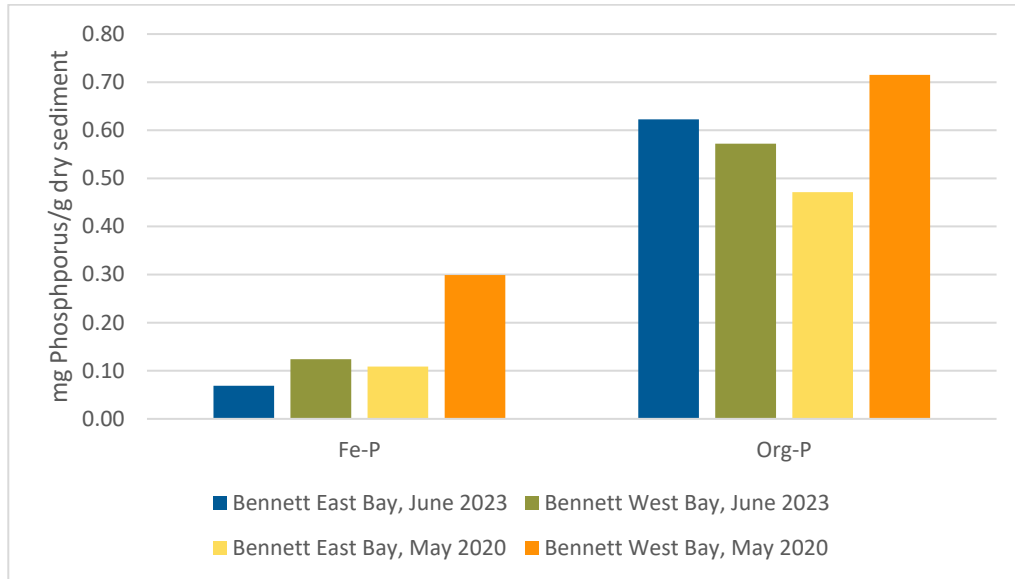


Figure 17 Bennett Lake Sediment Phosphorus Speciation for Average Top Six cm

Table 1 Bennett Lake Phosphorus Sediment Speciation, Average of 2020 and 2023 Sample

Sediment Core	Composition: Average of Top 6 Centimeters (mg g ⁻¹ dry sediment)					Fe/Org-P Ratio	Maximum Potential Internal Phosphorus Release Rate (mg m ⁻² d ⁻¹) From Fe-P
	Fe-P	Org-P	Ca-P	Al-P	Fe		
	Iron and Loosely Sorbed Phosphorus	Organically Bound Phosphorus	Calcium Bound Phosphorus	Aluminum Bound Phosphorus	Reducible Extractable Iron		
East, BS1	0.09	0.55	0.18	0.04	3.40	5.6	0.40
West, BS2	0.21	0.64	0.18	0.07	5.97	6.8	1.05

3.3.1.2 Gervais Mill Pond

Unlike Bennett Lake, Gervais Mill Pond sediment is much higher in Fe-P (Figure 18). Concentrations of Fe-P in the south bay (no aeration) sediment were significantly higher than the north bay (Table 2). Org-P was similar for both bays. There is also a very high maximum potential release rate of phosphorus from GMP of 34.6 mg m⁻² d⁻¹ for the south bay (core GMP 1) and 7.5 mg m⁻² d⁻¹ for the north bay (core GMP 2). The reducible extractable iron in the lake sediments as a ratio to Fe-P (Fe/Fe-P) ranged from 9.3 for the

south bay to 12.5 for the north bay. Using a ratio of 10 (Fe/Fe-P) to delineate iron abundance (>10) and iron deficiency (<10), it appears the north bay has adequate iron. Although the sediment chemistry is amenable to aeration, the very high oxygen demand of the Gervais Mill Pond sediments can be expected to limit the degree of internal P reduction.

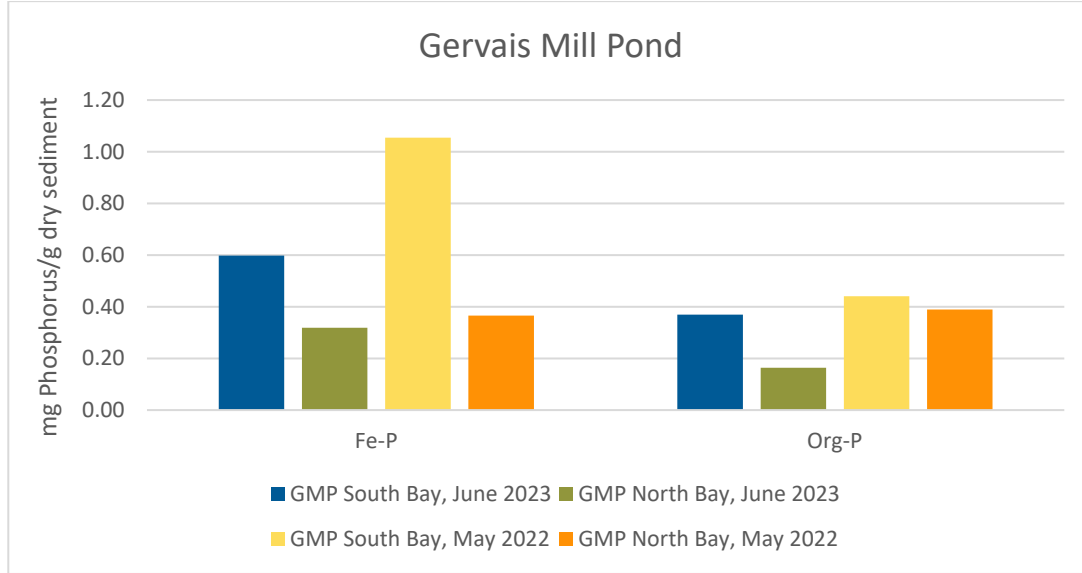


Figure 18 Gervais Mill Lake Sediment Phosphorus Speciation for Average Top Six cm

Table 2 Gervais Mill Pond Sediment Phosphorus Speciation, Average of 2022 and 2023 Sample

Sediment Core	Composition: Average of Top 6 Centimeters (mg g ⁻¹ dry sediment)					Fe/Org-P Ratio	Maximum Potential Internal Phosphorus Release Rate (mg m ⁻² d ⁻¹) From Fe-P
	Fe-P	Org-P	Ca-P	Al-P	Fe		
	Iron and Loosely Sorbed Phosphorus	Organically Bound Phosphorus	Calcium Bound Phosphorus	Aluminum Bound Phosphorus	Reducible Extractable Iron		
South, GMP 1	0.83	0.40	0.31	0.47	7.70	20.6	34.64
North, GMP 2	0.34	0.28	0.41	0.24	4.26	14.4	7.54

3.3.2 Sediment Properties

As part of the sediment core analysis, each core was analyzed for percent water, percent organic solids, percent inorganic solids, and sediment density (Table 3). The Bennet Lake samples have a higher water content and percent organic solids than the Gervais Mill Pond samples. However, the Gervais Mill Pond samples have higher percent inorganics solids and are a slightly denser sediment.

Table 3 Sediment Properties for Tested Lakes, Average of 2020 and 2023 Samples for Bennett and 2022 and 2023 Samples for Gervais Mill Pond

Sediment Core	Composition: Average of Top 6 Centimeters			
	Percent Water	Percent Organic Solids	Percent Inorganic Solids	Sediment Density (g/cm ³)
Bennett East, BS1	92%	39%	61%	1.03
Bennett West, BS2	93%	40%	60%	1.03
South, GMP 1	82%	20%	80%	1.10
North, GMP 2	85%	21%	79%	1.08

3.3.3 Porewater

In addition to sediment cores and water column data, sediment pore water samples were collected monthly throughout the summer as a direct measurement internal P loading potential in the study lake and pond. As part of the internal P loading process, phosphorus first releases from sediment solids and enters the water located between the sediment particles (the porewater). Water from the porewater then exchanges with the water column and this is internal P loading. Porewater samples were collected in each bay of the two shallow lakes. All collected samples were analyzed for phosphorus and iron.

3.3.3.1 Bennett Lake Porewater

Operation of the aerator after July 20, 2022 reduced phosphorus in porewater (Figure 19) in the east bay of Bennett Lake, and although it appears that the aerator is reducing in P loading, dissolved and total phosphorus concentrations in the water column were predominantly higher in the east bay from June through September (see Figure 9 and Figure 10). It is possible that the small size of the aerator system has a small area of influence and internal P loading in sediment distal to the aerator remained high.

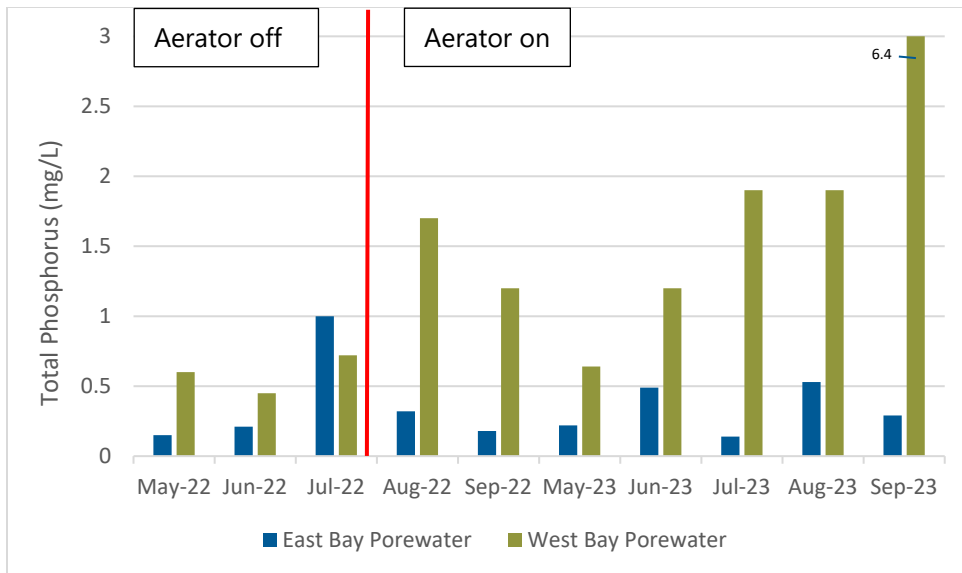


Figure 19 Total Phosphorus Concentration in Porewater in Bennett Lake Bottom Sediment

Since iron is insoluble in the presence of oxygen, iron concentrations in the porewater provide a good indication of whether oxygen in the water column is penetrating the sediments (Figure 20). It can be seen that for the west bay in 2022 and 2023 in particular, iron was low in the spring and then increased during the summer months. When the aerator was on in the east bay, iron did not increase in the summer, suggesting that the aerator may have either aerated the sediments enough to make iron insoluble or water movement created by the aerator caused flushing of water in and out of the porewater, thereby diluting the porewater concentrations.

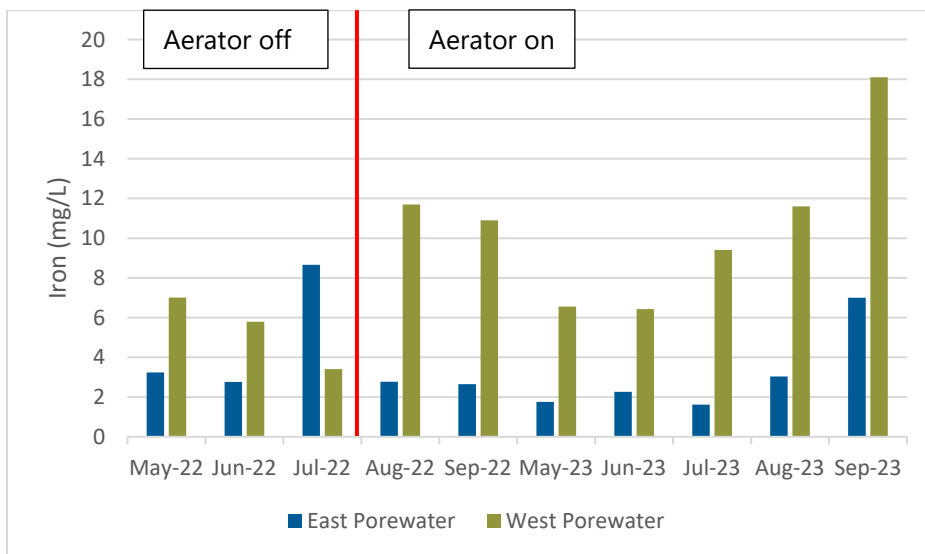


Figure 20 Iron Concentration in Porewater in Bennett Lake

The west bay sediments had higher iron and this may also partly explain the observed difference in porewater iron between the east and west bay of Bennett Lake.

An additional way to view the phosphorus and iron concentration data is viewing the ratio as in Figure 21. The east bay most commonly has a higher iron to phosphorus ratio. It is interesting note to the ratio in both bays fluctuates with time, regardless of aeration.

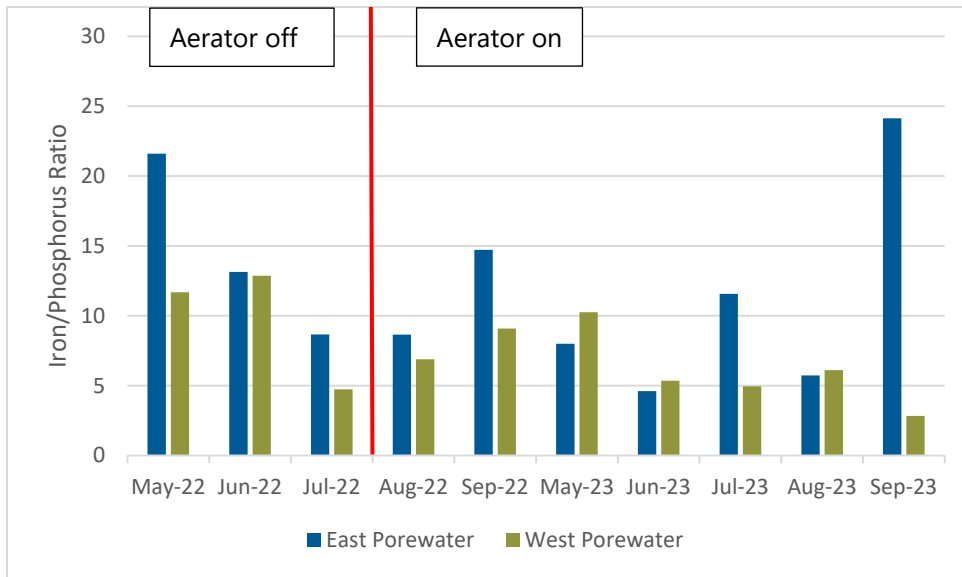


Figure 21 Iron to Phosphorus Ratio in Porewater in Bennett Lake

3.3.3.2 Gervais Mill Pond Porewater

In 2023 the north bay (aeration) of Gervais Mill Pond was consistently oxic while the south bay remained anoxic (no aeration), and the effect of the differing oxic conditions should manifest in the sediment porewater. Figure 22 shows phosphorus in the north bay (aeration) was lower in 2023 when the aerator was operating compared to 2022 when the aerator was not operating. Also, porewater concentrations in 2023 were closer between the two bays.

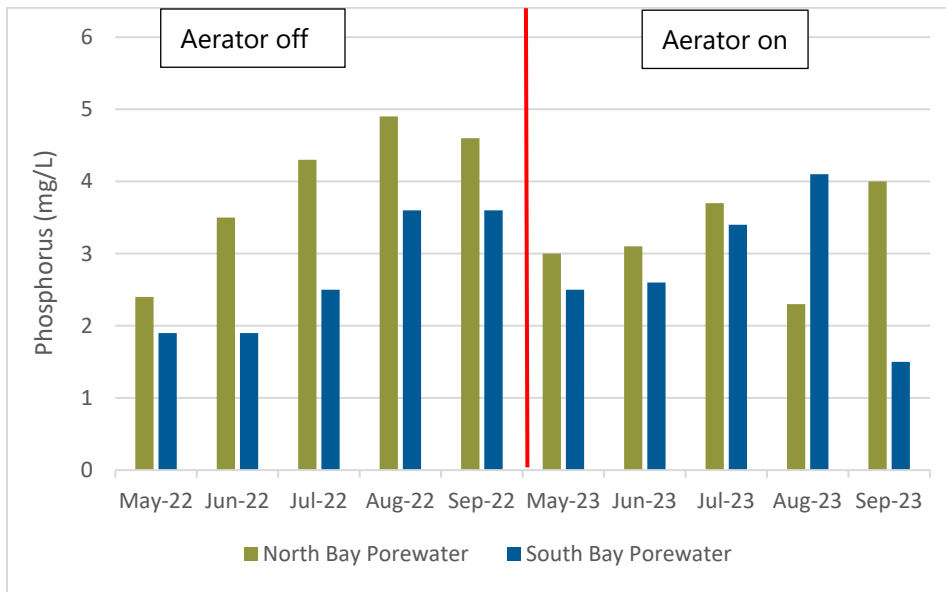


Figure 22 Phosphorus Concentration in Porewater in the North Bay (aerated) and South Bay (unaerated) of Gervais Mill Pond

Porewater iron was lower in the north bay with the aerator operating (Figure 23). The south bay of Gervais Mill Pond had a higher concentration of iron and a higher iron to phosphorus ratio for both years. In addition, the iron to phosphorus ratio was less in the porewater for the north bay when the aerator was on (Figure 24). This suggests that the north bay sediment was iron deficient.

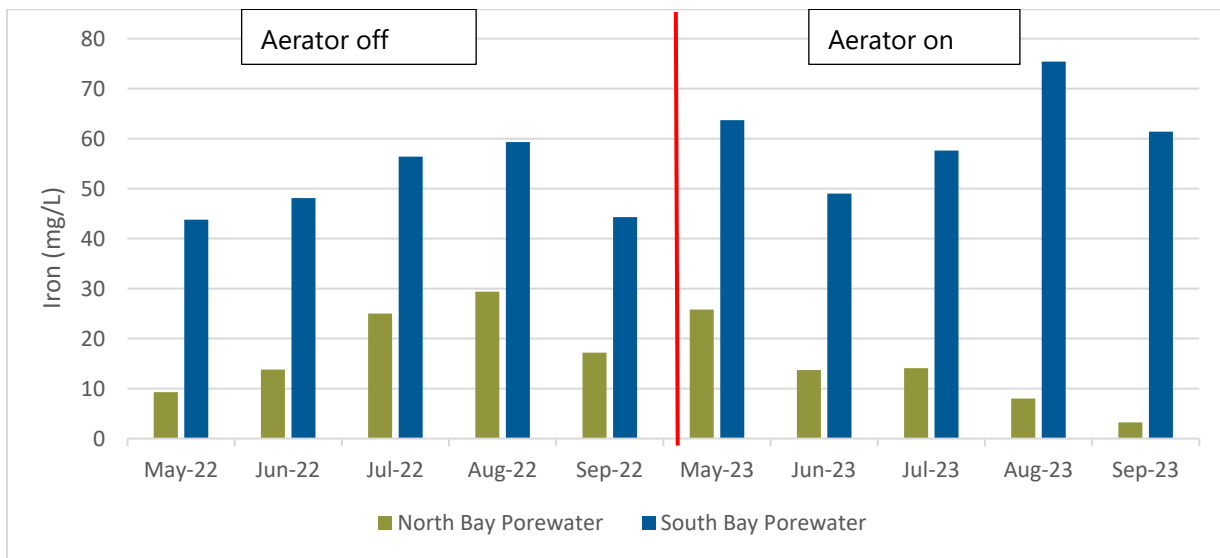


Figure 23 Iron Concentration in Porewater in the North Bay (aerated) and South Bay (unaerated) of Gervais Mill Pond

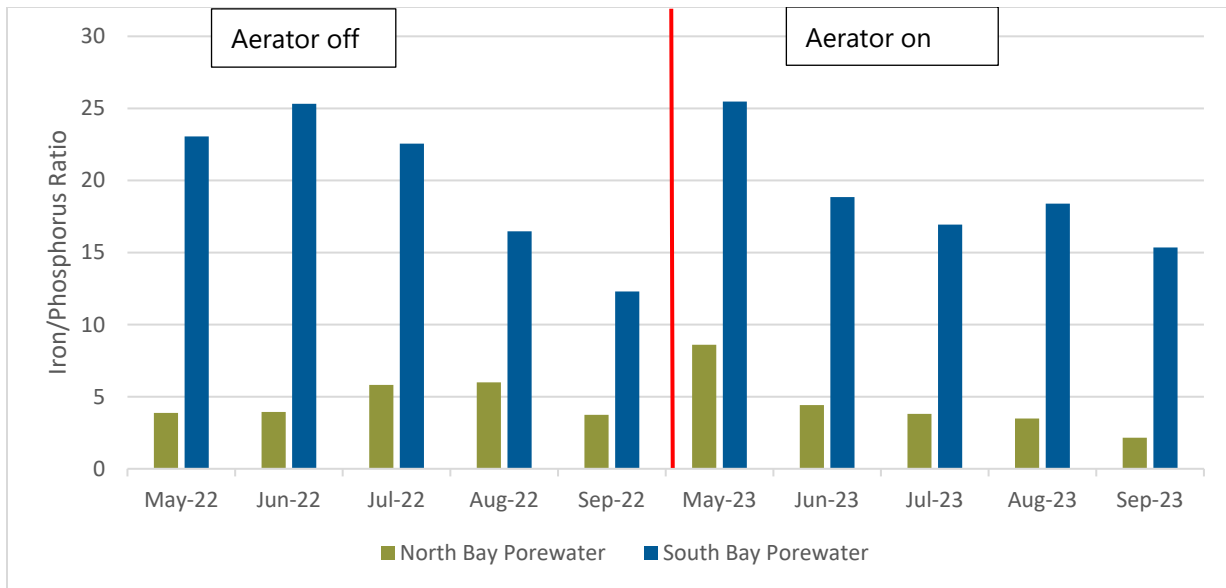


Figure 24 Iron to Phosphorus Ratio in Porewater in the North Bay (aerated) and South Bay (unaerated) of Gervais Mill Pond

4 Conclusions and Discussion

Internal P loading is a chemical process by which Fe-P becomes soluble in lake (or pond) bottom sediments when oxygen is low. Internal loading also occurs when Org-P decays. The intent of oxygenation (for this study forced air aeration) is to push oxygen into the sediment by increasing oxygen in the water column. If successful, enough oxygen is delivered into the sediment to keep Fe-P insoluble and also reduce Org-P decay which occurs anaerobically as part of a process called fermentation.

The primary conclusions of this study are:

1. Shallow lake forced air aeration can significantly increase oxygen throughout the shallow lake water column.
2. Shallow lake forced air aeration can reduce internal P loading, however, the degree of internal P load reduction will be affected by:
 - a. Sediment oxygen demand (SOD) of the lake/pond bottom sediments. The SOD of Gervais Mill Pond sediments is very high and forced air aeration was not capable of pushing oxygen into the lake bottom sediments to the degree needed to fully keep Fe-P oxidized, insoluble, and immobilized on the lake bottom sediments. However,
 - i. For the north bay, there was a 27% reduction in average TP concentrations in the water column in 2023 (with aeration) compared to 2022 (no aeration).
 - ii. Over time, it is possible that continued aeration will reduce SOD and the system may become more effective (internal P load reduction) over time.
 - b. Coverage of the aeration system. The Bennett Lake system was undersized and needs to be 3 to 4 times larger to adequately aerate the lake bottom sediments.
 - c. Iron availability. Bennett Lake is deficient in iron. Iron will need to be added to the lake bottom sediments for aeration to effectively reduce internal P loading.
 - d. Predominance of Org-P. The mechanism of internal P loading from Org-P is distinctly different from Fe-P sourced internal P loading. For lakes dominated by Org-P, several years of operation will be needed before the benefits are realized.
3. Phytoplankton growth was reduced for Gervais Mill Pond and Bennett Lake with operation of the aerators. This outcome was unexpected but this effect was observed for both study lakes, strengthening the observation.
4. For waterbodies with bottom sediments high in Fe-P, aluminum treatments (e.g., alum) will be a more effective and immediate means of reducing internal P loads. However, aeration provides dual benefits of internal P load reduction and improved dissolved oxygen concentrations.
5. For waterbodies with Org-P dominated sediment, addition of iron and vigorous aeration of the bottom sediments may be the only approach available to control internal P loading as an

aluminum treatment will not be effective on Org-P. This addition of iron and aeration is experimental.

We recommend the following:

- (1) Operate the Gervais Mill Pond aerator throughout the summer (May to September) in addition to the winter given the observed extremely low oxygen levels in the summer when the aerator was not operating. It will be valuable to assess how summer aeration affects internal P loading over time.
- (2) Summer operation of the Bennett Lake aerators will also benefit the lake but operation of these aerators is not as critical as operation of Gervais Mill Pond. However, it will be valuable to assess how summer aeration affects internal P loading over time in a lake dominated by Org-P. If the District wants to reduce internal loading in Bennett Lake with aeration, the system should be expanded and iron added to the sediments.
- (3) If the District is interested in pursuing aeration in the future, direct oxygen injection systems should also be considered as they may be more effective at oxygenating lake bottom sediments for lakes with maximum depths of greater than 5 feet. Direct oxygen injection may also be needed if oxygen demand of the sediment (SOD) is very high and the water needs to be supersaturated with oxygen to satisfy SOD.

Attachments

Monitoring Locations



- Continuous DO Measurement
- DO measurement
- Porewater P, Fe, S measurement
- Porewater Areas



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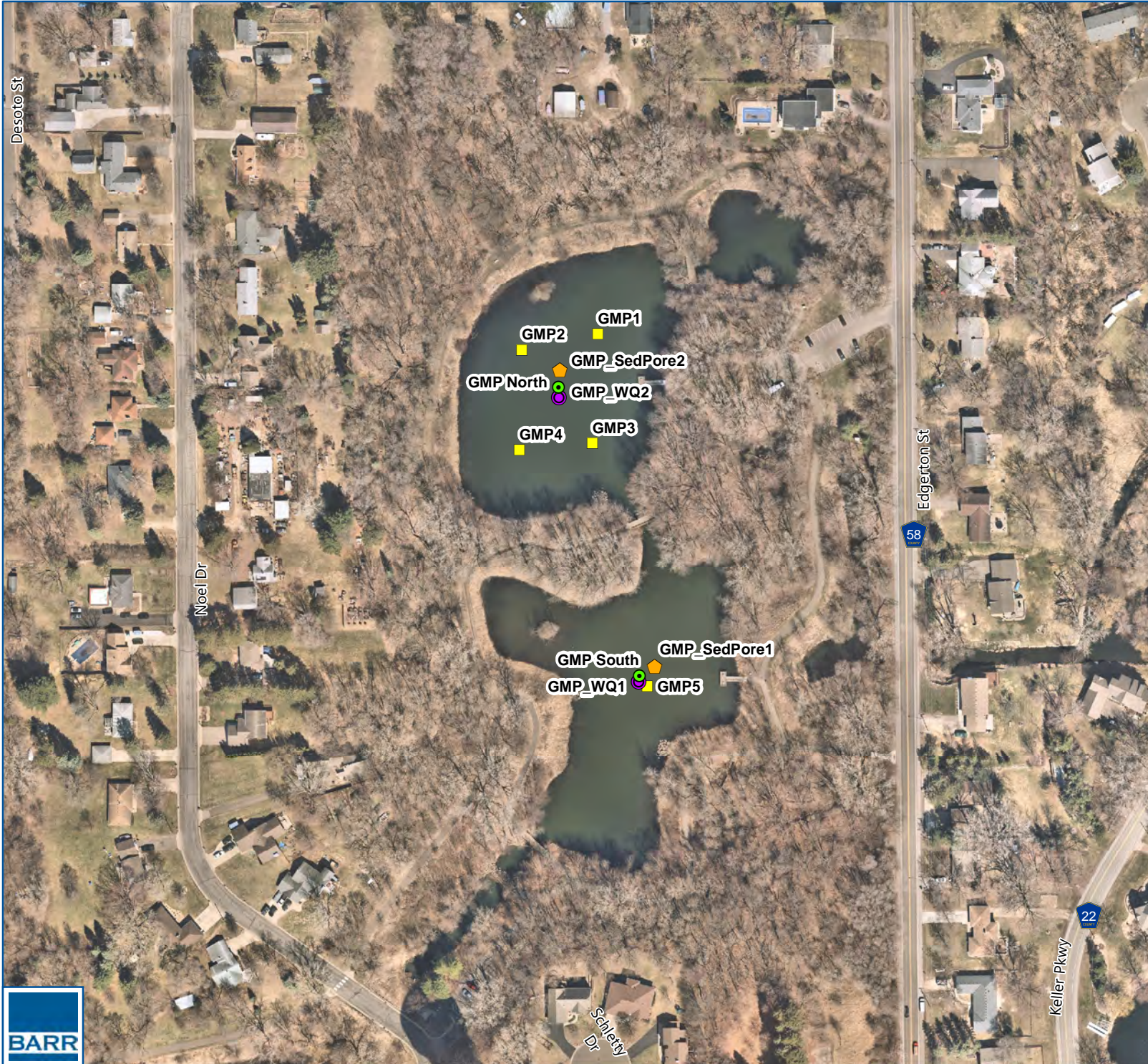
Feet

Imagery; Nearmap High Resolution April 2021

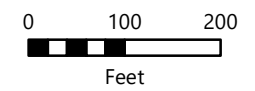
SAMPLE LOCATIONS
BENNETT LAKE
Shallow Lake Aeration Study
Ramsey Washington Metro
Watershed District

FIGURE 1





- Continuous DO Measurement
- DO measurement
- ⬠ Sediment Coring Sample
- TP Samples



Imagery; Nearmap High Resolution April 2021

**SAMPLE LOCATIONS
GERVAIS MILL POND**
Shallow Lake Aeration Study
Ramsey Washington Metro
Watershed District

FIGURE 2



* * * * *

Administrator's Report

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MEMO

TO: Board of Managers and Staff
FROM: Tina Carstens, Administrator
SUBJECT: February Administrator's Report
DATE: February 29, 2024

A. Meetings Attended

Monday, February 5	Various	Communications Intern Interviews
Tuesday, February 6	8:30 AM	MAWA Executive Committee
Wednesday, February 7	6:30 PM	Board Meeting
Thursday, February 8	9:00 AM	Owasso Lake Discussion
Friday, February 9	11:30 AM	MW Summer Tour Planning
Monday, February 12	1:00 PM	MPCA Grant Webinar
Tuesday, February 13	11:00 AM	MW Golf Association Meeting
	12:00 PM	Beltline Repair Update
	1:00 PM	MW Events-Education Meeting
Thursday, February 15	9:00 AM	Water Resources Conference Planning
	2:30 PM	New Board Member Orientation
	5:00 PM	Meet with Manager Skinner
Monday, February 19	ALL DAY	Holiday
Tuesday, February 20	5:30 PM	Closed Board Meeting – Performance Review
Wednesday, February 21	9:30 AM	MPCA Grant Opportunity Discussion
Thursday, February 22	11:00 AM	SAFL Stormwater Seminar Series
Monday, February 26	11:00 AM	Daylighting Phalen Creek Discussion
Tuesday, February 27	10:00 AM	MW Summer Tour Planning
	7:00 PM	A Sea Change for Lake Superior Documentary
Wednesday, February 28	VARIOUS	Grant Program Specialist Interviews
Thursday, February 29	9:00 AM	Grant Program Specialist Interview
	1:00 PM	New Board Member Orientation

B. Upcoming Meetings and Dates

April Board Meeting	April 3, 2024
Metro Watersheds Meeting	April 16, 2024
CAC Meeting	April 23, 2024
May Board Meeting	May 1, 2024
WaterFest	June 1, 2024
June Board Meeting	June 5, 2024
Minnesota Watersheds Summer Tour	June 25-26, 2024

C. Board Action Log and Updates

The board action log is attached. I review this list each month and add anything suggested in the previous meeting.

D. Minnesota Watersheds Updates

For the monthly newsletters go here: <https://www.mnwatersheds.com/news-letters>

The 2024 legislative event will be held on March 6th. I will be at the meeting and will report to the board at the meeting any update I have from the meeting.

Paige and I have met with Minnesota Watersheds staff as well as with Capitol Region WD staff regarding the planning of the summer tour. We have started to identify potential tour stop sites in our district. More information to come on the planning of this event.

E. Staffing Update

We will be completing interviews for the Grant Program Specialist from February 26-March 1. I would anticipate that we will be offering the position and hopefully have an accepted offer by the end of the following week, March 8.

Board of Managers 2024 Action Log

Wednesday, March 6, 2024

Item	Anticipated Action Date	Means of Action	Completed
Governance Manual	March 2024	RBA – Approval	March 2024
Land Acquisition and Use Policy	April 2024	Board discussion	
West Vadnais Lake Boundary Change	April 2024	Board discussion	
Shoreline Condition Assessment and Planning	April 2024	Presentation and Discussion.	
Alum Use Policy	Spring 2024	Proposed policy discussion.	
Impervious Surface Reduction Planning	Summer/Fall 2024	Presentation and Discussion.	

* * * * *

Project and Program Status Reports

* * * * *

Memorandum

To: Board of Managers and Staff
From: Tina Carstens, Brad Lindaman, and Erin Anderson Wenz
Subject: Project and Program Status Report – March 2024
Date: February 28, 2024

Note: *The location, brief description, and current status of each project described below can be found on the [2024 RWMWD engineering services story map](#).*

Project feasibility studies

A. Kohlman Creek flood risk reduction feasibility study (Barr project manager: Tyler Olsen; RWMWD project manager: Tina Carstens)

The purpose of this study is to complete a feasibility evaluation of modifications to reduce flood risk along Kohlman Creek and remove structures from the 100-year floodplain. Work includes coordinating with the cities of Maplewood and North Saint Paul, evaluating alternatives to reduce flood risk, preparing cost estimates for each alternative, and identifying permitting requirements. This project focused primarily on areas surrounding the Postal Credit Union (PCU) Pond and the wetland complex west of White Bear Avenue. This is a follow-up feasibility study of flood-prone areas identified in the Beltline resiliency study.

Barr presented the Kohlman Creek flood-risk-reduction feasibility study to the board of managers at the February meeting. Barr will finalize the feasibility study report to incorporate comments from RWMWD staff and managers and share it with the cities of North St. Paul and Maplewood this spring.

B. Ames Lake area flood risk reduction planning study (Barr project manager, Matt Metzger; RWMWD project manager, Tina Carstens)

The purpose of this study is to complete a planning-level evaluation to identify potential modifications that reduce flood risk to homes and businesses near Ames Lake, supported by the City of Saint Paul. Work includes coordinating discussions with the City; reviewing potential pipe alignments, land-acquisition costs, utility conflicts, and permitting issues; and completing the related design. This follow-up planning study was identified in the Beltline resiliency study.

This month, Barr staff followed up with the City of Saint Paul and the Housing and Redevelopment Authority (HRA). The HRA Board is reviewing its property portfolio and developing a long-range plan for several properties, including those near Ames Lake. The HRA anticipates being able to provide direction towards the end of March regarding whether they would be supportive of the proposed flood-risk mitigation project. Following receipt of feedback from the City and HRA, a feasibility report will be prepared, documenting concepts considered, stakeholder feedback, cost estimates, permitting

requirements, and recommendations for future system modifications. The draft report is anticipated to be available for RWMWD staff and Barr staff review in April. Once designed, the district will likely seek grant funding for this project, resulting in a construction timeframe of at least 2025 or later.

C. Resiliency study for non-Beltline tributary areas (pre-planning study and evaluation of existing data) (Barr project managers: Jay Hawley, Lulu Fang; RWMWD project manager: Tina Carstens)

The purpose of this project is to evaluate potential system-scale modifications to reduce flood risk within the portion of the RWMWD that was not evaluated as part of the Beltline resiliency study. This portion of the watershed includes the Tanners Lake, Battle Creek Lake, Battle Creek, Carver Lake, Fish Creek, and Snake Creek subwatersheds. The evaluation will identify modifications to the drainage system that could reduce flood risk to habitable structures within the 100-year floodplain of district-managed water bodies—including actively managing outlet control structures on Tanners Lake, Battle Creek Lake, and Carver Lake. This evaluation will allow RWMWD to identify potential flood-risk-mitigation strategies that address the portion of the district not tributary to the Beltline.

This month, Barr staff completed a detailed QA/QC of the Tanners Lake, Battle Creek Lake, and Battle Creek existing-conditions XPSWMM model to finalize peak water surface elevations throughout these watersheds. Staff have also remapped inundated areas and evaluated impacted structures in these watersheds. The team continues to evaluate system modifications needed to remove habitable structures and critical infrastructure from the floodplain in the Carver Lake, Fish Creek, Snake Creek, Tanners Lake, and Battle Creek Lake watersheds. Several modifications are being assessed in the model: adjustable outlet control structures, new regional stormwater basins, and modifications to culverts, storm sewers, and overland flow paths. The modeling effort includes evaluating ways to mitigate the downstream impacts of these proposed modifications along Fish Creek and Battle Creek and considering whether these actions to mitigate flood risk may have a positive effect on water quality in these creeks. Barr staff have also begun drafting the project report and organizing information to update the district's web map. The draft report is anticipated to be available for RWMWD staff review later this spring.

D. Owasso Basin area/North Star Estates improvements (Barr project manager, Brandon Barnes; RWMWD project manager, Tina Carstens)

The purpose of this study is to evaluate the benefit-cost of flood-risk-reduction strategies in the Owasso Basin/North Star Estates area by removing habitable structures from the floodplain. Stakeholder outreach with the City of Little Canada is important to this effort. This study is a continuation of the Owasso Basin bypass study, which laid out several phases of implementation and areas of further study.

As you recall, RWMWD received direction from Saint Paul Regional Water and North Star Estates property management that they are not interested in partnering on drainage modifications to their respective properties. This month, Barr staff met with the City of Little Canada to discuss responses from Saint Paul Regional Water and North Star Estates and review upcoming street improvement projects that the City of Little Canada is planning. The City informed us that there is a fall 2024 project to construct a sidewalk along South Owasso Boulevard. Barr staff are reviewing the benefits of increasing the South Owasso Boulevard culvert capacity alone. The City of Little Canada remains supportive of all of

the proposed modifications; however, we anticipate that replacing just the culvert provides only an incremental reduction in flood risk.

Currently, there is no Emergency Response Plan for North Star Estates. However, Barr and RWMWD staff have informed City of Little Canada staff and North Star Estates property management of the area's flood risk and specific flood-prone structures. City staff provided feedback on proposed modifications in and around North Star Estates to make structures accessible by emergency vehicles. In the meantime, it is our understanding that the City will assist North Star Estates by providing materials to install temporary flood-risk mitigation measures if necessary.

E. Street sweeping (Barr project manager, Michael B. McKinney; RWMWD project manager, Paige Ahlborg)

The purpose of this study is to support the 2024 enhanced street-sweeping grant program.

As mentioned last month, Barr coordinated with district staff to kick off 2024 enhanced street-sweeping grant efforts. Final information provided by 2023 grantees was processed, including invoice review and evaluation of the TP removal associated with the street sweeping mass collected. A report containing this is available for your information and can be [found at this link](#). The district plans to support a number of street-sweeping efforts again this year.

F. Watershed approach to retrofit projects (WARP) (Barr project manager, Marcy Bean; RWMWD project manager, Paige Ahlborg)

In 2022–23, Barr reviewed the history of the retrofit program to help inform considerations for future projects. This “retrofit inventory” resulted in an updated database of over 17,000 properties and GIS maps of built and considered projects. In 2024, Barr will work with district staff to consider the intersections between the database, and other districtwide initiatives and information, to more systematically guide retrofit project selection.

During this period, Barr and district staff met to finalize this scope of work. In addition, Barr GIS staff have been working with RWMWD staff to create a shared online mapping tool that includes the latest project data across the district's multiple program areas and allows staff to track potential projects moving forward. This mapping tool will directly connect the historical review of sites across the district with the development of an updated screening process for potential retrofit projects.

Lake Studies/TMDL Reports

G. 2024 grant applications (Barr project manager, Tyler Olsen; RWMWD project manager, Tina Carstens)

The purpose of this effort is to assist the district in preparing and submitting grant applications to help fund its projects and programs.

During this period, Barr and District staff met to discuss the MPCA's new Climate Resiliency Grant fund and its applicability to two of RWMWD's potential future flood-risk-reduction projects: Ames Lake

Improvements and Roosevelt Homes (Phase 3). Both of these projects fit the intent of the grant program to a large degree. Grant applications for both projects will be submitted in April, depending on approval from project partners.

Research projects

H. Kohlman Lake aquatic plant management effects study (Barr project manager, Keith Pilgrim; RWMWD project manager, Paul Erdmann)

The objective of this investigation is to determine the effect of intensive aquatic plant management on Kohlman Lake water quality. The goal is to help the district identify a science-based aquatic plant management policy. The report written for this effort is titled "Evaluation of the Potential Causes of Declining Water Quality in Kohlman Lake."

A qualitative analysis of the data (including the drone flyover data) has been conducted to evaluate the effect of plant management activities in Kohlman Lake on plant populations and water quality. April Londo of the Minnesota DNR has requested that a statistical analysis be conducted to determine differences in aquatic plant populations and water quality in Kohlman, Keller, Gervais, and potentially Beaver Lake. A draft report was completed and will be available for the March board meeting. Keith Pilgrim will be online at the meeting to discuss the efforts and next steps.

I. Shallow lake aeration study (Barr project manager: Keith Pilgrim; RWMWD project manager: Paul Erdmann)

The purpose of this project is to determine the potential for aeration to reduce internal phosphorus loading from bottom sediments in shallow lakes and ponds.

A final report, including a comprehensive analysis and recommendation on the potential for shallow lake aeration to control internal loading and improve shallow lake water quality, complete and will be presented to the board by Keith Pilgrim at the March meeting.

Capital improvements

J. Woodbury Target store stormwater retrofit project (Barr project manager: Katie Turpin-Nagel; RWMWD project manager: Paige Ahlborg)

The purpose of this project is to create concept-level and final designs and construct stormwater BMPs for Woodbury's Valley Creek Target shopping complex.

Barr provided the 100% design memorandum and plan sheets for RWMWD board of managers' bidding consideration at the February 7 meeting. The board of managers approved the project for bidding. Barr released the project for bid on February 9. The bid opening is scheduled for February 29.

K. Roosevelt Homes (Barr project manager: Marcy Bean; RWMWD project manager: Paige Ahlborg)

The purpose of this project is to create construction documents for a multi-phase flood management and water quality improvement project at the Roosevelt Homes public housing area in St. Paul.

In February, the board approved the plans and specifications and authorized staff to solicit quotes for the work. Once approved, planting is expected to begin early this spring.

A memorandum describing the recommended bidder is included in this month's board packet for the managers' review. Barr and district staff are asking for the managers' approval to award the project.

L. Stewardship grant program (Barr project manager, Marcy Bean; RWMWD project manager, Paige Ahlborg)

The purpose of this project is to 1) provide BMP design and review services to cost-share applicants throughout the RWMWD on an as-needed basis and 2) support the development of the stewardship grant program.

The construction documents for the Woodland Hills Church site "tiny homes" project were finalized and shared with the owner in late February. The project removes over 1.25 acres of pavement, captures up to 270 pounds of total suspended solids annually, adds native habitat, and creates gathering spaces for facility users. The site will become a model community for tiny homes in partnership with the non-profit group "Settled." The City of Maplewood has approved the plans, and we anticipate the owner will seek bids and manage construction in spring 2024.

M. Arbogast stormwater filtration BMP (Barr project manager, Leslie DellAngelo; RWMWD project manager, Paige Ahlborg)

The purpose of this project is to complete the final design, plans, and specifications for a regional stormwater BMP in the Lake Emily subwatershed. The goal of the BMP is to decrease phosphorus loads to Lake Emily, which is at risk of impairment from excess nutrients.

Barr issued the final change order that addressed the resolution of the incorrect concrete testing protocol for the cast-in-place concrete vault base slab and walls. Barr completed the final payment application and collected other remaining submittal documents for project close-out. The contractor agreed that it is appropriate to withhold a portion of the retainage on the project because the final (28-day) concrete test indicated that the concrete was at approximately 98% of the specified strength. The project is now considered complete.

N. Pioneer Park stormwater reuse (Barr project manager, Jennifer Koehler; RWMWD project manager, Paige Ahlborg)

The purpose of this project is to complete the final design, plans, and specifications for a stormwater reuse system in Pioneer Park that will reduce the usage of groundwater for irrigation and phosphorus loads to downstream water bodies.

Barr prepared for and led the preconstruction meeting with district and city of Little Canada staff as well as representatives from Peterson Companies. Additionally, we have been reviewing the pump and water treatment submittals as well as submittals related to the system intake structure. We are waiting on

several additional submittals from Peterson Companies for review before construction begins—expected in April 2024.

O. Fish Creek tributary improvements (Barr project manager, Tyler Olsen; RWMWD project manager, Tina Carstens)

The purpose of this project is to design and implement vegetation improvements around Double Driveway Pond, as well as stream-stabilization improvements in the Fish Creek tributary upstream.

During this period, Barr continued the development of project plans and technical specifications, including the landscape restoration plan. Additionally, after meeting with RWMWD staff, Barr began developing public education outreach materials for the property owners along the tributary creek. These outreach materials include a 3D rendering of the proposed project, a rendering of the creek cross-section, and precedent images and illustrations of the stream restoration techniques that will be used to restore the tributary. In the next period, Barr anticipates that the easements and appraisals will be finalized and that outreach to property owners for easement purchase agreements can begin.

P. Cottage Place Wetland Regeneration (Barr project manager, Brendan Dougherty; RWMWD project manager, Paige Ahlborg)

The purpose of this project is to design and restore a degraded wetland on City of Shoreview property located near the Cottage Place cul-de-sac. The project will involve the creation of plans, bidding, and construction administration to provide additional stormwater treatment and restore wildlife habitat within the project area.

During this period, Barr continued working toward a 30% plan design, developing grading, site layout, and landscape plans and specifications.

Q. County Road C culvert (Barr project manager, Tyler Olsen; RWMWD project manager, Paige Ahlborg)

The purpose of this project is to design and construct a box culvert where Kohlman Creek crosses under County Road C (owned by Ramsey County) in the City of Maplewood. The culvert was identified as a flood-risk-reduction improvement project in the Kohlman Creek Flood Risk Reduction Feasibility Study.

During this period, Barr continued preparing plans and specifications. Barr provided a plan set for RWMWD and Ramsey County staff review at the end of February. In the next period, Barr will prepare the necessary permit applications for the project and advance project plans and specifications to prepare for bidding. Construction is anticipated later in 2024.

CIP project repair and maintenance

R. Routine CIP inspection and unplanned maintenance identification (Barr project manager, Gareth Becker; RWMWD project manager, Dave Vlasin)

The purpose of this effort is to maintain the RWMWD's existing capital improvement projects as they come up outside the normal annual maintenance project (below).

Most of the work completed during this period was associated with Lake Wabasso outlet replacement planning with Ramsey County. The district is working collaboratively with the County as it prepares to remove the existing outlet and replace it with a new outlet when funds are available. Recently, Barr led the geotechnical investigation and analysis work and prepared a conceptual design for the County's consideration. Cost estimates were also prepared for the County to use in its internal funding request process. Once funding is approved, the outlet will be replaced.

S. 2024 CIP maintenance and repairs projects (Barr project managers, Gareth Becker; RWMWD project manager, Dave Vlasin)

The purpose of this effort is to maintain the RWMWD's existing capital improvement projects through this annual maintenance project.

To date, work has been performed on Sites 5 (Kohlman Basin) and 8 (Arlington Pond) but has not been fully completed. The contractor has submitted a payment application for consideration this month. The contractor has been asked for a comprehensive schedule for the remaining sites. The unusually mild winter has delayed work on several sites. Despite this, we assume no change to the overall project schedule due to the small size of this year's construction project and the mid-summer substantial completion date.

T. Beltline Mississippi Branch outfall replacement project (Barr project managers, Joe Welna and Nathan Campeau; RWMWD project manager, Dave Vlasin)

The purpose of this project is to replace the final approximately 70 feet of the Beltline Storm Sewer Interceptor adjacent to the Mississippi River that failed in July 2023.

During February, we completed the detailed 30% design of the tunnel replacement. We anticipate completing the 90% design in March. The construction and repair work are planned for later in 2024.

U. New technology mini case studies (Barr project manager, Marcy Bean; RWMWD project manager Tina Carstens)

The purpose of this project is to educate the board and RWMWD staff on new and interesting technologies and design strategies related to water quality improvements and other issues of concern within the district. The information provided for these new technologies is often based on the manufacturer's claims. They have not been modeled or tested by district staff or Barr unless explicitly stated as such.

Considerations for funding chloride application equipment

Overview

Recently, the City of Oakdale contacted RWMWD staff to ask whether grant funding may be available in 2024 to help fund a brine maker and liquid blending station as part of Oakdale's new Public Works Facility. The goal of the equipment is to help reduce chloride use by the City, which is upstream of Battle Creek Lake—a waterbody that is impaired for chloride (as deemed by the MPCA's impaired waters list).

According to a report by the University of Minnesota, winter maintenance, including salt and de-icing on roads, parking lots, sidewalks, and trails, accounts for 42% of Minnesota's chloride budget (Overbo, Heger, & Gulliver, 2021). Road salt and de-icing chemicals enter storm drains and discharge into waterbodies, becoming a permanent source of pollution. Chloride is a pollutant of concern because it does not degrade over time and is harmful to aquatic life and plants. Once chloride enters a waterbody, it is difficult and expensive to remove through practices such as reverse osmosis (Minnesota Pollution Control Agency). Therefore, it is important to find methods that reduce chloride loading while still maintaining public safety during winter months. During this period, Barr staff reviewed available information to better understand current best management practices for road salt application in Minnesota, case studies in Minnesota, and the role of watershed districts in reducing chloride loading.

Current Best Practices for Reducing Chloride Use in Minnesota

Traditional winter maintenance practices include the use of plows, rock salt, and a mixture of sand and salt. Recently, there have been new trends and improvements in winter maintenance to protect human safety while decreasing salt use.

Method of Chloride Application

The most common method to reduce salt use for winter road maintenance is through the use of liquid products instead of solely granular products. There are two primary methods to apply liquid winter maintenance products. The first is referred to as "pre-wetting" because it involves the application of liquid brine as well as granular salt to the road surface (Minnesota Department of Transportation, 2019). Pre-wetting is beneficial because it melts ice faster and uses less salt (less salt is lost due to less bounce and scatter compared to using solely granular material) (Minnesota Pollution Control Agency, n.d.). The second method is called "direct liquid application" and refers to the practice of solely applying a liquid agent. The direct liquid application, commonly referred to as "anti-ice," can be used before a storm. Anti-ice involves applying a chemical to prevent future bonding between the roadway and snow. Direct liquid application can also be used after the storm to de-ice (Minnesota Department of Transportation, 2019).

Technical Training

Another method to reduce salt is to provide training and education for winter maintenance professionals. The training of winter maintenance professionals should include a wide variety of topics, such as the various types of road treatments, how they work, and when they should be used. Not every chemical or product is appropriate, depending on weather conditions, including snowfall rate, temperature, and wind. For example, dry granular salt should be applied at a rate of 100 to 150 pounds per lane mile in light snow if the pavement temperature is between 20 and 32 degrees. The rate should be increased to 150 to 250 if the pavement temperature decreases below 20 degrees and stopped altogether if the pavement temperature is below 5 degrees (Minnesota Department of Transportation, 2019). Another important component of training is for all winter maintenance professionals to be familiar with the Maintenance Decision Support System (MDSS). MDSS is a tool that uses current weather, maintenance, and road conditions with forecasted weather and road conditions to recommend

treatment options. MDSS is a helpful tool for providing guidance but is sensitive to user inputs (Minnesota Department of Transportation, 2019).

Equipment Upgrades

Vehicle upgrades can also be an effective way to reduce salt use for winter road maintenance. Vehicle upgrades include electronic spreaders that have more advanced control that optimizes the amount of salt applied to the roads without oversalting. Pavement temperature readers can also be effective equipment upgrades since effective salt application rates are tied to pavement temperature. Traditionally, vehicles only have thermometers to measure the air temperature, which can be significantly different than pavement temperature (Minnesota Pollution Control Agency, 2023).

Timing of Maintenance

Another method to reduce the amount of salt is to optimize the timing of its placement before a storm event and to plow actively during the event. For early storm maintenance, anti-icing agents can be applied to the road to help prevent snow and ice from binding to the pavement. Mid-storm, consistent plowing is recommended to prevent the buildup of snow and ice. Both practices result in minimizing the amount of salt that needs to be applied after the storm is complete (Minnesota Department of Transportation, 2019).

Good Housekeeping Practices

Between storm events, good housekeeping practices are effective ways to reduce chloride pollution as well. For example, quarterly calibration of equipment is important to optimize salt applications to pavements and to prevent oversalting (Minnesota Department of Transportation, 2019). In addition, salt storage is an important consideration. Storing salt indoors reduces the chance of stockpiled salt washing into stormwater drains and waterbodies (Minnesota Pollution Control Agency, n.d.). Indoor storage is also beneficial because it reduces the need for operators to get rid of their salt at the end of winter by oversalting during the late winter season (Minnesota Pollution Control Agency).

Education

Finally, the importance of educating the public and elected officials about appropriate winter maintenance practices cannot be understated. Educating the public is important so they understand that although road maintenance has changed over the years, their safety has not. Providing educational materials, including public service announcements to property owners—of businesses, apartments, and single-family homeowners—is important so that as they maintain their own pavements, they understand how to use salt sparingly and appropriately, in a manner that reduces risk to their downstream waterbodies and maintains safe routes for pedestrians and vehicles. Educating public officials is also important; they are in a unique position to enact policies related to reducing salt at a city, county, or statewide level (Minnesota Pollution Control Agency, n.d.).

Examples from Minnesota

The table below summarizes several chloride reduction examples from nearby watershed districts, cities in RWMWD, and other cities in Minnesota that have implemented brine and liquid applications as part of their improved winter maintenance. It is important to note that most of these examples also include additional action items such as education and additional vehicle upgrades that could impact the total salt reduction and cost savings. The information in Table 1 is from the Minnesota Pollution Control Agency’s Chloride Management Plan (CMP), as well as information on the MWMO and City of Fridley partnership.

Table 1. Actions, salt reductions, and cost savings from watershed districts and cities

Entity	Actions and Benefits Period	Actions Implemented	Salt Reduction	Cost Savings
Rice Creek Watershed District Cities	2012–2013	Six cities received a \$65,000 grant from Rice Creek Watershed District to train staff and purchase shared anti-icing equipment.	32%	\$26,400 in a single season
Mississippi Watershed Management Organization (MWMO) and the City of Fridley	2018–2019	MWMO provided a \$80,600 grant to the City of Fridley to upgrade plow trucks to have salt brining equipment. Truck upgrades occurred throughout the 2018–2019 winter season, so all vehicles were not upgraded until the end of the winter season.	19%	\$15,300
City of Shoreview	2006–2015	The City trained staff, switched from sand-salt mixture to salt, implemented ant-icing, and upgraded trucks with spread control, pre-wetting tanks, and pavement sensors.	44% from 2006 to 2015	\$24,468 in 2014

City of Saint Paul	2011–2014	The City trained staff and upgraded trucks with spread control, pre-wetting systems, and electronic tools (to monitor and correct salt usage).	30%	Unknown
City of Prior Lake	2003–2010	The City trained staff, upgraded trucks with spread control, implemented anti-icing and prewetting, and added on-site pre-mix liquid.	42%	\$2,000 per event

Role of Watershed Districts in Chloride Reduction (MPCA guidance)

In the Statewide Chloride Management Plan (CMP), the MPCA states that watershed districts play a significant role in reducing salt across the state. An easy way for watershed districts to be involved is to incorporate guidance from the CMP into their watershed management plans. The MPCA also suggests a wide variety of actions related to winter maintenance that could be implemented at the watershed district level. The MPCA breaks down all of the suggested winter maintenance actions into a hypothetical timeline of goals, as described below.

Goals in years 1–2 (short-term goals)

- Partner with MPCA to offer Smart Salting winter maintenance training for local private and public winter maintenance professionals each winter.
- Educate 50% of constituents on the benefits of smart salt use.
- Create awareness about the environmental impacts of chloride through education, outreach, and other activities to local residents, applicators, elected officials, and businesses.
- Monitor local surface waters for chloride concentrations to track trends and progress and understand the movement of chloride through the watershed.
- Develop an incentive-based program for chloride reduction strategies.
- Host yearly workshops for local winter maintenance professionals to encourage the use of the Smart Salting Assessment Tool and track the progress of best management tools implemented.

- Coordinate end-of-winter excess salt drop-off locations for private contractors.
- Provide a measuring-cup-type salt scooper to homeowners and small businesses at the point of sale of salt in order to raise awareness of the amount of salt they are using.

Goals in years 3–5 (mid-term goals)

- Educate 75% of constituents on the benefits of smart salt use.
- Offer grants to private and public winter maintenance organizations for upgrading equipment or implementing innovative practices.
- Provide “free” advertising to private applicators who meet “smart salting” criteria.
- Encourage local businesses and public buildings to reduce salt use through improved insurance benefits and liability protection.
- Partner with local stakeholders on innovative projects to reduce chloride at the source and alternatives for de-icing.

Goal in years 6–10 (long term goals)

- Educate 100% of constituents on the benefits of smart salt use.
- Create model ordinances, education materials, or incentives for the organization or others to use and/or adopt. The MPCA has developed chloride-reduction model-ordinance language that serves as guidance for municipal officials who want direction in the use of de-icers to protect water quality, animals, human health, and infrastructure. Example ordinances and incentives could be similar to below:
 - Restrict the application of salt within a city to trained winter maintenance professionals.
 - Ask citizens to prove their knowledge of salt impacts on the environment and sign a pledge to use less salt in return for a stormwater fee credit.
 - Create consumer awareness materials available at participating stores (promoting the sales of shovels and snow blowers instead of ice melt).
 - Encourage hazardous household waste centers to accept ice-melt products.
 - Encourage development/redevelopment in your jurisdiction to specify a percentage of lower salt-dependent surfaces (heated, permeable, other).

Applicable district goal and action item

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Goal: Achieve quality surface water—The District will maintain or improve surface water quality to support healthy ecosystems and provide the public with a wide range of water-based benefits.

Action Items: WQ3—Assist local communities in implementing projects or other management actions resulting from the Minnesota Pollution Control Agency’s Twin Cities Metro Chloride Project or future chloride total maximum daily load studies.

References

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Minnesota Pollution Control Agency. (n.d.). *Smart Salting Tool (SST)*. Retrieved from <https://smartsaltingtool.com/>

Mississippi Watershed Management Organization. (2019, January 23). *Upgraded Snow-Fighting Equipment Helps Fridley Reduce Water Pollution*. Retrieved from <https://www.mwmo.org/news/upgraded-snow-fighting-equipment-helps-fridley-reduce-water-pollution/>

Overbo, A., Heger, S., & Gulliver, J. (2021, April 10). Evaluation of Chloride Contributions from Major Point and Nonpoint Sources in a Northern U.S. State. *Science of the Total Environment*.

V. Natural Resources Update—Paul Erdmann, Patrick Williamson & Joe Tillotson

Natural Resources Program staff has been gearing up for the upcoming field season, performing critical winter work, and attending various meetings and trainings.

We continued to prep the Keller Shoreline Project by removing invasive and weedy trees species. This project is a collaboration with Ramsey County Parks & Recreation and is part of the Keller Regional Park project (“Keller Habitat Enhancement Project”), which is funded by a Conservation Partners Legacy grant.

NR Staff attended the Prairie Enthusiasts virtual Conference, including a one day prescribed burn training and sessions by restoration practitioners throughout the Midwest. The last week of February we will be attending the Best Practices for Pollinators Summit, a 3-day virtual conference that focuses on pollinator health and best practices for invertebrates. NR Program Manager, Paul Erdmann attended the Citizen Advisory Committee’s February meeting to introduce himself and the new NR team to the Committee, discuss the upcoming field season and potential future collaboration. NR staff also met with Carp Solutions, our contractor that helps us manage carp populations in District waters, to discuss 2023 management and to plan 2024 work (photo of RWMWMD and Carp Solutions staff below taken at the

meeting). We plan to provide an update to the board on our Carp Management work in next month's board packet.



W. Public Involvement and Education Program – Sage Passi

RWMWD Youth Schools Learn about Native Plants and Prepare for Plantings



In February RWMWD Education staff teamed up with Ramsey County Master Gardeners to help three fifth grade classes at Weaver (photos above) and two American Indian Magnet fifth grade classes learn about the native plants they will be planting at sites that include Keller Lake Island with the Wilderness in the City Project (with AIM), Keller Lake shoreline in Maplewood (potentially Weaver and other schools) and at other locations around our District. These education activities that we are currently engaging schools in involve research, drawing and planting seeds indoors that were “stratified” in December.

Mounds Park Academy classes have also been growing plants this year with the help of science teacher, Mitch Thomsen. We have plans to grow more seedlings at Harmony Learning Center (Adult ESL) students. L’Etoile du Nord classes are lined up in early March to plant seeds that have been stratified (cross your fingers that teachers at St. Paul Public Schools don’t vote to strike).

We are exploring the possibility of returning to plant seeds at Hazel Park Middle School with a new teacher with the help of John Weimholt, the ESL teacher we have worked with for several year. We also plan to engage Farnworth and other schools in the transplantation process in the next couple months. **The truth is we need more light rack space!** We have some feelers out for additional light rack space at Lionsgate, Woodbury Elementary and at the Priory that we are in the process of researching.

We Grow Our Own!



In the meantime, our plant growing operation is in motion. The schools that are growing seedlings this year include Weaver, Farnsworth, Mounds Park Academy (they grow their own), Woodbury High School Environmental Club, American Indian Magnet (their plants are now living in the light rack at our office), Harmony Learning Center (soon to be planted), L'Etoile du Nord, possibly the Priory and Lionsgate (we hope to transport some seedlings there to be put under lights). These seedlings will be given away at our annual festival at Lake Phalen.

Phalen Freeze Fest



Our RWMWD tables at Phalen Freeze on February 24 (in the foreground) provided something for everyone, including art activities, stamps for card-making, a matching block activity for identifying native fish that live in Lake Phalen, a sign-up option for storm drain adoption, an invite to WaterFest, Stewardship grant info and lots of good networking and conversation! Thank you to Water Steward Bette Danielsen, Jill Danner (CAC) and staff (Carrie, her family and Sage for volunteering on a sunny but chilly Saturday! Thanks to all the partners in the area and to Asha Shoffner (City of St. Paul for pulling together many organizations and activities for the event, even though we couldn't be out on the ice!

X. Communications and Outreach Program – Lauren Hazenson

Current Projects

Website Accessibility Project

Roughly half of the accessibility concerns highlighted in the WeCo audit earlier this year. The following items have been addressed:

- No "Skip To" option present in the menus
- Submenu content not dismissible via keyboard
- Missing/unclear image alternative text for CAC and staff images

St. Paul Media could not replicate the remaining items, so I have connected WeCo and St. Paul Media so they can address those concerns in tandem. We estimate the majority of the accessibility concerns should be addressed by April, and we will receive a seal of recognition from WeCo for the website.

Community Survey

The community survey was delivered via text to approximately 25,000 phone numbers with a 3% return rate of 624 completed surveys and a 4% margin of error. This margin of error is acceptable for the given sample size and indicates that the results are a fairly reliable indicator for the population they represent. We got a statistically significant breakdown by age, ethnicity, and income for those surveyed. The survey contractor, FlashVote, also provided map overlays of the data to see data breakdowns by subwatershed, city, and equity priority area. So far, the results have proved especially useful in showing areas where the District needs to improve our visibility and overall understanding of our services. It also provides crucial insight into the water management concerns that are most pressing to a geographic area or demographic and how they define indicators of "healthy and safe" water bodies. FlashVote CEO Kevin Lyons will present these results to the Board in depth at the March meeting.

WaterFest

The WaterFest staff team met twice in February to determine whether the event should move forward with accepting vendors. After extensive discussion, we determined the best course of action would be to launch a small pilot for local vendors on an invite basis only so we can determine the size and focus of

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vendor offerings that would best fit the mission of WaterFest while also bolstering its financial sustainability as overall costs increase due to inflation and other factors.

Meanwhile, RWMWD staff will be working on re-envisioning the District booth space at the event to increase our organization's visibility and branding, update our interactive components, and ensure that all pieces read as part of a whole. Staff from all departments will be providing their insights to move this initiative forward in time for WaterFest this year and will ensure the booths have adequate staffing.

Signage

I am working with our graphic design contractor, Studio Lola, and illustrator Maggie Wiebe to create signage for several Stewardship Grant projects and the Lake Owasso shoreline restoration signs. These designs will remain consistent with the signs for Targeted Retrofit and Stewardship Grant signs completed in the last two years to create a brand-consistent look and feel for projects across the district and integrate QR code content to direct visitors to our website project information. This effort aims to increase RMWMD visibility at these projects and encourage visitors to interact with us further beyond the sign content.

E-newsletter

This month, we experienced a technical issue requiring email domain authentication with several email providers to ensure our newsletter content is not quarantined or placed in spam folders, particularly for Gmail, Outlook, and Yahoo email addresses. Our IT service, Metro-INET, took longer than anticipated to resolve the issue as it was not a typical request. The February newsletter stats are delayed until next month for this reason.

Social Media (Facebook, YouTube, Instagram)

Numbers as of 2/27:

Facebook

Reach: 3,790
Engagement (likes, shares, comments): 317
Audience: 1,605

Instagram

Reach: 5,323
Engagement: 193
Audience: 910

YouTube

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Views: 1,937

Watch time (hours): 29.3

Subscribers: 338

Viewers: 1,600

Most watched video: Lee and Paul Bauer's garden tour video, initially used for the LEAP awards. This video gained 1,347 views in February, with 90 views on 2/26 alone!

LinkedIn

Note: We are adding LinkedIn as a social media channel this year to further interact with our community and project partners as well as potential job applicants. The posting frequency will be six times a year to start.

Reach: 17,791

Engagement: 120 clicks to employment page

Followers: 415

Resident Communications/Professional Development/ Public Meetings, Misc.

- Meeting with District 2 Council staff (1/31)
- Communications Intern candidate interviews. A final candidate accepted the position on 2/ 21 and will start work on 5/13.

* * * * *

Handed out at
Meeting

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Memorandum

To: RWMWD Board of Managers
From: Katie Turpin-Nagel and Erin Anderson Wenz
Subject: Woodbury Target Stormwater Retrofits- Recommendation to Award Project
Date: March 6, 2024
c: Paige Ahlborg and Tina Carstens

The goal of the Woodbury Target Stormwater Retrofit project, located within the Valley Creek Plaza complex, is to treat runoff from highly impervious tributary areas to improve water quality for downstream waterbodies (e.g., Tamarack Nature Preserve, Battle Creek Lake). Target Corporation (Target) owns approximately 12.4 acres of the Valley Creek Plaza Complex. The parcel consists of approximately 3.4 acres of impervious roof and 7.3 acres of impervious pavement.

The installation of stormwater retrofits at the Target store in Woodbury would be the third partnership between RWMWD and Target. Stormwater retrofits (e.g., rain gardens and tree trenches) were installed at the Target stores located in East and North Saint Paul in 2020 and 2021, respectively, resulting in over 7 acres of impervious surfaces treated between the two stores.

The proposed stormwater retrofits at the Target store in Woodbury include the installation of two filtration rain gardens. The north rain garden will be constructed entirely within open green space. The south rain garden will be constructed mostly within existing green space, but will also require the removal of 8 parking spaces. Both basins are sized to store as much stormwater volume as feasible, within the available space, while also limiting the removal of existing, mature trees and maintaining a minimum of 5' offset from existing City sidewalks. Stormwater will be diverted into the rain gardens via trench drains (polydrain PDX) that will be retrofit around existing storm structures to collect runoff before it enters the existing grates. Runoff captured by the trench drains will discharge into retrofit storm structures and storm sewer, which will drain to the rain gardens for treatment. As runoff filters through the rain gardens, total suspended solids (TSS), particulate nutrients, and dissolved nutrients will be captured by the treatment media or utilized by plants. Filtered runoff will then discharge to underlying drantile in the rain gardens connected to the existing storm infrastructure.

The two proposed rain gardens will treat approximately 4.3 acres of onsite impervious pavement (i.e., treating ~59% of the total impervious pavement of the Target storage parcel) and convert 8 existing parking spaces to part of the south rain garden, thereby reducing impervious area.

The RWMWD Board of Managers authorized bidding for the Woodbury Target Stormwater Retrofits at their February 7, 2024 meeting. Following the Board's authorization, the project was bid for three weeks between February 9 and February 29. Bids were opened on February 29, 2024 at a virtual bid opening. Eighteen (18) bids were received and are listed in Table 1.

Table 1. Summary of Bids Received for Woodbury Target Stormwater Retrofits

Number	Bidder	Total Base Bid Entered on the Bid Form
1	Kurilla Contracting	\$602,645.75
2	Swan Companies	\$636,912.91
3	MNL	\$643,872.25
4	Shoreline Landscaping & Contracting	\$674,840.01
5	Sunram Construction, Inc.	\$678,568.00
6	Bituminous Roadways Inc.	\$705,097.60
7	Minnesota Dirt Works Inc	\$713,836.83
8	Diversified Drainage	\$717,368.90
9	Blackstone Contractors LLC	\$719,413.51
10	JL Theis, Inc.	\$722,708.35
11	St Paul Utilities	\$728,397.76
12	Pember Companies, Inc.	\$742,903.42
13	McNamara Contracting	\$789,423.55
14	Minger Construction Co. Inc.	\$799,795.50
15	Miller Excavating, Inc.	\$839,292.17
16	Peterson Companies	\$877,622.17
17	New Look Contracting, Inc.	\$883,770.50
18	Urban Companies	\$934,453.13
Engineer's opinion of probable cost was \$776,000 - \$898,000 at the February 2024 Board Meeting (estimated accuracy range of -5% to +10%).		

Bid results from eighteen (18) firms indicate high interest and availability, which seemingly resulted in competitive bids. The engineer's opinion of probable cost was estimated at 100%-design completion and was based on average bid prices from recent similar projects. The engineer's opinion of probable cost was \$776,000 - \$898,000 (estimated accuracy range of -5% to +10%) and aligns with the 13th – 17th total base bid prices in Table 1. The low bid is considerably lower than the engineer's estimate.

RWMWD does not have previous civil construction experience with the three lowest bidders listed in Table 1. As such, on February 29 Barr requested qualification evidence from the lowest apparent bidder, Kurilla Contracting, per Article 4 of Instructions to Bidders in the specifications. Requested information included qualifications outlining project experience in the past 5 years, a description of present commitments, a list of intended subcontractors, and a summary of available equipment, key personnel, and resources. On March 5, 2024, Kurilla Contracting provided an initial response and provided written evidence establishing qualifications. Barr continues to review the provided project information and contact the project experience references listed.

Barr Engineering recommends that the RWMWD Board of Managers consider the following motion:

Contingent upon Barr and District staff's satisfaction with the qualification evidence provided by the apparent lowest responsible and responsive bidder, Kurilla Contracting, award the project to Kurilla Contracting at the bid price of \$602,645.75 and direct staff to request the required bonds and insurance information and execute the contract for the work.

Once the necessary submittals are received and reviewed, and the contract is signed by all parties, a required preconstruction meeting will be held and a formal "Notice-to-Proceed" will be issued.

Next Steps

If the Board of Managers approves the motion the following would be completed:

- Barr Engineering and RWMWD staff review the qualification evidence provided by Kurilla Contracting.
- An Authorized Representative signs the Notice of Award to be sent to the successful bidder
- Successful bidder provides the following information:
 - Fully executed Form of Agreement
 - Performance Bond and Payment Bond
 - Certificate of Insurance verifying adequate insurance per the bidding documents
- Barr and Galowitz-Olsen will review the submittals and, if necessary, request modifications
- Barr will coordinate with the successful bidder regarding the construction schedule and schedule a preconstruction meeting
- The Form of Agreement will be signed by all parties
- Notice to Proceed is anticipated to be issued in March/April 2024.
- All work shall be substantially complete by September 13, 2024.
- The vegetation warranty will extend one year post-substantial completion, estimated through June or September 2025 (depending on when plants are installed). After the warranty period is complete and Final Acceptance has been issued, RWMWD will take over vegetation maintenance through October 2026 to align with the District's other vegetation maintenance contracts.