



**MINNEHAHA CREEK**  
**WATERSHED DISTRICT**  
QUALITY OF WATER, QUALITY OF LIFE

**Meeting:** Board of Managers  
**Meeting date:** 8/14/2023  
**Agenda Item #:** 11.2  
**Request for Board Action**

**Title:** Authorization to Contract with Stantec for Design, Bid Support, and Construction Oversight for Maintenance of Twin Lakes Pond

**Resolution number:** 25-041

**Prepared by:** Name: James McDermond-Spies  
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**Reviewed by:** Name/Title: Michael Hayman, Director of Project Planning; Chuck Holtman, Smith Partners

**Recommended action:** Authorization to enter into a contract with Stantec Consulting for engineering, design services, bidding support, and construction oversight for stormwater pond maintenance of Twin Lakes Pond.

**Schedule:** September 2025 – Separate plans for Twin Lakes Pond and Amelia Pond and Release Request for Bids  
October 2025 – Bid Selection and Award  
November 2025 – February 2026 – Construction Oversight

**Budget considerations:** Fund name and code: Project Maintenance & Land Management, 2-2003-4340  
Fund budget: \$72,000.00  
Expenditures to date: \$24,249.00  
Requested amount of funding: 25,860.00 + 10% contingency

**Past Board action:** Res # 23-043 Authorization to Contract for Engineering and Design Services For 2023-2024 Stormwater Pond Survey and Maintenance  
Res # 23-072 Awarding Construction Contact for 2023-24 Twin Lakes Park Pond and Nokomis-Amelia Pond Dredging  
Res # 24-060 Authorization to Terminate Minnesota Dirt Works, Inc. Contract for Twin Lakes Park Pond and Nokomis-Amelia Pond Dredging

**Summary:**

The Minnehaha Creek Watershed District (MCWD) is responsible to inspect and maintain 26 stormwater ponds through ownership or cooperative agreements with its partner communities. The MCWD Board of Managers established a policy that guides the investigation and maintenance of its stormwater management infrastructure to ensure the long-term water quality and water quantity function of these systems.

In 2023 the MCWD completed the Stormwater Pond Data Analysis. A 20-year schedule was developed, and ponds are now selected for survey and maintenance based on historical data and a calculated sedimentation rate for each pond. This maintenance is necessary to ensure stormwater ponds are functioning as designed and continue to accrue their designed water resource benefit.

In 2023 Twin Lakes Park Pond and Nokomis-Amelia Pond were identified for need of dredging maintenance. This maintenance project was slated for the winter of 2023-2024 with Stantec Consulting being awarded the design and construction oversight contract in August of 2023, and Minnesota Dirt Works, Inc. being awarded the construction contract in November 2023. The contract and design called for work to be completed under frozen ground conditions to allow efficient dewatering and access, and minimize impacts of heavy equipment. The winter of 2023-2024 was the warmest on record with only short stretches of frost building cold followed by heatwaves. When seeking dewatering permits in late winter of 2023-24 the MN DNR indicated that Blanding's turtles, a state-listed threatened species, had been reported in the vicinity of the project area. Dredging work would conflict with state law that prohibits the destruction of threatened species and their habitats.

With these challenges and delays staff looked to temporarily cancel the dredging of the Nokomis-Amelia Pond and postpone work at Twin Lakes Park Pond to the winter of 2024-2025. A change order was drafted to this effect and offered to MN Dirt Works. Following its review of the change order MN Dirt Works requested that MCWD terminate its contract citing existing workload and risk tolerance for winter conditions. In November 2024 the Board terminated the contract with MN Dirt Works.

Staff have requested the design engineer, Stantec, to provide a scope of services to separate the plans of Twin Lakes Park Pond from the Nokomis-Amelia Pond, solicit bids, and conduct construction oversight. This scope of work would establish a new contract for the Twin Lakes Park Pond and allow staff to move maintenance of this project forward while working to find solutions or alternatives to complete maintenance at Nokomis-Amelia in the future. Staff seek to separate the work at these two basins as initial indications from the MN DNR have been that winter work in the presence of Blanding's turtles may not be permissible. Maintenance of Nokomis-Amelia Pond is targeted for winter of 2026-2027, to allow time to navigate the issues, but this timeline is uncertain. Staff turnover and capacity have delayed navigating this process.

Stantec's 2023 design contract (the scope is attached as a supporting document) totaled \$49,240. Of that, \$12,379 budgeted to construction observation remained unspent. The present scope would use some work completed under the original design contract, but would involve separating plans and specifications for the Twin Lakes basin, supporting the bid process, and providing observation and contract administration services. As the original design engineer, Stantec has a robust understanding of the needs and complexities of the project and can efficiently complete the tasks outlined in the scope of work, attached as supporting documents. Below are the tasks as outlined by Stantec:

- Task 1: Project Design, Construction Documents, and Permitting
- Task 2: Bid Document Development and Bid Support
- Task 3: Construction Administration and Oversight

Staff have reviewed the scope of work and offered minor edits but find that the scope covers the necessary elements as noted above. The cost of these services, see table below, by comparison with the original scope and in staff's experience, is reasonable.

Task	Description	Cost
1	Project Design, Construction Documents and Permitting	\$3,980.00
2	Bid Document Development and Bid Support	\$6,820.00
3	Construction Administration and Oversight	\$15,060.00
<b>Total</b>		<b>\$25,860.00</b>

In summary, Twin Lakes Park Pond was identified to need maintenance in the winter of 2023-2024. Due to unseasonably warm weather and complications associated with the Nokomis-Amelia Pond surrounding Blanding's turtles this work was not able to be completed. Staff requested Stantec provide a Scope of work to conduct maintenance of Twin Lakes Park Pond separate from Nokomis-Amelia in winter 2025-2026. Staff find the scope of work provided to meet the needs of the district and to represent an appropriate cost for these services.

As a Board-adopted policy, professional services exceeding \$25,000 are to be obtained by competitive process, unless the Board makes an exception. Staff suggests that an exception is warranted here, in that Stantec has performed the original work on this project with which it is important to maintain continuity, and has the project-specific knowledge associated with that work.

At the August 14, 2025 Board Meeting, Staff will seek authorization for the Administrator to execute a contract with Stantec Consulting in an amount not to exceed \$25,860.00, and authorization for the Administrator to execute amendments up to an additional 10% of the contract price.

**Supporting Documents (list attachments):**

- MCWD Proposal Twin Lakes Pond 2025
- Engineering and Design Services for 2023-2024 Stormwater Pond Survey and Maintenance



## RESOLUTION

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**Resolution number:** 25-041

- Title:** Authorization to Contract with Stantec for Design, Bid Support, and Construction Oversight for Maintenance of Twin Lakes Pond
- WHEREAS, Minnehaha Creek Watershed District (MCWD) engages in regional capital improvement projects as described in its Water Resources Management Plan;
- WHEREAS, MCWD has a policy that guides the investigation and maintenance of its stormwater management infrastructure and conducts pond sediment surveys on the 26 regional ponds that MCWD is responsible to inspect and maintain;
- WHEREAS, the Project Maintenance and Land Management Program (PMLM) annually budgets for this effort in accordance with the PMLM Maintenance Plan;
- WHEREAS, utilizing MCWD's Stormwater Pond Data Analysis, in 2023, the Board of Managers ("Board") identified Twin Lakes Park pond and Nokomis-Amelia pond for Winter 2023-24 maintenance;
- WHEREAS, to complete this work, the Board selected Stantec Consulting as the design engineer on August 10, 2023 and awarded Minnesota (MN) Dirt Works, Inc. the construction contract on November 27, 2023;
- WHEREAS, the winter of 2023-2024 did not have the cold weather conditions needed to conduct dredging work and Blanding's turtles, a state-listed threatened species, were reported to be in the vicinity of the Nokomis-Amelia project area, with the result that the work was not completed in winter of 2023-2024;
- WHEREAS, on November 7, 2024, after consultation with MN Dirt Works about extending its contract and a mutual determination not to do so, the Board terminated the contract;
- WHEREAS, staff requested that Stantec provide a scope of work for engineering services associated with procuring \maintenance of Twin Lakes Park Pond separate from Nokomis-Amelia Pond in winter 2025-2026;
- WHEREAS, staff recommends the submitted scope of work as meeting the needs of the MCWD at an appropriate cost for these services; and
- WHEREAS, the Board, on recommendation of staff, finds that a competitive procurement for the services is not warranted, given Stantec's initial performance of work under the prior scope of services, its familiarity with the project, and staff's ability to evaluate the proposed cost of the services.

NOW, THEREFORE, BE IT RESOLVED that the Minnehaha Creek Watershed District Board of Managers authorizes the MCWD Administrator, on advice of legal counsel, to negotiate and execute a contract with Stantec Consulting, in an amount not to exceed \$25,860, and authorizes the Administrator to execute any amendments to the contract that he finds warranted, up to an additional 10 percent of the contract price, in aggregate.

Resolution Number 25-041 was moved by Manager \_\_\_\_\_, seconded by Manager \_\_\_\_\_. Motion to adopt the resolution \_\_\_ ayes, \_\_\_ nays, \_\_\_ abstentions. Date: 8/14/2025

\_\_\_\_\_  
Secretary Date: \_\_\_\_\_

DRAFT



August 8, 2025

**James McDermond-Spies**  
Minnehaha Creek Watershed District  
15320 Minnetonka Boulevard  
Minnetonka, MN 55345

Dear James,

Stantec is pleased to submit this proposal to assist Minnehaha Creek Watershed District (MCWD) with your efforts in maintaining the Twin Lake Pond located upstream of Twin Lakes on W 26<sup>th</sup> Street in St. Louis Park.

## Background

In 2023, MCWD opened bids and awarded the 2023-2024 Pond Maintenance project to Minnesota Dirt Works. The 2023-2024 Pond Maintenance Project included the sediment excavation of Amelia Pond and Twin Lake Pond. Between a combination of abnormally warm weather and Amelia Pond being flagged for Blandings Turtle by the DNR, the 2023-2024 Pond Maintenance project was not completed.

Stantec has worked with MCWD over the years to continually improve the understanding of how MCWD's 26 ponds operate and ways in which they can be optimized. Twin Lake Pond is a historically quick-accumulating pond that needs dredging every 8-12 years. It has also been determined to be undersized for the drainage area contributing to it. During the 2023 design, Stantec determined the bottom of the pond could be lowered 2-3-feet to provide additional sediment storage. This will result in less frequent sediment removal projects and saving MCWD long term maintenance costs.

MCWD has asked Stantec to separate the Twin Lake Pond from the project manual from the 2023-2024 Pond Maintenance project to create a revised project manual to bid, award and complete sediment excavation in Twin Lake Pond in the winter of 2025-26.

The tasks completed under this scope of work will be to separate Twin Lake Pond from the 2023-2024 Pond Maintenance project, complete the revised project manual, provide bidding support, and conduct construction administration and observation.

## Scope of Work

### Task 1: Project Design, Construction Documents, & Permitting

Stantec will review the 2023-2024 Pond Maintenance project manual and separate the Twin Lake Pond project to complete a revised project manual with only the Twin Lake Pond sediment excavation. Sediment accumulation will be reviewed using the quantities previously surveyed as well as the historic accumulation rate to determine if any additional quantities should be included.

The plan set will include the following: Title Sheet with Location Map, Topographic Survey with estimated depths of sediment to be removed and quantities, Removal Plan, General Notes, Existing Conditions, SWPPP, Grading and Drainage Plan, Erosion Control and Details, Utility and Restoration, Site Details, Pond Profiles, and Restoration Planting Plan. Some items are combined to reduce the number of sheets.

Stantec will look to provide the plans to MCWD and schedule a meeting with MCWD staff to review and confirm remaining details prior to soliciting bids.



Coordination meetings and minutes for the kickoff meeting and 100% design have been incorporated into Stantec's cost and schedule. Our scope also includes one coordination meeting with St. Louis Park.

The proposed dredging projects will likely require permits from the MCWD, Department of Natural Resources, and the City of St. Louis Park. Stantec will assist MCWD by providing necessary materials to complete and submit the necessary permits for the Twin Lake Pond. We assume MCWD will take the lead in submitting the permit applications and coordinating with partner agencies.

#### **Task 1 Deliverables:**

- 100% Design Plans
- Meeting Minutes from kickoff meeting, 100% Design meeting and partner meetings

#### **Task 1 Assumptions:**

- There will be one round of edits for the 100% design plans. We assume we will receive comments back from MCWD on the plans within two weeks of submittal.
- MCWD will coordinate with partners to establish meeting times. Stantec assumes the City of St. Louis Park coordination will be one meeting. This meeting will be held when plans have been completed.
- A dewatering permit will be required. The de-watering permit will be submitted by the contractor with the reporting of pumping rates and volumes also provided by them. The Contractor will also be responsible for obtaining other necessary permits prior to construction, which may include road permits, MPCA NPDES, etc.

#### **Task 1 MCWD Staff Resource needs:**

- Review of the plan set at 100%. Provide any necessary edits to the plans and report along with providing input on preferred bidding approach given sediment sampling results.
- Attendance at the 100% meetings.
- Coordination with Partner Agencies to establish project overview meetings.
- Submittal of permits to agencies (City, DNR, MCWD).

### **Task 2: Bid Document Development and Bid Support**

Project specifications will be separated from the 2023-2024 Pond Maintenance Project and revised in accordance with EJCDC and MCWD standards. Stantec staff have worked with the MCWD's front end (Division 0 & 1) specifications in the past and are able to efficiently update them as a part of this project. In parallel with the development of the plan set and project manual, we will update the bid item list for incorporation in the 100% submittal to MCWD. Stantec will conduct one round of specification revisions for each submittal based on the comments received. Stantec assumes bids will be requested using a public bidding process. The following tasks will be assumed for the public bidding process:

- Create bid documents using EJCDC and MCWD standard specifications.
- Provide final Opinion of Probable Costs (OPCC) for the project.
- Publish an advertisement of bids with QuestCDN.
- Assist with pre-bid meeting.
- Answer bidder questions during the bidding window and issue addenda as needed.
- Tabulate bids from contractor.
- Draft bid recommendation memo to MCWD staff for Board consideration.



## **Task 2 Deliverables:**

- 100% Specification Package
- Final OPCC for the project.
- Advertisement for bid.
- Pre-bid meeting minutes.
- Responses to bidder questions, including addenda.
- Bid recommendation for staff with bid tabulation.

## **Task 2 Assumptions:**

- There will be one round of edits for the 100% project manual. We assume we will receive comments back from MCWD on the specifications within two weeks of submittal.
- Assumed the Eruv was relocated during the 2023 project and coordination is not necessary for construction.
- Assumed the sediment sampling information is valid for disposal. The contractor's disposal site will determine if additional information is required.

## **Task 2 MCWD Staff Resource needs:**

- Review and comment of the specifications set and OPCC.
- Attendance at pre-bid meeting.
- Review of responses to bidder questions.

## **Task 3: Construction Administration and Oversight**

Stantec will lead construction administration and oversight for the pond maintenance project. Our team, led by Nick Wyers, will lead the preconstruction meeting to establish project objectives, construction meeting cadence, submittal processes and communication requirements for the project. Creating clear communication processes during the start of the project with the contractor and team will allow for a smoother construction process. Prior to the start of construction staff will stake benchmarks and project boundaries to create the limits of disturbance which will be critical for the project. Our staff will also complete follow-up construction staking as the contractor gets near to initiating excavation to define design grades and allow for efficient excavation of the necessary sediment to be removed. As the project progresses our team will lead designated construction meetings as needed and provide minutes of the meetings for all parties to understand the progress of the project and next steps. During the construction process our team will review pay applications, prepare change orders, review submittals, and respond to requests for information by the contractor.

Before final completion staff will conduct a final inspection and prepare punch lists for the contractor prior to project closeout. Once this inspection is completed our team will perform a post-construction survey and provide as-built record drawings and electronic GIS files. This step is critical to perform promptly in winter conditions as snow and ice can make it tough to verify excavated depths.

We anticipate it will take three to four weeks to remove the sediment and have a budget of 10 hours per week for on-site observation, contractor coordination and processing of project requests (i.e., pay applications, request for information, change orders, etc.). We do recognize there will be some time for project closeout once vegetation has established later in the spring and have budgeted hours for the project closeout but have not focused our schedule on this activity.

During the four weeks estimated for sediment removal we recognize the following as critical times during the construction process to be on-site:





- **Project Start-up:** As the project starts up, dewatering will be required. Proper coordination with partner agencies on where dewatering water can be discharged and what hours of operation can occur given the proximity to residential areas will be key to success. Monitoring discharge locations once dewatering initiates to ensure proper signage for potential thin ice will also be critical. Our team will be prepared to do regular site visits during the first 3-5 days of dewatering to ensure this approach is implemented.
- **Initiation of Excavation:** As the contractor gets started moving materials it is important they maintain the prescribed erosion and sediment control practices and respect the project limits. Setting expectations early is critical as it sets the tone for the duration of the project to ensure success.
- **Project Closeout:** Documenting conditions once the contractor has confirmed they have established the desired grades is key to ensure proper payment of actual sediment removed. Our approach will be to work with the contractor to give our survey team one-week advance notice of when they will be wrapping up allowing the survey team to come in and document graded elevations.

We assume the MCWD will visit the site once per week at a minimum and attend any necessary on-site meetings required due to public or partner agency requests.

### **Task 3 Deliverables:**

- Pre-construction meeting minutes.
- Construction staking.
- Construction observation reports.
- Approved change orders, pay applications, and requests for information.
- As-built records with survey points GIS and CAD formats.

### **Task 3 Assumptions:**

- Weekly on-site construction meetings are not necessary for this project schedule.
- MCWD will be responsible for public and partner agency coordination.

### **Task 3 MCWD Staff Resource needs:**

- Coordination with public (residents or associations) and partner agencies.
- Attendance at pre-construction meeting.
- Approval of change orders and pay applications.

Our approach as highlighted in our project understanding and scope of services is to deliver a cost-effective improvement to MCWD's ponds which can make the biggest difference to the landscape.

## **Schedule**

We are prepared for work on this project to begin immediately, with the design and quoting process to occur in fall 2025 and construction to occur fall 2025/winter 2026.



## Fee Estimate

Our estimated fee to complete the identified scope of work is **\$25,860.00**. Any anticipated changes to the scope that will affect the project fee will be communicated to MCWD before additional work is undertaken. We will invoice monthly for actual time and expenses incurred.

Task	Description	Cost
1	Project Design, Construction Documents and Permitting	\$3,980.00
2	Bid Document Development and Bid Support	\$6,820.00
3	Construction Administration and Oversight	\$15,060.00
<b>Total</b>		<b>\$25,860.00</b>

We thank you for this opportunity to present this proposal. Should you have any questions or need clarification of anything in the enclosed proposal, please do not hesitate to contact us.

Regards,

**STANTEC CONSULTING SERVICES INC.**

**Nick Wyers**  
Project Manager  
952-838-5661  
Nick.wyers@stantec.com

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Attachment: None



# Engineering and Design Services for 2023-2024 Stormwater Pond Survey & Maintenance

Prepared for Minnehaha Creek Watershed District  
Prepared by Stantec

July 28, 2023





July 28, 2023

**Josh Wolf**  
Minnehaha Creek Watershed District  
15320 Minnetonka Blvd  
Minnetonka, MN 55

Dear Josh,

**Reference: RFP – 2023-2024 Stormwater Pond Survey & Maintenance**

Thank you for the opportunity to present this proposal for the 2023-2024 Stormwater Pond Survey & Maintenance RFP. We have enjoyed the opportunity to work alongside MCWD in the development of the Stormwater Pond Capital Improvement Planning project and see this as continuation of the continual improvement of MCWD's assets. Our proposed approach is aimed at providing the most cost-effective and impactful solution. We have worked with MCWD over the years to continually improve the understanding of how MCWD's 26 ponds operate and ways in which they can be optimized. While this may seem like a routine project our team recognizes there are opportunities for improvement, even with this project. Key features to deliver on these opportunities include:

**Focus on Pond Optimization** – As MCWD looks to optimize the effectiveness of the ponds, typical dredging projects create opportunities to work on the functionality of the ponds. Our team has identified the potential to deepen Twin Lake pond to improve time necessary between dredgings as a way to enlarge the permanent pool in the pond and allow for greater efficiency in the pond operation.

**Efficient Project Delivery** – Our team has been working with MCWD on these ponds for over 20 years. Our team is familiar with the plans and survey needs for each of your ponds. Our team can complete the survey and plan preparation within a month of award. This creates the ability to ensure the projects are bid during the optimal winter bidding window creating cost savings for MCWD.

**Proactive Construction Oversight** – We have built a team around recognizing both of these ponds will have the public's attention. Our team will be focused on ensuring controlled construction sites with proactive communication with MCWD. This limits potential complaints and delays during the tight winter construction season and allows the projects to be completed on-time.

Our Stantec team excels at collaborative client relations and partnerships to develop innovative yet practical solutions providing value to our clients. With our knowledge and expertise in this region, we would welcome the opportunity to support this initiative. If you have any questions or require further information, please contact me at 763 252-6889.

Best regards,

**STANTEC CONSULTING SERVICES INC.**

**Rena Weis**  
Water Resources Engineer  
Phone: 763 252-6889  
Rena.weis@stantec.com

**Chris Meehan** PE (MN), CFM  
Senior Principal  
Phone: 612-321-6365  
Christopher.meehan@stantec.com



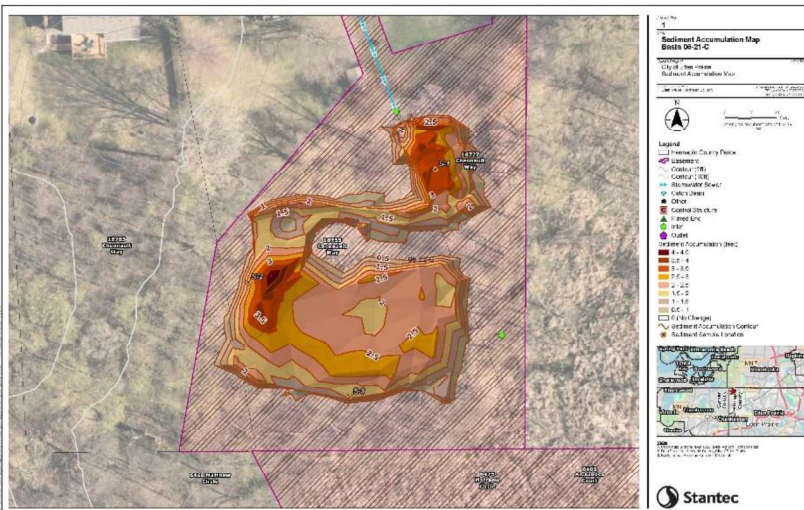


## Project Understanding

Stantec recognizes this is not simply a pond dredging project, as our team has been intimately involved with the development of MCWD's Stormwater Pond Capital Improvement Planning, we wrapped up in July. We recognize MCWD's desire to develop a systematic approach to optimizing and effectively managing the District's 26 ponds. Through efficient operation and maintenance of the program MCWD can make the greatest impact on the watershed and its resources.

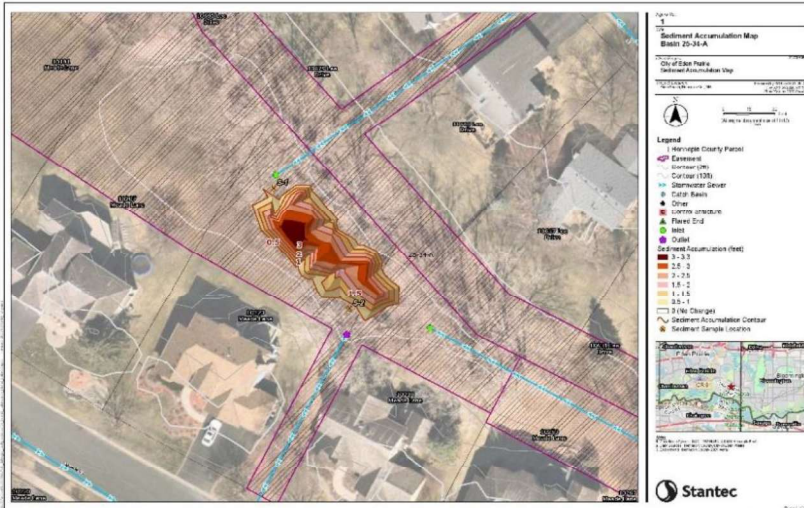
The Stormwater Pond Capital Improvement Planning study MCWD focused on understanding accumulation rates in the ponds to determine the effectiveness of the ponds and better budget for the potentially costly dredging associated with the operation and maintenance of the ponds. We see this project as a continuation of that process by looking at ways to further enhance the operation of these ponds.

The first step is our ability to leverage the historical surveys of Twin Lakes and Amelia, we developed a mapping system to easily define key areas of accumulation to provide insight on the effectiveness of the pond and how it can be further optimized as needed as shown in figures below. We have developed a routine with MCWD ponds to quickly complete the sediment surveys for each of the ponds within a day to allow for quick turnaround time in developing the bid documents to ensure the ponds hit the optimal winter bidding window for contractors.



City of Eden Prairie Sediment Accumulation Maps

Efficient mapping of sediment accumulation allows for ease of removal.





We recognize Twin Lake pond is a historically quick-accumulating pond that is need of dredging every 8-12 years and that it is undersized for the drainage area contributing to it. Given the industrial drainage area, much of the pond's watershed goes through sites with higher contaminant levels that typically need to be landfilled. The tight site constraints of Twin Lake make perimeter control a big issue. The active Twin Lake Association is well aware of the impact the pond has on limiting sediment entering the lake and will actively monitor the project. The project will have significant visibility from the local community as construction activities occur, which is a reason we have built in time to be proactive with monitoring contractor activities to limit the potential for any issues to arise.

Amelia was last dredged in 2011 and is surrounded by Minneapolis Park and Recreation Board land. The pond has a significant and well-established wetland buffer that will need to be actively watched during construction to limit potential disturbance. This has been an issue in the past and is something we are very aware will need to be actively monitored. We are also aware this construction is in a highly visible area (next to Cedar Avenue and Lake Nokomis) and will need to also be actively monitored to ensure potential concerns or complaints are minimized. Our approach to proactive contractor communication on projects ensures limits for encroachment will be firmly established and that erosion and sediment controls a firmly in place.

Dewatering during the winter months will typically be required for both of the projects, but it should not be an issue as we will work with the contractor to install proper signage in Twin Lake and Lake Nokomis to limit the potential for encroachment on the thin ice that can occur with dewatering. We will properly identify and direct the contractor to properly sign and monitor these discharges. This proactive approach limits potential risks and creates clarity in the surrounding areas on project activities.

As with many winter construction projects our team will be ready to complete the as-builts promptly upon contractor notification to ensure proper documentation of the removed quantities. Many times, this step, if not acted on promptly, is where there can be issues and debates with the contractors as they tend to move snow and ice as part of the dredging which are not beneficial for the project's water quality impact but can influence surveys. Our staff will be focused on quantifying the actual removed sediment volumes to ensure proper payment to the contractor for work completed.

Our team's familiarity with the MCWD's ponds ensures we are able to efficiently leverage the existing plan sets to seamlessly develop bid plan sets. Our team has always used the approach of adding further refinement to the plans such as site characteristics that can be noted to limit potential damages (e.g., trees, key features, access points, lighting structures). Adding updated details to the plans to reflect the

best practices in the industry ensures the sites stay protected and limit potential for issues on the site.



Our team's understanding of working with MCWD is to continually improve the process and results, while limiting risks. We look to bring that approach to this project to continue to further the strength of the MCWD brand in the community.



## Scope and Methodology

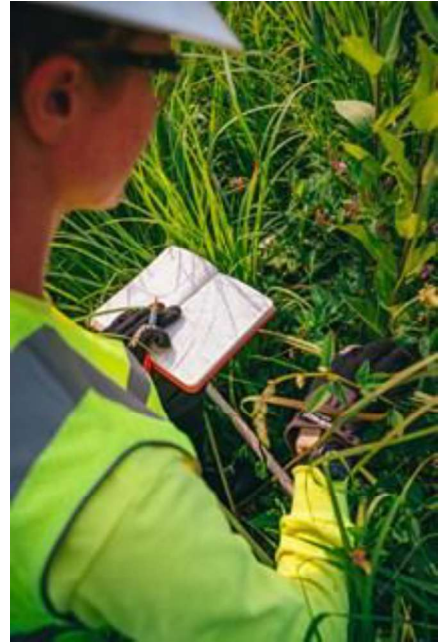
As a partner with MCWD our team is committed to the goal of continual improvement in the operation and maintenance of the ponds to maximize the effectiveness of dollars for the District. Our scope and methodology look to highlight our approach to making it happen.

### Task 1: Pond Sediment Surveys

Prior to initiation of Task 1 Stantec staff will look to coordinate a Kickoff meeting with MCWD staff the week of August 21<sup>st</sup> to confirm project timelines, desired outcomes, and communication schedules.

During the week of the 21<sup>st</sup> Stantec staff will perform pond bathymetry surveys. The surveys will measure the top of sediment and depth to refusal. Detailed survey information is necessary for estimating the sediment quantity and locations for excavation. Survey information collected will provide detail necessary to accurately quantify and delineate the sediment to be removed. As part of the field survey the team will also collect storm sewer inlet and outlet information along with verifying critical infrastructure and structures (i.e. paved trails, playground equipment, power lines, lighting structures, and fire hydrants) near the project to ensure proper documentation prior to dredging.

Following the field survey, existing as-built CAD drawings will be used to create a preliminary surface of sediment accumulation to be used as part of the plan drawings and bidding. Additionally existing CAD plans will be updated with additional infrastructure data collected as part of the survey to ensure an accurate representation of field conditions, limiting need for any additional site visits prior to bidding.



**Task 1 Deliverables:** Surveyed sediment depths, pond structures and adjacent infrastructure in GIS and CAD formats.

**Task 1 Assumptions:** Staff will be notified prior to the site survey if Optional Task 6 is required.

**Task 1 MCWD Staff Resource needs:** Attendance at the Kickoff meeting and notifying Stantec staff of any identified additional survey needs prior to conducting site field surveys.

### Task 2: Pond Maintenance Technical Report

A Pond Maintenance Technical Report will be developed upon the completion of the sediment surveys to document sediment accumulation in each of the ponds and to formally characterize the sediment to be dredged based on existing and potential additional sampling (Optional Task 6). We are aware that initial results of sampling suggest that both of the ponds are contaminated for PAH's along with arsenic in Amelia. Our ability to help further delineate contamination will create a move favorable bid package.

The report will summarize the results of the survey, sampling, describe the sampling process (location and handling) and characterize the sediment to be removed and recommended disposal requirements for each of the ponds. The samples from the ponds will be analyzed in accordance with "Managing Stormwater Sediment Best Management Practice Guidance" (MPCA, 2017). We will work in coordination with MCWD on how best to address bidding the dredging given these results.





The summary of the report will outline the estimated cost for disposal OPCC (Opinion of Probable Construction Cost) on a per cubic yard basis along with potential disposal requirements.

**Task 2 Deliverables:** Pond Maintenance Technical Report which provides summary of methodology and results of surveyed sediment depths in each pond along with sediment sampling and disposal requirements. The report will also provide associated figures and tables associated with survey and sampling results. This task includes one meeting between MCWD and Stantec staff to review the report.

**Task 2 Assumptions:** There will be one round of edits on the Pond Maintenance Technical Report.

**Task 2 MCWD Staff Resource needs:** Review of the technical report and providing any necessary edits to the report along with providing input on preferred bidding approach given sediment sampling results.

### Task 3: Project Design, Construction Documents, & Permitting

Stantec will quantify sediment accumulation and prepare a plan sets for each of the ponds based on the information collected in Task 1 by updating existing as-built/construction plans for each pond. Additional survey information needs necessary for development of plans will be scoped and completed as part of Task 1 to limit the need to conduct two site surveys.

Following the survey and sampling, a plan set will be prepared for each of the pond sites. The plan set will include: Title Sheet with Location Map, Topographic Survey with estimated depths of sediment to be removed and quantities, Removal Plan, General Notes, Existing Conditions, SWPPP, Grading and Drainage Plan, Erosion Control and Details, Utility and Restoration, Site Details, Pond Profiles, and Restoration Planting Plan. Some items may be combined to reduce the number of sheets.

Stantec will send plans to MCWD for review at 60% along with an updated OPCC. Accompanying the 60% Plan set will be a Draft Design Report for MCWD to review outlining the process to develop the plans, assumptions associated with plan development for construction, and restoration requirements upon completion of construction. This information will be sent one week in advance of meeting with MCWD to review the proposed plans and report.

At the 60% Design meeting Stantec staff will provide an overview to the development of the plans, draft Design Report, and proposed construction process. Through this meeting any adjustments needed will be documented for incorporation into the 100% design plans. Upon completion of the meeting, minutes will be sent to MCWD staff.

Upon receipt of the comments from MCWD Stantec will finish the plan set and design report for submittal of 100% plan set and report prior to going out to bid. Stantec will look to provide the plans and report to MCWD a week prior to the 100% Design Meeting.

At the 100% Design meeting the final plans and report will be reviewed with staff to confirm remaining details prior to going to bid.





Coordination meetings and minutes for the kickoff meeting, 60%, and 100% design have been incorporated into Stantec's cost and schedule. Our scope also includes one coordination meeting with St. Louis Park, City of Minneapolis and Minneapolis Park and Recreation Board staff. We assume these meetings will occur prior to development of 60% plans.

We will have weekly update check-ins with Josh on the progress of the plans and report in addition to upcoming week activities. Stantec will prepare and provide written follow-up summary emails documenting check-in meetings.

The proposed dredging projects will likely require permits from the MCWD, Department of Natural Resources, City of Minneapolis, City of St. Louis Park, and Minneapolis Park and Recreation Board. Stantec will assist MCWD by providing necessary materials to complete and submit the necessary permits for these two sites. We assume MCWD will take the lead on submitting the permits and coordinating with partner agencies.



### **Task 3 Deliverables:**

- 60% and 100% Design Plans and Report.
- Meeting Minutes from 60% and 100% Design meeting along with Partner meetings
- Design plans in CAD format
- Design report in PDF and Word format

### **Task 3 Assumptions:**

- There will be one round of edits for the 60% and 100% Design Report and Plans. We assume we will receive comments back from MCWD on the plans and report within two weeks of submittal.
- MCWD will coordinate with partners to establish meeting times. Stantec assumes the City of Minneapolis and MPRB meetings will be one meeting and the City of St. Louis Pak meeting will be another. These meetings will be held prior to the completion of 60% plans.
- A dewatering permit will be required for both sites. The de-watering permit will be submitted by the contractor with the reporting of pumping rates and volumes also provided by them. The Contractor will also be responsible for obtaining other necessary permits prior to construction, which may include road permits, MPCA SWPPP, etc.





### **Task 3 MCWD Staff Resource needs:**

- Review of the plan sets and reports at 60% and 100%. Provide any necessary edits to the plans and report along with providing input on preferred bidding approach given sediment sampling results.
- Attendance at the 60% and 100% meetings.
- Coordination with Partner Agencies to establish project overview meetings.
- Submittal of permits to agencies (Cities, DNR, MPRB, MCWD).

### **Task 4: Bid Document Development and Bid Support**

Project specifications will be developed in accordance with EJCDC and MCWD standards. Stantec staff have worked with the MCWD's front end (Division 0 & 1) specifications in the past and are able to efficiently update them as a part of this project. In parallel with the development of the plan set and design engineer report we will develop a draft bid item list for incorporation that will be provided as part of submitting the 60% design plans and draft engineer's report. The draft specifications will be sent to MCWD staff in Word format for review and comment one week prior to the 60% and 100% design meetings. Stantec will conduct one round of specification revisions for each submittal based on the comments received.



Stantec assumes bids will be requested using a public bidding process. We also assume the ponds will be packaged together as one bid. The following tasks will be assumed for the public bidding process:

- Create bid documents using EJCDC and MCWD standard specifications.
- Provide final OPCC for the project.
- Publish an advertisement of bids with QuestCDN.
- Assist with pre-bid meeting.
- Answer bidder questions during the bidding window.
- Tabulate bids from contractor.
- Draft bid recommendation memo to MCWD staff.

#### **Task 4 Deliverables:**

- 60% and 100% Specification Package in hard copy (5 copies), PDF, and Word Format.
- Final OPCC for the project.
- Advertisement for bid.
- Pre-bid meeting minutes.
- Responses to bidder questions.
- Bid recommendation for staff with bid tabs.

#### **Task 4 Assumptions:**

- There will be one round of edits for the 60% and 100% specification report. We assume we will receive comments back from MCWD on the specifications within two weeks of submittal.

#### **Task 4 MCWD Staff Resource needs:**

- Review and comment of the specifications set (60% and 100%) and OPCC.
- Attendance at pre-bid meeting.
- Review of responses to bidder questions.

### **Task 5: Construction Administration and Oversight**

Stantec will lead construction oversight for both pond projects. Our team, led by Nick Wyers, will lead the preconstruction meeting to establish project objectives, construction meeting cadence, submittal process and communication requirements for the project. Creating clear communication processes during the start of the project with the contractor and team will allow for a smoother construction process. Prior to the start of construction staff will stake benchmarks and project boundaries (especially at Amelia) to create the limits of disturbance which will be critical for both projects. Our staff will also complete follow-up construction staking as the contractor gets near to initiating excavation to define design grades and allow for efficient excavation of the necessary sediment to be removed. As the project progresses our team will lead designated construction meetings as needed and provide minutes of the meetings for all parties to understand the progress of the project and next steps. During the construction process our team will review pay applications, prepare change orders, review submittals, and respond to requests for information by the contractor.

Before final completion staff will conduct a final inspection and prepare punch lists for the contractor prior to project closeout. Once this inspection is completed our team will perform a post-construction survey and provide as-built record drawings and electronic GIS files. This step is critical to perform promptly as in winter conditions snow and ice can make it tough to verify excavated depths.



We anticipate it will take seven-weeks to remove the sediment (both ponds) and have budgeted 10 hours per week for on-site observation, weekly project progress meetings, contractor coordination and processing of project requests (i.e., pay applications, request for information, change orders, etc.). We do recognize there will be some time for project closeout once vegetation has established later in the spring and have budgeted hours for the project closeout but have not focused our schedule on this activity.

During the seven weeks estimated for sediment removal we recognize the following as critical times during the construction process to be on-site:

- **Project Start-up:** As the project starts up dewatering will be required. Proper coordination with partner agencies on where dewatering water can be discharged and what hours of operation can occur given the proximity to residential areas will be key to success. Monitoring discharge locations once dewatering initiates to ensure proper signage for potential thin ice will also be critical. Our team will be prepared to do regular site visits during the first 3-5 days of dewatering to ensure this approach is implemented.
- **Initiation of Excavation:** As the contractor gets started moving materials it is important they are maintaining the prescribed erosion and sediment control practices and respecting the project limits. Setting expectations early is critical as it sets the tone for the duration of the project to ensure success.
- **Project Closeout:** Documenting conditions once the contractor has confirmed they have established the desired grades is key to ensure proper payment of actual sediment removed. Our approach will be to work with the contractor to give our survey team one-week advance notice of when they will be wrapping up allowing the survey team to come in and document graded elevations.

We assume the MCWD will visit the site once per week at a minimum and attend any necessary on-site meetings required due to public or partner agency requests.

#### **Task 5 Deliverables:**

- Pre-construction meeting minutes.
- Construction staking.
- Construction observation reports.
- Approved change orders, pay applications, and requests for information.
- As-built records with survey points GIS and CAD formats.

#### **Task 5 Assumptions:**

- There will be weekly on-site construction meetings, assumed one meeting per week for seven weeks.
- MCWD will be responsible for public and partner agency coordination.



#### **Task 5 MCWD Staff Resource needs:**

- Coordination with public (residents or associations) and partner agencies.
- Attendance at pre-construction meeting.
- Approval of change orders and pay applications.





Our approach as highlighted in our project understanding and scope of services is to deliver a cost-effective improvement to MCWD's ponds which can make the biggest difference on the landscape.

### Optional Task 6: Collect and Analyze Sediment Samples

Stantec staff will look to collect additional sediment samples as part of the bathymetric surveys to confirm potential disposal options for dredged materials. The cost provided is for additional laboratory analysis and staff time to take the sample, which is minimal additional time since staff will be on-site for the bathymetric survey. Staff will collect samples in accordance with the MPCA Managing Stormwater Sediment Best Management Practices Guidance Manual. Currently the ponds have elevated PAH levels and Amelia has an elevated arsenic level. Through the sampling, confirmation of the disposal requirements for dredged materials can be confirmed. Our cost to complete the sampling is:

- Less than one acre pond – \$1,200
- One-to-four-acre pond - \$1,350

### Cost:

Stantec has prepared the following cost estimate for sediment survey, design, bidding, and construction observation. The estimated cost for these services is included in table below. Each task includes the expected minimum level of effort using the most efficient discounted hourly rate, cost of mileage, survey equipment, and other miscellaneous expenses.

	Name	Meehan, Chris	Weis, Rena	Stone, Ali	Doerr, Sylvia	Wyers, Nick	Campbell, Patty	Domek, Kyle	Expenses	Total
	Project Billing Rate	\$222.00	\$149.00	\$133.00	\$133.00	\$157.00	\$133.00	\$133.00		
	Task Description									
Task 1	Pond Sediment Surveys		2.0	12.0	10.0				\$500.00	\$3,724.00
Task 2	Pond Maintenance Technical Report	2.0	3.0	16.0						\$3,019.00
Task 3	Project Design, Construction Documents and Permitting	4.0	27.0		44.0	14.0				\$12,961.00
Task 4	Bid Document Development and Bid Support		2.0		6.0	20.0	4.0			\$4,768.00
Task 5	Constructin Admininstration and Oversight	3.0	12.0		90.0	6.0		44.0	\$1,000.00	\$22,218.00
	<b>Total</b>	<b>9.0</b>	<b>46.0</b>	<b>28.0</b>	<b>150.0</b>	<b>40.0</b>	<b>4.0</b>	<b>44.0</b>	<b>\$1,500.00</b>	<b>\$46,690.00</b>
Optional Task 6	Collect Analyze Sediement Samples									
	Pond Less than 1 acre			0.75	0.75				\$ 1,000.50	\$ 1,200.00
	Pond 1 to 4 acres			0.75	0.75				\$ 1,150.50	\$ 1,350.00
	<b>Total with Optional Task</b>	<b>9.0</b>	<b>46.0</b>	<b>29.5</b>	<b>151.5</b>	<b>40.0</b>	<b>4.0</b>	<b>44.0</b>	<b>\$ 3,651.00</b>	<b>\$ 49,240.00</b>



## Schedule:

Based on the scope of services and desired timelines we have established the following schedule to ensure the project hits the desired bidding window and is completed during the 2023/2024 winter.

Estimated Project Schedule		Date to Complete	August	Sept	Oct	Nov	Dec	Jan	Feb
MCWD Board Approval to Proceed		August-10							
Task 1	Pond Sediment Surveys	August 21-23							
Task 2	Pond Maintenance Technical Report	August 23-29							
Task 3	Project Design, Construction Documents and Permitting	August 28-Sept. 22							
Task 4	Bid Document Development and Bid Support	Sept. 5 -Oct. 20							
Task 5	Constructin Administraction and Oversight	Dec. 1 - Feb. 29th							
Optional Task 6	Collect Analyze Sediement Samples	August 21-Sept. 8th							





## Key Personnel

The key members of our team, listed below are active members of the communities we serve. That's why at Stantec, we always **design with community in mind**.



**Chris Meehan | PE, CFM**

Chris currently serves as the District Engineer for Minnehaha Creek Watershed District and has worked with the District on 53 projects during his tenure, ranging from watershed-wide model updates for FEMA to wetland restorations. He has developed a deep understanding of the District's approach to achieving its overall goals through value-add partnership development. Additionally, Chris has more than 20 years of experience in watershed planning, water quantity and quality modeling, environmental review, stream restoration and construction management. He has served more than 12 watershed management organizations, three of them as District Engineer. As a result of joining Stantec, Chris has been able to bring world-wide expertise in water resources management to the District, further expanding the spectrum of solutions available to achieve the District's desired goals. Chris is responsible for leading 80 water professionals focused on developing targeted solutions to clients throughout the United States. His team was responsible for completing more than 147 projects in 2022 including a wide variety of services ranging from watershed management, floodplain modeling, climate adaptation, stormwater BMPs, groundwater, water resources, funding solutions, and ecological restoration. His ability to align these resources facilitates efficient and prompt project execution.



**Rena Weis | EIT**

Rena has four years of experience in the fields of water resources and environmental engineering, working for both public and private clients. Her project and technical experience include hydrologic and hydraulic modeling and analysis, field data collection and processing, GIS services, watershed permitting, stormwater management, and construction oversight. She also has experience with multiple research studies related to infiltration practices. Rena currently serves on the Board of the Minnesota Stormwater Research Council.



**Nick Wyers | PE Associate, Civil Engineer**

Nick has over 7 years of experience in municipal design, private development design and utility inspection. His work focuses primarily with public sector clients in both public and private funded projects.





**Ali Stone | EIT**

Ali is a water resources engineer in training with a variety of field and analytical experience. She attended the University of Minnesota, Twin Cities, obtaining her bachelor's and master's degree in Geoengineering. Her passions lie in hydrology, water quality, and urban stormwater management. Ali has been involved in a number of stormwater projects including sediment sampling, pollutant analysis and accumulation calculations.



**Sylvia Doerr | EIT**

Sylvia is a water resources engineer in training and a recent graduate of the University of Minnesota where she obtained her bachelor's degree in environmental engineering. She has assisted with various stormwater projects including watershed permitting, field sampling and data collection, and cost estimations.

**Jason Nelson | Survey Manager**

Jason is a professional land surveyor with over 17 years of expertise and experience in the land surveying profession. Jason is a collaborative team player with an ownership mentality. He brings experience leading and managing multiple survey crews and office staff. Business owner with 6 years of experience in business operations, management, budgeting, marketing and payroll.

**Kyle Domek | Survey Technician, LSIT**

Kyle is a survey technician who specializes in collecting topographic data for projects across the Twin Cities.





## Project Examples



### Integrated Stormwater Management **Eden Prairie, Minnesota**

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The City of Eden Prairie, a suburban community in the Minneapolis metropolitan area, manages over 800 stormwater basins. Each basin plays an important role in protecting lakes and streams from sedimentation and excess nutrient loading. Stantec and the City started their partnership in 2010 to inventory infrastructure and document maintenance needs. Basins are assessed within a lake watershed, beginning with impaired waterbodies. Since 2010, the City has assessed over 400 ponds through the inventory and assessment program. The assessments include determination of stormwater contributions from public the rights-of-way, city lands, or immediate connection to downstream public waters. Field surveys are conducted to measure the top of sediment and bottom of sediment, by measuring to a depth of refusal. The City collects detailed inspection records to comply with their MS4 reporting requirements and document qualitative maintenance concerns. Following the field surveys, the ponds are analyzed for sediment accumulation and modelled for water quality characteristics. Stantec and the City maintain a database that compiles the sediment accumulations survey points, and pond contours. Pond water quality is analyzed using P8 (Program for Predicting Polluting Particle Passage thru Pits, Puddles, and Ponds). The modeling identifies ponds that transport excess total suspended solids (TSS) and total phosphorus (TP) to downstream waterbodies. Depending on the watershed a lake response models using BATHTUB, a lake eutrophication model. Results from P8 are used as an input for upstream watershed loading. For reporting, basins are prioritized for maintenance needs, retrofitting opportunities, and need for expanding basins. Maintenance needs are prioritized by degree of sediment accumulation, pipes with inhibited flow or infrastructure needing repair, ponds with low TSS or TP removal efficiencies, and basin expansion projects. The report also identifies ponds where further study is warranted and provides cost estimates for projects. For example, the City has partnered with local watershed districts and the University of Minnesota to investigate internal loading in stormwater ponds. The City is improving workflows by developing GIS tools to view and plan pond maintenance projects and streamline MS4 inspections. Through each inventory phase, the City better understands where to focus taxpayer dollars. This focus has led to identifying important, cost-effective stormwater projects that improve water quality and help meet TMDL load allocations.





*Pond GP-1.2 Before*



*Pond GP-1.2 After*

### **City of Eagan Stormwater Pond Management** Eagan, Minnesota

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In 2016, Stantec designed and observed the installation of the first of a series of projects for the City of Eagan, which was a pond modification project. This project included modification of the existing outlet structure to control the water quality treatment depth and the addition of an iron enhanced sand filter on pond EP-2.01 which is in the North Lake watershed.

Prior to beginning design Stantec completed topographical surveys, bathymetric surveys, sediment sampling, and sediment testing to assist in developing the filters shown, which was part of the City's regular maintenance evaluation of accumulated sediment in ponds. In all the filters shown, as well as those being designed currently, Stantec has made numerous modifications to existing storm sewer and outlet control structures to allow proper function of the new filters within the City's existing stormwater pond system.

Since 2016 Stantec has designed and managed the construction of four other iron enhanced sand filter installations as part of pond enhancements for the protection of Cliff Lake, Burr Oaks Lake, Fitz Lake, and Lemay Lake. Through the success of these projects Stantec has become a trusted partner in the implementation of Eagan's stormwater management program. Stantec has now performed several feasibility studies for various BMPs, pond sediment corings, and internal loading assessments since these initial projects as a reflection of Stantec's ability to deliver results to the City. Stantec is currently in the process of construction for two iron enhanced sand filter retrofits in the City of Eagan and is beginning the design of three more to be constructed in 2019-2020.



### **Thompson Oaks River to River Greenway and Water Quality Design** **Dakota County, Minnesota**

The Thompson Oaks site is a connection between the Robert Street Underpass and Oakdale Avenue, along the River to River Greenway in West Saint Paul. It offers surrounding communities access to outdoor recreation opportunities essential for public health and well-being. Redevelopment of this former golf course and current brownfield presents stakeholders with a nexus of pedestrian connectivity, improved stormwater management, and environmental enhancement within a highly urban neighborhood.

In 2019, Dakota County hired Stantec to evaluate concepts which manage the impacted soil while also unlocking future development and enhancing natural areas and stormwater management. We engaged with study partners to understand key concepts and their vision for the site. Key points included the desire for pedestrian access and connectivity, maintenance access to stormwater features, restoration of a natural corridor, and improved stormwater management using a combination of ponds, wetlands and a stream.

The Stantec team refined one concept that avoided impacts to existing jurisdictional wetlands, managed environmentally impacted soils on-site, increased pollutant removal of stormwater runoff, and provided trail connections and a natural experience for greenway users. For example, the concept included native prairie grasses and flowers to create pollinator habitat, riparian buffers, and a variety of aquatic habitats. The concept also included multiple crossings of the water features to enhance pedestrian connectivity and improve access to community features such as the library and a potential amphitheater.

Stantec further developed the concept from preliminary design through construction documents and is currently performing construction observation and administration services. The project is anticipated to be substantially complete in Summer 2023.



## **Pamela Park and Bde Maka Ska Pond Surveys Minneapolis, Minnesota**

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The Minnehaha Creek Watershed District owns and maintains 26 stormwater basins throughout the watershed. Basins are surveyed in the spring and compare the existing volume to the design volume. If a basin volume has been reduced by approximately 50% the basin undergoes dredging maintenance. Sediment samples are collected to determine if the fill material is considered regulated or unregulated. Regulated fill needs to be disposed of at a landfill if values of arsenic, copper, or PAHs are above the industrial waste limits. Samples were collected in both ponds and results indicated the fill material from Pamela Park exceeded the industrial limits for PAHs (BaP equivalent). Pamela Park Pond 1 also included a retaining wall design and replacement near the outfall. The existing retaining wall had undercut the wall, impacting adjacent private property. For both projects Stantec provided engineering and oversight services. For Pamela Park Pond and Bde Maka Ska, Stantec oversaw the construction of the wall and dredging activities.

## **References:**

### **City of Eden Prairie, MN**

Contact: **Patrick Sejkora**  
8080 Mitchell Road, Eden Prairie, Minnesota, 55344-2230  
Office: 952-949-8300

### **City of Eagan, MN**

Contact: **Gregg Thompson**  
3830 Pilot Knob Road, Eagan, Minnesota, 55122-1810  
Office: 651-675-5000

### **Thompson Oaks**

Contact: **Mike Behan**  
600 E Fourth Street, Chaska, Minnesota, 55318  
Office: 612-361-1500

**MCWD Resources:** MCWD resources needed to complete the project are highlighted in the Approach and Methodology Section.

**Subcontracting:** The only subcontracting we anticipate for this project would be for the optional task of sediment core analysis. Pace Analytical would be the laboratory used to evaluate the sediment samples.