



Title: Authorization to Amend Wassermann Alum Design Contract with Stantec

Resolution number: 21-032

Prepared by: Name: Laura Domyancich-Lee
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Reviewed by: Name/Title: Kailey Cermak, Hydrologist

Recommended action: Authorization to amend an existing contract with Stantec (formerly Wenck Associates) to provide additional construction oversight of the Wassermann Lake alum application.

Schedule: April 2021: First alum treatment of Wassermann Lake and second alum treatment of the pond on the Wassermann Lake Preserve property.
Fall 2022: Second alum treatment of Wassermann Lake.

Budget considerations: Wassermann Lake Alum Treatment
Fund name: Wassermann Lake Internal Load Management 3-3156
Fund budget: \$360,900 (includes \$270,675 BWSR Clean Water Fund grant)
Expenditures to date: \$22,384
Requested amount of funding: \$15,600

Past Board action: Resolution 19-035: Authorization to award contract for the Wassermann West alum treatment
Resolution 19-072: Authorization to apply for BWSR Clean Water Funds
Resolution 20-050: Ordering of the Wassermann internal load management project
Resolution 20-051: Approval of Wassermann internal load project agreement
Resolution 20-052: Authorization to contract with UW-Stout to analyze Wassermann Lake sediment for alum treatment engineering design
Resolution 20-075: Authorization to contract with University of Wisconsin-Stout to perform sediment core analysis
Resolution 20-076: Authorization to contract with Wenck Associates to develop alum treatment specifications

Summary:

Since adoption of the 2017 Water Management Plan, the Minnehaha Creek Watershed District (MCWD) has been working to implement high impact capital projects within the Six-Mile Creek Halstead Bay (SMCHB) subwatershed, with particular focus in the city of Victoria and Laketown Township, where current land use pressure presents a unique opportunity to implement projects concurrent with development. Under this plan, MCWD has invested substantially in both watershed and in-lake management activities in the restoration of Wassermann Lake, an impaired waterbody within the city of Victoria.

In June 2017, MCWD and the City of Victoria partnered to acquire a 33-acre parcel on the west side of Wassermann Lake now referred to as Wassermann Lake Preserve. In advance of that acquisition, the District and City entered into an agreement stating that the two agencies would collaborate to develop a park design that provides public access and

enjoyment of the site while restoring its wetland and woodland areas and implementing water quality improvements in Wassermann Lake. With a subwatershed-wide carp management program underway, internal loading is the last remaining significant source of nutrient pollution to address in Wassermann Lake. The 2013 SMCHB Diagnostic Study estimates an annual internal release rate of 375 pounds per year, the largest nutrient source identified.

Alum Treatments

In November 2017, a contract was awarded for preliminary design for park amenity and natural resources improvements at the Wassermann Lake Preserve site. A component of that design scope was the development of specifications for aluminum sulfate (alum) treatment of the six-acre pond on the site. Prior analysis had identified this pond as a significant source of phosphorus into Wassermann Lake with approximately 39 pounds per year due to internal nutrient release from the pond. Wenck Associates prepared a technical memo recommending two alum treatments to occur over three years, with the first and third years having active treatment. The memo also recommends a third contingency dose sometime in the following 2-5 year window, and this need would be determined by subsequent effectiveness monitoring.

The first alum application to the pond occurred in spring 2019 resulting in a 75-pound per year decrease in phosphorus loading to Wassermann Lake. The second alum treatment is set to occur in April or May 2021. During the 2020 monitoring season, Research and Monitoring (R&M) program staff collected sediment cores from the bed of the pond. These cores were analyzed by the University of Wisconsin – Stout to determine the total amount of legacy phosphorus in pond sediment and the rate at which phosphorus is released from sediment into the water column. These analyses have helped to identify the most cost effective alum dose and, thereby, phosphorus load reduction possible.

In January 2020, MCWD was awarded a Clean Water Fund grant from the Board of Water and Soil Resources (BWSR), positioning Wassermann Lake for an initial alum treatment in spring 2021 and a subsequent treatment in fall 2022. The total budget for this project is \$355,900, including \$284,720 in grant funds and \$71,180 in match. MCWD's match funds will be allocated to feasibility, pre- and post-project sediment analysis, and a portion of the treatment cost. The grant dollars will be allocated exclusively to alum application.

Because of Stantec's (formerly Wenck Associates) unique qualifications and experience with alum application in the region, MCWD contracted with Stantec (Attachments 1 and 2) to develop specification documents for the alum applications of both Wassermann Lake and Wassermann West Pond informed by: the sediment core lab results; lake bathymetry; historic and recent water quality data; initial dosing calculations; and the internal load management plan. Specifications direct treatment locations, recommended alum application rates, application schedule, a cost-benefit analysis, and estimated project cost.

Contract Amendment

The Stantec contracts also included the provision of very limited construction oversight for the alum applications with the majority of the oversight and administrative tasks to be managed by MCWD staff. Fortunately, the accepted quotes for the alum applications are lower than what was estimated in the grant budgets. As such, MCWD staff recommend that this available grant funding be allocated to additional construction oversight by Stantec not to exceed \$15,600 as detailed in Attachment 3: Wassermann Alum Application Construction Oversight Contract Amendment. The additional construction oversight is to include supplementary monitoring of water chemistry during the treatments, verification of dosing across the treatment areas, and compilation of treatment records to comply with reporting requirements. Tasks and associated costs will be adjusted based on a forthcoming operations plan to be submitted by the contractor which will determine timing and oversight need.

Staff recommends approval of the contract amendment with Stantec to provide additional construction oversight for the Wassermann Lake and West Wassermann pond alum applications.

Supporting documents:

Attachment 1: Wassermann West Pond Alum Design and Oversight Scope of Work

Attachment 2: Wassermann Lake Alum Design and Oversight Scope of Work

Attachment 3: Wassermann Alum Application Construction Oversight Contract Amendment



RESOLUTION

Resolution number: 21-032

Title: Authorization to Amend Wassermann Alum Design Contract with Stantec

- WHEREAS, pursuant to Resolution 14-047 the MCWD Board of Managers has identified the Six Mile Creek-Halsted Bay (SMCHB) subwatershed as a priority area for focusing planning activities and coordination efforts;
- WHEREAS, on March 26, 2015 the Board of Managers authorized MCWD to enter into a Memorandum of Understanding with the City of Victoria outlining opportunities to collaborate and integrate mutual efforts in the realms of coordinated planning of local water and land use plans, assessment of specific management issues, coordinated regulatory review of water and land development, and specifically identified a shared interest in addressing the water quality impairment of Wassermann Lake;
- WHEREAS, in January 2018, the Board of Managers adopted the MCWD Watershed Management Plan, which incorporated a comprehensive restoration strategy for the SMCHB subwatershed to achieve MCWD’s goals of protecting and improving water quality, water quantity, ecological integrity, and thriving communities through land use and water integration. The Watershed Management Plan includes a capital improvement plan, which lists the Wassermann West External Load Reduction;
- WHEREAS, in September 2018, the Board of Managers accepted a grant award of \$93,879 through the Board of Water and Soil Resources Watershed-Based Funding Pilot Program for the Wassermann West project;
- WHEREAS, on August 22, 2019 the Board of Managers authorized staff to submit an application to the Board of Soil and Water Resources (BWSR) Clean Water Fund grant program requesting \$284,720, and requiring a 25% match of \$71,180 for the implementation of the Wassermann Internal Load Management Project (the Project). BWSR notified MCWD in January 2020 that the grant was awarded in the full amount;
- WHEREAS, on June 23, 2020, the Board of Managers ordered the Wassermann Internal Load Management Project in fulfillment of the MCWD Watershed Management Plan’s identification of the Project as a planned capital investment to reduce internal nutrient loading, improve water clarity, and create a more abundant and diverse aquatic vegetation community with alum treatments;
- WHEREAS, on September 24, 2020, the Board of Managers authorized staff to enter a contract with Stantec (formerly Wenck Associates) to develop specifications for alum treatment of Wassermann Lake and the Wassermann West Pond and to provide construction oversight;
- WHEREAS, based on project complexity, the scope of the design and construction oversight contract with Stantec has been amended to include additional oversight activities to be performed by Stantec to verify that proper procedures are followed throughout the alum treatments.

NOW, THEREFORE, BE IT RESOLVED that the MCWD Board of Managers authorizes the District Administrator to execute a contract amendment with Stantec to perform additional construction oversight of the Wassermann alum treatments.

Resolution Number 21-032 was moved by Manager _____, seconded by Manager _____. Motion to adopt the resolution ___ ayes, ___ nays, ___ abstentions. Date: 4/22/2021

 Secretary Date: _____



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Exceptional outcomes.

September 17, 2020

Brian Beck

Research and Monitoring Program Coordinator
Minnehaha Creek Watershed District
15320 Minnetonka Blvd.
Minnetonka, MN 55345

RE: Wassermann West Pond Alum Treatment Design and Oversight Scope of Work

Dear Mr. Beck:

Thank you for the opportunity to continue to provide our services to the Minnehaha Creek Watershed District (District). As requested, Wenck Associates, Inc. (Wenck) has prepared this proposal to assist the District in developing the final design, specifications, request for quote documents, contractor selection, and oversight of the second alum application for Wassermann West Pond. This proposal only addresses requests for the second dose that is planned for 2021. Future alum doses will require an additional proposal.

Following is a scope of work for implementing the Wassermann West Pond alum treatment

Task 1. Alum Dosing and Cost Estimate Analysis

Under this task, Wenck will review the sediment core lab results collected after the first alum dose as well as the items prepared by Wenck and the District prior to the first dose, which includes: the initial sediment core results, lake bathymetry, historic and recent water quality data, the initial dosing calcs, and internal load management plan. Wenck will use this information to adjust and/or refine the alum treatment area and the chemical dosing rate for the second dose to achieve long-term reduction goals/targets. Wenck will work with District staff to prepare a plan for the second dose that includes: treatment location(s), recommended dosing rates, application schedule, updated cost/benefit analysis, estimated cost, staging area, and lessons learned from the first dose. Deliverables for this task will include a technical memo to district staff detailing the second alum dose for Wassermann West Pond. This task will be completed by November 20th, 2020

Task 2. Development of Alum Application Specifications and Bid Documents

Using the plans and specifications developed for the first alum dose, along with the analyses and memo completed under Task 1, Wenck will develop specifications and request for quote documents for the second dose for Wassermann West Pond. The specifications for the alum application will include application rates, locations, timing, equipment requirements, staging, maps for access and staging, and any other necessary information. This task will be completed by December 11th, 2020

Task 3. Contractor Selection

Wenck will assist the district with reviewing quotes and selecting the contractor(s). Wenck subtasks for this task will include helping answer any pre-quote questions, quote analysis and review with district staff, and contractor recommendation. It is understood that the request for quotes will combine both the Wassermann West Pond alum treatment and the Wassermann

Brian Beck
MCWD
September 17, 2020



Lake alum treatment as one construction project with separate quote line items for the two sites. Combining these treatments should help reduce mobilization costs.

Task 4. Application Observation

The second alum application for Wassermann West Pond will likely be conducted in the Spring of 2021 and take approximately 2 to 3 days. Wenck will be on-site during the initial set-up and early application period. For subsequent days, Wenck will be available to help the District answer questions and review water quality data to ensure progress. It is our understanding that District staff will be available to assist with application observation and monitoring. Wenck has budgeted 3 hours of staff time to be on-site during the initial set-up and early application period, and 2 hours for subsequent follow-up questions and check-ins. We will work closely with District staff and develop an on-site schedule for application observation and monitoring.

Task 5. Meetings

Wenck allotted time for one meeting (likely remote format) with district staff during the process. Additional meetings may occur if aligned with tracking and/or other monitoring events.

Budget and Timeline

Wenck will perform the work tasks described above at our most efficient discounted hourly rates that are currently used by MCWD along with direct expenses covering mileage, equipment, etc. with a total not to exceed \$5,800. In the event that follow-up or out of scope items are identified or requested by the District, Wenck will work with the District to develop a scope and budget for the additional task(s) and will not proceed with identified task(s) without authorization from the District.

	Task	Labor	Mileage & Equipment	Total Cost
1	Alum Dosing and Cost Estimate Analysis	\$2,300	--	\$2,300
2	Development of Alum Application Specifications and Bid Documents	\$950	--	\$950
3	Contractor Selection	\$1,300	--	\$1,300
4	Application Observation and Monitoring	\$700	\$150	\$850
5	Meetings	\$400	--	\$400
	TOTAL	\$5,650	\$150	\$5,800

On behalf of the 300+ employee-owners of Wenck, thank you for this opportunity to work with the Minnehaha Creek Watershed District. Should you have any questions, or need clarification, please do not hesitate to contact Jeff Strom at 763-252-6833.

Sincerely,

Wenck Associates, Inc.

Jeff Strom
Associate



Responsive partner.
Exceptional outcomes.

September 17, 2020

Brian Beck

Research and Monitoring Program Coordinator
Minnehaha Creek Watershed District
15320 Minnetonka Blvd.
Minnetonka, MN 55345

RE: Wassermann Lake Alum Treatment Design and Oversight Scope of Work

Dear Mr. Beck:

Thank you for the opportunity to continue to provide our services to the Minnehaha Creek Watershed District (District). As requested, Wenck Associates, Inc. (Wenck) has prepared this proposal to assist the District in developing the final design, specifications, request for quote documents, contractor selection, and oversight of the first alum application for Wassermann Lake. This proposal only addresses requests for the initial dose that is planned for 2021. Future alum doses will require an additional proposal.

Following is a scope of work for implementing the Wassermann Lake alum treatment

Task 1. Alum Dosing and Cost Estimate Analysis

Under this task, Wenck will review the sediment core lab results, lake bathymetry, historic and recent water quality data, and the processed buoy data that will be prepared and provided by the District. Wenck will use these analyses to define the alum treatment area and the chemical dosing rate to meet internal load reduction goals/targets. Wenck will work with District staff to design an internal load treatment plan for Wassermann Lake that includes: treatment location(s), recommended dosing rates, application schedule, estimated longevity of the proposed treatment, cost/benefit analysis, estimated cost, and potential staging area(s). Deliverables for this task will include a technical memo to district staff detailing the internal load treatment plan for Wassermann Lake. This task will be completed by November 13th, 2020.

Task 2. Development of Alum Application Specifications and Bid Documents

Wenck will develop the alum dosing specifications and request for quote documents for the initial dose for Wassermann Lake based on the internal load treatment plan developed during Task 1. The specifications for the alum application will include application rates, locations, timing, equipment requirements, staging, maps for access and staging, and any other necessary information. This task will be completed by December 11th, 2020

Task 3. Contractor Selection

Wenck will assist the district with reviewing quotes and selecting the contractor(s). Wenck subtasks will include helping answer any pre-quote questions, quote analysis and review with district staff, and contractor recommendation. It is understood that the request for quotes will combine both the Wassermann Lake alum treatment, as well as the Wassermann West Pond

Brian Beck
MCWD
September 17, 2020



alum treatment as one construction project with separate quote line items for the two sites. Combining these treatments should help reduce mobilization costs

Task 4. Application Observation

The first alum application for Wassermann will likely be conducted in the Spring of 2021 and take approximately 4 to 5 days. Wenck will be on-site during the initial set-up and early application period. For subsequent days, Wenck will be available to help the District answer questions and review water quality data to ensure progress. It is our understanding that District staff will be available to assist with application observation and monitoring. Wenck has budgeted 4 hours of staff time to be on-site during the initial set-up and early application period, and 2 hours for subsequent follow-up questions and check-ins. We will work closely with District staff and develop an on-site schedule for application observation and monitoring.

Task 5. Meetings

Wenck allotted time for 1 meetings (likely remote format) with district staff during the process. Additional meetings may occur if aligned with tracking and/or other monitoring events.

Budget and Timeline

Wenck will perform the work tasks described above at our most efficient discounted hourly rates that are currently used by MCWD along with direct expenses covering mileage, equipment, etc. with a total not to exceed \$10,000. In the event that follow-up or out of scope items are identified or requested by the District, Wenck will work with the District to develop a scope and budget for the additional task(s) and will not proceed with identified task(s) without authorization from the District.

	Task	Labor	Mileage & Equipment	Total Cost
1	Alum Dosing and Cost Estimate Analysis	\$5,600	--	\$5,600
2	Development of Alum Application Specifications and Bid Documents	\$2,000	--	\$2,000
3	Contractor Selection	\$900	--	\$900
4	Application Observation	\$850	\$150	\$1,000
5	Meetings	\$500	--	\$500
	TOTAL	\$9,850	\$150	\$10,000

On behalf of the 300+ employee-owners of Wenck, thank you for this opportunity to work with the Minnehaha Creek Watershed District. Should you have any questions, or need clarification, please do not hesitate to contact Jeff Strom at 763-252-6833.

Sincerely,

Wenck Associates, Inc.

Jeff Strom
Associate



Stantec Consulting Services Inc.
7500 Olson Memorial Highway Suite 300, Golden Valley, MN 55427

April 16, 2021
File: 227701960 & 227701961

Attention:

Laura Domyancich-Lee
Planner - Project Manager
Minnehaha Creek Watershed District
15320 Minnetonka Blvd
Minnetonka, MN 55345

Dear Laura,

Reference: Wassermann Lake and West Wassermann Pond Alum Application Oversight Contract Amendment

As requested by the District, this letter includes a scope of work and budget for alum application oversight and monitoring for Wassermann Lake and Wassermann West Pond. Wenck/Stantec will complete this work as an amendment to Task 4 of the "Wassermann Lake Alum Treatment Design and Construction Oversight" and "Wassermann West Pond Alum Treatment Design and Construction Oversight" agreements between the District and Wenck/Stantec dated October 18, 2020.

Task 4 Scope of Work Amendment

The alum applications for Wassermann Lake and Wassermann West Pond are currently scheduled to take place in late April and/or early May 2021. Details of the schedule and timing of the applications will be known when the contractor submits their final application plan to the District. The District has estimated that the alum treatments could take up to 10 days to complete based on the contractor's equipment and capacity. This scope of work assumes Wenck/Stantec will be on-site for up to 10 days (8 hours per day) to oversee and help monitor the alum application. Also included in this scope of work is 16 hours of Wenck/Stantec staff time for meetings, communication/correspondence with District staff, and to prepare equipment and materials for oversight.

The specific work to be performed by Wenck/Stantec for this amendment are as follows:

- Meetings and Prep (\$2,600)
 - One meeting with District staff to review Clarke's alum application plan and discuss oversight and monitoring procedures
 - One check-in meeting with District staff during application
 - Develop online tool (e.g. Smartsheet) to track and record application and monitoring data/information
 - Prepare equipment and SOPs for observation and monitoring
- Alum Application Oversight and Monitoring (\$10,500)
 - This scope assumes that one Wenck/Stantec staff will be on-site for up to 10 days, approximately eight hours per day to observe the application process. Wenck/Stantec's

Reference: Wassermann Lake and West Wassermann Pond Alum Application Oversight

primary role is to ensure that the contractor is following proper procedures and specifications for each treatment. While on site, Wenck/Stantec staff will track alum quantities, application routes, perform jar-tests, and monitor weather conditions, pH and other water quality conditions.

- Equipment and Mileage (\$2,500)
 - Up to 10 days of Wenck/Stantec boat usage (\$100/day)
 - Up to 10 days of Wenck/Stantec sonde and pH probe usage (\$100/day)
 - Mileage to/from job site from Wenck/Stantec Golden Valley office

Fee Estimate, Schedule & Deliverables

Fee Estimate

The cost for Wenck/Stantec to complete the Task 4 scope of work amendment detailed above is \$15,600.

Schedule

Wenck/Stantec will begin work immediately upon receiving a Notice to Proceed from the District. The schedule for this work is highly dependent on the final application plan supplied by the contractor.

Deliverables

- Creation of an online tool to track alum application quantities and information
- All monitoring data (e.g. pH profiles and jar tests) will be supplied to the District in electronic format

Project Team

The following Wenck/Stantec staff have been selected to execute the Scope of Work. Other staff will participate as needed

- Project Manager: Jeff Strom
- Senior Review: Chris Meehan
- Project Engineer: Anne Wilkinson

Assumptions

- The time and materials stated in this scope of work are estimates and will depend on the final application plan supplied by the contractor.
- Once the contractor's application plan is received, Wenck/Stantec will work closely with District staff to develop a plan and timeline for the oversight and monitoring that includes daily checks/procedures and how much time Wenck/Stantec staff will be needed on-site.

April 16, 2021
Laura Domyancich-Lee
Minnehaha Creek Watershed District
Page 3 of 3

Reference: Wassermann Lake and West Wassermann Pond Alum Application Oversight

Regards,

Stantec Consulting Services Inc.

A handwritten signature in black ink, appearing to read "J. Strom". The signature is stylized with a large initial "J" and a long horizontal stroke.

Jeff Strom
Project Manager
Phone: (952) 484-9083
jstrom@wenck.com