

Technical Advisory Committee MINUTES | March 14, 2024

A meeting of the Technical Advisory Committee (TAC) of the Shingle Creek and West Mississippi Watershed Management Commissions was called to order by acting Chair Ben Scharenbroich at 11:05 a.m., Thursday, March 14, 2024, at the Plymouth Community Center, 14800 34th Avenue North, Plymouth, MN.

Present: Mitchell Robinson, Brooklyn Park; Ben Perkey, Crystal; Derek Asche, Maple Grove; Nick Macklem, New Hope; Ben Scharenbroich, Plymouth; Todd Shoemaker and Katie Kemmitt, Stantec; and Judie Anderson, JASS.

Not represented: Brooklyn Center, Minneapolis, Osseo, and Robbinsdale.

Also present: Andy Polzin, Plymouth; and Mike Sorensen, Minneapolis Park and Recreation.

I. Robinson volunteered to serve as **Vice Chair** of the Technical Advisory Committee. Mark Ray, former representative from Crystal, had previously held this position.

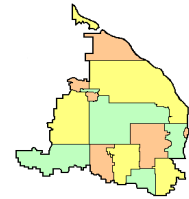
II. Motion by Asche, second by Robinson to **approve the agenda**. *Motion carried unanimously.*

III. Motion by Asche, second by Robinson to **approve the minutes*** of the February 8, 2024, meeting. *Motion carried unanimously.*

IV. **EAGLE/PIKE LAKE MANAGEMENT PLAN.**

A. The Commission has previously discussed a potential Lake Management Plan for Eagle and Pike Lakes, similar to those recently completed on Bass, Pomerleau, Meadow, and Crystal Lakes. These plans typically have included alum treatments to reduce internal phosphorus load; aquatic vegetation and fish management; and intensive monitoring over three to four years to comprehensively and systematically improve lake water quality. Eagle and Pike Lakes are slated to begin this process in 2024. The purpose of this item is to initiate the Lake Management Plan process so that monitoring and project preparation can be completed this spring/summer and alum treatments can be applied as soon as this Fall.

B. The Shingle Creek Commission previously studied the Eagle Lake subwatershed through the Cedar Island, Pike, and Eagle Lakes Nutrient TMDL completed in 2010 and in the TMDL 5-year review. The TMDL concluded that internal load management, biological management, and reduction of nonpoint sources of phosphorus in the watershed by retrofitting Best Management Practices (BMPs) would have the most impact on reducing phosphorus load and improving water quality. The TMDL 5-Year review identified a 39% reduction in TP for Pike Lake and a 29% TP reduc-



tion for Eagle Lake. Pike Lake Subwatershed Assessments were completed in 2017 and 2019. These past studies identified general practices to reduce the watershed load to the lake.

In 2023, the Commission authorized Stantec to complete the Eagle Lake Subwatershed Assessment that built on the previous studies to identify specific locations for BMPs in the Eagle Lake subwatershed and evaluate internal loading in Eagle and Pike Lakes. The Eagle Lake Subwatershed Assessment is still being finalized, but sediment core data collected in Summer 2023 and presented to the Commission in August indicated a need for internal load management in both Eagle and Pike. The Commission's Fourth Generation Plan includes a 2024 project to complete Lake Management Plans for Eagle and Pike Lakes similar to those recently completed in Bass, Pomerleau, Crystal, and Meadow lakes. This would include targeted monitoring; alum treatments to control internal phosphorus load; aquatic vegetation monitoring and treatment; and if necessary rough fish management.

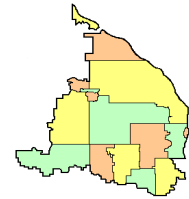
The Commission submitted a Clean Water Fund Projects & Practices grant to BWSR in August 2023 for \$527,500 (\$337,500 grant and \$190,000 match) to fund the Eagle and Pike Lakes internal load project; however, the Commission did not receive an award. Based on the findings of the internal load assessment for the lakes and discussions with the City of Maple Grove and the Commission, Staff recommend proceeding in 2024 with the Lake Management Plan for these lakes using Commission funding.

C. Similar to previous projects, Staff recommend that the Commission consider ordering the overall project, which would proceed in three actions at the March 14 meeting: first, approve the project; second, authorize a work order for Stantec to perform the professional services associated with the project; and third, authorize entering into a cooperative agreement with Maple Grove to serve as the contracting agent for the alum treatments. Future aquatic vegetation management would be completed under separate contract with a specialized contractor.

This project is listed on the Shingle Creek Capital Improvement Program for 2024, and typically the Commission would consider levying for it in Fall 2024. The Commission maintains the Closed Projects account in which to deposit levy funds that are "left over" when CIP projects are completed for less than the amount levied. The Commission has designated that those funds are to be used for limited purposes: to cover overages when CIP projects exceed the budget; to fund additional projects; or to complete special studies such as feasibility studies to help define and scope future CIP projects and to prepare them for grant applications. The Commission currently holds a large balance in the Closed Projects Account (estimated at around \$850,000) after several past projects came in well under budget. Based on the Commission's desire to not hold a large balance in their closed projects account, Staff recommend this project be funded through the Closed Projects Account rather than being levied for in 2024.

D. Stantec's **Work Order 24-02** revised March 12, 2024, provides a Scope of Work comprised of four tasks:

Task 1 – Engineering Support for alum treatments, with the City of Maple Grove



acting as the contracting agent for the treatments from Fall 2024 to Fall 2026. \$11,424.

Task 2 – Phosphorus Monitoring. Additional monitoring outside regularly scheduled monitoring comprised of collecting sediment cores and conducting water quality monitoring over two summers, 2025 and 2027. \$31,850.

Task 3 – Submersed Aquatic Vegetation (SAV) Monitoring. 2025 and 2027 early and late summer monitoring following alum treatments to assess response of the aquatic plant community. \$32,140.

Task 4 – Aquatic Invasive Species (AIS) Delineations and Permitting. Herbicide treatment and hand-pulling of curly-leaf pondweed and Eurasian watermilfoil. Early spring/summer for up to five years. \$47,890.

Total labor costs = \$105,544; total expenses = \$17,760. Total Stantec fee = \$123,304.

E. Contractor Fee Estimates.

Task 1 – Alum Application for both lakes - \$340,000.

Task 2 – Herbicide treatments and hand-pulling for up to five years - \$12,000.

Estimated contractor fees = \$352,000.

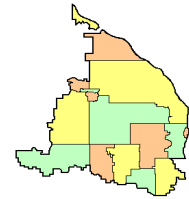
Motion by Asche, second by Macklem to recommend to the Commission to approve the project, authorize the work order, enter into a cooperative agreement with the City of Maple Grove, and fund the project from the Closed Project Account. *Motion carried unanimously.*

V. 2024 PROPOSED MAINTENANCE FUND ACTIVITIES.*

In 2022 the Commissions approved a new Maintenance Fund intended to maintain, repair, or replace Commission-led projects to continue providing water quality benefits. Projects considered for Commission funding under the Maintenance Fund are described in the policy* (included in the meeting packet for reference) and are evaluated by the TAC and recommended to the Commission for approval.

A. Bass Lake Curly-leaf Pondweed Management. Bass Lake has been treated with diquat herbicide for four consecutive years for a curly-leaf pondweed (CLP) infestation. CLP is persistent and often requires up to 7 years of treatment per DNR recommendation. Bass Lake requires additional CLP management in 2024. This additional year of Bass Lake CLP management includes: (1) Curly-leaf pondweed delineation and mapping; (2) Herbicide treatment permitting and coordination; and (3) Contract with herbicide applicator and application oversight.

The cost of the herbicide treatment will depend on the applicator, the delineated area of CLP growth, and the unit price of diquat herbicide, which is market-dependent. The expected cost of the herbicide application including applicator fees and materials is \$4,000. Stantec will coordinate a request for quote following the delineation. This applicator cost estimate of \$4,000 is Staff's best estimate based on last year's treatment and estimated 2024 herbicide unit prices. The window between when the delineation area is approved by the DNR



and when the optimal treatment window occurs is narrow, thus Stantec recommends the Commissions provide authorization for application to proceed immediately after obtaining the quote. The contract will be reviewed by the Commissions' attorney before application and will be brought to the following meeting for ratification. (A draft services agreement* is included in the meeting packet.) If the applicator fees are substantially more than estimated, Stantec will contact the Chair and get his decision and approval to proceed.

B. Ryan Creek Carp Barrier Maintenance. The Ryan Creek carp barrier installed on Ryan Creek off of France Avenue functions as the first step in carp population control in the Twin Lakes chain. The fish barrier at France Avenue (outlet of Twin Lakes to Ryan Lake) frequently clogs, which reduces flow capacity through the barrier and floods backyards of adjacent properties. Stantec and City staff must routinely clean off the barrier when it gets clogged, particularly in the spring with snowmelt. Staff recommends budgeting \$6,664.56 from the Maintenance Fund for carp barrier cleaning and maintenance in 2024. Site visits involve 2 staff entering Ryan Creek with equipment and yard waste bags for removing debris. Site visits typically last 1-2 hours. Stantec will complete up to 6 site visits in 2024 under the proposed budget.

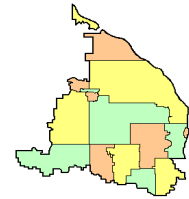
C. Stantec's **Work Order 24-03** dated March 7, 2024 shows Stantec fees for the Bass Lake project of \$5,200.04 and for the Ryan Lake project of \$6,664.56. Estimated contractor fee for the Bass Lake project is \$4,000.

Motion by Ashe, second by Robinson to recommend that the Commission approve the 2024 maintenance activities as described and to fund them from the Commission's Maintenance Fund. *Motion carried unanimously.*

IV. COLORADO AVENUE INFILTRATION TRENCH FEASIBILITY STUDY.

A. The Shingle Creek Watershed Management Commission (SCWMC) completed the Gaulke Pond Subwatershed Assessment in 2023. That study identified the Colorado Avenue infiltration trench as the highest ranked practice to reduce flooding and improve water quality within the Gaulke Pond Watershed, a large, fully developed mixed use subwatershed. The study also recommended the Commission study the trench location and design in more detail before final design because of its potential proximity to the adjacent drinking water reservoir. The Commission subsequently applied for and received a grant from the MPCA to study the trench feasibility. Work Order 24-01 dated March 7, 2024, details the tasks and costs to complete the feasibility study.

The 890 acres of urban landscape in question drains into the regional Gaulke Pond, which is land locked. During wet periods, the pond is pumped to Twin Lake to increase pond storage and mitigate upstream flooding. The City of Crystal has studied the pond and its watershed extensively to identify and prioritize efforts to reduce flooding within Gaulke Pond and other connected ponds just upstream. The Cities of Robbinsdale and Crystal and the Commission collaborated in 2021 to more extensively study and establish an emergency pumping plan for Gaulke Pond. The City implemented the Central Core Stormwater project in 2022 to provide additional flood storage within the chain of ponds. In 2023, these entities further collab-



orated to conduct an assessment of the Gaulke Pond subwatershed. The Gaulke Pond SWA identified eleven potential practices to reduce runoff volume within the watershed, which were ranked according to runoff reduction volume, watershed area, construction cost, lifetime cost, and cost per acre-foot infiltrated.

B. The **scope of work** focuses on a geotechnical evaluation to guide design of an infiltration trench adjacent to an underground drinking water reservoir.

Task 1 – Site Survey & Assessment. The project area will be surveyed for topography, utility locations, and site boundaries. Soil borings have already been collected at the site location by the City of Crystal and will be analyzed as part of the site survey task. Record drawings of the nearby reservoir and pump station will also be reviewed as part of this task. Timeframe: April 2024

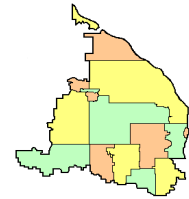
Task 2 – Geotechnical Evaluation. Staff will evaluate existing information to determine the presence of potential contamination, proximity of the proposed infiltration trench to the underground drinking water reservoir, key design features, and the potential slope stability concerns during construction/excavation of the infiltration trench. It involves assessing the groundwater regime, soil stratigraphy, and hydraulic conductivity of the soil as it affects the functioning of the infiltration facility. Additionally, it involves an evaluation of the geotechnical stability of the facility, such as slope stability, the effect of seepage forces or soil piping at adjacent structures and slopes, and design of fills that control the retention, diversion, or discharge of the collected stormwater. Timeframe: May – August 2024

Task 3 – Reporting. A feasibility study report will be completed that includes results/recommendations from the geotechnical evaluation. The report will also feature an update to the Shingle Creek PC-SWMM model that includes the infiltration trench and the water quantity benefit, and an updated conceptual design based on the geotechnical evaluation and design infiltration rate. Stantec will submit a final grant project report using the MPCA template approximately one month prior to the end of the grant agreement, June 30, 2025, or at completion of the project, whichever occurs first. Staff will respond promptly to any requests by the MPCA authorized representative for additional information and/or corrections to the report and will provide electronic files of all project deliverables to the MPCA authorized representative. Timeframe: September-February 2025

C. Fee estimate. Stantec will execute the scope of work for this project for \$20,140. Labor costs total \$19,956; expenses total \$184.

Motion by Asche, second by Robinson to recommend that the Commission accept the MPCA Community Resiliency Grant for the Colorado Avenue Infiltration Trench Feasibility Study in the amount of \$18,309, provide \$1,831 matching funds from the Closed Project Fund, and approve the Scope of Work as outlined. *Motion carried unanimously.*

V. Grant Opportunities. The MPCA is soliciting grant applications for their Implementation Grants for Stormwater Resilience program. Over \$35 million is available to fund implementation of stormwater projects such as retention ponds, rain gardens, and infiltration basins. Applications



are due April 11, 2024, at 4:00 p.m. As part of the nearly complete Eagle Lake Subwatershed Assessment, the Commission identified a project in Maple Grove as a top priority watershed BMP. The project is an infiltration basin in Eagle Woods Park. Stantec will draft a grant application for the pond project to be reviewed at the next Commission meeting ahead of submittal. Motion by Asche, second by Robinson to recommend to the Commission authorization for Staff to proceed with the grant application. *Motion carried unanimously.*

VI. OTHER BUSINESS.

The **next TAC meeting** is scheduled for Thursday, April 11, 2024, at 11:00.

There being no further business, the TAC meeting was adjourned at 11:59 a.m.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Judie A. Anderson".

Judie A. Anderson
Recording Secretary
JAA:tim

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