

Engineer's Report

February 12, 2020

Normandale Lake Water Quality Improvement Project:

Barr compiled and summarized pre- and post-drawdown aquatic plant data for Normandale Lake as part of a Lake Vegetation Management Plan (LVMP) request, which was submitted to the Department of Natural Resources (DNR) in mid-December. DNR indicated the District can expect to see a draft LVMP sometime in January or early-February, at which point all parties will have an opportunity to review and comment on the draft before it is finalized and signed. In the meantime, Barr has been begun developing a draft request for quotes for the 2020 herbicide treatment.



Curly-leaf pondweed in the portion of Nine Mile Creek upstream of West 84th Street (photo from June 2019). The proposed spring 2020 herbicide treatment of Normandale Lake will also include treatment of this upstream area.

Edina Stream Stabilization Project:

Barr received two pay applications for work completed on the Edina stream stabilization project in 2019. Phase I Pay Application #6 is for \$22,614.45 and includes partial (1/2) payment for the Year 1 & 2 vegetation establishment and warranty pay item and release of much of the retainage held. Phase II Pay Application #6 is for \$3,375.00, which includes partial (1/4) payment for the Year 1 & 2 vegetation establishment and warranty pay item. Barr recommends approval of both pay applications.

The end of the maintenance period for Phase I is spring 2020 and fall 2020 for Phase II. Additional pay requests for completion of the vegetation establishment and warranty pay items and release of remaining retainage are anticipated in 2020.

Barr staff made additional edits to the maintenance plan for the project based on feedback from NMCWD and City of Edina Staff. We also worked on completing project as-builts.

Discovery Point Restoration: No new activities.

Discovery Point Building Addition: Barr is finalizing construction access and limits requirements for the upcoming building addition as well as rough grading to be completed as part of the phase 1 construction. The construction limits will be implemented to ensure protection of the existing site landscaping features including the permeable pavements, trees, and plantings. Barr will be developing landscaping and site restoration plans over the coming months which will include a rain garden to capture roof runoff and updated native-centric plantings in conjunction with the addition. This work will represent Phase 2 of the project, to be bid under a separate contract, which will begin immediately after building construction is complete. Building construction is currently set for spring and summer 2020. Landscaping is likely to begin late summer into early fall 2020.

Lake Cornelia and Lake Edina Water Quality Improvements:

Aluminum Treatment

HAB Aquatic Services Inc. will be conducting the alum treatment of North and South Lake Cornelia between May 10, 2020 and May 31, 2020. There are no additional updates at this time.

Lake Cornelia and Lake Edina Water Quality Improvements:

Feasibility Study

At the September 18, 2019 regular meeting, the Board approved a scope of work for Barr to complete a preliminary engineering/feasibility study to further evaluate the other water quality improvement practices recommended in the UAA study for Lake Cornelia and Lake Edina. The feasibility study includes the following tasks:

Task	Description of Task
1A	Stormwater Treatment BMP in Rosland Park- Conceptual Design Evaluation
1B	Stormwater Treatment BMP in Rosland Park- Feasibility Analysis/Preliminary Design
2A	High-level Evaluation of Other Stormwater Treatment/Phosphorus Reduction BMPs in the Lake Cornelia and/or Lake Edina Watershed
3	Curly-leaf Pondweed Management
4A	Promoting a Healthy Predator Fish Population
4B	Evaluating Other Fishery Management Strategies
5	Final Report, Presentation, and Public Hearing

At the December 18, 2019 NMCWD board meeting, Barr staff presented the conceptual plan for the preferred stormwater management feature in Rosland Park (outcome of Task 1A). The preferred conceptual best management practices (BMP) is a filtration treatment vault located at the edge of the North Parking lot. In the conceptual stormwater feature design, water would be pumped from Swimming Pool Pond into an above-ground treatment vault with the pump potentially powered (or offset) by solar energy generation. After passing through the filtration system, treated water would be discharged to Lake Cornelia. The proposed vault could be split into several chambers to allow for testing of various filtration media. The NMCWD Board provided feedback on the conceptual plan and approved Barr to move forward with a more detailed feasibility assessment and preliminary design (Task 1B).

Barr has continued to refine the conceptual design of this proposed filtration treatment vault. We met with NMCWD and City of Edina staff on February 4, 2020 to discuss project design questions and overall schedule. We will be meeting with the Minnesota Department of Natural Resources on February 12, 2020 to discuss regulatory considerations associated with this concept.



Sketch of preferred BMP concept for a stormwater feature in Rosland Park to treat runoff prior to reaching Lake Cornelia.

As part of Task 4B (Evaluating Other Fishery Management Strategies), Barr and NMCWD staff worked with Jordan Wein, WSB staff with carp expertise, to develop a monitoring plan for goldfish and carp in Lake Cornelia and upstream waterbodies. During late-January, Barr and NMCWD staff reviewed WSB's goldfish monitoring plan and offered suggestions to ensure the plan will help the District answer key questions related to future fishery management activities. The goldfish monitoring plan was submitted to Hennepin County in pursuit of grant funding. The goldfish and carp monitoring plan will be summarized in the feasibility study.

Barr has also initiated work on evaluating additional stormwater treatment/phosphorus reduction BMPs in the Lake Edina watershed. At the February 4, 2020 meeting with NMCWD and City of Edina staff, two potential stormwater BMP retrofit sites were presented for feedback from city staff, including the Lynmar Basin (currently a turfed stormwater detention area) at Hazelton Road and Lynmar Lane and the Cornelia School Park located at 72nd Street and Cornelia Drive.



Aerial image of the Lynmar Basin, located at Hazelton Road and Lynmar Lane in the Lake Edina watershed.



Aerial image of Cornelia School Park, located at 72nd Street and Cornelia Drive in the Lake Edina watershed.

Pentagon Park Stormwater Management: No new activities.

Regional Stormwater Volume Reduction Opportunity Study: Barr is working with NMCWD staff and legal counsel to develop a cooperative agreement for funding a portion of construction of a volume-reduction based stormwater BMP at the City of Edina's Braemar salt storage site. NMCWD will use stormwater facilities funds to fund a portion of this BMP.

BMP Retrofits on Nonprofit Sites- Final Design and Construction:

Bids for the project were opened on Monday, February 10, 2020. Eight bids were received. The apparent low bidder is Sunram Construction Inc. with a bid of \$199,946.00. The final engineers estimate after one addendum was issued with the project was \$193,426.00. Barr staff and NMCWD staff have experience working with Sunram on similar projects as well as recent creek restoration work.

Barr recommends awarding the project to Sunram Construction Inc. Upon Board approval at the February 19, 2020 meeting, Barr will issue the Notice of Award, with contracting to follow. All the project partners will then be informed of the bidding results and preparation for spring and summer construction will begin.

Bush Lake Shoreline Vegetation Management:

Since the early-2000s, when a pumped outlet was constructed on Bush Lake, the NMCWD has partnered in managing the vegetation along the shoreline to control invasive species and manage the healthy and diverse native plant community. The most recent three-year management contract with Landbridge Ecological has now expired.

Smetana Lake Use Attainability Analysis Update:

Barr has completed updating the Smetana Lake Use Attainability Analysis (UAA) to assess current water quality and re-evaluate implementation recommendations from the original UAA study completed in 2003. Barr and District staff presented preliminary results to interested stakeholders on January 14, 2020. Attendees included residents that live adjacent to the lake, employees from nearby businesses, and the City of Eden Prairie.

A draft report has been prepared for review and comment by NMCWD staff and Board. We also prepared a project overview report to provide an abbreviated summary of the analysis, including current water quality conditions, a summary of phosphorus sources, and management recommendations. Results of the study and management recommendations were presented to the NMCWD Board of Managers at the February 6, 2020 special meeting.

**Wetland Conservation Act (WCA) and NMCWD Wetland Rule Administration:**

Work administering the WCA and NMCWD wetland rule in the past month included:

- Review restoration plans for SWLRT temporary wetland impacts and provide comments.
- Preparation and submittal of notice of decision for WCA no-loss activity approval at Douglas Corporation in Eden Prairie.
- Preparation and submittal of WCA notice of decision for wetland boundary and type approval at 6385 Old Shady Oak Road in Eden Prairie.
- Preparing 2019 WCA annual reporting form and submitting to BWSR.
- Miscellaneous program administration.