### Normandale Lake Water Quality Improvement Project:

An herbicide treatment of Normandale Lake and an upstream portion of Nine Mile Creek was conducted on May 8, 2020 to further reduce the curly-leaf pondweed (CLP) remaining following the winter of 2018-2019 lake drawdown. Water quality monitoring of Normandale Lake has begun, and will continue throughout the 2020 summer months. This year, we are monitoring water quality at the lake inlet, in addition to the typical monitoring location in the deepest portion of the lake near the outlet, to get a better understanding of nutrient cycling as water moves through the lake system.

District staff are working with Carp Solutions on monitoring carp activity in Normandale Lake throughout 2020.

### Edina Stream Stabilization Project:

Barr staff completed the as-built drawings for Phases I and II. Electronic CADD drawings for Phases 1 and 2 of the project were provided to Jessica Wilson, City of Edina, as requested.

On May 19, 2020 Barr staff met with three property owners that live adjacent to the creek north of West 70th Street to observe and discuss areas where additional warranty/maintenance work had been requested by area residents. Site observations included a section of the creek in the area of the Ryan Schildkraut property who is concerned about water being diverted onto his property during bank-full flow conditions resulting from the Three Rivers Regional Trail construction. On June 12th, Barr staff field walked the creek with the contractor, Sunram, to observe the Chinn property and the Schildkraut property and discuss possible solutions and warranty work required. On June 18th, Barr met with Landbridge, restoration subcontractor, and David Chinn to discuss maintenance work and replanting necessary in accordance with the warranty provision of the contract.

### Development of Data-sharing Web Map Tool:

Development and testing of the data-sharing web map tool continued this month. The application is ready for final testing and feedback regarding functionality and design before launching to the public. Ongoing maintenance and updates to the database will continue as water level data is recorded.
**Discovery Point Restoration:**
Barr has been coordinating with Landbridge Ecological for the Discovery Point landscape management for 2020. Landbridge continued on-site management of exotic species during the month of June. Landbridge installed additional plants to screen the parking lot.

**Discovery Point Building Addition:**
A request for quotes for the reconstruction of the northwest rain garden and site improvements associated with the ongoing building addition were sent to five landscaping contractors, with quotes due by June 12th. One quote was received for $58,504.34, which was well above the engineer’s estimate of cost. The quote was rejected by the Board because of price at the NMCWD regular meeting in June. Quotes will be requested again in the fall for work to be completed in the spring.

**Bush Lake Shoreline Vegetation Management:**
Barr has been coordinating ongoing shoreline vegetation management activities with the restoration contractor Landbridge. Barr will continue to monitor management activities performed and make recommendations based on the site conditions throughout the summer of 2020.
BMP Retrofits on Nonprofit Sites- Final Design and Construction:

Raingarden mulch and plantings have been installed at Good Samaritan, Oak Grove, St Luke’s, and St. Edward’s sites. These sites have experienced a couple significant rain events since planting and are infiltrating well. Some minor erosion issues continue to occur on some of the garden slopes, in particular near the inlet locations, and are being addressed by Sunram, the contractor. Sunram is currently working on completing restoration and punchlist items at these four sites. Following the results of infiltration testing at Chapel Hills, a change order was executed for Sunram to install an underdrain. After working through updates to the cooperative agreement with property owner, the District gave approval to proceed with work at this site. Since then a subcontractor installed a portion of the underdrain piping by directional drilling under the parking lot and connected to an existing catch basin. Sunram plans to quickly proceed to install the raingarden at Chapel Hills in the coming weeks.

Plantings and mulch installed at raingarden #1 at St. Edward’s Church in Bloomington.

Plantings and mulch installed at Good Samaritan Church in Edina.

Plantings and much installed at St. Luke’s Church in Bloomington.

Plantings and mulch installed at Oak Grove Church in Bloomington.
**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. Results of the study and management recommendations were presented to the NMCWD Board of Managers at the February 6, 2020 special meeting.

Minor revisions to the draft report are underway. A revised copy will be shared with the City of Eden Prairie to solicit feedback.

**Lake Cornelia and Lake Edina Water Quality Improvements: Aluminum Treatment**
HAB Aquatic Services Inc. conducted an alum treatment of Lake Cornelia in mid-May. Water quality monitoring of Lake Cornelia has begun and will continue throughout the 2020 summer months.

| Photo of treatment barge pulling from shoreline at South Cornelia. | Photo of HAB treatment barge on South Cornelia (photo courtesy of Larry Olson). |
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 other water quality improvement practices recommended in the UAA study for Lake Cornelia and Lake Edina. The feasibility study included the following:

- Stormwater Treatment BMP in Rosland Park - Feasibility Analysis/Preliminary Design
- High-level evaluation of other watershed BMPs, including BMPs in the Lake Edina watershed and management of ponds upstream of Lake Cornelia
- Curly-leaf pondweed management in Lake Cornelia
- Fishery management in Lake Cornelia

Barr provided a draft feasibility study report to the Board of Managers in early-June. Upon acceptance by the Board at the regular June board meeting, Barr finalized the report and distributed a copy to NMCWD and City of Edina staff.

Other efforts in the past month have included drafting a letter and two-page project summary for residents adjacent to Lake Otto regarding the Rosland Park stormwater BMP project and potential water level fluctuations related to the proposed pumping. NMCWD is holding a virtual public hearing on the proposed Rosland Park stormwater BMP project at 6:15 on Wednesday, July 15. The project will be presented to the Edina City Council at their July 21, 2020 meeting.

Barr will continue to work with NMCWD legal counsel and staff on development of a cooperative agreement with the City of Edina for the proposed project.

Rendering of proposed stormwater filtration vault in Rosland Park to treat water from Swimming Pool Pond before it flows to Lake Cornelia.
### Lower Valley Stabilization:
Work on the two maintenance and repair locations in the most downstream section of Nine Mile Creek in Bloomington has been substantially completed. City of Bloomington staff continue to monitor the site, as needed.

### Atlas 14 Model Updates:
At the May 20, 2020 regular meeting, the Board approved a scope of work for Barr to complete updates to the NMCWD’s watershed-wide Xp-SWMM model, including incorporating recent Atlas 14 updates completed by the cities of Edina, Richfield, Bloomington, and Minnetonka and review and revising model inputs (e.g., watershed divides and storm sewer information) for Eden Prairie and Hopkins (as needed).
We have been compiling data for the 2020 Atlas 14 model updates, including comparing and merging subwatersheds in GIS. We have received requested GIS storm sewer and other data from the City of Eden Prairie and are awaiting storm sewer information from the City of Hopkins.

### Wetland Restoration and Protection Opportunity Identification:
During development of the NMCWD 2017 Water Management Plan, the NMCWD Board of Managers, local cities, and other stakeholders identified wetland protection as an important issue and identified the following specific priority issues/opportunities related to wetland protection:

- Inventorying and assessing wetlands within the Nine Mile Creek watershed for function and value.
- Preserving the quality of existing wetlands and protecting high quality wetlands.
- Seeking opportunities to restore degraded wetlands.
- Improving wetland health by promoting diversity and abundance of native aquatic species and improving habitat.

In 2020, the NMCWD budgeted for a wetland restoration and protection opportunity study as a first step to 1) compile the best available information regarding wetlands within the Nine Mile Creek watershed, 2) use that information to identify high-value wetlands and/or wetlands with rare and high-quality wetland biological communities in the watershed, and 3) identify the highest-priority opportunities for wetland restoration or protection. Barr staff have begun compiling an inventory of “best available” wetland information, based on the latest National Wetland Inventory (NWI) data, wetland information (delineations and/or function and value assessment information) received through the NMCWD permitting program, and information available from the cities within the watershed. We will be meeting with each city in upcoming weeks to inform them of the ongoing study and discuss any relevant data they can share to help inform the study.

### Regional Stormwater Volume Reduction Opportunity Study:
No new activities.
**Pentagon Park Stormwater Management:** No new activities.

**Lake Level Management Plans for Arrowhead and Indianhead Lakes:**

The study to develop management plans for these two landlocked lakes has gotten underway. The City of Edina is planning to survey low point elevations on the houses around the two lakes in July, while Barr develops the lake level water balance model.

![Screenshot of subwatershed divides for Arrowhead and Indianhead Lakes, and the Nine Mile South Fork watershed that would receive water from these lakes.](image)

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

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

- reviewing wetland application and past submittals, submittal of WCA notice of application, and miscellaneous coordination for Three Rivers Park District Nine Mile Creek Trail extension under TH 169
- reviewing wetland application, submitting WCA Notice of Application, and conducting delineation site review for wetland at Trileaf MIN Daisy Cell Tower in Edina
- miscellaneous program administration