

Engineer's Report

August 14, 2019

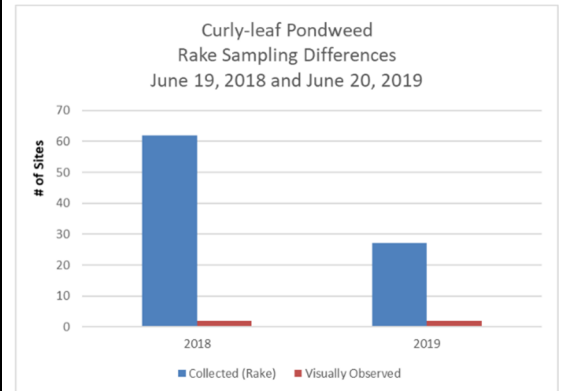
Normandale Lake Water Quality Improvement Project:

Periodic heavy rainfalls in recent weeks have continued to slow the site restoration work at the lake inlet. However, we anticipate that Rachel Contracting will complete the restoration work soon. We are meeting with Rachel next week to discuss project close out.

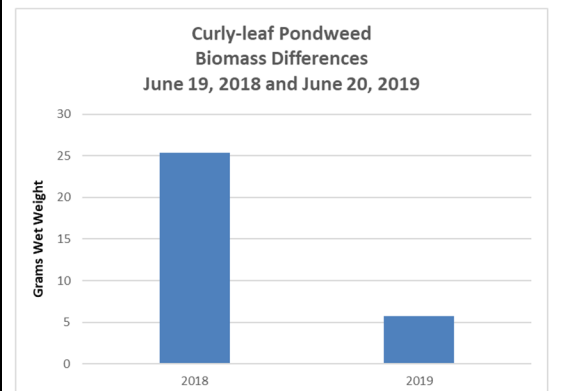
An aquatic plant survey was conducted on Normandale Lake on June 20th, 2019. Results from the survey indicate significant reductions in the abundance of curly-leaf pondweed as compared with 2018. However, the extent of the remaining curly-leaf population warrants proceeding with the herbicide treatment in spring of 2020, as planned, to further reduce the presence of the invasive plant. A second aquatic plant survey will be conducted in August. District and Barr staff plan to meet with staff from MnDNR in September to discuss the planned herbicide treatment.



Photo of curly-leaf pondweed germinating from a turion.



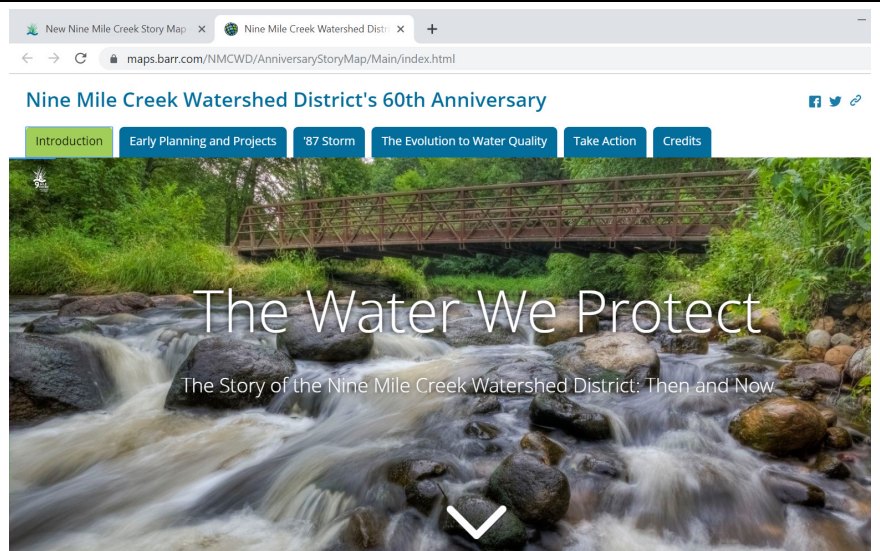
Comparison of the June 2018 and 2019 aquatic plant survey results indicates that the drawdown significantly reduced the number of sites in which curly-leaf pondweed was collected on a rake.



Comparison of the June 2018 and 2019 aquatic plant survey results indicates that the drawdown significantly reduced the amount of curly-leaf pondweed biomass in Normandale Lake.

Nine Mile Creek Watershed District 60th Anniversary Story Map:

The final Story Map was recently made public online prior to the 60th anniversary events scheduled for this summer. Barr staff will continue to track map functionality and monitor website traffic.



Edina Stream Stabilization Project: Phase II of the project reached substantial completion at the end of October. The substantial completion deadline was December 31, 2019 so the project was completed ahead of schedule. Barr worked on a maintenance plan to establish clear roles for the District and the City of Edina for addressing future maintenance needs. A draft of the maintenance plan was provided to Administrator Anhorn in early August. Barr worked with the contractor to complete some maintenance items on two reaches where water was pooling in the floodplain. In Reach 2, the channel was realigned to move it away from one home. The fill placed in the old channel had settled, so it was holding water and creating mosquito habitat very near to the private residence. The contractor brought in additional fill to more completely fill the old channel. In Reach 12, a combination of compaction during construction and minor differences in graded elevations had resulted in shallow temporary pools in the floodplain where pool had not previously been located. The contractor graded shallow swales to ensure positive drainage to the creek channel. Sunram submitted a payment application for \$12,780.11 for this work. Barr is recommending payment.



Stabilized and vegetated shoreline on winding stretch of creek at Reach 11 (June 25, 2019).



Vegetated shoreline along the creek at Reach 1 (June 25, 2019).

Lake Cornelia and Lake Edina Water Quality Improvements:

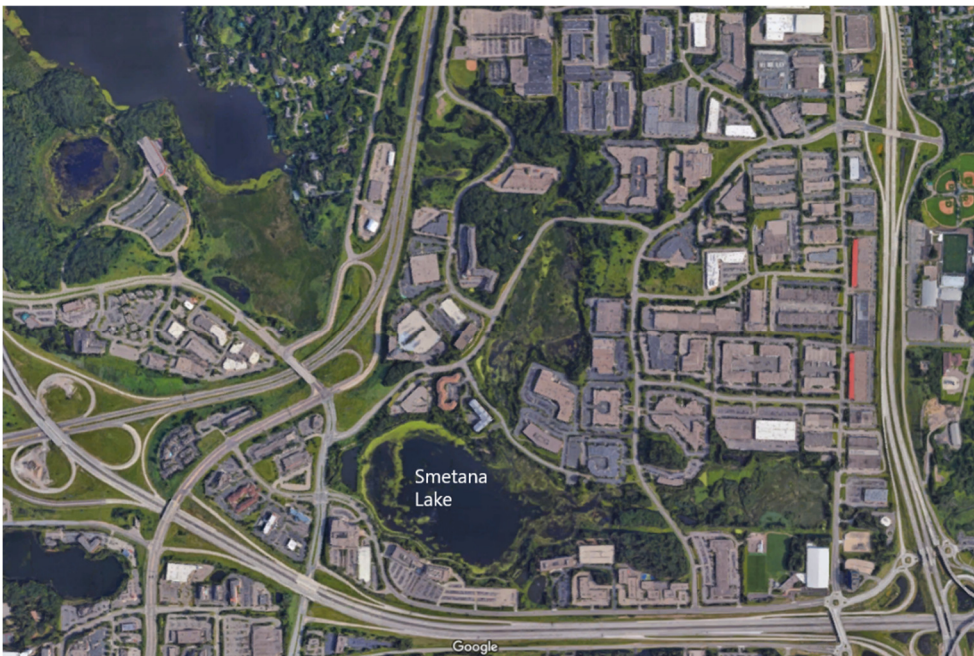
Barr has completed the Use Attainability Analyses (UAAs) for North and South Lake Cornelia and Lake Edina. The report was accepted by the Board of Managers at the July 17th NMCWD regular board meeting. Upon manager request, the report was submitted to contacts at MDNR, MPCA, BWSR, and Hennepin County to solicit feedback on the proposed management strategies for the three lakes.

One of the recommended management strategies is to conduct an alum treatment of Lake Cornelia (North and South basins) to reduce the release of phosphorus from lake bottom sediments. Barr completed a feasibility study in July for conducting an alum treatment in the fall of 2019. A public hearing on the proposed alum treatment project is planned for August 21st prior to the NMCWD’s regular board meeting. Following the public hearing, the Board will tentatively order the project. Barr will then prepare a Request for Quotes (RFQ), in consultation with NMCWD’s legal counsel, which will be distributed to contractors in late-August.



The NMCWD’s 2019 Summer Tour included a stop at Lake Cornelia (North Basin) to discuss results of the recent study and the proposed management strategies.

Smetana Lake Use Attainability Analysis Update: Barr has begun 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. Work on the project over the past month has included updating the P8 watershed model to include Best Management Practices (BMPs) that have been constructed in the watershed since the original study in 2003. Barr and District staff met with staff from the City of Eden Prairie on August 13, 2019 to discuss the project scope, lake use and water quality perceptions, and stakeholder participation. A meeting to share preliminary study results with stakeholders is tentatively planned for this fall.

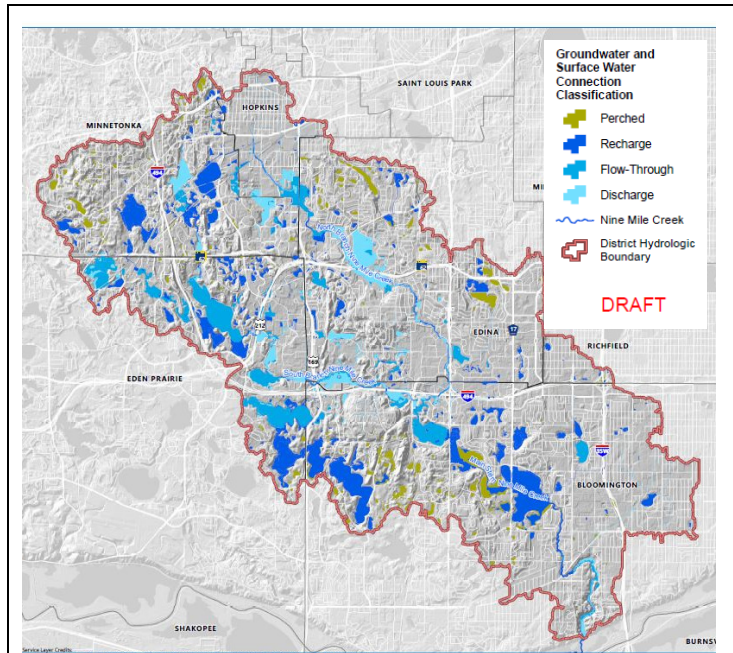


Smetana Lake is a shallow lake located just north of I-494 and east of east of Highway 212. The South Fork of Nine Mile Creek flows through Bryant Lake, then meanders through the industrial park area and flows in and out of Smetana Lake.

Groundwater/Surface-Water Interaction Study and Assessment of Surface Water Vulnerability to Changes in the Groundwater System: Barr is evaluating how groundwater and surface water interact across the Nine Mile Creek watershed and then will use that data to identify surface waters and wetlands that may be particularly sensitive to changes in the groundwater system.

Understanding how changes in the groundwater system may affect surface water levels, stream flow, and water quality is an important component of long-term planning and protection of water resources in the Nine Mile Creek watershed. How connected, or disconnected, surface waters are to the groundwater system affects how they may respond to seasonal changes (drought), long-term climate change, or anthropogenic stresses (groundwater pumping).

Barr has completed the preliminary assessment for groundwater and surface water interaction and the vulnerability of surface waters to changes in the groundwater system. This analysis includes approximately 2000 lakes, ponds, wetlands, and stream reaches across the District. Preliminary results will be presented to NMCWD staff next week. Results will be presented to the NMCWD Board of Managers at the September 4, 2019 special meeting.



This map shows the preliminary classifications of the surface water/groundwater connection throughout the watershed.

Bush Lake Outlet Project: No new activities.

BMP Retrofits on Nonprofit Sites- Final Design and Construction:

Due to high prices on the quotes that were solicited in June, project construction in 2019 has been postponed and quotes will be requested again over the winter. Pending continued interest in participation by the property owners, the 2020 construction project will include all six BMP retrofit sites. Barr has prepared an amended scope of services to complete bid-ready construction documents for all six BMP sites to in the fall and to go out for bid again mid-winter. Stakeholder engagement will be again upon further development of the construction plans this fall.

District Office (Discovery Point): The District intends to hire a landscape contractor to perform management of the restoration areas including weed eradication, as well as maintenance of the planted areas near the building, including the overflow parking area. Barr has been assisting District staff in coordinating with Landbridge Ecological to submit a proposal to act as site landscape manager. The intention is to form an on-going relationship with this qualified contractor. Staff met with Landbridge on site to ensure they thoroughly understand the expectations (aesthetics, ecological restoration, native plants, budgets and reporting, etc.) of the District and are prepared to act as a groundskeeper with intimate knowledge of the site.

Pentagon Park Stormwater Management (in partnership with the cities of Edina and Bloomington): No new activities.

Regional Stormwater Volume Reduction Opportunity Study: No new activities.

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

- Review wetland application for Birch Island Road Quiet Zone project in Eden Prairie, prepare and submit WCA Notice of Application for wetland boundary and type decision. Conduct wetland delineation site review.
- Prepare and submit WCA Notice of Decision for wetland boundary and type approval for Ebert Site at 7725 Washington Ave S in Edina and determine NMCWD wetland management classification.
- Conduct site review for potential unpermitted wetland fill at 6282 Industrial Blvd in Eden Prairie.
- Review wetland assessment for 7800 Picture Dr. in Bloomington.
- Respond to questions from Westwood regarding Liberty Plaza in Eden Prairie.
- Review wetland delineation submittal for 1100- Viking Drive in Eden Prairie.
- Reviewing and commenting on wetland restoration plans for temporary wetland impacts associated with the Southwest LRT project. Discussing pipe collapse/sediment release into wetland, review memo, and send information to Technical Evaluation Panel, conduct site review.
- Review historical imagery and old quad maps to determine whether a storm pond at 5600 83rd St in Bloomington was historically wetland.