

Engineer's Report

September 8, 2021

Lake Cornelia and Lake Edina Water Quality Improvements- Rosland Park Stormwater Filtration BMP

The Notice of Award for the Rosland Park BMP project was issued to Pember Companies, Inc. on August 12th and the Notice to Proceed was provided on August 26th. Representatives from Pember Companies, Barr Engineering, NMCWD, and the City of Edina met onsite for a pre-construction meeting on August 31st to discuss the construction project tasks, expectations, and schedule. Pember Companies originally planned to start construction on September 13th, but have now indicated construction likely won't begin until late-September. Barr staff have been working closely with Pember to review project design submittals and discuss potential project cost efficiencies.

Lake Cornelia and Lake Edina Water Quality Improvements: Lynmar Basin Stormwater Retrofit Concept Plan

A final concept design has been developed based on feedback from the public and the project team including the City of Edina and the NMCWD Administrator. The final concept plan includes an ornamental plant palette and a simple path alignment.

The revised concept plan has been summarized in a brief report, which was submitted for staff review on September 7, 2021. The information will be presented to the Board at the September 15th regular meeting and shared with the Edina City Council at their September 21, 2021 meeting.

A proposed scope of work to complete a more detailed feasibility analysis is being developed for completion in Fall 2022. The feasibility study will include soil borings and infiltration capacity analysis and additional engineering analysis to optimize basin sizing to maximize cost/benefit ratio. If the project is ordered by the District upon completion of the feasibility study, construction document preparation and bidding would take place over the winter of 2021/22 and spring 2022. Construction is anticipated for 2022.



The final concept design combines elements from preliminary designs presented to the public. The final concept design, including the estimated costs and potential water quality and flood improvements have been summarized in a report document.

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Arrowhead Lake and Indianhead Lake Use Attainability Analysis/Water Quality Study

Activities for the Arrowhead Lake and Indianhead Lake Use Attainability Analyses (UAA) updates are progressing. Barr has completed the existing conditions in-lake model calibrations and has gained insight on nutrient loading concerns. In September, Barr will move on to evaluate proposed best management practices and assess the potential water quality improvements in Arrowhead Lake and Indianhead Lake.

On August 16, the public engagement survey was closed and District staff provided a summary of initial responses in a spreadsheet format. District staff will develop a survey response summary in the upcoming months. In the meantime, Barr will use the results to inform the UAA process. There were 31 total responses (14 from residents on Arrowhead Lake and 17 from residents on Indianhead Lake). Results of the survey will inform management strategies and educational recommendations for Arrowhead and Indianhead lakes.

Holiday-Wing-Rose Chain of Lakes Use Attainability Analysis/Water Quality Study

Activities for the Holiday-Wing-Rose Chain of Lakes Use Attainability Analysis (UAA) Update are progressing. Barr has completed the existing conditions in-lake model calibrations and has gained insight on nutrient loading concerns. In September, Barr will move on to evaluate proposed best management practices and assess the potential water quality improvements in Lake Holiday, Wing Lake, and Lake Rose.

Additionally, NMCWD and the City of Minnetonka continue to work together closely to develop an online StoryMap and survey that will be posted on the City of Minnetonka's webpage. The StoryMap will include background information on lake ecology, lake characteristics, and the goals of the UAA study. The survey will inquire about how residents use the lake, their perceptions of water quality, and their interest in committing to lake water quality improvements by managing fertilizer use and other activities such as shoreline buffers. The StoryMap and survey will be posted in early September, with an in-person public engagement meeting in the evening on September 29. Residents will be notified of the StoryMap, survey and meeting through a mailing. Results of the survey and information gathered at the meeting will inform management and educational recommendations for Holiday, Wing, and Rose lakes.



Photo from the north basin of Rose Lake in August 2020. Portions of Lake Rose and Wing Lake have dense lily pad communities.

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Bush Lake Shoreline Vegetation Management

Barr staff continue to coordinate with the vegetation management contractor.



Discovery Point Restoration and Building Addition Rain Garden and Landscape

Planting and the final construction items related to the rain garden and remaining restoration have been completed. No work was completed this period. On-going restoration and site management tasks going forward will include monthly site visits, site-wide herbicide application to control woody invasive re-sprouts, garlic mustard, and narrowleaf bittercress.

Atlas 14 Flood Risk and Resiliency, Phase II

The Barr team completed preliminary flood inundation mapping and mapping of potentially impacted structures and roadways in August. A PDF "Mapbook" of inundation and impacts results was created and shared with the District board of managers and Technical Advisory Committee (TAC) in late-August.

A second project TAC meeting held on August 31st, in which draft inundation mapping results were shared with the TAC as well as progress related to other completed and ongoing tasks. The TAC is currently performing review of flood inundation results and plans to provide comments by September 20th. After comments are received and necessary updates are incorporated, the watershed-wide model will be finalized and final flood inundation and impact mapping will be completed.

A workshop meeting was conducted with the NMCWD Board on the evening of August 31st. In addition to sharing draft flood inundation and impact results, a major goal of the workshop discussion was to receive Board input and feedback regarding the next phases of the project. The Board provided valuable insight and input to help guide these tasks moving forward, and overall was supportive of the direction of the project moving into Phase 3.

In the month of September, we plan to complete our detailed analysis of crossing failure, continue to make progress on tasks related to quantifying flood damage costs, and begin review and incorporation of stakeholder comments on our flood inundation and impact mapping.

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Wetland Conservation Act (WCA) and NMCWD Wetland Rule Administration

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

- SuperValu Corp Campus, Eden Prairie- submitting the WCA Notice of Decision for wetland boundary and type approval
- Three Rivers Bryant Lake culvert, Eden Prairie – preparing and submitting the WCA Notice of Application, conducting a site review, providing suggested revised wetland boundaries to delineator, reviewing revised wetland delineation figure and sending to TEP for additional comments
- 5125 Schaefer Road, Edina – preparing and submitting the WCA Notice of Application, conducting a site review
- 6075 Lincoln Drive, Edina – preparing and submitting the WCA Notice of Application, conducting a site review, reviewing revised wetland delineation report and sending to TEP for additional comments
- McCauley Trail, Edina – preparing and submitting the WCA Notice of Application, conducting a site review
- Blue Stem, Eden Prairie – reviewing wetland functional assessment data and providing comments
- 6919 Moccasin Valley Rd, Edina – reviewing desktop information and responding to questions regarding potential wetland
- Willow Creek Road Improvements, Eden Prairie – reviewing application, preparing and submitting the WCA Notice of Application
- Oxboro Lake – reviewing wetland functional assessment, desktop, and previous wetland information, responding to questions regarding wetland status
- Providing potential wetland bank opportunity information in response to potential bank applicant
- Other miscellaneous program administration