

Memorandum

To: Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator
From: Barr Engineering Co.
Subject: Engineer's Report Summarizing February 2023 Activities for March 1, 2023 Board Meeting
Date: February 23, 2023

The purpose of this memorandum is to provide the Riley-Purgatory-Bluff Creek Watershed District (RPBCWD) Board of Managers and the District Administrator with a summary of the activities performed by Barr Engineering Co., serving in the role of District Engineer, during February 2023.

General Services

- a. Met with City of Chanhassen and Administrator Jeffery on February 2 to discuss the design of the decant facility at Chanhassen public works site. Discussion topics included decant water discharge, Met Council coordination, funding scenarios, and partnership.
- b. Met virtually with Administrator Jeffery and Counsel Welch February 7 and 21 to discuss the cooperative agreement for the Upper Riley Creek Restoration project, Chanhassen decant facility design, Middle Riley Creek project, Lake Susan Park Pond intake improvements, delegations of permit approvals, and work without permits.
- c. Met with Administrator Jeffery, staff Bakkum and Manager Duevel on February 9 to review 2022 budget reconciliation and discuss ideas for improving financials.
- d. Participated in the February 13 Finance and Audit committee meeting to review the final 2022 financials and how to best carry forward funds between the 2022 and 2023 budgets.
- e. Met with the MNDNR and City of Chanhassen on February 22 to discuss the potential need for additional hydraulic modeling and FEMA submittal for upper Riley Creek if the proposed restoration impacts the floodplain outside the allowable range (-0.09 to 0.00 feet)
- f. Participated in a February 16 meeting with the MPCA and manufactured treatment device (MTD) steering committee to discuss the roll out of the MTD guidance in the MN Stormwater Manual.
- g. Met virtually with Administrator Jeffery, President Ziegler, Counsel Smith and Counsel Welch to review draft agenda for February 23 regular board of managers meeting.
- h. Participated in the February 20 citizen advisory meeting to present the permit review process.
- i. Participated in the February 16 workshop with the Board of Managers meeting.
- j. Participated in the February 1 regular Board of Managers meeting.
- k. Prepared Engineer's Report for engineering services performed during February 2023.

Permitting Program

- a. *Permit 2022-053 Fox Ridge (aka Fox Hill Drive)* - The project proposes to split the existing lot at 581 Fox Hill Dr. in Chanhassen into three single family home lots and an outlet. The permit was conditionally approved at the January 4 meeting. Responded to applicant questions about financial assurance and maintenance declaration.
- b. *Permit 2022-075 EP Well House 17* – The project proposes construction of a new municipal drinking water well between Pheasant Woods Park and Village Woods Drive in Eden Prairie. The project includes a transmission line directionally drilled from Well House 17 to existing Well House 16 and includes an infiltration basin for stormwater management. The project triggers RPBCWD erosion prevention and sediment control rule, creek and wetland buffer rule, and the stormwater management rule. Reviewed February 14th submittal and draft the permit review report for consideration at the March 1, 2023 regular meeting.
- c. *Permit 2022-077 Dunibar Court*- – The project proposes construction of a 5-lot single family residential development south of Ridgewood Road, east of Dunibar Ridge Road in Minnetonka. The project triggers RPBCWD erosion prevention and sediment control rule, creek and wetland buffer rule, and the stormwater management rule Reviewed February 10 and provided review comments.
- d. *Permit 2023-003 Galpin Boulevard Reconstruction* – The project proposes the reconstruction of roughly two miles of Galpin Boulevard (CR 117) between Hwy 5 and the Chanhassen/Shorewood border by converting the roadway from rural roadway to an urbanized section with curb and gutter. The project triggers RPBCWD floodplain management rule, erosion prevention and sediment control rule, creek and wetland buffer rule, waterbody crossing and structures rule, and the stormwater management rule. Responded with questions from the applicant about the application of RPBCWD rules, infiltration testing, soil borings, and the District's CIP near the project.
- e. Preapplication meeting with the City of Minnetonka about the a potential flood mitigation project near Groveland Elementary school and the desire to coordinate with the school district's planned improvements at the site. The project would involve the replacement of an 18-inch pipe with a 42 inch pipe and be designed in a manner so as to not increase discharges at the site boundary, thus the project might only require approval under RPBCWD's Rule C – erosion Prevention and Sediment Control.
- f. Miscellaneous preapplication calls from future applicants with questions about rule applicability and criteria.

Data Management/Sampling/Equipment Assistance

- a. Prepared, loaded, and verified one RMB Laboratory (RMB) report to the database.
- b. Prepared, loaded, and verified 2022 data from Hyland Lake.
- c. Worked on the data submittal file for relevant 2021 creek and lake data in the MPCA's data specific format.
- d. Updating the EQULS Enterprise site to correct issues with downloading data.

Task Order 6: WOMP Station Monitoring

Purgatory Creek Monitoring Station at Pioneer Trail

- a. No activity this month.

Purgatory Creek Monitoring Station at Valley View Rd

- a. Download, review, and QAQC 2022 data.
- b. Process utility bills.
- c. Set up 2023 datalogger files and Loggernet (datalogger software) settings.

Task Order 24B: Silver Lake Water Quality Improvement Project

- a. This project will have no other activity until vegetation maintenance starts in spring 2023.

Task Order 28B: Rice Marsh Lake (RM_12a) Water Quality Improvement Project

- a. The three-year vegetation establishment period is in process.
- b. This project will not have other activity until spring 2023 when vegetation maintenance work will occur.

Task Order 29B: Middle Riley Creek (Reach R3) Stabilization Project Design

- a. The 3-year vegetation maintenance plan is in process, additional live plugs will be planted in Spring 2023.

Task Order 30B: Pioneer Trail Wetland Restoration Project

- a. The three-year vegetation establishment period is in process.
- b. This project will not have other activity until spring 2023 when vegetation maintenance work will occur.

Task Order 032B: Upper Riley Creek Ecological Enhancement Project

- a. Conducting additional hydraulics analysis to modify the proposed design to achieve a "No Rise" in the 100-year floodplain because this reach of Riley Creek is within a FEMA flood hazard zone with an AE designation, meaning a detailed study of this reach was conducted FEMA and imposing unanticipated analysis requirements on the project. This has resulted in the project timeline extending and unanticipated design revisions. In discussions with the MNDNR and city of Chanhassen on February 22 it was indicated that the "No Rise" requires hydraulic modeling to demonstrate the flood elevations to not increase by more than 0.00 feet increase or decrease by more than 0.094 feet. If the "No Rise" condition is unachievable the project will need to complete and submit a conditional letter of map revision to FEMA which would further impact the project timeline as well as require additional engineering budget to complete the analysis
- b. Moving forward with further detailed design to incorporate into 90% drawings, planned for draft in February/early March 2023 for RPBCWD staff and City staff review.

- c. Targeting permit submittal in February/early March 2023.

Task Order 033: Wetland Assessment – Phase 1

- a. Continued drafting Phase 1 report to define ecosystem services and describe methodology for assessing each service.
- b. Draft report expected to be delivered late-March

Task Order 034: Lotus Lake Aquatic Vegetation Management Plan

- a. Final report was delivered to the Administrator.

Task Order 035: Eden Prairie Stormwater Model Update and Flood-Risk Area Prioritization

- a. This month staff incorporated City of Eden Prairie in the Excel file that is used to calculate scores for flood-prone areas. After updating the Excel file, staff submitted draft inundation extents, revised Excel file, and draft documentation report for City of Eden Prairie staff and Administrator Jeffery review.
- b. Next month, after incorporating review comments, staff will submit findings of the study to the MPCA as required in the grant agreement.

Task Order 037: Sediment Analysis

- a. Draft Lake Sediment Analysis Technical Memorandums for Lake Riley, Lake Susan, and Rice Marsh Lake to be delivered by the end of February.
- b. Working with District staff it was determined to postpone Lake Susan wetland sampling until Spring of 2023 due to low water levels and to further investigate wetland sediment analytical approach.

Task Order 039A: Lotus Lake Water Quality Project – Preliminary Engineering

- a. Development of proposed BMP concepts for Lotus Lake sites based on site visits including concept graphics and inputs for BMP concept evaluation
- b. Development of proposed conditions H&H and water quality modeling to quantify impacts of each BMP site.
- c. Development of planning level engineer's opinions of probable cost for conceptual BMPs, including preliminary cost-benefit estimates.
- d. Coordinating meeting with district and city staff to review preliminary BMP concepts and preparation for meeting.
- e. **Drafting feasibility study report**

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Page: 5 of 5

Task Order 040: Alum Application on Lotus Lake

- a. Draft memo will be delivered to the Administrator by the early March.

Task Order 41: Chanhassen Decant Facility

- a. Hansen Thorp Pellinen Olson, Inc. (HTPO), surveying subcontractor, finished surveying the Chanhassen Public Work Facility.
- b. Geotechnical Investigation Borings were conducted.
- c. Continued preliminary design.

Task Order 42: Bluff Creek Culvert Reconstruction

- a. Draft technical memorandum of the four culvert replacement alternatives and recommended design was provided to the District on February 16 for review.

Task Order 43: Ecosystem Health Plan

- Conducted a kick-off meeting with District staff to discuss roles, schedule, and goals for project completion on February 17.
- Developed a list of GIS maps to be developed that depict the existing ecological conditions of the District such as soil types, tree canopy, impervious surfaces, and extent of lawn. Some of these maps have been developed for other District projects and will be updated.
- Worked to acquire GIS base data and set up base maps.
- Began a list of potential members to the Advisory Panel that will advise on the content of the Ecosystem Health Plan. This panel will primarily be composed of city staff within the District including planners and natural resource managers. Others to be invited include county and state staff, as well as ecological professionals.
- Initiated planning of the workshop series that will be conducted with the Advisory Panel. This highly facilitated series will be developed to squeeze every last drop of information from the members. We hope they survive.