

Memorandum

To: Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator
From: Barr Engineering Co.
Subject: Engineer's Report Summarizing March 2023 Activities for May 3, 2023 Board Meeting
Date: April 27, 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 April 2023.

General Services

- a. Met virtually with Administrator Jeffery and Counsel Welch April 4 and April 18 to discuss the Purgatory Creek Park berm repair, draft CIP status tracking tool (i.e. CIP matrix), potential regulatory approval delegation ideas, and cooperative agreements.
- b. Took part in the April 11 Lake association meeting at RPBCWD offices.
- c. Participated in the April 12 regular Board of Managers meeting.
- d. Met with Administrator Jeffery and Barr's hydrogeologist on April 18 to brainstorm potential groundwater management activities for RPBCWD to consider implementing. Ideas discussed include re-establishing a groundwater well network to track surficial groundwater, potential water quality monitoring, impact of groundwater on wetland and creek baseflows, etc. Based on discussion Administrator Jeffery requested a draft scope be provided in June.
- e. continued drafting CIP project status matrix for Administrator review (*see draft version attached to end engineer's report*).
- f. Barr is preparing a technical memorandum summarizing the benefits of restoring the eroded berm at the stormwater pond in the Purgatory Creek Recreation Area in Eden Prairie to Stantec's 2021 proposed condition.
- g. Participated in the April 20 continuation of the regular Board of Managers meeting.
- h. Participated in the April 20 workshop with the Board of Managers meeting.
- i. Participated in the April 25 continuation of the regular Board of Managers meeting.
- j. Met virtually with Administrator Jeffery, President Ziegler, Counsel Smith and Counsel Welch to review draft agenda for April 26 regular board of managers meeting.
- k. Prepared Engineer's Report for engineering services performed during April 2023.

Permitting Program

- a. *Permit 2022-068 KIWATCHI*-- Notified applicant of conditional approval.
- b. *Permit 2022-076 CSAH 4 Culvert Lining* – Notified applicant of conditional approval.

- c. *Permit 2022-077 Dunibar Court-* – Notified applicant of conditional approval.
- d. *Permit 2023-007 Southwest Village Retail* – The applicant proposes the construction of a retail building, associated drive-thru lane, landscaping, underground cistern for irrigation reuse, underground stormwater management facility, and a propriety stormwater device to provide water quality and rate control. The project triggers RPBCWD erosion prevention and sediment control (Rule C) and stormwater management (Rule J). Reviewed revised submittal and drafted permit report for consideration at the May 3 regular meeting.
- e. *Permit 2023-005 Sunnybrook Road culvert replacement* – Notified applicant of conditional approval.
- f. *Permit 2023-017 Crew Carwash* – The project proposes to redevelop the 1.35-acre site of the former Burger King restaurant at the southwest corner of Eden Prairie Road and Highway 5 in Eden Prairie. The proposed redevelopment consists of a +/-5,800 square foot carwash building and space for a future +/-5,000 square foot interior cleaning building. Additional redevelopment features include new pavement, utilities, underground stormwater infiltration BMP, sidewalk, and landscape. The project triggers RPBCWD erosion prevention and sediment control (Rule C) and stormwater management (Rule J). Reviewed April 3 submittal and provided review comments to applicant on April 19.
- g. *Permit 2023-018 Groveland Storm Sewer Replacement* The project would involve the replacement of an 18-inch pipe with a 42 inch pipe (with restrictor plates) so there is not a materially increase discharges at the site boundary, thus the project might only require approval under RPBCWD's Rule C – erosion Prevention and Sediment Control. Discussed the proposed work with the City and City's engineer to clarify the project and regulatory requirements.
- h. 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. Made corrections to 2022 data in the database.

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. Site visits to check on ice conditions/clear away ice.
- b. Site visits to prep for spring sampling – test and calibrate equipment, check/change out desiccants, set thermostats.
- c. Snowmelt event sampling – set, prep, and deliver samples.
- d. Download and review data.

Task Order 24B: Silver Lake Water Quality Improvement Project

- a. Vegetation maintenance will begin in May with garlic mustard control.
- b. Buffer signs are being fabricated for installation.

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

- a. The three-year vegetation establishment period is in process.
- b. Site walk-through to assess plug replacements and seeding establishment is scheduled for May 15, 2023.

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

- a. Site review of vegetation and planning for 2023 vegetation management activities to take place in May 2023.

Task Order 30B: Pioneer Trail Wetland Restoration Project

- a. The three-year vegetation establishment period is in process.
- b. Site walk-through to assess plug replacements and seeding establishment is scheduled for May 5, 2023.

Task Order 032B: Upper Riley Creek Ecological Enhancement Project

- a. Design revisions associated with additional hydraulics analysis result in a "No-Rise" condition for the project. This information is being reviewed by the DNR and City to confirm a conditional letter of map revision to FEMA will not be required for the project. Reviewed 90% level design drawings with City staff on April 6. Plan modifications are underway for final drawing set.
- b. Submitted Minnesota Joint Permit Application for U.S. Army Corps of Engineers and Minnesota Wetland Conservation Act permit coverage. RPBCWD permit is planned for submittal in April.
- c. Draft exhibits to go along with license agreements for working on private property were provided to RPBCWD staff and attorney on April 25.

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 in May.

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

- a. This month staff submitted the draft report for MPCA review, as required by the grant agreement. We received comments from the MPCA and have updated the project report to incorporate comments provided.

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- b. Evaluation methodology, results, and recommendations for next steps were presented to the RPBCD Managers during the April Workshop.
- c. Next month staff will be preparing final project reporting forms as required by the MPCA and then submitting final deliverables to RPBCWD, MPCA, and City of Eden Prairie.

Task Order 037: Sediment Analysis

- a. Draft Lake Sediment Analysis Technical Memorandums for Lake Riley, Lake Susan, and Rice Marsh Lake to be delivered in early May.
- b. Working with District staff to develop a sampling plan for the Lake Susan wetland and collect samples in mid-May.

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

- a. Follow-up on discussion items from the meeting with district and city staff, including evaluation of several additional BMP concepts.
- b. Review past inspections of ravine near BMP site LL_3 per conversation at meeting with District and city staff.
- c. Follow-up with city staff on outstanding items related per conversation at meeting with District and city staff. District staff need to perform soil health sampling and infiltration testing in Spring 2023 at the various BMP sites. Once complete, we will finalize BMP concepts, costs, and summary.
- d. Drafting feasibility study report.

Task Order 040: Alum Application on Lotus Lake

- a. Draft memo will be delivered to the Administrator in early May.

Task Order 41: Chanhassen Decant Facility

- a. Continued geotechnical report.
- b. Continued preliminary design.
- c. A site visit to St. Louis Park's decant facility is scheduled for April 28.

Task Order 42: Bluff Creek Culvert Reconstruction

- a. Barr incorporated the District's Prioritization Tool into the technical memorandum which was provided to the District on April 2, 2023.

Task Order 43: Ecosystem Health Plan

- a. Met twice monthly with District staff to discuss team efforts.

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- b. Completed initial development of a series of GIS maps depicting the historic ecological conditions as well as current ecological conditions within the district. These will serve as a baseline for the improvement of ecological conditions.
- c. Finalized the advisory panel of local experts to advise this project through a series of workshops. The first workshop is scheduled for May 18th and will set goals for the process as well as discuss ecological issues within the District.
- d. Continued conducting a literature review of the altered hydrology of green space. Many think that because land is not developed it readily infiltrates stormwater and does not contain nutrients in the runoff. Due to many factors from previous farming to lawn establishment, to earthworms, to deer herbivory, the hydrology of green space does not function effectively. This will be described in detail.

Capital Project	Project Phase (% Complete)								Comments
	Regional Analysis	Feasibility Study	Project Ordering	Design	Permitting	Construction	Substantial Completion	Final Completion	
Bluff Creek									
Bluff Creek Tributary Restoration	100%	100%	100%	100%	100%	100%	100%	99%	Final vegetation review in 2023
Pioneer Wetland Restoration	100%	100%	100%	100%	100%	100%	100%	30%	3-year vegetation management underway
Bluff Creek Reach 5 Restoration	100%	100%							
BT3	100%								
B4	100%								
B3	100%								
Riley Creek									
Lake Riley - Alum Treatment	100%	100%	100%	100%	100%	100%	100%	100%	
Rice Marsh Lake in-lake phosphorus load	100%	100%	100%	100%	100%	33%	33%	33%	The first of three alum doses applied in 2018
Rice Marsh Lake Water Quality Improvement Phase 1	100%	100%	100%	100%	100%	100%	100%	40%	3-year vegetation management underway
Riley Creek Restoration (Reach E and D3) (aka Lower Riley Creek Restoration)	100%	100%	100%	100%	100%	100%	100%	99%	Coordinating final vegetation review in spring 2023
Upper Riley Creek Stabilization (aka Upper Riley Creek Ecological Enhancement Project)	100%	100%	100%	90%	20%				
Middle Riley Creek Restoration	100%	100%	100%	100%	100%	100%	100%	40%	3-year vegetation management underway
St. Hubert Water Quality Project	100%	100%	100%	100%	100%	100%	100%	40%	3-year vegetation management underway
Lake Susan Park Pond	100%	100%	100%	100%	100%	100%	100%	100%	
Susan In-Lake	100%								
LU-A1.10c	100%								
LU-A3.4	100%								
Lake Susan Park Pond Reuse Inlet Enhancement				60%					
Chanhassen Decant Facility				10%					
Purgatory Creek									
Purgatory Creek Rec Area- Berm/retention area	100%			50%					
Lotus Lake in-lake phosphorus load control	100%	100%	100%	50%	100%	50%	50%	50%	The first of two alum doses applied in 2018. Second dose planned in fall 2023
Silver Lake Water Quality BMP	100%	100%	100%	100%	100%	100%	100%	40%	3-year vegetation management underway
Scenic Heights Forest Restoration	100%	100%	100%	100%	100%	100%	100%	100%	
Hyland Lake in-lake phosphorus load control	100%	100%	100%	100%	100%	100%	100%	100%	Three Rivers Park took over project.
Duck Lake Watershed Load	100%	100%	100%	100%	100%	100%	100%	100%	
Duck Lake Road Partnership (aka bridge)			100%				100%	100%	Partnership project with Eden Prairie. RPBCWD limited to financial contribution. Construction is complete. RPBCWD has fulfilled 2 of 5 year financial contributions.
Lotus Lake Watershed Improvement Project (LL_1, LL_3, LL_7, LL_8)	100%	70%							
Staring Lake StL_21	100%								
Lotus Lake LL_9	100%								
Staring Lake StL_1	100%								
Red Rock Lake RRL_7	100%								
Staring Lake StL_17	100%								
Mitchell Lake ML_3	100%								
PC_1	100%								
PC_2	100%								
Kerber Ravine	100%	100%							