

## Memorandum

**To:** Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator  
**From:** Barr Engineering Co.  
**Subject:** Engineer's Report Summarizing March 2024 Activities for April 3, 2024 Board Meeting  
**Date:** March 22, 2024

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 March 2024.

### General Services

- a. Met virtually with Administrator Jeffery, staff Nicklay, and Counsel Welch on March 5 and 19 to discuss actions on notice of probable violation locations, Upper Bluff Creek cooperative agreement, upper Riley Creek draft cooperative agreement and property rights discussions, and upcoming Lotus Lake subwatershed capital projects.
- b. Met virtually with city of Chanhassen on March 7 to discuss coordination/collaboration of 2025 street projects with RPBCWD CIP, potential partnerships pursuing the MPCA Climate Resilience Grant opportunities, and the proposed regional stormwater facility in the NW quadrant of Hwy 5 and Market.
- c. March 8 agenda setting meeting with Administrator Jeffery, President Pedersen, counsel Welch, and counsel Smith.
- d. Met with Administrator Jeffery and Counsel Welch to discuss the Lotus Lake subwatershed feasibility study and potential implementation process on March 8.
- e. Participated in the March 13 regular Board of Managers.
- f. Prepared Engineer's Report for engineering services performed during March 2024.
- g. Worked on developing a task order for the 2024 Lotus Lake alum application for consideration at the April 3 managers meeting.
- h. Assisting staff Dickhausen with trouble shooting RPBCWD MNRAM database related to the functional value determination.
- i. Miscellaneous discussions with Administrator Jeffery about grant opportunities, budgeting, task order development, CIP timing and process, permits, EHAP, meeting preparations, and ongoing studies.

### Permitting Program

- a. *Permit 2023-020 Bush Lake Veterinary Building* – The project proposes the development of a new veterinary clinic building and associated onsite parking area and driveway at 10160 Hennepin Town Road in Eden Prairie, MN. The project triggers RPBCWD erosion prevention

and sediment control (Rule C) and stormwater management (Rule J). Worked with the applicant to finalize the revised maintenance declaration.

- b. *Permit 2023-067 TH101 Rehabilitation and Creek Crossing Modification* – The proposed project includes bituminous mill and overlay of TH101, ADA Improvements, trail reclamation/rehabilitation, signal revisions, drainage preservation work and modifications to an existing culvert that conveys Purgatory Creek under the roadway. The project triggers RPBCWD floodplain management rule, erosion prevention and sediment control rule, creek and wetland buffer rule, dredging and sediment removal rule, and waterbody crossing and structures rule. Notified applicant of the conditional approval at the March 13, 2024 regular meeting of the Board of Managers
- c. *Permit 2023-077 Enclave at Manor Road* - This applicant proposes construction with driveways and patios, utilities, and stormwater management facilities. The stormwater management system includes vegetated swales, preservation of natural areas, and a bioretention basin site to provide runoff volume abstraction, water quality treatment, and rate control. Started reviewing revised submittal received on March 13.
- d. *Permit 2023-079 Grace Church Playground* - This applicant proposes construction of a new playground for Grace Church in Eden Prairie. The stormwater management system will be provided by an infiltration basin to provide runoff volume abstraction, water quality treatment, and rate control. Continued assisting the applicant with the maintenance declaration.
- e. *Permit 2024-004 Clear Spring Elementary Parking* – The applicant proposes the construction of a new parking lot. The proposed new parking lot will include the construction of new underground storm chambers for rate, volume, and water quality control. Notified applicant of the conditional approval at the March 13, 2024 regular meeting of the Board of Managers.
- f. *Permit 2024-005 Lake Ann Preserve and Park Improvements* – The proposed project includes the reconstruction and expansion of the Greenwood Shores Park parking lot and the construction of bituminous trails and three boardwalk crossings. The applicant proposes two infiltration basins and one biofiltration basin to provide stormwater rate control, volume abstraction, and water quality control. The project triggers RPBCWD floodplain management rule, erosion prevention and sediment control rule, creek and wetland buffer rule, waterbody crossing and structures rule, and stormwater management rule. Reviewed revised submittal and drafted the permit report for consideration at the March 13 managers meeting. Notified applicant of the conditional approval at the March 13, 2024 regular meeting of the Board of Managers and worked with applicant on finalizing the maintenance agreement.
- g. *Permit 2024-006 1811 Lake Lucy Road Wetland Restoration*– The proposed project includes the restoration of excavation that occurred in a WCA protect wetland and the downstream watercourse without a RPBCWD permit. The project triggers RPBCWD floodplain management rule, erosion prevention and sediment control rule, creek and wetland buffer rule, and waterbody crossing and structures rule. Reviewed the March 4 revised submittal and provided comments. Drafted the permit report for consideration at the April 3 managers meeting.
- h. *Permit 2024-013 Chanhassen 2024 Streets – Cahn View Area*– The city is proposing to improve approximately 3 miles of roadway with a mix of full reconstruction and rehabilitation in the residential Chan View neighborhood. The project triggers RPBCWD erosion prevention and sediment control rule and the stormwater management rule. The applicant is proposing

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**Page:** 3 of 5

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on-site BMPs and the use of a regional rainwater reuse system in the same subwatershed to provide rate control, volume abstraction, and water quality protection. Reviewed the March 8 submittal and provided comments informing the applicant that the application was incomplete because of missing geotechnical report and wetland protection analysis. Met virtually with the application March 20 to discuss review comments and incomplete items.

- i. Miscellaneous preapplication calls, emails, and meetings with future applicants with questions about rule applicability and criteria. Also answering questions from existing permit applicants about how to address comments provided during the review process and conditions of approval.

#### **Data Management/Sampling/Equipment Assistance**

- a. Coordinated with RPBC staff regarding 2024 phytoplankton analyses.
- b. Continued working with MPCA on the 2022 and 2023 data submission.

#### **Task Order 6: WOMP Station Monitoring**

##### ***Purgatory Creek Monitoring Station at Pioneer Trail***

- a. No activity.

##### ***Purgatory Creek Monitoring Station at Valley View Rd***

- a. Site visits to check on ice conditions.
- b. Planning with RPBCWD staff for 2024 monitoring.

#### **Task Order 24B: Silver Lake Water Quality Improvement Project**

- a. Vegetation maintenance contract is underway through December 2025.

#### **Task Order 28B: Rice Marsh Lake (RM\_12a) Water Quality Improvement Project**

- a. The year vegetation establishment period is in process.
- b. Coordinating with contractor to conduct a spring walkthrough to evaluate restoration.

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

- a. No site inspections took place in February 2024  
Ongoing vegetation management will continue through July 15, 2025.

#### **Task Order 30B: Pioneer Trail Wetland Restoration Project**

- a. The three-year vegetation establishment period is in process.
- b. Coordinating with contractor to conduct an April walkthrough to evaluate restoration.

#### **Task Order 032B: Upper Riley Creek Ecological Enhancement Project**

- a. Working with Administrator Jeffery and RPBCWD legal on revisions to a draft cooperative agreement with the city of Chanhassen.

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**Date:** March 22, 2024  
**Page:** 4 of 5

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- b. RPBCWD permit is planned for submittal after plans have been updated and property owner easements are in process in summer 2024.
- c. Because property owner coordination, some permitting, the incorporation of the proposed decant facility, and project bidding remains to be complete, Barr will coordinate with Administrator Jeffery to develop a request for additional engineering and permitting budget in early 2024.

#### **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. Continued data analysis for final report.

#### **Task Order 036B: Upper Bluff Creek Reach 5 Design**

- a. Site survey completed during the week of March 4. Will receive files from contractor the week of March 18.
- b. Beginning to develop preliminary sheets list for design drawings.
- c. Draft Cultural Resources Assessment was completed at the end of February and will be shared with Administrator Jeffery in March. One archaeological site was identified within the project vicinity. Barr will be contacting USACE to determine if a Section 106 permit would be required for the project.
- d. Phase 1 ESA is almost complete, awaiting the User Questionnaire to be filled out by Administrator Jeffery.
- e. Riffle design at the outlet of the City's proposed Galpin Boulevard culvert replacement is underway.

#### **Task Order 037: Sediment Analysis**

- a. Finalized sediment P saturation calculations.
- b. The Lake Susan and Lake Susan wetland memos will be delivered together by Mid-April 2024.

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

- a. Meeting with Administrator Jeffery and Counsel Welch to discuss next steps needed for project advancement.

#### **Task Order 040: Alum Application on Lotus Lake**

- a. Draft memo was delivered to the District Administrator in early June 2023.
- b. Presented results and next steps to the RPBCWD Board of Managers at the March 13 meeting.
- c. Developing a Task Order to complete Plans and Specifications for the second alum treatment scheduled for Fall of 2024.

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**Page:** 5 of 5

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#### **Task Order 41: Chanhassen Decant Facility**

- a. Progressed "Bone Yard" 30% design.
- b. Conducted geotechnical investigation of "Bone Yard".

#### **Task Order 43: Ecosystem Health Action Plan**

- a. Conducted biweekly meetings with District staff to discuss plan components and track project progress.
- b. Updated the spreadsheet of potential actions the District can take to improve ecosystem function to include the prioritization ranking results from the Board/CAC workshop March 11th.
- c. Edited the third chapter of the EHAP which addresses ecosystem function impairment and potential recovery. District staff is reviewing this chapter.
- d. Facilitated the March 11<sup>th</sup> Board/CAC EHAP workshop.



#### **Task Order 44: Lake Susan Park Pond Reuse Intake Modification**

- a. Obtained city of Chanhassen earthwork permit
- b. Reviewed submittal for the concrete wet well structure

Capital Project	Project Phase (% Complete)								Comments
	Regional Analysis	Feasibility Study	Project Ordering	Design	Permitting	Construction	Substantial Completion	Final Completion	
<b>Bluff Creek</b>									
Bluff Creek Tributary Restoration	100%	100%	100%	100%	100%	100%	100%	100%	Project Closed-out and Final payment in October 2023
Pioneer Wetland Restoration	100%	100%	100%	100%	100%	100%	100%	50%	3-year vegetation management underway
Bluff Creek Reach 5 Restoration	100%	100%	100%	10%	2%				Survey collection completed March, draft cultural and environmental resources reviews complete, setting up preliminary sheets, riffle design at Galpin Blvd culvert outlet underway
BT3	100%								
B4	100%								
B3	100%								
<b>Riley Creek</b>									
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%	45%	Establishing O&M documents in cooperation with the city. 3-year vegetation management underway
Riley Creek Restoration (Reach E and D3) (aka Lower Riley Creek Restoration)	100%	100%	100%	100%	100%	100%	100%	100%	
Upper Riley Creek Stabilization (aka Upper Riley Creek Ecological Enhancement Project)	100%	100%	100%	99%	50%				DNR and USACE permit received. District permitting pending. Anticipate bidding in later summer after the decant facility is incorporated into the project as directed by the Administrator. Assisting staff with property access agreements (private and public)
Middle Riley Creek Restoration	100%	100%	100%	100%	100%	100%	100%	45%	3-year vegetation management underway
St. Hubert Water Quality Project	100%	100%	100%	100%	100%	100%	100%	45%	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				100%	50%	5%			Contractor contract executed, city and district permits submitted, and reviewing shop drawings.
Chanhasen Decant Facility				20%					City and RPBCWD Administrator approved boneyard location and directed the design be rolled into the Upper Riley Creek Restoration Plans and specs for a single bidding.
<b>Purgatory Creek</b>									
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 2024. Sediment memo to be discussed at March meeting.
Silver Lake Water Quality BMP	100%	100%	100%	100%	100%	100%	100%	45%	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 3 of 5 year financial contributions.
Lotus Lake Watershed Improvement Project (LL_1, LL_3, LL_7, LL_8)	100%	100%							Report Finalized and will be presented at February 2024 regular meeting
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%							Incorporated summary into Lotus Lake Water Quality project to assess impact with respect to other BMPs being considered.

<b>Ongoing Studies</b>									
Ecological Health Action Plan		80%							The 4 of 4 Advisory Panel workshops completed. Several sections of the report are drafted and under review by RPBCWD.
Lotus Lake LVMP		100%						100%	
Eden Prairie Climate Resilience Modeling		100%						100%	
Wetland Assessment Phase 1		95%						95%	
Sediment Analysis - Riley, Rice Marsh, Susan		95%							Lake Susan and Lake Susan wetland memos will be delivered together in early 2024.