

## Memorandum

**To:** Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator  
**From:** Barr Engineering Co.  
**Subject:** Engineer's Report Summarizing April 2024 Activities for May 8, 2024 Board Meeting  
**Date:** May 3, 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 April 2024.

### General Services

- a. Met virtually with Administrator Jeffery on April 1 to discuss BWSR water storage and water quality grant opportunity for the Bluff Creek Reach 5 Ecological Enhancement Project. Assisted Administrator Jeffery with application development.
- b. Met virtually with Administrator Jeffery, staff Nicklay, and Counsel Welch on April 2, 16, and 30 to discuss actions on notice of probable violation locations, Upper Bluff Creek cooperative agreement, upper Riley Creek draft cooperative agreement and private property access agreements, variance requests with permit reviews, and upcoming Lotus Lake subwatershed capital projects.
- c. Met with Administrator Jeffery on April 17 to review action items for the ecological enhancement plans, begin 2025 budget discussions, review CIP implementation process, and Lotus Lake water quality project discussions.
- d. Participated in the April 3 regular Board of Managers.
- e. Prepared Engineer's Report for engineering services performed during April 2024.
- f. Miscellaneous discussions with Administrator Jeffery about grant opportunities, budgeting, task order development, CIP timing and process, permits, EHAP, meeting preparations, 2025 budget, and ongoing studies.

### Permitting Program

- a. *Permit 2022-018: Eden Prairie High School Track Facility Improvements* – The applicant proposes to add a stormwater reuse system to the Eden Prairie High School campus to meet the stormwater management requirements (rate control, volume abstraction, and water quality) applicable to the reconstruction of the school track and field complex. The original application for the project triggered only RPBCWD's Rule C erosion and sediment-control requirements because the school district presumed that the proposed work would involve only pavement rehabilitation, which is exempt from RPBCWD stormwater requirements. However, as the land-disturbing activities approved under permit 2022-018 got under way, poor onsite subsoil conditions were discovered, necessitating a change from pavement

- rehabilitation to full pavement reconstruction (i.e., disturbance of underlying soils). While the applicant submitted a new permit application (2024-017) the proposed work is a modification as described above. Reviewed submittal materials associated the permit modification request, worked with applicant to address review comments, and drafted permit report for consideration at the May 8 manager meeting.
- b. *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. Reviewed the revised submittal materials, variance request, meet virtually with the applicant, and drafted permit report for consideration at the May 8 manager meeting.
- c. *Permit 2024-008 Chanhassen Apartments* – The proposed project includes the redevelopment of a property into two multi-family/mixed use retail and restaurant buildings and associated onsite and under-building parking areas. The project triggers RPBCWD erosion prevention and sediment control and the stormwater management rules. Reviewed the April 18 revised submittal. Drafted the permit report for consideration at the May 8 managers meeting.
- d. *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 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 revised submittal materials, variance requests, meet virtually with the applicant (April 10), and drafted permit report for consideration at the May 8 manager meeting.
- e. *Permit 2024-018 Miller Park Courts* – The proposed project includes the replacing the existing basketball and tennis courts with eight (8) pickleball courts, one (1) tennis court, and one (1) basketball court. The project triggers RPBCWD erosion prevention and sediment control (Rule C), creek and wetland buffers (Rule D) and the stormwater management (Rule J) rules. Reviewed the submittal and provided review comments on April 3 informing the applicant the submittal was incomplete because of missing stormwater management system modeling (MIDS) in native electronic format and information to demonstrate compliance with the wetland protection bounce and inundation criteria.
- f. *Permit 2024-020 Olympic Hills Golf Course Hole 5 Reconfiguration* – The applicant is proposing to reshape hole 5 by moving the green, removing and reconstructing sections of bituminous cart path, and relocating an existing stormwater pond. The project triggers RPBCWD floodplain management (Rule B) and erosion prevention and sediment control (Rule C). Reviewed the submittal and provided review comments on April 9 informing the applicant the submittal was incomplete because of missing permit fee deposit and stormwater management system modeling in native electronic format. Reviewed revised submittal and drafted permit report for consideration at the May 8 manager meeting.
- g. *Permit 2024-023 Chanhassen Civic Campus* – The applicant is proposing a new city hall building, parking facilities, public parking, utility design, community site improvements, and stormwater management improvements. The applicant is proposing 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. The project triggers RPBCWD erosion prevention and sediment control rule and the stormwater management rule. Reviewed the April 2 submittal and provided review comments on April 15 informing the applicant the submittal was incomplete because of missing rate control information at all discharge locations and missing information in the hydrologic modeling. Reviewed revised April 22 submittal completing the application, provided review comments, and answered questions from the applicants engineer.

- h. Met with Administrator Jeffery, city of Eden Prairie Staff, and WSB on April 1 to discuss the planned reconstruction of Dell Road over Riley Creek. The meet was followed by a site walk to review site challenges and constraints.
- 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. Continued working with MPCA on the 2022 and 2023 data submission in the agency's specific submittal format.
- b. Prepared, loaded, and verified one RMB Laboratory (RMB) report to the database.
- c. Prepared, loaded, and verified winter lake data collected in 2021 that was collected with the Survey123 mobile application.

#### **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. 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.
- b. Visited site on 4/18.
- c. Garlic mustard management last season has reduced the abundance of the invasive species.

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

- a. The year vegetation establishment period is in process.
- b. Visited site on 4/19.
- c. Contractor will be conducting spot treatment for invasive grasses and broadleaf invasives, hand-pulling garlic mustard, and overseeding turf areas on 5/1.

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

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

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

- a. The year vegetation establishment period is in process.
- b. On site spring walk through on 4/23. Observed 1-3" of standing water in the middle of the site within the wetland areas. The water level is higher than summer conditions but not so high that we think it will hinder plant growth.
- c. Contractor spot sprayed reed canary grasses on 4/24 to reduce risk of hitting warm season natives.
- d. Fall will be the next time for herbicide treatment.
- e. Contractor is working on a management plan for the season and will provide to Barr soon.
- f. Contractor will complete monthly visits per the contract throughout the season. Visits will include mowing and spot spraying, as needed.
- g. Final walkthrough anticipated for late August or early September.



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

- a. Working with Administrator Jeffery and RPBCWD legal on revisions to private property agreements and a draft cooperative agreement with the city of Chanhassen.
- 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. Riffle design at the outlet of the City's proposed Galpin Boulevard culvert replacement is underway.
- b. Received site survey files from contractor the week of April 4.
- c. Incorporated survey into base files and developed preliminary sheets for design drawings.
- d. Completed draft Phase I ESA and draft Cultural Resources Assessment. Will be shared with Administrator Jeffery in May. One archaeological site was identified within the project vicinity. After further evaluation, the structure has been removed and will not require a Section 106 permit for the project.
- e. Survey has been incorporated into the District's existing conditions hydrologic model.

### **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 end of May 2024.

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

- a. Started developing a scope of work for the project design phase.

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

- a. A Task Order to complete Plans and Specifications for the second alum treatment scheduled for Fall of 2024 was approved by the Board.
- b. This task order is complete.

### **Task Order 040B Lotus Lake Alum Administration**

- a. Kicked off development of plans and specifications for the Fall alum treatment on Lotus Lake.

**Task Order 41: Chanhassen Decant Facility**

- a. Continue working on 30% design.

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

- a. Refined and added prioritization criteria to the spreadsheet of potential actions the District can take to improve ecosystem function.
- b. Began writing the final chapter of the EHAP which addresses the actions the District will take moving forward.
- c. This project is nearly complete.

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

- a. Reviewed submittal for the handrail
- b. Worked with contractor on schedule. The concrete structure is now supposed to be delivered in the beginning of June pushing the schedule back from the before anticipated start time of May 15.

**Task Order 45: Development of District-Wide Groundwater Monitoring Network**

- a. Conducted initial screening and site visits for potential monitoring well locations.
- b. Began development of monitoring well specifications in preparations to seek bids from drilling contractors.
- c. Meeting scheduled for May 6<sup>th</sup> to meet with staff to review locations.

**Task Order 46: Duck Lake Outlet Modifications**

- a. Reviewed the work done under Task Order 27 which analyzed the potential impacts of the post-1979 and 2014 Duck Lake outlet modifications relative to the original 1969 outlet.
- b. Started modeling potential outlet modifications to allow the outlet to function more closely to the original 1969 design while maintaining the current normal water level.

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%	60%	3-year vegetation management underway
Bluff Creek Reach 5 Restoration	100%	100%	100%	15%	5%				Survey collection completed March, draft cultural and environmental resources reviews complete, preliminary sheets set up complete, riffle design at Galpin Blvd culvert outlet underway, updated existing conditions hydrologic model complete
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%	60%	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 obtained, and reviewing shop drawings.
Chanhassen Decant Facility				25%					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. Board authorized Barr to finalize dosing and develop specification for second dose in late 2024.
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 presented at February 2024 regular meeting. Working with Administrator on scoping design efforts and city coordination.
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.
Development of Groundwater Monitoring Network		40%		10%					Location siting and selection underway. Specifications for bid in development.
Duck Lake Outlet Modification		10%							Modeling of possible Duck Lake outlet modifications underway.