

# Memorandum

**To:** Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator  
**From:** Barr Engineering Co.  
**Subject:** Engineer's Report Summarizing July 2024 Activities for August 7, 2024 Board Meeting  
**Date:** July 31, 2024  
**Project:** 23270053.14 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 July 2024.

## General Services

- a. Met virtually with Administrator Jeffery, staff Nicklay, and Counsel Welch on July 2 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, permit reviews, and quote/bidding process for 2024 Lotus Lake alum application.
- b. Attended the July 8 Watershed Based Implementation Funding (WBIF) meeting with Administrator Jeffery and stakeholder to discuss potential projects to apply the 2024 grant funds.
- c. Met with City of Chanhassen on July 10 to discuss decant facility design.
- d. Participated in the July 10 regular meeting of the Board of Managers.
- e. Met with Administrator Jeffery on July 11 to discuss potential grant opportunities and draft 2025 levy and budget.
- f. Met with Administrator Jeffery on July 17 to discuss finalize draft 2025 levy and budget for discussion at the July 18 workshop.
- g. Participate in July 18 Board of Managers budget workshop.
- h. Met with Administrator Jeffery on July 23 to brainstorm opportunities to enhance the ecological, educational, water quality benefits of north Lotus Lake water quality project as well as the need to increase stakeholder engagement.
- i. Participated in a meeting with the Metropolitan Council Environmental Services to discussion permitting requirements for the Upper Riley Creek Project and decant facility on July 9, 2024.
- j. Prepared Engineer's Report for engineering services performed during July 2024.
- k. Miscellaneous discussions with Administrator Jeffery about Clean Water Fund grant opportunity, task order development, permits, and ongoing studies.

## Permitting Program

- a. *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. Continued working with applicant to resolve conditional approval items.
- b. *Permit 2024-027 Hyland Boat Launch* – The applicant is proposing the reconstruction of the Hyland Lake boat launch in Bloomington. The project is part of a larger scheme of development that was approved under Permit 2018-072. The project triggers RPBCWD floodplain management (Rule B), erosion prevention and sediment control (Rule C), and stormwater management rule (Rule J). Work with applicant to clarify and resolve conditional approval items.
  - c. *Permit 2024-038 Lunds & Byerlys Food Holdings Improvement* – The applicant is proposing a building addition and utility improvements at the 7752 Mitchell Road in Eden Prairie. The project triggers RPBCWD erosion prevention and sediment control (Rule C) and stormwater management rule (Rule J). Work with applicant to clarify and resolve conditional approval items.
  - d. *Permit 2024-047: New Horizon Academy Retaining Wall (Dell Rd)*– The applicant is proposing to replace an existing deteriorated retaining wall with a new boulder wall. The project triggers RPBCWD erosion prevention and sediment control (Rule C). Reviewed the June 21 and July 12 submittals and provided review comments informing the applicant on July 5 the submittal was incomplete because of missing permit fee deposit. Worked with the applicant to revise submittal and submit the required permit fee deposit as well as financial assurance for administrator approval of the permit.
  - e. *Permit 2024-049: 11609 Leona Rd Redevelopment* – The applicant is proposing to subdivide the existing 3.44 AC parcel into two separate lots to 1) develop a one story, approximately 2,447 square foot building with a drive through, patio, and associated utility, landscape, and parking improvements and 2) demo a portion of the existing retail building and develop an approximately 18,500 square foot building with associated utility, landscape, and parking improvements. The project triggers RPBCWD erosion prevention and sediment control (Rule C and stormwater management rule (Rule J). Reviewed the June 28 submittal and provided review comments on July 5 informing the applicant the submittal was incomplete because of missing permit fee deposit, stormwater models in native format, and engineers opinion of probable cost.
  - f. *Permit 2024-051: Costco Gasoline - Fuel Facility Expansion*: The applicant proposes modification to the existing fueling area at Costco in Eden Prairie. The project triggers RPBCWD erosion prevention and sediment control (Rule C and stormwater management rule (Rule J). Reviewed the July 10 submittal and provided review comments on July 15 informing the applicant the submittal was incomplete because of missing permit fee deposit, stormwater models in native format, and engineers opinion of probable cost.
  - g. Met with City of Eden Prairie on July 12 to discuss design alternative for the upcoming Dell Road reconstruction project over Riley Creek.
  - h. 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. Prepared, loaded, and verified 31 RMB Laboratory (RMB) reports to the database.

### **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. Assist RPBCWD staff with storm event sampling.

### **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 and will continue through fall 2025.
- b. Site visit with the District Administrator held on Friday June 28.



June 28 - Native plantings along north side of trail, looking east



June 28 - Pollinator lawn, looking south

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

- a. Stantec conducted a site inspection on July 16<sup>th</sup>. They will conduct additional invasive species management later this summer. Numbers of invasives are decreasing and native species are becoming more established.

Ongoing vegetation management will continue through July 15, 2025.



Middle Riley Creek, July 16, 2024 – South Site, looking downstream (photo by Stantec)



Middle Riley Creek – July 16, 2024, South Site, looking southwesterly at pedestrian bridge and native vegetation in floodplain (photo by Stantec)

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

- a. The year vegetation establishment period is in process.
- b. Fall will be the next time for herbicide treatment.
- c. Contractor will complete monthly visits per the contract throughout the season. Visits will include mowing and spot spraying, as needed.
- d. Final walkthrough anticipated for late August or early September.
- e. Site visit with the District Administrator held on Friday June 28.





June 28 – Pioneer Trail wetland, looking north



June 28 – Pioneer Trail wetland, looking north

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

- a. Continue working with Administrator Jeffery and RPBCWD legal on revisions to private property agreements and a draft cooperative agreement with the city of Chanhassen.
- b. Working on necessary exhibit to accompany the agreements (public and private)
- c. Met virtually on July 29, 2024 with Metropolitan Council Environmental Services (MCES) to discuss permitting requirements for the Upper Riley Creek Project.
- d. Developed additional figures to assist with the MCES permit application.
- e. RPBCWD permit is planned for submittal after plans have been updated and property owner easements are in process in summer 2024.
- f. Coordinating permitting efforts with decant facility (Task Order 41)
- g. 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.

### **Task Order 033: Wetland Assessment – Phase 1**

- a. Phase 1 report to define ecosystem services and describe methodology for assessing each service remains on hold pending BWSRs proposed new wetland assessment protocols.

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

- a. Wetland delineation approved by the TEP.
- a. Proposed conditions modeling of the wetland outlet structure is underway. Proposed design seeks to mimic pre-development conditions hydrology through the wetland and downstream creek.
- b. Design of stream restoration elements is underway.
- c. Participated in the project Open House that occurred on the evening of July 29 at the Chanhassen Recreation Center.
- d. Working on application for the Clean Water Fund 2025 grant to obtain construction funding assistance.

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

- a. Completed and delivered draft memos for District staff review.

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

- a. Continued developing a scope of work for the and enhanced project feasibility and stakeholder engagement process.

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

- a. Finalized contract documents for alum application bid
- b. Sent advertisement for bids to Sun Sailor and the Sun Patriot newspapers.
- c. Posted contract documents to QuestCDN for online bidding.

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

- a. Progressed and submitted 60% design and opinion of probable cost.
- b. Met with city of Chanhassen to discuss 60% review comments on July 31, 2024.



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

- a. Incorporated Administrator Jeffery comments and completed final edits to the Plan as well as final formatting.



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

- a. Coordinating with contractor to complete the hand rail installation and the installation of the new suction piping.

**DRAFT**  
Ecosystem Health Action Plan  
August 2024

[View Purgatory Bluff Creek Watershed District Address](#)

Prepared for  
Riley Purgatory Bluff Creek Watershed District  
By Barr Engineering Company

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

- a. District staff are meeting with property owners regarding potential well locations. After concurrence with property owners on well locations bids will be sought for well installation.

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

- a. The purpose of this task order is to evaluate modifications to the Duck Lake outlet that maintain the existing runout elevation of 913.45 but better approximate the stage-duration curve before the outlet was modified in 2014.
- b. Met with Administrator Jeffery on July 16, 2024 to discuss and review the potential outlet modifications and their impacts on Duck Lake water levels.
- c. Currently working on technical memorandum summarizing the potential outlet modifications, modeling results and potential impacts to Duck Lake.
- d. Project is slightly behind schedule, but the budget spending is on track for the work that has been completed. Anticipate providing a draft of the technical memorandum to RPBCWD staff to review in August.

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%				Cultural and environmental resources report complete, preliminary sheets set up complete, riffle design at Galpin Blvd culvert outlet sent to District and City, updated existing conditions hydrologic model complete, proposed wetland outlet design 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%	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%	90%	75%			Contractor completed installation of concrete intake structure, associated pond excavation, and site restoration.
Chanhassen Decant Facility				60%	20%				City provided comments on 60% design which will be incorporated as the project move toward 100% design. Coordinated with MCES on permitting requirement to work in their sanitary sewer easement.
<b>Purgatory Creek</b>									
Purgatory Creek Rec Area- Berm/retention area	100%			50%					
Lotus Lake in-lake phosphorus load control	100%	100%	100%	100%	100%	50%	50%	50%	The first of two alum doses applied in 2018. Finalized contract documents for alum application bid to advertise in Sun Sailor and the Sun Patriot newspapers and on QuestCDN for online bidding.
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, enhance feasibility options, stakeholder engagement, 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		95%							Finalize draft report based on Administrator comments.
Lotus Lake LVMP		100%						100%	
Eden Prairie Climate Resilience Modeling		100%						100%	
Wetland Assessment Phase 1		95%						95%	
Sediment Analysis - Riley, Rice Marsh, Susan		100%							Lake Susan and Lake Susan wetland memos delivered.
Development of Groundwater Monitoring Network		45%		50%					Location siting and selection underway. Specifications for bids ready to be sent once concurrence of property owners obtained for well locations.
Duck Lake Outlet Modification		65%							Preparing memorandum summarizing potential outlet modifications, model results and impacts to Duck Lake water levels.