

## Memorandum

**To:** Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator  
**From:** Barr Engineering Co.  
**Subject:** Engineer's Report Summarizing December 2023 Activities for January 10, 2024 Board Meeting  
**Date:** January 5, 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 December 2023.

### General Services

- a. Participated in a December 7 agenda setting meeting with Administrator Jeffery, President Zeigler, and counsel Smith.
- b. Assisted RPBCWD staff with review, interpretation, and presentation of Score Your Shoe data.
- c. Participated in the December 13 regular Board of Managers.
- d. Met virtually with Administrator Jeffery, staff Nicklay, and Counsel Welch on December 20 and 27 to discuss status of permit violations, Upper Riley Creek restoration project status, Middle Riley (aka Bearpath), and upper Bluff Creek capital project.
- e. Participated in the December 18 meeting with Administrator Jeffery and staff Dickhausen to discussed 2023 soil investigation, analysis summary, and potential 2024 modifications to the program.
- f. Prepared Engineer's Report for engineering services performed during December 2023.
- g. Miscellaneous discussions with Administrator Jeffery about budgeting, environmental and solar thoughts for Spring Road Property, CIP timing and process, permits, EHAP, 2024 budget, 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). Review in-situ infiltration testing, worked with applicant on abstraction modification due to low infiltrating soils, reviewed permit modification request, and draft permit modification report for consideration at the January 10, 2024 regular meeting of the Board of Managers.
- b. *Permit 2023-036 Jerrys Enterprises Chipotle* – The project is a redevelopment of the northeast parking lot at Preserve Village into a Chipotle restaurant and associated onsite parking areas in Eden Prairie, MN. The project includes an underground stormwater

- management facility to provide volume control, water quality, and rate control. The project triggers RPBCWD erosion prevention and sediment control rule and the stormwater management rule. Notified applicant of conditional board approval at the December 13, 2023.
- c. *Permit 2023-064 Rainbow Drive Culvert Replacement* – The proposed project includes replacement of an existing, deteriorated arch corrugated metal culvert that conveys Purgatory Creek under Rainbow Drive in the vicinity of Eden Prairie Road in Eden Prairie. 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 revised submittals and draft permit report for consideration at the January 10, 2024 regular meeting of the Board of Managers.
  - d. 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 11 RMB Laboratory (RMB) reports to the database.
- b. Corrected data in the online database after review by RPBCWD.

#### **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. Download and review data.
- b. Maintenance – site visits to complete installation of new floorboard heater and winterization of station.
- c. Flow and stage data QA/QC and prep for loading into EQUIS.
- d. Review and approve MCES Lab invoice.

#### **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. The maintenance plan for the project was reviewed by the City of Chanhassen. As requested by the City, an inspection & maintenance checklist has been developed and is under review by the District Administrator.

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

- a. No site inspections took place in December, 2023

- b. 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.

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

- a. Bid package and associated drawings were provided to RPBCWD legal in September for review.
- b. RPBCWD permit is planned for submittal after plans have been updated and property owner easements are in process in January/February.
- c. Because property owner coordination, some permitting, 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.

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

- a. A scope of work for detailed design of the Upper Bluff Creek Reach 5 wetland and stream restoration project was approved by the Board at the December 13 workshop meeting.

**Task Order 037: Sediment Analysis**

- a. Working on data analysis to determine P sources in the wetland.
- b. The Lake Susan and Lake Susan wetland memos will be delivered together in early 2024.

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

- a. Finalizing draft feasibility study report including text, tables, and figures and submittal to district administrator for review.
- b. Coordinating draft feasibility study review meeting with District Administrator.

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

- a. Draft memo was delivered to the District Administrator in early June 2023.
- b. Next steps include incorporating comments from the District once received.

**Task Order 41: Chanhassen Decant Facility**

- a. Met with City of Chanhassen to discuss site constraints at existing “Bone Yard” and City’s preferred layout.
- b. Updated “Bone Yard” conceptual layout based on meeting with City of Chanhassen.

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

- a. Presented the general concept of the EHAP at the Minnesota Watersheds Annual Conference.
- b. Continued writing the Ecosystems Function section of the EHAP that describes impacts to the District ecosystem and potential solutions to these issues. Additional sections written include the impacts and potential solutions to lake, wetland, and stream ecosystems, degraded soils, urban heat island effect, and climate change.
- c. Planning and scheduling Workshop 4 with city and agency staff to discuss potential strategies for addressing ecosystem degradation. Three separate round-table discussions will be conducted in January with groups centered around 1. City planning, 2. Natural resources, and 3. Water resources.

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

- a. Working with contractor on form of agreement.
- b. Assisted Administrator Jeffery and Counsel Welch with development of access agreement with the city of Chanhassen.

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%	1%					Project Ordered and design service authorized in December 2023
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. 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%					Quotes received 10/20/23 with recommendation to award at November meeting
Chanhasen Decant Facility				15%					Working with the City and RPBCWD Administrator on alternative location and size of facility to improve fit with project and budget constraints.
<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
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%	95%							Delivered draft report to Administrator for review.
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		60%							The 3 of 4 Advisory Panel workshops have been completed. Several section 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		90%							Lake Susan and Lake Susan wetland memos will be delivered together in early 2024.