

Memorandum

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

General Services

- a. Participated in a January 2 meeting with Joe Seidl (Chanhassen) to discuss the city's pilot rainwater garden program for the area NE of downtown Chanhassen with respect to RPBCWD's regulatory program and partnership ideas.
- b. Met with Administrator Jeffery and staff Maxwell on January 3 to refine the scoping approach to holistic lake management. The hope is to bring a revised approach to the Managers in March.
- c. January 4 agenda setting meeting with Administrator Jeffery, President Zeigler, and counsel Smith.
- d. Participated in the January 10 regular Board of Managers.
- e. Met with the city of Chanhassen on January 18 to review the proposed regional stormwater approach for the downtown Chanhassen area. Review the preliminary volume and water quality computations for the proposed regional best management practices and provided initial review comments.
- f. Met virtually with Administrator Jeffery and the city of Eden Prairie on January 24 to strategize and discuss potential project to pursue the MPCA's climate resilience grant.
- g. Participated in the January 25 workshop with Board of Managers.
- h. Prepared Engineer's Report for engineering services performed during January 2024.
- i. Miscellaneous discussions with Administrator Jeffery about budgeting, task order development, 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). Notified the applicant that the modification request was conditionally approved at the January 10 meeting. Worked

- with the applicant to fulfil the conditions of approval.
- b. *Permit 2023-045 Avienda Rowhomes* – This applicant proposes construction of Phase 3 of the Avienda development which involves construction of 53 row homes (three- and four-units per building) with driveways and patios, private roads, utilities, and stormwater management facilities. The stormwater management system includes 2 tree trenches, a bioretention basin, rainwater harvest and reuse system, a manufactured treatment device, and modifying two existing stormwater facilities on the site to provide runoff volume abstraction, water quality treatment, and rate control. The project triggers RPBCWD floodplain management rule, erosion prevention and sediment control rule, and the stormwater management rule. Reviewed revised submittal and drafted the permit report for consideration at the February 7, 2024 regular meeting of the Board of Managers.
 - 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. Notified applicant of conditional board approval at the January 10, 2024 regular meeting of the Board of Managers.
 - d. *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. Reviewed revised submittal received on January 22, provided review comment to the applicant, and began drafting a permit report
 - e. *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. The application is incomplete because of missing permit fee deposit, stormwater management modeling, soils information, and detailed construction drawings. Worked with the applicant to incorporate the preliminary development into the RPBCWD H&H model to assess potential adverse offsite impacts from a potential variance request for rate control at all discharge locations. Using the model use agreement template developed by Smith Partners, developed a draft agreement for execution to allow the developers engineer access to use RPBCWD H&H model to evaluate remedial measures for the potential rate control impacts. Met virtually with the applicant on January 19 and 26 to discuss modeling and regulatory requirements.
 - f. *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. The project triggers RPBCWD erosion prevention and sediment control and stormwater rules. Received complete submittal on January 16 and drafted the permit report for consideration at the February 7, 2024 regular meeting of the Board of Managers.

- g. *Permit 2024-003 Asian Market Parking* – The applicant proposes to expand the parking lot at Asia Mall in Eden Prairie. The existing stormwater pond to the east will be replaced with underground storage facility to provide rate, volume and water quality control for the project. In addition to the lot, a turn lane along Technology Dr is also proposed. The project triggers RPBCWD floodplain management rule, erosion prevention and sediment control rule, and stormwater management rule. Reviewed submittal received on January 11, provided review comments to the applicant indicating the application was incomplete due to missing permit fee deposit, no snowmelt modeling, wetland protection assessment, and engineer's opinion of cost.
- h. Participated in preapplication meeting with Hennepin County on January 29 for the potential Purgatory Creek structure repair at County Road 62 and a meeting with the city of Minnetonka on January 19 for the Excelsior Boulevard (Cty 4) reconstruction project.
- 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. Submitted 2022 and 2023 data for Rice Marsh Lake and Lake Riley to the MPCA in the agency's specific submittal format.

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. Flow and stage data QA/QC and prep for loading into EQUIS.
- c. 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 has been finalized and shared with the City.

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. Working with Administrator Jeffery and RPBCWD legal on revisions to a draft cooperative agreement with the city of Chanhassen.
- b. Met with Administrator Jeffery and staff Forbes to coordinate private property owner communications and agreement process.
- c. RPBCWD permit is planned for submittal after plans have been updated and property owner easements are in process in summer 2024.
- d. 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. Met with District staff to discuss finalizing report.
- b. Continued drafting Phase 1 report to define ecosystem services and describe methodology for assessing each service.
- c. Continued data analysis for final report.

Task Order 036B: Upper Bluff Creek Reach 5 Design

- a. The project has been authorized, and a kick off meeting was held with District Administrator Jeffery on January 19th.
- b. Site survey and Phase 1 ESA will be completed within the first few weeks of February. Resident notification letters will be sent out by the District this week.

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 the end of February 2024.

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

- a. Finalizing draft feasibility study report including text, tables, and figures based on meeting to discuss review comments with district administrator.
- b. Draft feasibility study report submitted to RPBCWD managers.

Task Order 040: Alum Application on Lotus Lake

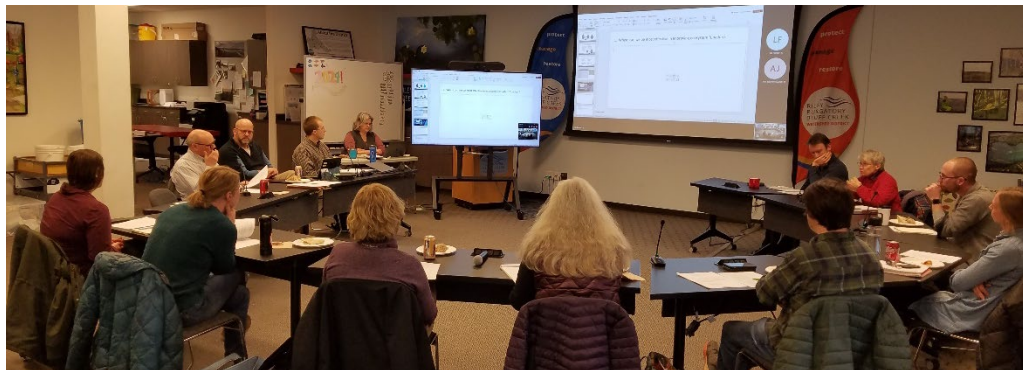
- a. Draft memo was delivered to the District Administrator in early June 2023.
- b. Working with District staff to determine next steps.

Task Order 41: Chanhassen Decant Facility

- a. Prepared "Bone Yard" alternative layouts, taking into consideration site constraints and potential required variances.
- b. Met with City of Chanhassen and Terry Jeffery to discuss the "Bone Yard" alternatives.

Task Order 43: Ecosystem Health Action Plan

- a. Conducted biweekly meetings with District staff to discuss plan components and track project progress.
- b. Facilitated Workshop 4 with city and agency staff discussing potential strategies for addressing ecosystem degradation. Three separate round-table discussions were conducted in January with participant groups centered around 1. City planning, 2. Natural resources, and 3. Water resources.



- c. The first three chapters of the EHAP have been written and have been reviewed by Administrator Jeffery. Refinements to the chapter on the land and water data chapter are on-going.

Task Order 44: Lake Susan Park Pond Reuse Intake Modification

- a. Working with contractor on shop drawing review.
- b. Applied for permits from the city of Chanhassen.

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%	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%								
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%	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%				Contractor contract executed, city and district permits submitted, and reviewing shop drawings.
Chanhassen Decant Facility				15%					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.
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 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%	99%							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.

Ongoing Studies									
Ecological Health Action Plan		75%							The 4 of 4 Advisory Panel workshops 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.