

Memorandum

To: Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator
From: Barr Engineering Co.
Subject: Engineer's Report Summarizing March 2023 Activities for June 7, 2023 Board Meeting
Date: May 31, 2023

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 May 2023.

General Services

- a. Met virtually with Administrator Jeffery, staff Nicklay, and Counsel Welch May 2 and May 16 to discuss the capital improvement project status, potential regulatory approval delegation ideas, status of probable permit violations, and cooperative agreements.
- b. Participated in the May 3 regular Board of Managers meeting.
- c. Met with Administrator Jeffery and Manager Crafton on May 4 to discuss the ecosystem services and brainstorm additional ideas.
- d. Met with Administrator Jeffery and staff Maxwell on May 8 to discuss 2023 monitoring locations and equipment needs for existing CIPs and future study locations.
- e. Participated in a meeting on May 10 with Administrator Jeffery and Counsel Welch to layout the process and materials necessary for the Lake Susan Park Pond reuse intake modification improvements.
- f. Met with Administrator Jeffery, staff Bakkum and Manager Duevel to discuss budget, levy, treasurers report formats and layouts.
- g. Participated in the May 18 workshop with the Board of Managers meeting.
- h. Participated in the May 18 continuation of the regular Board of Managers meeting.
- i. Met onsite with Administrator Jeffery and a property owner east of the pioneer wetland restoration project to listen to their fence and drainage items.
- j. Met virtually with Administrator Jeffery, President Ziegler, Counsel Smith and Counsel Welch to review draft agenda for May 25 regular board of managers meeting.
- k. Met with Administrator Jeffery on May 30 at the properties along Spring Road to review site conditions.
- l. Met with City of Chanhassen Parks on May 31 to walk the Lake Ann Park property to discuss the planned trail system and regulatory implications.
- m. Prepared Engineer's Report for engineering services performed during May 2023.

Permitting Program

- a. *Permit 2022-068 KIWATCHI*-- Responded to applicant's questions about conditions of approval and maintenance declaration.
- b. *Permit 2023-003 Galpin Boulevard Reconstruction* – The project proposes the reconstruction of roughly 2 miles of Galpin Boulevard (CR 117) between Hwy 5 and the Chanhassen/Shorewood border by converting the roadway from rural roadway to an urbanized section with curb and gutter. The project triggers RPBCWD floodplain management rule, erosion prevention and sediment control rule, creek and wetland buffer rule, waterbody crossing and structures rule, and the stormwater management rule. Started reviewing revised May 23 submittal. Thus far in the review process the application remains incomplete due to missing compensatory storage computations.
- c. *Permit 2023-022 CorTrust Bank Parking Lot Reconstruction* – The project involves the reconstruction of the existing CorTrust bank building parking lot that has experienced settlement since its original construction in the 1990s. The applicant is proposing to restore the parking lot and improve storm sewer. The project triggers RPBCWD's floodplain (Rule B), erosion and sediment control (Rule C), wetland and creek buffers (Rule D), and stormwater management (Rule J). The applicant is requesting a variance from achieving full compensatory storage requirements. The project is considered incomplete, and comments to the applicant were provided on May 1. Received information completing the application on May 3 but many review comments need addressing, especially related to the variance request.
- d. *Permit 2023-026 Café Zupas* – The project proposes constructing a Cafe Zupas restaurant by redevelop a portion of the existing parking lot of the Lunds & Byerly's at W 78th Street and Kerber Boulevard. The project triggers RPBCWD erosion prevention and sediment control (Rule C) and stormwater management (Rule J). Reviewed May 3 submittal, provided review comments, and notification to applicant on May 18 that the application was incomplete because of missing permit fee deposit, stormwater modeling and engineers opinion of probable construction costs.
- e. *Permit 2023-034 Life Time Pickleball Building* – The project proposes to redevelop a portion of the Life Time complex at 2932 Water Tower Place and 2970 Water Tower Place in Chanhassen. The project triggers RPBCWD erosion prevention and sediment control (Rule C) and stormwater management (Rule J). Conducted pre-application calls with the applicant and engineer to discuss the proposed project, review process, submittal requirements.
- f. Miscellaneous preapplication calls from future applicants with questions about rule applicability and criteria.

Data Management/Sampling/Equipment Assistance

- a. Prepared, loaded, and verified two RMB Laboratory (RMB) reports to the database.

Task Order 6: WOMP Station Monitoring

Purgatory Creek Monitoring Station at Pioneer Trail

- a. File management – lab sheets.

To: Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator
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Subject: Engineer's Report Summarizing March 2023 Activities for June 7, 2023 Board Meeting
Date: May 31, 2023
Page: 3 of 7

Purgatory Creek Monitoring Station at Valley View Rd

- a. Download and review data.
- b. Storm event sampling - set station.
- c. File management - lab sheets.

Task Order 14B: Lower Riley Creek Restoration

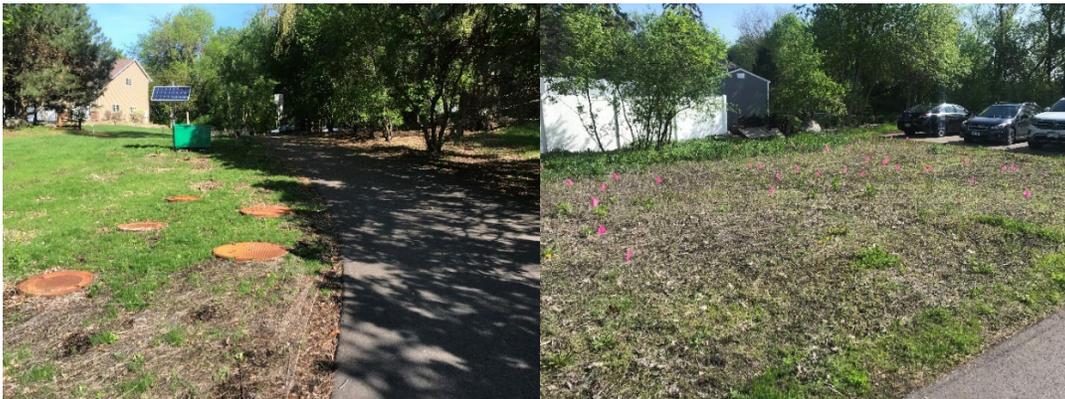
- a. Conducted the final site review for vegetation acceptance with the contractor, vegetation subcontractor, and City of Eden Prairie staff. Overall, herbaceous vegetation looked good. There was a high percentage of native grasses and forbs present throughout the seeded areas. The slope on the northeast side of the pedestrian bridge would benefit from an additional overseed. Landbridge is to follow up with a seeding within the next month.
- b. Health of trees and shrubs meet specifications. No additional replacement plants will be required.
- c. Remove all sediment logs and temporary erosion control measures (present throughout entire project site). Logs on steep pedestrian path (north end of project near Cedarcrest Dr.) can remain permanently (received approval from City)

Task Order 24B: Silver Lake Water Quality Improvement Project

- d. Vegetation maintenance began in May with garlic mustard control.
- e. Buffer signs are being fabricated for installation.

Task Order 28B: Rice Marsh Lake (RM_12a) Water Quality Improvement Project

- a. The three-year vegetation establishment period is in process.
- b. Site walk-through to assess plug replacements and seeding establishment occurred on May 15, 2023.
- c. Surviving plugs were flagged. Unfortunately, due to late planting last year, only about 10% of the plugs survived, and the area is full of thistle and other unwanted species. Landbridge will be spraying the area with broadleaf and replanting the plugs.
- d. It was still too early to tell how the seeding is coming along.



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

- a. Stantec (formerly Cardno – sub to Sunram) visited the site in early May to place live stakes and plugs as part of ongoing vegetation establishment management.
- b. Barr staff visited the site on May 15, 2023 with RPBWCD engineer, Bearpath, Sunram, and Stantec staff. Barr's landscape architect reviewed vegetation establishment along with Stantec's management plan for the season. Project boundaries were also reviewed, as well as sediment and erosion control BMPs. The material planted in 2022 appeared to be in good condition, with the exception of one of the trees, which will be replaced as part of ongoing vegetation management.
- c. Stantec staff returned to the site on May 16th and May 25th to mow reed canary grass, hand pull garlic mustard, and spot-treat thistle.



Task Order 30B: Pioneer Trail Wetland Restoration Project

- a. The three-year vegetation establishment period is in process.
- b. Site walk-through to assess plug replacements and seeding establishment was conducted on May 5, 2023. As expected, the site was soggy in many places and water was flowing through the draitile. A stoplog will be placed to reduce outflow through the draitile and hold more water in the wetland.
- c. The planted trees, bare root shrubs, and live stakes appear to be in good shape (minimal rubbing, etc.). A few replacements will be needed. Seeding looked good.
- d. Thistle and reed canary grasses are going to be sprayed sometime in the next few weeks.



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Date: May 31, 2023
Page: 5 of 7

Task Order 032B: Upper Riley Creek Ecological Enhancement Project

- a. Barr staff will walk site with City of Chanhassen staff on June 1st to review proposed restoration layout and tree removal and protection plan. Plan modifications will take place after site visit for final drawing set.
- b. RPBCWD permit is planned for submittal in June after site walk with City of Chanhassen staff.
- c. Draft exhibits to go along with license agreements for working on private property were provided to RPBCWD staff and attorney on April 25.

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. Having discussions with BWSR to determine if the approach they are developing will impact the RPBCWD approach.
- c. Having internal discussions to align the wetland plan with the Ecosystem Health Assessment currently in development for the district.
- d. Draft report expected to be delivered in August.

Task Order 035: Eden Prairie Stormwater Model Update and Flood-Risk Area Prioritization

- a. This month staff prepared the Final MPCA Continual Tracking and Budget-Expenditure Tracking Reports as required by the MPCA grant agreement and submitted reports to Administrator Jeffery for review. Following Administrator Jeffery's review, final reports will be submitted to the MPCA for approval.
- b. Next month, following MPCA approval of the Continual Tracking and Budget-Expenditure Tracking Reports Barr will submit final deliverables to RPBCWD, MPCA, and Eden Prairie.

Task Order 037: Sediment Analysis

- a. Draft Lake Sediment Analysis Technical Memorandums for Lake Riley, Lake Susan, and Rice Marsh Lake to be delivered by mid-June.
- b. Developed a sampling and analytical plan to assess phosphorus dynamics in the Lake Susan wetland including new Army Corps of Engineers techniques.
- c. Sampling the Lake Susan wetland is anticipated on Monday, June 5, 2023.
- d. Coordinated with the U of M laboratory and UW-Stout laboratory for sediment sampling and analysis.

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

- a. Follow-up and finalizing modeling and development of cost estimates for final alternatives. Waiting on results from district staff soil health sampling and infiltration testing at the various BMP sites. Once complete, we will finalize BMP concepts, costs, and summary.

- b. Drafting feasibility study report.

Task Order 040: Alum Application on Lotus Lake

- a. Reviewed sediment chemistry and hypolimnetic phosphorus to evaluate internal loading in Lotus Lake following the first alum treatment.
- b. Developed a strategy for future alum treatments for Lotus Lake.
- c. Reviewed literature on wake boats and their potential to affect alum treatment effectiveness and longevity.
- d. Draft memo will be delivered to the District June 9, 2023.

Task Order 41: Chanhassen Decant Facility

- a. Continued geotechnical report.
- b. Continued preliminary design.

Task Order 43: Ecosystem Health Plan

- a. Met twice monthly with District staff to discuss team efforts.

- b. Prepared for and conducted the first of four workshops with the project advisory panel comprised of staff from municipalities within the District, Fish &



- Wildlife Service, MN DNR, BWSR, and District staff. The goal was to garner from the group their definition of a healthy urban ecosystem within the district, to list challenges to the ecosystem and to rank them as to what be prioritized in the EHAP. Interestingly, the priority challenges were mostly social, including: a lack of big picture mindset, profit driven development pressure and lack of staff and funding. The results of this workshop will be presented at an upcoming Board workshop.
- c. Began writing the literature review of the altered hydrology of green space. Due to many factors including previous farming practices, to lawn establishment, to earthworms, to deer herbivory, the hydrology of green space in the District does not function effectively. This will be described in detail.

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Subject: Engineer's Report Summarizing March 2023 Activities for June 7, 2023 Board Meeting
Date: May 31, 2023
Page: 7 of 7

Task Order 44: Lake Susan Park Pond Reuse Intake Modification

- a. Finalized plans and specifications.
- b. Developed quote package and sent to eight contractors. Three contractors indicated they were too busy to submit and there was no response from another four. Only one quote was received, and it was significantly higher than the engineer's opinion of costs. We intend to reach out to the contractor to gather more information and work with Administrator Jeffery to define a path forward.

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%	99%		Final vegetation review in 2023
Pioneer Wetland Restoration	100%	100%	100%	100%	100%	100%	100%	40%		3-year vegetation management underway
Bluff Creek Reach 5 Restoration	100%	100%	20%							Final design contract underway
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%	40%		3-year vegetation management underway
Riley Creek Restoration (Reach E and D3) (aka Lower Riley Creek Restoration)	100%	100%	100%	100%	100%	100%	100%	99%		Conducted final vegetation inspection
Upper Riley Creek Stabilization (aka Upper Riley Creek Ecological Enhancement Project)	100%	100%	100%	90%	20%					
Middle Riley Creek Restoration	100%	100%	100%	100%	100%	100%	100%	40%		3-year vegetation management underway
St. Hubert Water Quality Project	100%	100%	100%	100%	100%	100%	100%	40%		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				60%						
Chanhassen Decant Facility				10%						
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 2023
Silver Lake Water Quality BMP	100%	100%	100%	100%	100%	100%	100%	40%		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 2 of 5 year financial contributions.
Lotus Lake Watershed Improvement Project (LL_1, LL_3, LL_7, LL_8)	100%	70%								Finalizing assessments and developing draft feasibility study
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%								

Ongoing Studies

Ecological Health Action Plan	35%	The first of four Advisory Panel workshops has been completed.
Lotus Lake LVMP	100%	
Eden Prairie Climate Resilience Modeling	100%	
Wetland Assessment Phase 1	95%	
Sediment Analysis - Riley, Rice Marsh, Susan	80%	