

## Memorandum

**To:** Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator  
**From:** Barr Engineering Co.  
**Subject:** Engineer's Report Summarizing August 2023 Activities for September 13, 2023 Board Meeting  
**Date:** September 7, 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 August 2023.

### General Services

- a. Participated in the August 2 regular Board of Managers meeting.
- b. Met virtually with Administrator Jeffery, staff Nicklay, and Counsel Welch on August 8 and August 24 to discuss status of permit violations, Upper Riley Creek restoration project status and outreach, regional stormwater management, and upper Bluff Creek capital project.
- c. Participated in the August 17 continuations of the August 2 regular Board of Managers meeting.
- d. Participated in the Ecological Health Action Plan coordination call with Administrator Jeffery on August 15 to develop the format for the 4<sup>th</sup> workshop in the series.
- e. Participated in the August 17 workshop with the Board of Managers.
- f. Met virtually with Administrator Jeffery, President Ziegler, Counsel Smith and Counsel Welch on August 31 to review draft agenda for September 13 regular board of managers meeting.
- g. Met with Administrator Jeffery and staff Forbes on August 31 to develop a property owner engagement strategy for the Upper Riley Creek project.
- h. Prepared Engineer's Report for engineering services performed during August 2023.
- i. Miscellaneous discussions with Administrator Jeffery about CIP, budgets, permits, workshop, and ongoing studies.

### Permitting Program

- a. *Permit 2018-016: Avienda:* This project involves a mixed-use regional development in the southwest quadrant of the intersection of Lyman Boulevard and Powers Boulevard in Chanhassen Minnesota. A permit modification was conditionally approved in March 2020, June 2020, and May 2022. The applicant fulfilled the conditions of approval, the permit was issued on July 14, 2021, and construction is underway. Reviewed permit modification request related to enlarge the wet basin storage to increase available water for reuse associated with Phase 1 (streets) and Phase 2 (Avienda Townhomes). Notified the applicant on August 8 that the submittal was incomplete because of a missing modification request and

- no stormwater modeling was provided. *Permit 2022-074 Xcel Service Center* – The project proposes to construct a new service center in Chanhassen on a 23-acre parcel located at 1891 Arboretum Blvd. The project triggers RPBCWD floodplain rule, erosion prevention and sediment control rule, creek and wetland buffer rule, waterbody crossing rule, and the stormwater management rule. Met with applicant and city of Chanhassen on August 8 to discuss RPBCWD's conditional approval.
- 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. Reviewed July 31 and August 15 submittals and provided comments. The application remains incomplete due to missing compensatory storage and water body crossing information related to the addition of the Bluff Creek culvert replacement. The applicant is requesting a variance from the required buffer widths. Participated in a August 3 and 28 virtual meetings with the applicant to review comments and coordinate on creek crossing design parameters/constraints.
- c. *Permit 2023-012 Audubon Business Park* – The proposed work will develop a 28-acre site at the southwest corner of Hwy 5 and Audubon Road Chanhassen, Minnesota. The applicant proposes constructing 2 office/warehouse buildings and associated site improvements on an undeveloped lot. The stormwater management system includes the construction of filtration and infiltration basins to provide water quality treatment, rate control, and volume abstraction. The project triggers RPBCWD floodplain rule, erosion prevention and sediment control rule, creek and wetland buffer rule, and the stormwater management rule. Reviewed July 27 submittal and provided comments related to restricted site stormwater management. The applicant is requesting a variance from providing compensatory storage adjacent to the same waterbody. Assisted Administrator Jeffery to issue a permit review timeline extension in accordance with MN Statute 15.99. Awaiting resubmittal.
- d. *Permit 2023-017 Crew Carwash* – The project proposes to redevelop the 1.35-acre site of the former Burger King restaurant at the southwest corner of Eden Prairie Road and Highway 5 in Eden Prairie. The proposed redevelopment consists of a +/-5,800 square foot carwash building and space for a future +/-5,000 square foot interior cleaning building. Reviewed revised August 23 submittal and drafted the permit report for consideration at the September 13, 2023 regular meeting of the Board of Managers.
- e. *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). Met with applicant on-site on August 15 to discuss alternative design ideas to minimize disturbed impervious surface with the applicants engineer, eliminate floodplain variance, minimize buffer variance request..
- f. *Permit 2023-026 Café Zupas* – The project proposes construction of the Café Zupas building (3,050 square feet), drive thru, parking, landscaping, and an underground stormwater

- management facility (UGSWMF) in Chanhassen, Minnesota. The project triggers RPBCWD erosion prevention and sediment control Rule C and stormwater management Rule J. The application was confirmed complete following review of the June 20, 2023 submittal. Additional review comments were sent to applicant August 11, 2023. Assisted Administrator Jeffery to issue a permit review timeline extension in accordance with Mn Statute 15.99. Awaiting resubmittal.
- g. *Permit 2023-034 Lifetime 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. Reviewed draft declaration.
- h. *Permit 2023-038 Mister Car Wash – Eden Prairie* – The project proposes the redevelopment of the former Burger King site in the NW corner of Flying Cloud and Prairie Center Drive into a Mister Carwash. The project triggers RPBCWD erosion prevention and sediment control (Rule C) and stormwater management (Rule J). Reviewed revised August 21 submittal and drafted the permit report for consideration at the September 13, 2023 regular meeting of the Board of Managers.
- i. *2023-044 Chanhassen Trail Improvements* – The applicant proposes trail improvements at three sites (#1-Topaz Dr and Lucy Ridge Circle, #2-South Lotus Lake Park, and #3- Galpin boulevard) in Chanhassen, MN. The proposed land-disturbing activities at Sites #1 and #2 involve trail improvements that only require compliance with RPBCWD's Rule C, erosion prevention and sediment control rule. The land disturbing activity at site #3 must demonstrate compliance with RPBCWD's Rule B, floodplain management. Rule C, erosion prevention and sediment control and Rule D, wetland and creek buffers. The applicant is requesting a variance from the required buffer width. Drafted the permit report for consideration at the September 13, 2023 regular meeting of the Board of Managers.
- j. *Permit 2023-045: Avienda Row Homes*: This project involves construction of a townhome development and associated utilities on the east side of Avienda Parkway in Chanhassen. The project triggers RPBCWD floodplain management Rule B, erosion prevention and sediment control Rule C and stormwater management Rule J. Reviewed the July 31 submittal as well as provided review comments and notified the applicant on August 11 that the submittal was incomplete because of a missing permit fee deposit, compensatory storage analysis, and engineer's opinion of probable costs. modification request and no stormwater modeling were provided. Provided additional review comments on the EOR 2013 reuse calculator and RWMWD reuse calculator submitted for consideration as abstraction estimating tools.
- k. *2023-047 HCRRA Culvert Replacements Mntka 60 & 61*– The county applicant proposes to reline two failing culverts that convey flow under the Minnetonka LRT Regional Trail between Vine Hill road and County Road 101 in Deephaven. The 36-inch ductile iron pipe (DIP) and 36-inch clay pipe are proposed to be repaired by slip lining existing culverts at the crossings identified as MNTKA 60 and MNTKA 61. The ultraviolet-cured liner will involve lining the culverts with a 5.8 mm liner. Drafted the permit report for consideration at the September 13, 2023 regular meeting of the Board of Managers.
- l. *2023-049 351 Joanna Drive-Pearson Residence* – This project is construction of the single-family residential home on Lot 1 associated with permit 2019-051- Berrospid Development. Reviewed a request to revise the low floor elevation for lot 1 and coordinated with city,

applicant, builder and engineer. Drafted the permit report for consideration at the September 13, 2023 regular meeting of the Board of Managers.

- m. Participated in an August 24 virtual meeting with Administrator Jeffery, City of Chanhassen and Kimley-Horn to discuss the development of a regional stormwater management plan for the downtown Chanhassen area. The goal is for this to be a regional stormwater plan compliant with RPBCWD rule J criteria.
- n. Conference call with Sarah Schweiger (city of Minnetonka) to coordinate a potential residential permit review for a residential lot that was part of the Saville West development (RPBCWD permit 2015-036).
- o. Miscellaneous preapplication calls from future applicants with questions about rule applicability and criteria.

#### **Data Management/Sampling/Equipment Assistance**

- a. Prepared, loaded, and verified 52 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. Download and review data.
- b. Storm event sampling - set station, collect, prep, and deliver sample.
- c. Review and update new Chain-of-Custody forms for sample deliveries to MCES Lab.
- d. Review changes to deliveries at MCES Lab.
- e. Review rating curve.

#### **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 three-year vegetation establishment period is in process.

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

- a. Stantec (formerly Cardno – sub to Sunram) visited the site once during August to inspect and treat site as needed for invasives as part of ongoing vegetation establishment management.
- 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 will be complete and submitted to RPBCWD legal in September.
- b. RPBCWD permit is planned for submittal after plans have been updated and property owner easements are in process in November.
- c. The Project received its Work in Public Waters Permit from the DNR on June 16, 2023. The Project received its USACE permit on July 21, 2023.

### **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 September.

### **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 is underway. The proposed scope will be shared with Administrator Jeffery for consideration at a future Board workshop meeting.

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

- a. Sediment results for the Lake Susan wetland expected in September 2023.
- b. The Lake Susan and Lake Susan wetland memos will be delivered together in September.

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

- a. Summarizing soil health data provided by District staff for North Lotus Lake Park (LL\_1).
- b. Drafting feasibility study report including text, tables, and figures.
- c. Compiling summary of all concepts and developing project recommendations.

### **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.

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

- a. Continued evaluation of site layout options.
- b. Continued preliminary design.

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



*Workshop two led discussions on what is a healthy urban ecosystem.*

- a. Met twice monthly with District staff to discuss team efforts.
- b. Compiled the data received through workshop 3 where participants identified initiatives the District and municipalities within the District can undertake to improve ecosystem function through policy, regulations, planning, CIP projects, and through education. Shared results with workshop participants.
- c. Researched potential regulations that address aspects of ecosystems not typically regulated. Examples include green space preservation ordinances, tree and native plantings requirement ordinances, green roof requirement, impervious surface limitation, living streets requirement.
- d. Completed a literature review that explains the altered hydrology of green space. The review documents how woodland hydrology is altered through the action of earthworms, deer herbivory, invasive species, and the actions of people. It also documents the altered hydrology of lawns; how this often-considered innocuous ground cover has limited infiltration capacity resulting in increased runoff to natural water bodies.

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

- a. Discussed the path forward with Administrator Jeffery. Direction was provided to discuss quote with contractor, discuss ideas to streamline enhancement measures with prospective contractors, adjust the project as needed, and request new quotes from additional contractors to allow a decision at the November 2023 meeting.

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%	99%		Final vegetation review in 2023
Pioneer Wetland Restoration	100%	100%	100%	100%	100%	100%	100%	45%		Reconstruction of an existing wetland outlet and wetland restoration. Included with the project is excavation of areas to provide additional flood storage in the wetland. 3-year vegetation management underway
Bluff Creek Reach 5 Restoration	100%	100%	25%							Final design task order development 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%	45%		Underground stormwater treatment system to treat the first flush of stormwater through an existing storm sewer to Rice Marsh Lake. Included with the project are soil amendment areas, native vegetation, and a rain garden to treat local runoff 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%	90%	20%					
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				60%						
Chanhasen Decant Facility				15%						
<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 2 of 5 year financial contributions.
Lotus Lake Watershed Improvement Project (LL_1, LL_3, LL_7, LL_8)	100%	90%								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	50%	The 3 of 4 Advisory Panel workshops have been completed.
Lotus Lake LVMP	100%	100%
Eden Prairie Climate Resilience Modeling	100%	100%
Wetland Assessment Phase 1	95%	95%
Sediment Analysis - Riley, Rice Marsh, Susan	80%	