

## Memorandum

**To:** Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator  
**From:** Barr Engineering Co.  
**Subject:** Engineer's Report Summarizing May 2022 Activities for June 1, 2022 Board Meeting  
**Date:** May 27, 2022

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 2022.

### General Services

- a. Met virtually with Interim Administrator Jeffery and Counsel Welch on May 9<sup>th</sup> to review manager workshop comments on the potential regulatory revisions.
- b. Met with Interim Administrator Jeffery on May 19<sup>th</sup> and May 26<sup>th</sup> to discuss capital project under construction, upcoming capital projects, project prioritization, and planning for 2023 activities.
- c. Participate in a May 5<sup>th</sup> meeting with Bearpath Country Club, Sunram Construction and Cardno to discuss remaining work for the Middle Riley Creek Project, timeline for completion, and responsible parties. Bearpath expressed an interest in taking on some of the activities currently under contract between RPBCWD and Sunram. (Installation of Kentucky Bluegrass sod at the end of the #16 course fairway and before the Riley Creek area, Restoration of the cart path from Bearpath Trail that was used for the main construction entrance access route to #13, and the prairie restoration area between the #13 green and #14 tee box.). Participated in a virtual meeting with Interim Administrator Jeffery and Counsel Welch on May 19<sup>th</sup> to discuss potential addendum language and items to the cooperative agreement with Baerpath Country Club to allow Bearpath to take on additional site restoration efforts.
- d. Present RPBCWD regulatory revision process at the May 16<sup>th</sup> Citizen Advisory Committee meeting with Interim Administrator Jeffery
- e. Met virtually with Interim Administrator Jeffery, MNDNR Staff (John Gleason, Wes Saunders-Pearce, and Daryl Ellison), and staff Maxwell on May 26<sup>th</sup> to discuss the DNR's decision making process for the Duck Lake outlet. The discussion included apparent increased hydraulic efficiency of the new structure, DNR statutory requirements, need for local governmental support, riparian owner support, additional technical data needs, and need for continued dialogue with all stakeholders.
- f. Participated in the May 4<sup>th</sup> regulatory workshop with the Board of Managers meeting
- g. Participated in the May 4<sup>th</sup> regular Board of Managers meeting.
- h. Participated in the May 11<sup>th</sup> Board of Managers special meeting.
- i. Participated in the May 12<sup>th</sup> continuance of special Board of Managers meeting.

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- j. Prepared Engineer's Report for engineering services performed during May 2022.
- k. Participated in the May 24<sup>th</sup> meeting with Interim Administrator Jeffery, President Ziegler, and Counsel Smith to discuss upcoming June 1<sup>st</sup> agenda.

### 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 and June 2020. 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 low infiltration capacity and the expansion of the permit to include Phase 2 (Avienda Townhomes). Notified the applicant about the conditional approval at the board's May 4<sup>th</sup> meeting.
- b. *Permit 2021-063 Reserve at Autumn Woods-* The project proposes the construction of an 87-lot development West of Audubon Road and south of Autumn Wood Drive in Chaska. The project proposes construction of three infiltration basins and one pond to provide stormwater quantity, volume, and rate quality control. Participated in an April 19<sup>th</sup> virtual meeting with Interim Administrator Jeffery and the applicant to discuss the Board's April 18<sup>th</sup> permit deny and the potential avenue to request a reconsideration. Participated in a virtual meeting with Interim Administrator Jeffery and Counsel Welch on May 19<sup>th</sup> to discuss the declaration for the Reserve at Autumn Woods
- c. *Permit 2021-078 Mattson Shoreline -* The project proposes stabilization of 90 feet of shoreline along Lotus Lake at 469 Pleasant View Rd in Chanhassen. The proposed project triggers RPBCWD's floodplain management, erosion prevention and sediment control, and shoreline streambank stabilization rules. Replied to inquiries from the applicant's representative about the conditional approval items.
- d. *Permit 2021-079 Tonka-Woodcroft Improvements-* The project proposes full reconstruction of the streets within the Tonka-Woodcroft neighborhood, an area south of Minnetonka Boulevard and between Larchwood Drive, Steele Street and Hillside Terrace in Minnetonka. The project proposes over 36 acres of land-disturbing activities. Notified the applicant about the conditional approval at the board's May 4<sup>th</sup> meeting.
- e. *Permit 2021-084 Chick-fil-a Chanhassen-* The project proposed the construction of an expanded Chick-fil-a restaurant drive-thru and parking lot area near Rich Marsh Lake in Chanhassen. The project proposes the use of an existing underground detention system and vegetated swale to provide stormwater quality, volume, and rate control. Reviewed submittal materials received on May 11<sup>th</sup> and drafted the permit review report for consideration at the board's June 1<sup>st</sup> meeting.
- f. *Permit 2021-085 7851 Park Drive Expansion –* The project proposes an expansion of the outside gravel storage area and addition of a second driveway access at Lakeshore Equipment at 7851 Park Drive in Chanhassen. The outside storage area will be expanded by approximately 10,467 square feet. The applicant proposes construction of a stormwater filtration/detention swale to provide stormwater quantity, volume, and rate quality control. Participated in several phone calls with the applicant and their engineer to explain the

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- financial assurance requirements and review the in-situ infiltration testing results. Reviewed the request for permit modification based on the infiltration test results showing higher than anticipated infiltration rates. Drafted the permit review report for consideration at the board's June 1<sup>st</sup> meeting.
- g. *Permit 2022-002 ISD 276 New Vantage/Momentum Building-* The project proposes the construction of a new building, parking lot and utilities near Clear Springs Elementary School in Minnetonka. The project proposes construction an underground infiltration system and using the existing stormwater pond to provide stormwater quantity, volume, and rate quality control. Provided review comments on the draft maintenance agreement prior to execution of the agreement.
  - h. *Permit 2022-005 Cunningham 2<sup>nd</sup> Addition-* The project proposes to split a single-family home lot into two lots with the construction of two single-family homes and driveway entrances, landscaping, and stormwater improvements on both lots at 855 Pleasant View Road, Chanhassen. Proposed stormwater features include two biofiltration basins with elevated underdrain to promote infiltration. Respond to questions from the applicant's engineer about the conditions of approval.
  - i. *Permit 2022-007 1441 Lake Lucy Lot Split-* The project proposes to split a single-family home lot into two lots. The existing home will remain on one lot and a new single-family homes and associated parking, driveway entrances, landscaping, and stormwater improvements is proposed for the new lot. The project proposes construction of biofiltration basin to provide stormwater quantity abstraction, rate control, and water quality treatment. Reviewed submittal materials received on May 11<sup>th</sup> and drafted the permit review report for consideration at the board's June 1<sup>st</sup> meeting.
  - j. *Permit 2022-017 Oak Point Elementary Circulation Upgrades –* The site is the Oak Point Elementary School Campus at 13400 Staring Lake Parkway in Eden Prairie. The project proposed the removal of an existing parking lot and driveway south of Staring Lake Pkwy and the rehabilitation of the existing driveway and the addition of another lane to the driveway north of Staring Lake Pkwy. Reviewed submittal materials received on May 13<sup>th</sup> and drafted the permit review report for consideration at the board's June 1<sup>st</sup> meeting.
  - k. *Permit 2022-026 Chapel Hill Building Expansion –* Expansion of the existing school building and associated parking lot modifications at 306 West 78th Street in Chanhassen. A biofiltration basin with iron enhanced sand and underlying infiltration will provide storm water quantity, volume, and quality control. Reviewed the draft maintenance declaration and provided comments to the applicant's engineer on the necessary revisions.
  - l. *Permit 2022-039 Taco Bell Reconstruction Minnetonka –* The project proposes a demolition and reconstruction of a Taco Bell restaurant and associated parking areas at 15110 MN-7 in Minnetonka. The project proposes the use of an underground infiltration system to provide stormwater quality, volume, and rate control. Reviewed submittal materials received on April 28<sup>th</sup> and submitted comments to the applicant on May 11<sup>th</sup>.
  - m. Met with Interim Administrator Jeffery and Staff Nicklay to define permit review responsibilities on May 27<sup>th</sup>.

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- n. Miscellaneous preapplication calls from applicant with questions about rule applicability and criteria.

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

- a. Downloaded and sent WOMP station data to the District.
- b. Worked on electronic submittal of relevant 2021 creek and lake data to the MPCA in the agency's data specific format.

#### **Task Order 6: WOMP Station Monitoring**

##### ***Purgatory Creek Monitoring Station at Pioneer Trail***

- a. No activity in May.

##### ***Purgatory Creek Monitoring Station at Valley View Rd***

- b. Storm event sampling.
- c. Maintenance – troubleshooting, repair, and restore power to station (damaged cables connecting breaker panel to power supply).

#### **Task Order 24B: Silver Lake Water Quality Improvement Project**

- a. Worked with Interim Administrator Jeffery on identifying needs for contracting with Prairie Restoration to provide on-going vegetation establishment services.

#### **Task Order 28B: Rice Marsh Lake (RM\_12a) Water Quality Improvement Project**

- a. The gas line at the rain garden was discovered to only have 1.5 feet of cover (previously thought to be 3 feet underground). Before constructing the rain garden, CenterPoint needed to move the gas line deeper underground. This was completed on 5/24. The rain garden and final grading will take place the week of 5/24.
- b. Final restoration and soil amendments are expected to occur the week of 5/30.
- c. Reconstruction of the park trail where damages occurred near the ballfield will take place the week of 5/24.

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

- a. Representatives from Barr (Jessica Olson, Brendan Dougherty, Bearpath (Jim Snell and Kevin Cashman), RPBCWD (Scott Sobiech), Sunram (Ryan Sunram, Tyler Schmitz), and Cardno (Terrence Ruane) met virtually on May 5 to discuss timing and coordination of final site restoration work.
- b. Representatives from Cardno were on site May 19 to plant live stakes and spray for reed canary grass. Barr's landscape architect, Brendan Dougherty, met the crew on site to review live staking locations and methods.

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**Photo of south site, looking downstream at VRSS on left bank and realigned channel**

- c. Representatives from Cardno plan to be on site May 25 and/or May 26 to plant live plugs, trees, and shrubs, and to seed/blanket bare soil.
- d. We continue to closely monitor the engineering services during construction budget which has been exhausted. Depending on the demand associated with remaining site restoration and vegetation establishment a future request for additional funding might be pursued. Barr will work with Interim Administrator Jeffery in the coming month to determine if additional construction administration budget is warranted.

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

- a. Change Order 1, which adjusts planting timeline for live stakes and bare root shrubs, was authorized on May 9th, 2022
- b. Change Order 2, which extends Substantial Completion date to June 30<sup>th</sup> and includes the work to modify the outlet flares and place small rock to prevent erosion, was authorized on May 18<sup>th</sup>, 2022.
- c. The wetland is drying out. The second herbicide treatment took place the week of 5/16.

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

- a. The draft Environmental Assessment Worksheet (EAW) has been drafted and submitted to District staff for review and comment. Once approved by the district, it will be submitted to the City of Chanhassen for review, comment, and approval. Minnesota Rules 4410.4300, Subpart 27 require preparation of an EAW to assess potential project impacts since the project will alter more than one acre of Riley Creek, which is a Minnesota public water.
- b. Field data collection was completed in May under suitable weather and stream flow conditions. District staff were invited to participate in this effort.

- c. Coordination with the City of Chanhassen is ongoing related to the City's completion of bathymetry survey for the project.
- d. A tree survey is pending and will include marking trees that the project intends to save.
- e. Project design drawings are started, including surfaces generated from survey data obtained as part of Task Order 032A.
- f. As part of preliminary design, the existing PC-SWMMM model for Upper Riley is being modified using topographic survey information obtained as part of Task Order 032A.
- g. A 30% concept level design is planned to be submitted to the City of Chanhassen for coordination in June 2022, with a 60% design planned for late August 2022.



**Photo of Barr staff rescuing an approximately 12-inch long Northern pike that was stranded in a portion of Upper Riley Creek, presumably as a result of receding flood flows.**



**Photo of conditions observed during field data collection.**

### **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 034: Lotus Lake Aquatic Vegetation Management Plan**

- a. Continued drafting Aquatic Vegetation Management Plan

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

- a. This month staff have been working on finalizing model calibration and validation. This work includes simulating rainfall events from the summer of 2021 and June 2014. For all three events, model results are being compared to measured water levels in lakes, ponds, and at

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WOMP stations. For the 2014 event, the model results are also being compared to high water levels measured during the rainfall event.

- b. Next month staff anticipate meeting with Administrator Jefferies and City of Eden Prairie staff to review the model calibration. If the group agrees the model adequately characterizes runoff from the watershed and simulates measured water levels, the model will then be used to simulate design rainfall events, which will be used to develop inundation maps and identify flood prone areas.
- c. This summer, following model validation, staff will simulate design events and develop inundation maps to identify areas at risk of flooding.
- d. The schedule for this task order extends through 2022. Later this year, work will include simulation of design events, inundation mapping, identification and prioritization of flood prone areas, and documentation.

#### **Task Order 036A: Bluff Creek Reach 5 Concept Design**

- a. Received comments from Interim Administrator Jeffery in late-May. The report will be updated in June.

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

- a. Preparing Lake Sediment Analysis Technical Memorandums.