

# Memorandum

**To:** Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator  
**From:** Barr Engineering Co.  
**Subject:** Engineer's Report Summarizing September 2024 Activities for October 2, 2024 Board Meeting  
**Date:** September 27, 2024  
**Project:** 23270053.14 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 September 2024.

## General Services

- a. Met virtually with Administrator Jeffery, staff Nicklay, and Counsel Welch on September 3 and 17 to discuss actions on notice of probable violation locations, Upper Bluff Creek cooperative agreement, upper Riley Creek draft cooperative agreement and private property access agreements, and St Huberts vegetation management.
- b. Participated in the September 11 regular meeting of the Board of Managers.
- c. Discussion with Administrator Jeffery on the cooperative agreements for the upper Riley Creek and upper Bluff Creek projects.
- d. Met with Administrator Jeffery and city of Chanhassen on September 19 to discuss the cooperative agreement and cost split for the Galpin Boulevard culvert replacement portion of the upper Bluff Creek project. Also discussed the upper Riley Creek project cooperative agreement and project timeline.
- e. Prepared Engineer's Report for engineering services performed during September 2024.
- f. Met with Administrator Jeffery and staff Maxwell on September 26 to revise draft task orders for discussed at the September 11 meeting related to watershed and lake diagnostic study and management plans, shoreline and vegetation management, and fisheries management.
- g. Miscellaneous discussions with Administrator Jeffery about task order development, CIP projects, past pay applications, permits, regulatory program, and ongoing studies.

## Permitting Program

- a. *2023-059 Three Oaks* – The applicant proposes the subdivision of an existing single family home parcel into a 5-lot single-family residential development in Eden Prairie, including preservation of natural areas, and a wet detention basin with bioretention bench to provide runoff volume abstraction, water quality treatment, and rate control. The project triggers erosion preventions and sediment control Rule C, wetland and creek buffer Rule D, and stormwater management Rule J. Reviewed September 9 and 26 submittals and drafted the permit report for considerations at the October 2 board of managers meeting.
- b. *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. Conducted a site visit with Administrator Jeffery on September 19.

- c. *Permit 2024-049: 11609 Leona Rd Redevelopment* – The applicant is proposing to subdivide the existing 3.44 AC parcel into two separate lots to 1) develop a one story, approximately 2,447 square foot building with a drive through, patio, and associated utility, landscape, and parking improvements and 2) demo a portion of the existing retail building and develop an approximately 18,500 square foot building with associated utility, landscape, and parking improvements. The project triggers RPBCWD erosion prevention and sediment control (Rule C and stormwater management rule (Rule J). Participated in a virtual meeting on September 24 to discuss alternative stormwater compliance measures.
- d. *Permit 2024-064 CenterPoint Energy-Xcel Service Facility* – The applicant is proposing several waterbody crossings to provide natural gas service. The project triggers RPBCWD erosion prevention and sediment control (Rule C), wetland and creek buffer (Rule D), and waterbody crossings and structures rule (Rule G). Reviewed September 3 and 25 submittals and drafted the permit report for considerations at the October 2 board of managers meeting.
- e. 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 16 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. No activity. Power line has been repaired and the monitoring station is operating again.

#### **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 and will continue through fall 2025.

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

- a. Stantec conducted a site inspection on September 19<sup>th</sup>. Numbers of invasives are decreasing and native species are becoming more established. Live stakes are growing well at the south site, but many will need to be replaced at the north site.



Photos of vegetation established at north and south sites, September 19, 2024 (photos by Stantec)

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

- a. The year vegetation establishment period is in process.
- b. Fall will be the next time for herbicide treatment.
- c. Contractor will complete monthly visits per the contract throughout the season. Visits will include mowing and spot spraying, as needed.
- d. Herbicide treatment of cattails and reed canary grass completed on 9/20. Latest management report indicates the site is in good condition, natives are establishing well, and on-going RCG and cattail management will be important. A few of the planted trees have died.
- e. RCG will continue to be managed with herbicide treatment this fall.

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

- a. Continue working with Administrator Jeffery and RPBCWD legal on revisions to private property agreements and a draft cooperative agreement with the city of Chanhassen.
- b. Prepared draft application for MCES Encroachment Agreement and will submit with updated plans in September.
- c. Developed legal descriptions of work areas to assist with the MCES permit application.
- d. RPBCWD permit is planned for submittal after plans have been updated and property owner easements are in process in summer 2024.
- e. Coordinating permitting efforts with decant facility (Task Order 41)

#### **Task Order 033: Wetland Assessment – Phase 1**

- a. Phase 1 report to define ecosystem services and describe methodology for assessing each service remains on hold pending BWSRs proposed new wetland assessment protocols.

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

- a. Wetland outlet structure design will likely require excavation of compensatory flood storage. Communicating with property owner on the north side of Bluff Creek to determine feasibility of excavating within the creek corridor where contaminants may be present.
- b. 60% design of stream restoration elements is ongoing.

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

- a. Completed and delivered draft memos for District staff review.

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

- a. Development of a scope of work for additional stakeholder engagement, city coordination, and concept development for the water quality BMP in North Lotus Lake Park, Authorized by Managers at September 2024 meeting.
- b. Submittal of a Board of Water and Soil Resources Clean Water Fund Grant application for the North Lotus Lake Park water quality improvement project.

#### **Task Order 040B Lotus Lake Alum Administration**

- a. Recommendation letter sent to Board for Solitude Lake Management as they are a qualified and responsible bidder.
- b. Completed contract with Solitude Lake Management.
- c. Alum treatment scheduled to begin October 1, 2024.

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

- a. Progressed design towards 90% design.

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

- a. Contractor conducted additional site restoration work and installed the handrail in mid-September.
- b. Coordinating with contractor to complete the revisions to the new suction piping to align with the project specifications and scheduling the testing and commissioning of the system.

#### **Task Order 45: Development of District-Wide Groundwater Monitoring Network**

- a. District staff are meeting with property owners regarding potential well locations. After concurrence with property owners on well locations bids will be sought for well installation in 2025.

#### **Task Order 46: Duck Lake Outlet Modifications**

- a. The purpose of this task order is to evaluate modifications to the Duck Lake outlet that

maintain the existing runout elevation of 913.45 but better approximate the stage-duration curve before the outlet was modified in 2014.

- b. Completed the draft of the technical memorandum summarizing the potential outlet modifications, modeling results and potential impacts to Duck Lake.

| 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%                   | 60%              | 3-year vegetation management underway   |
| Bluff Creek Reach 5 Restoration  | 100%                       | 100%              | 100%             | 20%    | 5%         |              |                        |                  | Proposed wetland outlet design and stream restoration element design is underway, conversations with private property owners to discuss opportunities for compensatory storage to remove debris and contaminants within Bluff Creek.                      |
| 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%                   | 60%              | 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%    | 75%        |              |                        |                  | DNR and USACE permit received. District permitting pending. Anticipate bidding in fall 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%                   | 60%              | 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%   | 100%       | 80%          |                        |                  | Contractor completed installation of concrete intake structure, associated pond excavation, and site restoration.   |
| Chanhassen Decant Facility   |                            |                   |                  | 90%    | 40%        |              |                        |                  | City provided comments on 60% design which will be incorporated as the project move toward 100% design. Coordinated with MCES on permitting requirement to work in their sanitary sewer easement.   |
| <b>Purgatory Creek</b>   |                            |                   |                  |        |            |              |                        |                  |   |
| Purgatory Creek Rec Area- Berm/retention area  | 100%                       |                   |                  | 50%    |            |              |                        |                  |   |
| Lotus Lake in-lake phosphorus load control   | 100%                       | 100%              | 100%             | 100%   | 100%       | 50%          | 50%                    | 50%              | Project let for bid on August 14, 2024 for second application. Low bid was 2% over engineer's opinion of probable cost, recommended Solitude Lake Management for the fall application.  |
| 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%                       | 100%              |                  |        |            |              |                        |                  | Report Finalized and presented at February 2024 regular meeting. Managers approved scope for additional stakeholder engagement, city coordination, and concept development at the September 2024 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.  |

| <b>Ongoing Studies</b>                        |  |      |  |     |  |  |  |      |   |
|---|--|------|--|-----|--|--|--|------|---|
| Ecological Health Action Plan                 |  | 100% |  |     |  |  |  |      | Finalize report and discussed at August 7 workshop.   |
| Lotus Lake LVMP                               |  | 100% |  |     |  |  |  | 100% |   |
| Eden Prairie Climate Resilience Modeling      |  | 100% |  |     |  |  |  | 100% |   |
| Wetland Assessment Phase 1                    |  | 95%  |  |     |  |  |  | 95%  |   |
| Sediment Analysis - Riley, Rice Marsh, Susan  |  | 100% |  |     |  |  |  |      | A1  |
| Development of Groundwater Monitoring Network |  | 45%  |  | 50% |  |  |  |      | Location siting and selection underway. Specifications for bids ready to be sent once concurrence of property owners obtained for well locations. |
| Duck Lake Outlet Modification                 |  | 90%  |  |     |  |  |  |      | Reviewing draft memorandum summarizing potential outlet modifications, model results and impacts to Duck Lake water levels.                       |