

## Memorandum

**To:** Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator  
**From:** Barr Engineering Co.  
**Subject:** Engineer's Report Summarizing November 2022 Activities for December 7, 2022 Board Meeting  
**Date:** November 30, 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 November 2022.

### General Services

- a. Participated in a November 4<sup>th</sup> meeting with City of Chanhassen to review city comments on the 60% drawings for Upper Riley Creek restoration. The discussions also included FEMA floodplain/floodway implications, pond outlet modification alternative to dredging and alternative locations for a potential decant facility (concrete structure used to dewater material from stormwater facility maintenance activities).
- b. Met virtually with Administrator Jeffery and City of Chanhassen on November 15<sup>th</sup> to discuss the cooperative agreement for the Upper Riley Creek Restoration project. The discussion also included the possibility of incorporating a cost share grant for design and construction of a decant facility on the city's public works facility.
- c. Met with Administrator Jeffery on November 15<sup>th</sup> to discuss the capital improvement program and 2023 budgeting.
- d. Met virtually on November 29<sup>th</sup> with Administrator Jeffery and the city of Eden Prairie to discuss the potential stabilization of a pond edge with riprap and the potential regulatory implications.
- e. Participated in the November 2<sup>nd</sup> workshop with the Board of Managers meeting
- f. Participated in the November 2<sup>nd</sup> regular Board of Managers meeting.
- g. Prepared Engineer's Report for engineering services performed during November 2022.

### Permitting Program

- a. *Permit 2021-068 Erhart Farm*- The project proposes the construction of a 21-lot development to the west of Hwy 101 in Chanhassen. The project proposes construction of a wet pond and infiltration basin to provide stormwater quantity, volume, and rate quality control. The proposed project triggers RPBCWD's erosion prevention and sediment control, wetland buffers, and stormwater management rules. Collaborated with Administrator Jeffery to review applicants request for a financial assurance reduction based on quotes received from the construction contractor.

- b. *Permit 2021-088 Pioneer Trail Reconstruction* - The applicant proposes a linear project involving the reconstruction of 1,610 feet of Pioneer Trail and a bituminous trail on the north side of the roadway, stormwater management, sanitary sewer, storm sewer, and watermain improvements. Stormwater management will be provided by two infiltration pipes, a new infiltration basin, two existing infiltration basins, and one existing wet stormwater pond to provide volume control, water quality, and rate control. The project triggers RPBCWD erosion prevention and sediment control rule and the stormwater management rule. Reviewed revised submittal and drafted permit review report for consideration at the December 7<sup>th</sup> meeting of the Board of Managers.
- c. *Permit 2022-065 Round Lake Building Improvements* – The project proposes construction of a new recreation building in the same location as the existing building, modifications to sidewalks, gathering spaces, underground utilities, as well as re-routing the existing storm sewer and an infiltration basin. The project triggers RPBCWD erosion prevention and sediment control rule and the stormwater management rule. Reviewed revised submittal and drafted permit review report for consideration at the December 7<sup>th</sup> meeting of the Board of Managers.
- d. *Permit 2022-069 921 Carver Beach Road* – The project proposes construction of a new single-family home on a lot that was recently subdivided, thus it does not qualify as an existing single family home lot. The project triggers RPBCWD erosion prevention and sediment control rule, creek and wetland buffer, and the stormwater management rule. Reviewed revised submittal and drafted permit review report for consideration at the December 7<sup>th</sup> meeting of the Board of Managers.
- e. *Permit 2022-070 Schutrop Addition* – The project proposes construction of a new single-family home on a lot to be subdivided from an existing single family home parcel, thus it does not qualify as an existing single family home lot. The project triggers RPBCWD erosion prevention and sediment control rule, creek and wetland buffer, and the stormwater management rule. Reviewed revised submittal and drafted permit review report for consideration at the December 7<sup>th</sup> meeting of the Board of Managers.
- f. *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. Reviewed October 25<sup>th</sup> submittal and informed the applicant the materials were incomplete due to missing compensatory storage computations, waterbody crossing analysis, and engineers opinion of cost. Participated in a November 17<sup>th</sup> meeting with the applicant to discuss the potential regulatory program and initial review comments.
- g. *Permit 2022-075 EP Well House 17* – The project proposes construction of a new municipal drinking water well between Pheasant Woods Park and Village Woods Drive in Eden Prairie. The project includes a transmission line directionally drilled from Well House 17 to existing Well House 16 and includes an infiltration basin for stormwater management. The project triggers RPBCWD erosion prevention and sediment control rule, creek and wetland buffer rule, and the stormwater management rule. Reviewed October 25<sup>th</sup> submittal and informed the applicant the materials were incomplete due to missing wetland buffer analysis, wetland

- protection criteria, and infiltration testing. Participated in a virtual meeting with the applicant on November 23<sup>rd</sup> to discussion review comments related to wetland buffering requirements.
- h. *Permit 2022-076 Tricam Addition-* – The project proposes construction of an addition onto the existing building with associated parking lot and sidewalk improvements. An underground infiltration basin will be utilized to meet the stormwater requirements. The project triggers RPBCWD erosion prevention and sediment control rule and the stormwater management rule. Reviewed October 31<sup>st</sup> submittal and informed the applicant the materials were incomplete due to missing permit deposit fee, geotechnical soil borings, and engineers opinion of cost.
  - i. *Permit 2022-077 Dunibar Court-* – The project proposes construction of a 5-lot single family residential development south of Ridgewood Road, east of Dunibar Ridge Road in Minnetonka. The project triggers RPBCWD erosion prevention and sediment control rule, creek and wetland buffer rule, and the stormwater management rule. Reviewed November 3<sup>rd</sup> submittal and informed the applicant the materials were incomplete due to missing permit deposit fee, wetland buffer analysis, and engineers opinion of cost.
  - j. Preapplication communications with City of Chanhassen about stormwater modeling and rule application for the reconstruction of Galpin Avenue. Provided the City permit application materials for prior RPBCWD permits along the Galpin Boulevard corridor (The Park, Bluffs at Lake Lucy, and Fawn Hill developments).
  - k. Miscellaneous preapplication calls from applicant with questions about rule applicability and criteria.

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

- a. Prepared, loaded, and verified 9 RMB laboratory (RMB) reports.
- b. Prepared, loaded, and verified creek data collected in May through July 2022 that was collected with the Survey123 mobile application.
- c. Submitted 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. File management – lab submission forms.

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

- a. Set station for storm event sampling.
- b. Download and review data.
- c. Review low end of rating curve.
- d. Process utility bills.
- e. Monitoring station winterization.

**Task Order 14B: Lower Riley Creek Stabilization Project**

- a. Prepared progress payment application #9 covering the final year of vegetation management.

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

- a. Prairie Restorations, Inc. and subcontractor started work on September 26. The earthwork components were completed and vegetation restoration was seeded and planted in late October. This project will have no other activity until vegetation maintenance starts in spring 2023.

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

- a. Landbridge planted shrubs to screen the monitoring cabinet and completed a late fall re-seeding of bee lawn. This project will not have other activity until spring 2023 when vegetation maintenance work will occur.

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

- a. The 3-year vegetation maintenance plan is in process, additional live plugs will be planted in Spring 2023.

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

- a. The three-year vegetation establishment period is in process.
- b. Live stakes and bare root shrubs were installed in early November.

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

- a. Moving forward with further detailed design to incorporate into 90% drawings, planned for draft in December 2023 and submittal to Board in January 2024.
- b. Targeting permit submittal in December 2023 as well.
- c. Met with City of Chanhassen to review 60% drawings on November 4<sup>th</sup> and to review stormwater treatment improvement options associated with the project (evaluation of pond outlet modifications vs. sediment removal).

**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. Draft report expected to be delivered late-December

**Task Order 034: Lotus Lake Aquatic Vegetation Management Plan**

- a. Draft Aquatic Vegetation Management Plan is complete except for areas where stakeholder input is required.
- b. Draft report without stakeholder input was delivered to the Administrator.

- c. Meeting is scheduled with the Lotus Lake Association on December 20, 2022.

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

- a. This month staff completed post-processing simulation results and prepared inundation extents for design events including the 2-year 10-year, 50-year, and 100-year 24-hour duration events. Inundation results were used to identify flood-prone buildings based on GIS files provided by the City of Eden Prairie.
- b. Results of the GIS analysis were used to update the prioritization framework. The prioritization framework includes six criteria which are used to develop a prioritized list of areas for further evaluation of flood-risk reduction projects. The six criteria are
  - a. Number of flood-prone structures
  - b. Frequency of flooding
  - c. Social vulnerability
  - d. Project efficiency
  - e. Multiple benefits
  - f. Critical infrastructure
- c. Next month staff will provide a draft report documenting the model updates, identification of flood-prone areas, and results for the prioritization framework to City staff and Administrator Jefferies for review.
- d. Final updates to the Purgatory Creek stormwater model were complete in coordination with work done by Minnetonka on the City's stormwater model. Coordination of updates was unplanned but allows for consistent inputs in the stormwater model.
- e. The schedule for this task order extends through 2022. A final report will be prepared following receipt of comments from the City and Administrator Jeffery, which will extend into 2023.

#### **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-December.
- b. Working with District staff it was determined to postpone Lake Susan wetland sampling until Spring of 2023 due to low water levels and to further investigate wetland sediment analytical approach.

**To:** Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator  
**From:** Barr Engineering Co.  
**Subject:** Engineer's Report Summarizing November 2022 Activities for December 7, 2022 Board Meeting  
**Date:** November 30, 2022  
**Page:** 6 of 6

---

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

- a. Updates to H&H and water quality models for existing conditions based on most current information from City including compiling baseline results for proposed concept comparison.
- b. Begin development of proposed BMP concepts for Lotus Lake sites based on site visits including concept graphics and inputs for BMP concept evaluation in H&H and water quality modeling.
- c. Follow-up with District staff on completion of field data collection related to soil health, soil compaction (penetrometer testing), and infiltration testing.
- d. Follow-up with City staff regarding outstanding information related to upcoming road and street reconstruction projects. Review of information provided by the city to quantify potential impact of roadway project (e.g., estimated area of reconstructed/new impervious area).
- e. Summarize Lotus Lake shoreline ranking data provided by District staff.