

Memorandum

To: Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator
From: Barr Engineering Co.
Subject: Engineer's Report Summarizing December 2022 Activities for January 4, 2023 Board Meeting
Date: December 28, 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 December 2022.

General Services

- a. Participated in a December 14th meeting with Administrator Jeffery, RPBCWD staff, Manager Crafton, and Barr staff to strategize and brainstorm critical items to develop a watershed ecological health plan. Barr is in the process of synthesize the information into a workplan for consideration by the Board.
- b. Met with City of Eden Prairie and Administrator Jeffery on December 22nd to review the updated hydrologic and hydraulic modeling results and scoring of floodprone areas. The previous RPBCWD models. The updated model results in 436 flood-prone structures (not counting the Secondary Residential buildings) while the prior, less detailed modeling indicated a total of 136 flood-prone structures in Riley and Purgatory Creek watersheds, in Eden Prairie, for the 100-year 24-hour event. The increase in the number of structures is anticipated, due to the additional resolution that has been added to the models. This illustrates the benefit of incorporating detailed storm sewer information into the analysis.
- c. Met virtually with Administrator Jeffery and Counsel Welch December 19th and 22nd 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.
- d. Met virtually with Administrator Jeffery, President Ziegler, Counsel Smith and Counsel Welch to review draft agenda for January 4, 2023 regular board of managers meeting.
- e. Participated in the December 7th workshop with the Board of Managers meeting
- f. Participated in the December 7th regular Board of Managers meeting.
- g. Prepared Engineer's Report for engineering services performed during December 2022.

Permitting Program

- a. *Permit 2021-088 Pioneer Trail Reconstruction* - The applicant proposes a linear project involving the reconstruction of 1,610 feet of Pioneer Trail. The project triggers RPBCWD

- erosion prevention and sediment control rule and the stormwater management rule. Informed applicant of the December 7th conditional approval.
- b. *Permit 2022-053 Fox Ridge (aka Fox Hill Drive)* - The project proposes to split the existing lot at 581 Fox Hill Dr. in Chanhassen into three single family home lots and an outlot. The project will also result in an additional outfall to Lotus Lake. The proposed project triggers RPBCWD's floodplain management, erosion prevention and sediment control, wetland and creek buffer, waterbody crossing and structures, and stormwater management rules. Responded to applicant question about review comments. Reviewed the applicant revised submittal and drafted permit report for the board of managers consideration at the January 4, 2023 regular meeting.
 - c. *Permit 2022-060: Groveland Elementary* – The proposed proposes to expand an existing trail into a drive lane to facilitate additional car stacking during school pick-up activities. The project triggers RPBCWD erosion prevention and sediment control rule and the stormwater management rule. Reviewed the applicant revised submittal and drafted permit report for the board of managers consideration at the January 4, 2023 regular meeting.
 - d. *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. Informed applicant of the December 7th conditional approval.
 - e. *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. Informed applicant of the December 7th conditional approval.
 - f. *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. Informed applicant of the December 7th conditional approval.
 - g. *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. Participated in December 19th and December 22nd meetings with the city and applicant to discuss the potential regulatory program and initial review comments.
 - 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. Responded to applicant questions about review comments.

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- i. Preapplication communications with MNDOT about the Highway 101 Purgatory Creek crossing near Lotus Lake. The discussion focused on permitting requirements and compensatory floodplain storage.
- j. Preapplication meeting with the City of Eden Prairie about the reconstruction of Dell Road at Riley Creek. Discussed regulatory requirements, site restrictions, adjacent future development, and streambank stabilization as a potential exception to stormwater management.
- k. Miscellaneous preapplication calls from applicant with questions about rule applicability and criteria.

Data Management/Sampling/Equipment Assistance

- a. Prepared, loaded, and verified creek and lake data collected in June through September 2022 that was collected with the Survey123 mobile application.
- b. Worked on the data submittal file for relevant 2021 creek and lake data in the MPCA's data specific format.

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. Process utility bills.
- c. Monitoring station winterization.
- d. Review and approve MCES Lab invoice.

Task Order 14B: Lower Riley Creek Stabilization Project

- a. Working with the contractor to finalize and close out the project.

Task Order 24B: Silver Lake Water Quality Improvement Project

- a. 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. The three-year vegetation establishment period is in process.
- b. 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.

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 January 2023 for RPBCWD staff and City staff review.
- b. Targeting permit submittal in January 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. Draft report expected to be delivered late-January

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. Met with the Lotus Lake Association on December 20, 2022.
- c. Input from the Lotus Lake Association will be added to the report and the final report delivered prior to the February Board meeting.

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

- a. This month staff developing an initial draft of prioritized flood-prone areas. The initial prioritized list was based on the prioritization framework which includes six criteria to prioritize areas for further evaluation. The six criteria are:
 - Number of flood-prone structures
 - Frequency of flooding
 - Social vulnerability
 - Project efficiency
 - Multiple benefits
 - Critical infrastructure
- b. Staff met with Eden Prairie staff and Administrator Jeffery to review the draft prioritized list of flood-prone areas and review the Excel file that assigns scores to each area. Following the meeting City staff will review the initial list and scoring, and recommend comments or adjustments such that the list accurately characterizes flood-prone areas within the City. Following feedback from the city and RPBCWD staff, Barr will prepare a documentation report describing the methodology, results, and assumptions for the study. The draft report is

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tentatively scheduled to be complete in January, pending receipt of comments from Eden Prairie on the draft list of flood-prone areas.

- c. 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-January.
- 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.

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
- c. Begin development of proposed conditions H&H and water quality modeling.
- d. Review data from City staff regarding outstanding information related to upcoming road and street reconstruction projects and quantify potential impact of roadway projects (e.g., estimated area of reconstructed/new impervious area).
- e. Review MPCA What's in my Neighborhood data to estimate if any known environmental concerns in project areas
- f. Review cultural resource data from SHPO and develop general write-up about impacts as related to project areas
- g. Compile wetland information and requirements for project locations
- h. Review LL-3 and LL-7 water quality monitoring data from RPBCWD staff and meeting with district staff to review monitoring locations details/set-up

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Task Order 040: Alum Application on Lotus Lake

- a. Conducted data analysis to determine alum application approach for the second half-dose alum treatment.

Task Order 40 (42): Bluff Creek Culvert Reconstruction

- a. The culvert replacement analysis project was approved at the December 7th Board meeting.
- b. Determination of culvert replacement alternatives
- c. Updates to the District's existing conditions H&H model to incorporate the proposed alternatives for evaluating impacts

Task Order 41: Chanhassen Decant Facility

- a. Initiated project setup activities and prepared for kick-off meeting at the Chanhassen Public Work Facility with District staff and City staff.
- b. Hansen Thorp Pellinen Olson, Inc. (HTPO), surveying subcontractor, began surveying and utility locate activities at the Chanhassen Public Work Facility.