

Memorandum

To: Riley-Purgatory-Bluff Creek Watershed District Board of Managers and District Administrator
From: Barr Engineering Co.
Subject: Engineer's Report Summarizing October 2022 Activities for November 2, 2022 Board Meeting
Date: October 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 October 2022.

General Services

- a. Participated in a virtual meeting with Administrator Jeffery, City of Eden Prairie and MNDNR on October 11th to discuss the Duck Lake outlet. The City expressed an openness to modifying the outlet so long as additional easements are not required. MNDNR indicated a change in the runout elevation would require additional easement but a modification to the outlet hydraulic function *might* be feasible.
- b. Participated in the October 11th Fall Project tour and provided follow-up answers to outstanding questions. Participated in the November 2nd agenda setting meeting.
- c. Participated in the October 5th workshop with the Board of Managers meeting
- d. Participated in the October 5th regular Board of Managers meeting.
- e. Prepared Engineer's Report for engineering services performed during October 2022.

Permitting Program

- a. *Permit 2022-037 Chanhassen Pond Rehabilitation* -The applicant proposes removing accumulated sediment and improving the drainage structures of from a stormwater pond. Worked with Administrator Jeffery to extend the permit review timeline. Communicated with the City of Chanhassen about the necessary delineation on October 11th. Meet with the City and WSB to discuss review comments on October 13th. Drafted permit review report for consideration at the November 2nd meeting of the Board of Managers..
- b. *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. Answered applicant's questions about review comments.
- c. *Permit 2022-063: Erhart Farm Waterbody Crossing* – The applicant is seeking an after-the-fact permit for the construction of a bridge spanning the watercourse connecting Wetland 2 and Wetland 3 within the Erhart Farm development. The project triggers RPBCWD floodplain management, erosion prevention ad sediment control, wetland and creek buffers, and waterbody crossing and structures rules. Reviewed the draft maintenance declaration.

- 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. Worked with Administrator Jeffery to extend the permit review timeline.
- e. *Permit 2022-068 Kiwatchi Subdivision* – The project proposes the subdivision of an existing single family home parcel into four parcels and the construction of three new single family homes. The project triggers RPBCWD erosion prevention and sediment control rule, and the stormwater management rule. Participated in an October 3rd meeting with the applicant and City of Eden Prairie to discuss the potential regulatory impacts of the city's requirement to require ROW drainage to the streets rather than following current drainage patterns. This would result in the need of a variance form RPBCWD for rate control and also require additional stormwater practices to treat the runoff leaving the site.
- f. *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. Responded to questions from the applicant's engineer about review comments.
- g. *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 September 23rd submittal completing the application and provided review comments to the applicant.
- h. Preapplication communications with Xcel Energy about stormwater modeling and rule application for the construction of a service center in Chanhassen.
- i. Miscellaneous preapplication calls from applicant with questions about rule applicability and criteria.

Data Management/Sampling/Equipment Assistance

- a. Prepared, loaded, and verified 13 RMB laboratory (RMB) reports.
- b. Prepared lake and creek data collected in May through August 2022 that was collected with the Survey123 mobile application.
- c. 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 September.

Purgatory Creek Monitoring Station at Valley View Rd

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- b. Set station for storm event sampling
- c. Download and review data.

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. Replacement vegetation will be seeded and planted in late October.

Task Order 28B: Rice Marsh Lake (RM_12a) Water Quality Improvement Project

- a. Landbridge will be adding shrub plantings to screen the monitoring cabinet and completing 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, Stantec representatives were scheduled to re-seed bare patches in October and will plant additional live plugs in Spring 2023.

Task Order 30B: Pioneer Trail Wetland Restoration Project

- a. The three-year vegetation establishment period is in process
- b. Planting of live stakes and bare root shrubs will occur in November

Task Order 032B: Upper Riley Creek Ecological Enhancement Project

- a. Received comments from City staff on 60% drawings, cost estimate, , stormwater pond LS-P3.16 modeled nutrient removal summary, and decant facility options to City of Chanhassen (Public Works and Engineers) and RPBCWD on September 30th.
- b. The existing PC-SWMMM model for Upper Riley is being modified using topographic survey information obtained as part of Task Order 032A.
- c. Moving forward with further detailed design to incorporate into 90% drawings, planned for December 2023.
- d. Targeting permit submittal in December 2023 as well.

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-November

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 to be delivered October 31.
- c. Working with the Administrator to schedule stakeholder meeting.

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

- a. This month Eden Prairie staff completed their review of the preliminary inundation extents for the 100-year event and provided comments and questions for consideration. The majority of comments were related to changes in inundation areas that are a result from adding additional detail to the stormwater models for Riley and Purgatory Creeks. Barr provided responses to each comment and question and copied Administrator Jeffery on communication with City staff.
- b. Eden Prairie provided GIS files for use in the prioritization framework. GIS files included building outlines, sanitary lift station locations, and wells. Barr reviewed the files, and will reference the files provided by the City when developing the prioritized list of flood-prone areas.
- c. After responding to the City's comments, Barr began processing simulation results to develop inundation extents for the 2-year and 10-year rainfall events, which will be used in the prioritization framework, Barr will also be developing inundation extents for rainfall estimates based on future climate change projections for the mid-21st century.
- d. Next month staff will continue processing inundation extents and process GIS files to develop information needed to input into the prioritization framework. In November or December staff anticipate meeting with City of Eden Prairie staff and Administrator Jeffery to review preliminary prioritized list of flood-prone areas.
- e. 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.
- f. The schedule for this task order extends through 2022. Later this year, work will include identification and prioritization of flood prone areas and documentation.

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-November.
- 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.

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

- a. Begin development of BMP concepts for Lotus Lake sites based on site visits.
- b. Organize H&H and water quality models for BMP concept evaluation.
- c. Coordination with District staff on 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.
- e. Compiling GIS data and review for wetlands, MPCA what's in my neighborhood, threatened and endangered species, cultural resources, etc.