LOWER MINNESOTA RIVER
WATERSHED DISTRICT

Executive Summary for Action

Lower Minnesota River Watershed District Board of Managers Meeting
Wednesday, August 17, 2022

Agenda Item
Item 7. J. – Permits and Project Reviews

Prepared By
Linda Loomis, Administrator

Summary

i. **LMRWD Permit Renewals**
There are no permit renewals this month

ii. **Ivy Brook Parking Northeast (LMRWD No.2022-027)**
This project is another permit for outdoor storage in the City of Burnsville. Young Environmental Consulting Group has reviewed the application on behalf of the LMRWD. Their findings and recommendations are detailed in the attached Technical Memorandum – Ivy Brook Parking Northeast (LMRWD No. 2022-027) dated August 10, 2022.

Attachments
Technical Memorandum – Ivy Brook Parking Northeast (LMRWD No. 2022-027) dated August 10, 2022

Recommended Action
Motion to conditionally approve Ivy Brook Parking Northeast (LMRWD No. 2022-027) dated August 10, 2022, contingent on receipt of the contact information for the contractor and the contact information for the person(s) responsible for the inspection and maintenance of all erosion and sediment control features.

iii. **Reliakor (LMRWD No. 2022-029)**
This is a project for construction of a new building in the City of Shakopee, that requires a LMRWD permit because it proposes fill in a wetland below the 100-year flood elevation. Young Environmental Consulting Group has reviewed the application on behalf of the LMRWD. Their findings and recommendations are detailed in the attached Technical Memorandum – Reliakor (LMRWD No. 2022-029) dated August 10, 2022.

Attachments
Technical Memorandum – Reliakor (LMRWD No. 2022-029) dated August 10, 2022

Recommended Action (LMRWD No. 2022-031)
Motion to conditionally approve Reliakor (LMRWD No. 2022-029) dated August 10, 2022, contingent on receipt of the contact information for the contractor and the contact information for the person(s) responsible for the inspection and maintenance of all erosion and sediment control features. (a check was received on behalf of Reliakor August 12, 2022)

iv. RSI Marine

This project proposes to redevelop a site at the intersection of CSAH 61/Flying Cloud Drive and Great Plains Blvd./CSAH 101. The City requested comments from the LRMWD. Young Environmental Consulting Group has reviewed the application on behalf of the LMRWD. Their comments are detailed in the attached Technical Memorandum – RSI Marine (LMRWD No. 2022-031) dated August 4, 2022.

Attachments

Technical Memorandum – RSI Marine (LMRWD No. 2022-031) dated August 4, 2022

Recommended Action

No Board action is required at this time

v. 10521 Spyglass Drive/Hoekstra (LMRWD No.2022-026)

The Board approved an after-the-fact permit for this project at the July 20, 2022 meeting. Since the July 20th meeting the LMRWD received information needed to conduct a review of the proposed project. Young Environmental Consulting Group reviewed the application on behalf of the LMRWD and found the project to be in order and issued the permit. Findings are detailed in the attached Technical Memorandum – 10521 Spyglass Drive Property/Hoekstra Residence (LMRWD No. 2022-026).

Attachments

Technical Memorandum – 10521 Spyglass Drive Property/Hoekstra Residence (LMRWD No. 2022-026)

Recommended Action

No action recommended – permit was approved at July 20, 2022 LMRWD Board of Managers meeting

vi. Permit Program Summary

Summary of all LMRWD permit applications is attached

Attachments

LMRWD Permit Program Summary dated August 10, 2022

Recommended Action

No action recommended

vii. Burnsville Future Quarry Lake Study

The City of Burnsville held a meeting March 3, 2022, to discuss the City's vision for the Kraemer Quarry after mining operations cease. Young Environmental provided comments to the City regarding the proposal. Those comments are detailed in the attached Technical Memorandum – Kraemer Quarry Lake Modeling Technical Memorandum Review dated April 8, 2022.

Attachments

Technical Memorandum – Kraemer Quarry Lake Modeling Technical Memorandum Review dated April 8, 2022

Recommended Action

No action recommended

viii. 535 Lakota Lane, Chanhassen – work without a permit

The LMRWD has kept in touch with the City regarding actions to correct the non-conformities at this property. The City of Chanhassen has revoked the Certificate of Occupancy for the property. The City Council was planning to discuss legal recourse against the property. The LMRWD plans to record the Board's order against the property. Legal recourse on behalf of the LMRWD will take longer to initiate.

Attachments

No attachments

Recommended Action

No Action recommended

Young Environmental Consulting Group, LLC

Technical Memorandum

To: Linda Loomis, Administrator
Lower Minnesota River Watershed District

From: Hannah LeClaire, PE
Katy Thompson, PE, CFM

Date: August 10, 2022

Re: Ivy Brook Parking Northeast (LMRWD No. 2022-027)

Ivy Brook Parking LLC (the applicant) has applied for an individual project permit from the Lower Minnesota River Watershed District (LMRWD) to develop an outdoor storage lot located at 12020 Highway 35W in the City of Burnsville (City), as shown in Figure 1. The applicant's engineering firm, Larson Engineering, Inc. (Larson), has provided site plans for the Ivy Brook Parking Lot Northeast project (Project), along with the permit application.

The proposed project consists of redeveloping an existing paved parking lot that will be used as an outdoor storage yard for commercial vehicles, recreational vehicles, equipment, and materials. The project would disturb 0.82 acres and is not located within the High Value Resource Area (HVRA) or Steep Slopes Overlay District. However, the project is located in the Minnesota River floodplain, triggering LMRWD Rule C. Although the Project is located near the Black Dog Lake Fen HVRA, the Project does not encroach upon it and is not expected to impact the fen. The applicant proposes to commence construction in October or November 2022.

Because the City does not have its LMRWD municipal LGU permit, the Project requires an LMRWD individual permit and is subject to an LMRWD permitting review.

Summary

Project Name:	Ivy Brook Parking Northeast
Purpose:	Outdoor storage yard for commercial vehicles,

recreational vehicles, equipment, and materials

Project Size:

Disturbed Area	Existing Impervious Area	Proposed Impervious Area	Net Change in Impervious Area
0.82 acres	2.8 acres	2.5 acres	-0.3 acres

Location: 12020 Highway 35W, Burnsville, MN 55337 (Parcel No. 037-028600101020)

LMRWD Rules: Rule C – Floodplain and Drainage Alteration

Recommended Board Action: Conditional approval

Discussion

The LMRWD received the following documents for review:

- LMRWD online permit application received July 5, 2022
- LMRWD permit fee of $750 received July 5, 2022
- Project Narrative by Ivy Brook Parking LLC; no date; received July 5, 2022
- Construction Plans by Larson Engineering, Inc.; dated June 29, 2022; received July 5, 2022; revised July 28, 2022
- Stormwater Pollution Prevention Plan by Larson Engineering, Inc.; no date; received July 5, 2022
- Authorization of Agent Form by Ivy Brook Parking LLC; dated June 29, 2022; received July 5, 2022
- No-Rise Certificate by Larson Engineering; dated July 22, 2022; received July 22, 2022
- Hydraulic model by Larson Engineering; dated August 8, 2022; received August 8, 2022

The application was deemed complete on August 8, 2022, and the documents received provide the minimum information necessary for permit review.

Rule C – Floodplain and Drainage Alteration

The Project is located in the Minnesota River floodplain, shown on the FEMA Flood Insurance Rate Map (FIRM) for Dakota County, Panel 27037C0070E (effective March 16, 2016). The effective FIRM shows the Project in the FEMA Zone AE (or 100-year floodplain) with a 100-year elevation of 715.4 NAVD88 at cross section Y.

To rehabilitate the existing parking lot, 2.5 inches of bituminous overlay will be added, resulting in approximately 22,440 cubic feet of floodplain fill. To mitigate the effects of the fill on the 100-year flood elevation, the applicant is proposing to provide 24,475 cubic feet of compensatory storage by excavating a basin on the west side of the property, which would result in an overall increase of approximately 2,035 cubic feet of floodplain storage.

Larson provided updated hydraulic modeling based on the FEMA effective model. The update determined the 100-year flood elevation at the project site is 715.22 and the proposed bituminous overlay is not expected to raise the 100-year flood elevation.

Although the Project does not trigger LMRWD Rule B (Erosion and Sediment Control), an erosion control plan is required to comply with Rule C. The applicant provided an Erosion Control Plan and a Stormwater Pollution Prevention Plan, but contact information for the contractor(s) and person(s) responsible for the inspection and maintenance of all erosion and sediment control features is required before the LMRWD can issue a permit.

Recommendations

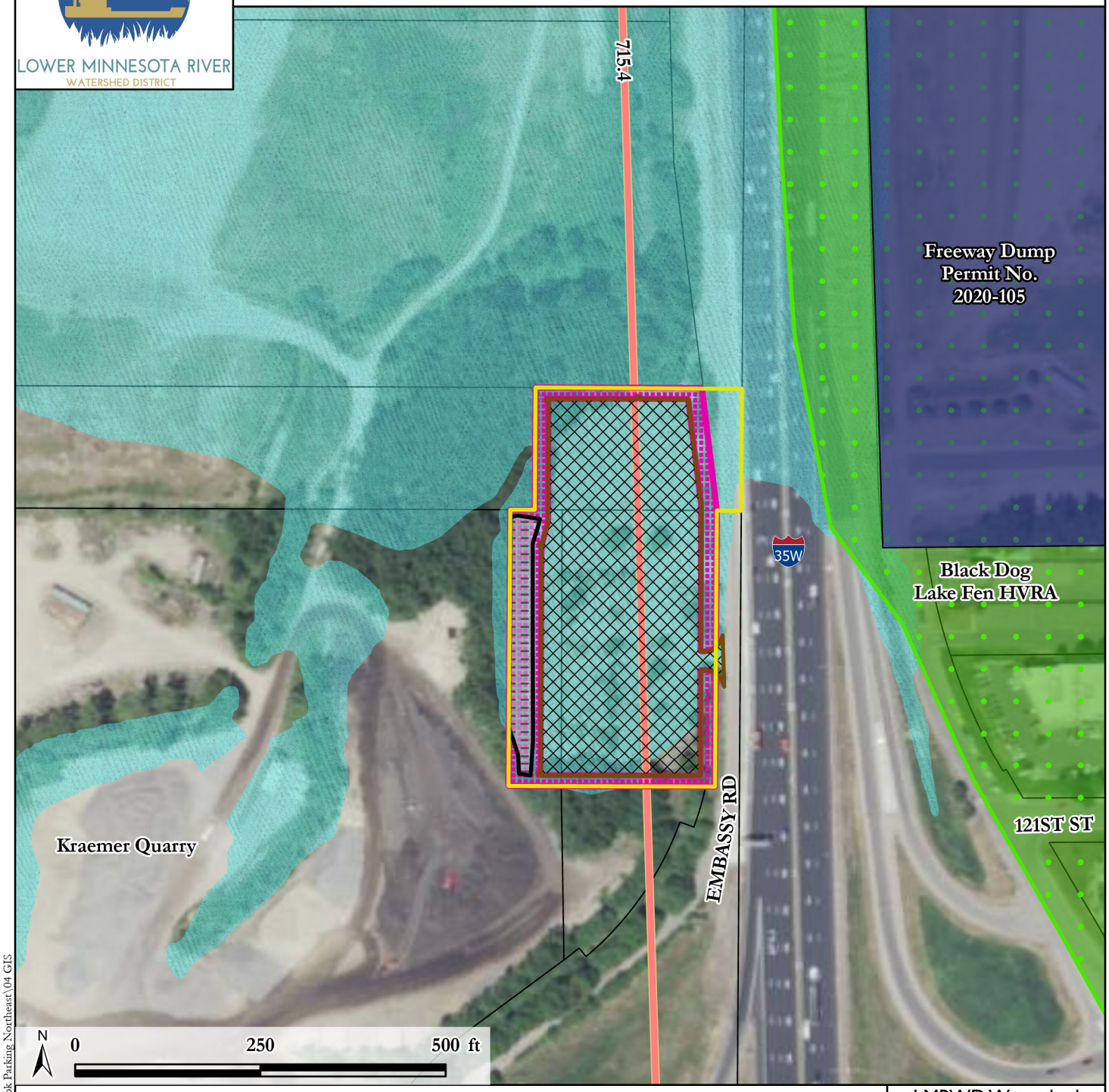
Based on our review of the project, we recommend conditional approval contingent on receipt of the following:

- Contact information for the contractor(s)
- Contact information for the person(s) responsible for the inspection and maintenance of all erosion and sediment control features

Attachments

- Figure 1 – Ivy Brook Parking Northeast Project Location Map

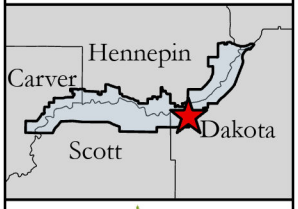
Figure 1: Ivy Brook Northeast Project Location



Legend

- Ivy Brook Northeast Project Site
- High Value Resource Area
- Previous LMRWD Permits
- Parcels
- Compensatory Storage
- Proposed Pavement
- Pervious Area
- 100-yr Floodplain
- FEMA Cross Section Y

LMRWD Watershed Location Map



Young Environmental Consulting Group, LLC

Projects\LMRWD\Project Reviews\02 In Process\Ivy Brook Parking Northeast\04 GIS

Young Environmental Consulting Group, LLC

Technical Memorandum

To: Linda Loomis, Administrator
Lower Minnesota River Watershed District

From: Hannah LeClaire, PE
Katy Thompson, PE, CFM

Date: August 10, 2022

Re: Reliakor (LMRWD No. 2022-029)

Reliakor Services, Inc. (the applicant) has applied for an individual project permit from the Lower Minnesota River Watershed District (LMRWD) to construct a new building at their existing property in the City of Shakopee (City), as shown in Figure 1. The applicant's engineer, Rehder & Associates, Inc. (Rehder), has provided site plans for the Reliakor project (Project), along with the permit application.

The Project comprises the construction a 11,745 square-foot building with an associated parking lot, driveway, and on-site stormwater management provided by a pretreatment and infiltration basin. The project would disturb 3.75 acres and create 0.52 acres of new, impervious surfaces. The project is not located in the High Value Resource Area or Steep Slopes Overlay District. However, there is a wetland delineated on site that will be affected by the Project. The applicant proposes to commence construction on August 22, 2022.

The City has obtained a Municipal Permit from the LMRWD and is therefore considered the primary permitting authority for projects within the LMRWD. However, the LMRWD has retained permitting authority for Rule C – Floodplain and Drainage Alteration, which regulates any alteration to or filling of land below the 100-year flood elevation of any wetlands subject to the Minnesota Wetland Conservation Act (WCA). The Project requires an LMRWD permit and is subject to an LMRWD permitting review.

Summary

Project Name:	Reliakor
Purpose:	New building construction with associated parking lot, driveway, and on-site stormwater management BMP

Project Size:

Disturbed Area	Existing Impervious Area	Proposed Impervious Area	Net Change of Impervious Area
3.75 acres	5.76 acres	6.28 acres	+0.52 acres

Location:	8600 Hansen Ave. Shakopee, MN 55379 (Parcel No. 279120220)
LMRWD Rules:	Rule C – Floodplain and Drainage Alteration
Recommended Board Action:	Conditional approval

Discussion

The District received the following documents for review:

- LMRWD online permit application, received July 20, 2022
- Construction Plans by Rehder; dated July 20, 2022; received July 20, 2022
- Authorization of agent form by Eugene Hansen; dated July 20, 2022; received July 20, 2022; revised August 1, 2022
- Stormwater Management Report by Rehder; dated August 1, 2022; received August 1, 2022

The applicant indicated in an email that the permit fee was sent by mail on August 2, 2022. A permit will not be issued until receipt of the permit fee is confirmed.

Rule C – Floodplain and Drainage Alteration

The LMRWD regulates the placement of fill below the 100-year flood elevation and alterations within drainage ways within the watershed in accordance with Minnesota Statute 103F and LMRWD Rule C; that authority includes wetlands and other waters not always mapped by FEMA.

An existing wetland is located on the east side of the site, adjacent to the proposed pretreatment and infiltration basins shown in Figure 1. Because the wetland is not delineated in the 2021 FEMA flood insurance rate maps for Scott County, the applicant

has provided a HydroCAD model, which defines the existing normal water elevation at 736.0 and the existing 100-year flood elevation at 736.7 feet.

As part of the construction of the infiltration and pretreatment basins, there will be 90 cubic yards of cut and 150 cubic yards of fill within the 100-year floodplain of the wetland. The applicant is also proposing to lower the outlet elevation of the wetland from 736.0 to 735.5. The provided HydroCAD model estimates the proposed 100-year flood elevation in the wetland will be lowered to 736.4, a reduction of 0.3 feet, despite the placement of floodplain fill, satisfying the no-rise requirement under Rule C.

The low floor elevation of the proposed building is 741.5, which is greater than the minimum two feet of separation from the proposed 100-year flood elevation required under Rule C. The applicant provided an erosion control plan. However, contact information for the contractor(s) and person(s) responsible for the inspection and maintenance of all erosion and sediment control features is required before the LMRWD can issue a permit.

Additional Considerations

The LMRWD is not the permitting authority for WCA, and this memo should not be construed as making a determination of the proposed impacts on the type, quality, or functionality of the existing wetland pursuant to WCA requirements. The applicant is encouraged to coordinate with the City, and all other applicable agencies, to determine if the proposed project fulfills its other regulatory obligations.

Recommendations

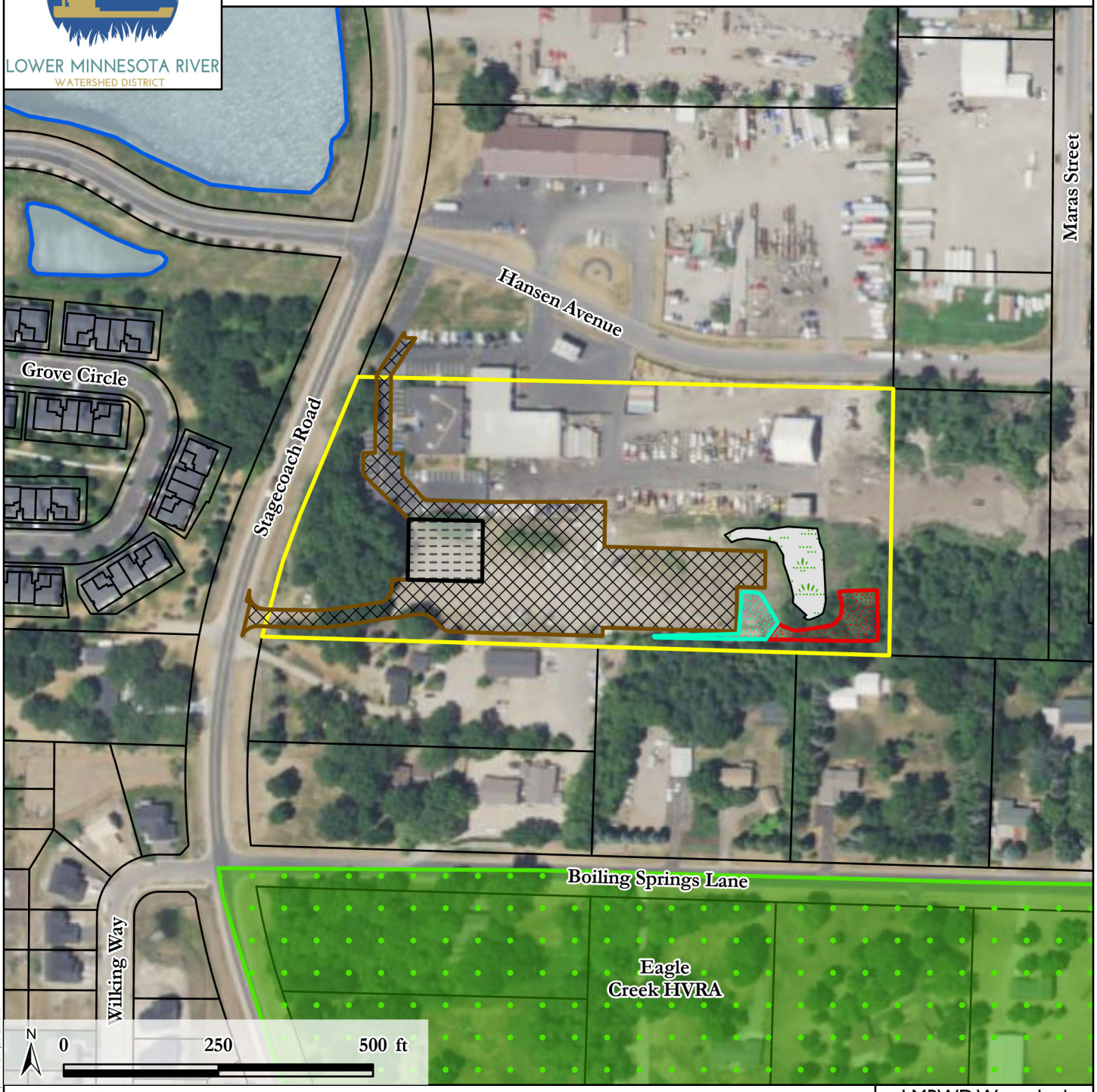
Based on our review of the project, we recommend conditional approval contingent on the receipt of the following:

- Permit fee for $750
- Contact information for the contractor(s)
- Contact information for the person(s) responsible for the inspection and maintenance of all erosion and sediment control features

Attachments

- Figure 1 – Reliakor Location Map

Figure 1: Reliakor Project Location



Legend

- Reliakor Project Site
- Existing Wetland
- Proposed Building
- Proposed Infiltration Basin
- Proposed Pavement
- Proposed Pre-Treatment Basin
- High Value Resource Area
- Parks
- Parcels
- Open Water

LMRWD Watershed Location Map

Young Environmental Consulting Group, LLC

Projects\LMRWD\Project Reviews\02 In Process\Reliakor\04 GIS\Reliakor

Young Environmental Consulting Group, LLC

Technical Memorandum

To: Linda Loomis, Administrator
Lower Minnesota River Watershed District

From: Hannah LeClaire, PE
Katy Thompson, PE, CFM

Cc: Mackenzie Young-Walters
City of Chanhassen

Date: August 4, 2022

Re: RSI Marine (LMRWD No. 2022-031)

On July 18, 2022, the City of Chanhassen (City) submitted an Agency Review Request to the Lower Minnesota River Watershed District (LMRWD) and requested comments on the proposed RSI Marine mixed-use Planned Unit Development (PUD) rezoning permit. James R. Hill Inc. (James R. Hill), the engineer for RSI Marine, prepared the site plans and stormwater management calculations for the RSI Marine Storage project (Project), located in the northeast corner of the intersection of Great Plains Boulevard (County State Aid Highway [CSAH] 101) and Flying Cloud Drive in Chanhassen, Minnesota, as shown in Figure 1.

The existing site has a building and parking lot for an animal daycare. The Project proposes to fully remove the existing facilities and construct a total of 2.99 acres (130,220 square feet) of new impervious area. In addition, the proposed Project will construct four 20,000-square-foot storage buildings, driveway, and stormwater management facilities and will disturb approximately 6.55 acres. The Project is not located within the High Value Resource Area, Steep Slopes Overlay District, or 100-year floodplain.

Because the City does not have its LMRWD municipal LGU permit, this Project will likely require an LMRWD Individual Project permit under Rules B and D. The purpose of this memo is to summarize the preliminary review that Young Environmental Consulting

Group LLC (Young Environmental) has completed in response to the City's request for comments on the PUD rezoning permit application and to provide preliminary recommendations to the prospective applicant.

Summary

Project Name:	RSI Marine Storage		
Purpose:	Boat and watercraft storage facilities		
Project Size:	Disturbed Area	Existing Impervious Area	Total New Impervious Area
	6.55 acres	0.41 acres	2.99 acres
Location:	10520 Great Plains Boulevard, Chanhassen, MN 55317 (Parcel 256010020 & 256010010)		
LMRWD Rules:	Rule B—Erosion and Sediment Control Rule D—Stormwater Management		
Recommended Board Action:	Information Only		

Discussion

The LMRWD received the following documents for review:

- Agency Review Request Land Development Proposal by City of Chanhassen; dated July 18, 2022; received July 18, 2022
- Storm Drainage Area by James R. Hill; no date; received July 18, 2022
- Project Narrative by Gries Architectural Group Inc.; no date; received July 18, 2022
- RSI Marine Storage Site Plan by James R. Hill; dated May 6, 2022; received July 18, 2022
- RSI Marine Storage Stormwater Management Narrative by James R. Hill; dated June 1, 2022; received July 18, 2022
- Storm Sewer Sizing Computation Sheet by James R. Hill; dated May 31, 2022; received July 18, 2022

Rule B—Erosion and Sediment Control

The LMRWD regulates land-disturbing activities that affect one acre or more under Rule B. The proposed Project would disturb approximately 6.55 acres within the LMRWD boundary. As part of the site plan, James R. Hill prepared a preliminary erosion and

control plan and a Stormwater Pollution Prevention Plan. The Project generally complies with Rule B; however, the following steps would be required before the LMRWD could issue a permit:

- Add the following notes to the Erosion Control Plan (Sheet C3.1).
    - Vehicle tracking on paved surfaces shall be removed within 24 hours of discovery.
    - All disturbed areas that are to be vegetated shall be decompacted through soil amendment or ripping to a depth of 18 inches. All decompaction measures should be completed before final stabilization.
- Add silt fence perimeter control around the proposed Nationwide Urban Runoff Program (NURP) pond and filtration bench.

The following items are conditional approval items that would be required for the issuance of an LMRWD permit:

- A copy of the NPDES permit
- Contact information for the contractor and person(s) responsible for the inspection and maintenance of the erosion and sediment control features

Rule D—Stormwater Management

The LMRWD regulates projects that create more than one acre of new impervious area. The Project proposes to construct a total of 2.99 acres (130,220 square feet) of new impervious surface. The development will drain to a proposed NURP pond with a filtration bench that outlets to a drainage ditch on the north side of Flying Cloud Drive (Figure 1).

Section 4.4.1 of Rule D requires proposed stormwater runoff rates to not exceed existing runoff rates. The existing and proposed runoff rates from the site are summarized in Table 1. The Project anticipates a reduction in runoff rates for 2-, 10-, and 100-year, 24-hour rainfall events.

Table 1. Runoff Rate Summary

Rainfall Event (24-hour)	Existing Conditions (cfs)	Proposed Conditions (cfs)	Change (cfs)
2-year	8.37	6.60	1.77
10-year	23.65	9.75	13.9

100-year	45.21	16.53	28.68

Section 4.4.2 of rule D requires proposed projects to retain one inch of runoff from new impervious surface on-site. The site is predominantly hydrologic soil groups B and C. The applicant is proposing to provide volume control through a filtration bench but has not specified a reason that infiltration is not feasible on site. The required on-site volume control is 10,852 cubic feet, and the filtration bench will provide 16,921 cubic feet of volume control.

Section 4.4.3 of Rule D requires no net increase in total phosphorus (TP) or total suspended solids (TSS) loads from existing conditions. The applicant modeled the site using P8 to determine the existing and proposed pollutant loadings. A summary of the P8 results for TP and TSS loads leaving the Project site in pounds per year (lb/yr) for the Project is provided in Table 2.

Table 2. Water Quality Summary

Contaminant	Existing Conditions (lb/yr)	Proposed Conditions (lb/yr)	Difference	Percent Reduction
TP	1.8	0.4	1.4	78%
TSS	429.2	20.7	408.5	95%

As presented, the proposed Project would result in a decrease in the TP and TSS loads from the site, meeting the requirements of Rule D. However, the applicant did not provide the modeling results to go along with the modeling inputs; therefore, the loads presented in Table 2 could not be verified. The applicant must submit the P8 results from the model with their permit application.

Section 4.4.4 of Rule D requires the applicant to develop and adhere to a maintenance agreement for the permitted Project. The maintenance agreement shall identify and protect the design, capacity, and functionality of the on-site filtration bench and NURP pond. The LMRWD has sample maintenance agreements available on the LMRWD website. Additionally, the maintenance agreement shall be recorded with Carver County. The applicant is required to submit a draft maintenance agreement with their application. If the City requires a separate stormwater maintenance agreement, please submit it in lieu of a separate maintenance agreement with LMRWD because it may meet the LMRWD standards and can help avoid redundancies.

Recommendations

No board action is required at this time. As presented, RSI Marine must obtain an LMRWD Individual Project permit before the start of construction activities for the applicable LMRWD rules. We offer the following summarized comments to the applicant to help facilitate the permit review process:

- Add the following notes to the Erosion Control Plan.
    - Vehicle tracking on paved surfaces shall be removed within 24 hours of discovery.
    - All disturbed areas that are to be vegetated shall be decompacted through soil amendment and/or ripping to a depth of 18 inches. All decompaction measures should be completed before final stabilization.
- Add silt fence perimeter control around the proposed NURP pond and filtration bench.
- Provide justification for why infiltration is not feasible on site.
- Provide the P8 model results.
- Provide a draft maintenance agreement.

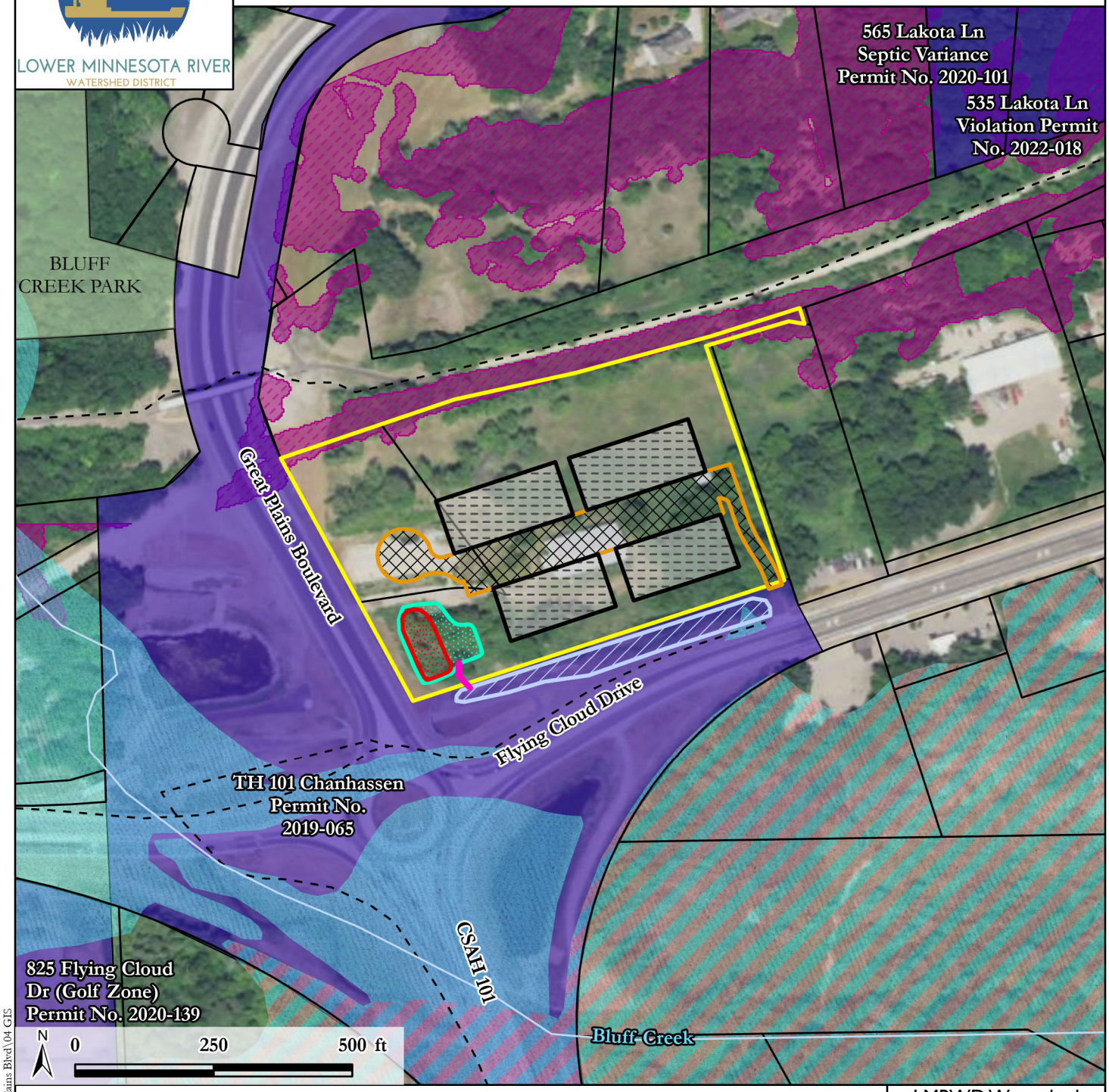
The following items are conditional approval items that may be submitted at a later date:

- Copy of the NPDES permit
- Contact information for the contractor and person(s) responsible for the inspection and maintenance of the erosion and sediment control features
- Executed maintenance agreement

Attachments

- Figure 1—RSI Marine Storage Project Location Map

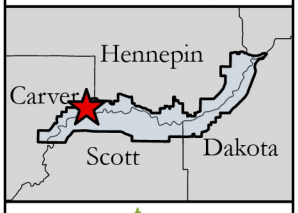
Figure 1: RSI Marine Storage Project Location



Legend

- Project Location
- Steep Slopes Overlay District
- Previous LMRWD Permits
- Parks
- Parcels
- Proposed Building
- Proposed Filtration Bench
- Proposed NURP Pond
- Proposed Pavement
- Proposed Outlet
- Ditch
- 100-yr Floodplain
- Floodway
- Public Waters
- Trails

LMRWD Watershed Location Map



Young Environmental Consulting Group, LLC

Projects\LMRWD\Project Reviews\02 In Process\Great Plains Blvd\04 GIS

Young Environmental Consulting Group, LLC

Technical Memorandum

To: Linda Loomis, Administrator
Lower Minnesota River Watershed District

From: Hannah LeClaire, PE
Katy Thompson, PE, CFM

Date: August 10, 2022

Re: 10521 Spyglass Drive Property/Hoekstra Residence (LMRWD No. 2022-026)

On May 20, 2022, John Hulbert, a landscape designer with The Mustard Seed Landscaping, contacted the Lower Minnesota River Watershed District (LMRWD) to share plans for a landscape project at 10521 Spyglass Drive, Eden Prairie, Minnesota (Project site: Hoekstra residence). The Hoekstra residence is owned by Jay and Deb Hoekstra.

Water from the adjacent property (10515 Spyglass Drive) located east of the project site drains into the Hoekstra residence backyard and cannot drain out because of a natural berm located on the property (Figure 1). The natural berm causes water to collect in the backyard and infiltrate, which has caused foundation settling and structural damage to the deck stairs and deck supports. The berm is located at the edge of the property and can be seen in Figure 2. Mr. Hulbert proposes to construct a riprap channel that would allow the backyard to drain. This riprap channel follows the natural drainage pattern that ultimately drains toward parkland on the west side of the property. The channel will discharge onto a fan-shaped riprap apron designed to disperse the water and prevent development of a gully at the outlet of the channel (Figure 3).

A small portion of the outlet channel and the entire riprap apron are located within the City of Eden Prairie's James A. Brown Conservation Area as well as the LMRWD's Steep Slopes Overlay District (SSOD). Mr. Hulbert has been in contact with the City of Eden Prairie since the beginning of the project. Matt Bourne, City of Eden Prairie engineer, and Randy Slick, park director, have both been notified of the project and have agreed with the assessment of the project site and the design of the riprap

channel and apron.

The City of Eden Prairie does not have its LMRWD municipal LGU permit. Therefore, this project requires an LMRWD individual permit and, as such, is subject to an LMRWD permitting review.

Summary

Project Name:	10521 Spyglass Drive (Hoekstra Residence)
Purpose:	Construction of a riprap channel and disbursement area to resolve private property drainage issues
Project Size:	400 square feet disturbed; 0 acres existing impervious; 208 square feet proposed impervious; net increase of 208 square feet new impervious
Location:	10521 Spyglass Drive, Eden Prairie, MN 55437 (Parcel ID Nos. 35-116-22-24-0021 and 35-116-22-24-0062)
LMRWD Rules:	Rule F—Steep Slopes
Recommended Board Action:	Information Only

Discussion

The LMRWD received the following documents for review:

- LMRWD online permit application; received July 13, 2022
- Permit fee of $750; received July 13, 2022
- Site Plans by The Mustard Seed Landscaping; dated July 13, 2022; received July 13, 2022; revised August 8, 2022

The application was deemed complete on August 8, 2022. The documents received provide the minimum information necessary for permit review.

Background

On June 2, 2022, Linda Loomis, LMRWD administrator, and Young Environmental Consulting Group LLC (Young Environmental) met with Mr. Hulbert and the City of Eden Prairie staff at the project site to discuss the project and to evaluate the existing site. Photos taken during the site visit are shown in Attachment 1. The following summarizes the observations that were made during the site visit:

- The backyard elevation where water pools is lower than the street and its associated storm sewer elevations. As such, LMRWD and the City of Eden Prairie agreed that water from the backyard should be allowed to maintain its current drainage pattern down the steep slope in a diffuse manner to minimize channelization and potential erosion.

- Water that collects in the backyard is causing foundation settling and structural damage to the deck stairs and deck supports (Figure 4).

On June 5, 2022, Young Environmental sent an email to Mr. Hulbert summarizing the items required for an LMRWD permit review (Attachment 2). Given the apparent structural and safety concerns at the property, Young Environmental stipulated that if items were received in a timely manner, the project may be considered at the June 15, 2022, board meeting. However, the requested items were not received until July 13, 2022.

On July 20, 2022, Ms. Loomis presented the project to the LMRWD board at its monthly meeting and requested approval of an after-the-fact permit so as not to delay construction, which the board approved. On July 25, 2022, Young Environmental coordinated via email with the landowner and Mr. Hulbert to discuss preliminary erosion concerns due to the proposed slope of the riprap channel. On July 26, 2022, Young Environmental met with Mr. Hulbert to discuss the design, recommending the following revisions to allow for LMRWD approval:

- Reduce the slope of the channel on the upstream side to less than 3 percent to reduce the potential formation of erosive velocities.

- Line the riprap channel with geotextile fabric to ensure underlying soils do not erode

On August 8, 2022, Mr. Hulbert sent an updated site plan with revised riprap cross section and longitudinal profile for review. The following discusses the project's applicability to Rule F.

Rule F—Steep Slopes

The LMRWD regulates land-disturbing activities within the SSOD and requires a permit for activities that involve the excavation of 50 cubic yards or more of earth or the displacement or removal of 5,000 square feet or more of surface area or vegetation within the overlay area. The applicant proposes a fan-shaped riprap apron within the SSOD and on the City of Eden Prairie's land, disturbing 400 square feet and approximately 50 cubic yards. As discussed, the city engineer and park director have both been notified of the project and have agreed with the assessment of the project site's drainage concerns and the proposed design.

Young Environmental analyzed the hydrology of the area to determine approximately how much flow currently drains to the existing low point and to the proposed outlet channel. The drainage area to the project site is approximately 8,447 square feet (0.19 acres). Table 1 summarizes the makeup of the drainage area based on an aerial image analysis.

Table 1. Existing Land Use Summary for Project Site Drainage Area

Land Use Description	Area (square feet)	Percent of Total Area
Roof	3,175	38%
Pavement	226	3%
Lawn (50%–75% Grass Cover, Hydrologic Soil Group A)	5,046	59%

The proposed riprap increases the impervious area of the site by 416 square feet. Table 2 summarizes the estimated existing and proposed discharges and volumes that would result from 2-, 10-, and 100-year rainfall events.

Table 2. Existing and Proposed Discharge and Volume Summary

Rainfall Event	Existing Discharge (cfs)	Proposed Discharge (cfs)	Existing Volume (acre-feet)	Proposed Volume (acre-feet)
2-Year	0.2	0.3	0.01	0.01
10-Year	0.6	0.6	0.02	0.03
100-Year	1.5	1.6	0.06	0.07

Based on these discharges, Young Environmental estimated the stability of the proposed channel, riprap apron, and riprap size. The average width of the proposed channel is 4 feet with a depth of 1.3 feet to 3.5 feet and an average slope of 2.33 percent. The channel has sufficient capacity to contain the 100-year rainfall event. The proposed riprap size of the channel and apron is 2- to 6-inch stone. Using a roughness coefficient of 0.035, the calculated maximum velocity of the 100-year discharge is 2.0 feet per second. The permissible velocity for riprap channels that consist of 2-inch diameter stones is 3 to 6 feet per second. For riprap channels that consist of 6-inch diameter stones, the permissible velocity is 4 to 7.5 feet per second.[1] As runoff approaches the fan-shaped riprap apron, the channelized flow will spread out, reducing the velocity of the runoff even further and preventing adverse effects to downstream

[1] Craig Fischenich, *Stability Thresholds for Stream Restoration Materials*, Table 2. Permissible Shear and Velocity for Selected Lining Materials, 2001

properties.

The water currently pooling in the backyard infiltrates and seeps (as subsurface flow) toward the steep slope at the western corner of the property. Infiltration through a steep slope can cause unstable soil conditions. The proposed riprap channel will cut through the berm, carrying runoff to the discharge point as surface water flows to its current overflow location, therefore maintaining the overall drainage pattern of the site. Ground-hug chokeberry woody ground cover plantings will surround the edge of the riprap apron to aid with soil stability on the steep slope as runoff exits the riprap apron. The plantings will further prevent channelized flow at the exit of the riprap apron. The applicant proposes final site stabilization by planting several species of shrubs and bushes.

Recommendations

No board action is required. The after-the-fact permit was approved on July 20, 2022, and issued on August 8, 2022. The applicant was informed that they must notify the LMRWD if any project changes or modifications occur that may warrant a permit amendment. The issued permit is attached as Attachment 3.

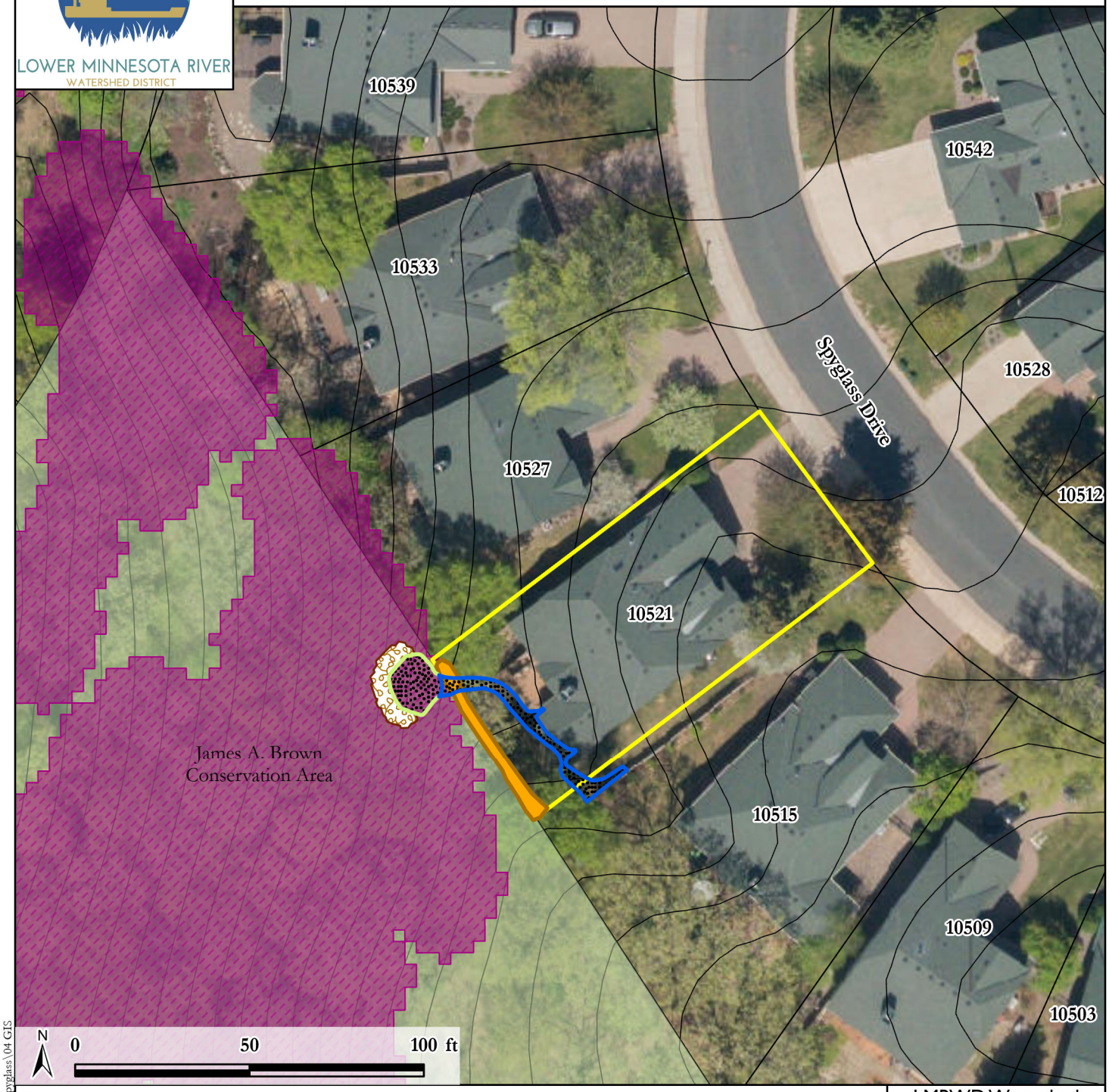
Figures

- Figure 1—10521 Spyglass Drive (Hoekstra residence) Project Location Map
- Figure 2—Natural berm observed at the edge of the property on June 2, 2022
- Figure 3—10521 Spyglass Drive (Hoekstra residence) Project Features
- Figure 4—Settlement observed at deck stairs on June 2, 2022

Attachments

- Attachment 1—Photos taken during site visit on June 2, 2022
- Attachment 2—Email sent to applicant detailing permit requirements
- Attachment 3—10521 Spyglass Drive (Hoekstra residence) After-The-Fact Permit

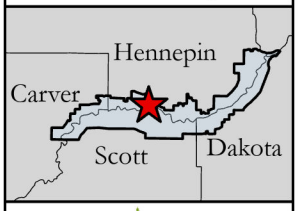
Figure 1: 10521 Spyglass Drive (Hoekstra Residence) Project Location



Legend

- Hoekstra Residence Project Location
- Steep Slopes Overlay District
- Proposed Riprap Channel
- Proposed Riprap Apron
- Proposed Chokeberry Woody Groundcover
- Natural Berm
- Parcels
- Parks
- 2 foot contours

LMRWD Watershed Location Map



Young Environmental Consulting Group, LLC

Projects\LMRWD\Project Reviews\02 In Process\10521 Spyglass\04 GIS

Figure 2. Natural berm observed at the edge of the property on June 2, 2022

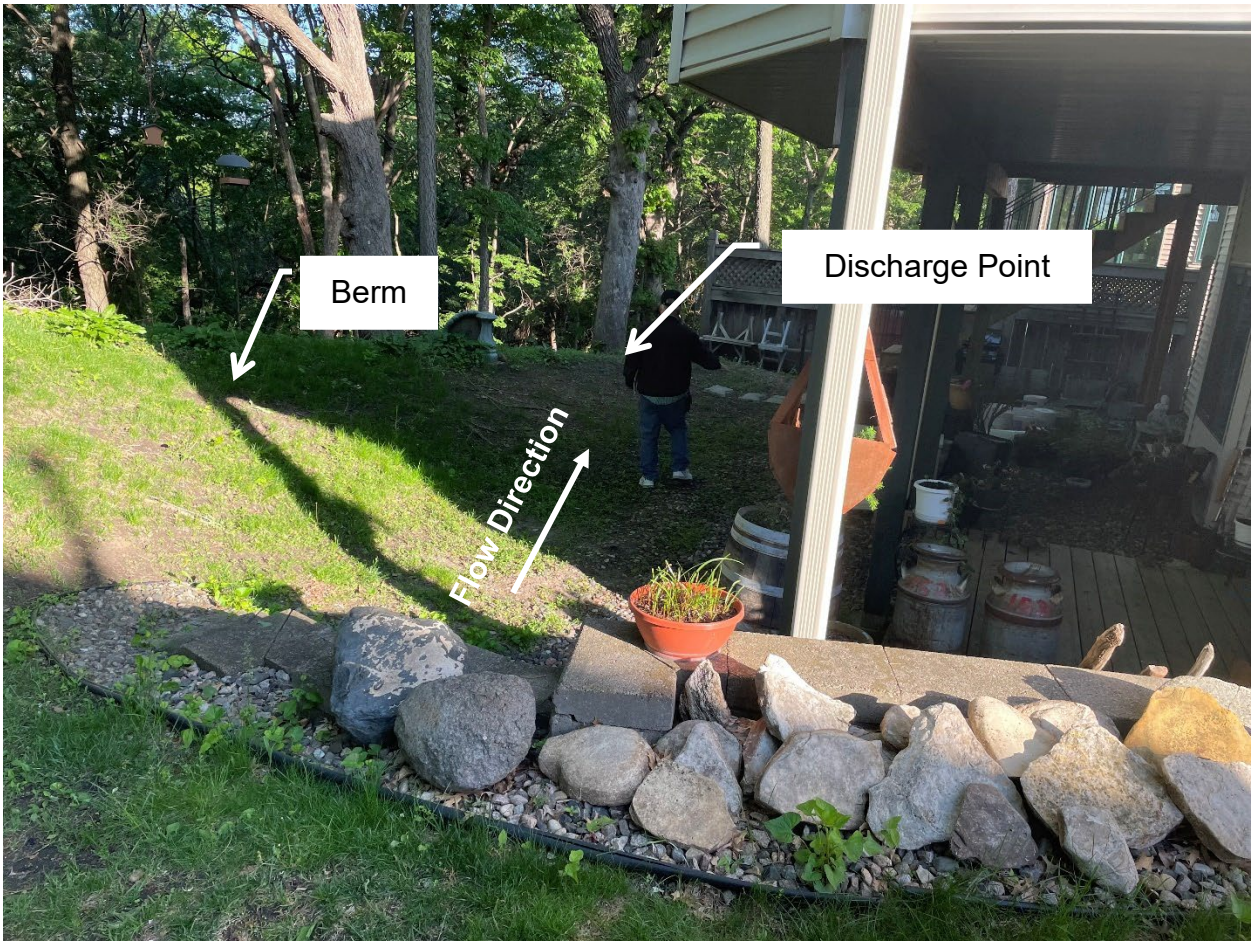
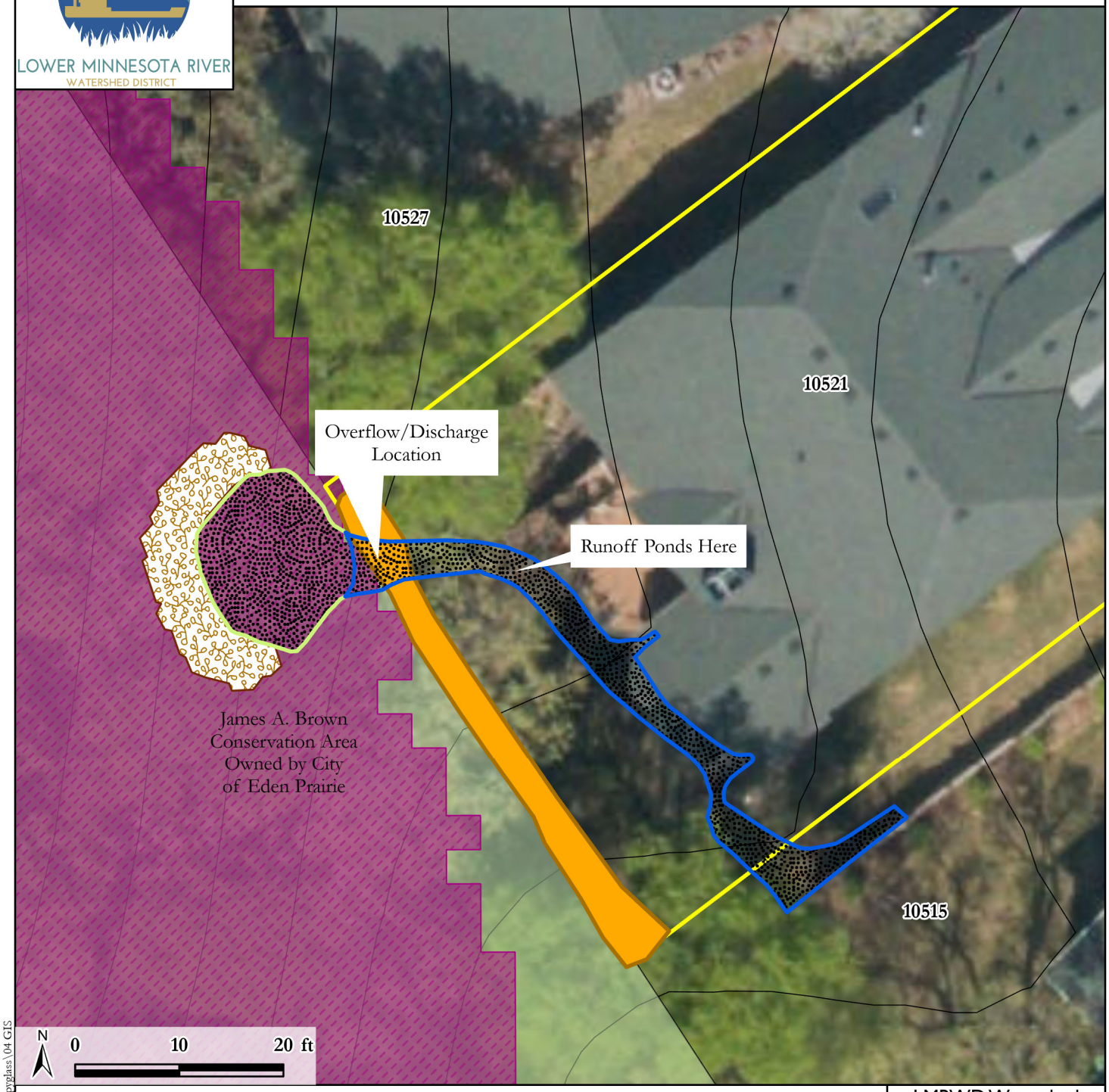


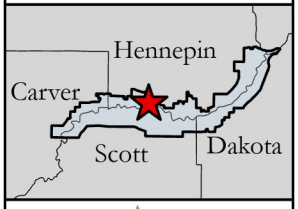
Figure 3: 10521 Spyglass Drive (Hoekstra Residence) Project Features



Legend

- Hoekstra Residence Project Location
- Steep Slopes Overlay District
- Proposed Riprap Channel
- Proposed Riprap Apron
- Proposed Chokeberry Woody Groundcover
- Natural Berm
- Parcels
- Parks
- 2 foot contours

LMRWD Watershed Location Map



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Projects\LMRWD\Project Reviews\02 In Process\10521 Spyglass\04 GIS

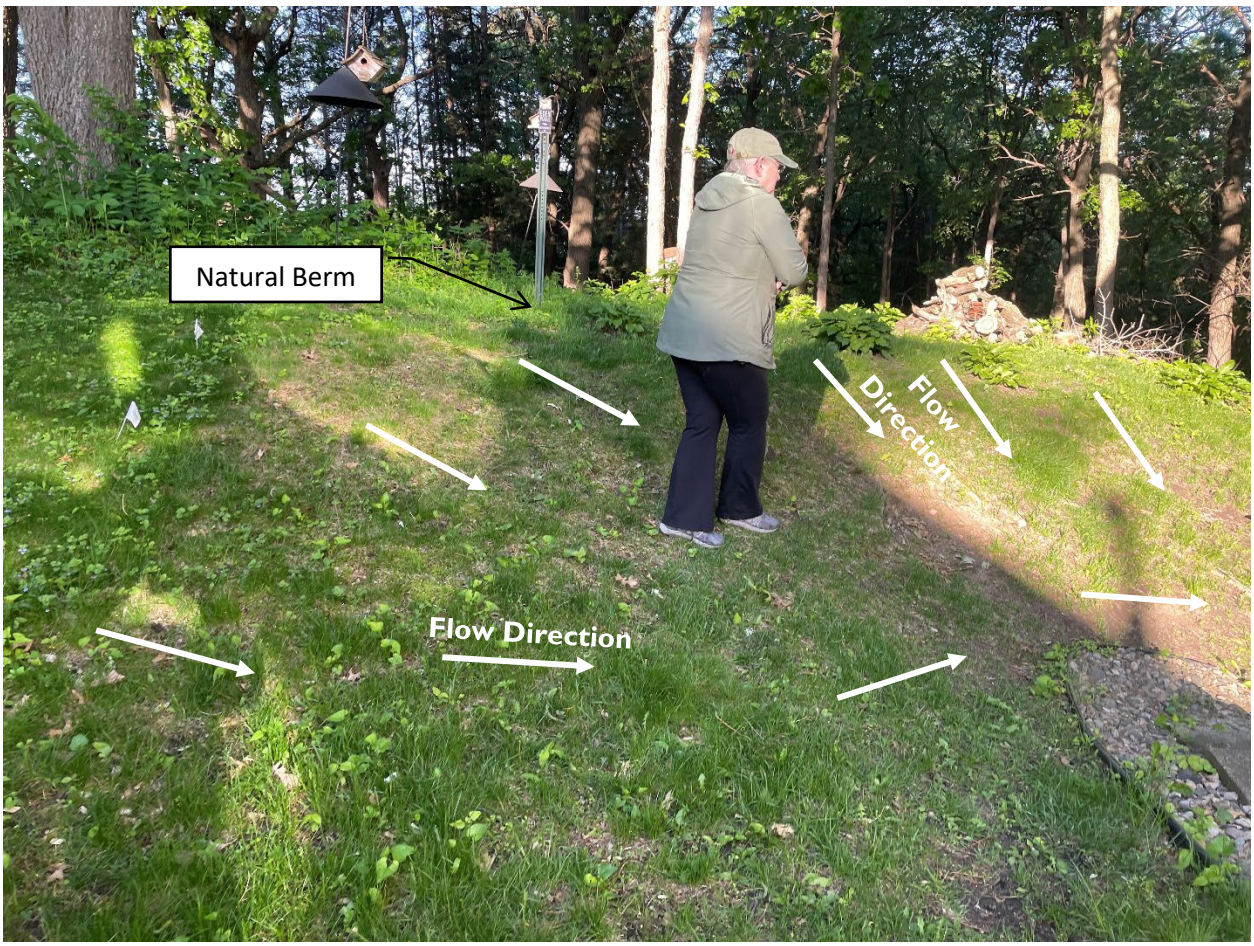
Figure 4. Settlement observed at deck stairs on June 2, 2022

Attachment 1 – Photos from June 2, 2022, Site Visit

1. Slope on eastern side of Hoekstra Residence

2. Proposed location of the beginning of the riprap channel

3. Natural berm prevents runoff from exiting the property. Flow pattern directs runoff to the western corner of the property.



4. Location of ponding near the deck stairs and the foundation of the house (currently dry)

Attachment 2 – Email Sent to Applicant Detailing Permit Requirements

From: Della Young
To: John Hulburt
Cc: Linda Loomis; Patrick Sejkora; Lower Minnesota River Watershed District
Subject: 10521 Spyglass Drive Landscape Project - Lower MN River Watershed District
Date: Sunday, June 5, 2022 5:51:03 PM

Hello John,

Below, I have summarized the proposed project and outlined the submittal schedule for the project to potentially be recommended for approval during the Lower Minnesota River Watershed District (LMRWD) board meeting on July 20, 2022.

Project Name: 10521 Spyglass Drive Landscape Project

Purpose: Enhance landscape and correct backyard drainage issues causing structural damage to the referenced property. It appears the project areas receive drainage from the front yard and the property adjacent to it from the east. Unfortunately, the areas where water collects in the backyard do not drain offsite because the outlet elevation appears higher. This appears to allow the pooled water to slowly infiltrate, thereby causing foundation settling and structural damage to the deck stairs and deck supports.

Project Size: Specific quantities are unknown. The project is within the Steep Slope Overlay District and is expected to consist of land-disturbing activities that involve the excavation of 50 cubic yards or more of earth or displacement or removal of 5,000 square feet or more of surface area or vegetation.

Location: 10521 Spyglass Drive, Eden Prairie, Minnesota 55347

The project as presented triggers LMRWD Rule F—Steep Slope, meaning an Individual Project Permit from the LMRWD is required. The permit application, fee schedule highlighting the required $750 fee, and other requirements can be found on the LMRWD website Individual Project Permit: Lower Minnesota River Watershed District (lowermnriverwd.org).

The following were required items discussed during the June 2, 2022, site visit:

- The backyard elevation where water pools seems significantly lower than the street and its associated storm sewer elevations. As such, LMRWD and the city of Eden Prairie agreed that water from the backyard should be allowed to maintain its current drainage pattern down the steep slope in a diffuse manner to minimize channelization and potential erosion. To properly assess the proposed design, elevations *and dimensions* are required on the drawings, especially along the route of the "Drainage Dispersement Rip-Rap" shown on the drawing.
- You should review and complete the LMRWD Individual Project Permit application and provide all required items, including the $750 permit fee.
- According to our permitting schedule, the application is not eligible to be considered during the June 15, 2022, meeting. However, my team is willing to work with you and

the property owner, given the apparent structural and safety concerns at the property. To expedite the permitting process, LMRWD will need Mustard Seeds's proposed construction schedule.

Thank you, and please feel free to contact me if you have any questions.

Della Schall Young, PMP, CPESC
Principal
Young Environmental Consulting Group, LLC
a S/W/MBE

6040 Earle Brown Dr., Suite 306
Brooklyn Center, MN 55430
Phone:(651) 249-6974
Email: della@youngecg.com
Website: www.youngecg.com

Attachment 3 – 10521 Spyglass Drive (Hoekstra Residence) After-The-Fact Permit

LOWER MINNESOTA RIVER WATERSHED DISTRICT

Permit Number
2022-026

Individual Project Permit (After-the-Fact)

Pursuant to Minnesota Statutes, Chapter 103B, 103D, and 103F consistent with the rules of the Lower Minnesota River Watershed District (LMRWD), and on the basis of statements and information contained in the permit application, plans and supporting information provided by the applicant, all of which are made part hereof by reference, **permission is hereby granted** to the applicant to perform actions as authorized below.

By granting this permit, the LMRWD does not direct the activity authorized herein or warrant the soundness of the applicant's design or methods in any respect. The LMRWD waives no immunity or protection applicable to itself, an officer, an agent or an employee pursuant to this approval.

Project Name	Project Location	
10521 Spyglass Drive (Hoekstra Residence)	**10521 Spyglass Drive, Eden Prairie, MN 55347**	
Type of Development	**City**	**County**
Landscaping	Eden Prairie	Hennepin
Permittee/Property Owner's Name	**Permittee Mailing Address**	
Jay and Deb Hoekstra	10521 Spyglass Drive, Eden Prairie, MN 55347	
Authorized Agent Name	**Agent Email Address**	**Agent Phone Number**
John Hulbert	johnh@themustardseedinc.com	(952)-445-6555
Purpose of Permit	**Authorized Action(s)**	
Construction of riprap channel and dispersion area to fix drainage issues	Construction of riprap dispersion area in the Steep Slopes Overlay District	
Affected Rule(s): Rule F—Steep Slopes		

Board Approval	Expiration Date	Issued Date
July 20, 2022	**August 8, 2023**	August 8, 2022

Authorized Issuer Name and Title	Email Address	Phone Number
Linda Loomis, LMRWD Administrator	permit@lowermnriverwd.org	(763) 545-4659

This permit is granted **subject to** the following **general conditions**:

NPDES Permit: Submit a copy of the NPDES construction stormwater general permit to the LMRWD before construction begins. All erosion and sediment control measures must be effectively installed and maintained according to LMRWD guidelines and MPCA NPDES Permit guidelines as laid out by current District Rules and Policies until all disturbed soils have been permanently stabilized.

Start Work: Grading and excavating must not begin until the applicant has been noticed that a permit has been issued and required erosion control measures are in place. Working without a permit where required is in violation of LMRWD Rules and is a misdemeanor subject to penalty by law.

Applicable federal, state, or local regulations: The permittee is responsible for the action(s) of their representative, contractor and employees and compliance with all rules, regulations, requirements, or standards of any applicable federal, state, or local agencies; including, but not limited to, the U.S. Army Corps of Engineers, Board of Water and Soil Resources, MN Pollution Control Agency, watershed districts, water management organizations, county, city and township zoning.

Site access: In accepting this permit, the owner recognizes and agrees that LMRWD representatives may enter the site at reasonable times to inspect the activities authorized hereunder and compliance with the requirements of this permit, the LMRWD Rules and applicable statutes. This includes routine site inspections as well as inspections during or immediately following installation of best management practices, following storms/critical events, prior to seeding deadlines, for the purpose of permit closeout, or on report of issue or complaint. This right of access is in addition to the access authority of the LMRWD under existing law.

Completion date: Construction work authorized under this permit shall be completed on or before the date specified above. No construction is authorized beyond the expiration date. The permittee may request an extension of the time to complete the project by submitting a written request, stating the reason thereof, to the LMRWD, no later than two weeks before this permit expiration.

Written consent: In all cases where the permittee by performing the work authorized by this permit shall involve the taking, using, or damaging of any property rights or interests of any other person or persons, or of any publicly owned lands or improvements thereon or interests therein, the permittee, before proceeding, shall obtain the written consent of all persons, agencies, or authorities concerned, and shall acquire all property, rights, and interests needed for the work.

Not assignable: This permit is not assignable nor transferable by the permittee except with the written consent of the LMRWD.

No changes: The permittee shall make no changes, without written permission or amendment previously obtained from the LMRWD, in the dimensions, capacity or location of any items of work authorized hereunder.

Permission only/no liability: This permit is permissive only. No liability shall be imposed by the LMRWD or any of its officers, agents or employees, officially or personally, on account of the granting hereof or on account of any damage to any person or property resulting from any act or omission of the permittee or any of its agents, employees, or contractors. This permit shall not be construed as estopping or limiting any legal claims or right of action of any person other than the state against the permittee, its agents, employees, or contractors, for any damage or injury resulting from any such act or omission, or as estopping or limiting any legal claim or right of action of the state against the permittee, its agents, employees, or contractors for violation of or failure to comply with the permit or applicable conditions.

Contractor responsibility: The permittee shall ensure the contractor has received and thoroughly understands all conditions of this permit.

Termination: This permit may be terminated by the LMRWD at any time deemed necessary for the conservation of water resources, or in the interest of public health and welfare, or for violation of any of the conditions or applicable laws, unless otherwise provided in the permit.

LMRWD Permit Program Summary — August 10, 2022

							Board Actions								
Permit No.	Project Name	City	Status	Pre-Permit Meeting	Date Received	Date Applicaton Considered Complete	Information Only	Conditional Approval	Approval	On Hold / Cancelled	Permit Issued	Permit Expiration Date	Renewed	Inspection Date	Date Permit Closed
2019-085	Minnesota Bluffs LRT Regional Trail Repair	Chanhassen	Active Permit	-	12/12/2019		-			-	5/20/2020	June 2023	-	7/6/2022	-
2019-065	Trunk Highway 101 Improvements	Chanhassen	Active Permit		11/8/2019									7/6/2022	
2020-100	Peterson Farms Road Maintenance	Chanhassen	Expired	-	5/6/2020	5/6/2020	-	-	5/20/2020	-	5/21/2020	5/21/2021	-	7/19/2022	-
2020-102	Structures, Inc.	Chaska	Cancelled by Applicant	-	5/4/2020	-	5/20/2020	6/17/2020	-	6/30/2020	-	-	-	-	-
2020-103	Prairie Heights Development	Eden Prairie	Expired	-	5/27/2020	6/5/2020	-	6/17/2020	-	-	10/23/2020	10/23/2021	-	7/6/2022	-
2020-108	Hawthorne Ridge (2019-066)	Carver	Incomplete	-	6/23/2020	-	7/15/2020	-	-	-	-	-	-	-	-
2020-110	CSAH 11 Reconstruction	Carver	Active Permit	-	9/28/2020	11/3/2020	-	12/16/2020	-	-	4/13/2021	4/13/2022	4/20/2022	7/26/2022	-
2020-112	Vierling Industrial Project	Shakopee	Expired	-	6/25/2020	6/29/2020	-	7/15/2020	-	-	7/17/2020	7/15/2021	-	7/19/2022	-
2020-113	Fort Snelling Redevelopment (2019-057)	Fort Snelling	Active Permit	-	7/20/2020	8/12/2020	-	8/19/2020	-	-	9/11/2020	8/19/2022	7/20/2022	7/20/2022	-
2020-115	Quarry Lake Park Improvements and Mountain Bike Trail	Shakopee	Closed	-	7/23/2020	9/8/2020	-	9/16/2020	-	-	Not issued	-	-	7/26/2022	3/17/2022
2020-116	Shakopee Memorial Park Pedestrian Bridge	Shakopee	Closed	-	8/24/2020	10/5/2020	-	10/21/2020	-	-	10/23/2020	10/23/2021	-	7/6/2022	10/5/2021
2020-117	Greystone Headquarters	Shakopee	Expired	-	7/24/2020	9/10/2020	-	-	9/16/2020	-	9/16/2020	9/16/2021	-	7/19/2022	-
2020-118	10117 1st Ave Demolition	Bloomington	No Permit Required	-	8/18/2020	-	-	-	-	-	-	-	-	-	-
2020-122	Cargo Van-Go	Shakopee	No Permit Required	-	8/20/2020	-	-	-	-	-	-	-	-	-	-
2020-123	Gaughan Companies Demolition	Shakopee	Closed	-	8/27/2020	8/27/2020	-	-	9/16/2020	-	9/17/2020	9/17/2021	-	7/6/2022	10/15/2021
2020-124	Southbridge Crossings 6th Addition	Shakopee	Cancelled by Applicant	-	8/24/2020	-	-	-	-	3/5/2021	-	-	-	-	-
2020-126	Texas Roadhouse	Shakopee	Closed	-	9/17/2020	11/5/2020	-	-	11/18/2020	-	11/19/2020	11/18/2021	-	7/1/2022	10/14/2021
2020-131	Watermark at Savage	Savage	Cancelled by Applicant	10/7/2020	9/25/2020	-	-	-	-	-	-	-	-	-	-
2020-132	77th Street Underpass	Bloomington	Active Permit	10/18/2020	10/21/2020	11/12/2020	11/18/2020	12/16/2020	-	-	7/27/2021	7/27/2022	7/20/2022	7/28/2022	-
2020-133	Shakopee Mix Use	Shakopee	Active Permit	10/29/2020	11/2/2020	11/2/2020	-	-	11/18/2020	-	11/19/2020	11/18/2022	10/15/2021	7/6/2022	-
2020-135	Canterbury Crossings	Shakopee	Active Permit	-	11/19/2020	12/3/2020	-	12/16/2020	-	-	5/11/2021	5/11/2022	4/20/2022	7/26/2022	-
2020-137	5501 Warehouse South Improvements	Bloomington	No Permit Required	-	12/9/2020	-	-	-	-	-	-	-	-	-	-

LMRWD Permit Program Summary — August 10, 2022

							Board Actions								
Permit No.	Project Name	City	Status	Pre-Permit Meeting	Date Received	Date Applicaton Considered Complete	Information Only	Conditional Approval	Approval	On Hold / Cancelled	Permit Issued	Permit Expiration Date	Renewed	Inspection Date	Date Permit Closed
2020-140	10029 Trails End Rd	Chanhassen	No Permit Required	-	12/29/2020	-	-	-	-	-	-	-	-	-	-
2021-001	Mallard Farms	Eden Prairie	No Permit Required	-	1/30/2021	-	-	-	-	-	-	-	-	-	-
2021-002	CSAH 61 Drainage Ditch	Chanhassen	Active Permit	-	2/1/2021	10/11/2021	-	-	10/20/2021	-	10/21/2021	5/31/2022	5/18/2022	-	-
2021-003	Southwest Logistics Center	Shakopee	Active Permit	-	2/11/2021	3/12/2021	-	3/17/2021	-	-	4/21/2021	4/21/2022	4/20/2022	7/1/2022	-
2021-005	Jefferson Chiller Project	Bloomington	No Permit Required	-	3/2/2021	-	-	-	-	-	-	-	-	-	-
2021-007	Burnsville Cemetery Expansion	Burnsville	Active Permit	3/5/2021	9/2/2021	9/17/2021	-	10/20/2021	-	-	11/17/2021	10/20/2022	-	7/28/2022	-
2021-009	Burnsville Industrial IV	Burnsville	Closed	4/2/2021	3/22/2021	3/31/2021	-	4/21/2021	-	-	4/23/2021	4/21/2022	-	7/28/2022	3/9/2022
2021-011	2021 Street & Utility Reconstruction	Shakopee	Closed	3/30/2021	3/30/2021	4/16/2021	-	4/21/2021	-	-	4/28/2021	4/28/2022	-	7/6/2022	3/28/2022
2021-012	Canterbury Park Parking Lots Phase 2	Shakopee	Closed	4/1/2021	4/2/2021	4/10/2021	-	4/21/2021	-	-	5/11/2021	5/11/2022	-	7/19/2022	5/11/2022
2021-013	Summerland Place	Shakopee	Closed	-	4/8/2021	5/27/2021	-	4/21/2021	-	-	4/26/2021	4/22/2022	-	6/20/2022	3/22/2022
2021-014	Quarry Lake Outlet	Shakopee	Cancelled by Applicant	6/7/2021	4/9/2021	9/29/2021	-	10/22/2021	-	11/19/2021	-	-	-	-	-
2021-015	Stagecoach Rd Improvements	Shakopee	Closed	4/16/2021	4/12/2021	4/30/2021	-	5/5/2021	-	-	5/7/2021	5/5/2022	-	7/1/2022	3/23/2022
2021-016	Whispering Waters	Shakopee	Active Permit	-	4/14/2021	6/4/2021	-	6/16/2021	-	-	7/13/2021	7/13/2022	7/20/2022	7/13/2022	-
2021-017	Capstone 35	Burnsville	Active Permit	-	4/20/2021	5/12/2021	-	5/19/2021	-	-	8/19/2021	8/17/2022	7/20/2022	7/13/2022	-
2021-018	Jefferson Court	Shakopee	Active Permit	-	4/22/2021	5/17/2021	-	6/2/2021	-	-	6/3/2021	6/2/2023	7/20/2022	7/6/2022	-
2021-019	Cretex Site	Shakopee	Expired	4/23/2021	4/26/2021	4/30/2021	-	5/5/2021	-	-	5/7/2021	5/5/2022	-	7/1/2022	5/5/2022
2021-020	Core Crossings Apartments (Prev. Southbridge)	Shakopee	Active Permit	-	6/14/2021	7/13/2021	-	7/21/2021	-	-	8/5/2021	6/15/2023	6/17/2022	7/26/2022	-
2021-021	Spirit of Truth Church	Burnsville	Cancelled by Applicant	5/13/2021	6/16/2021	-	-	-	-	7/16/2021	-	-	-	-	-
2021-022	2021 Safety and Security Center	Fort Snelling	Active Permit	-	5/18/2021	10/29/2021	-	11/17/2021	-	-	3/18/2022	3/18/2023	-	7/20/2022	-
2021-023	106th St Improvements	Bloomington	Active Permit	-	5/25/2021	5/28/2021	-	6/2/2021	-	-	6/17/2022	6/17/2022	4/20/2022	7/28/2022	-
2021-025	TH 13	Savage	Active Permit	-	6/11/2021	6/15/2021	-	2/16/2022	-	-	5/20/2022	5/20/2023	-	7/13/2022	-
2021-026	TH 55	Ft Snelling, Mendota, Mendota Heights	No Permit Required	-	6/30/2021	-	-	-	-	-	-	-	-	-	-

LMRWD Permit Program Summary — August 10, 2022

							Board Actions								
Permit No.	Project Name	City	Status	Pre-Permit Meeting	Date Received	Date Applicaton Considered Complete	Information Only	Conditional Approval	Approval	On Hold / Cancelled	Permit Issued	Permit Expiration Date	Renewed	Inspection Date	Date Permit Closed
2021-027	Minnesota River Greenway Trail	Eagan	Conditional Approval	-	8/17/2021	11/2/2021	-	11/17/2021	-	-	-	-	-	-	-
2021-029	Northland Paving	Burnsville	No Permit Required	6/29/2021	7/6/2021	-	-	-	-	-	-	-	-	-	-
2021-030	Building Renovation Park Jeep	Burnsville	Active Permit	-	7/9/2021	7/16/2021	-	9/15/2021		-	6/21/2022	6/21/2023	-	-	-
2021-031	Caribou Coffee	Savage	Closed	6/1/2021	7/9/2021	8/10/2021	-	8/18/2021	-	-	8/19/2021		-	7/13/2022	6/11/2022
2021-032	I-35W Auxiliary Lane	Bloomington	Pre-Permit	5/24/2021; 8/31/21	-	-	-	-	-	-	-	-	-	-	-
2021-033	Minnesota MASH & 130th St Extension	Savage	Active Permit	6/23/2021	9/17/2021	-	-	-	6/15/2022	-	6/17/2022	6/17/2023	-	-	-
2021-034	Circle K Holiday Station Stores	Savage	Closed	8/25/2021	7/26/2021	9/10/2021	-	9/15/2021	-	-	10/19/2021	9/15/2022	-	7/13/2022	7/12/2022
2021-035	I35W Frontage Trail	Burnsville	Conditional Approval	-	12/15/2021	12/22/2021	-	1/19/2022	-	-	-	-	-	-	-
2021-039	River Bluffs Improvements	Shakopee	Active Permit	-	7/23/2021	8/12/2021	-	8/18/2021	-	-	10/1/2021	8/18/2022	-	7/6/2022	-
2021-040	Canterbury Independent Senior Living	Shakopee	Active Permit	-	8/11/2021	8/19/2021	-	9/15/2021	-	-	1/7/2022	1/7/2023	-	7/26/2022	-
2021-041	Line 0832	Burnsville	Closed	-	9/7/2021	9/7/2021	-	9/15/2021	-	-	9/17/2021	9/15/2022	-	7/28/2022	6/27/2022
2021-042	Hwy 13 & Lone Oak	Eagan	Active Permit	-	8/27/2021	9/16/2021	-	10/20/2021	-	-	10/22/2021	10/20/2022	-	-	-
2021-043	Junction 35W & 13, LLC	Burnsville	No Permit Required	-	9/2/2021	-	-	-	-	-	-	-	-	-	-
2021-044	Storage Mart Phase 4 (1900 Stoughton Ave)	Chanhassen	No Permit Required	-	9/7/2021	-	-	-	-	-	-	-	-	-	-
2021-045	Triple Crown Residences Phase II	Shakopee	Active Permit	-	9/22/2021	10/27/2021	-	11/17/2021	-	-	11/19/2021	11/17/2022	-	7/26/2022	-
2021-046	CenterPoint Dakota Station Facility	Burnsville	Closed	-	9/21/2021	10/15/2021	-	10/20/2021	-	-	10/22/2021	10/22/2022	-	7/28/2022	6/24/2022
2021-047	River Valley Industrial Center	Chanhassen	On Hold	-	9/21/2021	-	-	-	-	10/1/2021	-	-	-	-	-
2021-048	Minnesota River Greenway Railroad Bridge	Eagan	Pre-Permit	9/28/2021	-	-	-	-	-	-	-	-	-	-	-
2021-049	Stump Road Maintenance	Bloomington	Active Permit	10/20/2021	10/22/2021	10/29/2021	-	11/17/2021	-	-	11/19/2021	11/17/2022	-	7/28/2022	-
2021-050	Spring Valley Cir & Wentworth Ave S	Bloomington	No Permit Required	10/27/2021	-	-	-	-	-	-	-	-	-	-	-
2021-051	Blue Lake Siphon Landscape Restoration	Eden Prairie	No Permit Required	10/5/2021	10/28/2021	-	-	-	-	-	-	-	-	-	-
2021-052	Shakopee Dental Office	Shakopee	Active Permit	-	11/3/2021	12/14/2021	-	12/15/2021	-	-	12/17/2021	12/15/2022	-	7/13/2022	-

LMRWD Permit Program Summary — August 10, 2022

							Board Actions								
Permit No.	Project Name	City	Status	Pre-Permit Meeting	Date Received	Date Applicaton Considered Complete	Information Only	Conditional Approval	Approval	On Hold / Cancelled	Permit Issued	Permit Expiration Date	Renewed	Inspection Date	Date Permit Closed
2021-056	Twin Overlook	Bloomington	No Permit Required	-	12/7/2021	-	-	-	-	-	-	-	-	-	-
2021-057	Cliff Road Ramp	Burnsville	Active Permit	-	12/14/2021	1/4/2022	-	1/19/2022	-	-	6/8/2022	6/8/2023	-	7/13/2022	-
2021-058	MAC Gate Security Improvements	Fort Snelling	Active Permit	-	12/15/2021	12/16/2021	-	1/19/2022	-	-	4/27/2022	4/27/2023	-	7/28/2022	-
2021-061	Merriam Junction Trail	Burnsville	Pre-Permit	1/31/2022	-	-	-	-	-	-	-	-	-	-	-
2022-001	Centerpoint Shakopee Pigging	Shakopee	No Permit Required	-	1/12/2022	-	-	-	-	-	-	-	-	-	-
2022-002	2022 MBL Nicollet River Crossing	Bloomington, Burnsville	Active Permit	-	1/18/2022	-	-	3/16/2022	-	-	4/25/2022	4/25/2023	-	-	-
2022-003	Ivy Brook Parking East	Burnsville	Active Permit	-	1/19/2022	2/25/2022	-	3/16/2022	-	-	5/16/2022	5/16/2023	-	-	-
2022-004	CHS Savage Terminal	Savage	Incomplete	-	1/27/2022	-	-	-	-	-	-	-	-	-	-
2022-005	Chaska West Creek Apartments	Chaska	Incomplete	-	2/8/2022	-	-	-	-	-	-	-	-	-	-
2022-006	Quality Forklift	Shakopee	No Permit Required	-	2/10/2022	-	-	-	-	-	-	-	-	-	-
2022-007	Engineered Hillside	Eden Prairie	Active Permit	-	2/15/2022	3/14/2022	-	-	4/20/2022	-	4/21/2022	4/21/2023	-	-	-
2022-008	Ivy Brook Parking West	Burnsville	Active Permit	-	2/16/2022	2/25/2022	-	3/16/2022	-	-	5/31/2022	5/31/2023	-	-	-
2022-010	Quarry Lake Pedestrian Bridge and Trail	Shakopee	Conditional Approval	-	2/24/2022	-	-	4/20/2022	-	-	-	-	-	-	-
2022-011	Biffs Inc.	Burnsville	Conditional Approval	-	2/28/2022	3/29/2022	-	4/20/2022	-	-	-	-	-	-	-
2022-012	Quarry Lake Park Improvements - Roadway and Boat Launch	Shakopee	Cancelled by Applicant	-	3/17/2022	-	-	-	-	5/24/2022	-	-	-	-	-
2022-013	Normandale & 98th Intersection Improvements	Bloomington	Active Permit	-	3/22/2022	4/1/2022	-	4/20/2022	-	-	4/22/2022	4/22/2023	-	-	-
2022-014	TH 41/CSAH 61 Improvements	Chaska	Conditional Approval	2/16/2021; 1/6/2022	3/23/2022	5/11/2022	-	5/18/2022	-	-	-	-	-	-	-
2022-015	Xcel Driveway	Shakopee	Incomplete		4/20/2022	-	-	-	-	-	-	-	-	-	-
2022-016	Organice Recycling Facility Relocation	Louisville Township	Incomplete		4/20/2022	-	-	-	-	-	-	-	-	-	-
2022-017	PLOC Channel Stabilization	Shakopee	Active Permit		6/30/2022	7/5/2022		-	7/20/2022	-	7/21/2022	7/21/2023	-	-	-
2022-018	Lakota Lane	Chanhassen	Under Review		4/19/2022	-	5/18/2022	-	-	-	-	-	-	-	-
2022-019	TH 494 SP 2785-433	Eagan and Bloomington	Conditional Approval		4/21/2022	6/24/2022	-	7/20/2022	-	-	-	-	-	-	-

LMRWD Permit Program Summary — August 10, 2022

							Board Actions								
Permit No.	Project Name	City	Status	Pre-Permit Meeting	Date Received	Date Applicaton Considered Complete	Information Only	Conditional Approval	Approval	On Hold / Cancelled	Permit Issued	Permit Expiration Date	Renewed	Inspection Date	Date Permit Closed
2022-020	New Century School	Bloomington	No Permit Required		4/28/2022	-	-	-	-	-	-	-	-	-	-
2022-021	Oak St N (CenterPoint Energy)	Chaska	Active Permit		4/29/2022	-	-	-	6/15/2022	-	6/17/2022	6/17/2023	-	-	-
2022-022	Ace Rent A Car	Fort Snelling	Incomplete		5/10/2022	-	-	-	-	-	-	-	-	-	-
2022-023	494 Corridors of Commerce	Fort Snelling	Pre-Permit	5/3/2022	5/19/2022		7/20/2022			-	-	-	-	-	-
2022-024	Gedney Pickles Holding Pond Restoration	Chanhassen	Pre-Permit	6/16/2022	-					-	-	-	-	-	-
2022-025	10561 E Riverview Drive	Eden Prairie	No Permit Required		6/22/2022					-	-	-	-	-	-
2022-026	10521 Spyglass Drive	Eden Prairie	Active Permit	5/31/2022	7/13/2022	8/8/2022			7/20/2022	-	8/8/2022	8/8/2023	-	-	-
2022-027	Ivy Brook Parking Northeast	Burnsville	*Conditional Approval**		7/5/2022			*8/17/2022**		-	-	-	-	-	-
2022-028	Quarry Lake Park Restroom	Fort Snelling	Active Permit		7/6/2022	7/8/2022	-	7/20/2022	-	-	7/22/2022	7/22/2023	-	-	-
2022-029	Reliakor	Shakopee	*Conditional Approval**					*8/17/2022**							
2022-030	Frenchies Metals	Chaska	Incomplete		7/22/2022										
2022-031	RSI Marine (Great Plains Blvd)	Chanhassen	Pre-Permit		7/18/2022		8/17/2022					-	-	-	-

STATUS DEFINITIONS:

Active Permit: Applicant has a valid permit issued by LMRWD

Cancelled by Applicant: Applicant withdrew their application for a LMRWD permit

Closed: Applicant has indicated the project has completed construction and that the permit file may be closed

Conditional Approval: LMRWD managers conditionally approved the permit application, pending receipt of additional information from applicant

Expired: Applicant either obtained conditional approval, approval, and/or was issued a permit and the expiration date has passed

Incomplete: Applicant applied for a permit, but the application is incomplete

No Permit Required: Applicant applied for a permit, but during the completeness review, it was determined that the project did not trigger the regulatory thresholds

On Hold: Applicant requested their application be placed on hold

Pre-Permit: Applicant has requested pre-permit application reviews or meetings, but has not yet applied for a permit from LMRWD

Under Review: Permit application is complete and under review by LMRWD staff

** Staff recommendation only, has not yet been presented to the Board for action*

Young Environmental Consulting Group, LLC

Technical Memorandum

To: Linda Loomis, Administrator
Lower Minnesota River Watershed District

From: Hannah LeClaire, PE
Katy Thompson, PE, CFM

Date: April 8, 2022

Re: Kraemer Quarry Lake Modeling Technical Memorandum Review

The City of Burnsville held an informational meeting on March 3, 2022, to discuss the future of Kraemer Quarry. A Technical Memorandum by Young Environmental dated March 11, 2022 contains additional background information on the project and provides an update to the Board regarding the informational meeting (Attachment 1).

The City of Burnsville, in cooperation with Black & Veatch and Barr Engineering, has completed a draft Technical Memorandum titled Burnsville-Savage Area Water Study (Tech Memo, Attachment 2) to document the hydrogeological modeling of Kraemer Quarry Lake. The City of Burnsville has requested feedback from several stakeholders and is interested in collecting answers to the following questions:

1. Do you have any concerns with the modeling that was done or the results?
2. Is 690 feet the "right" normal water elevation for the future lake? If not, why?
3. Do you believe your agency has direct say in what the future lake's normal water elevation will be? If yes, what is the basis for being part of the decision-making group?
4. Rising groundwater elevations will likely be a challenge for area infrastructure owners. Do you have any ideas for mitigations to rising groundwater elevations?
5. Do you have any other comments or questions?

Background

Kraemer Mining & Materials expects to continue mining operations for another 20 to 40 years, depending on the market demand for limestone and construction aggregate

materials. A groundwater flow model based on Metro Model 3 was updated for this study to analyze groundwater flow and water table elevations in the vicinity of the final quarry pit. The model was updated to represent the future extent of the quarry and allow lake levels to rise and fall due to interaction with groundwater.

The study evaluated two future groundwater conditions:

1. End of mining—immediately after the aggregate deposits are exhausted but with the quarry pumps still active (water elevation 600 feet)
2. Full lake—the pumps decommissioned and the quarry allowed to fill with groundwater (water elevation 690 feet)

Particle tracking was also modeled to evaluate the groundwater flow paths from areas of interest such as the Freeway Landfill, Freeway Dump, and Burnsville Sanitary Landfill (BSL). The concentrations of groundwater constituents were not evaluated as part of this modeling effort.

The City of Burnsville recommended a final quarry pit water level of 690 feet with the assumption that it is likely the lowest elevation that can be maintained in the lake and still have a gravity outlet to the Minnesota River, reducing the need for significant pumping. The Minnesota Pollution Control Agency has indicated that designs of the remediation effort at the Freeway Landfill are also based on a future lake elevation of 690 feet.

Implications for the Lower Minnesota River Watershed District

The following outlines the potential implications for the natural resources within the LMRWD:

Calcareous Fens and Springs

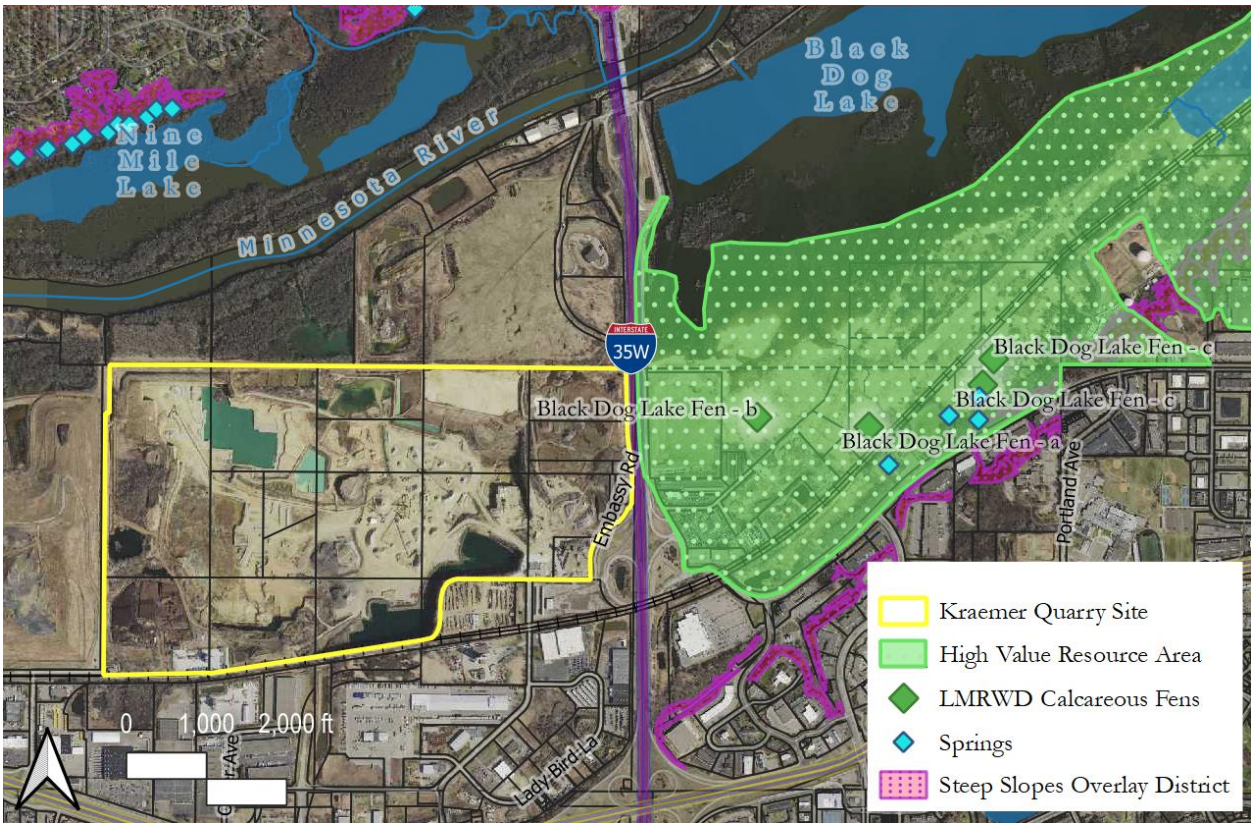
The Lower Minnesota River Watershed District (LMRWD) is home to many groundwater-dependent natural resources, including Black Dog Fen Complex, which is located east of Kraemer Quarry across Interstate 35W (Figure 1) and has been identified as a calcareous fen, a high-value resource within the LMRWD that requires special protections specified in the 2018 LMRWD Watershed Plan.

Black Dog Fen has experienced severe degradation due to high groundwater withdrawal and industrial pumping activities in the area. The cessation of dewatering for mining activities and groundwater levels returning to their previous conditions may be beneficial to restoring Black Dog Fen.

In addition to Black Dog Fen, there are several natural springs in the area (Figure 1); however, the Tech Memo does not address how the higher groundwater levels may affect the number and flow of springs. The LMRWD is concerned because of the

proximity of many of these springs to steep and easily erodible slopes; especially because the Tech Memo does not document how the future quarry lake will affect the neighboring springs and groundwater-dependent resources.

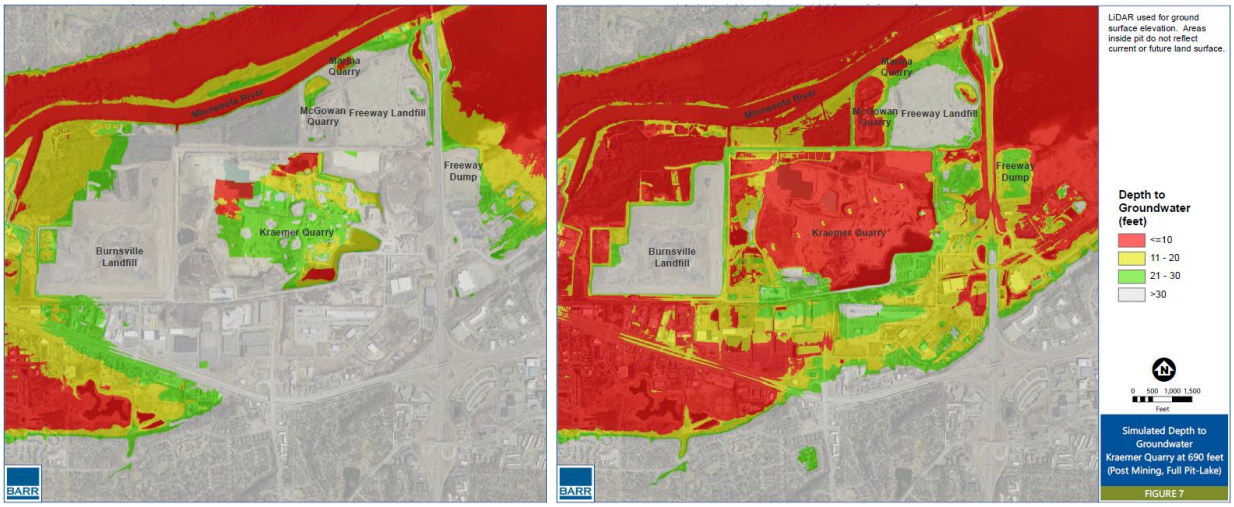
Figure 1. Location of Black Dog Fen Complex and springs relative to Kraemer Quarry.



Existing Infrastructure

Unfortunately, higher groundwater may have serious detrimental impacts on nearby infrastructure, some of which has been previously identified, including sanitary and storm sewers, foundations, and basements in the areas where the groundwater will rebound (Figure 2). However, the report does not appear to have considered the impacts of higher groundwater levels on existing stormwater management systems, such as infiltration basins, rain gardens, and stormwater ponds, which have been developed based on the current groundwater levels, with Kraemer Quarry dewatering pumps operational. The City of Burnsville has invested in developing regional BMPs for the Minnesota River Quadrant located south of the Quarry; how will higher groundwater levels affect the effectiveness and treatment capacity of these BMPs? This should be reevaluated based on projected groundwater levels.

Figure 2. Depth to groundwater at end of mining operations with dewatering pumps on El. 600 (left) and dewatering pumps decommissioned and a full lake at El. 690 (right).



Higher levels of groundwater could cause flood-control infrastructure to fail or overtop in the future. Of particular concern are the earthen levees at the BSL. Higher groundwater elevations could saturate the soil and foundation, reducing their ability to withstand flood flows and protect the landfill from erosion.

It is not clear from the memo how far the impacts of the future lake and higher groundwater levels will be felt.

Water Quality

According to the modeling, when mining operations end and the Kraemer Quarry water level is at 600 feet, groundwater from the BSL, Freeway Landfill, and Freeway Dump will flow into the pit, helping fill the future quarry lake. Contaminants from these areas could enter the lake and may negatively affect its water quality. Although the groundwater discharge into the quarry lake will be reduced when it reaches an elevation of 690 feet, there is still evidence that groundwater may flow into Kraemer Quarry from these three areas of interest. Additionally, higher groundwater levels combined with flood elevations on the Minnesota River may be more likely to transport any contamination from these sites downstream. Therefore, contaminant concentrations and impacts on the water quality of the future lake and Minnesota River must be investigated, particularly if the lake and surrounding area will be used for recreation.

Minnesota River

Kraemer Quarry is proposed to outlet to the Minnesota River at an elevation of 690 feet; however, the exact path and method have not been determined. It should be noted that the City has expressed a desire for a gravity outlet for the future lake to avoid the need for frequent pumping; however, the Minnesota River is at an elevation of approximately 688 feet in this reach, which may make a gravity outlet challenging. Regardless of the

outlet method selected, erosion protection for the outlet and emergency overflows will be necessary to prevent sediment from discharging into the river and exacerbating the existing turbidity impairment of the river.

Additionally, Kraemer Quarry is located within the Minnesota River floodplain (Figure 3). In the Tech Memo the future groundwater levels were modeled during a 100-year flood event to determine the impacts at the end of mining and under the full lake scenario (Figure 4). Because high ground currently surrounds the quarry, floodwaters from the Minnesota River are not expected to affect the water levels within the lake. However, higher groundwater levels may affect the normal and flood elevations on the river.

Figure 3. FEMA 100-year flood elevations at Kraemer Quarry (Dakota County Flood Insurance Study).

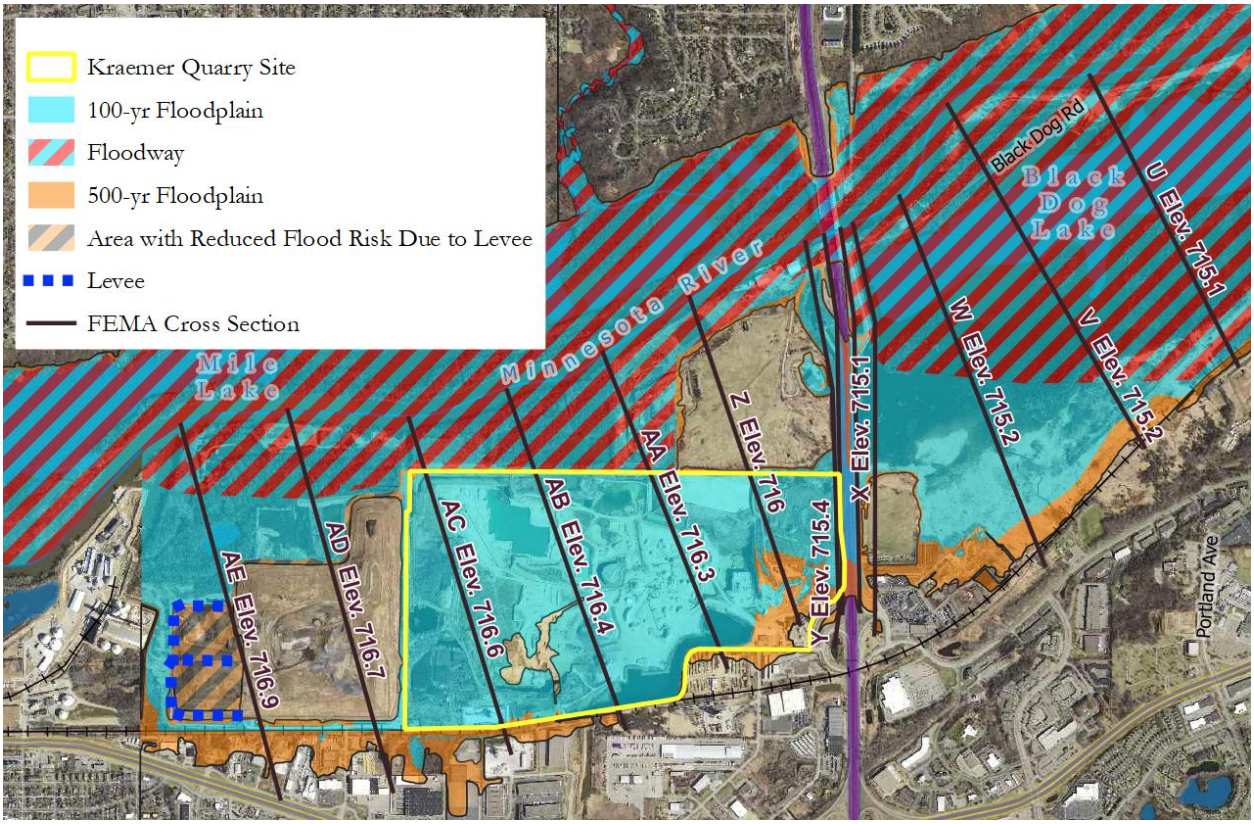
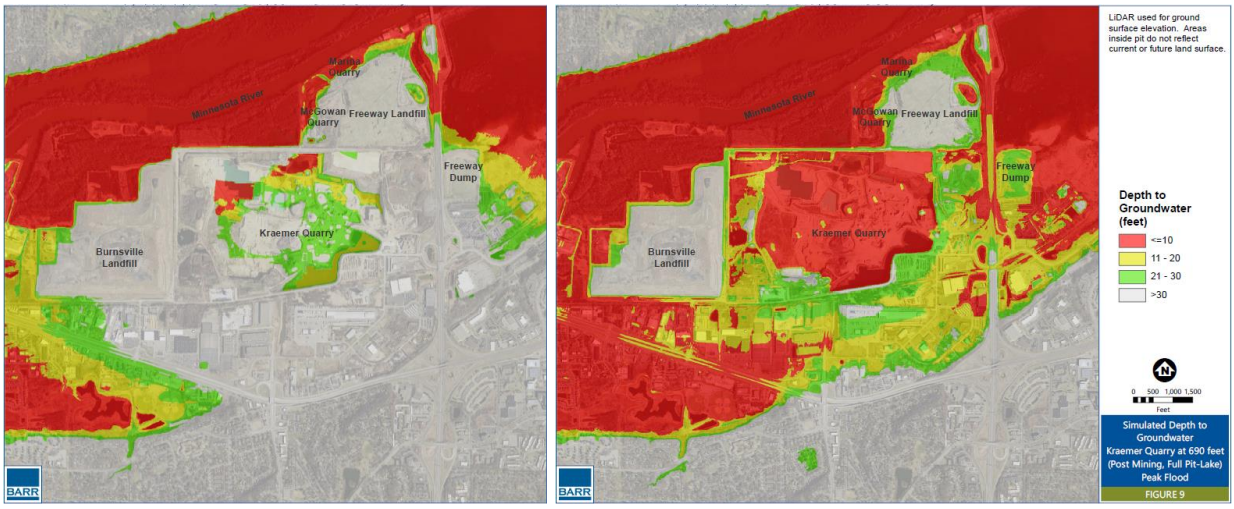


Figure 4. Modeled depth to groundwater during peak flood event at end of mining activities with pumps on (left) and full lake scenario (right).



Future Development and Climate Change

The report does not appear to have considered how future development and demand for groundwater in the area, as well as future climate projections, may affect groundwater levels and the final lake elevation. This should be considered in future studies.

Findings

Given the quarry operations are expected to continue for another 20 years, we acknowledge that there are many unknowns at this time that will require additional discussion and outreach by the City, including the following:

- Establishing the interconnections between Kraemer Quarry, Black Dog Fen Complex, and the Minnesota River normal and flood elevations, particularly in light of future climate predictions
- Determining the final lake elevation and extents, as well as future land use around the lake, to balance recreation desires with safety concerns
- Determining if the cities of Burnsville and Savage can continue to use the lake as a drinking water source, particularly if the lake will be used for recreation and if the Freeway Landfill waste is inundated
- Determining impacts on nearby utilities, structures and foundations, stormwater management facilities and BMPs, and flood-control protection

Recommendations

The City requested input on the modeling completed, the ideal lake elevation, who should set the lake level, and mitigation strategies for the rising groundwater elevations. Given the broad scale of the potential impacts, we appreciate the City asking these questions early.

Based on our review, we recommend the following regarding the City's questions:

1. The modeling appears to be adequate at this early stage of the project process. However, we recommend further modeling be completed to address water quality impacts and the effects of climate change.
2. There is not enough information to determine if 690 feet is the ideal water level of the future lake. We recommend delineating the approximate extent of groundwater change, especially if there are impacts within Hennepin or Scott counties. Additionally, we recommend carefully investigating the implications on surrounding infrastructure and natural resources, including, but not limited to, stormwater management systems, calcareous fens, the Minnesota River, and nearby springs.
3. It is LMRWD's policy to protect and improve natural resources within the watershed to prevent further degradation. Additionally, as a regional permit authority, LMRWD is responsible for the management of drainage alterations and impacts on surface and groundwater. Therefore, LMRWD would like to be part of the future decision-making group and process.
4. The extent of groundwater impacts will be crucial in determining mitigation strategies. Depending on the final elevation of the lake, mitigation strategies may include increasing pump capacity, raising critical infrastructure, flood-proofing, modifying existing stormwater management facilities, and implementing new water quality BMPs to protect the future lake and existing downstream resources.
5. We recommend the City consider the process the Minneapolis Park & Recreation Board used to evaluate the Hiawatha Golf Course pumping operations in 2017.

No action is required at this time. The LMRWD staff will continue to participate in future discussions and will submit these comments to the City as part of their public comment period.

Attachments

- Attachment 1—Kraemer Quarry Future Lake Level Informational Meeting Technical Memorandum
- Attachment 2—Burnsville–Savage Area Water Study–Task F–Quarry Lake Modeling