

Technical Memorandum

To: Linda Loomis, Administrator
Lower Minnesota River Watershed District

From: Katy Thompson, PE, CFM
Della Schall Young, CPESC, PMP

Date: April 30, 2021

Re: Summerland Place (LMRWD No. 2021-013)

At the meeting of the Lower Minnesota River Watershed District (LMRWD) board on April 21, 2021, the managers recommended conditional approval of the Summerland Place (Project) permit application, pending receipt of a financial surety. Because of a miscommunication between Summergate Companies (the applicant) and the City of Shakopee (City), the applicant was unaware of the need to obtain a permit from LMRWD. To avoid project delays, a financial surety was required to allow the applicant to begin mass grading activities while Young Environmental staff reviewed the permit application materials in consultation with the City. See Young Environmental's April 16, 2021, memo to LMRWD for additional information.

The following memo outlines Young Environmental's review of the permit application materials for compliance with the LMRWD rules.

Summary

<u>Project Name:</u>	Summerland Place 1st Addition
<u>Purpose:</u>	Residential subdivision
<u>Project Size:</u>	Project Total: 125 acres, 5.98 acres existing impervious, 47.62 acres proposed impervious; net increase of 41.64 acres new impervious 1st Addition: 36.4 acres disturbed, 0 acres existing impervious, 17.6 acres proposed impervious; net

increase of 17.6 acres new impervious

Location: 1600 Phillips Drive, Shakopee, MN 55379

LMRWD Rules: Rule B – Erosion and Sediment Control
Rule D – Stormwater Management

Recommended Board Action: Update only, no action

Discussion

Rule B – Erosion and Sediment Control

The District regulates land-disturbing activities that affect one acre or more under Rule B. The proposed 1st Addition would disturb approximately 36.4 acres within the LMRWD boundary. The applicant has provided a grading plan, Stormwater Pollution Prevention Plan, NPDES permit, and contractor/inspector contact information. The Project complies with Rule B.

Rule D – Stormwater Management

The Project proposes a total of 41.64 acres of new impervious surfaces on existing undeveloped land. To meet the stormwater management requirements, the Project includes nine stormwater management basins, six of which will provide filtration for water-quality treatment.

Section 4.4.1 of Rule D requires that applicants demonstrate no increase in proposed runoff rates compared with existing conditions. Further, the Project is located upstream of Dean Lake within the City’s Blue Lake Drainage System and is limited to a maximum discharge of 0.1 cubic feet per second (cfs) per acre during the 100-year storm event. The City’s requirement is a significantly more restrictive requirement than the LMRWD Rule D is. A summary of the existing and proposed discharge rates, illustrating that the Project meets the LMRWD rate control requirement, is provided in Table 1.

Table 1. Summerland Place Discharge Rate Summary

Design Event	Existing Rates (cfs)	Proposed Rates (cfs)	Change (cfs)
2-year/24-hour	89.54	45.72	-43.82
10-year/24-hour	188.09	80.79	-107.30
100-year/24-hour	450.23	175.94	-274.29

Section 4.4.2 of Rule D requires volume reduction for post-construction stormwater runoff volume for projects that create more than one acre of impervious surface. The Project is required to provide 3.47 ac-ft of volume reduction to meet the LMRWD’s

requirements; however, the Project is located within a high-vulnerability drinking water supply management area, and infiltration is prohibited. The proposed stormwater management basins will be lined to prevent infiltration, and filtration technologies will be incorporated on six of them. The Project will provide a total of 5.20 acre-feet (ac-ft) of water quality volume for the Project, thereby meeting the LMRWD's volume control requirement.

Although the entire development meets the LMRWD volume control requirements, it will be constructed in several phases. The applicant proposes to begin work on the first phase of construction this year, the 1st Addition, which calls for a total of 17.6 acres of new impervious surface. As part of the 1st Addition, three filtration basins and one wet pond will be constructed (see Figure 1). Based on the new impervious surface generated by the 1st Addition, the required water quality volume is 1.47 ac-ft. The proposed filtration BMPs to be constructed with the 1st Addition will provide a total of 2.6 ac-ft of water quality volume, which is in line with the overall Summerland Plan stormwater management plan and more than meets the required volume for the impervious surfaces generated as part of the 1st Addition.

Section 4.4.3 of Rule D requires projects that create more than one acre of impervious surface to provide evidence that no net increase in total phosphorus (TP) or total suspended solids (TSS) in the receiving waters would result from the Project. The applicant did not provide water quality modeling results showing no net increase in TP and TSS in receiving waters would result from the Project. However, because the Project meets Section 4.4.2 requirements, it also complies with Section 4.4.3.

Financial Assurance

Per LMRWD Rule A, Section 1.2.11 Financial Assurances, the LMRWD can require financial performance assurances with permit applications to ensure adequate adherence to LMRWD rules. At the April 21, 2021, board meeting, the managers approved requiring a financial assurance to cover the potential costs of installing alternative stormwater rate, volume, and water quality facilities should our review find that the Project does not meet the District's requirements. Although the information presented to date meets District rules, we are aware that the applicant is addressing comments by the City of Shakopee, some of which could materially affect the Project's stormwater management plan and pond design within the 1st Addition. We recommend retaining the financial surety in the amount of \$155,120 until the applicant has addressed the City's comments and provided the LMRWD with the final stormwater management plan.

Recommendations

We recommend retaining the financial surety and continuing to work with the applicant and City to address outstanding comments and confirm the water quality calculations.

Attachments

- Figure 1 – Summerland Place Project Location Map



Figure I: Summerland Place Project Location



LEGEND

- Summerland Place
- Proposed Filtration Basins
- Proposed Wet Pond
- Proposed Roads
- Summerland Place 1st Add.
- Public Waterways
- Public Waters
- LMRWD Boundary
- County Boundaries

LMRWD Watershed Location Map

