



# LOWER MINNESOTA RIVER WATERSHED DISTRICT

## Executive Summary for Action

Lower Minnesota River Watershed District Board of Managers Meeting  
Wednesday, February 16, 2022

### Agenda Item

#### Item 6. K. – Permits & Project Reviews

#### Prepared By

Linda Loomis, Administrator

#### Summary.

i. **TH 13 Savage (LMRWD No. 2021-025)**

This project is proposed by MnDOT to improve traffic between Lynn Avenue and the TH 101/TH13 intersection in Savage. This project will impact the Vernon Avenue intersection with TH 13 and therefore access to the LMRWD dredge management site may be limited at times. MnDOT has applied for a LMRWD permit. Young Environmental Consulting Group has reviewed the documentation on behalf of the LMRWD and a Technical Memorandum dated February 9, 2022 is attached detailing the review and providing staff recommendations. Staff is recommending conditional approval.

#### Attachments

Technical Memorandum – SP 701-128 TH 13 Project Review (LMRWD No. 2021-052) dated February 9, 2022

#### Recommended Action

Motion to conditionally approve LMRWD Permit 2021-025 – TH 13 Savage, subject coordinating access to dredge site during construction, receipt of a copy of the NPDES permit, contact information for the contractor(s) and/or person(s) responsible for inspection and maintenance of all erosion and sediment control features and a copy of the executed maintenance agreement.

# Technical Memorandum

**To:** Linda Loomis, Administrator  
Lower Minnesota River Watershed District

**From:** Kaci Fisher, Environmental Specialist  
Katy Thompson, PE, CFM

**Date:** February 9, 2022

**Re:** SP 7001-128 TH 13 Project Review (LMRWD No. 2021-025)

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The Minnesota Department of Transportation (MnDOT) has applied for an individual project permit from the Lower Minnesota River Watershed District (LMRWD or District) to improve Trunk Highway 13 (TH 13) and Dakota Avenue between Louisiana Avenue to just west of Quentin Avenue in the City of Savage (the City), as shown in Figure 1. MnDOT's engineer, Bolton & Menk, has provided site plans for the SP 7001-128 TH 13 project (the Project), along with the permit application.

The proposed Project includes grading, new and reconstructed bituminous pavement, lighting, bridges, and stormwater management. The Project would disturb approximately 46 acres and create 4.2 acres of new impervious surfaces. The Project is not located within the Steep Slopes Overlay District, but it is adjacent to the High Value Resource Area (HVRA) Overlay District and is within the 100-year floodplain of the Minnesota and Credit Rivers. MnDOT proposes commencing construction on April 1, 2022.

The Project is located within the MnDOT right-of-way and is subject to LMRWD permitting review, regardless of the City's municipal LGU permit status. The Project summary and review comments can be found below.

## Summary

<u>Project Name:</u>	SP 7001-128 TH 13
<u>Purpose:</u>	Road and highway improvements
<u>Project Size:</u>	46 acres disturbed; 16.3 acres existing impervious; net increase of 4.2 acres new impervious
<u>Location:</u>	Savage, Minnesota
<u>LMRWD Rules:</u>	Rule B—Erosion and Sediment Control Rule C—Floodplain and Drainage Alteration Rule D—Stormwater Management
<u>Recommended Board Action:</u>	Conditional approval

## Discussion

The LMRWD received the following documents for review:

- Hybrid Environmental Assessment for Trunk Highway 13 Corridor Improvements by MnDOT, received June 5, 2021, dated May 2021
- Local Government Road Wetland Replacement Plan for TH 13 – Dakota Avenue Intersection Improvements by Bolton & Menk, received June 7, 2021, dated April 2021
- LMRWD online permit application, received June 11, 2021
- *LMNRWD Permit Memorandum* by Bolton & Menk, dated June 11, 2021, received June 11, 2021
- Construction plan sheets by SRF, dated May 27, 2021, received June 11, 2021
- *Materials Design Recommendation* by Braun Intertec and Bolton & Menk, dated May 21, 2021, received June 11, 2021
- Drainage Overview Map by Bolton & Menk, dated June 11, 2021, received June 11, 2021
- *Floodplain Assessment*, dated May 2021, received June 11, 2021
- *TH 13 Corridor Evaluation and Dakota Improvement Design Memo* by Bolton & Menk, dated May 18, 2021, revised July 8, 2021, and received July 13, 2021
- MIDS calculator report, received June 11, 2021
- Comment Resolution by Bolton & Menk, received July 13, 2021
- Existing and proposed MIDS calculator results, received July 13, 2021
- Existing and proposed P8 results, received July 21, 2021
- Draft Maintenance Agreement, dated and received January 26, 2022

The application was deemed complete on January 26, 2022, and the documents received provide the minimum information necessary for permit review.

### Background

The application was originally reviewed in conjunction with the Environmental Assessment for the July 7, 2021, board meeting; no board action was requested at the time. Additional information has been provided, as well as the required maintenance agreement between the City and applicant for the Project's stormwater basins.

The District met with the applicant on July 15, 2021, to discuss the District's comments on the application. Bolton & Menk provided an updated No-Rise Memo to address the District's no-rise requirements, as well as to clarify HVRA impacts and MIDS water quality calculations. The LMRWD requires a maintenance plan or agreement to be submitted prior to a conditional permit being issued. The applicant submitted the draft agreement on January 26, 2022. The maintenance responsibilities for the four stormwater ponds will be split between the City of Savage and MnDOT and incorporated into the respective MS4 programs.

### 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 46 acres within the LMRWD boundary, of which 2.85 acres is within the HVRA.

MnDOT has provided an erosion and sediment control plan and a stormwater pollution prevention plan. Several items will be needed before a permit can be issued under Rule B, including the following:

- 1) Copy of the NPDES permit
- 2) Contact information for the contractor(s)
- 3) Contact information for the person(s) responsible for the inspection and maintenance of all erosion and sediment control

### Rule C—Floodplain and Drainage Alteration

As discussed, the Project is in the Minnesota River and Credit River floodplains and is shown on the FEMA Flood Insurance Rate Map (FIRM) Panels 27139C0063E and 27139C0044E, effective February 12, 2021. Per the Environmental Assessment, the Project proposes 36.32 acres of impact within the floodplain and 0.93 acres in the floodway. Existing and proposed HEC-RAS hydraulic models were completed for the Minnesota River to determine the Project's impact on the flood elevations. The Project does not modify the road profile within the Credit River floodplain. Therefore, no floodplain models were developed for impacts to Credit River.

Bolton & Menk provided a no-rise certification stating the 100-year flood elevation would not rise by more than 0.00 feet in the floodway or flood fringe within the vicinity of the Project, meeting the requirements of Rule C.

Rule D—Stormwater Management

The Project proposes 4.2 acres of new impervious surface, and within the HVRA, 367 square feet of new impervious and 135 square feet of reconstructed impervious surface. MnDOT proposes constructing two wet sedimentation basins, Louisiana Basin and Yosemite Basins, and one filtration basin, Dakota Basin, all located within the MnDOT right-of-way, as well as a small detention basin that will be maintained by the City, to meet the LMRWD’s stormwater management requirements.

Much of the Project is within a confirmed karst area and is subject to shallow bedrock. Because of the Project’s proximity to Savage Fen, the proposed design was developed to minimize bedrock excavation to avoid inadvertently draining the underlying aquifer that sustains the fen. To avoid bedrock excavation, MnDOT has proposed a shallow storm sewer system that will avoid bedrock excavation but also prevent the entirety of the Project site from being collected in the storm sewer. To compensate for the areas that cannot be captured in the storm sewer and treated in a stormwater basin, the Project proposes to intercept approximately 15 acres of an untreated, and mostly impervious, off-site drainage area and route it to the Louisiana Basin for treatment.

Section 4.4.1 of Rule D requires that applicants demonstrate no increase in proposed runoff rates when compared to existing conditions. The *LMNRWD Permit Memorandum* provides the existing and proposed runoff rates (Table 1). The overall rates are reduced per Rule D requirements.

*Table 1. TH 13 Existing and Proposed Runoff Rate Summary (Bolton & Menk)*

MODEL RESULTS (CFS)									
EVENT	OUTFALL #1		OUTFALL #2		OUTFALL #3		SUM OF OUTFALLS		REDUCTION
	EX.	PR.	EX.	PR.	EX.	PR.	EX.	PR.	
2-YR (2.83")	205.24	89.97	27.27	26.15	37.93	46.04	270.44	162.16	108.28
10-YR (4.21")	297.25	201.08	40.87	39.74	46.89	63.86	385.01	304.68	80.33
100-YR (7.42")	480.98	404.69	48.82	47.98	49.26	67.64	579.06	520.31	58.75

Section 4.4.2 of Rule D requires stormwater runoff volume reduction on-site to be equivalent to one inch of runoff from the impervious surfaces outside the HVRA. For linear projects within the HVRA, Section 4.4.2 requires the larger of 0.55 inches of runoff from the new and reconstructed impervious surfaces or 1.1 inches of runoff from the net increase of impervious surfaces. The required volume reduction for the Project is 15,613 cubic feet. However, because of shallow bedrock and karst features present in the Project vicinity, infiltration practices are not permitted per Section 4.4.2 (c) of Rule D. The MnDOT basins will be lined to prevent infiltration, and approximately 39,204 cubic feet of runoff will be filtered within the Dakota Basin.

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 provided P8 results for existing and proposed conditions. The data show TSS and TP will be reduced in proposed conditions from the existing conditions, as shown in Table 2.

*Table 2. TH 13 Existing and Proposed TP and TSS Loads from P8*

Pollutant	Existing Load (lb.)	Proposed Load (lb.)	Change (lb.)
TP	30.7	23.8	-6.9
TSS	11,146	7,963	-3,183

Per the *LMNRWD Permit Memorandum*, the stormwater basins will be jointly managed by MnDOT and the City. A copy of the maintenance plan has been provided to the District, fulfilling the maintenance requirements.

### Special Stipulations

The proposed Project will impact the entrance to the LMRWD Dredge Site on Vernon Avenue. The private terminal dredging is typically complete by June 1 to account for fish-spawning windows, and the main channel dredging typically occurs in August and September. The current staging plan showed Vernon Avenue would be closed in June and reopen to one-way traffic by August. For the duration of the Project, gravel access to Vernon Avenue will need to be maintained for dredge site workers and emergency services vehicles. Special accommodations may be necessary for equipment delivery if weather conditions postpone 2022 dredging activities. Continued coordination will be needed to align the dredging operations with the TH 13 construction activities.

### Additional Information

MnDOT held a virtual open house on October 12, 2021, to discuss the construction of the new intersection at Dakota Avenue scheduled to begin in spring 2022. There were a few questions from the public, which are summarized below:

- 1) **Question:** *Fabcon Precast has some very strict environmental requirements set forth by the MPCA around two streams that go through our site that are going to be affected by the Dakota Avenue Project. We conduct monthly sampling monitoring for our annual reports. Will there be any changes to those streams that go in front of our property?*

**MnDOT Response:** From a drainage standpoint for the Project, we're not doing any changes to their drainage infrastructure with the Project. The Project is designed so the flows under Highway 13 that convey the water from your site will not change. We will have some temporary culvert connections that need to facilitate drainage during construction itself, but we are also held to MPCA standards that make sure our sediment does not impact those receiving waters.

Because Fabcon is testing upstream of our project, I would not anticipate any changes to the sediment loading in your monitoring. If there are, our contractor is mandated to clean those up.

- 2) **Question:** *I am concerned about noise. I am only a block or so off Highway 13. It is already a pretty noisy highway. There will be more projects after this one is completed, correct?*

**MnDOT Response:** Correct, several more intersections will be worked on, and the exact configurations have yet to be defined. When we determine exactly what to build, we will have to update that environmental document I talked about, which would include a more detailed noise analysis specific to that configuration. That will be determined in the future and revisited.

- 3) **Question:** *You showed pictures of those two old railroad bridges, off Quentin and Lynn. Are there any plans to improve the safety of the overhead bridges or make them easier to navigate?*

**MnDOT Response:** There are actually three bridges in the area, with two on Quentin. There are some challenges because the railroads still have the right to use the rail on top of the bridges. The City owns the bridge, but the railroads still have reserved rights to use it. There are plans in the future, but they're costly at this point. The City is trying to find funding to replace those bridges.

- 4) **Question:** *Has there been any thought to helping drivers from Taylor Drive exit onto McCall if McCall traffic increases significantly?*

**MnDOT Response:** We are expecting more traffic on McCall and Williams. Our initial mitigation will be those speed signs. A few other options could be to continue to lower the traffic and make it less appealing as a route, or find side roads for residents to use to get access to McCall, or prohibit left turns out of these neighborhoods. We will continue to look at traffic as construction progresses.

## Recommendations

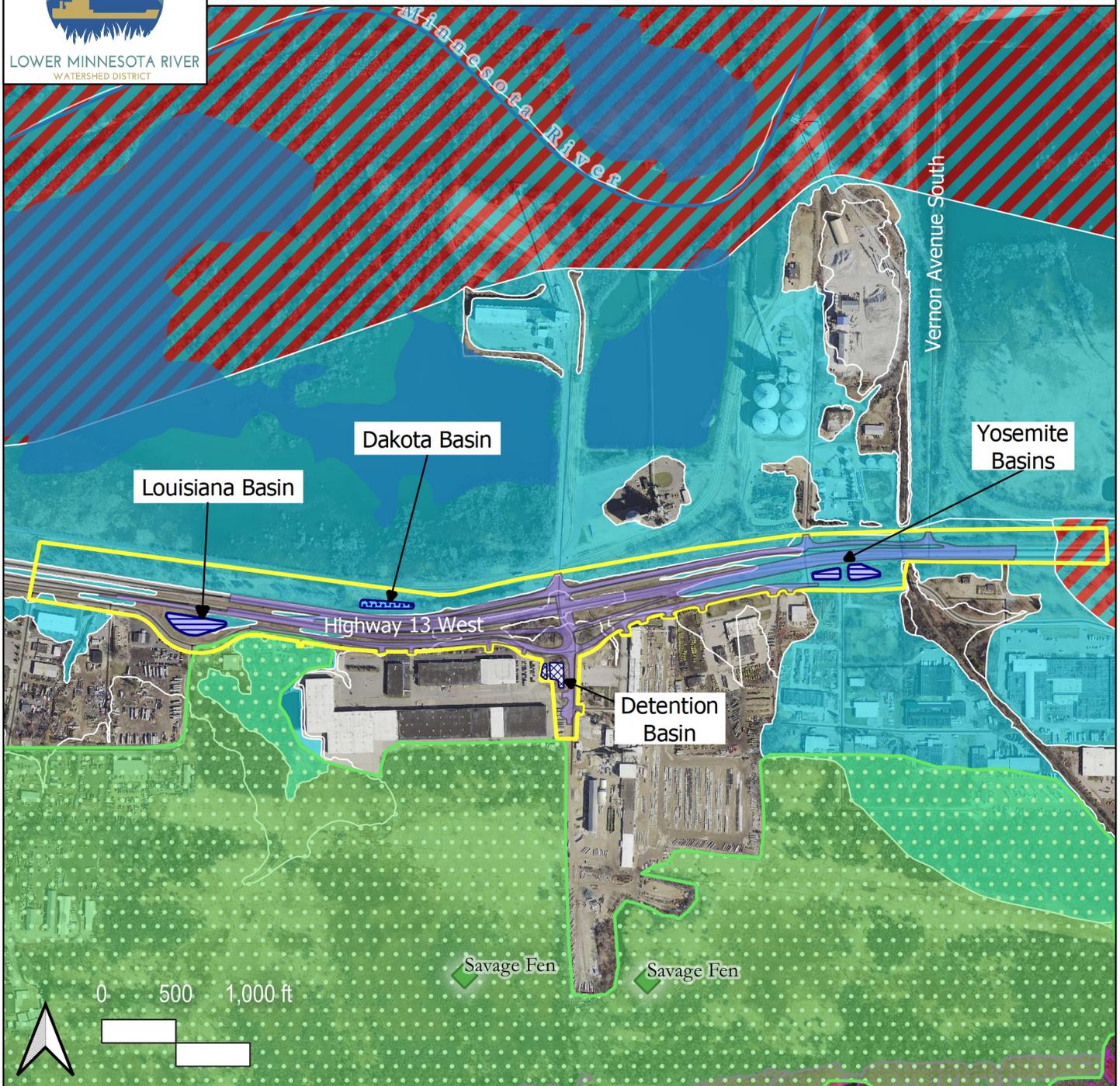
The staff recommends conditional approval of the Project, given the special provision of maintaining access to the dredge site during construction and the pending receipt of a copy of the NPDES permit and contact information for the contractor(s) and/or person(s) responsible for inspection and maintenance of all erosion and sediment control features.

## Attachments

- Figure 1—Trunk Highway 13 Project Location Map



Figure 1: Trunk Highway 13 Project Location



**LEGEND**

- |  |                         |  |                               |
|--|-------------------------|--|-------------------------------|
|  | Project Location        |  | Public Waterways              |
|  | TH 13                   |  | Public Waters                 |
|  | Detention Area          |  | High Value Resource Area      |
|  | Filtration Basin        |  | Steep Slopes Overlay District |
|  | Wet Sedimentation Basin |  | 100-yr Floodplain             |
|  | Road                    |  | Floodway                      |
|  |                         |  | Calcareous Fens               |

**LMRWD Watershed Location Map**

