



Division of Ecological & Water Resources
Region 4 (Southern Region)
21371 Highway 15 South
New Ulm, MN 56073

October 14, 2026

Renville County Drainage Authority
c/o Seth Sparks, Drainage Inspector
Government Services Center
105 South 5th Street, Suite 319
Olivia, MN 56277

Subject: DNR Advisory Report - Final Engineer's Report for Improvement of Renville County Ditch No. 138, Branch B

Thank you for the opportunity to review the Final Engineer's Report (FER) for the proposed County Ditch No. 138 Branches B (CD 138 Br B) improvement project located in Renville County. This letter constitutes the Commissioner's Final Advisory Report in accordance with Minnesota Statutes § 103E.301 on behalf of the Commissioner of the Minnesota Department of Natural Resources (DNR).

As required under Minn. Stat. § 103E.301, the DNR finds:

- The detailed survey report is complete, and the plan appears to conform to the general requirements of Minn. Stat. § 103E.
- The detailed survey report is an acceptable plan for draining the affected property.
- The Commissioner does not approve or disapprove the plan. We do recommend that the Drainage Authority ensure the project remains consistent with the Hawk Creek – Middle Minnesota River Watershed Comprehensive Watershed Management Plan (approved in 2022).
- The proposed drainage appears to be of public benefit or utility under the environmental, land use, and multipurpose water management criteria in Minn. Stat. § 103E.015, Subd. 1.
- The commissioner determines that a soil survey is not required for this project.
- Based on the information currently available, the project would not require a Public Waters Work Permit or other DNR authorization. This determination may be revisited if future design modifications or additional information indicate the potential for alteration of public waters.

Recommendations to consider the implementation of multipurpose water management

The DNR appreciated the inclusion of two WASCOBs in the Preliminary Engineer's Report, so removing them from the project scope represents a notable change in direction. The previously proposed WASCOBs would have offered flow attenuation and water quality benefits for roughly 20 percent of the project's drainage area, supporting efforts to maintain Sacred Heart Creek's High Value status as identified in the Hawk Creek – Middle Minnesota River Watershed Comprehensive Watershed Management Plan. In alignment with the considerations outlined in Minn. Stat. 103E.015, subdivision 1, item 2, the DNR encourages the drainage authority to continue evaluating opportunities for multipurpose drainage management practices that may help reduce downstream flooding, erosion, and sedimentation, as well as protect or improve water quality. Any assessment of these measures should remain site-specific and balanced with project goals, feasibility, cost, right-of-way limitations, and drainage needs.

Adequacy of the Outlet

Clarification of Modeling Assumptions

- The conclusion that increasing upstream tile capacity will reduce the amount of water delivered to downstream resources is not supported by standard hydrologic principles. According to the National Engineering Handbook (NEH) Part 630, Chapter 7, dual hydrologic soil groups are mapped where the presence of a water table occurs within 60 centimeters of the surface. When tile drainage lowers the water table below this depth, these soils function hydrologically as their A/B/C counterparts rather than Group D. While improved drainage may reduce localized ponding and improve crop health in the areas that experience extended ponding, the increase in evapotranspiration from these areas is small relative to the overall volume conveyed via both overland flow and the tile network across the watershed.
- Reducing the Curve Number (CN) changes only the modeled surface runoff component and does not account for the water that continues to leave the watershed through the tile systems. Because the watershed is already fully drained, tile already maintains the water table below the threshold identified in NEH Part 630, Chapter 7, and therefore the "drained condition" CN currently applies. Increasing tile size will not reduce the total amount of water exiting the watershed; it will only change the pathway and timing of that outflow.
- Revised or additional modeling is not being requested at this time. However, if a consistent pre- and post-project CN were applied, and that change materially altered the submitted peak flow rate, velocity, or flow-duration hydrograph, re-evaluation may be necessary.
- The FER included a description of Pond 26P, and hydrographs outputs for Pond 26P, Pond 29P, and Pond 32P, without a spatial explanation of what these modeled elements represent. Please note that analysis of model inputs and model outputs is vital in determining whether the model represents the existing and proposed project conditions. For the DNR to provide accurate and relevant reviews of improvement reports, future reports should include the following information:

1. Detailed modeling information such as existing and proposed system routing schematics with subcatchments, conveyances, storage nodes, outlets, and identifying locations of overland flow.
 2. Flow/volume/velocity summaries at critical locations, and representative upstream/downstream hydrographs.
 3. Description of modeling assumptions including but not limited to runoff routing methods, overflow discharge definition, storage definition, roughness values, and any simplifying assumptions built into the model.
- The FER identifies a roughly 10% increase in 5-year peak flow (14 cfs), indicating a measurable change in hydraulic behavior for the types of frequent events that shape channel stability. While this increase is small relative to the larger watershed, the DNR remains attentive to how incremental changes from individual projects can accumulate over time and affect downstream hydrology, channel form, and flood characteristics. Evaluating these modest yet additive impacts is important for responsible long-term drainage management. Recognition of how incremental increases collectively influence the system, and how individual projects can help mitigate them, should be considered as part of ongoing coordination with the Drainage Authority.
 - DNR staff have been reviewing hydrologic and hydraulic models prepared for drainage projects to better understand the assumptions, methods, and conditions incorporated during model development. Access to the native model files allows for more effective coordination, supports accurate evaluation of project design intent, and improves the efficiency of our technical review. While we acknowledge that the model files were not included with the Final Engineer Report submittal, we reiterate our expectation that future project reviews include the native model files as part of the standard documentation for improvement projects significantly altering the quantity of overland flow to tile flow. Providing these files at the time of report submittal enables a more thorough and transparent technical review. We appreciate continued collaboration with Drainage Authorities and will continue to request model files for future drainage project evaluations during early coordination.

Alternative Solutions

Wetland Restoration

- We appreciate the evaluation of wetland restorations in this report and encourage the continued inclusion of robust analysis, including incorporating varying wetland depths and types based on site-specific conditions, particularly in the upper portion of the watershed. As noted in the FER, with a greater design depth, to 4.5 feet, the footprint could be substantially reduced as well as the corresponding land cost. Oftentimes, created wetlands do not require matching acre ratios to account for surrounding marginal damp soils. Restricting the analysis to these assumptions artificially inflates the acreage required for wetland restoration, consequently driving up land acquisition costs.
- It is recommended that wetland restoration not be viewed solely as an all-or-none alternative, as this does not evaluate scenarios where partial and/or smaller wetland restorations may be utilized to accept drainage water and attenuate flows. Using multiple wetland restorations could significantly reduce land acquisition costs by decreasing the wetland footprint, making restoration a more competitive and

feasible option. Evaluation of these scenarios may potentially show wetland restoration is a viable option and alleviate the need to increase the size of the tile system. While we understand that this option is also dependent on willing landowner participation, the reduction in size resulting from varying wetland characteristics and depth may provide a palatable alternative option for the improvement of the tile system.

- The DNR maintains a restorable wetland inventory GIS database in Region 4 from which project-specific maps can be shared ahead of feasibility or early coordination so that these areas are communicated as early as possible for discussion with drainage authorities and landowners.

Please send the response to this letter and/or revised FER, meeting minutes, Finding of Fact, and any Order issued by the Drainage Authority regarding this proposed improvement to the DNR when they become available. In addition, please note that our agency continues to support the use of off-channel storage solutions, such as wetland restoration or similar water retention basins or impoundments, to help reduce flooding and erosion, and, in some cases, provide natural resource and ecological enhancements. The Drainage Authority should continue to pursue opportunities to retain surface water runoff within its existing drainage systems whenever and wherever possible.

Thank you for consideration of this report. Please submit the above-noted documents or any questions about this letter to the Regional Drainage email: Region4Drainage.dnr@state.mn.us.

Sincerely,

Ethan Jenzen Digitally signed by Ethan
Jenzen
Date: 2026.10.14 13:22:46
-05'00'

Ethan Jenzen, EWR R4 North District Manager

EC:

Haley Byron, DNR, Regional Environmental Assessment Ecologist
Emily Wolf, DNR, Area Hydrologist
Ryan Fleming, DNR, Drainage Engineer
Seth Sparks, Renville County, Drainage Systems Manager
Bill Helget, Bolton & Menk, Project Engineer
Heather Weis, Renville County, Auditor-Treasurer
Holly Hatlewick, Renville County SWCD, District Manager
Rita Weaver, BWSR, Chief Engineer
DNR Region 4 Drainage