



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

July 6, 2026

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

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

Dear Managers,

We appreciate the opportunity to evaluate the preliminary engineer's report (PER) for the proposed Renville County Ditch 138 Branch B (CD 138 Br B) improvement project. This Advisory Report, prepared on behalf of the Commissioner of the Minnesota Department of Natural Resources (DNR), aims to provide expert insights and recommendations in accordance with the guidelines outlined in Minnesota Statutes 103E.255. The comments in this advisory report are based on review of the CD 138 Branch B, Improvement Preliminary Engineer's Report, dated May 7, 2026.

Overview

The C138 branch B represented in this report serves a watershed of approximately 533 acres within Sections 25, 26, 35 and 36 of Ericson Township in Renville County and consists of subsurface drainage tile daylighting to CD 138 Main Open Ditch in Section 35 of Ericson Township. CD 138 then flows south to outlet into Sacred Heart Creek in Section 2 of Sacred Heart North Township. A petition was submitted to the Renville County Board of Commissioners, acting as the drainage authority for CD 138, requesting improvements to the tile of Branch B of the CD 138 drainage system.

Discussion of the Improvement

Design Data: WASCOBs -

- The inclusion of two WASCOBs in the design plan is acknowledged and appreciated. While the report indicates that these structures will be designed in accordance with NRCS practice standards, the use of a 2-year design storm for sizing is notably smaller than the NRCS Code 638 requirement, which specifies a 10-year event. Additionally, the reported drawdown times of 12 and 16 hours fall well within the commonly accepted 48-hour guideline, suggesting that additional storage capacity could be accommodated if needed. Finally, there appears to be a discrepancy between the report and the plan set, as the notes for WASCOB 2 reference sizing based on a 5-year design storm.

- The report states that the WASCOBs capture 105 acres of drainage and will reduce peak flows. Please clarify whether the WASCOBs are included in the hydraulic calculations.

Hydrologic Impacts and adequacy of the outlet

- The PER indicates that flow will increase for the 5-year and 10-year storm events. Available aerial imagery, topographic information, and the DNR's Restorable Wetland Inventory indicate that portions of the CD 138 drainage area appear to currently function, and have historically functioned, as areas of water storage. For example, the depression located north of 850th Avenue has been observed to detain approximately 60 acre-feet, referencing 2025 aerial imagery and MnTopo elevation data. Tables 1 & 2 of the PER show an increase of the system drainage coefficient from 4.8 cfs to 11.8 cfs, which would reduce the duration of flow from the drainage area by roughly 50 percent for smaller precipitation events that are primarily influenced by the tile system. Increasing the drainage coefficient will allow water stored in these depressional areas to drain substantially more quickly, which may alter the characteristics, stage, and timing of flows leaving the drainage area. Impacts of the increased peak flow and changes in duration of flow cannot be evaluated without the more specific calculations requested herein. For the DNR to provide accurate and relevant reviews of improvement reports, it would be beneficial for future reports to include the following information:
 - Detailed modeling information such as existing and proposed system routing schematics with subcatchments, conveyances, storage nodes, outlets, and identifying locations of overland flow.
 - Flow/volume/velocity summaries at critical locations, and representative upstream/downstream hydrographs.
Description of modeling assumptions including but not limited to runoff routing methods, overflow discharge definition and locations, storage definition, roughness values, and any simplifying assumptions built into the model.
- DNR staff have been reviewing hydrologic models created for drainage projects to gain a deeper understanding of the conditions and considerations utilized during model construction. Please submit the HydroCAD model files used for the hydraulic analysis to the email below.

Alternative Solutions

Wetland restoration –

The evaluation of wetland restorations via different approaches in the report is noted and continuing to include analysis of varying wetland depths and types based on site-specific conditions, particularly in the upper portion of the watershed is encouraged. Additionally, it is recommended that wetland restoration not be viewed solely as an all-or-none alternative scenario, as this does not evaluate scenarios where partial and/or smaller wetland restorations may be utilized to accept drainage water. Utilizing multiple wetland restorations could significantly reduce land acquisition costs by decreasing the wetland footprint, therefore making restoration a more competitive and feasible option than an improvement. These scenarios, after an evaluation, may potentially show wetland restoration is a viable option and alleviate the need to increase the size of the tile system.

Compatibility of the Project with Local Land Use Plans

The Final Engineer's Report should address how the project aligns with the Hawk Creek – Middle Minnesota River Watershed Comprehensive Watershed Management Plan (approved in 2022). On page

8, the outdated “Renville County Water Management Plan” is referenced. CD138 is part of the Sacred Heart Creek subwatershed. Priority issues in the subwatershed include:

1. Altered Hydrology (page 19), **Goal 2:** Work to achieve no net increase in existing runoff volumes to the Minnesota River from changes in land use or land use practices for non-priority subwatersheds, as follows:

Sacred Heart Creek – Minnesota River - Maintain baseline (1996-2012) flow of 1,875,246 AF/year

2. Agricultural Practices, Soil Erosion and Runoff Management (pg. 98)

- a. Measurable Short-Term Goal: Implement local public practices on 10% of available cropland in priority areas.

The 1W1P project goals aim to mitigate the hydrologic effects of altered hydrology through strategies like improved soil health (i.e., cover crops, conservation tillage, etc.) and by adding additional storage features like conservation cover and wetland storage. Sacred Heart Creek is considered a high-quality and high-value stream (page 41).

Public Waters Impacts & Permitting Requirements

The outlet of CD 138 is located approximately 1.8 miles from the termination of CD 138 into the Sacred Heart Creek, a regulated public water. While a permit may not be required for this project, final determination will depend on responses to the questions and concerns outlined above, as well as the submission of requested data for further evaluation.

Thank you for consideration of these comments. Please send the response to this letter, the meeting minutes, the Finding of Fact, the Viewer’s Report, and any Order issued by the Drainage Authority regarding this proposed improvement to the DNR when they become available. Please submit these documents to Region4Drainage.dnr@state.mn.us.

Regards,



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CC:

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