



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

May 21, 2025

Board of Managers  
Buffalo Creek Watershed District  
PO Box 55  
Glencoe, MN 55336

**Re: Preliminary Engineer's Report for Judicial Ditch No. 15 Branch M37 Improvement**

Renville County Drainage Authority,

The Minnesota DNR appreciates the opportunity to review the Preliminary Engineer's Report (PER) for the proposed improvement of Renville County Judicial Ditch No. 15 Branch M37. This Advisory Report, prepared on behalf of the Commissioner, offers expert insights and recommendations in accordance with Minnesota Statutes 103E.255 based on the April 30, 2025, improvement report.

**Overview**

In November 2024, the Buffalo Creek Watershed District, serving as the Drainage Authority for Judicial Ditch No. 15 Branch M37 (JD 15 Br M37) in Renville County, accepted a petition for drainage improvements. The proposed project area, located in Preston Lake Township, involves the construction of a water and sediment control basin (WASCOB) and a drainage pipe to replace 24,763 feet of deteriorating underground tiles. These tiles, which drain approximately 684 acres based on Lidar contour data, are currently compromised by cracks, sags, and root obstructions that hinder flow. The project outlet is JD 15 Main Open Ditch, approximately 2.25 miles north of Buffalo Lake.

**Hydrologic Impacts and adequacy of the outlet**

- The report does not provide an analysis of changes in flow duration. This is a critical omission, as changes in flow duration can negatively impact stream channel stability, aquatic ecosystems, and habitats, even during low-flow conditions. An assessment of duration changes is necessary to determine how flow timing and extent differ from existing conditions. Furthermore, additional survey data is required, including flow volume, velocity, and hydrographs for various storm events.
- HydroCAD calculations are also necessary to fully assess the project's impact under different storm events. Detailed HydroCAD calculations for various storm scenarios should be provided to enable further evaluation of flow dynamics.
- Storage areas have the potential to effectively mitigate peak flow increases to receiving waters, thereby reducing downstream impacts. The report briefly discusses wetland restoration as a potential storage option and provides a rough estimation based on the assumption that sufficient wetland acres are required to store the entire additional runoff at a depth of one foot. However, this scenario may not be practical or feasible in all cases.

Other scenarios, such as storage areas with varying capacities (i.e., greater than one foot in depth) that can partially collect runoff, have not been analyzed or evaluated in the report. A comprehensive analysis of how different storage configurations affect peak flows under various storm scenarios is necessary to provide a more accurate and practical assessment.

- Encouraging agricultural best management practices, like WASCOP's, is highly beneficial to reduce surface flow rate and promote settling of sediment and pollutants prior to entering downstream receiving waters. However, pollution reduction estimates should be calculated for each individual practice rather than applied across the entire sub-watershed. This ensures a more accurate representation of water quality benefits at the field scale and avoids overstating the overall impact. Pollution load reduction values in Table 7 appear to be listed as sub-watershed-wide values and should be edited to reflect individual practices' pollutant reductions.
- Lastly, the project is situated within the Drinking Water Supply Management Area for Surface Water for Saint Paul – Mississippi and Minneapolis. This important factor should have been addressed in the Preliminary Engineering Report (PER). A discussion of potential impacts and mitigation measures related to drinking water protection is necessary to ensure a thorough review.

### **Public Waters Impacts & Permitting Requirements**

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. For any communication regarding drainage systems, please contact us via [Region4Drainage.dnr@state.mn.us](mailto:Region4Drainage.dnr@state.mn.us).

Best regards,

Ethan Jenzen, EWR Southern District Manager

CC:

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