DEPARTMENT OF NATURAL RESOURCES

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

December 9, 2024

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

Re: Preliminary Engineer's Report for Improvement of Renville County Judicial Ditch No.15 Branch B56 (JD15BrB56)

Dear Managers,

We appreciate the opportunity to evaluate the preliminary engineer's report (PER) for the proposed Renville County Judicial Ditch No.15 Branch B56 (JD15BrB56) 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 the review of the Judicial Ditch 15 Branch B56 Improvement Preliminary Engineer's Report, dated October 1, 2024.

Overview

The Judicial Ditch No. 15 (JD 15) serves a watershed of approximately 59,805 acres, 528 of which are drained by Branch B56. The watershed is characterized by rolling hills and spans portions of Renville and Sibley Counties. The main open ditch flows generally eastward, ultimately discharging into Buffalo Creek, a designated public water. A petition was submitted to the Board of Managers of the Buffalo Creek Watershed District, acting as the drainage authority for JD 15, requesting improvements to the Branch B56 drainage system. The proposed improvements aim to enlarge the tile and increase the system's capacity to the maximum allowable drainage coefficient of 3/8 inch per day, as specified by the Buffalo Creek Watershed District rules.

The proposed project includes two options:

Option 1: Replace and redesign multiple system tile lines, including Branches B56, B64, and B37.

Option 2: Incorporate the changes in Option 1 along with the construction of a storage basin to enhance the storage capacity of the Branch B56 system.

Comments on Flow and Environmental Impacts of Proposed Options

- The peak flow rate for the proposed Option 1 increases by 50%, 51%, 58%, and 63% for 5-year, 10-year, 25-year, and 50-year storm events, respectively. In contrast, Option 2 results in peak flow reductions of 28%, 30%, 32%, and 29% for the same storm events. While the outlet does not discharge directly into public waters, we strongly recommend implementing mitigation measures for Option 2 to address the high flow rates and prevent inundation and scouring near the tile outlet.
- The flow volume increases by 13%, 14%, 15%, and 15% for Option 1 and by 12%, 13%, 14%, and 14% for Option 2 during 5-year, 10-year, 25-year, and 50-year storm events, respectively. To prevent bed and bank

erosion in downstream channels, we recommend implementing robust mitigation measures and high levels of erosion protection.

- The DNR supports Option 2 as implementing the outlined strategies would significantly reduce negative impacts on ecosystems and habitats in downstream public waters. The proposed storage pond would also positively impact water quality by enhancing nutrient uptake for nitrogen and phosphorus, reducing total suspended solids, and increasing water retention and sedimentation.

Compatibility of the Project with Local Land Use Plans

The Final Engineer's Report should consider how the project aligns with the South Fork Crow River Watershed Comprehensive Watershed Management Plan (approved in March 2024). This is especially important since JD15 has been designated as a priority drainage system for drainage water management and a high-priority area for addressing water storage loss and altered hydrology—both of which are Tier 1 priority issues.

Public Waters Impacts & Permitting Requirements

The outlet of JD15 Branch B56 is located nearly 13 miles from Buffalo Creek, a designated public water. While the proposed conditions are not expected to negatively impact public waters, we strongly recommend implementing adequate mitigation measures to prevent significant increases in flow and subsequent soil erosion downstream. Additionally, it is important to assess the capacity of downstream drainage infrastructure to effectively convey the added hydraulic load.

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,

Ethan Jenzen Digitally signed by Ethan Jenzen
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Ethan Jenzen, DNR, EWR Northern District Manager

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