



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

September 12, 2022

Don Belter, President
Buffalo Creek Watershed District
P.O. Box 55
Glencoe, MN 55336

Dear Mr. Belter:

RE: Final Engineers Report (FER), McLeod-Sibley Judicial Ditch 8 Laterals 12 and 13 Improvement

Thank you for the opportunity to review the proposed improvement of McLeod-Sibley Judicial Ditch 8 (JD8), Laterals 12 and 13. We offer the following comments per Minnesota Statutes §103D and §103E on behalf of the Commissioner of the Minnesota Department of Natural Resources (DNR). Please read this letter at the Hearing and include it in the official Final Hearing record.

Project Summary

The project proposes to increase the tiled laterals' capacity by installing larger tiles to provide a 3/8-inch drainage coefficient. The project area outlets into the Main Trunk of JD 8, then Buffalo Creek, which flows to the South Fork Crow River and eventually to the Mississippi River. This project lies within the South Fork Crow River major watershed.

Adequacy of Outlet & Downstream Flooding

According to the FER, the improvement of the drainage system will result in a change in the peak flows at the outlet of the system. The report cites that the maximum increase in downstream peak flows resulting from the improvement would be 3.34 cubic feet per second (1,499 gallons per minute) but also states that this maximum would only occur if Lateral 12 peaks at the same time as the JD8 Main Trunk. Under this scenario, the modeling presented in the FER shows that peak flows in Buffalo Creek would increase by 0.14% during the 5-year event and 0.05% during a 50-year event. Velocities in the JD8 Main Trunk will increase by less than 0.03 feet per second.

Conclusion

The FER assessed the adequacy of the outlet using methodology described in the Minnesota Public Drainage Manual, as follows: 1) outlet stage is equal to or less than that required for adequate drainage; 2) no excessive scour or deposition of sediment, and 3) outlet will not cause or increase flood damages downstream unless compensation is made. While the FER states that modeling shows the project will result in negligible changes in water surface elevation and velocity, the proposed improvement will incrementally increase flood stage and

channel velocity. These increases are documented in Tables 2 and 3 of the FER. The predicted downstream impacts are listed as minor, but there will be an impact from this improvement.

DNR encourages the continued exploration of alternative practices and BMPs in the JD8 Laterals 12 and 13 watersheds that could be implemented to help offset these increases. The report says Water and Sediment Control Basins (WASCOBS) may be constructed over the improved tile in one or more locations to provide a trap for sediment, reduce surface erosion, and provide additional storage. The report says the tile improvement project does not need to be modified to support the construction of these practices, so the WASCOBs can and should be completed outside of the improvement process.

Minnesota Statutes §103E.015 involves identifying alternative measures in locally adopted water management plans, stating, "This investigation shall include early coordination with applicable soil and water conservation district [SWCD] and county and watershed district water planning authorities about potential external sources of funding and technical assistance for these purposes and alternative measures." DNR acknowledges the drainage authority's outreach for this project and recognizes the importance of early coordination. Please consider working with the SWCD to install one or more WASCOBs, as described, or implement other alternative measures to help reduce downstream peak flows and velocities associated with this project.

Thank you for your continued cooperation. If you have any questions regarding these comments, please get in touch with Area Hydrologist Garry Bennett at garry.bennett@state.mn.us or (320) 753-0344.

Sincerely,



Todd Kolander
EWR R4 South District Manager

cc: Joanne Boettcher, DNR Regional Environmental Assessment Ecologist
Garry Bennett, DNR Area Hydrologist
Scott Mackenthun, DNR Area Fisheries Supervisor
Stein Innvaer, DNR Area Wildlife Supervisor
Scott Roemhildt, DNR R4 Regional Director
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