

Minnesota Department of Natural Resources

Division of Ecological and Water Resources (EWR)
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December 1, 2022

Merrisa Lore
Faribault County Drainage Inspector
Faribault County Planning and Zoning
415 South Grove Street, Suite #8
Blue Earth, MN 56013

Dear Ms. Lore:

RE: Preliminary Advisory Report – County Ditch #26 Improvement, Lateral 1 – Faribault County

Minnesota DNR has reviewed the Preliminary Engineering Report for the proposed repair and improvement of CD#26 Lateral 1 as prepared by ISG. On behalf of the DNR, we offer the following recommendations and guidance for consideration by the Faribault County Ditch Authority.

The Preliminary Engineering Report offers three improvement options to bring CD#26 Lateral 1 up to current standards. All three options involve improving drainage by replacing existing tiles that are in disrepair and are shallow, so they will be replaced with deeper and larger tiles to increase the drainage coefficients and grade.

Overall, all three-options increase tile water discharge rates and volumes, likely increasing the velocity and stage duration for each storm event while increasing to the cumulative annual discharge volumes for the Blue Earth River, which is an impaired public water resource. The increases in volume, duration, velocity, and annual discharge will also increase pollutant loading to the Blue Earth River. The Blue Earth River is impaired for excessive nutrients, fecal coliform bacteria, and turbidity. The project, as proposed, may also further degrade aquatic habitat and increase existing water quality impairments, none of which are beneficial to the public's use and interest in the Blue Earth River as a public resource. A Public Waters Work Permit will likely be required for this project. Therefore, please begin applying for a Public Water Work Permit at www.dnr.state.mn.us/mpars/index.html. Once the permit application request is started, any need for additional information for the permit application can be requested, including a technical review of the project model to help determine if a Public Water Work Permit will be required and what conditions will be applied.

The CD#26 –Lateral 1 Improvement project, seems in conflict with the 2007 Faribault County Local Water Management Plan specifically on priority concerns, including:

WATER QUALITY CONCERNS - surface water, including addressing impaired waters and the development of TMDLs by major watersheds for priority pollutants; Currently, several of these water bodies are listed as impaired and do not meet their designated uses because of pollution problems from a combination of point and nonpoint sources.

DRAINAGE MANAGEMENT CONCERNS – including addressing drainage management focusing on public drainage systems; and flood damage reduction focusing on controlled drainage, out-of-county drainage inputs, water retention areas, and wetland restorations.

The Faribault County Water Management Plan states, “agricultural drainage involves both open ditches and subsurface drain tiles which are necessary to remove excess precipitation and improve the productivity of agricultural land; however, they also have a direct impact on the water quality and quantity of receiving streams and lakes. These drainage systems can carry not only vast amounts of water but also pollutants at great distances

and at faster rates than would have occurred in natural conditions. Drainage systems requiring repair can use technologies such as controlled drainage, wetland restorations, buffer and vegetated filter strips that can aid in flood water control and water quality improvement”.

To comply with Minnesota Water Law, the drainage authority must direct the engineer to incorporate alternative measures, as defined below, into the Final Engineering Report. The Preliminary Engineering Report did not recognize or evaluate three of the nine environmental and land use criteria in Minnesota Statutes 103E.015, Subdivision 1, Environmental and Land Use Criteria including:

- (6) the effect on water quality by constructing the proposed drainage project;
- (7) fish and wildlife resources affected by the proposed drainage project;
- (9) the overall environmental impact of all the above criteria.

These criteria are part of the more extensive list of considerations that must be addressed as part of the Public Water Work Permit decision. Additional, alternative measures to manage runoff water, improve water quality, and reduce discharge velocity and annual discharge volumes are necessary above those presented as part of an enhancement to an existing BWSR easement. The proposed wetland enhancement will partially aid in achieving this water management goal; it is likely that after the additional model review, more mitigation is likely to be needed to address this improvement project and future private tile improvements. Mitigation measures should conserve water by temporarily storing some runoff volumes in upland areas where rainwater falls on the land and allow for infiltration, filtration, temporary storage, and groundwater recharge. This is necessary for reducing flood stage, flood duration, annual discharge, sediment, and nutrient increases while lessening or alleviating other environmental impacts to receiving public waters downstream.

To comply with Minnesota Water Law, the improvement project must include the implementation of management practices to improve water quality and mitigate fish and wildlife impacts. As proposed, the project will increase the runoff volume, duration, and annual discharge volume to the Blue Earth River. The proposed method of drainage conveyance will keep pollutants in suspension, maximize the erosive force of the water, increases stream bank instability and erosion, promote stream channel degradation, reduce effective sediment, and bed load transport, degrade aquatic habitat, and ultimately increases existing water quality impairments in the Blue Earth River.

Additional environmental requirements are included in Minnesota Statutes Chapter 103G. The proposed project needs to incorporate these requirements further to mitigate increases in the discharge velocity, stage duration, and annual flow volume contributing to downstream impacts with flooding, erosion, water quality impairment, and degraded aquatic habitat.

Minnesota Statutes Chapter 103G.245 Work in public waters requires applicants to address environmental impacts associated with a project. Specifically, subdivision 7, Effect on environment and mitigation, states:

- A. A public waters work permit may be issued only if the project involves a minimum encroachment, change, or damage to the environment, particularly the waterway's ecology.
- B. If a significant change in the resource is justified, public waters work permits must include provisions to compensate or mitigate the detrimental aspects of the change.

In summary, the project as proposed does not adequately address the required environmental resource impacts as provided in Minnesota Water Law and conflicts with the 2007 Faribault County Local Water Management Plan priorities. The proposed wetland enhancement for this project may provide some environmental benefits, but additional water storage or other mitigation practices will likely be needed. DNR does not have a permit application for this project and all the necessary information to review this project accurately. DNR suggests the Faribault County Drainage Authority apply for a Public Water Work Permit and provide the necessary XPSWMM project model files as part of this application submittal. Additional permit application requests will be determined as the model is reviewed to fully assess the environmental impacts identified in the Preliminary Engineering Report

Merissa Lore – Drainage Manager
Preliminary Advisory Report for Faribault County Ditch #26-Lateral 1
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for CD#26-Lateral 1 dated November 21, 2022. The environmental impacts associated with this project, as identified in the Preliminary Engineering Report, are incomplete. Because this report is incomplete, DNR does not approve of the PER as submitted. Once all additional DNR-requested permit application information and the model review are completed, a final letter evaluating the Preliminary Engineering Report for this project will be sent to the Faribault County Drainage Authority.

If you would like to discuss this Preliminary Advisory Report, feel free to call or email.

Sincerely,



Todd Kolander
South District Manager - EWR

Ec: Chuck Brandl, I&S Group Nathan Carr, Faribault SWCD Dan Girolamo, DNR EWR

