DEPARTMENT OF NATURAL RESOURCES

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

December 12, 2022

Heron Lake Watershed District
1008 3rd Ave
Heron Lake, MN 56137
admin@hlwdonline.org

Re: Final Engineer's Report (FER) for Heron Lake Watershed District – Project 2

Dear Heron Lake Watershed District Drainage Authority,

DNR has reviewed the FER for Project 2 and has identified concerns with Jackson County Project 2. Following Minnesota Statutes §103D and §103E on behalf of the Minnesota Department of Natural Resources (DNR), please read this letter at the Hearing, and include it in the official Final Hearing record.

The proposed project intends to improve drainage on Branch B1 within the Project 2 watershed by adding a 24" pipe upstream of the open ditch. The existing pipe would then be abandoned by the drainage system but will continue to function as a private drainage system. The existing B1 pipe has a drainage capacity of 0.32 inch/day, and the proposed B1 pipe would have a drainage capacity of 0.45 inch/day. The estimated cost of this improvement is $518,276.

Hydraulics and Public Water Impact

This project, like the proposed JD3 project, can potentially further increase the water level stage and duration in the Heron Lakes and Duck Lake system, as documented in the JD3 model summary (ISG Memo 06/01/2022). The FER states that: "Despite the increase in peak flow, velocity, and water depth at the outlet of the model shows that Heron (Duck) Lake can handle the increase without adverse effects." Adverse effects are not defined or detailed in the FER. As you are aware, any increase in water levels on Duck Lake may require a public water permit.

Conclusion

The impacts of this project include further reducing water storage within the watershed, further degrading downstream water quality, contributing to potential flooding, potentially impacting a calcareous fen, and adding additional cumulative impacts to downstream impaired waters, which are widely identified across southern Minnesota. The DNR does not recommend moving ahead with this Project 2 improvement until the JD3 project has been approved. If the HLWD chooses to proceed with this project before the JD 3 project is resolved, please note that DNR will require a Work in Public Waters Permit as part of this project. As part of the permit determination process, DNR will require a more thorough review of the modeling for this project and the

relationship between the proposed project and the JD3 improvement project to determine if independent or cumulative impacts are associated with this proposed project or as a connected action to the JD 3 project.

The ISG engineer for the Drainage Authority states that the drainage system improvement increases drainage while decreasing the peak flow at the outlet. The DNR has several questions regarding this assertion:

1. How is this peak flow decrease achieved without increasing water storage?
2. Does this action increase discharge velocities or contribute to increased annual flow volumes to the lake?
3. Has the Project 2 model been calibrated to the JD3 model?

Please provide a more detailed explanation of these modeling questions and a copy of the model files so DNR can evaluate the relationship of this project with the proposed JD3 project. Please send a copy of the model used or any questions about this letter to Regional Drainage the email < Region4Drainage.dnr@state.mn.us >

Sincerely,

Todd Kolander
DNR Southern Region, Ecological and Water Resources South District Manager

cc: Tom Kresko, DNR Area Hydrologist
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