

August 30, 2021

Heron Lake Watershed District
1008 3rd Ave., PO Box 345
Heron Lake, MN 56137

Dear HLWD Board of Managers:

The North Heron Lake Game Producers Association (NHLGPA) has a long history with the Heron Lake system of shallow lakes and wetlands. Our goal has always been to protect and improve the resources surrounding this incredible wetland complex which is a valuable resource for our community. As such, we are deeply concerned with the massive improvement project proposed for the JD 3 drainage system.

While the NHLGPA is often associated with only North Lake and North Marsh, as conservationists we recognize that all lakes and wetlands within the Heron Lake system are interconnected. The total volume of water that will be added to the whole of Heron Lake as a result of the JD 3 improvement project will undoubtedly harm this already degraded ecosystem. Whether the engineer plans recognize it or not, the outlet of JD 3 into South Heron Lake receives water from 20,122 acres as a result of the attached JD 19 system which was also recently improved. Additional water from the expanded capacities of these systems will not only affect lake levels but will also increase nutrient and sediment loading to Heron Lake and other watersheds downstream.

The engineers of this project base their determination that the JD 3 improvements will have a minimal environmental impact from the results of their modeling. The DNR points out in their letter that the 97 acre-feet of storage (equivalent to only 0.05 inches of rain over the entire watershed) only slightly reduces peak flows according to a hydrograph provided by the engineers. This same hydrograph also shows a significant increase in the total volume of water entering Heron Lake. This proves the storage options for this project inadequately control additional water drained by the ditch improvements.

Other modeling in the Final Engineers Report (FER) that causes concern exists in the XP SWMM Flowrate (Free Outfall) and (High Water) - No Wetland tables in appendix F. Many of the tile outlets in these charts show a decreased flowrate despite an increase in the size of upstream tile. The charts present data with no storage wetlands making it impossible that a larger proposed tile could show a reduced flowrate from the previous existing conditions (see enclosed tables for the 2-year storm events). In addition to what is presented on the included tables, other unrealistic data exists for all modeled storm events within the FER. Inconsistencies within the engineer's data severely limit the confidence one can have in modeling that is supposedly showing a reduced environmental impact. This suggests that flows from the improved system are much greater than what is indicated by the FER.

Heron Lake is an amazing resource made even more unique by a rare wetland type known as a calcareous fen. Located on the southern tip of South Heron Lake, the fen already shows signs of degradation as its lower elevations are being colonized by cattails. Higher water levels in Heron Lake have allowed the cattails to encroach upon many threatened plants, some of which only exist in these special wetlands. As indicated above, greater volumes of water from the JD 3 improvements would increase lake levels potentially destroying a fragile calcareous fen already being affected from higher lake elevations. Furthermore, future unmitigated drainage improvements would only compound this and other environmental issues associated with increased agricultural drainage.

The Heron Lake Management Plan completed by DNR wildlife staff in April 2021 outlines the agency's role for lake level management on the entire Heron Lake basin. Within this plan the DNR has documented that storm flooding can cause water levels to rise approximately 3 feet within 48 hours. Additionally, the DNR notes that late spring runoff may cause lake elevations to increase from 4-6 feet. The NHLGPA recognizes that additional water from the JD 3 and other future drainage improvements will only increase the bounce in Heron Lakes water levels following both spring runoff and summer storm events. This poses a serious ecological threat as altered hydrology will inherently change the habitat and associated wildlife on this dynamic wetland complex. Both Reed Canary grass and invasive hybrid cattail tolerate water level fluctuations far better than do native sedges and bulrush. Projects such as the JD 3 improvements that add water to Heron Lake threatened to change the overall plant regime to a less diverse ecosystem of invasive species limiting its potential wildlife productivity.

An increase of water level fluctuations also negatively affects the nesting bird population on Heron Lake. Both upland and water nesting birds utilize the habitat in and around these shallow lakes producing a multitude of species to be enjoyed by hunters and other wildlife enthusiasts. The success rate of nesting birds depends upon stable water levels in order that nests remain above the lakes high water elevation. It is of great concern to the NHLGPA that additional water from the JD 3 improvement project will reduce bird production by creating a more flashy, flood prone wetland complex. Spring flooding also damages nest structures monitored by our organization that are increasingly disturbed by high water, rendering them unusable to nesting birds.

As downstream landowners, we wonder why we are to so willingly accept greater volumes of water from projects such as JD 3? As a result of the increased drainage capacity of public systems and the additions of private tile, landowners on North Heron Lake must continually cope with additional flooding. As upstream drainage capacities grow, systems downstream experience reduced efficiency. At times outlets may exist under feet of water causing prolonged inundation for those also seeking to improve the productivity of their land. As a result, it is undeniable that we have reached a point where drainage improvements benefiting a few landowners leads to less efficient drainage for many more whom are downstream. The HLWD board of managers needs to consider public benefit on a broader scale to include landowners downstream and how they are negatively impacted by drainage improvements.

The Heron Lake wetland complex once supported awe-inspiring numbers of migratory birds and other wildlife. While its resources have been degraded as a result of agricultural drainage and other poor land management decisions, the shallow lakes and surrounding marshlands of Heron Lake still provide valuable fish and wildlife habitat suitable for some recreational activities. The NHLGPA is committed to protecting and restoring what is the defining resource of this community. Therefore, we urge the Heron Lake Watershed District board of managers to dismiss this project as designed in order that sensible reductions to the capacity of the proposed JD 3 improvement can be made. Alternative land management practices such as cover crops, reduced tillage, conversion of row crops to pasture or CRP, and wetland restoration should also be explored as they reduce the need for drainage by increasing groundwater infiltration. Taking these necessary steps will limit the sediment and nutrient loads carried by excessive volumes of water thus allowing conservation work to further improve Heron Lake for public benefit.

**FREE OUTFALL - NO WETLAND
(2 Year Storm Event)**

TILE BRANCH	EXISTING (Inches)	PROPOSED (Inches)	% Decreased Flow
Branch H5	unknown	12	-73%
Branch H10	6	18	-1586%
Branch O2	8	12	-19%
Branch P	10	24	-400%
Branch P1	6	8	-91%
Branch R	15	30	-107%
Branch R2	5	8	-31%
Branch R3	6	12	-37%
Branch R4	6	8	-100%
Branch R5	6	8	-98%
Branch S2	6	8	-100%
Branch S3	6	8	-100%
Branch T	8	18	-100%
Btanch T1	6	10	-98%

**HIGH WAER - NO WETLAND
1,407 FEET ELEVATION
(2 Year Storm Event)**

TILE BRANCH	EXISTING (INCHES)	PROPOSED (INCHES)	% DECREASED FLOW
Branch H0	8	12	-348%
Branch H5	unknown	12	-75%
Branch H10	6	18	-1585%
Branch L	10	15	-280%
Branch O2	8	12	-19%
Branch P	10	24	-410%
Branch P1	6	8	-100%
Branch R	15	30	-107%
Branch R2	5	8	-317%
Branch R3	6	12	-37%
Branch R4	6	8	-100%
Branch R5	6	8	-98%
Branch R6	6	8	-100%
Branch S2	6	8	-100%
Branch S3	6	8	-100%
Branch T	8	18	-100%
Branch T1	6	10	-98%

***Please read this letter at the continuation of the final hearing for the proposed JD 3 improvement project in order that the voice of our organization may be heard. Questions may be directed to an NHLGPA representative present at the hearing. Thank you.**

Sincerely,



Aaron Meyer, NHLGPA President

Enclosures: 1