

Memorandum

Le Sueur County Ditch No. 43



To: Le Sueur County Drainage Authority
From: Chuck Brandel, PE
Date: June 16, 2022
Subject: Le Sueur County Ditch No. 43

The following memorandum is in response to letter signed by landowners for County Ditch No. 43 (CD 43) received by ISG on June 13, 2022. There are several concerns presented by the landowners. The information below provides answers to some of the questions and information provided. Landowner comments provided in the letter are underlined followed by response by ISG.

We were told at the ditch meeting the work that would be done on Ditch 43 would go back to historical ways.

ISG followed the 103E.101 process for re-establishment of records due to incomplete drainage records. As part of this process, the ditch profile, alignment, cross-section, hydraulic structures, right-of-way, and any other pertinent information regarding the ditch were re-established to the original legal design including updates made by other procedures throughout the history of the CD 43 system. The re-establishment of records utilized the available historical records including engineering reports, design plans and ditch profiles, construction quantity estimates and pay applications, permits, agency comment letters, and hearing meeting minutes. While the available records provided guidance and historical context to the ditch, the records did not provide enough as-built data to establish the extent of the repair. Additional aerial photographs, topographic survey, soil borings, capacity design, culvert dimensions and elevations, and other information was obtained to aid in determining the as constructed or subsequently improved condition (ACSIC). The findings of the report were presented to landowners, county staff, agencies, and the Drainage Authority prior to approval for re-establishment of records and repair proceedings among additional informational landowner meetings.

At a ditch meeting DNR said the culvert on 221st Ave was 9 inches lower than it was supposed to be, it was considerably over dug. If the culvert is at a historical level when it was cleaned, the ditch is approximately 33 inches too deep now. The project has also stopped a natural spawning area that has been there for decades.

Prior to the repair, the outlet control of Tyler Lake was located at 221st Avenue through a 68-inch x 43-inch corrugated metal arch culvert. The culvert was permitted to be lowered to 1021.32 feet NAVD 88 (1021.15 feet NAVD 29) while the elevation when surveyed was 1020.19 NAVD 88, lower by 1.13-feet. The drainage authority had received requests from benefitting landowners to clean and/or remove obstructions through Tyler Lake. A condition from the DNR, was to install a structure to re-establish the permitted outfall elevation for Tyler Lake. The design was reviewed by Drainage Authority Staff, ISG and the DNR and following that review, a hog slat structure was installed, and vegetation removal was completed through Tyler Lake as a part of the repair project. The culvert at 221st Avenue was at an elevation too low most likely from settlement of soils in the peat ground. The outlet of this culvert also historically had a drop in elevation and was best matched based on the research, site investigation, and findings presented in the re-establishment of records. This historically created a barrier for fish passage.

The cost of digging the ditch lower was considerably more, with moving so much more dirt. This ditch would not have to been dug so deep and it would have functioned well. ISG said the ditch was dug twice to get the right grade. ISG said there was a mix up with the numbers. The way the ditch is dug so deep, the water will flow so fast in lower land and cause flooding and will not go through the outlet of the lake fast enough. This ditch must be repaired. We would like answers why the ditch was dug too deep. The cost of digging the ditch to historical level would have not cost this much money. The ditch should be resurveyed, the

ditch grade should be brought up to at least the bottom of the culvert. The ditch will not repair itself; it would take many decades to do that.

In areas from Sta. 147+00 (east side of 221st Avenue) to Sta. 119+00 (next field crossing approach downstream) the maximum material removed from the centerline of the ditch was 1.29-feet with most locations removing 0.25-feet of material or less. The costs for open ditch cleaning that does not significantly deepen the ditch are fairly standardized if the material can be removed with one scoop from the excavator. ISG has inspected the construction of the repair project and has included construction stakes to ensure the ditch was cleaned to the correct elevation. The ISG inspector was present on site daily while the contractor was working and has ensured that the installed culverts and legal grade has been established correctly. ISG is not aware and did not approve digging the ditch twice to achieve the right grade or changing any numbers due to a "mix up." The elevations in the plans have remained the same since final plans were approved by the Drainage Authority and match what was approved as the re-establishment of records (ROR) that was presented to all landowners at the ROR hearing.

The whole project has over charged the landowners that are being assessed. ISG Company that did the survey was done at a high cost that we were assessed for. If there are additional repairs to the ditch, the landowners should not be assessed. We should not have to pay any more assessments for a ditch project that was not done correctly. Many of the landowners getting assessed, are not getting any benefits of the Ditch 43 project. With the high cost of the project, we would like a detailed audit report of the project before the final assessment is billed to the landowners. If any federal grants become available, we should be eligible to receive the grant money to help reduce the assessments to the landowners. We need approximately 5 years to pay for the assessments we have already received before we receive the final assessment, interest free.

Based on comments and feedback from landowners, county staff, and the Drainage Authority, the repair project was significantly reduced from its original scope due to concerns about the cost. The original proposed scope was estimated to cost \$795,851 and the approved project cost is \$329,148. Based on repairs to drainage systems in southern Minnesota, this cost is comparable based on the extent of the work completed. ISG provides detailed summaries of the profession services provided on a monthly basis to the county. A summary can be provided upon request.

We would like a cease-and-desist order on Ditch 43, if there is any additional repair work being done on fixing the problems listed on the petition. Until landowners are notified.

In providing this response to the drainage authority, ISG will cease work until directed to do so by the Drainage Authority. There currently is an active contract with Brunz Construction and there are punch list items to be completed. Portions of the project are not 100% complete and if not completed could cause additional costs to the system. ISG recommends to not stop the contractor at this time as these issues will be repaired at no additional cost to the project from the original bid, if we notify the contractor to stop work, they could request additional costs due to delays by stopping work on the project. It is recommended that the drainage authority allow Brunz and ISG to complete the current contracted project. Brunz would like be on site on June 22 or 23, 2022, weather permitting, to work on the punch list.

The following list are the items that need to be completed on the punch list:

Upper Watershed:

- Touch up banks and open ditch cleaning station 96+00 to 107+00
- Seeding buffers
- Seeding side slopes
- Install beehive intake at Sta. 101+50
- Clean up staging areas with left over materials and removed culverts/pipes

Clear Lake Outlet:

- Install additional riprap west side of bank (approx. 5 CY)

Memorandum



- Level banks on east bank to cover wing walls and level top of ditch (approx. 35 CY fill)
- Clean up any concrete materials from removals
- Final touchups on riprap placement on east side of bank upstream of weir
- Final touchups on riprap placement on open ditch bend
- Final touchups on riprap placement around weir to match weir elevation
- Trim tree branches
- Final grading & seeding

Please review and let us know if you have any questions or concerns.