Heron Lake Watershed District (HLWD)
Regular Meeting
February 19, 2020

1. Call to Order
   Bruce Leinen called the meeting to order at 9:00 a.m.
   Managers present: Harvey Kruger, Bruce Leinen, Jim Buschena, and Mark Bartosh
   Staff: Jan Voit and Catherine Wegehaupt
   Others present: Justin Ahlers, Nobles County; Dave Thiner, Murray County; Cathy Hohenstein, Jackson County; Jacob Rischmiller and Chuck Brandel, H+S Group (ISG); Phil Kruger, Jerry Daberkow, Geoff Johnson, and Cory Reith

2. Agenda
   Jim Buschena made a motion to approve the agenda. Harvey Kruger seconded this. Motion carried unanimously.

3. Minutes
   Harvey Kruger made a motion to approve the minutes of the January 15 regular meeting. Jim Buschena seconded this. Motion carried unanimously.

4. Treasurer’s Report and Bill Payment
   Jan Voit presented the treasurer’s report and bills payable. Harvey Kruger made a motion to approve the treasurer’s report and pay bills. Jim Buschena seconded this. Motion carried unanimously.

5. Construction Project Work Session
   Chuck Brandel and Jacob Rischmiller, ISG provided an update on current projects. Active projects include improvements for Jackson County Judicial Ditch (JD) 36, 19, 14, and 3 and Jackson County Ditch (CD), as well as reestablishment of records (ROR) for HLWD Projects 2, 4, and 84-4A.

   The Preliminary Engineering Report (PER) for JD 36 is very close to being finished. ISG anticipates submission by the end of the month.

   ISG met with H2Over Viewers to provide them with an update on the JD 3 improvement project. They discussed the possibility of holding a landowner meeting before the viewers begin any field work and again when they have completed the report. H2Over Viewers estimates having the reports completed by September. Discussion was held regarding interim reports. The viewers generally provide the engineer with their draft reports to ensure that the damages are correct. ISG doesn’t have input on the methodology or the values the viewers have determined. For scheduling purposes it would be beneficial to hold meetings before landowners begin spring field work or fall harvesting.

   The ROR reports for HLWD Projects 2, 4, and 84-4A are mostly complete. They will be sent to the District Administrator for review before submission.

   Hutton Drainage, the contractor that performed the work on JD 30 has gone out of business. In the system, bank sloughing occurred during the warranty period. ISG tried working with the contractor to have them fix the ditch banks and got no response. They contacted Pate Bonding, Hutton Drainage’s bonding company, and did not get a response. ISG sought bids last fall and got no response. Bid packets were distributed again in January. Noomen Excavating, LLC submitted the only bid. It is ISG’s opinion that trying to recover costs through the bonding company would cost as much or more than the $8,000 bid. They are recommending approval of the bid.

   CD 3 Construction Update.
   - Bid Package #1 is nine percent complete. Larson Contracting, Inc. will begin pond work on February 20 or 21. Almost four miles of ditch cleaning has been complete. They will come back and do tile repairs. The completion date for this bid package is September 30, 2020.
• Bid Package #2 is 43 percent complete. Dirt Merchant, Inc. (DMI) is working now. Discussion was held regarding the granular that is being hauled. ISG has televised tile that has been in the ground for 30 days. At this point, there have not been major areas that need to be addressed. There are some spots that need to be reevaluated.

Discussion was held regarding granular that DMI is hauling for the pipe foundation. The contractor did hit some fine, wet sand that slowed them almost to a stop. Rock can be placed under the tile if the soil conditions are poor. Typically the rock is an inch and a half size. ISG estimates that 20 percent of the linear tile footage within a project will need six inches of rock under the pipe. If they know that poor soils exist, the estimate is made for the entire area. In Bid Package #2 five percent of the pipe foundation estimate has been used. Most of that was in one area. The typical specification for rock foundation is at least six inches. In the area described above, the depth was between eight inches and one foot. DMI is using quartzite rather than hauling limestone from Mankato.

Discussion was held regarding construction. The biggest tile has been installed. Water was running in the tile in December. The contractor did not work during January. It is not known if water is still running in the tile. They are making good progress and will continue to work when weather permits. The completion date for this bid package is December 31, 2020.

• ISG is obtaining submittals from the contractor for Bid Package #3. The contractor will begin work in the spring. The completion date for this bid package is December 31, 2020.

• The subcontractor will start boring on Bid Package #4 in the near future. The completion date for this bid package is December 31, 2020.

• The bridges on the gravel roads in Bid Package #5 are complete. The paved roads will be done after the frost is out. The completion date for this bid package is September 30, 2020.

• Construction photos were shown.

JD 19 Construction Update.

• Eighty six percent of the project is complete. A substantial amount of the work was done in 2019. The northeast part of the watershed remains to be completed. These are small branches with shallower tile installation. There is one transmission line that still needs to be crossed. The contractor stopped work on January 13. Svoboda Excavating plans to start in early spring and finish the project. ISG will start televising the week of February 24. The completion date for this project is May 30, 2020.

• Construction photos were shown.

• The county is going to do some work on the outlet of the small pond.

• The wetland outlet structure is in place. The contractor also hit some poor soils in this project. They are getting close to using the amount of rock estimated.

• There was one issue boring under County Road 14. A dip in the road was discovered. There was a void under the road. The contractor fixed this at no cost to the project.

Construction Process.

Preparation of Construction Plans

• In an improvement project, ISG prepares a PER, Final Engineering Report, and final construction plans. Most of the surveying for a project is done before the PER is submitted. In that process, information is gathered which includes private tile maps, utility information, Geographic Information System (GIS) files, and windmill and rural water locations. That information is included in the plan set. Tile locations are based upon information in the original map, which can be 100 years old. If the original plan is incorrect, there will be variations in the new plan. Over 90 percent of the time, the original plan is incorrect. As-built drawings of an original project are rare. If they do exist, they do not include notes that say where alignments were changed. In almost every project there are surprises that arise.
• The original map for JD 36 was shown as an example. Intakes are typically located in low areas. In some cases, they are way off the mainline. ISG has to create a plan for the contractors to use for bidding by adjusting as much as possible for unknowns. They start with the locations of tile outlets into a ditch or stream. Ninety percent of those have been modified because of stream movement, frost, or breakage. So, even those are not always accurate. Sometimes the profiles shown on original maps do not mean anything because the project was not built to those specifications.

• Many adjustments are made during construction. ISG requires that the new tile be installed so that the top of the new tile is at the bottom of the old tile to get sufficient depth. Often times adjusting the grade can be used to reduce tile size and save costs to landowners.

• Intakes are installed at property lines and at strategic places within a field to allow for televising. In isolated low spots, an intake is necessary, even if the field is tiled. The intake helps for relief in the event of multiple rain events.

*Construction Bid Items*

• Unit price bids with contingency are the industry standard for this type of work. It is mainly done because there are so many unknown factors. Minnesota Department of Transportation, city, and county projects are bid this way. Most building projects are done by lump sum bid. What is above ground is known and can be much easier bid. With all the unknowns in an agricultural setting, lump sum bidding would be more expensive most of the time.

• Tile investigation includes excavation to separate topsoil from clay, flagging tile locations, and backfilling with compaction. The purpose is to limit the number of private tile connections if possible and to locate existing tile. ISG does not want the new tile installed in the same trench as the old tile. The old tile may still have some capacity. If it is removed, the Minnesota Pollution Control Agency (MPCA) considers it hazardous waste and it must be placed in a landfill, which would incur extra project costs. Tile investigation allows ISG to locate existing tile so new tile placement can be adjusted as the project progresses.

• Agricultural tile installation includes excavation to separate topsoil from clay, laying pipe on grade, and backfilling with compaction. Materials include high-density polyethylene (HDPE) dual wall pipe as well as granular bedding and encasement material. Joints are sealed with a bell and spigot gasket that overlaps several inches. ISG will be switching the specifications to require a water tight seal for future projects.

Discussion was held regarding pipe installation. Dual wall is easier to use and is more accessible. The industry standard for deflection is 10 percent. ISG requires five percent. The contractor is required to replace that section if the deflection is greater than five percent. ISG will be getting a camera that has the capability of measuring deflection during televising.

Contractors have the choice of using the spoon trench or square bottom method for tile installation. ISG prefers the spoon trench method because it is less costly. Six inches of bedding and encasement material over the top is required for the square bottom method. Rock is not required to be placed under the tile when using the spoon method. Some contractors prefer the square bottom method and they outbid others that use the spoon method. If the HLWD wants to require the spoon method that could be done. If the spoon method is a requirement, then contractors that prefer the spoon method would have to determine whether they are interested in bidding. Using the spoon method cuts material costs by 50 percent.

In CD 3, DMI is using the square bottom method. LooCon will use the spoon method. In JD 19 a combination of both methods is being used. On JD 30, the square bottom method was used. If a contractor hits bad soils, material encasing the pipe is required. In the bid process, either method is allowed. The contractor has to provide a lineal foot price. If they switch between methods during construction, no cost changes are allowed.

Discussion was held regarding the use of HDPE dual wall pipe. ISG prefers not to install agricultural tile at depths greater than 18 feet. There are some places where it cannot be
helped. Generally, they are switching to triple wall once the depth gets to 18 feet. Granular rock encasement is required around the entire pipe for added strength.

Video footage of tile installation in Blue Earth County was shown.

- Connecting existing tile includes separating topsoil from clay, which is typically already done with main tile, laying and connecting pipe, and backfilling with compaction. Materials include PE single wall pipe, Inserta-tee fittings, and granular bedding and encasement material. ISG estimates the installation of Inserta-tee fittings every 200 feet. Having private tile maps helps determine the number that are needed, but even those are not always accurate. In a pattern-tiled field, Inserta-tees may be needed every 40 feet. This is one of the unknowns in the planning process. Inserta-tees are sized at 50 percent of the original main. To connect, a coupler that covers the first three bands on each side is required. The joints must be wrapped in fabric and packed with rock.

There are various reasons that landowners do not want to provide tile maps. The landowner may not be supportive of the project, doesn't want to provide information to anyone working for the government, or may not have them. On JD 19, there were several instances that when construction was going to start on a particular landowner's field, the maps were provided. Adjustments could still be made at that point. Before privacy laws were enacted, maps were readily available from the Farm Service Agency. That is no longer the case. ISG requests private tile maps at the preliminary and final hearings, as well as at the preconstruction meeting.

- Cross connections include separating topsoil from clay, which is typically already done with main tile, laying and connecting pipes, and backfill with compaction. Materials include 30 lineal feet of HDPE dual wall pipe, appropriate Inserta-tee fittings, and granular bedding and encasement material.

- Dewatering is incidental, rather than a bid item in most cases. The contractors are given a long window of time to do the work. ISG does not feel that landowners should pay for extra pumping if the contractor wants to work in wet conditions. Where Branch 2 enters CD 3, ISG was aware that the open ditch may not be completed and the new main was coming in lower than the existing ditch. Dewatering was built into the bid because some pumping would be required.

- Other incidental items include chisel plowing and clean up after tile installation, every 2,500 lineal feet; bends, granular bedding, bonding, insurance, and traffic control. If traffic control is required at a major intersection, it is included as a bid item.

- Quantity tracking is done on a daily basis. ISG's Construction Administration Staff record what is installed. The Foreman for the contractor records what was installed. Both parties converse at least weekly to confirm quantities. Essentially, pay requests are done as the project progresses and quantities are set each week.

- ISG does as much as possible to eliminate change orders. For example, the CD 3 project was bid with gravel roads being open cut. After construction began, Jackson County informed ISG that they had enacted a new policy that requires all county gravel roads to be bored. Seeding or disturbed areas may require a change order depending on the time of the year the work is done. Sometimes contract extensions are unavoidable due to weather conditions. Unit price bids are required for most items to avoid the need for change orders. If a change order is needed, ISG works with the contractor to determine the best solution before bringing anything to the HLWD.

- Construction pay applications are done on a monthly basis. ISG has built a pay schedule for the contractors based on a deadline provided by HLWD staff. The cutoff date is generally a week in advance of the monthly meeting.

Questions.

- Abandonment of existing tile. If the old tile no longer functions, is filled with dirt, or is collapsing, it is crushed every 1,000 feet and sealed with sakrete. MPCA prefers that the old tile
remain in the ground. If there is some functionality to the old tile, it is broken at the property line and may be connected into the new main. It is the landowner’s decision, generally 50-50, on whether or not the old tile is connected to the new tile. Tile blocks are included in the contractor’s bid. In all cases, the old tile is abandoned completely from the public drainage system. ISG creates an abandonment map. It is an official action to abandon the tile at the final acceptance hearing.

- As-built plans. ISG develops as-built plans of the completed drainage system. Information is available for each landowner. The plans are converted to GIS files. The plans include a record of the new lines, as well as the abandoned lines. This information is provided to the HLWD and the county. ISG also keeps a copy. Until most recent projects, as-built plans were very difficult to find. A final acceptance hearing, the maps are provided and the final pay request is submitted. In the past, drainage authorities did not always hold these hearings. Landowners can have copies of these maps, either printed or digitally.

- Warranty. Minnesota statutes require tile to be under warranty for three years and ditch work for one year. The project must follow the Minnesota public bidding process as required by law. The drainage law states that a final acceptance hearing must be held to accept the project.

- Damages and landowner relations. During construction, earth is moved. ISG field staff takes a lot of pictures before the earth is moved to get a good understanding of topsoil depth before construction. There may be an instance where the topsoil is not replaced to the depth it was before construction. In that case, ISG requires the contractor to fix it. ISG also gathers video footage with a drone to assist in determining how damages should be paid. This footage can show where there are clay spots. Pictures are the best way to show what was there before and after construction. Chris Adams is a licensed drone pilot for ISG. He flies the system and determines that the damages payments are accurate.

  Drone footage creates very large files, so ISG keeps them forever. They could be placed on a thumb drive and provided to the HLWD. At the final acceptance hearing, along with the as-built drawings, ISG provides a file for each branch containing photos from the drone footage. Drone footage has also been made available through YouTube videos.

- JD 30 construction. The contractor intends to start as soon as weather and site conditions allow in the spring of 2020.

6. South Heron Lake (SHL) TMDL Implementation: Phase 3 Grant Agreement
Efforts for this grant are focused on CD 3, which flows into Okabena Creek and then SHL and JD 14 and JD 3, which also outlet into SHL. Projects include 15 alternative side inlets (ASIs) on CD3, four ASIs on JD 14, and a 4.2 acre wetland on JD 3. Mark Bartosh made a motion authorizing Bruce Leinen to sign the grant agreement. Harvey Kruger seconded this. Motion carried unanimously.

7. H2Over Viewers Contract
Jan Voit explained that the contract has been revised to include the price of $2 per acre for the determination of benefits for Jackson County JD 3. The cost will be allocated to landowners based on the determined benefits. Harvey Kruger made a motion authorizing Bruce Leinen to sign the contract. Mark Bartosh seconded this. Motion carried unanimously.

8. Minnesota Association of Drainage Inspectors (MADI) Membership
Jan Voit explained that dues for MADI are $50 for Members and $25 for Associate Members. The HLWD is considered an Associate Member. This organization provides great education topics and pertinent information regarding current events in drainage within the state. Mark Bartosh made a motion to become an Associate Member of MADI for $25. Harvey Kruger seconded this. Motion carried unanimously.

9. Audit Firm
Jan Voit explained that the firm of Danielle L. Berg, Ltd. submitted an audit quote. The proposed cost for 2020, 2021, and 2022 is $5,100 per year. Should additional services be required due to additional state
and/or federal requirements, proposed changes will be communicated and a new engagement letter
would be drafted. The HLWD paid $7,712 for the 2018 audit.

Mark Bartosh made a motion to approve Danielle L. Berg, Ltd. as the audit firm for 2020, 2021, and 2022
at a cost of $5,100 per year. Harvey Kruger seconded this. Discussion was held regarding other entities
for which this firm has conducted audits. Motion carried unanimously.

10. Watershed Technician Laptop Computer
Nobles County leases computers every four years. Catherine Wegehaupt spoke with county staff and
provided a side-by-side comparison for the Board to review. The costs for leasing are more expensive
than outright purchase from Computer Lodge.

Nobles County only uses HP computers. Computer Lodge only handles Dell computers. Discussion was
held regard technical support and warranty. The county goes directly through HP and is provided a
three-year onsite warranty for HP programming. If something happens to the computer, it is not
covered by the warranty. Dell provides a one year factory warranty, not an insurance program.
Computer Lodge will do computer repair work, but that would be a separate cost. The Watershed Technician’s computer is almost six years old. Program updates are done automatically, but no repair
work has been needed on this computer. If the HP option is chosen, the HLWD would have to lease a
new computer every three years.

Harvey Kruger made a motion to purchase the laptop computer from Computer Lodge. Bruce Leinen
seconded this. Motion carried unanimously.

11. Jackson County JD 30 Open Ditch Cleaning
On January 17, ISG distributed bid requests to eleven contractors for cleaning approximately 2,000 linear
feet of open ditch on Jackson County JD 30. One bid was received from Noomen Excavating, LLC from
Currie. The bid amount was $8,050.

Harvey Kruger made a motion to accept the bid amount as recommended by the engineer. Bruce Leinen
seconded this. Discussion was held regarding how the process started. The landowner contacted the
District Administrator over a year ago. She contacted ISG. Jacob Rischmiller explained that ISG has been
exploring options to cover the costs through the warranty and bond because the contractor went out
of business. He also explained that in a typical repair, it comes before the Board. If the estimated cost is
under $175,000, three bids are secured. ISG can be appointed to do the actual work. ISG recommended
securing the contractor rather than spending funds on legal fees to recover the costs through the
bonding company. Motion carried unanimously.

12. Reports
District Administrator
Jan Voit reported on the HLWD Advisory Committee mailing, grants awarded, annual reports, 2019 audit
preparation, JD 3, JD 14, and the meeting with Representative Hamilton, Senator Weber, and county
commissioners and their staff. Bruce Leinen explained that the purpose of the meeting was for the
legislators to hear everyone’s view and ask the counties for their input.

Watershed Technician
Catherine Wegehaupt provided an update on the Schindler Pond bid packet. Bruce Leinen opened the
one bid that was received. It was from Reker Construction in the amount of $40,000.

Catherine Wegehaupt spoke with City of Fulda about the possibility of hauling spoil to dump site. The
city said that it could be done as long as the contractor leveled the spoil. The HLWD has secured cost-
share for the project in the amount of $12,000. Discussion was held regarding the best way to get the
project done since we have been working on it for over a year.

Mark Bartosh made a motion to reject the bid. Harvey Kruger seconded. Motion carried unanimously.
Mark Bartosh made a motion to re-bid the project with bids due the day before the March meeting. Harvey Kruger seconded this. Motion carried unanimously.

Discussion was held regarding hauling the spoil. Mr. Schindler and his neighbor asked if they could have some of the spoil. Catherine Wegehaupt explained that there is more spoil than will fit in the spots that were requested. The neighbor does not want heavy equipment on their property. The bid included taking spoil to the dump. If Mr. Schindler wants spoil, it can be done on site and leveled. She has to check to make sure that no wetlands would be impacted.

Catherine Wegehaupt provided an update on grants approved through the Conservation Corps of Minnesota and Iowa (MCC) for cedar revetments and prairie maintenance, as well as for one summer intern. MCC will let HLWD staff know when someone applies and how the interview process proceeds.

The winter workshop will be held on February 24. Catherine Wegehaupt has been working on contacting the speakers, advertising, and finalizing meals and refreshments. She has also been working on the HLWD annual report.

Discussion was held regarding the Lawns to Legumes deadline for pollinator plots. Cottonwood Soil and Water Conservation District will be contacted regarding this.

Bruce Leinen thanked Jim Buschena for his years of service to the HLWD.

Jerry Daberkow asked about the JD 30 construction. Jacob Rischmiller will discuss this with Chuck Brandel to make sure the crossings were done correctly.

13. Adjournment
   The meeting adjourned at 11:39 a.m.

Harvey Kruger
Secretary