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PROJECT NO. 78, CLAY-WILKIN JUDICIAL DITCH NO. 1-IMPROVEMENT MINUTES FOR PRELIMINARY HEARING AUGUST 30, 2018

Pursuant to Minnesota Statutes Annotated (M.S.A.) 103E.261, and other applicable statutes, the Board of Managers, Buffalo-Red River Watershed District (BRRWD), held the Preliminary Hearing for Project 78, Clay-Wilkin Judicial Ditch (J.D.) No. 1-Improvement on Thursday, August 30, 2018, at 7:00 PM in the BRRWD office, 1303 4th AVE NE, Barnesville, Minnesota. BRRWD Managers present were: John E. Hanson, Gerald L. Van Amburg, Peter V. Fjestad, and Mark T Anderson. Others attending included: Bruce E. Albright, BRRWD Administrator, and Erik Jones, Engineer, Houston Engineering, Inc. (HEI); and landowners Lynn Brakke, John Ready, Darin Brandt, Harold and Ardelle Brandt, Stuart Brandt, Jay Nord, Bryan Kritzberger, Blayne Tonsfeldt, Todd Blilie, Paul Anderson, and Wayne Hoeck.

BRRWD Vice President Peter Fjestad called the Preliminary Hearing to order at 7:00 PM. The purpose of the hearing is to review the petition for the partial improvement of Clay-Wilkin J.D. No. 1. BRRWD Administrator Bruce Albright advised the audience that the proceedings were being video recorded to aid in the preparation of the minutes. He passed around a sign-up sheet to record attendance.

Albright stated there have been numerous informational meetings regarding J.D. No. 1 over the years. He discussed the history of the judicial ditch system near the line between Wilkin and Clay Counties. The BRRWD is the drainage authority for the system. The proposed project is a result of recurring flooding experienced by landowners along the drainage system in Clay County since 2013, resulting in crop loss, delayed planting, and erosion. A petition was filed for a diversion outlet on the county line beginning at Wolverton Creek, proceeding upstream, and tying into J.D. No. 1-Branch No. 1 (north-south alignment). The diversion is intended to alleviate downstream flooding in Clay County by routing the water straight west to Wolverton Creek, reducing flows into Clay County. HEI completed a preliminary analysis of this proposal in 2014. Upon review, it was determined that a partial improvement of the main ditch in Clay County would have greater benefits, cost approximately the same, and potentially could be less controversial. The petition for the Partial Improvement of J.D. No. 1 was filed with the BRRWD on 6/11/18 and was designated as Project No. 78.

BRRWD Administrator Bruce E. Albright explained that the BRRWD has jurisdiction over J.D. No. 1 and is the sole drainage authority on the project. Minnesota Drainage Law guides the hearing process. The BRRWD Board will take testimony from landowners and answer questions to the best of their ability. Both private and public benefits of the improvements will be considered. The Board also looks at the necessity for the project and the adequacy of the project's outlet. The Board can either dismiss the petition or make an order to continue the proceedings. If the decision is made to continue, a Detailed Survey Report will be prepared. The Board will appoint Viewers to determine the benefits to pay for the improvement. The Viewers will establish the benefitting area and benefit rates. A final hearing would be scheduled. Each landowner would receive a notice of hearing and a property owner's statement showing the estimated cost of the project to their benefited acres. Following the final hearing, the Board could then decide to build the project. If adopted, a 30-day appeal period would go into effect to allow anyone who disagrees or has additional concerns not previously addressed to appeal the Order with District Court.

Albright turned the meeting over to HEI Engineer Erik Jones. Using the white board, Jones displayed a map showing the overall layout of the J.D. No. 1 system. The proposed outlet improvement encompasses approximately 24.4 square miles (sq. mi.). Jones indicated on the map the location of the earlier petition

to divert water from J.D. No. 1 at the county line and bring it west to Wolverton Creek to reduce flows into Clay County. The problem with this option was the lack of slope and depth from the field levels. As water comes from the south (Wilkin County) and enters the main east-west channel in Clay County, it slows down and can breakout to the north onto the adjoining cropland. The original county line diversion proposal was expensive and provided only a limited channel capacity. The petitioners decided that a partial improvement of the main channel in Clay County would provide greater benefits by lowering the last 16,160' of the ditch, yielding a better grade and more separation from the bottom of the ditch to the field levels.

Jones gave details on the existing ditch characteristics. While most segments of the ditch have a 20' bottom, limited repairs completed on the west end in 2008 widened some portions to a 28' bottom with a 4H:1V slope (0.02%). The improvement would lower the grade line around 3.5' at the outlet for a consistent 0.04% grade with 5H:1V slopes. No new culverts or culvert sizing changes are proposed, but existing road centerline culverts would need to be lowered to the new grade and extended.

The hydraulic analysis for this project utilized modeling from the Fargo-Moorhead Diversion project. This model provides the most current data along Wolverton Creek and accounts for floodwater storage on the fields during events that exceed the capacity of the ditch. Jones used the overhead monitors to display slides illustrating the current capacity of the channel for the 2, 5, 10, and 25-year flood events versus the ditch capacity after the improvement. The ditch currently conveys between a 2-year and 5-year flood before the water level in the ditch exceeds the adjacent field levels. For the 10-year event, if the channel were lowered, it would keep the ditch system's water surface elevation below field levels. According to the 1978 J.D. No. 1 Improvement Engineer's Report, the ditch had been designed to contain the 15-year event below the general field elevations with the expectation that the spoilbank was going to provide some additional freeboard. Currently, even with the freeboard, during the 10-year event, the water surface elevations exceed the spoilbank elevations.

Jones opened the floor to questions. Landowner Jay Nord questioned why the illustration presented both 10' and 20' channel width options, since the channel currently exceeds the 10' width option. Jones stated a 10' option was reviewed as an alternative, and though it could provide greater depth, narrowing it would be less efficient. The new channel will have 5H:1V side slopes to help with stabilization. He explained that with similar soils, a ditch with these side slopes has been shown to be more stable than the typical 4H:1V slope. The current cost estimate is based on construction on the south side of the channel only. Excavating the ditch on both sides would be less efficient and more expensive.

Manager Mark Anderson asked if the existing culvert field inlets will be reset. Jones replied that the inlets on the side with construction activity (currently south) would need to be reset to match to proposed ditch slope. Selective resets could be done on the other side if a particular culvert needed more depth. The likely solution would be to install riprap at the culvert outlet.

Landowner Harold Brandt Jr. asked why only one side of the ditch would be excavated with the proposed improvement. Jones replied that excavating both sides of the ditch wasn't necessary to improve the drainage, and if both sides were excavated, the project would have a larger footprint, significantly increasing the cost of the project. Brandt commented that if both sides aren't excavated, the project shouldn't be developed. Jones reiterated that working on both sides of the ditch would affect the feasibility of the proposed project. Using the overhead monitors, Jones illustrated how the topsoil stripping would be accomplished. He explained that the north side of the ditch would be left as is with no changes to the slope. There would be approximately 20% more stripping costs if both sides were altered. Brandt commented that if only one side is excavated, the ditch will actually end up being moved

further south. Jones agreed that the bottom will move and the outlet pipes at Wolverton Creek will move south as well, but since the pipes will be lowered either way, it wouldn't be a problem. He thought it would be best not to disturb the north slope since it is currently fairly stable.

Jay Nord pointed out that the project will require additional right-of-way (R/W) to the south, but there would be more R/W needed if both sides were excavated. Albright pointed out that the R/W acquisition costs are rolled over into the total project costs for which the landowners will be assessed.

Landowner Darin Brandt asked if a narrower channel bottom width could save money. Jones explained that narrowing the channel width would yield less benefits in terms of lowering the water surface profile. Landowner Bryan Kritzer mentioned that a 10' bottom would limit the ability to increase the inlet culvert sizing in the future. Anderson asked if the ditch automatically gets narrower when you go deeper. Albright said when you only take out the bottom of the wedge, it requires less excavation, but it doesn't greatly increase the ditch system's capacity.

Albright assured the landowners the BRRWD and HEI recognize that this is their land, their project, and their money. The goal is to do what will be most beneficial and provide the best solution for the ditch system. He referred to a previous project where landowners cutback in every aspect of the construction to save money, but within a year of completion, they complained that the ditch was too shallow and not working as they had hoped. He also pointed out that the proposed improvement isn't going to provide a ditch that will handle all events, but it should handle the 10-year event, according to Jones' design. Nord added that a 10' bottom would collect silt, but silt would not accumulate as quickly in a 20'-28' bottom.

Using the overhead monitors, Jones reviewed the cost estimate. Excavation will be the greatest cost for the proposed J.D. No. 1 improvement. Roughly 285,000 cubic yards (cy) of material would be removed for a 20' bottom. A 10' bottom would require 217,000 cy of excavation. Using an average of \$4/yard, total excavation costs for the 20' bottom would be \$1,140,000; seeding and mulching for 53 acres at \$1,000 per acre would be \$53,000; culverts and flapgates-approximately \$251,210; riprap-approximately \$27,000; and erosion control-\$10,000. Using the project map, Jones discussed the sizing and location of the ditch centerline (3) pipes. The temporary R/W is estimated to cost \$10,920 (36.4 acre @ \$300/acre) and permanent R/W would \$100,000 (20 acre @ \$5,000/acre). The total opinion of probable project costs is \$2,143,372.

Manager Anderson asked if the permanent R/W acreage would increase if both sides were excavated. Jones thought that the permanent R/W acreage costs would be slightly more because we would be disturbing land on both sides of the ditch, and the seeding costs would also increase.

Albright explained the potential project funding process. He thought the BRRWD would need a bond sale, allowing the costs to be spread over several years. Another benefit of a bond sale is that currently interest rates are low. He added that if the Board decides to move forward, this could be a 2019 project. Albright discussed the estimates, noting that these figures are not firm until the project is built. Jones noted that his estimate is conservative, using 20% of the costs for contingencies, which are unknown until the project is underway.

Albright noted that the hearing is also an opportunity to question the validity of the petition. By law, the petition was reviewed by BRRWD Attorney Tami Norgard, Vogel Law Firm. She had to determine if the petition signers represented at least 26% of land that the improvement passes over. Norgard found that the petition represents roughly 39% of total acreage, and it meets statutory requirements for an improvement. Secondly, the original project petitioners had to provide a bond to cover current project

development costs. Currently, the bond amount is at \$60,000. If the project isn't developed, the original petitioners are liable for the new petition costs to date. If they don't pay, the BRRWD can go to their insurance company to recoup our costs.

The Engineer's Report, which can also be found on the BRRWD's website, was sent to the Minnesota Board of Water and Soil resources (BWSR) and the Minnesota Department of Natural Resources (DNR) for their advisory comments. Their comments will be incorporated in the Detailed Engineer's Report. Anderson added that sometimes the agencies will require an archeological survey or an Environmental Assessment Worksheet (EAW), but nothing like that was requested for the J.D. No. 1 project.

Albright talked about the previous repairs/changes made to the system over the years, and the current poor performance of the outlet. Landowner Blayne Tonsfeldt commented that everyone understands we can't prevent a 2013 type flood event from affecting everyone, but we should be able to address lost crop from only a 1.5" to 2.5" rainfall. As the ditch performs currently, it has become a detriment to the adjacent landowners on the outlet.

Albright noted that the system outlet, Wolverton Creek, is finally under construction and will be restored. Jones stated the modeling showed that the peak flows coming from J.D. No. 1 tends to be slightly ahead of the main stem flows and shouldn't affect the peak levels on Wolverton Creek. After the Wolverton Creek restoration is completed, the affect should be even smaller given the new wider floodplain channel that will be meandering within the Creek bed.

Nord asked if the 5H:1V slope will help or hinder spring runoff during the snow melt. Albright thought it should help because the channel will be wider across the top. He noted that the ringdikes that have been built for adjacent farmsteads within the benefit area addressed the imminent spring flooding threat to those properties and eliminated the need to preemptively open the ditch every spring.

Harold Brandt asked whose idea it was to excavate only the south side of the ditch. Jones said it had been his design to help save costs. Albright commented that it is a fact that water overtops the ditch to the north and when that happens, the landowners don't get the protection benefits they expect from the ditch system. Jones commented that if the landowners want to raise/excavate the north side, now is the time to change the plans to incorporate more protection to the north. Brandt said that the north side has always been a little higher for protection but adding spoil to the south embankment doesn't make any sense. Albright said that with the current design, dirt could be added to the south side and still keep it lower than the northside. Brandt thought both sides should be excavated, and the north berm improved/enhanced.

Landowner John Ready asked what the longest bond repayment terms might be. He feels he's currently being taxed to the limit. Albright suggested that bonds can be sold at different rates and terms. He noted that one of the important issues is bond interest rates, but Ready felt that the landowners' cash flow was also an important issue. He felt that that the estimated \$17/acre cost is too much over a ten-year repayment option at 5% interest.

Brandt asked if any more land will be added into the ditch. He thought there were too many properties draining to the ditch now. Albright said this project shouldn't add any new lands into the system. Adding new lands would be a separate process.

Anderson noted that with this process, the Viewers could redetermine the current benefit rates. Albright reviewed how benefit rates changed with the 1970s redetermination. Ready pointed out that he wasn't

against the project but hoped that the bond repayment schedule could be spread out over as many years as possible. Paul Anderson noted that an individual landowner can either finance their assessment or pay it in full at any time. Albright explained that as the project develops, the BRRWD could work with Clay County and Ehlers and Associates, Inc., to determine the best possible rates and bond terms, and then discuss the options with the landowners at the final hearing.

Albright noted that Jeff Nord, who owns/operates land on J.D. No. 1, was in the office to discuss the project. Nord pointed out that landowners on the south end of the ditch system in Wilkin County are assessed to several ditch systems, and he hoped the Viewers would keep this issue in mind when setting the project benefit rates. Jones estimated a rate of \$17.71/acre/year for 10 years for all lands within the benefit area, assuming an interest rate of 5%.

Jay Nord asked if the J.D. No. 1 ditch committee had any other issues regarding J.D. No. 1 maintenance. Albright noted that where Branch No. 1 ends in Section 18, Deerhorn Township, Wilkin County, there is significant erosion occurring on the upstream Altenbernd property. He discussed a couple of options to address this issue. Albright added that J.D. No. 1 already should have the required one-rod grassed bufferstrip in accordance with the 2015 Buffer Law. Lynn Brakke, who is a member of the ditch committee, remarked that over the years, most of the problems have been addressed, so that currently, the ditch requires only minor annual maintenance.

Vice President Fjestad asked if the audience had any other concerns or comments regarding the proposed project. Ron Hoeck asked about the effects of the F-M Diversion on flows under County Road (C.R.) No. 2. Jones noted that the C.R. No. 2 culvert is proposed to be the same size with the Diversion plan. The Diversion Authority (DA) is hosting an open house in Moorhead on 9/13/18 regarding "Plan B". Comments on "Plan B" are due by 9/27/18. There was an extended discussion about the DA's project and possible impacts to the J.D. No. 1 area.

Bryan Kritzerberger asked if the landowners could move the dirt themselves. Jones wasn't sure about what the Minnesota Statutes' requirements/liability issues are for a legal ditch system project. Albright commented that we should wait and see how the construction bidding turns out before making any decision about the landowners doing the excavation.

Vice President Fjestad asked if there were anymore comments. Albright noted that the Board will consider an Order to continue the project development in the next few weeks when all the Managers are present. If the Order is approved, the Viewers can start their work yet this fall and then we can plan to hold the Final Hearing sometime in January. Albright suggested that Jones should provide an estimate for an alternative where both sides of the ditch are excavated. There was a brief discussion about the ditch berm elevations/slopes. Manager Van Amburg observed that from the comments at tonight's hearing, he thought the Board would approve the Order to move the project forward.

Vice President Fjestad asked if there was any further testimony to be presented. There being none, **motion** by Anderson to adjourn the hearing, **seconded** by Van Amburg. **Approved.** Vice President Fjestad adjourned the Preliminary Hearing at 8:15 PM.

Respectfully submitted,

John E. Hanson, BRRWD Secretary