

BUFFALO-RED RIVER WATERSHED DISTRICT

BARNESVILLE, MINNESOTA 56514

123 FRONT STREET SOUTH – PO BOX 341

PHONE 218-354-7710

MINUTES FOR STRUCTURE CAPACITY HEARING Project No. 1, Wilkin County Ditch No. 22, Lateral No. 2 April 23, 2009

Pursuant to Minnesota Statutes Annotated (M.S.A.) 103E.721 and any other applicable statutes, the Board of Managers, Buffalo-Red River Watershed District (BRRWD), held a hearing on Thursday, April 23, 2009, at 7:00 PM in the Community Center, Comstock, MN. BRRWD Managers present were Roger G. Ellefson, Gerald L. VanAmburg, E. Robert Olson, and Curtis M. Nelson. Others attending included Bruce E. Albright, BRRWD Administrator, Erik Jones, Engineer, and Zach Herrmann, Engineer, Houston Engineering, Inc. (H.E.); landowners: Jeff Nord, Dennis VanWechel, Jay Nord, Gail White, Steven J. White, Carl Nord, Sheri Buchholz, Michael Aigner, Michael A. Ernst, Bryan Kritzerberger, Ross Aigner, and Donald Bohner.

Chairman Ellefson called the hearing to order at 7:00 PM and introduced the BRRWD Board and staff. He noted that the proceedings were being taped to aid in preparation of the minutes. Ellefson explained that tonight's hearing was convened to discuss the hydraulic capacity report for centerline structures on Wilkin County Ditch No. 22, Lateral No. 2.

Albright gave a brief history of the issues regarding the improvement of County Ditch No. 22 and the installation of the three laterals. The improvement project was completed in approximately 1981. Albright noted that we are currently experiencing a wet cycle that began in 1993, and highwater problems are prevalent throughout the BRRWD. Last year, landowners along Lateral No. 2 contacted the BRRWD regarding drainage problems. The Board hired William Nichol Excavating, Inc. to clean Lateral No. 2. Because of wet conditions/unharvested crops last fall and this spring, Jeff Nichol has not been able to complete his work.

Even though the BRRWD had authorized a ditch cleanout, the landowners felt that there were problems with the capacity of some of the centerline structures on Lateral No. 2. According to M.S.A. 103E.721, if the Engineer determines that a structure no longer serves its original purpose, he can review the culvert sizing and recommend changes to the drainage authority (Board of Managers, BRRWD). Jones did conduct a structure review and filed a letter on 3/05/09 recommending proposed structure changes for Lateral No. 2. Once the report was filed, Drainage Law requires the BRRWD to notify the affected landowners and hold a hearing to discuss the proposed changes/costs. Based upon the testimony given at tonight's hearing, the Board will determine if the existing culverts are insufficient in capacity for the efficient operation of the ditch and then issue an Order for the proposed structure changes.

Albright distributed an attendance sign-up sheet and encouraged the audience to state their names for the record when asking questions or giving testimony. He expects that the Board would be making a decision regarding this issue at their 4/27/09 meeting. If the Board decides to order in the project, it will be followed by a 30-day appeal period.

Albright introduced the project engineer, Erik Jones, H.E., who presented his findings/proposal regarding the Lateral No. 2 structures.

Jones discussed his review of ditch improvement plans from the 1980s and his evaluation of the structure capacities along Lateral No. 2. At the outlet, the ditch can carry approximately 0.8" of runoff per day. Further upstream the capacity decreases to approximately 0.5" per day. Jones explained that his recommendations include adding culverts next to the existing pipes to match the 0.8" capacity along the entire lateral, which should be enough capacity to drain a 3" to 4" during a 24-hour rainfall event from a typical field in about 1-2 days. Jones displayed a map showing the location of Wilkin County Ditch No. 22 and its laterals. He acknowledged that Lateral No. 2 was always a shallow ditch. The ditch is approximately 3.5 miles long with 2'-5' per mile grade with a 0.4%-0.1% slope. One of the limiting factors for ditch performance is elevation from the field level to the ditch bottom; the ditch grade varies in depth from about 3.5' to 2' on the upper end. Larger pipes would address the drainage problems along this lateral because currently, before the culvert is full, the water has broken out of the ditch onto the adjacent field.

Jones doesn't recommend any structure changes, except for the upstream 1.5 miles of the ditch. The entire ditch is located in Mitchell Township. The first crossing at the downstream end is a 42" dia. corrugated metal pipe (CMP) with 10 square feet (sq. ft.) of waterway area. In Section 4, there is another 42" dia. CMP in a field entrance at the quarterline. On the line between Sections 3 and 4, there is a 36" x 22" CMPA that has about 4.5' sq. ft. of waterway. Jones proposes to install a second CMPA that will have a similar waterway area as the existing pipes, for a combined waterway area of approximately 9 sq. ft. The next crossing 0.5 miles to the east, near the quarterline in Section 3 at Sta. 104+47, will also have another culvert added for approximately 9 sq. ft. of waterway area. On the line between Sections 2 and 3, or Sta. 131+80, the existing pipe is a 36" x 22" CMPA, having about 4.4 sq. ft. of waterway, and Jones proposes an additional line of 24" dia. pipe in this location to increase the total waterway area to approximately 7.5 sq. ft. On the quarterline of Section 2 or Sta. 157+ 81, Jones proposes to add another 24" dia. pipe to the existing 24" dia. culvert to increase the waterway area to about 6 sq. ft. Jones recommended that the last (24" dia.) structure on the ditch system at Sta. 184+43 between Sections 1 and 2, should not be changed.

Jones explained that his goal for the project is to give all the landowners along the ditch system equal opportunity to access the ditch system with similar performance throughout. Ellefson asked if Jones planned to lower any of the structures. Jones said it would require a ditch improvement proceeding to lower the ditch bottom and structures. He felt that his suggested changes would provide significantly better drainage than the existing conditions. The estimated total project cost is approximately \$12,500.

Jeff Nord asked how the additional culverts would be installed. Jones explained that the culverts would be placed side-by-side with the existing structures, and if necessary, the channel could be modified slightly to accommodate the additional culverts. Nord asked why Jones recommended installing the culverts side-by-side instead of stacked one higher than the other. Jones explained that because the ditch is so shallow, the new pipe higher wouldn't be utilized before water would back into the adjacent field. Ideally, the pipe should run full to maximize the ditch performance.

Carl Nord asked if Jones surveyed the existing culverts before proposing these changes. Jones explained that they will verify the condition of the existing culverts before giving a contractor a list of materials to order, assuming the Board approves the changes. Albright commented that the culverts were all new in 1981. Jones pointed out that soil conditions impact a culvert's life span with some lasting only about 15 years and some lasting nearly 50 years. Nord suggested Jones could consider replacing the existing culverts with a new single line larger arch pipe. Jones was still concerned that the culvert needed to reach full capacity before water spilled out into the adjacent field.

Ross Aigner had another question about the culvert/earthen material review. Jones explained that all those issues are considered for a standard ditch repair and could be done without a ditch improvement hearing. During the recent ditch repair, the contractor didn't have time to level the spoil because of weather

problems. Jones pointed out that if there are areas where the spoil needs work, the landowners should contact the BRRWD so we can get the contractor out there to clean up the site and possibly raise the berm in low areas.

Jeff Nord questioned the proposed additional culverts/sizing. His goal for the project was to increase drainage so that the outlet culverts would run full to capacity, but not so that water would break out of the ditch. This spring, water broke out of the ditch and cut a 5' to 6' wide gully through his neighbor's field. He acknowledged that this spring the runoff was greater than normal. Albright commented that if the Board decides to adopt the Engineer's Report and move forward with the project, their Order could include a provision not to change the last two existing upstream culverts and monitor them to see how they function with the proposed downstream culvert changes. If it proves necessary to change them, we can go ahead with the work according to the Engineer's recommendations without having to hold another hearing.

Dennis VanWechel thought that as long as they have more capacity downstream, the proposed changes will improve drainage. Jones explained that his project design was an attempt to provide orderly drainage along the entire reach of Lateral No. 2. Albright commented that with all drainage projects, there will always be downstream concerns. The ditch design is for a 5-10 year runoff event, and there is no way to prevent events greater than that from flooding the adjacent and downstream areas.

At 7:30 PM, Chairman Ellefson asked if there were any further questions or comments regarding the proposed project.

Michael Aigner questioned if there was a maintenance schedule for the last two miles of the main ditch. He noted that there is a heavy growth of cattails on Wilkin County Ditch No. 22-Main, and there are trees and cattails on Lateral No. 2. Ellefson noted that the ditches are inspected annually for vegetation, and we spray for cattails and trees where needed with a helicopter. Albright explained that Wade Opsahl, Technician, H.E., inspects the BRRWD ditch systems annually, but he wasn't sure the stretch of ditch Aigner mentioned was sprayed last year. Aigner noted that in the downstream 0.5 miles of Lateral No. 2 the tree growth backs up water into Section 4. Albright and Ellefson commented that the BRRWD did have the trees cut on Lateral No. 2 last year. Albright noted that the stumps would have to be treated so they won't regrow. Ellefson noted that Opsahl would be directed to check the area in question this summer when he does the inspections.

Jeff Nord briefly discussed the need for ditch committees within the BRRWD. Ellefson said that no committee has been appointed for Wilkin County Ditch No. 22, but if a landowner sees an area on the ditch that needs work, he should contact the BRRWD office. Albright explained that the BRRWD covers a large area, and it is difficult for the staff to monitor every mile of ditch system, so if the landowners along the ditch see a problem, they need to let the office know about it.

Ellefson asked the group if they wanted to organize a ditch committee. Albright noted that currently, Opsahl is inspecting the ditch systems to record flood damages for Federal Emergency Management Agency (FEMA). FEMA will pay 75% of flood repairs, and the State of Minnesota will pay the remaining 25% of the costs. Jeff Nord thought that a ditch committee might be a good idea, given the size of Wilkin County Ditch No. 22 and the three laterals. Ellefson commented that it would benefit the BRRWD if there were a committee. Albright suggested that we review the ditch system landowners and discuss this issue again later. Donald Bohner asked how many committee members are needed. Ellefson said that there are three landowners serving on the Clay/Wilkin Judicial Ditch No. 1 (J.D. 1) committee. He thought that there could be four, one for each lateral, and one for the main ditch. Jeff Nord expressed an interest to serve on a County Ditch No. 22 committee and thought four members was a good idea. The group discussed other possible candidates for the committee and length of the committee term. There was also a

discussion about whether or not land tenants or landowners should serve on the ditch committee. The BRRWD will consider the appointment of a ditch committee at their next meeting.

Chairman Ellefson asked if there were any further questions or comments to come before tonight's hearing. There being none, he adjourned the hearing at 7:50 PM. A decision regarding the proposed structure changes will be considered at the 4/27/09 BRRWD meeting in Barnesville.

Respectfully submitted,

Bruce E. Albright, BRRWD Administrator