

BUFFALO-RED RIVER WATERSHED DISTRICT

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PROJECT NO. 79, WOLVERTON CREEK RESTORATION MINUTES FOR FINAL HEARING August 15, 2017

In accordance with Minnesota Statutes Annotated (M.S.A) 103D.605, 103D.729, and any other applicable statutes, the Board of Managers, Buffalo-Red River Watershed District (BRRWD), held a hearing for Project No. 79, Wolverton Creek Restoration, on Tuesday, August 15, 2017, at 7:30 PM in the BRRWD office, 1303 4th AVE NE, Barnesville, Minnesota. BRRWD Managers present were Gerald L. VanAmburg, John E. Hanson, Jay A. Leitch, Catherine L. Affield, Peter V. Fjestad, and Mark T. Anderson. Others attending included: Bruce E. Albright, BRRWD Administrator, Erik Jones, Engineer, Ted Rud, Engineer, Houston Engineering, Inc. (HEI); Pete Waller, Board Conservationist, Minnesota Board of Water and Soil Resources (BWSR); Don Bajumpaa, District Manager, Wilkin Soil and Water Conservation District (SWCD); Steve Neppl, Assistant Engineer, and Tim Christopher, Maintenance Superintendent, Wilkin County Highway Department; and landowners: Violet Gruenberg, Barb Sorenson, Tom Paulson, Jay Nord, Michael Mastin, Paul Israelson, Jeff Nord, Harvey Hoyme, Jon Evert, Hugh J. Trowbridge, Rod Rohlf, Dennis Van Wechel, Robert Nord, Ken Linsey for Myrtle Nord, Lynn Brakke, Jeff Nichol, John Ready, Darin Brandt, Michael Brandt, Michael Matz, Nathan Matz, Jim Briks, Jerry Butenhoff, Don Nelson, Brice Bellmore, Ardis Nygaard, Mel Nygaard, Dan Olsgaard, Lowell Picotte, Steven Thompson, John Thompson, Pete Thompson, Don Bohner, Bradley Nelson, and Mark Askegaard.

BRRWD Chair Gerald L. Van Amburg called the hearing to order at 7:30 PM. He introduced the BRRWD Managers and Staff. BRRWD Administrator Bruce Albright advised the audience that the meeting was being recorded. He passed a sign-up sheet for the audience to record their attendance.

Albright gave a brief history of the project. In the 1950s, landowners worked with the Soil Conservation Service (SCS) to develop a project for Wolverton Creek in accordance with Public Law (PL) 566, which didn't result in any work. In 1984, the PL 566 project was revisited, but then abandoned in favor of the idea of creating a legal ditch system to provide funding for maintenance. Also in the 1980s, the Minnesota Department of Natural Resources (DNR) designated Wolverton Creek as protected waters from the Red River upstream to County Road (C.R.) No. 30, effectively eliminating the possibility of a comprehensive channel restoration project because the DNR was not issuing permits for natural waterway maintenance/restoration projects at that time. Over the years, the BRRWD formed steering committees and held informational meetings to continue discussions about the development of a project for Wolverton Creek. In the early 1990s, the Clay SWCD staff obtained a BWSR grant for a project to work on the outlet to the Red River to stop the erosion at the north end of Wolverton Creek in Clay County, where the outlet was degrading, or downcutting. A second grant was obtained in the late 1990s that was used to conduct a survey of the entire channel. The results of this work led to the acquisition of a DNR permit in 2014 for the proposed channel restoration project, which we consider to be a major accomplishment. The permit is valid until 2019 and is probably the first one of its kind in the State from the DNR. The Board is determined to get started on Phase 1 of the project yet this fall, pending landowner input at tonight's meeting. Albright briefly reviewed the meeting agenda, and then turned the meeting over to Ted Rud, Engineer, HEI, to discuss the project engineering and design.

Using the overhead monitors, Rud displayed several slides regarding the design components of the project. The first slide showed the location of the 104 square miles (sq. mi.) watershed area of Wolverton Creek and the legal ditch systems that outlet into the creek. He explained that the purpose of the project is to

reduce channel sediment and address overland flooding for the 10-year event by establishing a low flow 2-stage channel. Rud noted that over 95% of the watershed is actively farmed. In 2008, a restoration was completed on the Creek downstream of Trunk Highway (T.H.) No. 75 and the legal drainage systems that outlet into the Creek, including the installation of rock riffles, vegetative buffers/side inlets, and targeted best management practices (BMPs) to address the effects of erosion. The project design incorporated data from the International Water Institute's (IWI) 2008 Light Detection and Ranging (LiDAR) project and HEI's 2009 channel study, which resulted in modeling we could use to produce maps for the 2, 5, and 10-year floodplains. Albright explained that a 2-year event has a 50% chance of happening in any given year (2.25 to 2.5 inches of rainfall per day), a 5-year event has a 20% chance (3.5 inches), and a 10-year event has a 10% chance (4 to 4.5 inches).

Rud displayed slides showing channel geometry tables and drawings. He noted that they worked closely with the DNR on the design of the 2-stage channel when applying for the Public Waters Work Permit. He explained that the meandering low flow channel would convey the flows about 95% of the time with a higher, wider contained floodplain, or "valley", to contain higher flows. He explained in the upstream reaches of the channel in Mitchell Township, the low flow channel width would be approximately 4 feet with the valley width at approximately 30 feet. As the project moves downstream and the drainage area and flows increase, the channel geometries also increase. At the halfway point of the channel alignment, the low flow channel width will be approximately 15 feet with a 100-foot to 110-foot wide valley. Downstream near T.H. No. 75, the channel width is approximately 18 feet with a 115-foot to 125-foot valley. The floodplain channel will have a 4H:1V slope up to the natural ground (floodplain embankment) to prevent erosion. To comply with DNR guidelines and to slow down the flow velocities, Rud explained that the design includes pools on the outside of the low flow channel bends, which mimic pools which would be expected on natural channels. Albright noted that the meandering channel design is meant to create a "self-sustaining" waterway, where it may cut on the outside bend, but will deposit the sediment on an inside bend. He noted that on the Whisky Creek Tributaries restoration project east of Barnesville, both a meandering channel and a conventional channel were constructed. Several years later, the conventional channel had accumulated 3'-4' of sediment that had to be removed, but the meander channel is still working well with minimal build up.

Rud discussed the restoration concept plan with slides showing where side inlets could be located, possible sizes/lengths of those structures, and a typical field inlet section drawing. The BRRWD will work with landowners regarding the location and number of side inlets on their property. He also showed the plan and profile sheets for the channel restoration. There is about 2 feet of sediment in the first one-third of the channel (Reach A) from T.H. No. 75 to 0.5 miles south of the Clay/Wilkin County line. The middle reach (Reach B) includes all the channel from 0.5 miles south of the County line upstream to County Road (C.R.) No. 30. In this stretch of the creek, there are sediment depths from 2 to 4 feet. Further upstream from C.R. No. 30 to Section 17, Mitchell Township, Wilkin County (Reach C), the sediment depths are from 0 to 2.5 feet.

Rud explained that we plan to start the channel restoration in Reach B where the channel has the greatest amount of sediment and daylight on either end so that the channel won't fill up again before the other two phases are completed. Depending on funding availability, following completion of the work in Reach B, we could work on both Reach A and C at the same time, or if funding is limited, work would be done in smaller portions in Reach C, as funding becomes available. Albright explained that the last phase of the project would be just general maintenance in Reach A, which is the outlet portion of the project in Clay County, where restoration work was already completed a few years ago.

The total cost of the proposed project is estimated at \$10.4 million. Rud reviewed a breakdown of HEI's Opinion of Probable Cost. Of total project costs, \$5.7 million is estimated for construction, \$3.18 million for land easements, and the balance for engineering, administrative, legal, and contingencies.

Albright commented that the proposed project should address the common concerns of sedimentation in the centerline of the channel and the erosion/downcutting that is creating new channels on either side of the old channel centerline. Another issue is the fact that the project will not be able to reestablish the old Creek gradeline because the original bridges on the Creek were replaced with culverts, which limits excavation depths. He explained that the engineers are certain they will be able to make the channel hydraulics work with the proposed grades.

Albright reviewed the project funding and the associated restrictions that come with each source. The project costs will be financed by the BRRWD and their M.S.A. 103D.905, Subd. 3, account (\$2 million); water management district (wmd) fees; the BWSR Targeted Watershed Demonstration Program Clean Water Fund (CWF) Grant (\$2.8 million); a Lessard-Sams Outdoor Heritage Council (LSOHC) grant in the amount of \$1.877 million, an Enbridge Ecofootprint Grant (\$100,000); and possible funding sources yet to be identified including the Natural Resources Conservation Service (NRCS) Wetland Restoration Enhancement (WRE) Program, or the Conservation Reserve Enhancement Program (CREP). Albright mentioned the proposed wmd fees, which are based on a modified combined runoff and erosion method, using both runoff and sediment loading. The fee is expected to generate approximately \$100,000/year for a period of 10 years to help fund the local landowner share of project construction and maintenance costs. Albright noted that the project will be constructed in phases as funding becomes available. He added that the BRRWD's goal is to incorporate features (buffers and side inlets) to ensure that the project will continue to function as designed well into the future. Because Wolverton Creek is the outlet for several area legal and private drainage systems, it needs to function at peak performance.

Erik Jones, Engineer, HEI, explained that the goal of the project is to provide a 10-year event capacity for Wolverton Creek by cleaning the channel, expanding the buffers, and installing BMPs to reduce sedimentation (side inlets). The BRRWD has the authority to establish a wmd and collect revenues for a project initiated by Board Order in accordance with M.S.A. 103D.729. Jones discussed how the wmd fees were calculated and how they will be implemented to fund the local share of the project costs. The general method used to determine the wmd fees is based equally on runoff volume and sediment loading contribution to the Wolverton Creek watershed. Using LiDAR data, the engineers were able to delineate a contribution area to the Creek. The LiDAR data didn't include culvert information, so HEI had to conduct a structure field inventory, and the culvert data was loaded into the elevation grid to create an adjusted digital elevation model.

Runoff contribution was based on soil type and land use. The land use is based on the 2011 National Land Cover Database (NLCD), which was manually corrected to reflect actual land use. Land use was broken down into four categories: rural farmstead (low intensity use), city parcels (medium); natural areas (including gravel pits/Wetlands Reserve Program (WRP), etc.), and cultivated crops. The soil type and land use data were analyzed to determine a land use class for an individual parcel. Then the total runoff volume for all the land in each category was divided by the total number of acres in that category to produce a typical runoff value per parcel in that category. The same process was used to determine sediment contribution per category, based on factors including land cover, management practice, climate, slope, and slope length. The average fee is \$1.50/acre across all categories, ranging from \$0.25 (natural area) to \$1.59 (cropland), based on 50% sediment contribution/50% runoff volume. Jones explained that the wmd is set up as a perpetual assessment, but the Board will review the assessment annually, based on funding needs.

Paul Israelson asked if the fee amount would ever go up from the \$1.50 rate. Albright said that the Board could raise less in a given year, based on need, but not more than \$100,000 annually, based on the maximum rate of \$1.50. If the Board wanted to raise more, they would have to go through another hearing process to make that change. Manager Fjestad pointed out that the BWSR grant requires a local match. Jones explained that the \$2.8 million grant is split 75% (CWF)/25% (local match).

Jeff Nord asked how many years the BRRWD expected to levy the maximum fee. Albright explained that the Board must review the fee assessment annually at their budget hearing. If landowners have concerns about their assessment, they are welcome to attend the budget hearing and provide input. In addition, this fee can only be used to pay for Wolverton Creek project related expenses. The project easement acreage will not be assessed a fee because the easements are required for the DNR permit. Albright encouraged the landowners to review the wmd maps situated around the room. If there is an area the landowner thinks should be field verified, he asked that they mark it on the map.

Albright discussed the project Operation and Maintenance (O&M) Plan. In the past, Wolverton Creek didn't have an "owner", who was responsible for maintenance. With this project, the landowners within the wmd would be the project owners, and the BRRWD would assume responsibility for project maintenance. He also explained that permanent easements will be acquired from the landowners along the creek from the Red River to the upper reaches in Section 17, Mitchell Township, funded by the referenced State/Federal programs. The total cost of project easement acquisition is estimated at \$3.1 million.

Don Nelson asked if the easement areas would be open to the public for hunting, etc. Albright assured him that the land wouldn't be open to the public and could only be hunted by permission from the landowner.

John Ready was concerned about all the projects in his area and the costs/taxes for each.

Don Bajumpaa, District Manager, Wilkin SWCD, commented on the cost of the easement acquisition (\$3.1 million). He noted that for most of the County ditch improvement projects, the landowners donated the right-of-way (R/W) with the reasoning that if the total cost of their project is lower, then their assessments would also be lower. The loss of the easement payment would be made up for in lower taxes. The Bois de Sioux Watershed District is developing a project where the landowners agreed to donate their easement payments, and the value of their contribution was used as part of the match of their BWSR grant. Albright noted that the Board will be working with the individual landowner regarding easements, and this option could be discussed.

Albright explained that the Engineer's Report was filed with the DNR and BWSR for advisory comments. The DNR had no comments. Albright shared some of the comments from Al Kean, Project Engineer, BWSR. He encouraged the attendees to provide comments regarding the project. The Board will make a decision in the next several weeks about adopting the project Order, which includes the assessment of the wmd fee. They will take the landowners' comments into consideration. The Order is subject to a 30-day appeal period, which should be filed with BWSR. If the Board does make the Order to move forward with the project, they want to start construction and temporary easement acquisition yet this fall. State and Federal easement funding could take time to put in place, so temporary easements would allow construction to move forward.

Harvey Hoyme asked about the BRRWD's options for acquiring easements. He has concerns about the additional taxes on his property and the easement values. Albright explained that if all alternatives fail in the easement negotiation process, the BRRWD does have the right of eminent domain, but has rarely used it. The group had a discussion regarding easement values. Hoyme felt that he was already paying too many taxes on his land, and the project would just add another unwanted tax. He also objected to the proposition that landowner donate their land for the project easements.

Bradley Nelson commented that taxes always seem to keep increasing. He bought property along the Creek, and he understands that he will lose some cropland to an easement, but the project will benefit his remaining acreage. Albright pointed out that the problems on Wolverton Creek are not going to "fix

themselves". On Nelson's property, because of the depth of the sediment in the channel, the water has cut two new channels on either side of the original channel.

Jeff Nord asked what the estimated cost was for the proposed project in the 1950s. Albright wasn't sure and offered to check the files. He discussed the proposed project, which would have been developed as a soil conservation "treatment" project for the entire watershed.

Someone asked if any work was planned downstream of T.H. No. 75 north to the Red River. Jones said that this stretch of the channel would just need buffers. Since the outlet to the Red River was improved a few years ago, there is no channel construction planned for this area. The landowner asked why that area was included in the wmd fee. Van Amburg commented that this area is being protected by the upstream project because without the project, the outlet will fill up again with sediment. Jones added that any future maintenance costs at the outlet of the Creek would be an eligible wmd expense.

Manager Leitch commented that to put the costs into perspective, \$1 million in 1950 equals \$10.4 million in today's economy.

Jeff Nichol asked if the channel capacity will be improved by this proposed project. Jones explained that following a catastrophic event like the 9" rainfall a few years ago, water will still breakout of the creek. This project is designed for a 10-year event (4"-4.5"), but not for the 100-year. Albright pointed out that the project might not change the quantity of flooding during large events, but the project will improve water quality in the event of major flooding because of the buffers and side inlets. Hoyme pointed out that the 9" rainfall event was rare.

Jim Briks commented on the F-M Diversion upstream staging area boundary. He pointed out that the diversion would back water up over the entire project to the outlet. He questioned if there might be possible funding available from the Diversion project because this project will increase holding capacities on a tributary to the Red River. Briks also suggested that control structures might also be a retention feature the Diversion Authority might fund. Jones pointed out that the project watershed is not conducive to water storage because the area is so flat. Manager Anderson commented that retention projects are more feasible in the middle or late contribution areas. The proposed project area is in the early stage for the peak flood timing. A brief discussion followed regarding upstream retention projects.

Paul Israelson encouraged the Board to move forward with the project. Jeff Nord also spoke in favor of the propose project because Wolverton Creek is the main drainage outlet, and it needs to function properly.

Albright reiterated his invitation for the landowners to review the project wall maps and to take copies of the informational handouts.

Chair Van Amburg asked if there was anyone else who wished to give testimony or ask a question. There being none, **motion** by Anderson to adjourn the meeting, **seconded** by Leitch. **Approved.** Chairman Van Amburg adjourned the hearing at 9:22 PM.

Respectfully submitted,

John E. Hanson, Secretary