

BUFFALO-RED RIVER WATERSHED DISTRICT

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BUFFALO-RED RIVER WATERSHED DISTRICT BARNESVILLE TOWNSHIP AREA DRAINAGE Minutes for Landowner Informational Meeting May 28, 2015

The Board of Managers, Buffalo-Red River Watershed District (BRRWD), held a landowner informational meeting regarding the Barnesville Township Area Drainage project on Thursday, May 28, 2015, at 7:00 PM in the BRRWD office, located at 1303 4th Avenue NE, Barnesville, MN. BRRWD Managers present were Gerald L. Van Amburg, Mark T. Anderson, John E. Hanson, and Peter V. Fjestad. Houston Engineering, Inc. (HEI) Staff attending included: Bruce E. Albright, BRRWD Administrator; Erik S. Jones, Engineer; and Thomas Eskro, Engineer. Others attending included: Jenny Mongeau, Clay County Commissioner; and landowners: Andy Beyer, Robert Braton, Jerry Butenhoff, Etta Mae Christianson, Janice Christianson, Wesley Christianson, Edward Ernst, Keith Ernst, David Grommesh, Greg Grommesh, Rick Maier, Jay Nord, Paul Quinnild, Frank Schindler, Gary Smith, Pete Thompson, Rick Thompson, Steven Thompson, John Thompson, Tim Pender, and Roger Wagner.

BRRWD Chairman Gerald L. Van Amburg called the meeting to order at 7:00 PM. He introduced the BRRWD Board and Staff. He announced that the proceedings were being recorded to aid in the preparation of the minutes. He also passed around a sign-in roster to record attendance.

Bruce E. Albright, BRRWD Administrator, began the meeting by going over some of the history of the project. The BRRWD has received complaints about drainage in the area southwest of Barnesville fairly consistently over the last 35 years. An informational meeting was held on 02/03/14, and the participants discussed a waterway in the area that is Minnesota Department of Natural Resources (DNR) protected waters and noted that, in order to do any work on that waterway, a DNR permit would be required. The DNR does not usually issue permits without a plan, and usually, before a plan can be drawn up, a survey must be conducted. The landowners who attended the meeting in 2014 agreed to have the survey work done so project development could continue. There have also been concerns brought up about Whisky Creek. The study was expanded to parts of Whisky Creek from its confluence with the South Branch of the Buffalo River upstream through Section 22, Barnesville Township, which is located by the Rod-N-Gun Club. The BRRWD received a grant for \$10,000 from the Red River Basin Flood Damage Reduction Work Group (RRBFDRWG) that helped pay for part of the preliminary survey costs. The survey was completed late last fall. The Engineers will present the survey findings, and explain what problems have been identified on the unnamed tributary in Barnesville Township along with the surveyed portions of Whisky Creek. They will also offer some possible solutions to those problems. And then, most importantly, Albright explained, we would like to have input from the landowners as to what they would like to see done in this area, and what the next steps should be. There is one additional tributary in the study area that has not been surveyed, but has been included in the design calculations (Section 3, Barnesville Township, and Sections 5, 6, 8, and 9, Atherton Township). The landowners can choose to have that tributary surveyed, if they wish. The next Mediation Project Team (PT) meeting is tentatively scheduled for July 9, 2015, at 7:00 PM in Barnesville, where this project will be further discussed. Albright noted that the South Branch of the Buffalo River and Whisky Creek are both impaired according to the Clean Water Act criteria. The South Branch has been found to be carrying too much sediment. Whisky Creek is also sediment impaired and has an E. coli problem. Albright noted that these facts should be kept in mind when considering possible future projects for this area.

Thomas Eskro, Engineer, HEI, presented the Preliminary Engineer's Report. The total drainage area of Whisky Creek and its tributaries to the South Branch of the Buffalo River is approximately 72 square miles (sq. mi.). The South Tributary contributes approximately 24 sq. mi. of drainage area to the Whisky Creek watershed. Eskro pointed out several areas where Clay and Wilkin Counties have applied for Federal Emergency Management Agency (FEMA) funds to restore flood damages during the 2009-2011 floods. There is not a lot of sediment filling in Whisky Creek (between 0-1'). The South Tributary has about 3' of sediment. A specific flood damage reduction goal would be to protect farmsteads up to the 100-year event and protect agricultural lands for the 10-year event. The BRRWD Revised Watershed Management Plan (RWMP) set forth a goal of 8,000 to 9,000 acre-feet (ac. ft.) of storage within the Whisky Creek sub-watershed. Additionally, peak flow reductions of 34% for the 10-year event and 22% for the 100-year event have been set for the region contributing to the WC-1 regional assessment location (RAL). This will take the 100-year flood level and bring it down to about a 50-year level across the Whisky Creek watershed.

Eskro identified an area that encompasses Sections 28, 29, 32, and 33 as the only option that would work technically, address problems on both waterways, and address the goals for flood damage reduction that are listed in the BRRWD's RWMP. One alternative focuses on Sections 28 and 29 and would be able to store between 7,000-8,000 ac. ft. Another alternative moves the embankment back a section and gives it more of a north-south alignment. Both of these options would require some sort of diversion structure to be placed on Whisky Creek, like a sheet pile spillway that would let flow down Whisky Creek during low flow events and would direct water south into the off-channel storage site for anything over a 2-year runoff event. Eskro listed the Primary and Secondary alternative strategies that were found to be the best options for a project in this area. Primary strategies would be gated and ungated impoundments. Secondary strategies would include: wetlands, wetland restoration, cropland BMPs, conversion to grassland (buffers), other beneficial uses of stored water, diversions, set back levees, restored or created wetlands, and farmstead levees.

Eskro presented the overall concept plan. The embankment alignment could be fine-tuned. It would include, along with the impoundment, a channel restoration project for the South Tributary to reestablish the gradeline of the channel, removing approximately 3' of sediment, as well as setting back of the existing levees that are on Clay County Ditch (C.D.) No. 34, a channelized portion of Whisky Creek, to provide more storage within the channel. He went over some of the positive impacts a project like this would have on the area. He showed the audience members a number of hydrographs. The graphs show that there will be lower water levels in the Clay C.D. No. 34 portion of Whisky Creek. According to the model, this project will reach the goal to protect agricultural lands for the 10-year event (or more) and 100-year protection for most of the farmstead structures along the creek. Some areas will have 50-year protection, and those areas could be looked at for additional levels of protection, such as ring dike levees, in order to secure the 100-year level of protection for building sites.

Albright explained that part of the channel is Clay C.D. No. 34, which starts on the west line of Section 18, Barnesville Township, and goes up through County Road (C.R.) No. 2. That portion of the channel was straightened back in the early 1900s. The landowners at that time decided to make it a County Ditch rather than part of Whisky Creek. The BRRWD has jurisdiction over County Ditch systems, and as long as Minnesota Drainage Law is followed, there are a number of things that can be done. Whisky Creek downstream of the legal ditch is DNR protected waters. Upstream of where the ditch ends, is also DNR protected waters. The South Tributary of the Barnesville Township waterway is DNR protected waters all the way up to the line between Section 32 and Section 33, Barnesville Township. DNR protected waters are public waters of the State of Minnesota and we would need a permit to do work on them. The DNR usually supports creating a two-stage channel, where you make a deeper, smaller channel down in the bottom, and a broader, flatter channel where the water could run anytime the smaller channel couldn't carry it.

Albright stated that the reason we are having troubles in this area is because these existing channels are only capable of carrying two or five-year flows. This is why we have break-out flows: poorly draining channels, and channels that never completely drain. The break-out flows along Whisky Creek are well known. The BRRWD rebuilt the levees at the outlet in Section 18 a number of years ago. If you put up massive dikes to try to keep the creek in, it has some limitations as far as letting the field water back into the channel. Trying to improve the capacity of the channel is one of the goals of the Watershed. It cannot be the singular goal, because we would end up pushing that water onto someone else, without some type of retention.

Albright stated the BRRWD was asked to look at the various structures that are along the ditch because they can also play a part regarding the movement of water. He handed out some maps of the area and turned the floor back over to Eskro for a detailed presentation. Eskro began by stating that as part of the survey, they also took note of the culverts, bridge crossings, and looked at open waterway areas and gradelines in the area. It was determined that there was nothing that seemed out of place from a structure standpoint on the Whisky Creek or the South Tributary.

Rick Thompson had a question regarding the water on the downstream end of the unnamed tributary in Alliance Township, Section 10, near C.R. No. 57. He said there are three culverts and one structure that come in on C.R. No. 15 or 100th ST, into Section 10. This equals 351 sq. ft. of water coming into Section 10. The next bridge downstream has 279 sq. ft. of water going out. He questioned where the other 72 sq. ft. of water is supposed to be going.

Albright clarified that Thompson is referring to the old Waldo Morken place and the private bridge crossing Whiskey Creek. The bridge is the same as it was when the former owner lived there. The driveway used to dip down just north of the bridge, which provided a considerable overflow area. The place was sold, the house was torn down, a new house was moved in, and the driveway overflow area was raised. At that time, the natural waterway over the driveway was lost and now all of that water is forced to go through the bridge. Thompson added that the problem began even before then. He couldn't get rid of the water before that and now it has gotten a lot worse. Albright continued by noting that Whisky Creek is a flashy system and the water comes fast from the east of Barnesville. The eastern part of the waterway has substantial fall. Thompson and Albright measured the elevation last winter, and there was 90' of fall between Front Street in Barnesville and Thompson's land.

Albright noted that in the late 1980s, the Watershed looked at a potential storage site east of Barnesville where we could have tried to slow that water down. There were problems with that site and the problems were not the landowners. The problems east of Barnesville were a number of old gravel pits, the material (sand and gravel) is not stable, and the material is not conducive to holding water. The biggest problem is that if some sort of holding area were built east of Barnesville failed, you would send that wall of water down to a point where you could put Interstate-94 (I-94) under water. Whisky Creek goes right through town and because of the urban population and I-94, that site was deemed as not going to work. It would have also required a high hazard dam permit from the DNR.

Gary Smith felt the water has sped up over the years. Smith mentioned the work the BRRWD did 4-6 years ago on the east and west tributaries and noted any water that goes down Trunk Highway (T.H.) No. 52 is now forced into a ravine by Krebs which drains by Joe Gilbertson. Smith felt that project only benefitted landowners west of that area. To which another audience member noted that they have received zero benefits from that project (Project No. 54, Whisky Creek Tributaries).

An audience member asked how this project is going to change area flows and flooding. Jones answered that there will be approximately a 25% reduction in peak flow and a 32% reduction in volume where channels enter into the South Branch of the Buffalo River. Albright asked the Engineers to clarify the level

of reduction into actual inches and give an example for a specific location along the project. Jones gave the example that there would be approximately a 4" reduction along the South Branch.

Roger Wagner stated that the biggest problem over the years is not the water running north, but the water that stops running and backs up. Albright noted that the Watershed has held landowner meetings where they have looked at a project (South Branch of the Buffalo River) that would start at the Clay-Wilkin County line and go upstream. We have started a smaller piece of that now, by beginning at C.R. No. 30 and going up to Trunk Highway (T.H.) No. 9. The breakouts on the South Branch in Wilkin County are severe. There are two or three miles where channels are cutting across farm land and all of the top soil is gone. If all that is done in this area is a channel clean out, that would put more water onto the downstream landowners' property.

An audience member asked why was the tributary study stopped at the Wilkin County line and did not continue east. Jones answered because that was where the protected portion of the channel ended. He noted that the southern area was taken into consideration in the study (design calculations). Albright added that if the landowners felt that more area should be surveyed, we could make a motion to do that. Eskro added that less than half of the water is coming from the area surveyed, and the rest is coming from the south (unsurveyed area).

The BRRWD held a Meditation PT meeting on February 13, 2014, and the group recommended making sure we have adequate buffers along this area, incorporating wetland restorations, and they noted that a large portion of land near T.H. No. 9 is still native prairie. If you live next to the creek and you need some extra protection, you should consider a ring dike. In places where there are breakout flows, we could put in some setback levees. Drainage water management is incorporating the ability to run a tile system based on the conditions. There are sections of the channel that have quite a bit of woody debris in it. The creek goes through the road in four different places in Sections 25 and 36, Barnesville Township, which is not very efficient. If you look at all of the culvert sizes on the South Tributary, you will find that the last one (Sections 32/33, Barnesville Township, 140th ST S) is quite a bit smaller than the rest.

A landowner noted that the more efficient you make the water flow, the worse of a problem it will become for the downstream areas. Albright mentioned Section 14 of Barnesville Township where there was a bridge and now it is one 24" diameter culvert, changed as part of Project No. 54. The BRRWD worked with three different landowners to get easements to store that water on their property. It is one thing to clean out the waterway. Figuring out how to slow down or store some of the water is more complicated. Someone owns every acre of this property. If someone agrees to hold water on their land, they will need to be compensated for that through easements because they are doing it for the greater good of the area. Projects get expensive, but there are grants we can apply for. Albright felt that completing the channel survey work is a huge step to moving a project forward.

An audience member asked how much land we are talking about for storage and how much of the storage area is cropland now. Albright answered approximately two and a half sections. The audience member then asked if those landowners were in attendance today. Some audience members answered with a yes. One audience member suggested cleaning out portions of the DNR protected waters. Albright answered that we can certainly apply for a DNR permit to do so, but if that is all that is done, we will create even bigger problems for the landowners downstream. One landowner shared that he felt we are paying the penalty for all of the water coming out of the east that is not being metered. Albright mentioned a meeting that was previously held where we discussed the size of culverts that should go in on the west side of Section 33, Barnesville Township. The structures HEI recommended were considerably larger. Almost unanimously, the downstream landowners in attendance at that meeting voted to not make those bigger because they did not want more water downstream. The BRRWD would like to put together a comprehensive project that will not only solve the problems of the landowners in this area, but also does

not make more problems for someone else downstream. Albright believes it can be done, but it will be a lot of work.

An audience member asked if we could lower the water by Robert Thompson's old road where the bridge was taken out. He noted that taking out the bridge did not improve conditions.

Albright mentioned that the Red River Basin Commission is holding a bus tour next Thursday (06/04/15). It is a free and open to the public. They are going to look at a retention site built by the Bois de Sioux Watershed District south of Breckenridge called North Ottawa. That site holds approximately 20,000 ac. ft. of water and 75% of that storage area is still farmed. The Watershed bought the land, rather than taking easements.

Albright summed up the situation by stating that this DNR protected tributary has never been cleaned. It has been filling up with sediment for many years, and now we have a system that does not work. Jones added that we have had larger than average rain events over the last ten years, which have also contributed to the area drainage and flooding problems. Albright went on to say that the average annual rainfall in Fargo-Moorhead was 28" or 29". In the last 14 years, we have had as much as 38" or 39" per year, and we are starting to change those long range averages. Jones stated that the 30 year normal precipitation used to be 19.5" and now it is approximately 22".

Dave Grommesh questioned how the retention area concept would work. Jones went over the criteria. He said we have to have a way to divert water to the area and have elevation to work with. We try to plan it to avoid rural residences, if possible. The LiDAR provides good accuracy so the effectiveness of the area can be judged. Grommesh stated that water is held now for approximately five days after a rainfall event in Sections 21 and 22, Barnesville Township. He estimated that in the Sabin area, it is held for 11 days and Georgetown is closer to 19 days. He questioned if the water held in the proposed retention area would drain back into Whisky Creek after five days. Jones stated that the intent would be that the retention area would hold water during events and then drains out. There would not be a permanent pool of water on the area. Grommesh added that the area should have enough slope to help with that since there is 60' of slope from his land to the end of Section 21, Barnesville Township.

An audience member asked if there would be a plan in place to maintain the work after it is completed. Albright answered that yes, there would be a plan in place for regular maintenance and to make sure it is functioning properly. Van Amburg added that we really need a comprehensive project, not just a cleanout, or just a retention area. The BRRWD's plan would be to make several updates so that more work is not needed in a few years. The audience member pointed out that there has been work done on this area before, and that if that work had been maintained, the area wouldn't be in such bad shape now.

Another audience member asked about the DNR protected waterway designation and if that could ever be revoked. Albright answered probably not. These areas were designated as "public waterways" back in about 1985. We can obtain a permit to work through those areas as long as a plan is in place. If we plan a project to fix the area, the DNR will want it to be a long term fix, and the area will not be back to its current state 10 years from now. An audience member pointed out that the DNR will require bufferstrips and control inlets if a permit is obtained. Jones agreed and added that all permits come with conditions.

Albright reiterated that landowners are free to come in and talk to him about this project at any time. An audience member suggested they expand the study into Wilkin County. Albright said that concern would be noted. He noted that these projects do take time, but we would like to keep this one on the forefront. Jerry Butenhoff asked if there was any way for us to get some F-M Diversion Project money for a retention site. Albright answered that this might be a possibility.

Dave Grommesh commented that what was presented tonight, all sounded good. In reality, it is going to be much more difficult to fund and built.

Van Amburg asked if there were any other questions or comments. None were noted. At 8:50 PM, the meeting was adjourned.

Respectfully submitted and prepared by

John E. Hanson, Secretary