

BUFFALO-RED RIVER WATERSHED DISTRICT

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BUFFALO-RED RIVER WATERSHED DISTRICT
MINUTES FOR INFORMATIONAL MEETING
South Branch of the Buffalo River
January 27, 2011

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 an informational meeting on Thursday, January 27, 2011, at 2:00 PM in Hildebrand Hall, Assumption Catholic Church, Barnesville, MN. BRRWD Managers present were Gerald L. Van Amburg, Roger G. Ellefson, Curtis M. Nelson, and John E. Hanson. Others attending included Bruce E. Albright, BRRWD Administrator, Erik Jones, Engineer, and Zach Herrmann, Engineer, Houston Engineering, Inc. (H.E.); Don Bajumpaa and Craig Lingen, Wilkin Soil and Water Conservation District (SWCD), Brad Mergens and Aaron Larsen, West Otter Tail SWCD, Bruce Poppel, Wilkin Environmental, Dave Barsness, Minnesota Department of Natural Resources (DNR) Fisheries, Don Schultz, DNR; and landowners: Caroline Swenson, Kelly Peppel, Ernie Drewlow, Merle Nelson, Kenneth Cook, Rick Maier, Doug Wells, Joe Wipf, Robert Falkner, Dan Johnson, Gary Haugrud, Sylvester Trosvik, Orrin Sorum, Dan Froslic, Wesley Christensen, Dennis Butenhoff, Brady Butenhoff, Don Sakry, Jeff Nord, Kenneth Packer, Steve Holubok, Ron Conzemius, Paul Aaberg, Doug Danielson, and John Thompson.

Chairman Gerald L. Van Amburg called the meeting to order at 2:00 PM. Group introductions were made, and Albright noted that the meeting was being recorded to aid in the preparation of minutes. He also circulated a sign-up sheet to record attendance. He noted that any audience members should state their names when giving testimony or asking questions.

Albright noted the recording was started late at 2:35 PM.

Zach Herrmann, Engineer, H.E., reviewed the project components. He explained set back levees would be constructed along the South Branch. He noted some potential issues with set-back levees, which included significant break outs into Wilkin County Ditch (C.D.) No. 13 during various flood events and the encroachment on the natural storage within the floodplain. Herrmann stated measures would be taken to mitigate losing this storage in order to prevent increased flooding downstream. This would require adding retention within the project area. Herrmann stated one advantage of a wide set-back levee is that there would be sufficient storage within the floodplain. He noted the disadvantages of a wide set-back levee would be the need to acquire more land for easements (2,400 acres), and that the full protection benefit would only be noticeable for land already in a high flood area. Herrmann stated an advantage of a narrow set-back levee included more protected acres outside of the levee, with only 1,400 acres inside the levee. He noted that with a narrow set-back levee, additional storage would need to be implemented somewhere within the project to prevent downstream impacts.

Herrmann explained that Light Detection And Ranging (LiDAR) data was used to obtain information regarding areas for potential retention sites. LiDAR is a remote sensing method that uses light in the form of a pulsed laser to measure variable distances to the Earth. He commented that these sites would need to have the proper soil types to hold water, since the retention sites would be temporary gated storage. He explained the retention areas would fill during a flood event and remain closed until downstream flooding was resolved. Then, the water would be metered out of the retention site until it was dry. Erik Jones, Engineer, H.E., commented that certain off-channel retention sites would remain dry until the river reached

a specific elevation, and then water would flow into these off-channel sites. Herrmann stated Sections 10, 11, 14, and 15, Manston Township, Wilkin County, is a potential location for a retention site. There is approximately 25 square miles (sq. mi.) of drainage area to this location. Herrmann said that based on LiDAR data there is potential for approximately 5,500 acre-feet (ac-ft) of storage at this location. This would be enough storage to capture and hold 4 inches of runoff within the 25 sq. mi. drainage area. Jones explained that 4 inches of runoff is typical from a 6-inch, 100-year, 24-hour flood event. Herrmann moved on to possible locations for off-channel storage. He explained that off-channel storage is water that is diverted out of the river channel into an upstream retention site. He noted two possible locations, one in Section 32, Atherton Township, Wilkin County (approximately 2,000 ac-ft) and the other in Section 11, Deerhorn Township, Wilkin County (approximately 7,400 ac-ft). Jones noted they chose these sites for the presentation today, but there were several areas evaluated. Herrmann described in detail the modelling, which they completed using different variables. This provided information on what could be done downstream of Trunk Highway (T.H.) No. 9.

The third project component would be wetland restorations. Herrmann noted a possible location could be in Sections 32 and 33, Norwegian Grove Township, Otter Tail County. This large flat area with a significant drainage area (1,000 acres) would maximize storage while minimizing the "bounce."

Jones stated that funding was awarded for this project through the Clean Water Legacy (CWL) funding, which comes from a percentage of sales tax revenue from the Legacy amendment. This grant money will provide 75% of this project's funding. The remaining 25% will come from local funds. Jones noted this project would be completed in conjunction with the Wilkin and Otter Tail SWCD.

Jones discussed a plan to incorporate the best management practices (BMPs) which was created using LiDAR data. This data can be used to determine the contributing drainage area and areas susceptible to gully erosion. The BMPs would also incorporate buffer strips. Jones said the potential BMPs plan could be shared with the County SWCDs. The BRRWD and SWCD could then hold informational meetings to share and discuss this plan. Jones also noted that the SWCD would look at ways to stretch funding by using additional programs to install sediment basins, side inlets, and/or other measures to prevent erosion. Jones restated the LiDAR data provides information regarding the possibilities of what could be done. He explained in detail the results of the LiDAR analysis while referring to a map on the overhead screens.

Jones discussed the water quality within the project area. He noted that water quality monitoring has been completed by the Minnesota Pollution Control Agency (MPCA) and the Barnesville River Watch. He referred to a map showing the sampling sites within the project area. The results of the water quality testing show that the South Branch has a turbidity (cloudiness) impairment based on the State's standards. Jones noted one exception along C.D. No. 40, also referred to as the Lawndale Trout Stream, which almost always meets State standards.

Albright stated that the combination of retention and set-back levees results in a 50% flow reduction at the County Line for a 100-year flood event. He said this is approximately a 2' decrease in water elevation today without the project features. He said LiDAR data gives us a starting point to lowering water elevations. We can then work with the landowners to make adjustments as needed. Jones stated there have been no cost estimates completed. This is only a preliminary plan created in order to get landowner feedback. Herrmann commented that the options presented today, the wide and narrow set-back levees in conjunction with retention, are the extremes. He said the combinations are limitless in terms of the width of the levees and where storage is incorporated into the system.

Albright commented that the items Jones talked about in the upper watershed could accomplish several goals, such as water quality improvement and water storage. He gave an example that restoring a wetland in the upper watershed could control several acres of drainage. If this were accomplished, then there would be that much less drainage coming downstream. Albright explained we need to identify landowners willing to participate in the project and specify what type of compensation is available. He noted there are a

variety of sources to apply for funding, including the State, which appropriates funding for flood damage reduction (fdr) projects.

Albright stated a group of landowners initiated this process approximately three years ago. He recalled that this is the second informational meeting the BRRWD has held regarding this project. The goal for today's meeting is to receive additional landowner feedback for the Board to use during their decision making process.

Don Bajumpaa, Wilkin SWCD, commented on a section of the project, starting at T.H. No. 9 extending to the Deerhorn Creek confluence. He stated that the Wilkin SWCD committed over \$1 million in State easement money. Through this process the Wilkin SWCD secured approximately 1,000 acres of easements. There is a group of landowners, all with land adjacent to one another, who would like to see progress on this project soon. These landowners are in favor of set-back levees in this stretch. Bajumpaa noted they would use funds from the Reinvest in Minnesota (RIM) program to keep the area between the set-backs in native grasses and allow the river to re-meander. Bajumpaa questioned how soon the design work could begin and when decisions about width of the levees could be made. Jones stated the set-back levee design would depend on what happens in regard to slowing the downstream water flow. Albright also commented that it depends on what size event the levees would be designed to contain. He suggested scheduling a meeting with this group of landowners to discuss this further.

Landowner Steve Holubok suggested that runoff in the steeper part of the watershed needs to be slowed but tiling has increased the flow to the South Branch.

Albright commented that C.D. No. 44, formerly Judicial Ditch (J.D.) No. 3, was built in approximately 1905, and extends into the Rothsay Wildlife Management Area. This ditch most likely has one or two large culverts draining water from this area. Albright mentioned that the drainage patterns have changed since C.D. No. 44 was established, and these large culverts may not be necessary anymore. However, the ditch is designed to eliminate water as quickly as possible.

Herrmann stated they are considering ways to slow the water flow and/or store water in the upper end of the watershed also.

Van Amburg asked if there were any further questions or comments.

Manager Roger Ellefson stated this is a large scale project. He felt that it could be divided into phases, especially since there is a group of landowners ready to get started. Ellefson questioned what the downstream effects of the set-back levees might be and if there would be enough retention incorporated to prevent increased flooding downstream. Jones replied that there would be an increase in discharge at the Clay County Line without retention or downsized culverts. Ellefson asked if it would be possible to have a sufficient amount of retention inside the levee. Jones said there would need to be a wider corridor to have enough retention for that option. He also noted there would be permitting issues to address with the DNR, since there are stretches of public waters within the project area. The DNR would need to agree with the project in order to issue a permit. Jones commented that the plans he presented today are only preliminary. He is hopeful there would be some landowners willing to allow retention further into their fields, especially in low, non-productive areas. Herrmann noted that these areas can be detected using the LiDAR data. Albright explained there are several tools available that allow easy modeling to identify the effects of different scenarios.

Van Amburg asked how many landowners were present from the County line to the confluence of Deerhorn Creek. There were approximately five landowners present from this stretch. Van Amburg commented that there are an infinite number of possibilities for this project, depending on what landowners would like to do. He commented that the modeling also helps with the decision making process. Van Amburg felt we could start working towards correcting some of the issues along the South Branch.

Ellefson restated this is a big project which needs to be broken into segments. He said we should move forward in areas that are ready to go as long as there are no negative effects at the outlet.

Herrmann stated we need to determine what level of protection landowners are comfortable with and what is practical.

Landowner Jeff Nord questioned if there would be settling ponds included anywhere in the project to help with water quality and create retention. Jones stated a settling pond could be a potential design feature. Albright commented this design feature would allow the landowner to put the soil from the settling pond back into their field(s) where it came from.

Albright explained the project plans include a 1,400 sq. mi. area. He said this project could take several years to complete. There have been areas with issues identified and steps taken to find solutions. He stated that he hopes several sections of this project would be completed within a ten-year timeframe. The next steps would be to evaluate/determine the project components such as set-back levees, upstream BMPs, channel restoration, and off-channel storage sites. He said they would identify people to work on each component and create a timeline to develop them.

Albright noted that the South Branch of the Buffalo River is designated as Public Waters for the portion of the river downstream from T.H. No. 9. He explained the stretch from T.H. No. 9 upstream to the east Wilkin County Line is not considered Public Water. It is designated Public Water starting at the Otter Tail County Line and extending approximately three miles further upstream. Albright explained the Public Waters program was established in the mid-1980s, which requires a DNR permit to complete work along these waterways. He said the DNR considers if the proper steps are being taken to correct an issue, so a long-term solution is achieved.

Bajumpaa noted that the SWCD has acquired thirteen conservation easements along the South Branch.

Van Amburg asked if there were any further questions or comments.

Landowner Rick Maier agreed with Ellefson that consideration needs to be taken regarding downstream effects. Maier commented that he is on the downstream end of this project. He believes that the retention needs to be constructed upstream with the ditch cleaning occurring downstream. Maier stated he had raised a question during the informational meeting for the Deerhorn Creek Project, regarding the project's downstream effects, for which he feels he never received a thorough answer. Maier explained that he is centrally located within this project area, and since the project was constructed, water now backs onto his land. Van Amburg commented that unfortunately it has been a wet cycle since the Deerhorn Creek Project completion in 2000-2001.

Albright explained there is cause and effects with everything completed, especially in water management. The goal is to find a happy medium by keeping everyone involved in the process.

Van Amburg stated the landowner feedback is very important. He encouraged landowners to take the remaining time today to talk to the Board, the Engineers, or a SWCD representative.

There being no further discussion to come before the Board, Chairman Van Amburg adjourned the meeting at 3:45 PM.

Respectfully submitted,

Bruce E. Albright, BRRWD Administrator