

# ***BUFFALO-RED RIVER WATERSHED DISTRICT***

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## **MEDIATION PROJECT TEAM MINUTES**

January 8, 2015

The Buffalo-Red River Watershed District (BRRWD) Mediation Project Team (PT) held a meeting on Thursday, January 8, 2015, at 1:30 PM at the BRRWD office, Barnesville, MN.

Attending were: Bruce E. Albright, BRRWD Administrator, Erik S. Jones, Engineer, Houston Engineering, Inc. (HEI), Gerald L. Van Amburg, Chairman, BRRWD; Carolyn Clarin, Engineer, Natural Resources Conservation Service (NRCS); Chad Raitz, Fergus Falls Wetland Management District (WMD) and United States Fish and Wildlife Service (USFWS); Anthony Nelson, Pheasants Forever (PF) and Clay Soil and Water Conservation District (SWCD); Peter V. Fjestad, BRRWD Manager; Pete Waller, Board Conservationist, Minnesota Board of Water and Soil Resources (BWSR); Rick Thompson, landowner; Tara Mercil, Minnesota Pollution Control Agency (MPCA); Ted Rud, Engineer, HEI; Shawn May, Detroit Lakes WMD/USFWS; and John E. Hanson, BRRWD Manager.

Members absent were: Mark T. Anderson, Troy E. Larson, Breanna L. Kobiela, and Catherine L. Affield, BRRWD Managers; Julie A. Aadland, Area Hydrologist, Minnesota Department of Natural Resources (DNR); Ross Aigner, Wilkin County landowner; Audubon Dakota; Don Bajumpaa, District Manager, Wilkin SWCD; Mandy Erickson, Fisheries Specialist, Minnesota DNR; Brian Dwight, Board Conservationist, BWSR; Kevin Kassenborg/Lynn Foss, Clay SWCD; Josh Kavanagh, Biologist, Ducks Unlimited (DU); Edward J. Musielewicz, District Conservationist, Becker NRCS; Don Schultz, Area Wildlife Manager, DNR; Henry Van Offelen, Red River Basin Coordinator and DNR Ecological and Water Resources; Larry Martin, Fergus Falls WMD/USFWS; Keith Weston, Red River Basin Coordinator, NRCS; Brian Winter, Program Director, The Nature Conservancy (TNC); Robert A. Zimmerman, Engineer, City of Moorhead; Roger T. Hemphill, Area Hydrologist, DNR; and Larry Puchalski, Project Manager, United States Army Corp of Engineers (COE).

Bruce Albright, BRRWD Administrator, called the meeting to order at 1:30 PM. Introductions were made. He noted that a number of people called the office this morning indicating that they would not attend today's meeting because of the weather/bad road conditions. A signup sheet was passed to record attendance.

### **Business brought before the group included:**

**Meeting Minutes.** Draft minutes for the 09/25/14 Mediation PT meeting were distributed with today's meeting materials. Albright said now would be the time to note any needed corrections or changes.

**Motion** by Fjestad to approve the minutes. **Seconded** by Waller. **Approved.**

**Barnesville Township Area Drainage Study.** Jones presented a map titled "Preliminary Channel Capacities/Property Damage Levels". For this project, he noted that HEI recently completed the field survey work. One of the study areas in question is a DNR protected water course that joins Whisky Creek near the line of Sections 10 and 15, Alliance Township, and proceeds upstream for approximately seven miles ending in Section 33, Barnesville Township. The survey work also included Whisky Creek from its juncture with the South Branch of the Buffalo River in Section 9, Alliance Township, upstream through Section 21, Barnesville Township. The map has been color-coded to show the preliminary channel

capacities for the 2, 5, 10 and greater than 10-year events. The same has been done for building sites located along both tributaries where the analysis included the 5, 10, 25, 50 and 100-year frequency events. Jones also had the plan and profile drawings for both tributaries. He said there is still some work to do on the plans before they can be filed with the BRRWD. The survey looked at establishing a gradeline for the tributaries. Depth of sediment was determined by taking test pits throughout each reach. Modeling of the waterways was completed using the Hydrologic Engineering Center's River Analysis System (HEC-RAS). HEC-RAS allows the Engineer's to form one-dimensional steady flow, unsteady flow, sediment transport/mobile bed computations, and water temperature modeling. As referenced in the Mediation Agreement, one of the goals of the project would be to provide protection against a 10-year summer storm event for intensively farmed agricultural land. Intensively farmed land means land that has been planted with annually seeded crops or was in a crop rotation, pasture grass, or legumes in six out of the last ten years. Another goal of the Mediation Agreement would be to prevent damage to farm structures, homes, and communities. This would be done by promoting the construction of farmstead ring dikes built to a minimum of two feet of freeboard over the flood record, or one foot above the administrative 100-year flood, whichever is greater.

Albright distributed copies of the 02/13/14 Mediation PT minutes. At that meeting, the PT spent considerable time discussing natural resource enhancement (nre) opportunities for this project area, which included buffer strips, wetland restorations, grade stabilization in the beach ridge area, investigation regarding the use of native and rare plant species, grassland restorations/easements, side water inlets, channel restoration, flood plain easements, flow augmentation, and the use of drainage water management (DWM) regarding water quality and pattern water/cropland tiling. The group also discussed flood damage reduction (fdr) features for a project. Permitting issues/concerns were also noted. A DNR permit would be needed to work in protected waters. This would include the completion of an Environmental Assessment Worksheet (EAW). Spoil placement could be an issue for the COE, especially in wetland areas. Fisheries issues including habitat/passage impacts were discussed.

Albright said that BRRWD has a long history with drainage problems/flooding issues in this area. One of the first studies completed by the BRRWD is dated 1984 and was a map of all of the area culvert sizes/elevations. The BRRWD has held a number of informational meetings with the affected landowners in this area. The most recent meeting was held on February 3, 2014, when the landowners in attendance encouraged the Board to move forward with a study for this area. The BRRWD identified that one of the first things that was needed would be to survey the channel to determine where the problems are located. Survey work was based on a concept report filed by HEI dated 03/04/10. The drainage area for the Barnesville Township waterway is 21.4 square miles. An fdr goal for this waterway would be approximately 2,500 acre feet, however for Whisky Creek to the north, the goal would be 8,000-9,000 acre feet. An acceleration grant application was submitted to the Red River Basin Flood Damage Reduction Work Group (RRBFDRWG). In September of 2014, they did approve a \$10,000 grant. Landowners in attendance at the 02/03/14 meeting were asked to identify problems and their resource concerns on maps of the study area. The BRRWD has this information on file. A preliminary run-off retention investigation was conducted on 11/15/10 which looked at a larger retention area in Sections 27, 28, 29, 32, 33, and 34, Barnesville Township, and Sections 4 and 5, Atherton Township, Wilkin County. That site was capable of holding 4 inches of run-off from the project area as well as a diversion from Whisky Creek, which would handle about 90% of the flows above a two-year peak event. The gated storage at the site was estimated to be 10,650 acre feet. Albright noted that this site has not been discussed with the landowners.

HEI will continue to work on refining the project plans. When completed, that information will be filed with the BRRWD. Rick Thompson said that he would be interested in seeing the sizing of the various structures on Whisky Creek, the Barnesville Township tributary and downstream of the confluence of these two waterways with the South Branch of the Buffalo River. Jones said that he had this information but it still needs some minor modifications. Additional information will be available for the next Mediation PT

meeting. One of the next steps would be to meet again with project landowners to share the new information with them.

**New Farm Bill.** Through the Red River Retention Authority (RRRA), whose members include the Red River Joint Water Resource District, a North Dakota Political Subdivision, and the Red River Watershed Management Board, a Minnesota Political Subdivision, there is funding available in the new Farm Bill for construction of retention projects in the Red River Valley of the North watershed. The RRRA has a special allocation of 2014 Farm Bill funding from NRCS for the Red River Basin to assist landowners and producers, Watersheds, and Water Districts to implement NRCS practices to assist in fdr practices on their lands (\$50 million). The RRRA has also been offered a partnership agreement with NRCS for the Regional Conservation Partnership Program (RCPP) to provide funding for the implementation of the PL556 Watershed Protection Strategies in the amount of \$12 million dollars. The RCPP is also part of the 2014 Farm Bill. The RCPP funds will be split between Minnesota and North Dakota with about \$2 million dollars to be used for planning and permitting. The NRCS's Environmental Quality Incentives Program (EQIP) will be used for the special allocation. The BRRWD currently has several sites where hopefully some of the funding can be used. They include South Reep Lake, Pierce Lake, the Haick/Peppel detention, and the Wolverton Creek/Comstock Coulee Restoration. It has been indicated that there is no funding currently available for the Wetlands Reserve Enhancement (WRE) Program, however NRCS is currently taking applications. An application does not commit the landowner to the program. Easement values will be determined by using an appraiser.

**South Branch of the Buffalo River.** The Board spent some time at their 11/24/14 meeting discussing the problems/issues involving the South Branch of the Buffalo River. In 2009, the BRRWD held an informational meeting with landowners in Wilkin County to discuss a possible comprehensive project for the area. At that time, it was noted to the group that any project that were to occur in this area would need to include some fdr provisions. Since 2009, according to the landowners, the problems in this area have gotten worse. We are currently working with one landowner in the NE1/4, Section 6, Manston Township, where the water is breaking out of the channel and causing erosion to her farmland. At the 11/24/14 meeting, the Board felt that because the project area was so large (Wilkin County/Clay County line and upstream) they needed to identify a smaller phase where they hopefully could get something done. The work area was identified as a four mile reach, beginning at Trunk Highway (T.H.) No. 9 and continuing downstream to Wilkin County Road (C.R.) No. 30. The Swenson family has put part of their property in the NE1/4, Section 6, Manston Township, into the Conservation Reserve Program (CRP). HEI has also developed some plans for a levee that would be constructed on the CRP lands to contain the breakout flows and prevent further damage downstream. Ted Rud, HEI, identified some of the other project features being discussed for "Phase 1". They include a setback levee on the west side of the channel in Section 31, Atherton Township, and Sections 5 and 6, Manston Township. The stream channel in the Phase 1 segment would also be restored, probably using a two stage channel design. The BRRWD is also looking at possible retention areas in Sections 5 and 11, Manston Township. The Haick/Peppel Wetlands Reserve Program (WRP) site, located in Section 4, Manston Township, would also be beneficial to this area. A number of different scenarios have been run using the identified project components. The analysis looked at a number of different locations including the South Branch of the Buffalo River at T.H. No. 9, the South Branch of the Buffalo River at 230th AVE, the South Branch of the Buffalo River at C.R. No. 30, the South Branch of the Buffalo River at the Clay-Wilkin County line, Wilkin C.D. No. 13 at C.R. No. 30, and the South Branch of the Buffalo River in the breakout area in Section 6, Manston Township. A preliminary cost estimate was identified for a number of the features. The possible retention area in Sections 11 and 14, Manston Township was estimated to cost \$2.49 million. The possible FDR site in Section 5 was estimated to cost \$1.25 million. The setback levees on the west side of the channel were estimated to cost \$453,000. Total project cost, without channel restoration, is estimated at \$4,187,775. Channel capacity is also been evaluated using the HEC-RAS modeling program. At C.R. No. 30, the existing conditions show that the 100-year event produces a peak discharge (cfs) of 1,116. With the proposed setback levees and storage

sites, the flows reduced to 1,082 cfs. With the setback levees alone option, peak flows are increased to 1,405 CFS. Next month a meeting will be held again with Carolyn Swenson to discuss her options for the installation of the control levee on her property. The BRRWD hopes that she will qualify for EQIP funding. If not, the BRRWD has a grant for work on the South Branch of the Buffalo River from BWSR.

**Stony Creek Comprehensive Project.** Approximately one year ago, the Board met with landowners regarding a possible off-channel retention site that would be located in Sections 3, 4, and 5, Barnesville Township, Clay County. The project study area is Stoney Creek upstream from its confluence with Hay Creek, in Section 32, Elkton Township, to T.H. No. 9. After meeting with the affected landowners, the landowners felt that a possible better alignment for the proposed retention area could be found. The first site that was studied had the potential to hold 8,676 acre feet of gated storage. Rud presented a revised dike alignment that would include a Pool A on the north side of the creek channel in Sections 32 and 33, Elkton Township, and Sections 3 and 4, Barnesville Township, and a Pool B located on the south side of the channel in Sections 3, 4 and 9, Barnesville Township. Pool A could store 2,945 acre feet and Pool B could store 3,544 acre feet. Jones said that there would be some options regarding operation of the pools for a summer run-off event. For the preliminary design, they looked at a top-of-dam elevation for both pools at 958.00. The riser elevation would be at 955.00. Pools A and B would provide a 58.4% volume (acre feet) reduction and a peak flow reduction (cfs) of 85.3%. Benefits of the project can be shown downstream to the United States Geological Survey (USGS) gauges at Sabin and Dilworth. The Board intends to hold a meeting with the effected landowners in the near future. The Hydrologic Modeling System (HEC-HMS) was used to conduct the analysis. The software includes many traditional hydrologic analysis procedures such as event infiltration, unit hydrographs, and hydrologic routing. The program was also developed by the COE.

In the early 1900's, parts of Stoney Creek were channelized and turned into Clay C.D. No. 31. The ditch system begins near T.H. No. 9 and proceeds downstream through Section 4, Barnesville Township. A comprehensive project for this area would include a channel restoration of this reach, including possibly a two stage channel. Another item would include a redetermination of benefits for Clay C.D. No. 31. The current benefitting area for the ditch system primarily just covers the area where the channel was straightened. The benefits range from \$0.95/acre to \$1.90/acre. Stony Creek at T.H. No. 9 has an upstream drainage area of approximately 36 square miles. The intent of a redetermination of benefits would be to include this upstream drainage area as part of the benefitting area. More information should be available for the next Mediation PT meeting.

**Manston Slough Restoration.** Albright said the contractor was able to pretty much finish all of the construction work late last fall. There is still some seeding to do in the spring. The DNR grant for the project has been extended until 09/30/15. There is still one landowner we are waiting to get an easement from. Mr. Duane Stuehrenberg is currently working with the NRCS on a WRP easement for his land west of T.H. No. 9. That easement needs to be in place before the BRRWD can take their easement. In the spring, the project contractor will need to reinstall a number of boundary signs around the USFWS and DNR properties, which were removed for construction.

**Oakport Flood Mitigation.** The BRRWD will be working with the 2015 legislature to hopefully secure \$5.66 million dollars in bond funding to complete Phase 4.

**Wolverton Creek/Comstock Coulee.** The BRRWD will hold a landowner informational meeting in the near future to discuss the project status. The BRRWD has a current BWSR grant that will expire on 12/31/15 to help fund some of the project work. Last fall, the BRRWD submitted a Targeted Watershed Demonstration Program proposal to BWSR. We were not selected for an interview. It appears that there may be funding available through the NRCS EQIP program to help with the channel restoration. The archeological survey was completed by George R. Holley and Michael G. Michlovic, Department of

Anthropology and Earth Science, Minnesota State University, Moorhead (MSUM) in December, 2014. No significant archeological sites were identified. No additional archeological work is recommended for the impact area. On 07/15/14, the DNR issued a permit to restore approximately 26 miles of the Wolverton Creek channel. Conditions to the permit include: no work occurring between the dates of March 15 and June 15 to minimize impacts on fish spawning and migration; excavated material should not be permanently placed within the community designated flood plain areas or shore line areas without the proper permits; all side slopes and a strip of land along both sides of Wolverton Creek shall be seeded and maintained in permanent native vegetation, including buffers on the various legal ditch systems that also use the creek as an outlet; side inlets are to be installed on the legal ditch systems; and upon completion of the authorized work, the permitted party shall submit representative photographs and a survey of the project area to the DNR Division of Ecological and Water Resources. The BRRWD has identified a Phase 1 reach that would begin at Wilkin C.R. No. 30 and continue downstream for approximately 5 miles ending in Section 9, Wolverton Township, Wilkin County.

**Georgetown Levee.** The BRRWD continues to work with one remaining buy-out property. We are having some issues with the lending institutions regarding one house that needs to be demolished for placement of the levee. The contractor intends to come back in the spring to finish the work and complete the project.

**Fargo-Moorhead (F-M) Diversion Authority.** The Authority is anxiously awaiting completion of the Minnesota Environmental Impact Statement (EIS). The study is expected to be done in April, 2015. In the near future, the BRRWD will be asked by the Diversion Authority to approve their Fiscal Year (FY) 15 budget of approximately \$210 million dollars.

**TMDL/WRAPS.** The office is working with the Detroit Lakes MPCA office. A tentative date for an informational meeting regarding the Buffalo River TMDL/WRAPS is scheduled for Thursday, February 12. Notice of availability regarding the studies will be placed in the State Registrar. The Upper Red project is scheduled to be completed by 12/31/15.

**Buffalo River Restoration/Becker County.** Downstream of Becker C.D. No. 21, in Section 15, Riceville Township, the landowners have asked the BRRWD for possible channel restoration to improve flow characteristics associated with the County ditch system. The work would extend downstream for approximately 2.5 miles to C.R. No. 105. Upstream of this location, the BRRWD was involved with a potential detention site that would've been located in Sections 13 and 14 Riceville Township. That project was studied extensively back in the 1980s. Prior to that time, area landowners diverted a section of the Buffalo River in Section 7, Callaway Township. The NRCS is looking at ways that the flows could possibly be rerouted back into the historic channel. The BRRWD has not had time to work on this project.

**Glyndon DNR Protected Waterway.** In Section 35, Moland Township, Sections 1, 2, and 12, Glyndon Township, and Sections 7 and 18, Riverton Township, there is a DNR protected watercourse. The City of Glyndon outlets their sewage treatment system into this waterway. For years, there have been numerous problems reported with the condition of the tributary, which drains directly in the Buffalo River. The BRRWD would like to hold an informational meeting with the City to discuss a possible fdr/nre project for this waterway. Given the BRRWD's current workload, we have not had time to hold this meeting.

**Activities Update.** Copies of the 12/08/14 meeting press release were distributed. The BRRWD Fall Tour was held on October 9. The contractor has basically finished his work on the channel restoration project in the City of Hawley on the Buffalo River. There will be some seeding and clean up to do in the spring. The BRRWD had a goal of redoing their Rules and Bylaws this winter. Recommended guidelines for drainage systems and surface drainage systems have been furnished by the Red River Water Management Board

(RRWMB). The BRRWD now has an online permitting application. In 2014, we processed 163 applications.

**Revised Water Management Plan (RWMP).** The BRRWD was enlarged by approximately 400 square miles in 2012 by the BWSR. We now include the Otter Tail River downstream of Orwell Dam to Breckenridge. When the District was enlarged, BWSR gave us a deadline of 05/31/15 to update the RWMP. Two informational meetings with landowners in the new area will be held next week in Rothsay and Breckenridge. The Board will form a Technical Advisory Committee (TAC) and Citizen Advisory Committee (CAC) to assist with the process. BWSR needs a 60-day review period for the draft document. The BRRWD is also aware of a BWSR proposal to create a One Watershed One Plan (1W1P) concept. There are a number of demonstration projects ongoing around the state in that regard.

**Next Meeting.** The next BRRWD Meditation PT meeting is tentatively scheduled for Thursday, March 5, 2015, 1:30 PM, in the Barnesville office. Jones noted that he had a conflict on that date. Next Thursday, or March 12, happens to be the Minnesota Association of Watershed District's (MAWD) Legislative Reception and Day at the Capitol. The meeting date was moved to Thursday, March 19, 2015 at 1:30 PM at the Barnesville office. Albright noted that information should be forthcoming regarding the Joint Water Resources Conference sponsored by the RRBFDWRWG and the RRWMB. The conference will be held on March 25 and 26, 2015, at the Marriott Conference Center, Moorhead, MN. Albright encouraged PT members to attend. The Conference provides a good format to see what's happening in the Red River Basin of the North on the Minnesota side of the river in accordance with the Mediation Agreement.

**Adjournment.** There being no further business to come before the group, Albright adjourned the meeting at 3:50 PM.

Respectfully Prepared and Submitted by

Bruce E. Albright, BRRWD Administrator