

BUFFALO-RED RIVER WATERSHED DISTRICT

BARNESVILLE, MINNESOTA 56514

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MINUTES FOR MANAGERS' SPECIAL MEETING November 29, 2010

The Board of Managers, Buffalo-Red River Watershed District (BRRWD), held a special meeting on Monday, November 29, 2010, at 7:00 PM in the Barnesville office. BRRWD Managers present were Roger G. Ellefson, Gerald L. VanAmburg, Breanna Paradeis Kobiela, and Curtis M. Nelson. Others attending included: Bruce E. Albright, BRRWD Administrator, Erik Jones, Engineer, and Julie Jerger, Administrative Assistant, Houston Engineering, Inc. (H.E.); Steve Dalen, Pinnacle Water Management, Inc.; Bethany Kurz, Energy & Environmental Research Center (EERC); Lyle Hovland, Wilkin County Commissioner; Lynn Foss, Clay Soil and Water Conservation District (SWCD); Robert Zimmerman, City of Moorhead; and Jon Evert, Clay County Commissioner.

Chairman Ellefson called the meeting to order at 7:10 PM. He announced that the proceedings were being recorded to aid in preparation of the minutes.

EERC "Waffle" Presentation. Albright introduced Steve Dalen, Pinnacle Water Management, Inc, and Bethany Kurz, EERC, noting that they had made a brief presentation regarding the "waffle concept" at the 11/08/10 BRRWD meeting, but because of a large audience that night, they were not able to have the time needed for their presentation. He noted that we invited our local Legislators to tonight's meeting, but because of the weather conditions, some were not able to attend. Albright briefly discussed the issue of water retention as related to the Fargo-Moorhead Metro Flood Diversion project and concerns about spring flooding.

Dalen distributed a handout regarding small-scale distributive storage, or the "waffle" concept. Dalen feels that distributive storage is an important tool for all watershed districts to use to address flood mitigation. He explained that they have been working on this concept for about a year and are now prepared to implement a larger pilot project to showcase their distributive storage model.

Kurz gave a brief history of the development of the "waffle" concept, which implements temporary distributive springtime water retention/storage on agricultural land. She explained that in 2002 the Natural Resources Conservation Service (NRCS) provided funding for a study to look at the technical, social, and economic feasibility of the "waffle" concept and a basin-wide approach to flood mitigation for large springtime floods. The next step was to implement a pilot project involving local landowners/water authorities. She explained the specifics of the distributive retention/storage concept. She noted that at first, they had not planned to change the basic road configuration in the pilot are, but on further examination, it appears that building up roads, even slightly, could provide double or triple storage volume. Their model assumes the use of the existing culverts with vertical risers/standpipes followed by inline control structures to allow enough freeboard to prevent road overtopping. Once the potential storage on a parcel of land is achieved, this design allows water to continue to flow naturally through the culvert, so that the project won't affect neighboring landowners who don't wish to participate. Kurz stressed that the temporary storage would be implemented only during large springtime flooding events. While there could be some delays in planting, it may not be feasible to store water on fields during the growing season. Kurz talked about the possible location of the storage sites, the cost effectiveness of the concept, how quickly the concept could be implemented, local economic benefits, potential sources for cost-sharing possibilities, potential pilot project goals, and storage modeling on the tributaries and the main stem. She also discussed the process of implementing a pilot project. Kurz noted that LiDAR data could be a useful tool to identify

possible storage areas. The North Dakota State University (NDSU) conducted an economic evaluation of the waffle proposal based on 2005 land cash rent. The study found that the distributive storage was a feasible option. Landowners would be paid a retainer fee during a contract period (10 years) and a storage fee when water was actually held on their land. The payment would be approximately 125% to 250% of cash rent. The EERC did a study to determine how cost effective the project could be, and found that reimbursing landowners at a rate of 125% for the use of their land for storage was feasible. Distributive retention would be a way to address flooding problems in the near term while larger long-term flood damage reduction projects are implemented.

Ellefson asked if the site storage capacity would be reduced with the standpipe design. Albright said that existing culverts in storage areas might need to be upgraded to meet design standards. The group briefly discussed this issue.

Kurz explained that the project would also add to the local economy through payments to the landowners. She discussed cost-sharing options, including the NRCS' Agricultural Water Enhancement Program (AWEP) that could be used to pay up to 75% for structural modifications and landowner reimbursement. An NRCS committee has determined that distributive retention would qualify for NRCS funding. NDSU suggested that drain tile could be a good pairing with distributive storage. Dalen briefly discussed obtaining 75% funding from AWEP. The group also discussed Minnesota Department of Transportation (MNDOT) policy regarding the use of their road ditches for drainage projects. They also talked about township road benefits. She stressed that their goal is to create a sustainable project that will provide significant flood damage reduction.

Kurz discussed modeling that they did on each of the tributaries in the Basin and the main stem. She noted that there is some debate regarding the models they did on the main stem upstream of Fargo-Moorhead. There will be more detailed modeling in conjunction with the pilot project.

Dalen noted that he and Kurz had hoped to have the pilot project in operation by 2012. However, the timeline would be dependent on what the technical experts thought should be done. More discussion took place regarding hypothetical storage implementation during high water events. The workplan has three phases: consensus building, public relations, and marketing. He stressed the need to organize an unbiased strategic planning committee in conjunction with the project sponsor, which would develop marketing and implementation plans. The technical experts would work on site selection.

Albright asked how many acres they would need for a pilot project. Dalen felt that the pilot project would require approximately 50,000-100,000 acre-feet of storage. He added he and Kurz would like to review/refine their project workplan with the lead project sponsor. Once the lead sponsor is identified, Dalen explained that they would like to give other watershed districts/authorities a chance to participate to increase the number of acre-feet in the Basin. Albright thought that it would be better to start small and then add to the project size as it progresses. Kurz agreed and noted that the concept would probably be more feasible to implement by the accumulation of smaller projects throughout the Red River Basin, instead of one large basin-wide project.

Albright referenced the EERC's storage test plot in Shelly, MN, and discussed using ditch systems to help implement the project. Kurz thought that more outlets and large ditch systems would be beneficial in filling storage sites to their full potential. Dalen stressed that distributive storage could be used as one of many tools watershed districts have to address flooding problems. Albright noted that in order to appreciate the value of the waffle concept, people will need to see it in operation. Clay County Commissioner Jon Evert pointed out that the North Ottawa retention project was hard to sell to the public until it was built. More discussion took place regarding how the waffle concept would be implemented in response to major downstream flooding as far north as Canada. Kurz felt that the initial implementation

should focus on local project benefits. Albright referenced the Wolverton Creek drainage area and other areas within the BRRWD where retention might be available. Ellefson briefly discussed the issue of trash (field debris) blocking culverts on fields where water is stored, and how this might affect structure sizing. Dalen pointed out that to answer all of the questions relating to storage, the distributive storage concept would need to be implemented to test the proposal. Land prices are rising and so will easement costs. The group also discussed crop loss and landowner compensation resulting from the remote possibility that water might have to be stored on the tract longer than anticipated.

Ellefson pointed out a few variables that would be deterrents to landowner participation. Dalen said that there are many concerns that would need to be addressed during the pilot project. Permanent sites are becoming more expensive, as commodity prices increase. The waffle concept provides temporary storage, and landowners are only compensated when water is actually stored on their land. Dalen felt that changes will need to be made to the Federal Crop Insurance program in order to allow for possible crop loss due to the implementation of "distributive storage". Hovland asked if the modeling could quantify sub-watershed benefits.

The group discussed water retention scenarios that could cause problems, such as trash/debris buildup. They also discussed the Fargo-Moorhead Army Corps of Engineers (COE) Diversion, which could include extensive upstream retention areas in the BRRWD.

Dalen discussed project costs and pointed out that, "If we can model the hydraulic effectiveness of a permanent retention site, we can do the same for temporary distributive storage."

Albright explained to the Board that Dalen and Kurz are looking for sponsors for the next step of their pilot project. He suggested that the EERC might need to find multiple sponsors. People might be more interested in a pilot project located south of Fargo-Moorhead in light of the current F-M Diversion proposal. The group discussed the proposed location of the Diversion project, and future flooding scenarios. Albright noted that if agencies in this region don't take the initiative to address basin flooding, the Federal government might come into our area and mandate flood mitigation.

VanAmburg asked about North Dakota's interest in acting as a sponsor of the pilot project. Dalen briefly addressed their concerns about the study model. He and Kurz have been meeting with the City of Fargo/Cass County regarding this issue and sponsorship. They have also been in contact with Richland County.

Hovland asked where the initial seed money would come from for the pilot project. Dalen explained that they are looking for State and Federal funding and sponsorship from two or three watershed areas.

Albright commented that many of the questions about the proposal would be answered by implementing the pilot project. Kurz said that it would be more effective if the project could be put into operation for a more focused/concentrated study. More discussion continued regarding implementation of the pilot concept. Jones noted that the new LiDAR data could be used to determine storage areas. The group discussed tiling benefits/problems in association with a pilot storage project area.

Evert asked if the Board would consider appointing a committee to look at a possible pilot project for the Sabin Coulee/Wolverton Creek areas, which would retain water upstream of Fargo-Moorhead. Albright felt that it would be important to find partners to help share the costs/work. Ellefson thought that there should be a lead sponsor to spearhead the effort, and noted that the BRRWD currently has a very heavy workload. Albright felt that there are willing partners from both Wilkin and Clay Counties who could be available to help participate in a pilot project. The group discussed pilot project funding. Dalen noted that funding from the NRCS AWEP is available to help start the pilot project.

Evert felt that the groundwork for a pilot project should be started. Jones noted that the environmental agencies would need to cooperate regarding wetland mitigation/protected waters. Evert felt that the counties and cities should look at partnering with the BRRWD to establish a test pilot project.

VanAmburg felt that the BRRWD should consider sponsoring this proposal. Dalen would like to meet with the proposed committee to review the concept workplan. Albright thought that a committee made up of BRRWD Managers could review the workplan prior to committing to sponsoring the pilot project. Albright asked County Commissioners Hovland and Evert if they would discuss this issue with their respective Commissions to provide the BRRWD with some guidance regarding sponsorship.

Chairman Ellefson thanked Dalen and Kurz for their presentation. He felt the Board would like to digest the information, and also discuss it with Manager Hanson, who could not make tonight's meeting because of the weather. Ellefson cautioned that the BRRWD has a very heavy workload with numerous projects that we have to complete in 2011, including Oakport Flood Mitigation, Manston Slough Restoration, and construction of a new office building. Ellefson felt that whomever agrees to be the pilot project sponsor should have the time/resources to give it due diligence. Dalen suggested that it would be very beneficial if we would at least appoint a committee to look at the workplan. The Board agreed to make a decision by the January annual meeting.

Treasurer's Report. Albright gave a brief financial update. We currently have about \$2.3 million on hand. He noted that we recently received a payment from the Minnesota Department of Natural Resources (DNR) for over \$1 million for general and buyout expenses for Project No. 49, Oakport Flood Mitigation. We have submitted two more pay requests to the DNR for Oakport. Clay County should be forwarding their second half tax payment in the next few weeks.

Section 27, Skree Township, Clay County. A meeting to discuss ditch work that Clayton, Craig, and Brandon Runck did in Section 27 has been tentatively scheduled for 12/07/10 meeting at 9:00 AM in the Barnesville office. The office will notify the affected agencies. The agencies feel that it would be beneficial to meet before a larger meeting is held with neighboring landowners.

Project No. 68, Lake Jacobs Outlet. The Board has made an emergency declaration for Lake Jacobs. Jones is waiting for landowners to return permission to survey releases so H.E. can start their work. The Board discussed requests from landowners associated with Lake Annie east of Lake Jacobs for help with their high water concerns. There is about 0.5 miles between the two lakes. The Board discussed drainage patterns and the possibility that the Lake Annie landowners may petition to become part of the BRRWD.

Project No. 67, HRBP Lakes Outlet. The Board discussed the project status. Jones reported that the contractor expects to have the road and driveway culverts installed this week. With those culverts in, the project by Trunk Highway (T.H.) No. 34 will start to flow. Bridget Miller, MNDOT, discussed the outlet pipe 0.4' elevation change with Jones. Miller was more interested in getting the project operational than the actual inlet pipe elevation.

Project No. 64, LaBelle/Boyer Outlet. Albright and Manager Hanson still need to schedule a meeting with Loren Jetvig regarding his crossing concerns. Jones thought that Sellins Brothers, Inc., will start cleaning Becker County Ditch No. 9 this week. The consensus of the area landowners is that they would like to see Boyer Lake lowered about 4'.

Project No. 62, Clay/Wilkin Judicial Ditch No. 1 (J.D. 1), Branch No. 4-Improvement/Extension. The Board discussed Dean Paschke's concerns about his Branch No. 4 assessment. Wilkin and Clay Counties have sent out the tax statements for Branch No. 4. Albright noted that traditionally, assessments couldn't be changed once the Viewers' Report has been adopted. Future assessments could be adjusted by a

redetermination of benefits. Albright will do an analysis regarding the project's estimated costs vs. final costs. The Board had an extended discussion regarding the Viewers determinations and area drainage patterns. Ellefson noted that Paschke is also concerned about the restrictor plate on a culvert through C.R. No. 3. Albright thought we might need to have a meeting with the affected area landowners to talk about long-term drainage solutions for this area.

Project No. 50, Cromwell Township Highwater Investigation. Jones reported that the first phase of the project is just about down to the Ordinary High Water (OHW) wetland elevation. The Board would like to finish Phase 2 of the project next spring. Two landowners have still not signed their easement for this phase. We will also have to meet with the United States Fish and Wildlife Service (USFWS) to determine final wetland elevations for areas under easement.

Project No. 49, Oakport Flood Mitigation. Albright is scheduled to buy the Hasse house tomorrow. This is the last house left to buyout. We are still working on the acquisition of the VanRaden property for the stormwater retention pond. Albright plans to prepare a letter to State Senator Keith Langseth regarding the final funding needs based on estimates from Ulteig Engineers, Inc. (UEI).

Project No. 39, Georgetown Levee Improvement. Albright plans to send letters to the buyout property owners asking that they fill out permission to appraise forms, so that we can start the voluntary appraisal process. Albright noted that we still have approximately \$10,000 left in the current grant agreement. He will contact Pat Lynch, Financial Coordinator, DNR Waters, to get an extension for this grant. To date, there has been no new DNR information regarding possible extra funding for the project.

Project No. 32, Hawley EDA Diversion. Albright needs to mail the cost share agreement for the repair of the reinforced concrete pipe (RCP) repair to the affected parties for signature. Work on the structure will have to be done next year due to the weather. Jones prepared recommendations for work that needs to be done on the diversion channel downstream of the drop structure. Vegetation and sediment will need to be removed for about 4,000'. Jones thought this work could also be done next year. **Motion** by VanAmburg to do the referenced repair. **Seconded** by Paradeis Kobiela. **Approved.**

Project No. 29, Buffalo River Log Jam Removal. Scott Smith, NRCS, requested information regarding the log jam sites and their locations. The 2010 final billing was submitted last week.

Mediation Project Team (PT). The next PT meeting will be held on Thursday, December 9, 2010 at 1:30 PM at the MSUM Science Center near Glyndon.

COE Metro Flood Study. The next COE meeting will be held on 12/09/10 at 7:00 PM, Bennett Elementary School, Fargo.

Social Indicators Survey (SIS). The SIS survey notification letters were mailed last week.

Minnesota Association of Watershed Districts (MAWD). The MAWD annual meeting will be held on December 2-4, 2010. Manager reservations and delegate designations have been submitted.

Clay County Ditch No. 22 Repair. Jones submitted a repair plan for County Ditch No. 22 in Kragnes Township for the file.

Next Meeting. The Board of Managers, BRRWD, will hold their next regular meeting on Monday, December 13, 2010, at 7:00 PM in the Barnesville office.

Adjournment. Chairman Ellefson adjourned the meeting at 10:05 PM.

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Respectfully submitted,

John E. Hanson, Secretary