



**East Dakota Water Development District  
132B Airport Drive  
Brookings, SD 57006**

**605-688-6741**

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**MINUTES  
October 20, 2011**

The Board of Directors of the East Dakota Water Development District (EDWDD) held a regular meeting on October 20, 2011 at the EDWDD Office, 132B Airport Avenue, Brookings. Chairman Eggers called the meeting to order at 9:05 a.m. The following persons attended:

**Directors Present**

Lois Brown  
Mary Ellen Connelly  
Curt Eggers  
Martin Jarrett  
Roger Scheibe  
Jerry Soholt  
Kay Kassube  
John Weidler

**Directors Absent**

none

**Others Present**

Shirley Flemming, Florence  
Vincent Flemming, Florence  
Chris Hay, South Dakota State University  
Jeppe Kjaersgaard, South Dakota State University  
Ryan Thompson, United States Geological Survey  
Gene Wilts, Brookings-Deuel Rural Water System

**Staff Present**

Jay Gilbertson  
Deb Springman  
Kristi Thielen

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**Administrative Items**

Approval of Agenda - The Manager asked to have a Travel Request and a request for assistance from Brookings-Deuel Rural water System added to the agenda as previously distributed.

**Motion** by Kassube, seconded by Scheibe to approve the agenda as amended. Motion carried unanimously.

Minutes - The Board reviewed the Minutes of the September 15<sup>th</sup>, 2011 meeting. The Manager noted that in the section on the Codington Conservation District there was an errant reference to Day County that needed to be changed.

**Motion** by Soholt, seconded by Connelly to approve the Minutes as amended. Motion carried unanimously.

Financial Reports - The Board reviewed the September 2011 Financial Report.

**Motion** by Scheibe, seconded by Kassube to accept the September 2011 Financial Report. Motion carried unanimously. Chairman Eggers then asked that the reports be placed in the District files.

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Meetings and Conferences - Director Jarrett attended the September 29<sup>th</sup> meeting of the Lake County Clean Water Committee in Madison.

Director Weidler attended the National Rural Water Association Annual Meeting in Louisville, Kentucky, on October 4-6.

Directors Brown, Connelly, Jarrett, Kassube, Scheibe and Weidler attended the Eastern South Dakota Water Conference in Brookings on October 13<sup>th</sup>.

The Manager briefly commented on the following meetings he attended in the past month:

1. **September 19-20** - Rapid City. South Dakota Counties Annual Convention.
2. **September 22** - Aberdeen. James River Water Development District Board of Directors.
3. **September 22** - Pierre. South Dakota Board of Water and Natural Resources.
4. **September 23** - Pierre. Dedicated conservation funding roundtable.
5. **September 26** - Sioux Falls. Minnehaha Water Coalition.
6. **September 27** - Brookings. Brookings County Commission.
7. **September 28** - Colman. Central Big Sioux River watershed project II Steering Committee.
8. **September 29** - Watertown. First Planning and development District.
9. **September 29** - Madison. Lake County Clean Water Committee.
10. **October 3** - Brookings. Big Sioux water Festival Steering Committee.
11. **October 4** - DeSmet. Kingsbury County Commission.
12. **October 13** - Brookings. East South Dakota Water Conference.
13. **October 18** - Sioux Falls. Regional waste water treatment proposal presentation.
14. **October 18** - Canton. Lincoln County drainage.
15. **October 19** - Mitchell. SDARWS Quality On Tap editorial board.

Upcoming Meetings -

1. **October 26 & 27** - Deadwood. South Dakota Association of Rural Water Systems Managers Group Meeting.
2. **November 1 - 9:15 a.m.** - Lake County Courthouse, Madison. Lake County Commission.
3. **November 10 - 10:00 a.m.** - Pierre. South Dakota Board of Water and Natural Resources.
4. **November 17 - 9:30 a.m.** - Water Reclamation Plant, 4500 North Sycamore, Sioux Falls. November EDWDD Board of Directors Meeting.

Payment Requests - The Manager presented two payment requests:

*City of Madison* - The Manager presented the Board with the third payment request from the City of Madison. In February 2011, the Board awarded project assistance funds to support an assessment of options to address problems encountered by the City with volatile organic compounds (VOCs) showing up in their well water. Specifically, the Board agreed to cover thirty percent (30%) of the study costs, up to a cap of \$8,400. Two prior payment requests (\$5,203 in total) have been approved. The current request covers \$5,038 of study costs, of which the District's share would be \$1,511.

**Motion** by Jarrett, seconded by Weidler to approve payment of \$1,511 to the City of Madison as requested. Motion carried unanimously.

*United States Geological Survey* - At the October 2010 meeting, the Board agreed to provide District cost-share assistance totaling \$7,100 as cost-share for the operation and maintenance of a United States Geological Survey (USGS) gaging station, operated by the South Dakota Water Science Center. The gage is located on the Big Sioux River near Bruce. The USGS has submitted a payment request for \$7,100.

**Motion** by Brown, seconded by Jarrett to authorize payment of \$7,100 as requested. The Manager noted that this payment would complete the District obligation under this agreement. Motion carried unanimously.

*United States Geological Survey* - At the July 2011 meeting, the Board agreed to provide District cost-share assistance totaling \$4,922 as cost-share for the operation and maintenance of two USGS gaging stations, operated by the Minnesota Water Science Center. The gages are located on the Whetstone River near Big Stone City, and the Yellow Bank River near Odessa. The USGS has submitted a payment request for \$4,922.

**Motion** by Weidler, seconded by Connelly to authorize payment of \$4,922 as requested. The Manager noted that this payment would complete the District obligation under this agreement. Motion carried unanimously.

*Clark Rural Water System* - At the July 2011 meeting, the Board agreed to provide District cost-share assistance of up to \$25,000 as cost-share for the purchase of land that is part of the Kampeska well head protection area for the Clark Rural Water System (CRWS) in Codington County. The funds would be allocated from the District's Wellhead Protection Area Assistance program (Program). District support was limited to no more than fifty percent (50%) of the purchase cost, with a cap of \$25,000, as per Program policy. CRWS has completed the purchase of the land, and has submitted a payment request for \$25,000. The Manager indicated that the purchase price for the 135 acre parcel was in excess of \$50,000, therefore qualifying for the full amount of the support.

**Motion** by Soholt, seconded by Brown to authorize payment of \$25,000 as requested. The Manager noted that this payment would complete the District's obligation under this agreement. Motion carried unanimously.

Out-of-State Travel Authorization - The Manager requested Board authorization for out-of-state travel. He asked to attend the Minnesota/Iowa/South Dakota Drainage Research Forum to be held on November 22<sup>nd</sup> at Arrowwood Conference Center in Okoboji, Iowa.

**Motion** by Scheibe, seconded by Brown to authorize the Manager's attendance at the meeting as requested. Motion carried unanimously.

Director Area 1 Vacancy - The Manager noted that with the untimely passing of Director John Johnson on September 22<sup>nd</sup>, the position of Director from Director Area 1 was vacant. He reviewed the process for filling the position. After the Board formally acknowledges the vacancy, a Notice of Vacancy will be placed in the appropriate District newspapers, in this case the Watertown Public Opinion and Grant County Review. The notice will include a description of Director Area 1, procedures for obtaining a nominating petition, a time line for submitting the petition, and the selection process. Interested individuals will need to collect at least 25 valid signatures on nominating petitions, and then submit them to the District Office by a predetermined deadline. The Manager verifies that petitions are complete and accurate. The Board may

then select a replacement from those candidates who submit valid petitions. The appointed person will serve through the end of 2012.

He noted that earlier this year, the State Board of Water and Natural Resources, in accordance with state law, redefined the water development district director areas to reflect the results of the 2010 decennial census. As a result, EDWDD Director Area 1 includes the cities of Big Stone, Milbank, Marvin, and Twin Brooks in Grant County; Alban, Big Stone, Blooming Valley, Farmington, Grant Center, Kilborn, Lura, Mazeppa, Melrose, Osceola, and Twin Brooks townships in Grant County; and all of Codington County.

The Manager requested authorization to initiate the process of filling the vacancy. He proposed setting a deadline of December 2<sup>nd</sup>, 2011, for nominating petitions to be filed at the District office, with Board action to fill the vacancy at the December 15<sup>th</sup>, 2011, meeting.

**Motion** by Weidler, seconded by Scheibe to acknowledge the vacancy in Director Area 1, to authorize publication of the Notice of Vacancy, to require that all applicants for the vacancy submit their petitions to the EDWDD office no later than 5:00 p.m. on December 2<sup>nd</sup>, 2011, and to set the December 15<sup>th</sup>, 2011, Board meeting as the time to appoint a new Director for Area 1 from those that submit valid petitions. Motion carried unanimously.

Conservation Commission Representative - The Manager presented the Board with a request from the South Dakota Department of Agriculture seeking recommendations for appointment to the South Dakota Conservation Commission. The Commission consists of 9 members, each appointed by the Governor. According to South Dakota Codified Law (SDCL) 38-7-4, one of these members is to be selected from a list of at least three names submitted by water development districts (WDDs). For a number of years, former EDWDD Director Bill Dempsey represented WDD interests on the Commission. Tom Glover of Burke, who is a Director for the South-Central WDD, is the current WDD representative on the Commission. Mr. Glover's term expires at the end of this year, and the Department of Agriculture has requested that the WDDs submit a slate of names from which the Governor can make an appointment.

The Manager indicated that he understood that Mr. Glover is willing to continue service on the Commission, and he is unaware of any particular reason he might not be re-appointed. However, as SDCL 38-7-4 specifically requires that the choice be made from a list of at least three candidates, additional names have been solicited.

**Motion** by Brown, seconded by Kassube to put forward Directors Jerry Soholt and Mary Ellen Connelly for consideration for appointment to the State Conservation Commission. Motion carried unanimously.

### **Federal Fiscal Year 2012 USGS Gaging Station Agreement**

The Manager reviewed the proposed joint funding agreement between the District and the United States Geological Survey (USGS) South Dakota Water Science Center for support of stream gaging stations for Federal Fiscal Year (FFY) 2012 (October 2011 - September 2012). During FFY 2011, the District provided cost-share assistance for one gage, on the Big Sioux River near Bruce, at a cost of \$7,100. The current joint funding proposal would be for a continuation of support for this gage at a cost of \$7,300. No new gage sites have been proposed.

**Motion** by Kassube, seconded by Soholt to approve the FFY 2012 joint funding agreement for \$7,200 in support of the gage on the Big Sioux River near Bruce. Motion carried unanimously.

### **East Dakota WQM Project Grant Amendment**

The Manager explained that the East Dakota WQM Project is a collaborative effort between the District and the South Dakota Department of Environment and Natural Resources (DENR) to gather stream/river stage (water level) and discharge information at about two dozen of DENR's permanent ambient water quality monitoring (WQM) sites in the Minnesota River, Big Sioux River and Vermillion River basins. Under the agreement, DENR provided a grant of \$185,000 which was used to acquire stage recorders and discharge measuring equipment, and provided support to offset staff salaries and travel costs. The equipment was installed early in the 2010 field season, and District staff have been gathering stage and discharge data over the past two field seasons. The Project is scheduled to be completed at the end of December 2011.

The District recently requested an amendment to the agreement that would provide funding for additional monitoring equipment not covered in the original agreement. DENR has reprogrammed other funds toward this effort, and prepared a grant amendment that would increase the overall support by \$3,820.

**Motion** by Weidler, seconded by Scheibe to authorize the Chairman to sign the proposed amendment to the East Dakota WQM Project agreement. Motion carried unanimously.

### **Bioreactor Project Update**

Dr. Jeppe Kjaersgaard, South Dakota State University (SDSU) Water Resources Institute (WRI) briefed the Board on the status of the Demonstration of Nitrate Removal Effectiveness of Bioreactors for Drainage Water Management Project. He stated that after a long delay, the project had been awarded a United States Department of Agriculture Natural Resource Conservation Service (NRCS) Conservation Innovation Grant. The award was in the amount of \$75,000, which is what had been requested. At the March 2011 meeting, the Board had agreed to provide \$18,750 in cost-share assistance toward this research effort to assess the ability of bioreactors to lower the nitrate concentrations in water discharged from subsurface agricultural drains. The project will install bioreactors at several demonstration sites and monitor water quality changes. As originally planned, it was to also assess the use of locally-derived carbon sources (corn stalks) in place of the standard wood chips, but recent investigations by others has shown this to be problematic. Dr. Kjaersgaard indicated he would arrange a field tour for the Board once the demonstration sites are established.

### **Project Assistance Requests**

Brookings-Deuel Rural Water System - Gene Wilts, Manager of the Brookings-Deuel Rural Water System (BDRWS) presented a request for project assistance from the 2010 Well Head Protection Area Protection Program (Program). BDRWS is requesting \$25,000 in Program assistance to be applied toward the purchase of roughly 152 acres of land within the established well head protection area for their well field north of Bruce. This well field is operated jointly with the KingBrook Rural Water System and provides water to both systems. The BDRWS Board of Directors has authorized the purchase of the land, and a purchase agreement has been executed and is being finalized.

The Manager has examined the material provided by BDRWS, and concluded that the request meets Program requirements. The total purchase price of the land exceeds that necessary for BDRWS to qualify for the full amount of Program support, \$25,000.

**Motion** by Soholt, seconded by Brown to provide District cost-share assistance from the 2010 Well Head Protection Area Protection Program to cover fifty percent (50%) of the price of the proposed land purchase, up to a maximum of \$25,000, by BDRWS as requested. The Manager noted that the actual payment would not be made until after the purchase was finalized. Motion carried unanimously, with Director Weidler abstaining.

South Dakota State University - Dr. Chris Hay, SDSU Department of Agriculture and Biosystems Engineering (ABE), presented the Board with a research proposal entitled, "Agricultural Subsurface Drainage Impacts on Hydrology in Eastern South Dakota." The effort will be looking at the hydrologic impacts of subsurface agricultural drainage (tiling) at the field level using field-calibrated computer models. The projects has two major research objectives. One is to evaluate the performance of the DRAINMOD drainage simulation model using estimated soil hydraulic parameters. The second is to estimate the hydrologic effects of drained fields compared to undrained fields under typical crop rotations for commonly drained soils in eastern South Dakota. In particular, changes to both the timing and overall volume of flows will be assessed. In addition to Dr. Hay, Dr. Kjaersgaard (WRI) and Dr. Todd Trooien (ABE) will be involved in the project. Total costs for the two-year activity is \$110,168. SDSU will provide \$49,730, and they are requesting \$60,438 from the District.

The Manager noted that he had solicited this proposal in response to ever expanding interest in subsurface drainage within the District and across the region. The rapid expansion of tiling has placed considerable burdens on local counties that have adopted drainage ordinances. Proper application of the ordinances requires detailed knowledge of, among other things, the anticipated hydrologic changes that may arise from a drainage project. At present, there are limited tools available for the permitting authorities to assess the potential impacts. The timing and volume of water emanating from drain tile is a critical factor, and the proposed research project is intended to provide a better technical foundation for the permitting process.

Dr. Hay was asked about the prospect of finding additional partners in this investigation. He indicated that they were seeking additional support to expand the scope of the research to include water quality considerations. The Manager indicated that he too was seeking additional support to expand the research efforts to help address the current needs.

**Motion** by Scheibe, seconded by Connelly to provide District cost-share assistance to cover fifty-five percent (55%) of the costs of the proposed research project, up to a maximum of \$60,438 as requested. Motion carried unanimously.

USGS South Dakota Water Science Center - Ryan Thompson, USGS Huron Field Office, presented the Board with a draft research proposal entitled, "Assessment of Climatic Effects on Streamflow Characteristics in eastern South Dakota." The proposal is for analysis of existing data from the past 40-70 years to determine what factors may be affecting the hydrodynamics (stream and river flows) of eastern South Dakota. One potential factor that could be affecting hydrology and stream flow dynamics is climate change. Knowing the effect that climate, and subsequently climate variability, has on a region will help to better understand additional factors that may affect the hydrology which may include, but not necessarily be limited to, land-use and land-cover modifications. Compilation and calculations of systematic stream flow records

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and climatic data (such as precipitation and temperature) will be an important component of this study. Specific objectives of this study will be to 1) compile systematic records of stream flow and climate in eastern South Dakota and remove the variation in streamflow that is a direct influence of climate, and 2) perform regression analysis of the climate-variation-removed stream flow and additional statistical tests to look at trends.

The Manager noted that like the SDSU proposal, he had also solicited this study in an effort to address the many and varied problems surrounding drainage in the District and region. In this case, the investigation would take a much broader approach than the SDSU investigation, evaluating the long-term stream flow records at a number of gaging stations. It will also provide information relative to flow volume, which is the issue at the core of most drainage conflicts.

At this time, the USGS does not yet have a budget for FFY 2012, therefore they do not know what level of support they can provide to the study, nor what would be needed from potential collaborators. The Manager noted that other entities, such as the James River Water Development District, might want to join in this assessment of regional stream flow records. He will continue to explore options for getting this project moving forward.

### **District Project Updates**

Environmental Education - Deb Springman, District Outreach & Education Coordinator, reported on the Project WET's Sustaining the Blue Planet Global Water Education Conference in Bozeman, Montana, that she attended in September. There were over 200 attendees from 40 countries. Most of the attendees utilize Project WET (Water Education for Teachers) materials in their workplace. The District uses their materials in most of the presentations at the Big Sioux Water Festival, in the traveling trunks, and in the discovery packs available for teachers, out of school childcare centers, and for various workshops. During the conference Project WET, released their new activity guide and launched their [discoverwater.org](http://discoverwater.org) website. Project WET also recently signed an agreement with the National Parks System in which they will be working together to create curriculum for teachers on topics related to National Parks.

### **Adjournment**

There being no further District business, Chairman Eggers declared the meeting adjourned at 12:15 p.m.

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Roger Scheibe, Secretary

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