



**East Dakota Water Development District**  
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**MINUTES**  
**October 15, 2015**

The Board of Directors of the East Dakota Water Development District (EDWDD) held a regular meeting on October 15, 2015, at the City Visitor Center, 1001 East Fourth Avenue, Milbank, SD. Chairman Jarrett called the meeting to order at 9:35 a.m. The following persons attended:

**Directors Present**

Mark Anderson  
Lois Brown  
Mary Ellen Connelly  
Martin Jarrett  
Kay Kassube  
John Moes  
Jerry Soholt  
Janelle Weatherly

**Directors Absent**

Gary Duffy

**Staff Present**

Jay Gilbertson

**Others Present**

Gerry Adolph, self  
Marty Buttke, Grant County Commission  
Paul Dummann, Grant County Commission  
Bonnie Dybedahl, South Dakota Farm Bureau  
Guanghai Hua, SDSU Civil & Environmental Engineering  
Jesse Johnson, SD Corn  
Gary Lindeman, Grant County Planning & Zoning Board  
Dana Loseke, Friends of the Big Sioux River  
Kyungnan Min, SDSU Civil & Environmental Engineering  
Diane Radermacher, Upper Minnesota River Watershed District  
Dennis Skadsen, NE Glacial Lakes 319 Project/Day County CD  
Kathy Tyler, self  
Misti Ward, NE Glacial Lakes 319 Project/Day County CD  
Cory Zirbel, NE Glacial Lakes 319 Project/Day County CD

**Administrative Items**

**Approval of Agenda**

**Motion** by Soholt, seconded by Moes to approve the agenda as presented. Motion carried unanimously.

**Minutes** - The Board reviewed the Minutes of the September 17<sup>th</sup>, 2015 meeting. Director Moes noted that the 2015 Mayor's Big Sioux River Summit was held in Brookings, not in Sioux Falls as shown in the DRAFT Minutes.

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

**Financial Reports** - The Board reviewed the September 2015 Financial Reports.

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**Motion** by Soholt, seconded by Connelly to accept the September 2015 Financial Reports. Motion carried unanimously. Chairman Jarrett then asked that the reports be placed in the District files.

Meetings and Conferences - Director Connelly attended the Friends of the Big Sioux River in Sioux Falls on September 22<sup>nd</sup>.

Director Moes attended a presentation on the DRAFT General Water Pollution Control Permit for Concentrated Animal Feeding Operations on September 17<sup>th</sup>, held using the Digital Dakota Network (DDN). He also attended the September 24<sup>th</sup> meeting of the Upper Big Sioux River watershed Advisory Board. Both meetings were in Watertown.

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

1. **September 22** - Sioux Falls. Friends of the Big Sioux River.
2. **September 28** - Milbank. River Basin Natural Resource District Oversight Advisory Task Force Sub-Committee.
3. **September 29** - Sioux Falls. Minnehaha County Commission.
4. **September 29 - October 1** - Rapid City. US Environmental Protection Agency Region VIII Harmful Algal Blooms Workshop.
5. **October 6** - DeSmet. Kingsbury County Commission.
6. **October 14** - Pierre. South Dakota Water Management Board.

Upcoming Meetings -

1. **October 16 - 10:00 a.m.** - Pierre. River Basin Natural Resource District Oversight Advisory Task Force.
2. **October 19 & 20** - South Dakota School of Mines & Technology, Rapid City. National Science Foundation Food/Energy/Water Nexus Workshop.
3. **October 21 - 7:30 p.m.** - Centerville. Vermillion Basin Water Development District.
4. **October 22 - 10:00 a.m.** - Madison. SDARWS Quality On Tap Editorial Board.
5. **October 28 & 29** - Ramkota Inn, Pierre. South Dakota Association of Rural Water Systems Managers Group.
6. **November 5** - various DDN sites. South Dakota Board of Water & Natural Resources.
7. **November 12 - 9:00 a.m.** - Huron. James River water Development District.
8. **November 14 - 9:30 a.m.** - Tracy, MN. Minnesota River Basins AREA II/Redwood-Cottonwood River Control Area (RCRCA) Annual Legislative Gathering
9. **November 19 - 9:30 a.m.** - Water Reclamation Plant, 4500 North Sycamore, Sioux Falls. November EDWDD Board of Directors.
10. **November 23 - 10:00 a.m.** - Pierre. River Basin Natural Resource District Oversight Advisory Task Force.

Payment Requests - The Manager presented two payment requests from South Dakota State University (SDSU):

*SDSU (I)* - In October 2014, the Board agreed to provide up to \$6,000.00 in cost-share assistance to Dr. Guanghui Hua, Department of Civil and Environmental Engineering at South Dakota State University (SDSU), for a project entitled, "Nutrient Removal from Agricultural Subsurface Drainage Using Denitrification Bioreactors and Phosphate Adsorbents II." SDSU has submitted a reimbursement request of \$2,127.83 for this project covering expenses incurred during the month of August 2015.

*SDSU (II)* - In October 2014, the Board agreed to provide up to \$6,000.00 in cost-share assistance to Dr. Kyungnan Min, Department of Civil and Environmental Engineering at SDSU, for a project entitled, "Controlling Harmful Algal Blooms in Eutrophic Lakes by Combined Phosphorus Precipitation and Sediment Capping." SDSU has submitted a reimbursement request of \$1,935.51 for this project covering expenses incurred during the month of August 2015.

The Manager indicated that both payment requests were in order and consistent with the Board's awards of support. He requested authorization to make payments to South Dakota State University totaling \$4,063.34.

**Motion** by Connelly, seconded by Anderson to authorize payment of \$4,063.34 to cover the two requests as presented. Motion carried unanimously.

January 2016 Board Meeting Time and Place - The Manager noted that interest had been expressed in holding the January 2016 Board meeting in Pierre, in conjunction with the opening of the 2016 Session of the State Legislature. He noted that the District By-Laws call for the monthly Board meetings to be held on the third Thursday of the month, such a change for this meeting would require formal Board action. He requested that the Board set the January 2016 meeting time and date as 1:00 p.m. on the 13<sup>th</sup>, with the meeting to be held at the American Legion Cabin (520 South Pierre Street) in Pierre, SD.

**Motion** by Moes, seconded by Weatherly to hold the January 2016 Board meeting at 1:00 p.m. on the January 13<sup>th</sup>, with the meeting to be held at the American Legion Cabin (520 South Pierre Street) in Pierre, SD. Motion carried unanimously.

### **Project Assistance Request(s)**

SDSU Civil & Environmental Engineering Department - Dr. Kyungnan Min presented a request for District cost-share assistance for a USGS 104(b) project entitled, "Controlling Harmful Algal Blooms in Eutrophic Lakes by Combined Phosphorus Precipitation and Sediment Capping - Part 2." The District provided funding for the first year of this investigation, and this request is for a second year of support. The objective of this project is to develop an effective flocculating and capping technology to control harmful algal blooms in eutrophic lakes in South Dakota. This technology uses chemical flocculants and clay particles for phosphorus removal and sediment capping. Laboratory experiments will be conducted to evaluate the efficiency of this technology and develop the optimum application conditions for controlling algal blooms in South Dakota lakes. Dr. Min provided a review of the first years efforts and results.

The total proposed budget for the one-year project is \$68,410. \$22,738 is to be requested from the 104(b) Program, with SDSU providing \$39,672 as in-kind match. Dr. Min's request of the District is for \$6,000 in support. District funds would be used to cover supply and materials costs, along with water quality analyses. The manager noted that this is the same level of support provided for the first phase of the study.

**Motion** by Kassube, seconded by Connelly to pledge District cost-share assistance of \$6,000 toward support of the project entitled, "Controlling Harmful Algal Blooms in Eutrophic Lakes by Combined Phosphorus Precipitation and Sediment Capping - Part 2," as requested. The Manager again noted that USGS 104(b) funding decisions would be announced in early December, so that if this project was not supported, District funds could be rescinded and applied elsewhere with minimal disruption. Motion carried unanimously.

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## Comments from a Grant County citizen on CAFOs

Gerry Adolph, resident of western Grant County, spoke to the Board regarding her concerns about the recent expansion of large-scale dairy operations. Ms. Adolph expressed concerns that the oversight necessary from permitting authorities to insure that such facilities are properly designed and constructed is lacking. She cited as an example a recent incident with a large, permitted dairy in the area when storm water discharge left the facility. There was no evidence that the event adversely impacted the waters of the state, but design criteria contained in the permit requirements should have prevented such an occurrence. She noted that in response to local complaints, SD DENR staff inspected the facility, and have levied fines and requirements to address design problems. She requested that the District consider taking a more active role in monitoring such facilities.

The Manager noted that the District does not have any direct role or regulatory authority in the permitting of animal feeding operations. Permitting is currently obtained from state and county government agencies. However, he noted that from time-to-time he is asked to comment on a specific application, particularly in regard to possible water resource impacts. Earlier this year the Grant County Commission asked the District to expand its water sampling efforts in the upper Big Sioux River basin in order to monitor possible impacts of the facilities about which Ms. Adolph is concerned.

### Regional Water Resource Project Updates

Whetstone River Channel Re-Diversion - Dianne Radermacher, Administrator of the Upper Minnesota River Watershed District (UMRWD), briefed the Board on the status of the effort to re-direct the Whetstone River into its natural channel. In the 1920s, the river was diverted into Big Stone Lake with the hope that it would provide a consistent source of water for this heavily utilized recreational resource. Unfortunately, the diversion has instead been a source of considerable sediment and nutrient loadings, as well as exacerbating flooding during high water periods. In 2011, UMRWD initiated an effort to return the river to its natural channel. A variety of entities in both South Dakota and Minnesota, including the District, have contributed to the engineering and design effort.

Earlier this year UMRWD was presented with a final design and analysis for the diversion. The option chosen, Modified Alternative 2B, consists of a diversion weir in the existing diversion channel, restoration of the natural channel, modifications/upgrades to Grant County Road 47 (GCR47) and the bridge over the natural channel, construction of levees between GCR47 and the Minnesota River, abandonment of a portion of Big Stone County Road 15 and the bridge over the natural channel, and construction of a ring-dike around a single residence. Preliminary costs for the effort are just under \$6,000,000.

Northeast Glacial Lakes Watershed Improvement & Protection Project - Dennis Skadsen, Project Coordinator for the Northeast Glacial Lakes Watershed Improvement & Protection Project, provided the Board with an update on Project activities. The effort encompasses many of the lakes on the northern end of the Coteau des Prairies in Day and Marshall Counties, along with tributaries to the Red River and Minnesota River basins in Roberts, Grant and Deuel Counties. The Whetstone River and Yellow Bank River basins are largely located within District boundaries.

Major accomplishments during Segment 3 (2014-2016) include support of numerous best management practices: over 1,000 acres of riparian buffers, 1,100 feet of hard-bank stabilization, 5,400 acres of grazing management and 3 animal waste management systems. Outreach and education efforts include participation in children's water festivals in Aberdeen and Brookings, Lake & Stream Ecology Workshops, South Dakota

Envirothon and various age-appropriate K-12 field activities for area students. The Project is also conducting water quality sampling in Pickerel, Enemy Swim, Clear and Roy Lakes.

### 2015 Grant County Water Quality Sampling

The Manager reviewed results to date of the District's water quality sampling conducted within Grant County during 2015. The effort involves weekly water quality sampling and analyses from numerous collection sites in the upper Big Sioux River and Minnesota River watersheds. He noted that while some of this effort was a continuation of a general program of water quality sampling begun in 2014, additional sampling sites were added in western Grant County at the request of the County Commissioners. They were interested in learning more about how large concentrated animal feeding operations might be impacting the river. Results were presented for data from the upper Big Sioux River, the Whetstone River and the North and South Forks of the Yellow Bank River.

He offered the following general observations:

1. Upper Big Sioux River;
  - a. Nitrates - samples from the uppermost site had generally low concentrations (around 2.0 mg/L), with levels dropping to below 1.0 mg/L farther downstream. The single highest sample was 3.8 mg/L, well below the maximum contaminant level (MCL) of 10 mg/L;
  - b. Total suspended solids (TSS) - all samples were less than 80 mg/L and well below the MCL of 156 mg/L;
  - c. *E. coli* bacteria - Most samples had bacteria concentrations in the range of 100 to 1,000 colony forming units per 100 milliliters of sample (cfu/100 ml). A single high reading (>10,000 cfu/100 ml) coincided with a major precipitation event.
2. Whetstone River;
  - a. Nitrates - elevated nitrates were consistent below the outlet of the City of Milbank wastewater treatment facility (WWTF) on the South Fork. However, readings did not exceed 10 mg/L until late September when flow above the plant drop to zero, effectively making the WWTF the sole water source. Levels downstream at the confluence with Big Stone Lake did not exceed 0.5 mg/L;
  - b. Total suspended solids (TSS) - all samples were less than 80 mg/L;
  - c. *E. coli* bacteria - Most samples had bacteria concentrations in the range of 100 to 1,000 colony forming units per 100 milliliters of sample (cfu/100 ml). Again, the single high reading (>10,000 cfu/100 ml) coincided with a major precipitation event.
3. North and South Forks of the Yellow Bank River;
  - a. Nitrates - samples from both Forks were generally below 1.0 mg/L, with no samples exceeding 3.5 mg/L;
  - b. Total suspended solids (TSS) - all samples were less than 60 mg/L;
  - c. *E. coli* bacteria - Most samples had bacteria concentrations in the range of 100 to 1,000 colony forming units per 100 milliliters of sample (cfu/100 ml). Two high readings (>2,000 cfu/100ml) coincided with precipitation events.

Manager noted that field sampling would continue until early November. He would be making arrangements to give a summary of the 2015 sampling to the Grant County Commission in December.

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## Executive Session

**Motion** by Moes, seconded by Soholt to go into executive session at 12:20 p.m. to discuss personnel and legal issues with the Manager/Treasurer. Motion carried unanimously.

**Motion** by Kassube, seconded by Connelly to go come out of executive session at 12:35 p.m. Motion carried unanimously.

## Adjournment

There being no further District business, Chairman Jarrett declared the meeting adjourned at 12:36 p.m.

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John Moes, Secretary

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