



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

**605-688-6741**

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**MINUTES  
December 19, 2019**

The Board of Directors of the East Dakota Water Development District (District) held a regular meeting on December 19<sup>th</sup>, 2019, at the EDWDD Office, 132B Airport Drive, Brookings. Chairman Jarrett called the meeting to order at 1:00 p.m. The following persons attended:

**Directors Present**

Mark Anderson  
Mary Ellen Connelly  
Gary Duffy  
Spencer Hawley  
Martin Jarrett  
Kay Kassube  
Dana Loseke  
John Moes

**Directors Absent**

Jeff Barth

**Staff Present**

Barry Berg  
Kevin Christenson  
Jay Gilbertson  
Jeremy Hinke  
Deb Springman

**Others Present**

Richard Auch, Aurora  
Kurt Chowanski, SD School of Mines & Technology  
Tim Cowman, SD DENR Geological Survey Program  
Michael Crinion, Brookings  
Erin Hays, KingBrook Rural Water System  
Guanghai Hua, SDSU Civil & Environmental Engineering  
Lisa Kunza, SD School of Mines & Technology  
Scott Mohror, Banner Associates  
Amiel Redfish, City of Arlington

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**Administrative Items**

Approval of Agenda - Richard Auch requested time to address the Board. The Manager recommended scheduling Public Comment following Item III. Project Assistance Request(s) on the Agenda.

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

Minutes - The Board reviewed the Minutes of the November 21<sup>st</sup>, 2019, meeting.

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**Motion** by Moes, seconded by Loseke to approve the Minutes as presented. Motion carried unanimously.

Financial Reports - The Board reviewed the November 2019 Financial Reports.

**Motion** by Loseke, seconded by Connelly to accept the November 2019 Financial Reports. Motion carried unanimously. Chairman Jarrett then asked that the report be placed in the District files.

Report of Meetings and Conferences - Directors Anderson and Loseke attended the Big Sioux River Watershed Project Steering Committee meeting in Sioux Falls on December 5<sup>th</sup>.

Directors Anderson, Connelly, Duffy, Kassube and Loseke attended the Big Sioux River Water Summit in Sioux Falls on December 5<sup>th</sup>.

Director Duffy attended the Dakota Rural Action CAFO Information Forum in Mitchell on November 30<sup>th</sup>.

Directors Connelly and Loseke attended a meeting of the Friends of the Big Sioux River on December 3<sup>rd</sup> in Sioux Falls.

Director Loseke attended a meeting a Soil Health Forum in Sioux Falls on December 3<sup>rd</sup>.

The Manager commented briefly on the following meetings he attended:

1. November 26<sup>th</sup> - Regional Extension Drainage Research Forum, McCrory Gardens, SDSU, Brookings.
2. November 26<sup>th</sup> - SRAM video discussion w/ USEPA, teleconference.
3. December 3<sup>rd</sup> - SD Water Development District Managers Meeting, Pierre.
4. December 5<sup>th</sup> - Big Sioux River Watershed Project Steering Committee, Sioux Falls.
5. December 5<sup>th</sup> - Big Sioux River Water Summit, Sioux Falls.
6. December 6<sup>th</sup> - Dakota Rural Action CAFO Information Workshop, Watertown.
7. December 10<sup>th</sup> - State Non-Point Source Task Force, Pierre.
8. December 16<sup>th</sup> - Minnehaha Conservation District Board of Supervisors, Sioux Falls.
9. December 16<sup>th</sup> - Vermillion Basin Water Development District, Centerville.

Upcoming Meetings -

1. **January 3<sup>rd</sup>, 2019 - 1:00 p.m.** - various Dakota Digital Network (DDN) sites. South Dakota Board of Water & Natural Resources.
2. **January 14<sup>th</sup> - 16<sup>th</sup>** - Ramkota Hotel & Convention Center, Pierre. South Dakota Association of Rural Water Systems Annual Technical Conference.
3. **January 14<sup>th</sup> - 6:00 p.m. (MST)** - Rapid City. West Dakota Water Development District Board of Directors meeting.
4. **January 15<sup>th</sup> - 7:30 a.m.** - President's Lobby & Speaker's Lobby, State Capitol, Pierre. Breakfast with the Water Development Districts legislative event.
5. **January 15<sup>th</sup> - 1:00 p.m.** - American Legion Cabin, 520 South Pierre Street, Pierre. East Dakota Water Development District January Board of Directors meeting.

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6. **January 15<sup>th</sup> - 1:00 p.m.** - American Legion Cabin, 520 South Pierre Street, Pierre. James River Water Development District January Board of Directors meeting.

**Motion** by Moes, seconded by Duffy to hold the January 2020 District Board of Directors meeting on Wednesday, January 15<sup>th</sup>, at 10:30 a.m., at the Legion Cabin in Pierre. Motion carried unanimously.

Payment Requests - The Manager presented the Board with two payment requests from District-sponsored activities that required Board action. He noted that the requests were in order and consistent with the conditions established by the Board at the time of the awards.

<u>Grant Recipient/Activity</u>	<u>Requested Amount</u>
Town of Badger/Wastewater facility plan development	\$ 6,963.00
City of Madison/USACOE Flood Study	<u>\$ 12,500.00</u>
Total	\$ 19,463.00

**Motion** by Kassube, seconded by Anderson to authorize payments totaling \$ 19,463.00 as requested. Motion carried unanimously.

Project Assistance Review - The Manager reviewed the status of several projects that had previously received District cost-share assistance. Each project has been completed and will not be requesting further funds, or it has been determined that the project will not proceed. The Manager asked that the Board rescind the balance of District funds (\$39,964 in total) previously committed to the following projects:

<u>Award Date</u>	<u>Project</u>	<u>Award Amount</u>	<u>Unused Balance</u>
Oct 2017	City of Brookings Larson Nature Center	\$5,175	\$ 2,202
Sept 2018	EDWDD On-Line Data Presentation	\$7,500	\$ 7,500
Mar 2019	2019 Rotating Basin WQ Pilot Project	\$32,000	<u>\$ 328</u>
	Total		\$ 10,030

**Motion** by Duffy, seconded by Anderson to rescind the unused balances of the District cost-share assistance grants (\$10,030) as requested. Motion carried unanimously.

2020 Director Elections - The Manager noted that the current terms of office for the East Dakota directors representing even-numbered director areas (Duffy - 2, Jarrett - 4, Kassube - 6 & Connelly - 8) will expire on December 31<sup>st</sup>, 2020. Persons, including the incumbent directors, interested in serving in any of these positions, can start circulating nominating petitions on January 1<sup>st</sup>, 2020. He is preparing information packets containing director area description, nominating petitions and directions for circulating and filing petitions.

Travel Authorization - The Manager requested authorization for Barry Berg and himself to attend the Great Plains and Midwest Harmful Algal Blooms Conference, to be held at the University of Kansas - Edwards Campus, Overland Park, Kansas, on February 4<sup>th</sup> - 6<sup>th</sup>, 2020. He and Mr. Berg had been asked

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to present on the activities and functioning of the Big Sioux River Watershed Project, with an emphasis on the involvement of a diverse range of partners and stakeholders.

**Motion** by Kassube, seconded by Loseke to authorize the Manager and Mr. Berg to attend the Great Plains and Midwest Harmful Algal Blooms Conference as requested. Motion carried unanimously.

### **Project Assistance Requests**

City of Arlington Wastewater Facility Plan - Mayor Amiel Redfish, along with Scott Mohror, banner Associates, presented a request on behalf of the City of Arlington for District cost-share assistance to complete a facility plan of their waste water collection and treatment system. The community is working to update and modernize their waste water infrastructure in support of current and future growth. The City has entered into an agreement with Banner Engineering to complete the work, at a projected total cost of \$29,900. Their request was for up to \$10,000.

**Motion** by Hawley, seconded by Duffy to provide District cost-share assistance to the City of Arlington covering one-third (1/3) of the local costs of the proposed study, up to a maximum of \$10,000. Motion carried unanimously.

### **Public Comment**

Richard Auch, Aurora, commended the Board for providing support to the South Dakota State University School of Design for their efforts on the project entitled, “On Beyond Q: Evaluating MS4 Stormwater Management Strategies in Built-Out Neighborhoods.” Mr. Auch attended a public informational and scoping meeting in November, and thanked the Board for supporting the effort to identify appropriate policies and strategies for small rural cities, such as Brookings, to implement green stormwater infrastructure practices into the landscape of existing built-out neighborhoods. He noted that in times when everyone is having to deal with excessive water, stormwater management efforts that can be integrated into existing municipal areas will be beneficial.

### **Temporal and Spatial Patterns in Water Quality in the Big Sioux River Basin**

At its July 2018 meeting, the Board provided \$30,567 in funding to Dr. Lisa Kunza, South Dakota School of Mines & Technology, for a project entitled, “Temporal and Spatial Patterns in Water Quality in the Big Sioux River Basin.” Dr. Lisa Kunza and Kurt Chowanski, reported on their efforts to assess long-term water quality trends in the Big Sioux River basin.

Water quality monitoring in the Big Sioux River spans 6 decades with 151,213 reported results across 132 monitoring locations and 19 water quality parameters. Most monitoring locations are in the upper basin, upstream of Lincoln county. Specific areas of concern are near Watertown (*E. coli* and nitrate), between Watertown and Brookings (total suspended solids), Sioux Falls (nitrate), and Alcester (nitrate).

They noted that while many tributaries are monitored, absence of flow (discharge) measurements complicate linking changes in BSR water quality to tributary water quality. For example, Skunk Creek has a stream flow gage near the Big Sioux River; however, monitoring locations on Skunk Creek and

its tributaries do not allow for an assessment of the amount of any given water quality parameter that would be entering the Big Sioux River. Split Rock Creek has similar challenges. Jack Moore Creek and Bachelor Creek do not have stream flow monitoring gages.

Long-term changes in water quality vary by water quality parameter. Water quality may improve (*E. coli*, total suspended solids), or get worse (*E. coli*, nitrate) depending on monitoring location and water quality parameter. However, they did note a consistent trend of rising nitrate values for those sites that had an adequate data set. In most instances, the current nitrate concentrations were still below any state limitations, the Board agreed that the trend was quite troubling.

The Manager noted that this information would be extremely useful for prioritization of future monitoring efforts. Dr. Kunza noted that the project activities were nearly complete, and that they would be working with the Manager to finalize the report. Once completed, a press release would be developed and distributed.

### **Evaluation of Nitrate Removal Rates of Denitrification Bioreactors Using Agricultural Residue Media**

Dr. Guanghui Hua, South Dakota state University Department of Civil and Environmental Engineering, provided the Board with an update of his research efforts entitled, "Evaluation of Nitrate Removal Rates of Denitrifying Bioreactors Using Agricultural Residue Media." The objective of this study is to evaluate the nitrate removal performance of selected agricultural residues in denitrifying bioreactors. The Bioreactors have emerged as an important edge-of-field treatment technology to reduce the nitrate loads from subsurface drainage. Wood media (wood chips) are by far the most widely used as a carbon source in field-scale denitrification bioreactors. However, Dr. Hua's research has shown that carbon substrates derived from agricultural residues (corn cobs, corn stover, and barley straw) show greater nitrate removal rates than wood chips. Work to-date indicates that corn cobs in particular are more effective at nitrate removal than wood chips.

The Manager noted that results of this study could lead to the development of new bioreactors using wood chips and agricultural residues, which may enhance the nitrate removal efficiency and reduce the bioreactor cost. Funding for this effort was provided primarily through SDSU and grants from the US Geological Survey 104(b) Grant Program. However, the District has provided two grants totaling \$12,000 toward this effort.

### **Potential Legislation for the 2020 Legislative Session**

The Manager briefed the Board on two pieces of legislation that are likely to be presented to the 2020 Session of the South Dakota Legislature. The first involves the expansion of the Vermillion Basin Water Development District (VBWDD). This effort was planned for consideration in the 2019 Session, but was ultimately withdrawn in response to opposition from Governor Noem. He noted that she is perhaps more inclined to consider the proposal this year. The bill would move portions of Lake, Miner and Kingsbury Counties that are currently part of the East Dakota WDD into the expanded VBWDD, and adding all of McCook County as well. It also contains language concerning the repopulation of the Board of Directors for the expanded entity, and establishes limitations on the applicable tax levy. Representative Kent Peterson, R-Salem, is expected to be the prime sponsor.

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The second piece of legislation is a general clean-up bill for water development districts. It addresses three points. First, it removes reference to municipalities that, “are contiguous to the included area,” in the description of the James River WDD. Second, it would remove ‘disability’ as a criteria for declaring a director position vacant. Finally, it removes the specific reference to Minutes of a water development district having to be ‘mailed’ to official newspapers. It is proposed to substitute the word ‘distributed,’ as most entities have specifically requested that we send our correspondence via email, i.e., electronically. Representative Tina Mullaly, R-Rapid City, has been identified as a potential sponsor. The Manager noted that Representative Mullaly’s husband, Daniel, is the Administrative Assistant for the West Dakota Water Development District.

### **Adjournment**

There being no further District business, Chairman Jarrett declared the meeting adjourned at 3:55 p.m.

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John Moes, Secretary

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