



# North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0850  
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WATER DEVELOPMENT DIVISION  
(701) 328-2752

September 8, 2016

North Dakota Department of Health  
Division of Water Quality  
918 East Divide Avenue  
Bismarck, ND 58501-1947

RE: August 2016 Devils Lake Outlets Monthly Discharge and Water Quality Report

Dear Division of Water Quality:

Enclosed is the monthly discharge report for the Devils Lake Outlets for the month of August 2016. Both outlets discharged at reduced rates in August. Heavy precipitation in mid-August led to a period of reduced outflows. Later in the month, foam overflowing the West Outlet standpipes limited the discharge. The West and East Outlets discharged at average rates of 152 and 116 cfs respectively (**Figure 1**). A total of 16,524 acre-feet were discharged in August 2016.

The attached tables contain average daily outlet discharges and water quality results from samples collected from the outlets and the corresponding upstream and downstream locations. Also included are average daily stream flow data and conductivity data obtained from the USGS gaging stations located upstream and downstream of the outlets.

If you have any questions, please contact me at (701) 328-4948.

Sincerely,

Jonathan Kelsch P.E.  
Section Chief of Construction

JK:TD/416-10  
Enclosure

### August 2016 Devils Lake Outlet Discharge Summary

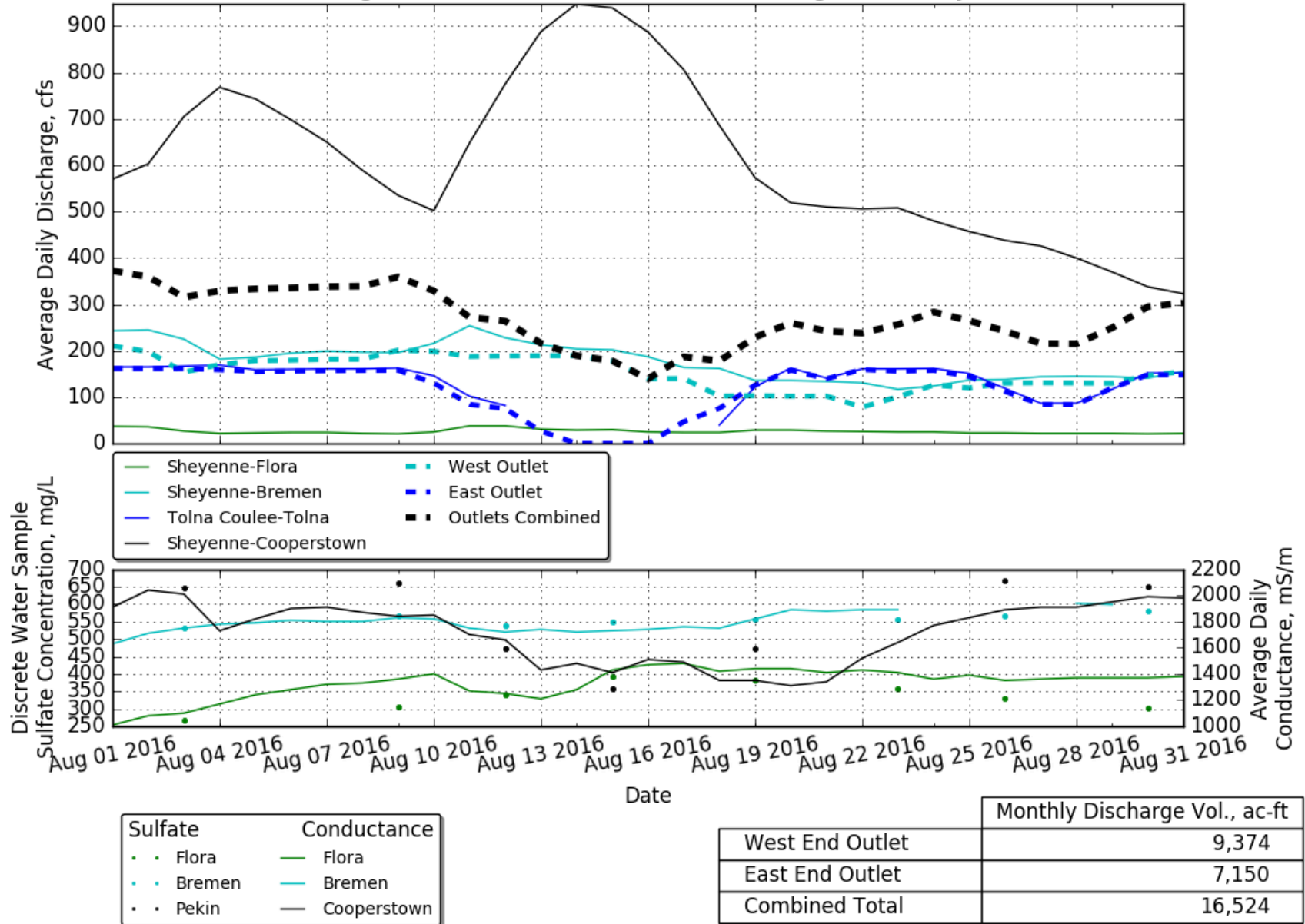


Figure 1: Devils Lake Outlet Discharge Summary

OUTLET OPERATOR NAME/ADDRESS

NAME: ND State Water Commission  
 ADDRESS: 900 E Boulevard Avenue,  
 Bismarck ND 58505

MONTHLY DISCHARGE REPORT

LOCATION: WEST END OUTLET

FACILITY: Devils Lake Outlet Project

MONITORING PERIOD	
START DATE	END DATE
8/1/16	8/31/16

LOCATION: Benson Co, ND

Devils Lake West Outlet discharged 9,374 ac-ft over 31 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.62	8.82	8.73	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	NA	NA	NA	µS/cm	Continuous	Recorder
SULFATE	583	607	594	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	587	599	594	mg/L	2 x Week	GRAB
OUTLET DISCHARGE	78	211	152	cfs	Continuous	Recorder
SIGNATURE	<i>Jon Kelsch</i>			9/8/16	701-328-4948	
NAME AND TITLE	JONATHAN KELSCH, HEAD, CONSTRUCTION SECTION			DATE	TELEPHONE NUMBER	
COMMENT AND EXPLANATION OF ANY VIOLATIONS						
Summary of individual sample results and flow data for outlet, upstream & downstream monitoring locations attached.						

Notes:

- ac-ft - Acre feet
- SU - Standard Units
- µS/cm - Microsiemens per Centimeter at 25 degrees Celsius
- mg/L - Milligrams per liter or parts per million
- cfs - Cubic feet per second
- NA - Not available

OUTLET OPERATOR NAME/ADDRESS

NAME: ND State Water Commission  
 ADDRESS: 900 E Boulevard Avenue,  
 Bismarck ND 58505

MONTHLY DISCHARGE REPORT


LOCATION: EAST END OUTLET

FACILITY: Devils Lake Outlet Project

MONITORING PERIOD	
START DATE	END DATE
8/1/16	8/31/16

LOCATION: Ramsey, Benson, Nelson, ND

Devils Lake East Outlet discharged 7,150 ac-ft over 28 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.63	8.85	8.71	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	NA	NA	NA	µS/cm	Continuous	Recorder
SULFATE	934	1010	994	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	972	1010	1001	mg/L	2 x Week	GRAB
OUTLET DISCHARGE	0	162	116	cfs	Continuous	Recorder
SIGNATURE				9/8/16	701-328-4948	
NAME AND TITLE	JONATHAN KELSCH, HEAD, CONSTRUCTION SECTION			DATE	TELEPHONE NUMBER	
COMMENT AND EXPLANATION OF ANY VIOLATIONS						
Summary of individual sample results and flow data for outlet, upstream & downstream monitoring locations attached.						

Notes:

- ac-ft - Acre feet
- SU - Standard Units
- µS/cm - Microsiemens per Centimeter at 25 degrees Celsius
- mg/L - Milligrams per liter or parts per million
- cfs - Cubic feet per second
- NA - Not available

OUTLET OPERATOR NAME/ADDRESS

NAME: ND State Water Commission  
 ADDRESS: 900 E Boulevard Avenue,  
 Bismarck ND 58505


MONTHLY DISCHARGE REPORT

LOCATION: UPSTREAM OF THE WEST END OUTLET (FLORA)

FACILITY: Devils Lake Outlet Project

MONITORING PERIOD	
START DATE	END DATE
8/1/16	8/31/16

LOCATION: Benson Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.18	8.54	8.41	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	1,010	1,480	1,328	µS/cm	Continuous	Recorder
SULFATE	266	391	334	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	219	387	323	mg/L	2 x Week	GRAB
FLOW, INSTREAM	21	38	26	cfs	Continuous	Recorder
SIGNATURE				9/8/16	701-328-4948	
NAME AND TITLE	JONATHAN KELSCH, HEAD, CONSTRUCTION SECTION			DATE	TELEPHONE NUMBER	
COMMENT AND EXPLANATION OF ANY VIOLATIONS						
Summary of individual sample results and flow data for outlet, upstream & downstream monitoring locations attached.						

Notes:

- SU - Standard Units
- µS/cm - Microsiemens per Centimeter at 25 degrees Celsius
- mg/L - Milligrams per liter or parts per million
- cfs - Cubic feet per second
- USGS streamflow and specific conductance data courtesy of the USGS
- USGS data are provisional and subject to revision

OUTLET OPERATOR NAME/ADDRESS

NAME: ND State Water Commission  
 ADDRESS: 900 E Boulevard Avenue,  
 Bismarck ND 58505


MONTHLY DISCHARGE REPORT

LOCATION: DOWNSTREAM OF THE WEST END OUTLET (BREMEN)  
 UPSTREAM OF THE EAST END OUTLET

FACILITY: Devils Lake Outlet Project

LOCATION: Eddy Co, ND

MONITORING PERIOD	
START DATE	END DATE
8/1/16	8/31/16

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.57	8.79	8.68	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	1,630	1,940	1,800	µS/cm	Continuous	Recorder
SULFATE	533	579	556	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	516	573	552	mg/L	2 x Week	GRAB
FLOW, INSTREAM	117	254	177	cfs	Continuous	Recorder
SIGNATURE				9/8/16	701-328-4948	
NAME AND TITLE	JONATHAN KELSCH, HEAD, CONSTRUCTION SECTION			DATE	TELEPHONE NUMBER	
COMMENT AND EXPLANATION OF ANY VIOLATIONS						
Summary of individual sample results and flow data for outlet, upstream & downstream monitoring locations attached.						

Notes:

- SU - Standard Units
- µS/cm - Microsiemens per Centimeter at 25 degrees Celsius
- mg/L - Milligrams per liter or parts per million
- cfs - Cubic feet per second
- USGS streamflow and specific conductance data courtesy of the USGS
- USGS data are provisional and subject to revision

OUTLET OPERATOR NAME/ADDRESS

NAME: ND State Water Commission  
 ADDRESS: 900 E Boulevard Avenue,  
 Bismarck ND 58505


MONTHLY DISCHARGE REPORT

LOCATION: DOWNSTREAM OF THE EAST END OUTLET (PEKIN)

FACILITY: Devils Lake Outlet Project

LOCATION: Nelson Co, ND

MONITORING PERIOD	
START DATE	END DATE
8/1/16	8/31/16

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.29	8.63	8.44	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	NA	NA	NA	µS/cm	Continuous	Recorder
SULFATE	357	667	561	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	416	667	581	mg/L	2 x Week	GRAB
FLOW, INSTREAM	NA	NA	NA	cfs	Continuous	Recorder
SIGNATURE				9/8/16	701-328-4948	
NAME AND TITLE	JONATHAN KELSCH, HEAD, CONSTRUCTION SECTION			DATE	TELEPHONE NUMBER	
COMMENT AND EXPLANATION OF ANY VIOLATIONS						
Summary of individual sample results and flow data for outlet, upstream & downstream monitoring locations attached.						

Notes:

- SU - Standard Units
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- cfs - Cubic feet per second
- NA - Not available

Date	Above West End Outlet - Sheyenne River near Flora		West End Outlet		Below West End Outlet/Above East End Outlet -Sheyenne River near Bremen		East End Outlet		Below East End Outlet - Toina Coulee near Toina		Below East End Outlet - Sheyenne River near Cooperstown		Sum of Outlets	
	Average Streamflow USGS Gage (cfs)	Average Specific Conductance USGS Gage (µS/cm)	Average Daily Outlet Discharge (cfs)	Total Daily Volume (ft <sup>3</sup> )	Average Streamflow USGS Gage (cfs)	Average Specific Conductance USGS Gage (µS/cm)	Average Daily Outlet Discharge (cfs)	Total Daily Volume (ft <sup>3</sup> )	Average Streamflow USGS Gage (cfs)	Average Specific Conductance USGS Gage (µS/cm)	Average Streamflow USGS Gage (cfs)	Average Specific Conductance USGS Gage (µS/cm)	Average Daily Outlet Discharge (cfs)	Total Daily Volume (ft <sup>3</sup> )
8/1/16	37	1,010	211	18,205,000	243	1,630	162	13,963,000	165	2,930	570	1,910	372	32,168,000
8/2/16	36	1,080	198	17,106,000	245	1,710	162	13,966,000	165	2,910	603	2,040	360	31,072,000
8/3/16	27	1,100	154	13,283,000	225	1,750	162	13,965,000	167	2,950	705	2,010	315	27,248,000
8/4/16	22	1,170	170	14,706,000	182	1,780	159	13,745,000	169	2,910	768	1,730	329	28,451,000
8/5/16	23	1,240	179	15,428,000	186	1,790	155	13,382,000	159	2,930	743	1,820	333	28,810,000
8/6/16	24	1,280	180	15,525,000	195	1,810	156	13,455,000	160	2,920	698	1,900	335	28,980,000
8/7/16	24	1,320	182	15,689,000	199	1,800	157	13,542,000	161	2,960	650	1,910	338	29,231,000
8/8/16	22	1,330	182	15,707,000	197	1,800	158	13,611,000	161	2,980	589	1,870	339	29,318,000
8/9/16	21	1,360	201	17,388,000	196	1,830	158	13,635,000	163	2,980	535	1,840	359	31,023,000
8/10/16	25	1,400	199	17,169,000	216	1,820	131	11,276,000	146	2,880	502	1,850	329	28,445,000
8/11/16	38	1,270	188	16,205,000	254	1,750	85	7,307,000	102	2,660	648	1,700	272	23,512,000
8/12/16	38	1,250	189	16,310,000	228	1,720	75	6,485,000	82	2,660	775	1,660	264	22,795,000
8/13/16	31	1,210	189	16,360,000	213	1,740	27	2,323,000	-	2,580	888	1,430	216	18,683,000
8/14/16	29	1,280	189	16,365,000	204	1,720	0	0	-	2,320	948	1,480	189	16,365,000
8/15/16	30	1,430	178	15,398,000	202	1,730	0	0	-	2,350	939	1,410	178	15,398,000
8/16/16	25	1,470	140	12,053,000	187	1,740	0	0	-	1,990	887	1,510	140	12,053,000
8/17/16	24	1,480	140	12,107,000	164	1,760	47	4,063,000	-	2,340	806	1,490	187	16,170,000
8/18/16	24	1,420	102	8,845,000	162	1,750	76	6,544,000	40	2,930	686	1,350	178	15,389,000
8/19/16	29	1,440	103	8,912,000	136	1,820	126	10,885,000	122	2,990	573	1,350	229	19,797,000
8/20/16	29	1,440	102	8,831,000	136	1,890	158	13,642,000	163	2,990	519	1,310	260	22,473,000
8/21/16	27	1,410	102	8,847,000	134	1,880	140	12,066,000	141	2,830	510	1,340	242	20,913,000
8/22/16	26	1,430	78	6,781,000	131	1,890	160	13,797,000	161	2,700	506	1,520	238	20,578,000
8/23/16	25	1,410	101	8,716,000	117	1,890	155	13,435,000	161	2,950	508	1,640	256	22,151,000
8/24/16	25	1,360	126	10,884,000	124	-	158	13,620,000	162	2,950	480	1,770	284	24,504,000
8/25/16	23	1,390	120	10,358,000	137	-	145	12,502,000	151	2,980	457	1,830	265	22,860,000
8/26/16	23	1,350	130	11,246,000	138	-	113	9,720,000	119	2,910	438	1,890	243	20,966,000
8/27/16	22	1,360	131	11,313,000	144	-	85	7,309,000	87	2,870	426	1,910	216	18,622,000
8/28/16	22	1,370	130	11,274,000	145	1,940	84	7,298,000	87	2,800	400	1,910	215	18,572,000
8/29/16	22	1,370	130	11,215,000	144	1,930	120	10,330,000	117	2,890	370	1,950	249	21,545,000
8/30/16	21	1,370	147	12,690,000	141	-	148	12,801,000	152	2,970	338	1,990	295	25,491,000
8/31/16	22	1,380	155	13,396,000	156	1,940	148	12,786,000	152	2,990	323	1,980	303	26,182,000
<b>Minimum</b>	21	1,010	78	6,781,000	117	1,630	0	0	40	1,990	323	1,310	140	12,053,000
<b>Maximum</b>	38	1,480	211	18,205,000	254	1,940	162	13,966,000	169	2,990	948	2,040	372	32,168,000
<b>Average</b>	26	1,328	152	13,171,355	177	1,800	116	10,046,871	139	2,806	606	1,719	269	23,218,226
			<b>Total (Mgal)</b>	3,054			<b>Total (Mgal)</b>	2,330					<b>Total (Mgal)</b>	5,384
			<b>Total (Ac-ft)</b>	9,374			<b>Total (Ac-ft)</b>	7,150					<b>Total (Ac-ft)</b>	16,524

**Notes:**

- cfs - cubic feet per second
- µS/cm - Microsiemens per Centimeter at 25 degrees Celsius
- ft<sup>3</sup> - cubic feet
- Mgal - Millions of Gallons
- Ac ft - Acre Feet
- USGS streamflow and specific conductance data are preliminary and courtesy of the USGS
- NC - Not calculated



**Sheyenne River Upstream of West End Outlet Near Flora**  
**Monthly Water Quality Summary**  
**Devils Lake Outlet Discharge Report**

Date	Time	Specific Conductance USGS Gage (µS/cm)	pH	Sulfate (mg/L)	7 Day Rolling Average of Sulfate (mg/L)	Total Suspended Solids (mg/L)	Number of Samples included in 7- day Average
8/1/16	-	-	-	-	-	-	-
8/2/16	-	-	-	-	-	-	-
8/3/16	10:00	1,090	8.18	266	219	NA	2
8/4/16	-	-	-	-	-	-	-
8/5/16	-	-	-	-	-	-	-
8/6/16	-	-	-	-	-	-	-
8/7/16	-	-	-	-	-	-	-
8/8/16	-	-	-	-	-	-	-
8/9/16	8:05	1,350	8.41	304	285	56	2
8/10/16	-	-	-	-	-	-	-
8/11/16	-	-	-	-	-	-	-
8/12/16	9:55	1,240	8.29	339	322	NA	2
8/13/16	-	-	-	-	-	-	-
8/14/16	-	-	-	-	-	-	-
8/15/16	12:00	1,430	8.46	391	345	NA	3
8/16/16	-	-	-	-	-	-	-
8/17/16	-	-	-	-	-	-	-
8/18/16	-	-	-	-	-	-	-
8/19/16	9:10	1,480	8.42	383	387	NA	2
8/20/16	-	-	-	-	-	-	-
8/21/16	-	-	-	-	-	-	-
8/22/16	-	-	-	-	-	-	-
8/23/16	8:15	1,430	8.54	357	370	48	2
8/24/16	-	-	-	-	-	-	-
8/25/16	-	-	-	-	-	-	-
8/26/16	9:20	1,340	8.47	329	343	NA	2
8/27/16	-	-	-	-	-	-	-
8/28/16	-	-	-	-	-	-	-
8/29/16	-	-	-	-	-	-	-
8/30/16	10:00	1,360	8.48	301	315	NA	2
8/31/16	-	-	-	-	-	-	-
<b>Minimum</b>		1,090	8.18	266	219	48	
<b>Maximum</b>		1,480	8.54	391	387	56	
<b>Average</b>		1,340	8.41	334	323	52	

**Notes:**

µS/cm - Microsiemens per Centimeter at 25 degrees Celsius

mg/L - Milligrams per liter or parts per million

NA - Not Analyzed

USGS specific conductance data courtesy of the USGS

USGS data are provisional and subject to revision

Italic font denotes preliminary result

**West End Outlet  
Monthly Water Quality Summary  
Devils Lake Outlet Discharge Report**

Date	Time	Specific Conductance from Telemetry System (µS/cm)	pH	Sulfate (mg/L)	7 Day Rolling Average of Sulfate (mg/L)	Total Suspended Solids (mg/L)	Number of Samples included in 7- day Average
8/1/16	-	-	-	-	-	-	-
8/2/16	-	-	-	-	-	-	-
8/3/16	10:15	-	8.73	595	597	NA	2
8/4/16	-	-	-	-	-	-	-
8/5/16	-	-	-	-	-	-	-
8/6/16	-	-	-	-	-	-	-
8/7/16	-	-	-	-	-	-	-
8/8/16	-	-	-	-	-	-	-
8/9/16	8:20	-	8.71	597	596	7	2
8/10/16	-	-	-	-	-	-	-
8/11/16	-	-	-	-	-	-	-
8/12/16	10:05	-	8.69	592	595	NA	2
8/13/16	-	-	-	-	-	-	-
8/14/16	-	-	-	-	-	-	-
8/15/16	11:45	-	8.82	585	591	NA	3
8/16/16	-	-	-	-	-	-	-
8/17/16	-	-	-	-	-	-	-
8/18/16	-	-	-	-	-	-	-
8/19/16	9:20	-	8.62	607	596	NA	2
8/20/16	-	-	-	-	-	-	-
8/21/16	-	-	-	-	-	-	-
8/22/16	-	-	-	-	-	-	-
8/23/16	8:25	-	8.70	590	599	26	2
8/24/16	-	-	-	-	-	-	-
8/25/16	-	-	-	-	-	-	-
8/26/16	9:40	-	8.79	583	587	NA	2
8/27/16	-	-	-	-	-	-	-
8/28/16	-	-	-	-	-	-	-
8/29/16	-	-	-	-	-	-	-
8/30/16	10:10	-	8.77	602	593	NA	2
8/31/16	-	-	-	-	-	-	-
<b>Minimum</b>		NA	8.62	583	587	7	
<b>Maximum</b>		NA	8.82	607	599	26	
<b>Average</b>		NA	8.73	594	594	17	

**Notes:**

mg/L - Milligrams per liter or parts per million

NA - Not Analyzed

Italic font denotes preliminary result

**Sheyenne River Downstream of West End Outlet/Upstream of East End Outlet (Bremen)**  
**Monthly Water Quality Summary**  
**Devils Lake Outlet Discharge Report**

Date	Time	Specific Conductance USGS Gage (µS/cm)	pH	Sulfate (mg/L)	7 Day Rolling Average of Sulfate (mg/L)	Total Suspended Solids (mg/L)	Number of samples included in 7- day Average
8/1/16	-	-	-	-	-	-	-
8/2/16	-	-	-	-	-	-	-
8/3/16	9:35	1,740	8.65	533	516	NA	2
8/4/16	-	-	-	-	-	-	-
8/5/16	-	-	-	-	-	-	-
8/6/16	-	-	-	-	-	-	-
8/7/16	-	-	-	-	-	-	-
8/8/16	-	-	-	-	-	-	-
8/9/16	7:40	1,840	8.59	568	551	60	2
8/10/16	-	-	-	-	-	-	-
8/11/16	-	-	-	-	-	-	-
8/12/16	9:20	1,740	8.62	540	554	NA	2
8/13/16	-	-	-	-	-	-	-
8/14/16	-	-	-	-	-	-	-
8/15/16	12:15	1,720	8.74	548	552	NA	3
8/16/16	-	-	-	-	-	-	-
8/17/16	-	-	-	-	-	-	-
8/18/16	-	-	-	-	-	-	-
8/19/16	8:50	1,720	8.57	556	552	NA	2
8/20/16	-	-	-	-	-	-	-
8/21/16	-	-	-	-	-	-	-
8/22/16	-	-	-	-	-	-	-
8/23/16	7:50	1,900	8.79	557	557	56	2
8/24/16	-	-	-	-	-	-	-
8/25/16	-	-	-	-	-	-	-
8/26/16	8:45	1,900	8.75	567	562	NA	2
8/27/16	-	-	-	-	-	-	-
8/28/16	-	-	-	-	-	-	-
8/29/16	-	-	-	-	-	-	-
8/30/16	9:40	1,940	8.72	579	573	NA	2
8/31/16	-	-	-	-	-	-	-
<b>Minimum</b>		1,720	8.57	533	516	56	
<b>Maximum</b>		1,940	8.79	579	573	60	
<b>Average</b>		1,813	8.68	556	552	58	

**Notes:**

µS/cm - Microsiemens per Centimeter at 25 degrees Celsius  
mg/L - Milligrams per liter or parts per million  
NA - Not Analyzed  
USGS specific conductance data courtesy of the USGS  
USGS data are provisional and subject to revision  
Italic font denotes preliminary result

**East End Outlet  
Monthly Water Quality Summary  
Devils Lake Discharge Report**

Date	Time	Specific Conductance from Telemetry System (µS/cm)	pH	Sulfate (mg/L)	7 Day Rolling Average of Sulfate (mg/L)	Total Suspended Solids (mg/L)	Number of samples included in 7- day average
8/1/16	-	-	-	-	-	-	-
8/2/16	-	-	-	-	-	-	-
8/3/16	7:55	-	8.85	1010	1010	NA	2
8/4/16	-	-	-	-	-	-	-
8/5/16	-	-	-	-	-	-	-
8/6/16	-	-	-	-	-	-	-
8/7/16	-	-	-	-	-	-	-
8/8/16	-	-	-	-	-	-	-
8/9/16	9:30	-	8.65	1000	1005	46	2
8/10/16	-	-	-	-	-	-	-
8/11/16	-	-	-	-	-	-	-
8/12/16	8:05	-	8.68	983	992	NA	2
8/13/16	-	-	-	-	-	-	-
8/14/16	-	-	-	-	-	-	-
8/15/16	-	-	-	-	-	-	-
8/16/16	-	-	-	-	-	-	-
8/17/16	-	-	-	-	-	-	-
8/18/16	-	-	-	-	-	-	-
8/19/16	7:20	-	8.69	1010	1010	NA	1
8/20/16	-	-	-	-	-	-	-
8/21/16	-	-	-	-	-	-	-
8/22/16	-	-	-	-	-	-	-
8/23/16	9:40	-	8.72	1010	1010	14	2
8/24/16	-	-	-	-	-	-	-
8/25/16	-	-	-	-	-	-	-
8/26/16	7:55	-	8.74	1010	1010	NA	2
8/27/16	-	-	-	-	-	-	-
8/28/16	-	-	-	-	-	-	-
8/29/16	-	-	-	-	-	-	-
8/30/16	9:05	-	8.63	934	972	NA	2
8/31/16	-	-	-	-	-	-	-
<b>Minimum</b>		NA	8.63	934	972	14	
<b>Maximum</b>		NA	8.85	1010	1010	46	
<b>Average</b>		NA	8.71	994	1001	30	

**Notes:**

mg/L - Milligrams per liter or parts per million  
 NA - Not Analyzed due to operation constraints  
 Italic font denotes preliminary result

**Sheyenne River Downstream of East End Outlet near Pekin  
Monthly Water Quality Summary  
Devils Lake Outlet Discharge Report**

Date	Time	Specific Conductance Laboratory Analysis (µS/cm)	pH	Sulfate (mg/L)	7 Day Rolling Average of Sulfate (mg/L)	Total Suspended Solids (mg/L)	Number of samples included in 7- day Average
8/1/16	-	-	-	-	-	-	-
8/2/16	-	-	-	-	-	-	-
8/3/16	7:30	-	8.63	647	610	NA	2
8/4/16	-	-	-	-	-	-	-
8/5/16	-	-	-	-	-	-	-
8/6/16	-	-	-	-	-	-	-
8/7/16	-	-	-	-	-	-	-
8/8/16	-	-	-	-	-	-	-
8/9/16	10:00	0	8.50	659	653	54	2
8/10/16	-	-	-	-	-	-	-
8/11/16	-	-	-	-	-	-	-
8/12/16	7:30	0	8.35	474	567	NA	2
8/13/16	-	-	-	-	-	-	-
8/14/16	-	-	-	-	-	-	-
8/15/16	13:20	0	8.33	357	497	NA	3
8/16/16	-	-	-	-	-	-	-
8/17/16	-	-	-	-	-	-	-
8/18/16	-	-	-	-	-	-	-
8/19/16	7:00	0	8.29	474	416	NA	2
8/20/16	-	-	-	-	-	-	-
8/21/16	-	-	-	-	-	-	-
8/22/16	-	-	-	-	-	-	-
8/23/16	-	-	-	-	-	-	-
8/24/16	-	-	-	-	-	-	-
8/25/16	-	-	-	-	-	-	-
8/26/16	7:25	0	8.48	667	667	NA	1
8/27/16	-	-	-	-	-	-	-
8/28/16	-	-	-	-	-	-	-
8/29/16	-	-	-	-	-	-	-
8/30/16	8:40	0	8.50	651	659	NA	2
8/31/16	-	-	-	-	-	-	-
<b>Minimum</b>			8.29	357	416	54	
<b>Maximum</b>			8.63	667	667	54	
<b>Average</b>			8.44	561	581	54	

**Notes:**

mg/L - Milligrams per liter or parts per million

NA - Not Analyzed

Italic font denotes preliminary result

**Bold font denotes sample sulfate concentration exceeds 750 mg/L**