



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

July 13, 2017

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

RE: June 2017 Devils Lake Outlets Monthly Discharge and Water Quality Report

Division of Water Quality:

Enclosed is the monthly discharge report for the Devils Lake Outlets for the month of June 2017. Both outlets discharged continuously with the exception of a temporary West Outlet power outage in early June (**Figure 1**). Average discharge rates were 215 cfs (West) and 183 cfs (East). A total of 23,658 acre-feet were discharged in June which brings the 2017 discharge total to 41,382 ac-ft.

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

June 2017 Devils Lake Outlet Discharge Summary

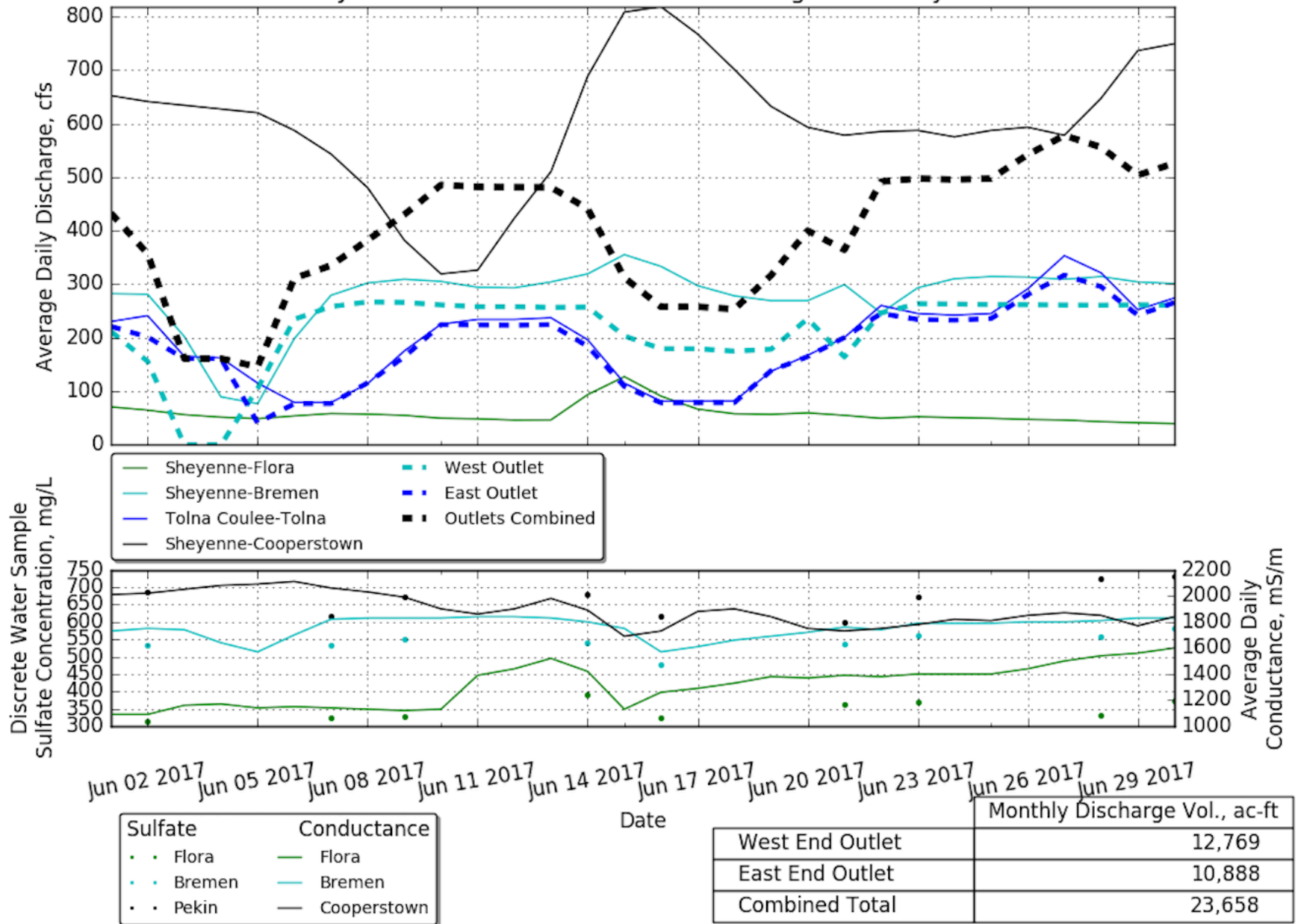


Figure 1: Devils Lake Outlet Discharge Summary

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
6/1/17	6/30/17

LOCATION: Benson Co, ND

Devils Lake West Outlet discharged 12,769 ac-ft over 28 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.68	8.97	8.79	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	NA	NA	NA	µS/cm	Continuous	Recorder
SULFATE	578	614	591	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	579	608	590	mg/L	2 x Week	GRAB
OUTLET DISCHARGE	0	266	215	cfs	Continuous	Recorder
SIGNATURE				7/13/17	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
6/1/17	6/30/17

LOCATION: Ramsey, Benson, Nelson, ND

Devils Lake East Outlet discharged 10,888 ac-ft over 30 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.57	8.72	8.64	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	NA	NA	NA	µS/cm	Continuous	Recorder
SULFATE	947	1010	973	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	951	995	973	mg/L	2 x Week	GRAB
OUTLET DISCHARGE	41	317	183	cfs	Continuous	Recorder
SIGNATURE				7/13/17	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
6/1/17	6/30/17

LOCATION: Benson Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.33	8.49	8.42	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	1,090	1,600	1,315	µS/cm	Continuous	Recorder
SULFATE	314	389	346	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	318	366	343	mg/L	2 x Week	GRAB
FLOW, INSTREAM	39	127	58	cfs	Continuous	Recorder
SIGNATURE				7/13/17	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

MONITORING PERIOD	
START DATE	END DATE
6/1/17	6/30/17

LOCATION: Eddy Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.60	8.76	8.70	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	1,570	1,840	1,756	µS/cm	Continuous	Recorder
SULFATE	477	583	541	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	506	570	538	mg/L	2 x Week	GRAB
FLOW, INSTREAM	77	355	278	cfs	Continuous	Recorder
SIGNATURE				7/13/17	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

MONITORING PERIOD	
START DATE	END DATE
6/1/17	6/30/17

LOCATION: Nelson Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.43	8.61	8.54	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	NA	NA	NA	µS/cm	Continuous	Recorder
SULFATE	598	731	666	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	607	728	661	mg/L	2 x Week	GRAB
FLOW, INSTREAM	NA	NA	NA	cfs	Continuous	Recorder
SIGNATURE				7/13/17	701-328-4948	
NAME AND TITLE				JONATHAN KELSCH, HEAD, CONSTRUCTION SECTION		
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
- NA - Not available

**Daily Outlet Discharge and Upstream and Downstream Flows
Devils Lake Outlets**

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 - Tolna Coulee near Tolna		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 ³)	Average Streamflow USGS Gage (cfs)	Average Specific Conductance USGS Gage (µS/cm)	Average Daily Outlet Discharge (cfs)	Total Daily Volume (ft ³)	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 ³)
6/1/17	71	1,090	211	18,271,000	282	1,730	221	19,088,000	230	2,790	652	2,010	432	37,359,000
6/2/17	65	1,090	156	13,458,000	281	1,750	201	17,369,000	241	2,800	641	2,020	357	30,827,000
6/3/17	56	1,160	0	0	202	1,740	161	13,899,000	165	2,790	634	2,050	161	13,899,000
6/4/17	51	1,170	0	0	89	1,640	161	13,899,000	162	2,800	627	2,080	161	13,899,000
6/5/17	49	1,140	105	9,056,000	77	1,570	41	3,503,000	115	2,800	620	2,090	145	12,559,000
6/6/17	54	1,150	234	20,237,000	198	1,700	77	6,619,000	79	2,790	587	2,110	311	26,856,000
6/7/17	58	1,140	258	22,295,000	279	1,820	77	6,628,000	79	-	543	2,060	335	28,923,000
6/8/17	57	1,130	266	23,022,000	302	1,830	116	9,991,000	114	-	480	2,030	382	33,013,000
6/9/17	55	1,120	266	22,952,000	309	1,830	164	14,181,000	175	-	382	1,990	430	37,133,000
6/10/17	49	1,130	261	22,560,000	305	1,830	224	19,362,000	225	-	319	1,900	485	41,922,000
6/11/17	48	1,390	258	22,273,000	294	1,840	224	19,319,000	234	2,780	326	1,860	481	41,922,000
6/12/17	46	1,440	258	22,274,000	293	1,840	223	19,269,000	234	2,770	423	1,900	481	41,543,000
6/13/17	46	1,520	256	22,148,000	304	1,830	224	19,372,000	237	-	510	1,980	481	41,520,000
6/14/17	93	1,420	257	22,195,000	319	1,800	184	15,886,000	196	-	688	1,890	441	38,081,000
6/15/17	127	1,130	203	17,550,000	355	1,750	109	9,410,000	115	2,730	808	1,690	312	26,960,000
6/16/17	91	1,260	179	15,474,000	333	1,570	78	6,765,000	81	2,760	818	1,730	257	22,239,000
6/17/17	66	1,290	179	15,470,000	297	1,610	78	6,778,000	81	2,790	767	1,880	258	22,248,000
6/18/17	58	1,330	175	15,087,000	278	1,660	79	6,786,000	81	2,810	701	1,900	253	21,873,000
6/19/17	57	1,380	178	15,391,000	269	1,690	138	11,934,000	137	-	632	1,840	316	27,325,000
6/20/17	59	1,370	235	20,324,000	269	1,720	165	14,217,000	167	-	593	1,750	400	34,541,000
6/21/17	55	1,390	164	14,157,000	299	1,760	200	17,291,000	200	2,840	578	1,730	364	31,448,000
6/22/17	49	1,380	246	21,262,000	246	1,740	245	21,186,000	260	2,840	585	1,750	491	42,448,000
6/23/17	52	1,400	263	22,748,000	293	1,790	234	20,197,000	245	2,900	587	1,780	497	42,945,000
6/24/17	51	1,400	263	22,694,000	310	1,790	233	20,102,000	242	2,910	575	1,820	495	42,796,000
6/25/17	49	1,400	262	22,612,000	314	1,790	235	20,339,000	245	2,870	587	1,810	497	42,951,000
6/26/17	47	1,440	261	22,593,000	313	1,800	280	24,216,000	291	2,840	593	1,850	542	46,809,000
6/27/17	46	1,500	261	22,540,000	309	1,800	317	27,357,000	353	2,820	578	1,870	578	49,897,000
6/28/17	43	1,540	261	22,514,000	314	1,810	295	25,496,000	321	2,810	647	1,850	556	48,010,000
6/29/17	41	1,560	261	22,570,000	304	1,830	242	20,922,000	252	2,850	736	1,770	503	43,492,000
6/30/17	39	1,600	260	22,504,000	301	1,830	265	22,922,000	274	2,840	749	1,840	526	45,426,000
Minimum	39	1,090	0	0	77	1,570	41	3,503,000	79	2,730	319	1,690	145	12,559,000
Maximum	127	1,600	266	23,022,000	355	1,840	317	27,357,000	353	2,910	818	2,110	578	49,897,000
Average	58	1,315	215	18,541,033	278	1,756	183	15,810,100	194	2,815	599	1,894	398	34,351,133
			Total (Mgal)	4,161			Total (Mgal)	3,548					Total (Mgal)	7,708
			Total (Ac-ft)	12,769			Total (Ac-ft)	10,888					Total (Ac-ft)	23,658

Notes:

- cfs - cubic feet per second
- µS/cm - Microsiemens per Centimeter at 25 degrees Celsius
- ft³ - 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 (μ S/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
6/1/17	-	-	-	-	-	-	-
6/2/17	8:50	1,080	8.49	314	318	NA	2
6/3/17	-	-	-	-	-	-	-
6/4/17	-	-	-	-	-	-	-
6/5/17	-	-	-	-	-	-	-
6/6/17	-	-	-	-	-	-	-
6/7/17	8:05	1,080	8.43	326	320	NA	2
6/8/17	-	-	-	-	-	-	-
6/9/17	9:40	1,130	8.47	328	327	NA	2
6/10/17	-	-	-	-	-	-	-
6/11/17	-	-	-	-	-	-	-
6/12/17	-	-	-	-	-	-	-
6/13/17	-	-	-	-	-	-	-
6/14/17	8:25	1,550	8.48	389	359	21	2
6/15/17	-	-	-	-	-	-	-
6/16/17	9:20	1,210	8.38	323	356	NA	2
6/17/17	-	-	-	-	-	-	-
6/18/17	-	-	-	-	-	-	-
6/19/17	-	-	-	-	-	-	-
6/20/17	-	-	-	-	-	-	-
6/21/17	8:05	1,380	8.33	363	343	NA	2
6/22/17	-	-	-	-	-	-	-
6/23/17	8:30	1,400	8.41	368	366	NA	2
6/24/17	-	-	-	-	-	-	-
6/25/17	-	-	-	-	-	-	-
6/26/17	-	-	-	-	-	-	-
6/27/17	-	-	-	-	-	-	-
6/28/17	8:10	1,540	8.44	331	350	16	2
6/29/17	-	-	-	-	-	-	-
6/30/17	9:15	1,590	8.36	372	352	NA	2
Minimum		1,080	8.33	314	318	16	
Maximum		1,590	8.49	389	366	21	
Average		1,329	8.42	346	343	19	

Notes:

μ S/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
6/1/17	-	-	-	-	-	-	-
6/2/17	9:00	-	8.81	591	600	NA	2
6/3/17	-	-	-	-	-	-	-
6/4/17	-	-	-	-	-	-	-
6/5/17	-	-	-	-	-	-	-
6/6/17	-	-	-	-	-	-	-
6/7/17	8:15	-	8.68	579	585	NA	2
6/8/17	-	-	-	-	-	-	-
6/9/17	9:50	-	8.79	578	579	NA	2
6/10/17	-	-	-	-	-	-	-
6/11/17	-	-	-	-	-	-	-
6/12/17	-	-	-	-	-	-	-
6/13/17	-	-	-	-	-	-	-
6/14/17	8:35	-	8.68	582	580	11	2
6/15/17	-	-	-	-	-	-	-
6/16/17	9:35	-	8.93	589	586	NA	2
6/17/17	-	-	-	-	-	-	-
6/18/17	-	-	-	-	-	-	-
6/19/17	-	-	-	-	-	-	-
6/20/17	-	-	-	-	-	-	-
6/21/17	8:15	-	8.70	579	584	NA	2
6/22/17	-	-	-	-	-	-	-
6/23/17	8:40	-	8.97	603	591	NA	2
6/24/17	-	-	-	-	-	-	-
6/25/17	-	-	-	-	-	-	-
6/26/17	-	-	-	-	-	-	-
6/27/17	-	-	-	-	-	-	-
6/28/17	8:20	-	8.74	601	602	9	2
6/29/17	-	-	-	-	-	-	-
6/30/17	9:25	-	8.85	614	608	NA	2
Minimum		NA	8.68	578	579	9	
Maximum		NA	8.97	614	608	11	
Average		NA	8.79	591	590	10	

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 (μ S/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
6/1/17	-	-	-	-	-	-	-
6/2/17	8:30	1,740	8.74	533	527	NA	2
6/3/17	-	-	-	-	-	-	-
6/4/17	-	-	-	-	-	-	-
6/5/17	-	-	-	-	-	-	-
6/6/17	-	-	-	-	-	-	-
6/7/17	7:40	1,810	8.60	534	534	NA	2
6/8/17	-	-	-	-	-	-	-
6/9/17	9:15	1,820	8.71	551	543	NA	2
6/10/17	-	-	-	-	-	-	-
6/11/17	-	-	-	-	-	-	-
6/12/17	-	-	-	-	-	-	-
6/13/17	-	-	-	-	-	-	-
6/14/17	8:00	1,790	8.64	540	546	25	2
6/15/17	-	-	-	-	-	-	-
6/16/17	8:55	1,550	8.75	477	509	NA	2
6/17/17	-	-	-	-	-	-	-
6/18/17	-	-	-	-	-	-	-
6/19/17	-	-	-	-	-	-	-
6/20/17	-	-	-	-	-	-	-
6/21/17	8:42	1,760	8.65	535	506	NA	2
6/22/17	-	-	-	-	-	-	-
6/23/17	8:10	1,780	8.76	560	548	NA	2
6/24/17	-	-	-	-	-	-	-
6/25/17	-	-	-	-	-	-	-
6/26/17	-	-	-	-	-	-	-
6/27/17	-	-	-	-	-	-	-
6/28/17	7:45	1,780	8.71	556	558	37	2
6/29/17	-	-	-	-	-	-	-
6/30/17	8:50	1,820	8.74	583	570	NA	2
Minimum		1,550	8.60	477	506	25	
Maximum		1,820	8.76	583	570	37	
Average		1,761	8.70	541	538	31	

Notes:

μ S/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
6/1/17	-	-	-	-	-	-	-
6/2/17	7:00	-	8.58	977	989	NA	2
6/3/17	-	-	-	-	-	-	-
6/4/17	-	-	-	-	-	-	-
6/5/17	-	-	-	-	-	-	-
6/6/17	-	-	-	-	-	-	-
6/7/17	9:28	-	8.57	979	978	NA	2
6/8/17	-	-	-	-	-	-	-
6/9/17	7:40	-	8.72	947	963	NA	2
6/10/17	-	-	-	-	-	-	-
6/11/17	-	-	-	-	-	-	-
6/12/17	-	-	-	-	-	-	-
6/13/17	-	-	-	-	-	-	-
6/14/17	9:50	-	8.63	954	951	18	2
6/15/17	-	-	-	-	-	-	-
6/16/17	7:35	-	8.62	964	959	NA	2
6/17/17	-	-	-	-	-	-	-
6/18/17	-	-	-	-	-	-	-
6/19/17	-	-	-	-	-	-	-
6/20/17	-	-	-	-	-	-	-
6/21/17	9:28	-	8.64	954	959	NA	2
6/22/17	-	-	-	-	-	-	-
6/23/17	6:40	-	8.72	996	975	NA	2
6/24/17	-	-	-	-	-	-	-
6/25/17	-	-	-	-	-	-	-
6/26/17	-	-	-	-	-	-	-
6/27/17	-	-	-	-	-	-	-
6/28/17	9:38	-	8.60	979	988	23	2
6/29/17	-	-	-	-	-	-	-
6/30/17	7:25	-	8.65	1010	995	NA	2
Minimum		NA	8.57	947	951	18	
Maximum		NA	8.72	1010	995	23	
Average		NA	8.64	973	973	21	

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
6/1/17	-	-	-	-	-	-	-
6/2/17	7:20	0	8.58	685	669	NA	2
6/3/17	-	-	-	-	-	-	-
6/4/17	-	-	-	-	-	-	-
6/5/17	-	-	-	-	-	-	-
6/6/17	-	-	-	-	-	-	-
6/7/17	9:55	0	8.43	615	650	NA	2
6/8/17	-	-	-	-	-	-	-
6/9/17	8:10	0	8.56	672	644	NA	2
6/10/17	-	-	-	-	-	-	-
6/11/17	-	-	-	-	-	-	-
6/12/17	-	-	-	-	-	-	-
6/13/17	-	-	-	-	-	-	-
6/14/17	10:15	0	8.46	678	675	56	2
6/15/17	-	-	-	-	-	-	-
6/16/17	8:05	0	8.56	615	647	NA	2
6/17/17	-	-	-	-	-	-	-
6/18/17	-	-	-	-	-	-	-
6/19/17	-	-	-	-	-	-	-
6/20/17	-	-	-	-	-	-	-
6/21/17	9:55	-	8.49	598	607	NA	2
6/22/17	-	-	-	-	-	-	-
6/23/17	7:05	0	8.60	673	636	NA	2
6/24/17	-	-	-	-	-	-	-
6/25/17	-	-	-	-	-	-	-
6/26/17	-	-	-	-	-	-	-
6/27/17	-	-	-	-	-	-	-
6/28/17	10:05	0	8.61	725	699	49	2
6/29/17	-	-	-	-	-	-	-
6/30/17	8:00	0	8.58	731	728	NA	2
Minimum			8.43	598	607	49	
Maximum			8.61	731	728	56	
Average			8.54	666	661	53	

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