



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

June 20, 2016

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

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

Dear Division of Water Quality:

Enclosed are the monthly discharge reports for the Devils Lake Outlets for the month of May 2016. The West Outlet discharged at half capacity on May 1st and 2nd and at full capacity for the remainder of the month. The East Outlet was started on May 2nd and discharged an average of 138 cfs over the month. The East Outlet was shut down between May 25th and 30th to provide greater capacity in the Upper Sheyenne during a period of rain (**Figure 1**). A total of 23,618 acre-feet were discharged in May 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

May 2016 Devils Lake Outlet Discharge Summary

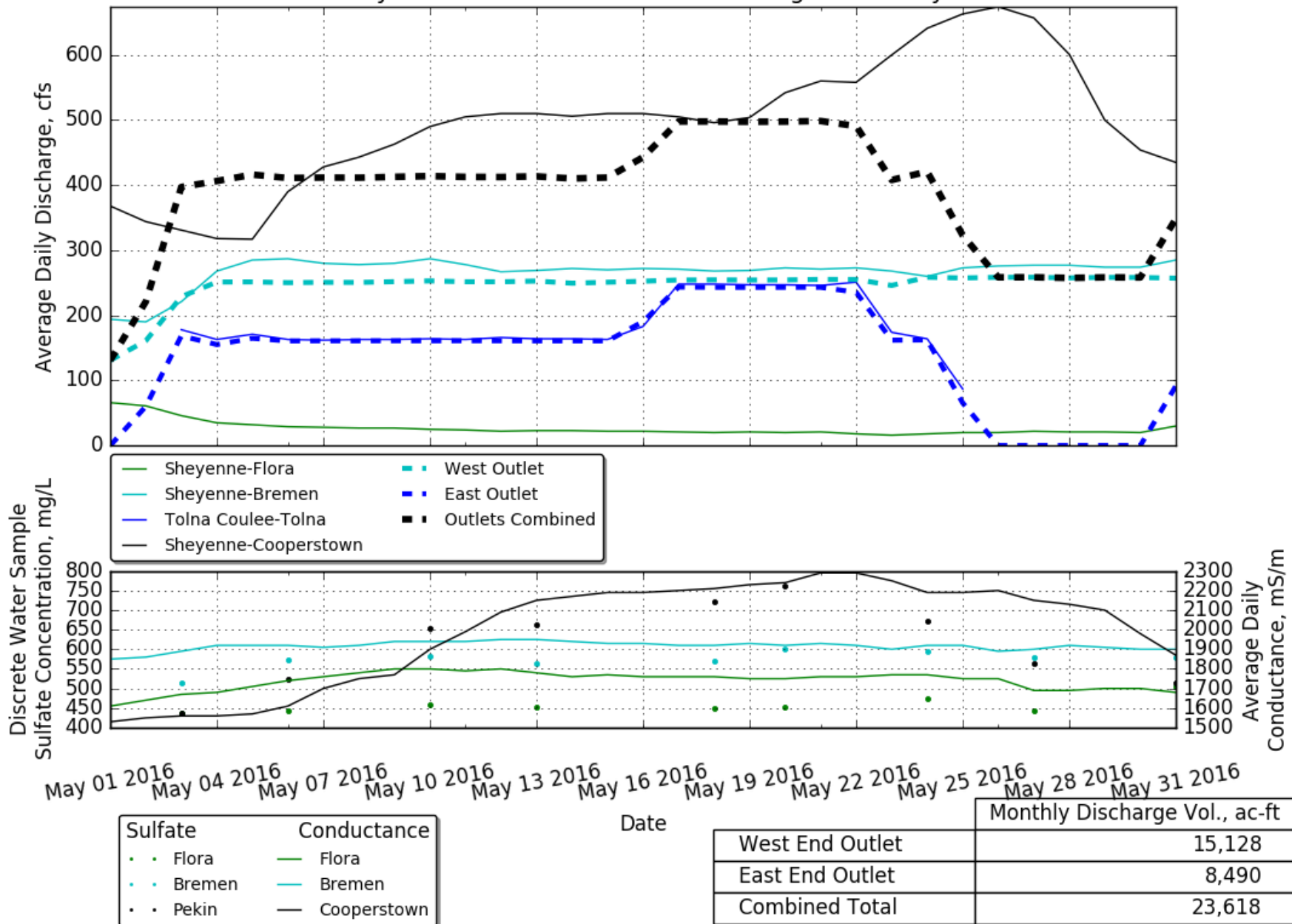


Figure 1: Devils Lake Outlet Discharge Summary

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
5/1/16	5/31/16

LOCATION: Benson Co, ND

Devils Lake West Outlet discharged 15,128 ac-ft over 31 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.51	8.61	8.55	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	NA	NA	NA	µS/cm	Continuous	Recorder
SULFATE	570	603	594	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	584	602	593	mg/L	2 x Week	GRAB
OUTLET DISCHARGE	131	259	246	cfs	Continuous	Recorder
SIGNATURE				6/20/16	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
5/1/16	5/31/16

LOCATION: Ramsey, Benson, Nelson, ND

Devils Lake East Outlet discharged 8,490 ac-ft over 25 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.51	8.59	8.56	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	NA	NA	NA	µS/cm	Continuous	Recorder
SULFATE	977	988	982	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	977	986	981	mg/L	2 x Week	GRAB
OUTLET DISCHARGE	0	243	138	cfs	Continuous	Recorder
SIGNATURE				6/20/16	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
5/1/16	5/31/16

LOCATION: Benson Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.39	8.69	8.49	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	1,610	1,800	1,738	µS/cm	Continuous	Recorder
SULFATE	436	505	457	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	410	474	450	mg/L	2 x Week	GRAB
FLOW, INSTREAM	16	66	26	cfs	Continuous	Recorder
SIGNATURE				6/20/16	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
5/1/16	5/31/16

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.52	8.68	8.58	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	1,850	1,950	1,916	µS/cm	Continuous	Recorder
SULFATE	515	601	573	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	510	588	568	mg/L	2 x Week	GRAB
FLOW, INSTREAM	190	287	267	cfs	Continuous	Recorder
SIGNATURE				6/20/16	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
5/1/16	5/31/16

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.35	8.59	8.50	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	NA	NA	NA	µS/cm	Continuous	Recorder
SULFATE	437	762	613	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	405	743	605	mg/L	2 x Week	GRAB
FLOW, INSTREAM	NA	NA	NA	cfs	Continuous	Recorder
SIGNATURE				6/20/16	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
- 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 - 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 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)
5/1/16	66	1,610	131	11,313,000	194	1,850	0	0	-	822	368	1,530	131	11,313,000
5/2/16	61	1,640	161	13,902,000	190	1,860	60	5,195,000	-	1,400	344	1,550	221	19,097,000
5/3/16	46	1,670	229	19,760,000	221	1,890	168	14,555,000	178	2,970	331	1,560	397	34,315,000
5/4/16	35	1,680	251	21,706,000	268	1,920	155	13,407,000	163	2,950	318	1,560	406	35,113,000
5/5/16	32	1,710	251	21,723,000	285	1,920	165	14,239,000	171	2,930	317	1,570	416	35,962,000
5/6/16	29	1,740	250	21,624,000	287	1,920	161	13,889,000	163	2,930	390	1,610	411	35,513,000
5/7/16	28	1,760	251	21,666,000	280	1,910	161	13,906,000	162	2,930	428	1,700	412	35,572,000
5/8/16	27	1,780	251	21,655,000	278	1,920	161	13,902,000	163	2,920	443	1,750	412	35,557,000
5/9/16	27	1,800	252	21,756,000	280	1,940	161	13,912,000	163	2,940	463	1,770	413	35,668,000
5/10/16	25	1,800	253	21,853,000	287	1,940	161	13,903,000	164	2,930	490	1,900	414	35,756,000
5/11/16	24	1,790	252	21,747,000	278	1,940	161	13,915,000	163	2,920	505	1,990	413	35,662,000
5/12/16	22	1,800	252	21,741,000	267	1,950	161	13,906,000	166	2,910	510	2,090	413	35,647,000
5/13/16	23	1,780	253	21,833,000	269	1,950	161	13,895,000	164	2,920	510	2,150	414	35,728,000
5/14/16	23	1,760	249	21,551,000	272	1,940	161	13,895,000	164	2,910	506	2,170	410	35,446,000
5/15/16	22	1,770	251	21,681,000	270	1,930	161	13,893,000	163	2,890	510	2,190	412	35,574,000
5/16/16	22	1,760	252	21,810,000	272	1,930	190	16,453,000	183	2,880	510	2,190	443	38,263,000
5/17/16	21	1,760	254	21,973,000	271	1,920	243	21,035,000	248	2,880	505	2,200	498	43,008,000
5/18/16	20	1,760	255	22,002,000	268	1,920	243	21,005,000	248	2,860	496	2,210	498	43,007,000
5/19/16	21	1,750	254	22,975,000	269	1,930	243	21,000,000	247	2,860	504	2,230	497	42,975,000
5/20/16	20	1,750	255	21,990,000	273	1,920	243	21,003,000	247	2,860	542	2,240	498	42,993,000
5/21/16	21	1,760	255	22,064,000	271	1,930	243	21,009,000	246	2,850	560	2,290	499	43,073,000
5/22/16	18	1,760	255	22,051,000	273	1,920	235	20,347,000	251	2,820	558	2,290	491	42,398,000
5/23/16	16	1,770	246	21,258,000	268	1,900	162	13,990,000	174	2,770	600	2,250	408	35,248,000
5/24/16	18	1,770	259	22,337,000	260	1,920	162	14,020,000	164	2,810	641	2,190	421	36,357,000
5/25/16	20	1,750	257	22,244,000	273	1,920	66	5,660,000	87	2,420	663	2,190	323	27,904,000
5/26/16	20	1,750	258	22,334,000	276	1,890	0	0	-	1,470	674	2,200	258	22,334,000
5/27/16	22	1,690	259	22,337,000	277	1,900	0	0	-	1,340	657	2,150	259	22,337,000
5/28/16	21	1,690	258	22,253,000	277	1,920	0	0	-	1,300	601	2,130	258	22,253,000
5/29/16	21	1,700	258	22,325,000	274	1,910	0	0	-	1,220	500	2,100	258	22,325,000
5/30/16	20	1,700	258	22,311,000	274	1,900	0	0	-	1,100	454	1,980	258	22,311,000
Minimum	16	1,610	131	11,313,000	190	1,850	0	0	78	822	317	1,530	131	11,313,000
Maximum	66	1,800	259	22,337,000	287	1,950	243	21,035,000	251	2,970	674	2,290	499	43,073,000
Average	26	1,738	246	21,257,677	267	1,916	138	11,929,968	180	2,470	495	1,994	384	33,187,645
			Total (Mgal)	4,929			Total (Mgal)	2,766					Total (Mgal)	7,696
			Total (Ac-ft)	15,128			Total (Ac-ft)	8,490					Total (Ac-ft)	23,618

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 (μS/cm)	pH	Sulfate (mg/L)	7 Day Rolling Average of Sulfate (mg/L)	Total Suspended Solids (mg/L)	Total Samples included in 7- day Average
5/1/16	-	-	-	-	-	-	-
5/2/16	-	-	-	-	-	-	-
5/3/16	8:05	1,660	8.43	436	410	44	3
5/4/16	-	-	-	-	-	-	-
5/5/16	-	-	-	-	-	-	-
5/6/16	10:15	1,730	8.46	442	439	NA	2
5/7/16	-	-	-	-	-	-	-
5/8/16	-	-	-	-	-	-	-
5/9/16	-	-	-	-	-	-	-
5/10/16	8:05	1,800	8.51	459	451	NA	2
5/11/16	-	-	-	-	-	-	-
5/12/16	-	-	-	-	-	-	-
5/13/16	10:10	1,780	8.53	452	456	NA	2
5/14/16	-	-	-	-	-	-	-
5/15/16	-	-	-	-	-	-	-
5/16/16	-	-	-	-	-	-	-
5/17/16	-	-	-	-	-	-	-
5/18/16	8:20	1,750	8.52	448	450	60	2
5/19/16	-	-	-	-	-	-	-
5/20/16	10:20	1,740	8.69	453	451	NA	2
5/21/16	-	-	-	-	-	-	-
5/22/16	-	-	-	-	-	-	-
5/23/16	-	-	-	-	-	-	-
5/24/16	8:05	1,760	8.46	474	458	NA	3
5/25/16	-	-	-	-	-	-	-
5/26/16	-	-	-	-	-	-	-
5/27/16	10:20	1,680	8.39	443	459	NA	2
5/28/16	-	-	-	-	-	-	-
5/29/16	-	-	-	-	-	-	-
5/30/16	-	-	-	-	-	-	-
5/31/16	8:25	1,690	8.41	505	474	156	2
Minimum		1,660	8.39	436	410	44	
Maximum		1,800	8.69	505	474	156	
Average		1,732	8.49	457	450	87	

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)	Total Samples included in 7- day Average
5/1/16	-	-	-	-	-	-	-
5/2/16	-	-	-	-	-	-	-
5/3/16	8:15	-	8.52	591	585	36	3
5/4/16	-	-	-	-	-	-	-
5/5/16	-	-	-	-	-	-	-
5/6/16	10:30	-	8.61	591	591	NA	2
5/7/16	-	-	-	-	-	-	-
5/8/16	-	-	-	-	-	-	-
5/9/16	-	-	-	-	-	-	-
5/10/16	8:18	-	8.55	597	594	NA	2
5/11/16	-	-	-	-	-	-	-
5/12/16	-	-	-	-	-	-	-
5/13/16	10:20	-	8.56	570	584	NA	2
5/14/16	-	-	-	-	-	-	-
5/15/16	-	-	-	-	-	-	-
5/16/16	-	-	-	-	-	-	-
5/17/16	-	-	-	-	-	-	-
5/18/16	8:30	-	8.51	600	585	9	2
5/19/16	-	-	-	-	-	-	-
5/20/16	10:35	-	8.60	603	602	NA	2
5/21/16	-	-	-	-	-	-	-
5/22/16	-	-	-	-	-	-	-
5/23/16	-	-	-	-	-	-	-
5/24/16	8:15	-	8.52	600	601	NA	3
5/25/16	-	-	-	-	-	-	-
5/26/16	-	-	-	-	-	-	-
5/27/16	10:35	-	8.51	603	602	NA	2
5/28/16	-	-	-	-	-	-	-
5/29/16	-	-	-	-	-	-	-
5/30/16	-	-	-	-	-	-	-
5/31/16	8:35	-	8.56	590	597	10	2
Minimum		NA	8.51	570	584	9	
Maximum		NA	8.61	603	602	36	
Average		NA	8.55	594	593	18	

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)	Total samples included in 7- day Average
5/1/16	-	-	-	-	-	-	-
5/2/16	-	-	-	-	-	-	-
5/3/16	7:35	1,860	8.52	515	510	30	3
5/4/16	-	-	-	-	-	-	-
5/5/16	-	-	-	-	-	-	-
5/6/16	9:45	1,920	8.57	572	544	NA	2
5/7/16	-	-	-	-	-	-	-
5/8/16	-	-	-	-	-	-	-
5/9/16	-	-	-	-	-	-	-
5/10/16	7:42	1,940	8.56	583	578	NA	2
5/11/16	-	-	-	-	-	-	-
5/12/16	-	-	-	-	-	-	-
5/13/16	9:30	1,950	8.58	565	574	NA	2
5/14/16	-	-	-	-	-	-	-
5/15/16	-	-	-	-	-	-	-
5/16/16	-	-	-	-	-	-	-
5/17/16	-	-	-	-	-	-	-
5/18/16	15:55	1,920	8.60	570	568	24	2
5/19/16	-	-	-	-	-	-	-
5/20/16	8:20	1,930	8.68	601	586	NA	2
5/21/16	-	-	-	-	-	-	-
5/22/16	-	-	-	-	-	-	-
5/23/16	-	-	-	-	-	-	-
5/24/16	7:41	1,920	8.56	594	588	NA	3
5/25/16	-	-	-	-	-	-	-
5/26/16	-	-	-	-	-	-	-
5/27/16	9:50	1,900	8.59	580	587	NA	2
5/28/16	-	-	-	-	-	-	-
5/29/16	-	-	-	-	-	-	-
5/30/16	-	-	-	-	-	-	-
5/31/16	7:55	1,900	8.52	580	580	54	2
Minimum		1,860	8.52	515	510	24	
Maximum		1,950	8.68	601	588	54	
Average		1,916	8.58	573	568	36	

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)	Total samples included in 7- day average
5/1/16	-	-	-	-	-	-	-
5/2/16	-	-	-	-	-	-	-
5/3/16	-	-	-	-	-	-	-
5/4/16	-	-	-	-	-	-	-
5/5/16	-	-	-	-	-	-	-
5/6/16	8:15	-	8.59	977	977	NA	1
5/7/16	-	-	-	-	-	-	-
5/8/16	-	-	-	-	-	-	-
5/9/16	-	-	-	-	-	-	-
5/10/16	9:35	-	8.57	982	980	NA	2
5/11/16	-	-	-	-	-	-	-
5/12/16	-	-	-	-	-	-	-
5/13/16	8:05	-	8.58	977	980	NA	2
5/14/16	-	-	-	-	-	-	-
5/15/16	-	-	-	-	-	-	-
5/16/16	-	-	-	-	-	-	-
5/17/16	-	-	-	-	-	-	-
5/18/16	9:47	-	8.57	985	981	36	2
5/19/16	-	-	-	-	-	-	-
5/20/16	8:20	-	8.55	985	985	NA	2
5/21/16	-	-	-	-	-	-	-
5/22/16	-	-	-	-	-	-	-
5/23/16	-	-	-	-	-	-	-
5/24/16	9:30	-	8.51	988	986	NA	3
5/25/16	-	-	-	-	-	-	-
5/26/16	-	-	-	-	-	-	-
5/27/16	-	-	-	-	-	-	-
5/28/16	-	-	-	-	-	-	-
5/29/16	-	-	-	-	-	-	-
5/30/16	-	-	-	-	-	-	-
5/31/16	-	-	-	-	-	-	-
Minimum		NA	8.51	977	977	36	
Maximum		NA	8.59	988	986	36	
Average		NA	8.56	982	981	36	

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)	Total samples included in 7- day Average
5/1/16	-	-	-	-	-	-	-
5/2/16	-	-	-	-	-	-	-
5/3/16	9:45	-	8.50	437	405	36	3
5/4/16	-	-	-	-	-	-	-
5/5/16	-	-	-	-	-	-	-
5/6/16	7:45	-	8.59	523	480	NA	2
5/7/16	-	-	-	-	-	-	-
5/8/16	-	-	-	-	-	-	-
5/9/16	-	-	-	-	-	-	-
5/10/16	10:15	-	8.50	655	589	NA	2
5/11/16	-	-	-	-	-	-	-
5/12/16	-	-	-	-	-	-	-
5/13/16	7:40	-	8.54	664	660	NA	2
5/14/16	-	-	-	-	-	-	-
5/15/16	-	-	-	-	-	-	-
5/16/16	-	-	-	-	-	-	-
5/17/16	-	-	-	-	-	-	-
5/18/16	10:20	-	8.52	723	694	46	2
5/19/16	-	-	-	-	-	-	-
5/20/16	7:45	-	8.54	762	743	NA	2
5/21/16	-	-	-	-	-	-	-
5/22/16	-	-	-	-	-	-	-
5/23/16	-	-	-	-	-	-	-
5/24/16	10:10	-	8.51	672	719	NA	3
5/25/16	-	-	-	-	-	-	-
5/26/16	-	-	-	-	-	-	-
5/27/16	7:40	-	8.35	563	618	NA	2
5/28/16	-	-	-	-	-	-	-
5/29/16	-	-	-	-	-	-	-
5/30/16	-	-	-	-	-	-	-
5/31/16	10:05	-	8.41	514	539	118	2
Minimum			8.35	437	405	36	
Maximum			8.59	762	743	118	
Average			8.50	613	605	67	

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