



# 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

November 4, 2014

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

RE: September 2014 Devils Lake Outlets Monthly Discharge and Water Quality Report

Enclosed are the monthly discharge reports for the Devils Lake Outlets for the month of September 2014 and summaries of water quality sample results and flow data. The outlets discharged at full capacity with a few exceptions for routine maintenance (**Figure 1**).

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.  
Head, Construction Section  
JK:MSW:416-10

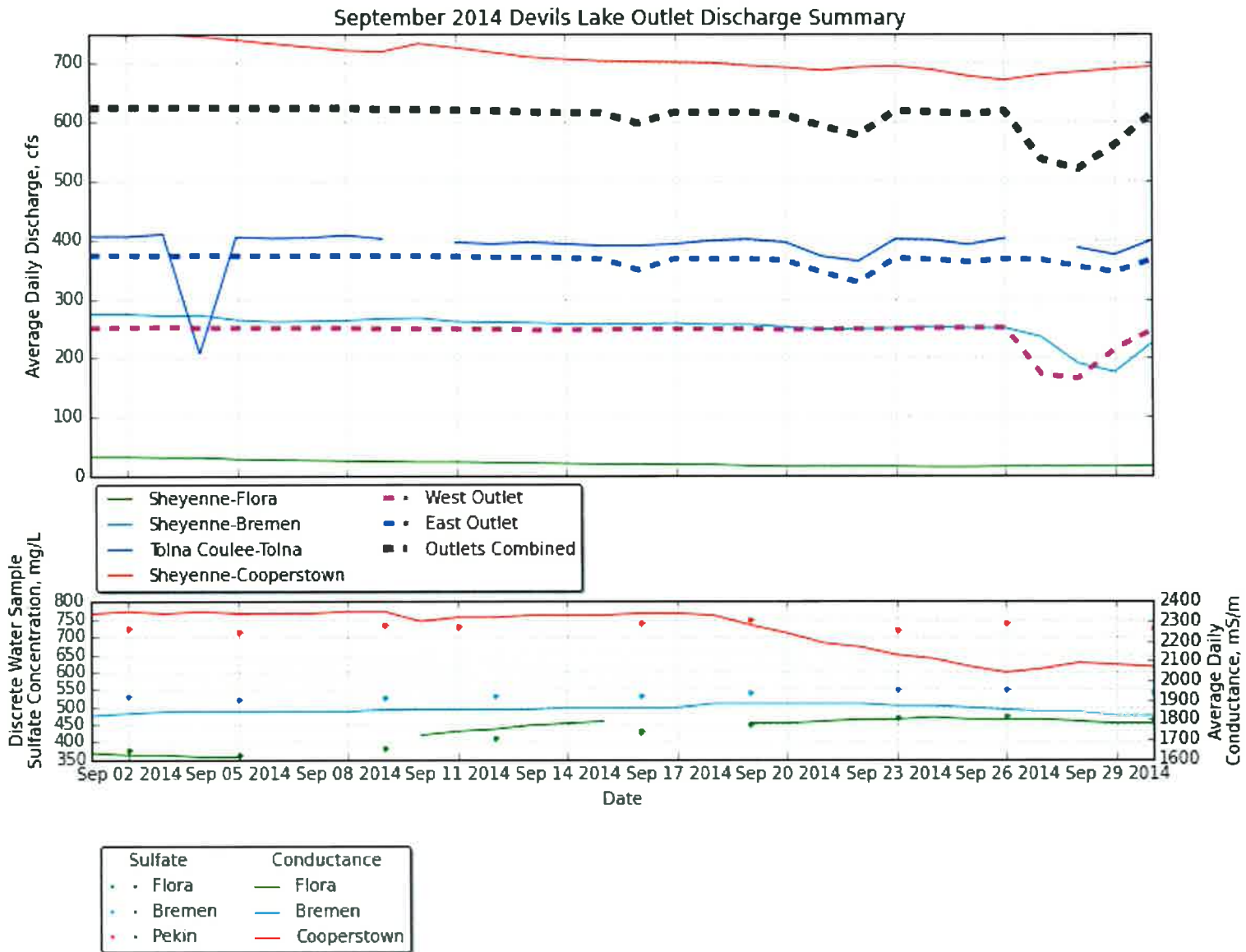


Figure 1: Devils Lake Outlet Discharge Summary

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
9/1/14	9/30/14

LOCATION: Benson Co, ND

Devils Lake West Outlet discharged 14,423 ac-ft over 30 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.71	8.81	8.76	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	NA	NA	NA	µS/cm	Continuous	Recorder
SULFATE	537	554	544	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	538	552	544	mg/L	2 x Week	GRAB
OUTLET DISCHARGE	165	251	242	cfs	Continuous	Recorder
SIGNATURE				11/4/14	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
9/1/14	9/30/14

LOCATION: Ramsey, Benson, Nelson, ND

Devils Lake East Outlet discharged 21,698 ac-ft over 30 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.62	8.72	8.68	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	NA	NA	NA	µS/cm	Continuous	Recorder
SULFATE	920	952	933	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	917	946	931	mg/L	2 x Week	GRAB
OUTLET DISCHARGE	327	373	365	cfs	Continuous	Recorder
SIGNATURE				11/4/14	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
9/1/14	9/30/14

LOCATION: Benson Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.37	8.51	8.46	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	1,610	1,810	1,746	µS/cm	Continuous	Recorder
SULFATE	361	473	424	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	370	472	422	mg/L	2 x Week	GRAB
FLOW, INSTREAM	14	32	21	cfs	Continuous	Recorder
SIGNATURE				11/4/14	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
- 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
9/1/14	9/30/14

LOCATION: Eddy Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.57	8.77	8.69	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	1,820	1,880	1,852	µS/cm	Continuous	Recorder
SULFATE	520	551	536	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	523	550	535	mg/L	2 x Week	GRAB
FLOW, INSTREAM	175	274	252	cfs	Continuous	Recorder
SIGNATURE				11/4/14	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
9/1/14	9/30/14

LOCATION: Nelson Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.52	8.66	8.59	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	NA	NA	NA	µS/cm	Continuous	Recorder
SULFATE	714	751	731	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	708	746	728	mg/L	2 x Week	GRAB
FLOW, INSTREAM	NA	NA	NA	cfs	Continuous	Recorder
SIGNATURE				11/4/14	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. Sulfate concentrations exceeded 750 mg/L for one sample; however, 7-day-average remained below 750 mg/L						

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 - Shyenne River near Flora		West End Outlet		Below West End Outlet/Above East End Outlet -Shyenne River near Bremen		East End Outlet		Below East End Outlet - Tolna Coulee near Tolna		Below East End Outlet - Shyenne 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> )			
9/1/14	32	1,630	250	21,628,000	274	1,820	373	32,209,000	405	2,780	749	2,340	623	53,837,000			
9/2/14	32	1,620	250	21,638,000	274	1,830	373	32,191,000	405	2,780	747	2,350	623	53,829,000			
9/3/14	31	1,620	251	21,683,000	271	1,840	372	32,112,000	409	2,770	749	2,340	623	53,795,000			
9/4/14	31	1,610	250	21,620,000	272	1,840	373	32,219,000	207	2,800	745	2,350	623	53,839,000			
9/5/14	28	1,610	250	21,609,000	264	1,840	372	32,151,000	404	2,810	739	2,340	622	53,760,000			
9/6/14	27	-	250	21,604,000	261	1,840	372	32,132,000	402	2,810	733	2,340	622	53,736,000			
9/7/14	26	-	250	21,607,000	262	1,840	372	32,132,000	403	2,810	727	2,340	622	53,739,000			
9/8/14	25	-	250	21,602,000	263	1,840	372	32,141,000	407	2,820	721	2,350	622	53,743,000			
9/9/14	24	-	249	21,523,000	266	1,850	371	32,094,000	401	2,810	719	2,350	621	53,617,000			
9/10/14	23	1,720	248	21,466,000	267	1,850	371	32,067,000	-	2,810	733	2,300	620	53,533,000			
9/11/14	23	1,740	248	21,461,000	261	1,850	370	32,005,000	395	2,810	726	2,320	619	53,466,000			
9/12/14	22	1,750	248	21,457,000	260	1,850	369	31,914,000	392	2,830	718	2,320	618	53,371,000			
9/13/14	21	1,770	247	21,315,000	259	1,850	369	31,869,000	395	2,820	710	2,330	616	53,184,000			
9/14/14	20	1,780	247	21,350,000	257	1,860	368	31,770,000	392	2,820	706	2,330	615	53,120,000			
9/15/14	19	1,790	247	21,357,000	257	1,860	367	31,678,000	389	2,820	703	2,330	614	53,035,000			
9/16/14	19	-	249	21,496,000	257	1,860	348	30,049,000	389	2,820	702	2,340	597	51,545,000			
9/17/14	18	-	248	21,443,000	258	1,860	367	31,709,000	392	2,820	701	2,340	615	53,152,000			
9/18/14	18	-	248	21,460,000	256	1,880	367	31,686,000	398	2,820	700	2,330	615	53,146,000			
9/19/14	16	1,780	249	21,493,000	256	1,880	367	31,685,000	400	2,810	695	2,280	615	53,178,000			
9/20/14	15	1,780	247	21,337,000	252	1,880	364	31,446,000	395	-	692	2,240	611	52,783,000			
9/21/14	15	1,790	248	21,422,000	248	1,880	344	29,731,000	371	-	687	2,190	592	51,153,000			
9/22/14	15	1,800	249	21,483,000	249	1,880	327	28,281,000	363	2,810	692	2,170	576	49,764,000			
9/23/14	15	1,800	249	21,509,000	250	1,870	368	31,782,000	400	2,810	694	2,130	617	53,291,000			
9/24/14	14	1,810	250	21,591,000	252	1,870	366	31,620,000	399	-	688	2,110	616	53,211,000			
9/25/14	14	1,800	251	21,650,000	250	1,860	362	31,240,000	391	-	677	2,070	612	52,890,000			
9/26/14	15	1,800	251	21,652,000	250	1,850	367	31,694,000	402	2,830	670	2,040	617	53,346,000			
9/27/14	15	1,800	171	14,742,000	235	1,840	365	31,579,000	-	2,830	679	2,060	536	46,321,000			
9/28/14	15	1,790	165	14,246,000	190	1,840	354	30,587,000	386	2,820	684	2,090	519	44,833,000			
9/29/14	15	1,780	215	18,555,000	175	1,820	345	29,791,000	374	2,820	689	2,080	560	48,346,000			
9/30/14	16	1,780	246	21,256,000	224	1,820	366	31,610,000	398	2,830	693	2,070	612	52,866,000			
<b>Minimum</b>	14	1610	165	14,246,000	175	1820	327	28,281,000	207	2770	670	2040	519	44,833,000			
<b>Maximum</b>	32	1810	251	21,683,000	274	1880	373	32,219,000	409	2830	749	2350	623	53,839,000			
<b>Average</b>	21	1746	242	20,941,833	252	1852	365	31,505,800	388	2812	709	2252	607	52,447,633			
<b>Notes:</b>				<b>Total (Mgal)</b>	4,699					<b>Total (Mgal)</b>	7,070					<b>Total (Mgal)</b>	11,769
				<b>Total (Ac-ft)</b>	14,423					<b>Total (Ac-ft)</b>	21,698					<b>Total (Ac-ft)</b>	36,121

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)	No. of days included in the 7 day Rolling Average
9/1/14	-	-	-	-	-	-	-
9/2/14	9:25	1,570	8.37	378	398	NA	7
9/3/14	-	-	-	-	-	-	-
9/4/14	-	-	-	-	-	-	-
9/5/14	9:55	1,550	8.41	361	370	NA	7
9/6/14	-	-	-	-	-	-	-
9/7/14	-	-	-	-	-	-	-
9/8/14	-	-	-	-	-	-	-
9/9/14	10:10	1,680	8.43	384	373	86	7
9/10/14	-	-	-	-	-	-	-
9/11/14	-	-	-	-	-	-	-
9/12/14	8:15	1,690	8.44	411	398	NA	7
9/13/14	-	-	-	-	-	-	-
9/14/14	-	-	-	-	-	-	-
9/15/14	-	-	-	-	-	-	-
9/16/14	7:55	1,800	8.50	428	420	NA	7
9/17/14	-	-	-	-	-	-	-
9/18/14	-	-	-	-	-	-	-
9/19/14	8:35	1,810	8.44	449	439	NA	-
9/20/14	-	-	-	-	-	-	-
9/21/14	-	-	-	-	-	-	-
9/22/14	-	-	-	-	-	-	-
9/23/14	8:00	1,850	8.51	470	460	49	7
9/24/14	-	-	-	-	-	-	-
9/25/14	-	-	-	-	-	-	-
9/26/14	13:30	1,810	8.51	473	472	NA	7
9/27/14	-	-	-	-	-	-	-
9/28/14	-	-	-	-	-	-	-
9/29/14	-	-	-	-	-	-	-
9/30/14	8:00	1,860	8.50	466	470	NA	7
<b>Minimum</b>		1,550	8.37	361	370	49	
<b>Maximum</b>		1,860	8.51	473	472	86	
<b>Average</b>		1,736	8.46	424	422	68	

**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	pH	Sulfate (mg/L)	7 Day Rolling Average of Sulfate (mg/L)	Total Suspended Solids (mg/L)	No. of days included in the 7 day Rolling Average
9/1/14	-	-	-	-	-	-
9/2/14	9:35	8.73	539	540	NA	7
9/3/14	-	-	-	-	-	-
9/4/14	-	-	-	-	-	-
9/5/14	10:10	8.72	537	538	NA	7
9/6/14	-	-	-	-	-	-
9/7/14	-	-	-	-	-	-
9/8/14	-	-	-	-	-	-
9/9/14	10:30	8.71	549	543	37	7
9/10/14	-	-	-	-	-	-
9/11/14	-	-	-	-	-	-
9/12/14	8:00	8.76	554	552	NA	7
9/13/14	-	-	-	-	-	-
9/14/14	-	-	-	-	-	-
9/15/14	-	-	-	-	-	-
9/16/14	8:05	8.78	539	547	NA	7
9/17/14	-	-	-	-	-	-
9/18/14	-	-	-	-	-	-
9/19/14	8:45	8.78	545	542	NA	7
9/20/14	-	-	-	-	-	-
9/21/14	-	-	-	-	-	-
9/22/14	-	-	-	-	-	-
9/23/14	8:08	8.78	551	548	30	7
9/24/14	-	-	-	-	-	-
9/25/14	-	-	-	-	-	-
9/26/14	13:20	8.81	541	546	NA	7
9/27/14	-	-	-	-	-	-
9/28/14	-	-	-	-	-	-
9/29/14	-	-	-	-	-	-
9/30/14	8:10	8.73	537	539	NA	7
<b>Minimum</b>		8.71	537	538	30	
<b>Maximum</b>		8.81	554	552	37	
<b>Average</b>		8.76	544	544	34	

**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 near 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)	No. of days included in the 7 day Rolling Average
9/1/14	-	-	-	-	-	-	-
9/2/14	9:10	1,790	8.65	530	525	NA	7
9/3/14	-	-	-	-	-	-	-
9/4/14	-	-	-	-	-	-	-
9/5/14	9:35	1,800	8.57	520	525	NA	7
9/6/14	-	-	-	-	-	-	-
9/7/14	-	-	-	-	-	-	-
9/8/14	-	-	-	-	-	-	-
9/9/14	9:45	1,840	8.66	525	523	56	7
9/10/14	-	-	-	-	-	-	-
9/11/14	-	-	-	-	-	-	-
9/12/14	8:35	1,800	8.70	534	530	NA	7
9/13/14	-	-	-	-	-	-	-
9/14/14	-	-	-	-	-	-	-
9/15/14	-	-	-	-	-	-	-
9/16/14	7:30	1,800	8.76	533	534	NA	7
9/17/14	-	-	-	-	-	-	-
9/18/14	-	-	-	-	-	-	-
9/19/14	8:10	1,890	8.73	539	536	NA	7
9/20/14	-	-	-	-	-	-	-
9/21/14	-	-	-	-	-	-	-
9/22/14	-	-	-	-	-	-	-
9/23/14	7:30	1,870	8.74	551	545	51	7
9/24/14	-	-	-	-	-	-	-
9/25/14	-	-	-	-	-	-	-
9/26/14	13:50	1,850	8.77	549	550	NA	7
9/27/14	-	-	-	-	-	-	-
9/28/14	-	-	-	-	-	-	-
9/29/14	-	-	-	-	-	-	-
9/30/14	7:35	1,830	8.66	540	545	NA	7
<b>Minimum</b>		1,790	8.57	520	523	51	
<b>Maximum</b>		1,890	8.77	551	550	56	
<b>Average</b>		1,830	8.69	536	535	54	

**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 Outlet Discharge Report**

Date	Time	pH	Sulfate (mg/L)	7 Day Rolling Average of Sulfate (mg/L)	Total Suspended Solids (mg/L)	No. of days included in the 7 day Rolling Average
9/1/14	-	-	-	-	-	-
9/2/14	10:50	8.62	920	917	NA	7
9/3/14	-	-	-	-	-	-
9/4/14	-	-	-	-	-	-
9/5/14	8:20	8.68	923	922	NA	7
9/6/14	-	-	-	-	-	-
9/7/14	-	-	-	-	-	-
9/8/14	-	-	-	-	-	-
9/9/14	8:30	8.62	939	931	36	7
9/10/14	-	-	-	-	-	-
9/11/14	10:45	8.70	952	938	NA	7
9/12/14	-	-	-	-	-	-
9/13/14	-	-	-	-	-	-
9/14/14	-	-	-	-	-	-
9/15/14	-	-	-	-	-	-
9/16/14	9:16	8.72	940	946	NA	7
9/17/14	-	-	-	-	-	-
9/18/14	-	-	-	-	-	-
9/19/14	10:00	8.71	933	937	NA	7
9/20/14	-	-	-	-	-	-
9/21/14	-	-	-	-	-	-
9/22/14	-	-	-	-	-	-
9/23/14	9:20	8.69	931	932	26	7
9/24/14	-	-	-	-	-	-
9/25/14	-	-	-	-	-	-
9/26/14	8:05	8.71	934	933	NA	7
9/27/14	-	-	-	-	-	-
9/28/14	-	-	-	-	-	-
9/29/14	-	-	-	-	-	-
9/30/14	9:20	8.69	922	928	NA	7
<b>Minimum</b>		8.62	920	917	-	
<b>Maximum</b>		8.72	952	946	-	
<b>Average</b>		8.68	933	931	-	

**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	pH	Sulfate (mg/L)	7 Day Rolling Average of Sulfate (mg/L)	Total Suspended Solids (mg/L)	No. of days included in the 7 day Rolling Average
9/1/14	-	-	-	-	-	-
9/2/14	11:10	8.52	723	708	NA	7
9/3/14	-	-	-	-	-	-
9/4/14	-	-	-	-	-	-
9/5/14	8:50	8.56	714	719	NA	7
9/6/14	-	-	-	-	-	-
9/7/14	-	-	-	-	-	-
9/8/14	-	-	-	-	-	-
9/9/14	9:15	8.57	734	724	51	7
9/10/14	-	-	-	-	-	-
9/11/14	11:20	8.59	728	725	NA	7
9/12/14	-	-	-	-	-	-
9/13/14	-	-	-	-	-	-
9/14/14	-	-	-	-	-	-
9/15/14	-	-	-	-	-	-
9/16/14	9:42	8.66	741	735	NA	7
9/17/14	-	-	-	-	-	-
9/18/14	-	-	-	-	-	-
9/19/14	10:30	8.63	<b>751</b>	746	NA	7
9/20/14	-	-	-	-	-	-
9/21/14	-	-	-	-	-	-
9/22/14	-	-	-	-	-	-
9/23/14	9:43	8.63	719	735	45	7
9/24/14	-	-	-	-	-	-
9/25/14	-	-	-	-	-	-
9/26/14	7:45	8.54	740	730	NA	7
9/27/14	-	-	-	-	-	-
9/28/14	-	-	-	-	-	-
9/29/14	-	-	-	-	-	-
9/30/14	9:45	8.58	725	733	NA	7
<b>Minimum</b>		8.52	714	708	45	
<b>Maximum</b>		8.66	751	746	51	
<b>Average</b>		8.59	731	728	48	

**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**