

August 30, 2023

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

RE: July 2023 Devils Lake Outlets Monthly Discharge and Water Quality Report

Division of Water Quality:

The monthly discharge report for the Devils Lake Outlets for the month of July 2023 is enclosed. The Devils Lake West End Outlet and East End Outlet operated steadily except for two days when they were shut down for weed control. The West End Outlet operated at an average rate of 217 cfs with a total discharge volume of 13,338 acre-feet in July. The East End Outlet operated at an average rate of 138 cfs with a total discharge volume of 8,502 acre-feet in July. The combined total discharge volume from both West and East End Outlet is 21,840 acre-feet in July.

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.

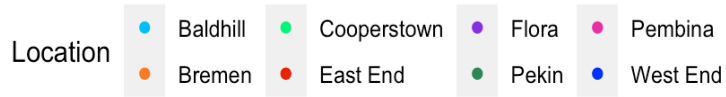
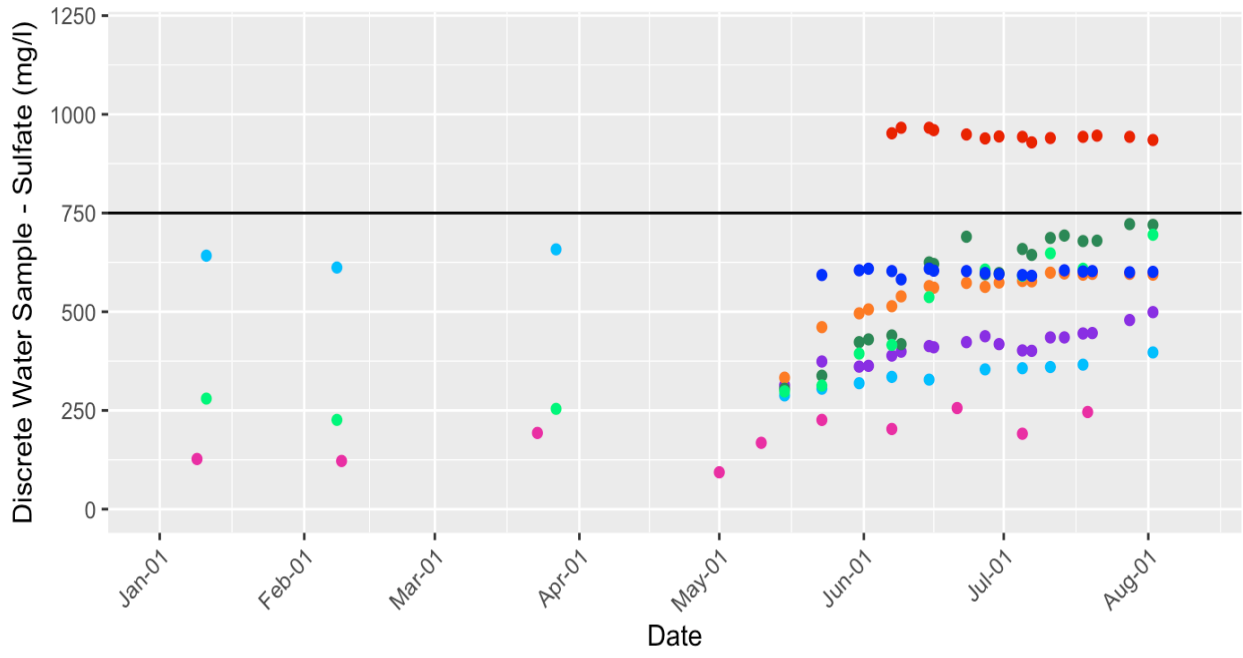
If you have any questions, please contact me at (701) 328-9049.

Sincerely,

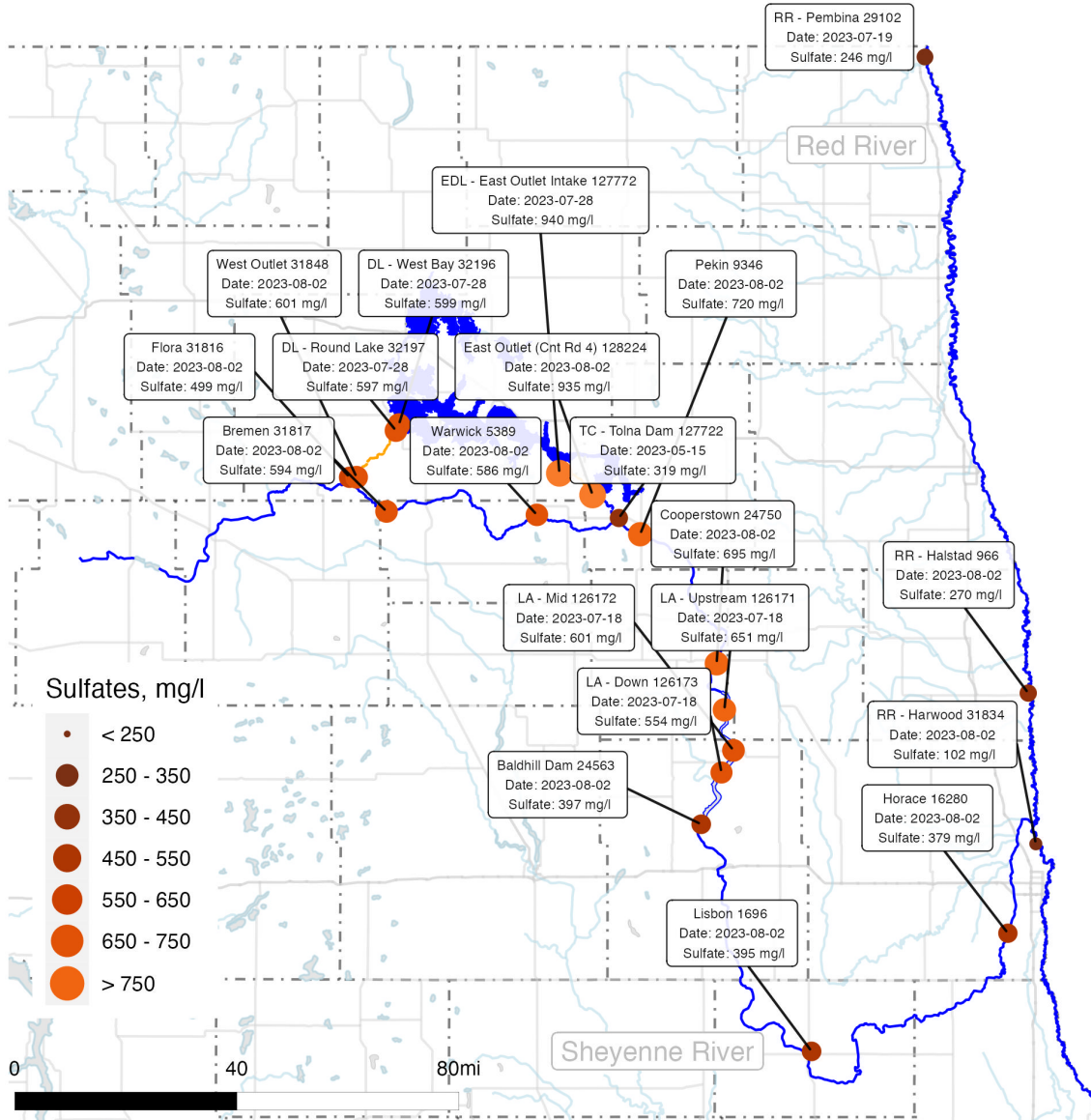


Yaping Chi, P.E.  
Water Resource Engineer, Water Development  
YC:/416-10  
Enclosure

### 2023 Devils Lake Outlet Sulfate Trends



# Devils Lake Outlet Operations Preliminary Sulfate Concentrations 08/15/2023



OUTLET OPERATOR NAME/ADDRESS  
 NAME: ND Dept. of Water Resources  
 ADDRESS: 1200 Memorial Highway,  
 Bismarck ND 58504

**MONTHLY DISCHARGE REPORT**


**LOCATION: WEST END OUTLET**

FACILITY: Devils Lake Outlet Project

MONITORING PERIOD	
START DATE	END DATE
7/1/23	7/31/23

LOCATION: Benson Co, ND

**Devils Lake West Outlet                      13338                      ac-ft over                      29                      Days**

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.56	8.74	8.68	SU	2 X Week	GRAB
SULFATE	591	605	599	mg/l	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	592	605	600	mg/L	Average	GRAB
OUTLET DISCHARGE	0	248	217	cfs	Continuous	Recorder
SIGNATURE				8/15/23	701-328-9049	
NAME AND TITLE	YAPING CHI, WATER RESOURCES ENGINEER, WATER DEVELOPMENT DIVISION			DATE	TELEPHONE NUMBER	
COMMENT AND EXPLANATION OF ANY VIOLATIONS						
A summary of individual sample results and flow data for both outlets, and upstream & downstream monitoring location is 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

OUTLET OPERATOR NAME/ADDRESS  
 NAME: ND Dept. of Water Resources  
 ADDRESS: 1200 Memorial Highway,  
 Bismarck ND 58504

**MONTHLY DISCHARGE REPORT**


**LOCATION: EAST END OUTLET**

FACILITY: Devils Lake Outlet Project

MONITORING PERIOD	
START DATE	END DATE
7/1/23	7/31/23

LOCATION: Ramsey, Benson, Nelson Co, ND

**Devils Lake East Outlet                      8502                      ac-ft over                      29                      Days**

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.53	8.78	8.64	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	2800	2920	2870	µS/cm	Continuous	Recorder
SULFATE	929	946	941	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	935	945	941	mg/l	Average	GRAB
OUTLET DISCHARGE	0	170	138	cfs	Continuous	Recorder
SIGNATURE				8/15/23	701-328-9049	
NAME AND TITLE	YAPING CHI, WATER RESOURCES ENGINEER, WATER DEVELOPMENT DIVISION			DATE	TELEPHONE NUMBER	
COMMENT AND EXPLANATION OF ANY VIOLATIONS						

**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

OUTLET OPERATOR NAME/ADDRESS  
 NAME: ND Dept. of Water Resources  
 ADDRESS: 1200 Memorial Highway,  
 Bismarck ND 58504


**MONTHLY DISCHARGE REPORT**

**LOCATION: UPSTREAM OF THE WEST END OUTLET (FLORA)**

FACILITY: Devils Lake Outlet Project

MONITORING PERIOD	
START DATE	END DATE
7/1/23	7/31/23

LOCATION: Benson, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.22	8.4	8.31	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	1690	1830	1746	µS/cm	Continuous	Recorder
SULFATE	401	479	435	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	402	479	432	mg/l	Average	GRAB
FLOW, INSTREAM	8.6	34.2	19.1	cfs	Continuous	Recorder
SIGNATURE				8/15/23	701-328-9049	
NAME AND TITLE	YAPING CHI, WATER RESOURCES ENGINEER, WATER DEVELOPMENT DIVISION			DATE	TELEPHONE NUMBER	
COMMENT AND EXPLANATION OF ANY VIOLATIONS						
A summary of individual sample results and flow data for both outlets, and upstream & downstream monitoring location is 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

OUTLET OPERATOR NAME/ADDRESS  
 NAME: ND Dept. of Water Resources  
 ADDRESS: 1200 Memorial Highway,  
 Bismarck ND 58504


**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
7/1/23	7/31/23

LOCATION: Eddy Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.59	8.75	8.67	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	1970	2010	1994	µS/cm	Continuous	Recorder
SULFATE	577	599	591	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	578	598	590	mg/l	Average	GRAB
FLOW, INSTREAM	57.4	257	212	cfs	Continuous	Recorder
SIGNATURE				8/15/23	701-328-9049	
NAME AND TITLE	YAPING CHI, WATER RESOURCES ENGINEER, WATER DEVELOPMENT DIVISION			DATE	TELEPHONE NUMBER	
COMMENT AND EXPLANATION OF ANY VIOLATIONS						
A summary of individual sample results and flow data for both outlets, and upstream & downstream monitoring location is 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

OUTLET OPERATOR NAME/ADDRESS  
 NAME: ND Dept. of Water Resources  
 ADDRESS: 1200 Memorial Highway,  
 Bismarck ND 58504

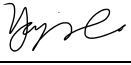
**MONTHLY DISCHARGE REPORT**

**LOCATION: DOWNSTREAM OF BOTH OUTLETS (PEKIN)**

FACILITY: Devils Lake Outlet Project

LOCATION: Nelson Co, ND

MONITORING PERIOD	
START DATE	END DATE
7/1/23	7/31/23

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.44	8.57	8.5	SU	2 X Week	GRAB
SULFATE	644	722	681	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	652	722	679	mg/L	Average	GRAB
FLOW, INSTREAM	NA	NA	NA	cfs	Continuous	Recorder
SIGNATURE				8/15/23	701-328-9049	
NAME AND TITLE	YAPING CHI, WATER RESOURCES ENGINEER, WATER DEVELOPMENT DIVISION			DATE	TELEPHONE NUMBER	
COMMENT AND EXPLANATION OF ANY VIOLATIONS						
A summary of individual sample results and flow data for both outlets, and upstream & downstream monitoring location is 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 Dept. of Water Resources  
 ADDRESS: 1200 Memorial Highway,  
 Bismarck ND 58504


**MONTHLY DISCHARGE REPORT**

**LOCATION: DOWNSTREAM OF BOTH OUTLETS (COOPERSTOWN)**

FACILITY: Devils Lake Outlet Project

LOCATION: Griggs Co, ND

MONITORING PERIOD	
START DATE	END DATE
7/1/23	7/31/23

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.45	8.51	8.49	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	1970	2180	2097	µS/cm	Continuous	Recorder
SULFATE	591	648	616	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	591	648	616	mg/l	Average	GRAB
FLOW, INSTREAM	193	514	419	cfs	Continuous	Recorder
SIGNATURE				8/15/23	701-328-9049	
NAME AND TITLE	YAPING CHI, WATER RESOURCES ENGINEER, WATER DEVELOPMENT DIVISION			DATE	TELEPHONE NUMBER	
COMMENT AND EXPLANATION OF ANY VIOLATIONS						
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**Notes:**

- ac-ft - Acre feet
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- µS/cm - microsiemens per Centimeter at 25 degrees Celsius
- mg/L - milligrams per liter or parts per million
- cfs - cubic feet per second

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 (ft3)	Average Streamflow USGS Gage (cfs)	Average Specific Conductance USGS Gage (µS/cm)	Average Daily Outlet Discharge (cfs)	Total Daily Volume (ft3)	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 (ft3)
7/1/2023	34.2	1700	243	20986000	256	1940	147	12700800	147	2840	494	1900	390	33686800
7/2/2023	33	1700	212	18278000	257	1940	147	12700800	147	2810	480	1910	359	30978800
7/3/2023	24.5	1690	218	18850000	224	1940	151	13046400	151	2810	508	1890	369	31896400
7/4/2023	29.7	1710	240	20694000	235	1950	170	14688000	170	2820	514	1930	410	35382000
7/5/2023	28.5	1690	241	20823000	244	1970	125	10800000	125	2910	507	1970	366	31623000
7/6/2023	26.1	1700	240	20745000	242	1990	148	12787200	148	2920	501	2020	388	33532200
7/7/2023	23.9	1720	240	20713000	241	2000	152	13132800	152	2870	495	2050	392	33845800
7/8/2023	23.1	1740	240	20726000	238	2000	158	13651200	158	2840	460	2060	398	34377200
7/9/2023	21.2	1760	216	18644000	235	2000	153	13219200	153	2860	453	2060	369	31863200
7/10/2023	14.5	1760	167	14401000	209	2000	150	12960000	150	2920	457	2170	317	27361000
7/11/2023	11.2	1750	0	0	159	1990	132	11404800	132	2920	459	2180	132	11404800
7/12/2023	10.5	1730	0	0	69	2010	139	12009600	139	2900	457	2200	139	12009600
7/13/2023	12.5	1720	163	14080000	57.4	-	103	8899200	103	2860	455	2200	266	22979200
7/14/2023	21.1	1710	243	20978000	187	-	0	0	-	445	2200	243	20978000	
7/15/2023	20.8	1720	244	21058000	231	1910	0	0	10.2	2860	433	2190	244	21058000
7/16/2023	19.9	1740	243	21000000	235	1980	156	13478400	156	2900	374	2180	399	34478400
7/17/2023	20.1	1740	244	21051000	235	1890	143	12355200	143	2870	261	2170	387	33406200
7/18/2023	21	1750	246	21227000	238	2010	142	12268800	142	2850	193	2140	388	33495800
7/19/2023	20.2	1760	247	21307000	239	2010	143	12355200	143	2870	286	2060	390	33662200
7/20/2023	20.1	1770	247	21304000	238	-	137	11836800	137	2850	390	-	384	33140800
7/21/2023	19.9	1770	246	21296000	237	2030	152	13132800	152	2870	419	-	398	34428800
7/22/2023	19.4	1780	248	21429000	238	2010	122	10540800	122	2880	428	-	370	31969800
7/23/2023	19.2	1790	248	21430000	238	2010	146	12614400	146	2860	430	-	394	34044400
7/24/2023	18.6	1810	246	21241000	237	2000	146	12614400	146	2870	436	-	392	33855400
7/25/2023	16.9	1810	242	20933000	235	1980	161	13924000	164	2870	424	-	403	34857000
7/26/2023	13.8	1810	208	18000000	231	1960	159	13704000	164	2830	431	-	367	31704000
7/27/2023	8.57	1820	216	18642000	197	1990	160	13827000	163	2830	436	-	376	32469000
7/28/2023	14.5	1830	237	20448000	217	2000	160	13850000	165	2800	445	-	397	34298000
7/29/2023	14.5	1830	236	20359000	225	2000	161	13889000	166	2880	447	-	396	34248000
7/30/2023	14.4	1840	234	20192000	228	1990	162	13960000	167	2820	445	-	395	34152000
7/31/2023	14	1860	233	20173000	226	2000	162	14009000	166	2840	437	-	396	34182000

<b>Minimum</b>	8.6	1690	0	0	57.4	1890	0	0	10.2	2800	193	1890	0	0
<b>Maximum</b>	34.2	1860	248	21430000	257	2030	170	14688000	170	2920	514	2200	418	36118000
<b>Average</b>	19.1	1703	217	18742194	212	1913.793103	138	11947090	140	2769	419	1974	355	30689284
			<b>Total (Mgal)</b>	4346			<b>Total (Mgal)</b>	2770					<b>Total (Mgal)</b>	7116
			<b>Total (Ac-ft)</b>	13338			<b>Total (Ac-ft)</b>	8502					<b>Total (Ac-ft)</b>	21840

**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)	Number of samples included in 7-day Average
7/1/23	-	-	-	-	-	-	-
7/2/23	-	-	-	-	-	-	-
7/3/23	-	-	-	-	-	-	-
7/4/23	-	-	-	-	-	-	-
7/5/23	8:18:00 AM	1690	8.35	402	402	NA	1
7/6/23	-	-	-	-	-	-	-
7/7/23	10:05:00 AM	1720	8.26	401	402	NA	2
7/8/23	-	-	-	-	-	-	-
7/9/23	-	-	-	-	-	-	-
7/10/23	-	-	-	-	-	-	-
7/11/23	8:15:00 AM	1750	8.35	435	418	91	2
7/12/23	-	-	-	-	-	-	-
7/13/23	-	-	-	-	-	-	-
7/14/23	9:15:00 AM	1710	8.22	435	435	NA	2
7/15/23	-	-	-	-	-	-	-
7/16/23	-	-	-	-	-	-	-
7/17/23	-	-	-	-	-	-	-
7/18/23	8:05:00 AM	1750	8.4	445	440	NA	2
7/19/23	-	-	-	-	-	-	-
7/20/23	11:20:00 AM	1770	8.27	446	446	NA	2
7/21/23	-	-	-	-	-	-	-
7/22/23	-	-	-	-	-	-	-
7/23/23	-	-	-	-	-	-	-
7/24/23	-	-	-	-	-	-	-
7/25/23	-	-	-	-	-	-	-
7/26/23	-	-	-	-	-	-	-
7/27/23	-	-	-	-	-	-	-
7/28/23	9:25:00 AM	1830	-	479	479	NA	1
7/29/23	-	-	-	-	-	-	-
7/30/23	-	-	-	-	-	-	-
7/31/23	-	-	-	-	-	-	-
<b>Minimum</b>		1690	8.22	401	402	91	
<b>Maximum</b>		1830	8.4	479	479	91	
<b>Average</b>		1746	8.31	435	432	91	

**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

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

Date	Time	Specific Conductance from Telemetry System (uS/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
7/1/23	-	-	-	-	-	-	-
7/2/23	-	-	-	-	-	-	-
7/3/23	-	-	-	-	-	-	-
7/4/23	-	-	-	-	-	-	-
7/5/23	8:30:00 AM	-	8.56	593	593	NA	1
7/6/23	-	-	-	-	-	-	-
7/7/23	10:20:00 AM	-	8.66	591	592	NA	2
7/8/23	-	-	-	-	-	-	-
7/9/23	-	-	-	-	-	-	-
7/10/23	-	-	-	-	-	-	-
7/11/23	-	-	-	-	-	-	-
7/12/23	-	-	-	-	-	-	-
7/13/23	-	-	-	-	-	-	-
7/14/23	9:35:00 AM	-	8.71	605	605	NA	1
7/15/23	-	-	-	-	-	-	-
7/16/23	-	-	-	-	-	-	-
7/17/23	-	-	-	-	-	-	-
7/18/23	8:20:00 AM	-	8.72	602	604	NA	2
7/19/23	-	-	-	-	-	-	-
7/20/23	11:00:00 AM	-	8.74	603	603	NA	2
7/21/23	-	-	-	-	-	-	-
7/22/23	-	-	-	-	-	-	-
7/23/23	-	-	-	-	-	-	-
7/24/23	-	-	-	-	-	-	-
7/25/23	-	-	-	-	-	-	-
7/26/23	-	-	-	-	-	-	-
7/27/23	-	-	-	-	-	-	-
7/28/23	9:45:00 AM	-	-	600	600	NA	1
7/29/23	-	-	-	-	-	-	-
7/30/23	-	-	-	-	-	-	-
7/31/23	-	-	-	-	-	-	-
<b>Minimum</b>			8.56	591	592		
<b>Maximum</b>			8.74	605	605	NA	
<b>Average</b>			8.68	599	600	0	

**Notes:**

µS/cm - microsiemens per Centimeter at 25 degrees Celsius

mg/L - milligrams per liter or parts per million

NA - Not analyzed

**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
7/1/23	-	-	-	-	-	-	-
7/2/23	-	-	-	-	-	-	-
7/3/23	-	-	-	-	-	-	-
7/4/23	-	-	-	-	-	-	-
7/5/23	8:00:00 AM	1970	8.6	578	578	NA	1
7/6/23	-	-	-	-	-	-	-
7/7/23	9:40:00 AM	2000	8.75	577	578	NA	2
7/8/23	-	-	-	-	-	-	-
7/9/23	-	-	-	-	-	-	-
7/10/23	-	-	-	-	-	-	-
7/11/23	7:40:00 AM	1990	8.64	599	588	43	2
7/12/23	-	-	-	-	-	-	-
7/13/23	-	-	-	-	-	-	-
7/14/23	8:50:00 AM	-	8.72	597	598	NA	2
7/15/23	-	-	-	-	-	-	-
7/16/23	-	-	-	-	-	-	-
7/17/23	-	-	-	-	-	-	-
7/18/23	7:30:00 AM	2010	8.59	594	596	NA	2
7/19/23	-	-	-	-	-	-	-
7/20/23	11:45:00 AM	-	8.74	596	595	NA	2
7/21/23	-	-	-	-	-	-	-
7/22/23	-	-	-	-	-	-	-
7/23/23	-	-	-	-	-	-	-
7/24/23	-	-	-	-	-	-	-
7/25/23	-	-	-	-	-	-	-
7/26/23	-	-	-	-	-	-	-
7/27/23	-	-	-	-	-	-	-
7/28/23	9:00:00 AM	2000	-	596	596	NA	1
7/29/23	-	-	-	-	-	-	-
7/30/23	-	-	-	-	-	-	-
7/31/23	-	-	-	-	-	-	-
<b>Minimum</b>		1970	8.59	577	578	43	
<b>Maximum</b>		2010	8.75	599	598	43	
<b>Average</b>		1994	8.67	591	590	43	

**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

**East End Outlet  
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
7/1/23	-	-	-	-	-	-	-
7/2/23	-	-	-	-	-	-	-
7/3/23	-	-	-	-	-	-	-
7/4/23	-	-	-	-	-	-	-
7/5/23	9:45:00 AM	2910	8.53	943	943	NA	1
7/6/23	-	-	-	-	-	-	-
7/7/23	7:40:00 AM	2870	8.78	929	936	NA	2
7/8/23	-	-	-	-	-	-	-
7/9/23	-	-	-	-	-	-	-
7/10/23	-	-	-	-	-	-	-
7/11/23	9:31:00 AM	2920	8.61	940	935	29	2
7/12/23	-	-	-	-	-	-	-
7/13/23	-	-	-	-	-	-	-
7/14/23	-	-	-	-	-	-	-
7/15/23	-	-	-	-	-	-	-
7/16/23	-	-	-	-	-	-	-
7/17/23	-	-	-	-	-	-	-
7/18/23	9:35:00 AM	2850	8.63	943	943	NA	1
7/19/23	-	-	-	-	-	-	-
7/20/23	-	-	-	-	-	-	-
7/21/23	7:15:00 AM	2870	8.64	946	945	NA	2
7/22/23	-	-	-	-	-	-	-
7/23/23	-	-	-	-	-	-	-
7/24/23	-	-	-	-	-	-	-
7/25/23	-	-	-	-	-	-	-
7/26/23	-	-	-	-	-	-	-
7/27/23	-	-	-	-	-	-	-
7/28/23	7:40:00 AM	2800	-	943	943	NA	1
7/29/23	-	-	-	-	-	-	-
7/30/23	-	-	-	-	-	-	-
7/31/23	-	-	-	-	-	-	-
<b>Minimum</b>		2800	8.53	929	935	29	
<b>Maximum</b>		2920	8.78	946	945	29	
<b>Average</b>		2870	8.64	941	941	29	

**Notes:**

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mg/L - milligrams per liter or parts per million  
NA - Not analyzed  
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**Sheyenne River Downstream of Both Outlets Near Pekin  
Monthly Water Quality Summary  
Devils Lake Outlet Discharge Report**

<b>Date</b>	<b>Time</b>	<b>Specific Conductance Laboratory Analysis (µS/cm)</b>	<b>pH</b>	<b>Sulfate (mg/L)</b>	<b>7 Day Rolling Average of Sulfate (mg/L)</b>	<b>Total Suspended Solids (mg/L)</b>	<b>Number of samples included in 7-day Average</b>
7/1/23	-	-	-	-	-	-	-
7/2/23	-	-	-	-	-	-	-
7/3/23	-	-	-	-	-	-	-
7/4/23	-	-	-	-	-	-	-
7/5/23	10:16:00 AM	-	8.48	659	659	NA	1
7/6/23	-	-	-	-	-	-	-
7/7/23	7:10:00 AM	-	8.44	644	652	NA	2
7/8/23	-	-	-	-	-	-	-
7/9/23	-	-	-	-	-	-	-
7/10/23	-	-	-	-	-	-	-
7/11/23	9:55:00 AM	-	8.55	687	666	61	2
7/12/23	-	-	-	-	-	-	-
7/13/23	-	-	-	-	-	-	-
7/14/23	7:40:00 AM	-	8.44	693	690	NA	2
7/15/23	-	-	-	-	-	-	-
7/16/23	-	-	-	-	-	-	-
7/17/23	-	-	-	-	-	-	-
7/18/23	10:00:00 AM	-	8.52	679	686	NA	2
7/19/23	-	-	-	-	-	-	-
7/20/23	-	-	-	-	-	-	-
7/21/23	7:45:00 AM	-	8.57	680	680	NA	2
7/22/23	-	-	-	-	-	-	-
7/23/23	-	-	-	-	-	-	-
7/24/23	-	-	-	-	-	-	-
7/25/23	-	-	-	-	-	-	-
7/26/23	-	-	-	-	-	-	-
7/27/23	-	-	-	-	-	-	-
7/28/23	7:15:00 AM	-	-	722	722	NA	1
7/29/23	-	-	-	-	-	-	-
7/30/23	-	-	-	-	-	-	-
7/31/23	-	-	-	-	-	-	-
<b>Minimum</b>			8.44	644	652	61	
<b>Maximum</b>			8.57	722	722	61	
<b>Average</b>			8.5	681	679	61	

**Notes:**

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NA - Not analyzed

**Sheyenne River Downstream of Both Outlets Near Cooperstown**  
**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
7/1/23	-	-	-	-	-	-	-
7/2/23	-	-	-	-	-	-	-
7/3/23	-	-	-	-	-	-	-
7/4/23	-	-	-	-	-	-	-
7/5/23	11:00:00 AM	1970	8.45	591	591	NA	1
7/6/23	-	-	-	-	-	-	-
7/7/23	-	-	-	-	-	-	-
7/8/23	-	-	-	-	-	-	-
7/9/23	-	-	-	-	-	-	-
7/10/23	-	-	-	-	-	-	-
7/11/23	10:50:00 AM	2180	8.5	648	648	125	1
7/12/23	-	-	-	-	-	-	-
7/13/23	-	-	-	-	-	-	-
7/14/23	-	-	-	-	-	-	-
7/15/23	-	-	-	-	-	-	-
7/16/23	-	-	-	-	-	-	-
7/17/23	-	-	-	-	-	-	-
7/18/23	10:55:00 AM	2140	8.51	609	609	NA	1
7/19/23	-	-	-	-	-	-	-
7/20/23	-	-	-	-	-	-	-
7/21/23	-	-	-	-	-	-	-
7/22/23	-	-	-	-	-	-	-
7/23/23	-	-	-	-	-	-	-
7/24/23	-	-	-	-	-	-	-
7/25/23	-	-	-	-	-	-	-
7/26/23	-	-	-	-	-	-	-
7/27/23	-	-	-	-	-	-	-
7/28/23	-	-	-	-	-	-	-
7/29/23	-	-	-	-	-	-	-
7/30/23	-	-	-	-	-	-	-
7/31/23	-	-	-	-	-	-	-
<b>Minimum</b>		1970	8.45	591	591	125	
<b>Maximum</b>		2180	8.51	648	648	125	
<b>Average</b>		2097	8.49	616	616	125	

**Notes:**

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