

June 13, 2023

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

RE: May 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 May 2023 is enclosed. The West Outlet began discharging on May 16<sup>th</sup> at a 50 cubic feet per second (cfs) and was increased to 175 cfs on May 17<sup>th</sup> for the remainder of the month. A total of 4,844 acre-feet were discharged in May.

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 Yaping Chi at (701) 328-9049.

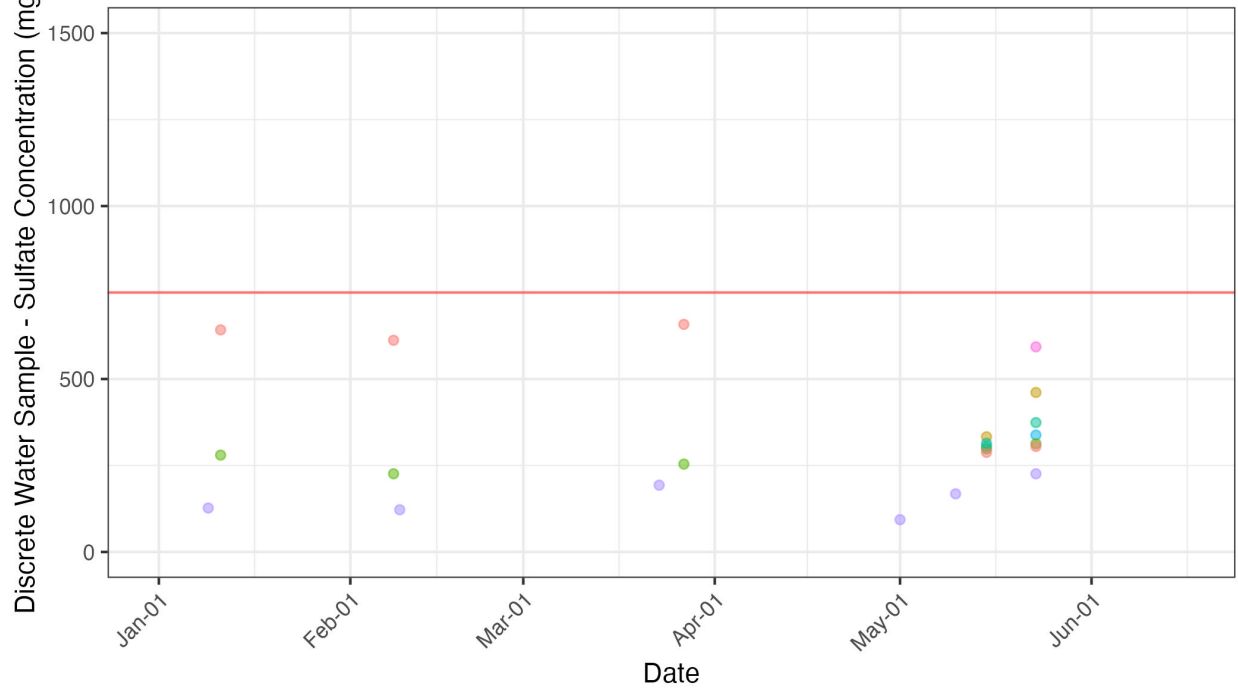
Sincerely,

*Chris Korkowski*

Christopher Korkowski, P.E.  
Chief of the Investigations Section, Water Development

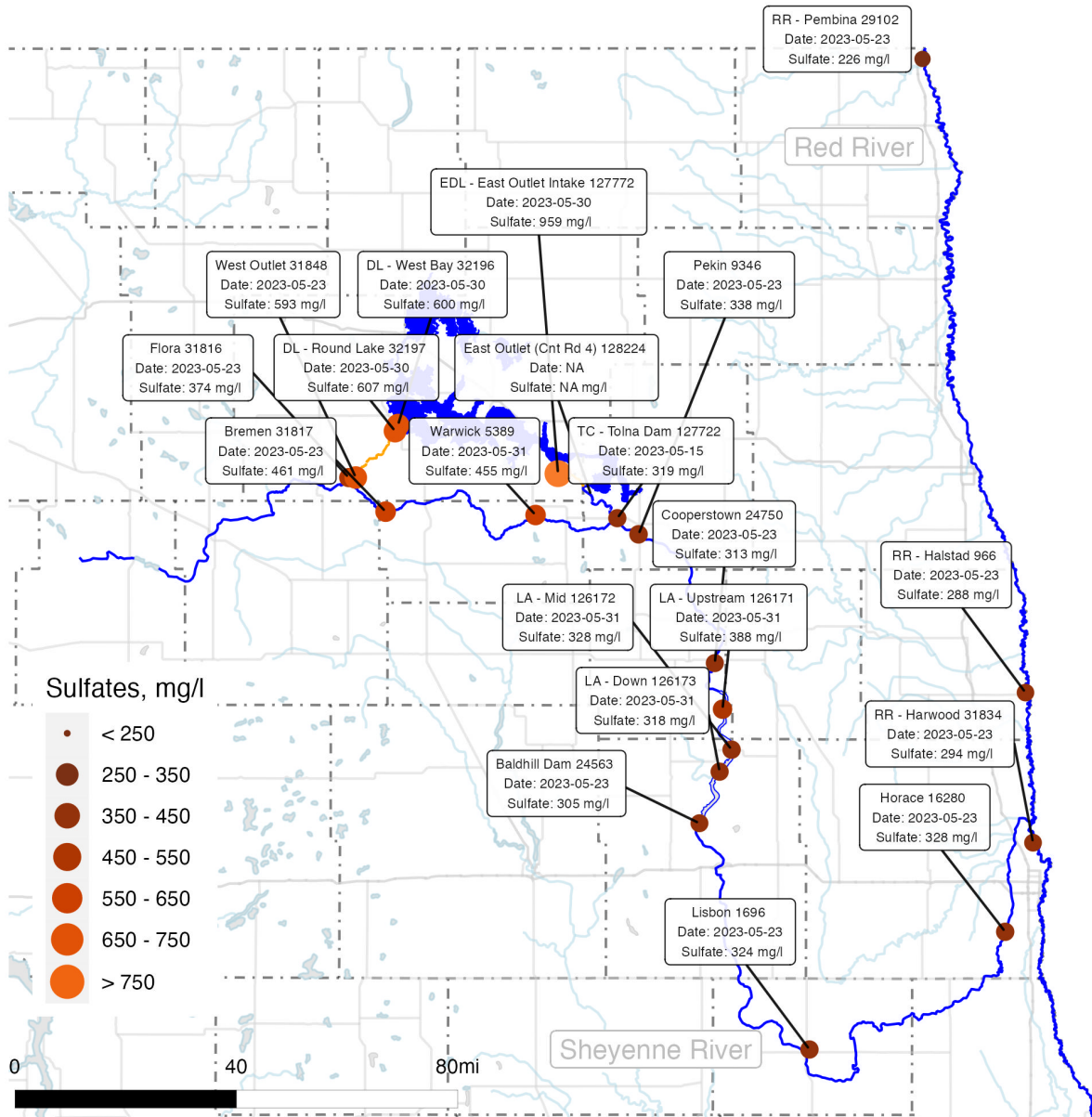
CK:pp/416-10  
Enclosure

### 2023 Devils Lake Outlet Sulfate Trends



Location      ● Baldhill - 24563      ● Cooperstown - 24750      ● Pekin - 9346      ● West End - 31848  
● Bremen - 31817      ● Flora - 31816      ● Pembina - 29102

# Devils Lake Outlet Operations Preliminary Sulfate Concentrations 06/16/2023



OUTLET OPERATOR NAME/ADDRESS  
 NAME: ND Dept. of Water Resources  
 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
5/1/23	5/31/23

LOCATION: Benson Co, ND

**Devils Lake West Outlet                      4844                      ac-ft over                      17                      Days**

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.62	8.62	8.62	SU	2 X Week	GRAB
SULFATE	593	593	593	mg/l	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	593	593	593	mg/L	Average	GRAB
OUTLET DISCHARGE	0	165	78.8	cfs	Continuous	Recorder
SIGNATURE	<i>Chris Korkowski</i>			6/16/23	701-328-2762	
NAME AND TITLE	CHRISTOPHER KORKOWSKI, CHIEF OF INVESTIGATIONS SECTION, 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: 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
5/1/23	5/31/23

LOCATION: Ramsey, Benson, Nelson Co, ND

**Devils Lake East Outlet**                      **0**                      **ac-ft over**                      **0**                      **Days**

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	NA	NA	NA	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	NA	NA	NA	µS/cm	Continuous	Recorder
SULFATE	NA	NA	NA	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	NA	NA	NA	mg/l	Average	GRAB
OUTLET DISCHARGE	NA	NA	NA	cfs	Continuous	Recorder
SIGNATURE	<i>Chris Korkowski</i>			6/16/23	701-328-2762	
NAME AND TITLE	CHRISTOPHER KORKOWSKI, CHIEF OF INVESTIGATIONS SECTION, 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
- NA - Not available

OUTLET OPERATOR NAME/ADDRESS  
 NAME: ND Dept. of Water Resources  
 ADDRESS: 900 E Boulevard Avenue,  
 Bismarck ND 58505

**MONTHLY DISCHARGE REPORT**

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

FACILITY: Devils Lake Outlet Project

LOCATION: Benson, ND

MONITORING PERIOD	
START DATE	END DATE
5/1/23	5/31/23

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.26	8.38	8.32	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	1110	1110	1110	µS/cm	Continuous	Recorder
SULFATE	314	374	344	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	314	374	344	mg/l	Average	GRAB
FLOW, INSTREAM	104	398	270	cfs	Continuous	Recorder
SIGNATURE	<i>Chris Korkowski</i>			6/16/23	701-328-2762	
NAME AND TITLE	CHRISTOPHER KORKOWSKI, CHIEF OF INVESTIGATIONS SECTION, 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: 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
5/1/23	5/31/23

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.27	8.45	8.36	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	0	0		µS/cm	Continuous	Recorder
SULFATE	333	461	397	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	333	461	397	mg/l	Average	GRAB
FLOW, INSTREAM	331	421	363	cfs	Continuous	Recorder
SIGNATURE	<i>Chris Korkowski</i>			6/16/23	701-328-2762	
NAME AND TITLE	CHRISTOPHER KORKOWSKI, CHIEF OF INVESTIGATIONS SECTION, 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: 900 E Boulevard Avenue,  
 Bismarck ND 58505

**MONTHLY DISCHARGE REPORT**

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

FACILITY: Devils Lake Outlet Project

LOCATION: Nelson Co, ND

MONITORING PERIOD	
START DATE	END DATE
5/1/23	5/31/23

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.29	8.39	8.34	SU	2 X Week	GRAB
SULFATE	305	338	322	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	305	338	322	mg/L	Average	GRAB
FLOW, INSTREAM	NA	NA	NA	cfs	Continuous	Recorder
SIGNATURE	<i>Chris Korkowski</i>			6/16/23	701-328-2762	
NAME AND TITLE	CHRISTOPHER KORKOWSKI, CHIEF OF INVESTIGATIONS SECTION, 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  
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 Bismarck ND 58505

**MONTHLY DISCHARGE REPORT**

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

FACILITY: Devils Lake Outlet Project

LOCATION: Griggs Co, ND

MONITORING PERIOD	
START DATE	END DATE
5/1/23	5/31/23

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.26	8.4	8.33	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	1070	1180	1125	µS/cm	Continuous	Recorder
SULFATE	298	313	306	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	298	313	306	mg/l	Average	GRAB
FLOW, INSTREAM	577	2260	1168	cfs	Continuous	Recorder
SIGNATURE	<i>Chris Korkowski</i>			6/16/23	701-328-2762	
NAME AND TITLE	CHRISTOPHER KORKOWSKI, CHIEF OF INVESTIGATIONS SECTION, 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
- 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 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)
5/1/2023	398	990	0	0	421	-	0	0	-	-	2070	834	0	0
5/2/2023	387	1000	0	0	398	-	0	0	-	-	2220	841	0	0
5/3/2023	377	1020	0	0	378	-	0	0	-	-	2260	855	0	0
5/4/2023	364	1060	0	0	372	-	0	0	-	-	2190	882	0	0
5/5/2023	-	-	0	0	-	-	0	0	-	-	2050	904	0	0
5/6/2023	312	1050	0	0	345	-	0	0	-	-	1890	915	0	0
5/7/2023	323	1110	0	0	380	-	0	0	7.11	-	1780	914	0	0
5/8/2023	371	-	0	0	412	-	0	0	4.57	-	1670	936	0	0
5/9/2023	385	1220	0	0	411	-	0	0	2.7	-	1520	959	0	0
5/10/2023	373	1210	0	0	394	-	0	0	2.33	-	1390	986	0	0
5/11/2023	348	1130	0	0	370	-	0	0	1.96	-	1280	998	0	0
5/12/2023	340	1110	0	0	357	-	0	0	1.71	-	1200	1020	0	0
5/13/2023	337	1100	0	0	361	-	0	0	2.89	-	1160	1040	0	0
5/14/2023	331	1110	0	0	342	-	0	0	1.52	-	1130	1050	0	0
5/15/2023	350	1110	19.8	1710000	331	-	0	0	1.12	-	1110	1070	20	1710000
5/16/2023	363	1080	46	3974000	356	-	0	0	0.98	-	1060	1110	46	3974000
5/17/2023	335	1100	110	9467000	372	-	0	0	14.2	-	1010	-	110	9467000
5/18/2023	318	1130	161	13871000	408	-	0	0	2.71	-	946	-	161	13871000
5/19/2023	291	1190	163	14060000	419	-	0	0	1.36	-	891	1160	163	14060000
5/20/2023	266	1240	161	13875000	404	-	0	0	1.3	-	839	1170	161	13875000
5/21/2023	237	1270	159	13779000	388	-	0	0	1.19	-	802	1180	159	13779000
5/22/2023	219	1340	162	13989000	371	-	0	0	1.15	-	780	1180	162	13989000
5/23/2023	202	-	163	14046000	360	-	0	0	1.04	-	769	1180	163	14046000
5/24/2023	190	-	165	14255000	-	-	0	0	0.83	-	762	1190	165	14255000
5/25/2023	178	-	165	14263000	-	-	0	0	0.79	-	745	1240	165	14263000
5/26/2023	162	1500	161	13892000	-	-	0	0	0.67	-	718	1290	161	13892000
5/27/2023	146	1500	159	13724000	-	-	0	0	0.6	-	685	1320	159	13724000
5/28/2023	136	1520	161	13937000	-	-	0	0	0.56	-	647	1370	161	13937000
5/29/2023	123	1520	162	14033000	-	-	0	0	0.66	-	616	1410	162	14033000
5/30/2023	112	1520	163	14079000	-	-	0	0	-	-	594	1430	163	14079000
5/31/2023	104	1520	163	14054000	-	-	0	0	1.53	2740	577	1460	163	14054000
<b>Minimum</b>	104	990	0	0	331	100000	0	0	0.56	2740	577	834	0	0
<b>Maximum</b>	398	1520	165	14263000	421	0	0	0	14.2	2740	2260	1460	165	14263000
<b>Average</b>	270	1172	78.8	6806710	363	0	0	0	2.2	-	1168	1063	78.8	6806710
			<b>Total (Mgal)</b>	1578			<b>Total (Mgal)</b>	0					<b>Total (Mgal)</b>	1578
			<b>Total (Ac-ft)</b>	4844			<b>Total (Ac-ft)</b>	0					<b>Total (Ac-ft)</b>	4844

**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 ( $\mu$ 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
5/1/23	-	-	-	-	-	-	-
5/2/23	-	-	-	-	-	-	-
5/3/23	-	-	-	-	-	-	-
5/4/23	-	-	-	-	-	-	-
5/5/23	-	-	-	-	-	-	-
5/6/23	-	-	-	-	-	-	-
5/7/23	-	-	-	-	-	-	-
5/8/23	-	-	-	-	-	-	-
5/9/23	-	-	-	-	-	-	-
5/10/23	-	-	-	-	-	-	-
5/11/23	-	-	-	-	-	-	-
5/12/23	-	-	-	-	-	-	-
5/13/23	-	-	-	-	-	-	-
5/14/23	-	-	-	-	-	-	-
5/15/23	10:30:00	1110	8.26	314	314	32	1
5/16/23	-	-	-	-	-	-	-
5/17/23	-	-	-	-	-	-	-
5/18/23	-	-	-	-	-	-	-
5/19/23	-	-	-	-	-	-	-
5/20/23	-	-	-	-	-	-	-
5/21/23	-	-	-	-	-	-	-
5/22/23	-	-	-	-	-	-	-
5/23/23	8:05:00	-	8.38	374	374	NA	1
5/24/23	-	-	-	-	-	-	-
5/25/23	-	-	-	-	-	-	-
5/26/23	-	-	-	-	-	-	-
5/27/23	-	-	-	-	-	-	-
5/28/23	-	-	-	-	-	-	-
5/29/23	-	-	-	-	-	-	-
5/30/23	-	-	-	-	-	-	-
5/31/23	-	-	-	-	-	-	-
<b>Minimum</b>		1110	8.26	314	314	32	
<b>Maximum</b>		1110	8.38	374	374	32	
<b>Average</b>		1110	8.32	344	344	32	

**Notes:**

$\mu$ 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 results*

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

Date	Time	Specific Conductance from Telemetry System ( $\mu\text{S}/\text{cm}$ )	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
5/1/23	-	-	-	-	-	-	-
5/2/23	-	-	-	-	-	-	-
5/3/23	-	-	-	-	-	-	-
5/4/23	-	-	-	-	-	-	-
5/5/23	-	-	-	-	-	-	-
5/6/23	-	-	-	-	-	-	-
5/7/23	-	-	-	-	-	-	-
5/8/23	-	-	-	-	-	-	-
5/9/23	-	-	-	-	-	-	-
5/10/23	-	-	-	-	-	-	-
5/11/23	-	-	-	-	-	-	-
5/12/23	-	-	-	-	-	-	-
5/13/23	-	-	-	-	-	-	-
5/14/23	-	-	-	-	-	-	-
5/15/23	-	-	-	-	-	-	-
5/16/23	-	-	-	-	-	-	-
5/17/23	-	-	-	-	-	-	-
5/18/23	-	-	-	-	-	-	-
5/19/23	-	-	-	-	-	-	-
5/20/23	-	-	-	-	-	-	-
5/21/23	-	-	-	-	-	-	-
5/22/23	-	-	-	-	-	-	-
5/23/23	8:18:00	-	8.62	593	593	NA	1
5/24/23	-	-	-	-	-	-	-
5/25/23	-	-	-	-	-	-	-
5/26/23	-	-	-	-	-	-	-
5/27/23	-	-	-	-	-	-	-
5/28/23	-	-	-	-	-	-	-
5/29/23	-	-	-	-	-	-	-
5/30/23	-	-	-	-	-	-	-
5/31/23	-	-	-	-	-	-	-
<b>Minimum</b>			8.62	593	593		
<b>Maximum</b>			8.62	593	593	NA	
<b>Average</b>			8.62	593	593	0	

**Notes:**

- $\mu\text{S}/\text{cm}$  - microsiemens per Centimeter at 25 degrees Celsius
- mg/L - milligrams per liter or parts per million
- NA - Not analyzed
- italic font denotes preliminary results*

**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 ( $\mu$ 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
5/1/23	-	-	-	-	-	-	-
5/2/23	-	-	-	-	-	-	-
5/3/23	-	-	-	-	-	-	-
5/4/23	-	-	-	-	-	-	-
5/5/23	-	-	-	-	-	-	-
5/6/23	-	-	-	-	-	-	-
5/7/23	-	-	-	-	-	-	-
5/8/23	-	-	-	-	-	-	-
5/9/23	-	-	-	-	-	-	-
5/10/23	-	-	-	-	-	-	-
5/11/23	-	-	-	-	-	-	-
5/12/23	-	-	-	-	-	-	-
5/13/23	-	-	-	-	-	-	-
5/14/23	-	-	-	-	-	-	-
5/15/23	10:10:00 AM	-	8.27	333	333	54	1
5/16/23	-	-	-	-	-	-	-
5/17/23	-	-	-	-	-	-	-
5/18/23	-	-	-	-	-	-	-
5/19/23	-	-	-	-	-	-	-
5/20/23	-	-	-	-	-	-	-
5/21/23	-	-	-	-	-	-	-
5/22/23	-	-	-	-	-	-	-
5/23/23	7:40:00 AM	-	8.45	461	461	NA	1
5/24/23	-	-	-	-	-	-	-
5/25/23	-	-	-	-	-	-	-
5/26/23	-	-	-	-	-	-	-
5/27/23	-	-	-	-	-	-	-
5/28/23	-	-	-	-	-	-	-
5/29/23	-	-	-	-	-	-	-
5/30/23	-	-	-	-	-	-	-
5/31/23	-	-	-	-	-	-	-
<b>Minimum</b>		0	8.27	333	333	54	
<b>Maximum</b>		0	8.45	461	461	54	
<b>Average</b>			8.36	397	397	54	

**Notes:**

$\mu$ 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 results*

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

<b>Date</b>	<b>Time</b>	<b>Specific Conductance USGS Gage (<math>\mu</math>S/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>
5/1/23	-	-	-	-	-	-	-
5/2/23	-	-	-	-	-	-	-
5/3/23	-	-	-	-	-	-	-
5/4/23	-	-	-	-	-	-	-
5/5/23	-	-	-	-	-	-	-
5/6/23	-	-	-	-	-	-	-
5/7/23	-	-	-	-	-	-	-
5/8/23	-	-	-	-	-	-	-
5/9/23	-	-	-	-	-	-	-
5/10/23	-	-	-	-	-	-	-
5/11/23	-	-	-	-	-	-	-
5/12/23	-	-	-	-	-	-	-
5/13/23	-	-	-	-	-	-	-
5/14/23	-	-	-	-	-	-	-
5/15/23	-	-	-	-	-	-	-
5/16/23	-	-	-	-	-	-	-
5/17/23	-	-	-	-	-	-	-
5/18/23	-	-	-	-	-	-	-
5/19/23	-	-	-	-	-	-	-
5/20/23	-	-	-	-	-	-	-
5/21/23	-	-	-	-	-	-	-
5/22/23	-	-	-	-	-	-	-
5/23/23	-	-	-	-	-	-	-
5/24/23	-	-	-	-	-	-	-
5/25/23	-	-	-	-	-	-	-
5/26/23	-	-	-	-	-	-	-
5/27/23	-	-	-	-	-	-	-
5/28/23	-	-	-	-	-	-	-
5/29/23	-	-	-	-	-	-	-
5/30/23	-	-	-	-	-	-	-
5/31/23	-	-	-	-	-	-	-
<b>Minimum</b>		NA	NA	NA	NA	NA	
<b>Maximum</b>		NA	NA	NA	NA	NA	
<b>Average</b>		NA	NA	NA	NA	NA	

**Notes:**

$\mu$ S/cm - microsiemens per Centimeter at 25 degrees Celsius

mg/L - milligrams per liter or parts per million

NA - Not analyzed

*italic font denotes preliminary results*

**Sheyenne River Downstream of Both Outlets 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
5/1/23	-	-	-	-	-	-	-
5/2/23	-	-	-	-	-	-	-
5/3/23	-	-	-	-	-	-	-
5/4/23	-	-	-	-	-	-	-
5/5/23	-	-	-	-	-	-	-
5/6/23	-	-	-	-	-	-	-
5/7/23	-	-	-	-	-	-	-
5/8/23	-	-	-	-	-	-	-
5/9/23	-	-	-	-	-	-	-
5/10/23	-	-	-	-	-	-	-
5/11/23	-	-	-	-	-	-	-
5/12/23	-	-	-	-	-	-	-
5/13/23	-	-	-	-	-	-	-
5/14/23	-	-	-	-	-	-	-
5/15/23	12:00:00 PM	-	8.29	305	305	49	1
5/16/23	-	-	-	-	-	-	-
5/17/23	-	-	-	-	-	-	-
5/18/23	-	-	-	-	-	-	-
5/19/23	-	-	-	-	-	-	-
5/20/23	-	-	-	-	-	-	-
5/21/23	-	-	-	-	-	-	-
5/22/23	-	-	-	-	-	-	-
5/23/23	9:40:00 AM	-	8.39	338	338	NA	1
5/24/23	-	-	-	-	-	-	-
5/25/23	-	-	-	-	-	-	-
5/26/23	-	-	-	-	-	-	-
5/27/23	-	-	-	-	-	-	-
5/28/23	-	-	-	-	-	-	-
5/29/23	-	-	-	-	-	-	-
5/30/23	-	-	-	-	-	-	-
5/31/23	-	-	-	-	-	-	-
<b>Minimum</b>			8.29	305	305	49	
<b>Maximum</b>			8.39	338	338	49	
<b>Average</b>			8.34	322	322	49	

**Notes:**

µS/cm - microsiemens per Centimeter at 25 degrees Celsius

mg/L - milligrams per liter or parts per million

NA - Not analyzed

*italic font denotes preliminary results*

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

**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
5/1/23	-	-	-	-	-	-	-
5/2/23	-	-	-	-	-	-	-
5/3/23	-	-	-	-	-	-	-
5/4/23	-	-	-	-	-	-	-
5/5/23	-	-	-	-	-	-	-
5/6/23	-	-	-	-	-	-	-
5/7/23	-	-	-	-	-	-	-
5/8/23	-	-	-	-	-	-	-
5/9/23	-	-	-	-	-	-	-
5/10/23	-	-	-	-	-	-	-
5/11/23	-	-	-	-	-	-	-
5/12/23	-	-	-	-	-	-	-
5/13/23	-	-	-	-	-	-	-
5/14/23	-	-	-	-	-	-	-
5/15/23	1:00:00 PM	1070	8.26	298	298	90	1
5/16/23	-	-	-	-	-	-	-
5/17/23	-	-	-	-	-	-	-
5/18/23	-	-	-	-	-	-	-
5/19/23	-	-	-	-	-	-	-
5/20/23	-	-	-	-	-	-	-
5/21/23	-	-	-	-	-	-	-
5/22/23	-	-	-	-	-	-	-
5/23/23	10:30:00 AM	1180	8.4	313	313	NA	1
5/24/23	-	-	-	-	-	-	-
5/25/23	-	-	-	-	-	-	-
5/26/23	-	-	-	-	-	-	-
5/27/23	-	-	-	-	-	-	-
5/28/23	-	-	-	-	-	-	-
5/29/23	-	-	-	-	-	-	-
5/30/23	-	-	-	-	-	-	-
5/31/23	-	-	-	-	-	-	-
<b>Minimum</b>		1070	8.26	298	298	90	
<b>Maximum</b>		1180	8.4	313	313	90	
<b>Average</b>		1125	8.33	306	306	90	

**Notes:**

µS/cm - microsiemens per Centimeter at 25 degrees Celsius

mg/L - milligrams per liter or parts per million

NA - Not analyzed

*italic font denotes preliminary results*

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