

September 12, 2024

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

RE: August 2024 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 August 2024 is enclosed. The West End Outlet discharge remained steady at 200 cubic feet per second (cfs) for the entire month. The East End Outlet discharge resumed at 200 cfs on August 2<sup>nd</sup> after being completely shutdown for two days starting on July 31<sup>st</sup> to comply with downstream water quality constraints. The East End Outlet discharge was increased to 275 cfs on August 20<sup>th</sup> and maintained that rate for six days before being reduced back to 200 cfs on August 26<sup>th</sup> to comply with downstream water quality constraints.

The table below summarizes the average discharge rate and total discharge volume for the West and East End Outlets in August.

	Average Discharge Rate (cfs)	Total Discharge Volume (acre-feet)
<b>West End Outlet</b>	210	12,885
<b>East End Outlet</b>	203	12,460
<b>Combined Total Discharge Volume (acre-ft)</b>		25,345

The attached figures and tables contain daily outlet discharges measured from the flow meters 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.

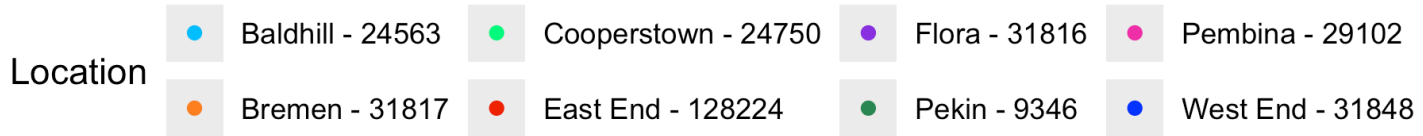
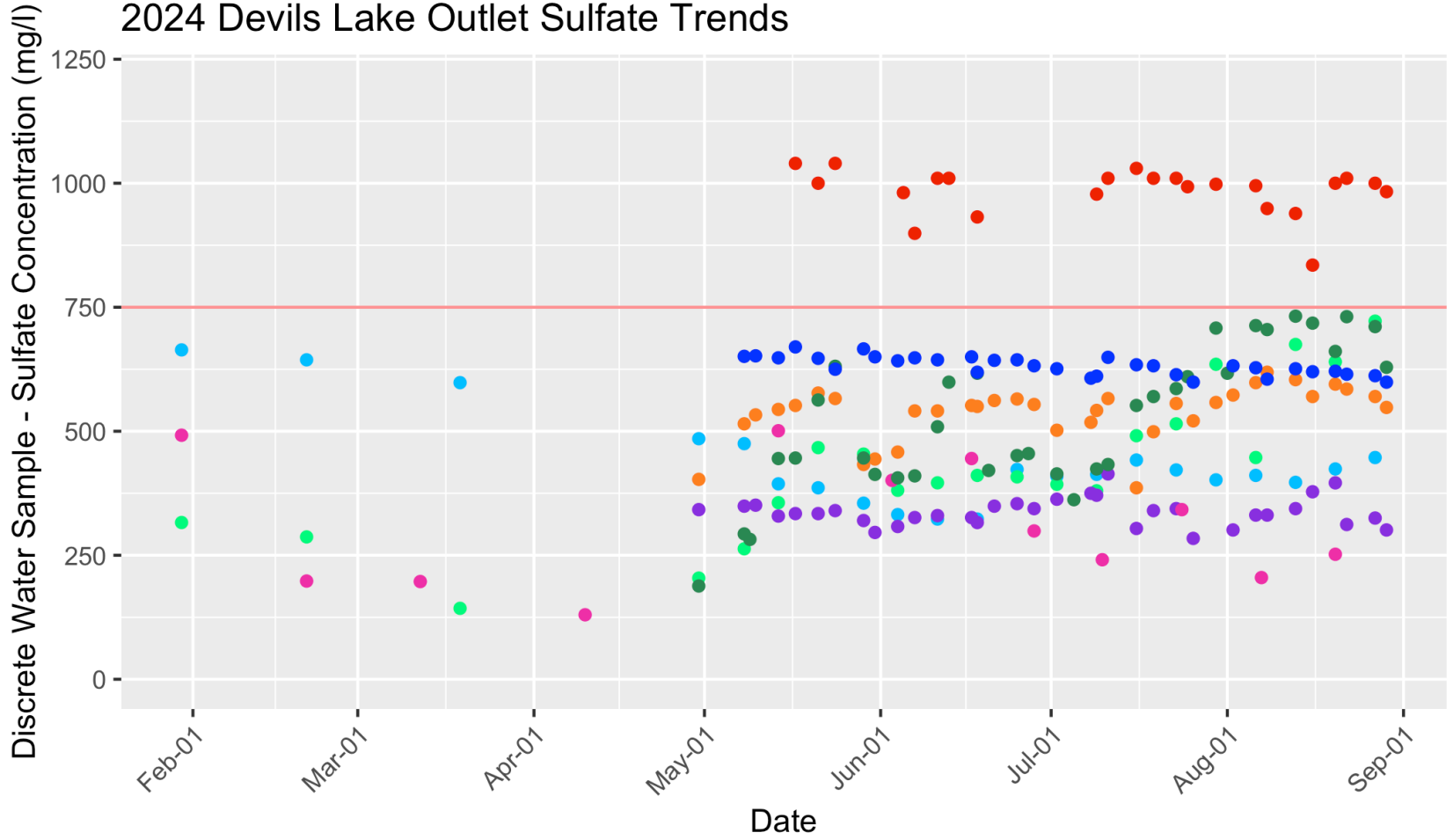
If you have any questions, please contact me at (701) 328-9049.

Sincerely,



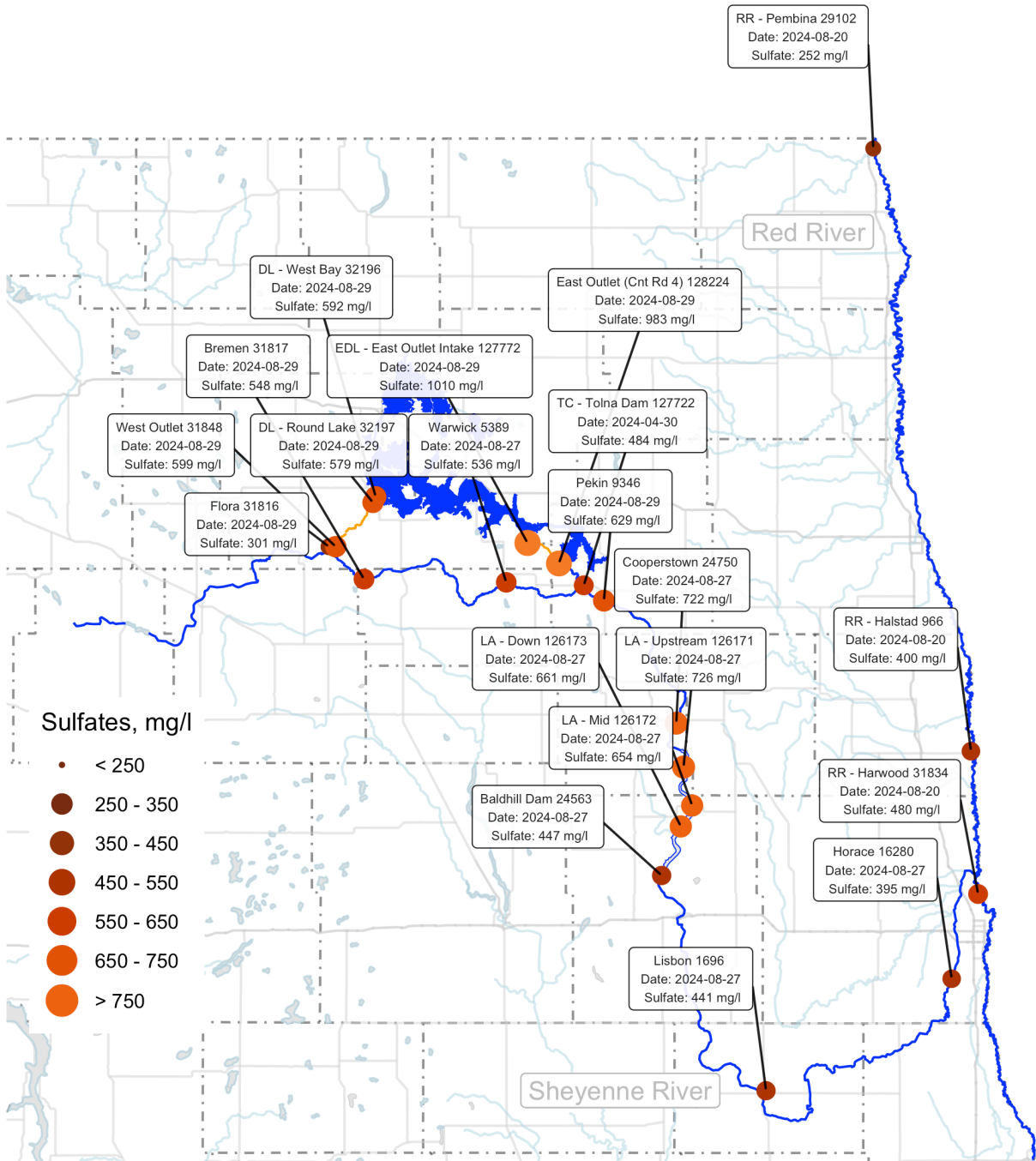
Yaping Chi, P.E.  
 Water Resource Engineer, Water Development Division  
 YC:/416-10  
 Enclosure

# 2024 Devils Lake Outlet Sulfate Trends



# Devils Lake Outlet Operations Sulfate Concentrations

8/31/24



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
8/1/24	8/31/24

LOCATION: Benson Co, ND

**Devils Lake West Outlet                      12885                      ac-ft over                      31                      Days**

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.65	8.84	8.74	SU	2 X Week	GRAB
SULFATE	599	632	618	mg/l	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	606	632	620	mg/L	Average	GRAB
OUTLET DISCHARGE	202	214	210	cfs	Continuous	Recorder
SIGNATURE	<i>Yaping Chi</i>			9/12/24	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
8/1/24	8/31/24

LOCATION: Ramsey, Benson, Nelson Co, ND

**Devils Lake East Outlet                      12460                      ac-ft over                      31                      Days**

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.45	8.8	8.69	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	2990	3040	3015	µS/cm	Continuous	Recorder
SULFATE	835	1010	964	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	887	1005	965	mg/l	Average	GRAB
OUTLET DISCHARGE	0	291	203	cfs	Continuous	Recorder
SIGNATURE	<i>Yaping Chi</i>			9/12/24	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

LOCATION: Benson, ND

MONITORING PERIOD	
START DATE	END DATE
8/1/24	8/31/24

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.2	8.42	8.29	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	1150	1480	1369	µS/cm	Continuous	Recorder
SULFATE	301	396	335	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	301	387	336	mg/l	Average	GRAB
FLOW, INSTREAM	22	99	41	cfs	Continuous	Recorder
SIGNATURE	<i>Yaping Chi</i>			9/12/24	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

LOCATION: Eddy Co, ND

MONITORING PERIOD	
START DATE	END DATE
8/1/24	8/31/24

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.55	8.74	8.64	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	1810	1980	1927	µS/cm	Continuous	Recorder
SULFATE	548	619	585	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	559	612	586	mg/l	Average	GRAB
FLOW, INSTREAM	195	302	254	cfs	Continuous	Recorder
SIGNATURE	<i>Yaping Chi</i>			9/12/24	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
8/1/24	8/31/24

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.4	8.62	8.52	SU	2 X Week	GRAB
SULFATE	617	732	691	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	617	725	690	mg/L	Average	GRAB
FLOW, INSTREAM	NA	NA	NA	cfs	Continuous	Recorder
SIGNATURE	<i>Yaping Chi</i>			9/12/24	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
8/1/24	8/31/24

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.5	8.56	8.54	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	2070	2310	2200	µS/cm	Continuous	Recorder
SULFATE	447	722	621	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	447	722	621	mg/l	Average	GRAB
FLOW, INSTREAM	314	646	540	cfs	Continuous	Recorder
SIGNATURE	<i>Yaping Chi</i>			9/12/24	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

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)
8/1/2024	30	1340	206	17799000	195	1920	0	0	2	2770	646	2240	206	17799000
8/2/2024	27	1350	205	17677000	243	1960	127	10968000	96.9	3010	628	2260	332	28645000
8/3/2024	26	1360	210	18179000	247	1980	219	18921000	227	3010	521	2240	429	37100000
8/4/2024	25	1370	213	18373000	245	1990	215	18610000	220	2990	350	2220	428	36983000
8/5/2024	25	1370	212	18337000	248	1990	216	18644000	221	2990	314	2060	428	36981000
8/6/2024	25	1400	212	18343000	243	1980	217	18736000	223	3000	411	2070	429	37079000
8/7/2024	24	1410	213	18420000	243	1970	213	18380000	224	3010	466	2260	426	36800000
8/8/2024	22	1430	213	18398000	236	1970	180	15582000	186	3030	483	2250	393	33980000
8/9/2024	22	1450	207	17847000	232	1980	157	13587000	158	3070	490	2280	364	31434000
8/10/2024	23	1450	213	18385000	231	1980	148	12770000	215	3050	491	2290	361	31155000
8/11/2024	23	1460	213	18373000	233	1970	211	18227000	215	3040	466	2290	424	36600000
8/12/2024	22	1460	214	18493000	231	1980	211	18255000	216	3030	446	2290	425	36748000
8/13/2024	22	1480	213	18433000	231	1980	211	18233000	215	3040	463	2310	424	36666000
8/14/2024	25	1470	212	18334000	242	2000	216	18665000	229	2970	467	2330	428	36999000
8/15/2024	31	1450	210	18178000	263	1930	183	15789000	218	2920	482	2310	393	33967000
8/16/2024	39	1460	208	18005000	286	1870	137	11879000	124	3000	528	2270	346	29884000
8/17/2024	41	1420	214	18510000	282	1860	211	18230000	217	3020	560	2230	425	36740000
8/18/2024	35	1430	214	18483000	270	1880	211	18255000	213	3020	564	2250	425	36738000
8/19/2024	33	1450	214	18477000	253	1920	216	18628000	222	3000	573	2240	429	37105000
8/20/2024	30	1440	211	18225000	244	1980	249	21540000	248	3020	623	2120	460	39765000
8/21/2024	28	1440	204	17608000	233	2000	291	25172000	339	3010	633	2110	495	42780000
8/22/2024	48	1430	202	17430000	251	1960	286	24693000	334	3030	622	2070	488	42123000
8/23/2024	81	1300	204	17589000	275	1820	276	23825000	315	3040	606	2100	479	41414000
8/24/2024	85	1290	209	18019000	300	1770	264	22843000	292	3010	613	2240	473	40862000
8/25/2024	68	1200	208	17960000	288	1750	291	25160000	341	3020	615	2300	499	43120000
8/26/2024	56	1180	208	17966000	265	1800	222	19166000	268	3010	605	2310	430	37132000
8/27/2024	50	1150	208	17995000	252	1810	161	13925000	160	3010	601	2300	369	31920000
8/28/2024	47	1180	209	18020000	247	1840	157	13552000	152	3000	618	2300	365	31572000
8/29/2024	66	1180	206	17832000	282	1830	194	16747000	221	2990	646	2290	400	34579000
8/30/2024	91	1100	203	17580000	294	1780	185	16008000	182	2960	635	2110	389	33588000
8/31/2024	99	1110	208	17998000	302	1710	206	17764000	211	2910	584	2080	414	35762000

<b>Minimum</b>	22	1100	202	17430000	195	1710	0	0	2	2770	314	2060	202	17430000
<b>Maximum</b>	99	1480	214	18510000	302	2000	291	25172000	341	3070	646	2330	506	43682000
<b>Average</b>	41	1313	210	18105355	254	1849	203	17508194	216	2906	540	2157	412	35613548
			<b>Total (Mgal)</b>	4198			<b>Total (Mgal)</b>	4060					<b>Total (Mgal)</b>	8258
			<b>Total (Ac-ft)</b>	12885			<b>Total (Ac-ft)</b>	12460					<b>Total (Ac-ft)</b>	25345

**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

**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
8/1/24	-	-	-	-	-	-	-
8/2/24	8:45:00	1350	8.23	301	301	NA	1
8/3/24	-	-	-	-	-	-	-
8/4/24	-	-	-	-	-	-	-
8/5/24	-	-	-	-	-	-	-
8/6/24	8:15:00	1400	8.33	331	316	19	2
8/7/24	-	-	-	-	-	-	-
8/8/24	12:40:00	1430	8.39	331	331	NA	2
8/9/24	-	-	-	-	-	-	-
8/10/24	-	-	-	-	-	-	-
8/11/24	-	-	-	-	-	-	-
8/12/24	-	-	-	-	-	-	-
8/13/24	8:10:00	1480	8.42	344	338	NA	2
8/14/24	-	-	-	-	-	-	-
8/15/24	-	-	-	-	-	-	-
8/16/24	8:00:00	1460	8.26	378	361	NA	2
8/17/24	-	-	-	-	-	-	-
8/18/24	-	-	-	-	-	-	-
8/19/24	-	-	-	-	-	-	-
8/20/24	8:05:00	1440	8.29	396	387	NA	2
8/21/24	-	-	-	-	-	-	-
8/22/24	8:30:00	1430	8.21	312	354	NA	2
8/23/24	-	-	-	-	-	-	-
8/24/24	-	-	-	-	-	-	-
8/25/24	-	-	-	-	-	-	-
8/26/24	-	-	-	-	-	-	-
8/27/24	8:00:00	1150	8.26	325	319	NA	2
8/28/24	-	-	-	-	-	-	-
8/29/24	8:40:00	1180	8.2	301	313	NA	2
8/30/24	-	-	-	-	-	-	-
8/31/24	-	-	-	-	-	-	-
<b>Minimum</b>		1150	8.2	301	301	19	
<b>Maximum</b>		1480	8.42	396	387	19	
<b>Average</b>		1369	8.29	335	336	19	

**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

**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
8/1/24	-	-	-	-	-	-	-
8/2/24	8:30:00	-	8.73	632	632	NA	1
8/3/24	-	-	-	-	-	-	-
8/4/24	-	-	-	-	-	-	-
8/5/24	-	-	-	-	-	-	-
8/6/24	8:30:00	-	8.65	628	630	13	2
8/7/24	-	-	-	-	-	-	-
8/8/24	12:50:00	-	8.75	605	617	NA	2
8/9/24	-	-	-	-	-	-	-
8/10/24	-	-	-	-	-	-	-
8/11/24	-	-	-	-	-	-	-
8/12/24	-	-	-	-	-	-	-
8/13/24	8:25:00	-	8.77	626	616	NA	2
8/14/24	-	-	-	-	-	-	-
8/15/24	-	-	-	-	-	-	-
8/16/24	7:50:00	-	8.69	620	623	NA	2
8/17/24	-	-	-	-	-	-	-
8/18/24	-	-	-	-	-	-	-
8/19/24	-	-	-	-	-	-	-
8/20/24	8:15:00	-	8.8	621	621	NA	2
8/21/24	-	-	-	-	-	-	-
8/22/24	8:15:00	-	8.73	615	618	NA	2
8/23/24	-	-	-	-	-	-	-
8/24/24	-	-	-	-	-	-	-
8/25/24	-	-	-	-	-	-	-
8/26/24	-	-	-	-	-	-	-
8/27/24	8:15:00	-	8.73	612	614	NA	2
8/28/24	-	-	-	-	-	-	-
8/29/24	8:30:00	-	8.84	599	606	NA	2
8/30/24	-	-	-	-	-	-	-
8/31/24	-	-	-	-	-	-	-
<b>Minimum</b>			8.65	599	606	13	
<b>Maximum</b>			8.84	632	632	13	
<b>Average</b>			8.74	618	620	13	

**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 ( $\mu$ 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
8/1/24	-	-	-	-	-	-	-
8/2/24	9:05:00	1960	8.59	573	573	NA	1
8/3/24	-	-	-	-	-	-	-
8/4/24	-	-	-	-	-	-	-
8/5/24	-	-	-	-	-	-	-
8/6/24	7:45:00	1980	8.64	598	586	41	2
8/7/24	-	-	-	-	-	-	-
8/8/24	12:20:00	1970	8.74	619	609	NA	2
8/9/24	-	-	-	-	-	-	-
8/10/24	-	-	-	-	-	-	-
8/11/24	-	-	-	-	-	-	-
8/12/24	-	-	-	-	-	-	-
8/13/24	7:40:00	1980	8.64	604	612	NA	2
8/14/24	-	-	-	-	-	-	-
8/15/24	-	-	-	-	-	-	-
8/16/24	8:20:00	1870	8.62	570	587	NA	2
8/17/24	-	-	-	-	-	-	-
8/18/24	-	-	-	-	-	-	-
8/19/24	-	-	-	-	-	-	-
8/20/24	7:37:00	1980	8.64	595	583	NA	2
8/21/24	-	-	-	-	-	-	-
8/22/24	8:55:00	1960	8.69	585	590	NA	2
8/23/24	-	-	-	-	-	-	-
8/24/24	-	-	-	-	-	-	-
8/25/24	-	-	-	-	-	-	-
8/26/24	-	-	-	-	-	-	-
8/27/24	7:36:00	1810	8.55	570	578	NA	2
8/28/24	-	-	-	-	-	-	-
8/29/24	9:00:00	1830	8.63	548	559	NA	2
8/30/24	-	-	-	-	-	-	-
8/31/24	-	-	-	-	-	-	-
<b>Minimum</b>		1810	8.55	548	559	41	
<b>Maximum</b>		1980	8.74	619	612	41	
<b>Average</b>		1927	8.64	585	586	41	

**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

**East End Outlet  
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
8/1/24	-	-	-	-	-	-	-
8/2/24	-	-	-	-	-	-	-
8/3/24	-	-	-	-	-	-	-
8/4/24	-	-	-	-	-	-	-
8/5/24	-	-	-	-	-	-	-
8/6/24	9:50:00	3000	8.75	995	995	8	1
8/7/24	-	-	-	-	-	-	-
8/8/24	11:00:00	3030	8.8	949	972	NA	2
8/9/24	-	-	-	-	-	-	-
8/10/24	-	-	-	-	-	-	-
8/11/24	-	-	-	-	-	-	-
8/12/24	-	-	-	-	-	-	-
8/13/24	9:35:00	3040	8.69	939	944	NA	2
8/14/24	-	-	-	-	-	-	-
8/15/24	-	-	-	-	-	-	-
8/16/24	9:45:00	3000	8.45	835	887	NA	2
8/17/24	-	-	-	-	-	-	-
8/18/24	-	-	-	-	-	-	-
8/19/24	-	-	-	-	-	-	-
8/20/24	9:30:00	3020	8.66	1000	918	NA	2
8/21/24	-	-	-	-	-	-	-
8/22/24	10:55:00	3030	8.7	1010	1005	NA	2
8/23/24	-	-	-	-	-	-	-
8/24/24	-	-	-	-	-	-	-
8/25/24	-	-	-	-	-	-	-
8/26/24	-	-	-	-	-	-	-
8/27/24	9:25:00	3010	8.7	1000	1005	NA	2
8/28/24	-	-	-	-	-	-	-
8/29/24	10:10:00	2990	8.74	983	992	NA	2
8/30/24	-	-	-	-	-	-	-
8/31/24	-	-	-	-	-	-	-
<b>Minimum</b>		2990	8.45	835	887	8	
<b>Maximum</b>		3040	8.8	1010	1005	8	
<b>Average</b>		3015	8.69	964	965	8	

**Notes:**

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USGS data are provisional and subject to revision

**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
8/1/24	11:50:00	-	8.4	617	617	NA	1
8/2/24	-	-	-	-	-	-	-
8/3/24	-	-	-	-	-	-	-
8/4/24	-	-	-	-	-	-	-
8/5/24	-	-	-	-	-	-	-
8/6/24	10:15:00	-	8.49	713	665	46	2
8/7/24	-	-	-	-	-	-	-
8/8/24	11:25:00	-	8.49	705	709	NA	2
8/9/24	-	-	-	-	-	-	-
8/10/24	-	-	-	-	-	-	-
8/11/24	-	-	-	-	-	-	-
8/12/24	-	-	-	-	-	-	-
8/13/24	10:05:00	-	8.62	732	719	NA	2
8/14/24	-	-	-	-	-	-	-
8/15/24	-	-	-	-	-	-	-
8/16/24	10:15:00	-	8.53	718	725	NA	2
8/17/24	-	-	-	-	-	-	-
8/18/24	-	-	-	-	-	-	-
8/19/24	-	-	-	-	-	-	-
8/20/24	9:55:00	-	8.51	661	690	NA	2
8/21/24	-	-	-	-	-	-	-
8/22/24	11:15:00	-	8.53	<b>731</b>	696	NA	2
8/23/24	-	-	-	-	-	-	-
8/24/24	-	-	-	-	-	-	-
8/25/24	-	-	-	-	-	-	-
8/26/24	-	-	-	-	-	-	-
8/27/24	9:55:00	-	8.56	711	721	NA	2
8/28/24	-	-	-	-	-	-	-
8/29/24	10:30:00	-	8.53	629	<b>670</b>	NA	2
8/30/24	-	-	-	-	-	-	-
8/31/24	-	-	-	-	-	-	-
<b>Minimum</b>			8.4	617	617	46	
<b>Maximum</b>			8.62	732	725	46	
<b>Average</b>			8.52	691	690	46	

**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 Both Outlets Near Cooperstown**  
**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
8/1/24	-	-	-	-	-	-	-
8/2/24	-	-	-	-	-	-	-
8/3/24	-	-	-	-	-	-	-
8/4/24	-	-	-	-	-	-	-
8/5/24	-	-	-	-	-	-	-
8/6/24	11:15:00	2070	8.5	447	447	93	1
8/7/24	-	-	-	-	-	-	-
8/8/24	-	-	-	-	-	-	-
8/9/24	-	-	-	-	-	-	-
8/10/24	-	-	-	-	-	-	-
8/11/24	-	-	-	-	-	-	-
8/12/24	-	-	-	-	-	-	-
8/13/24	10:55:00	2310	8.56	675	675	NA	1
8/14/24	-	-	-	-	-	-	-
8/15/24	-	-	-	-	-	-	-
8/16/24	-	-	-	-	-	-	-
8/17/24	-	-	-	-	-	-	-
8/18/24	-	-	-	-	-	-	-
8/19/24	-	-	-	-	-	-	-
8/20/24	10:50:00	2120	8.55	640	640	NA	1
8/21/24	-	-	-	-	-	-	-
8/22/24	-	-	-	-	-	-	-
8/23/24	-	-	-	-	-	-	-
8/24/24	-	-	-	-	-	-	-
8/25/24	-	-	-	-	-	-	-
8/26/24	-	-	-	-	-	-	-
8/27/24	10:45:00	2300	8.54	722	722	NA	1
8/28/24	-	-	-	-	-	-	-
8/29/24	-	-	-	-	-	-	-
8/30/24	-	-	-	-	-	-	-
8/31/24	-	-	-	-	-	-	-
<b>Minimum</b>		2070	8.5	447	447	93	
<b>Maximum</b>		2310	8.56	722	722	93	
<b>Average</b>		2200	8.54	621	621	93	

**Notes:**

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