

October 14, 2024

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

RE: September 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 September 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 reduced from 200 cfs to 125 cfs on September 23rd to comply with downstream water quality constraints. The East End Outlet was completely shut down on September 30th for screen cleaning, which was necessary due to debris carried in by the strong winds. The discharge from the East End Outlet was resumed at 125 cfs on October 1, 2024.

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

	Average Discharge Rate (cfs)	Total Discharge Volume (acre-feet)
West End Outlet	207	12,298
East End Outlet	180	10,708
Combined Total Discharge Volume (acre-ft)		23,006

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.

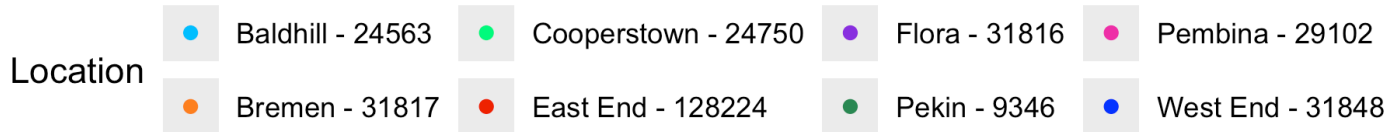
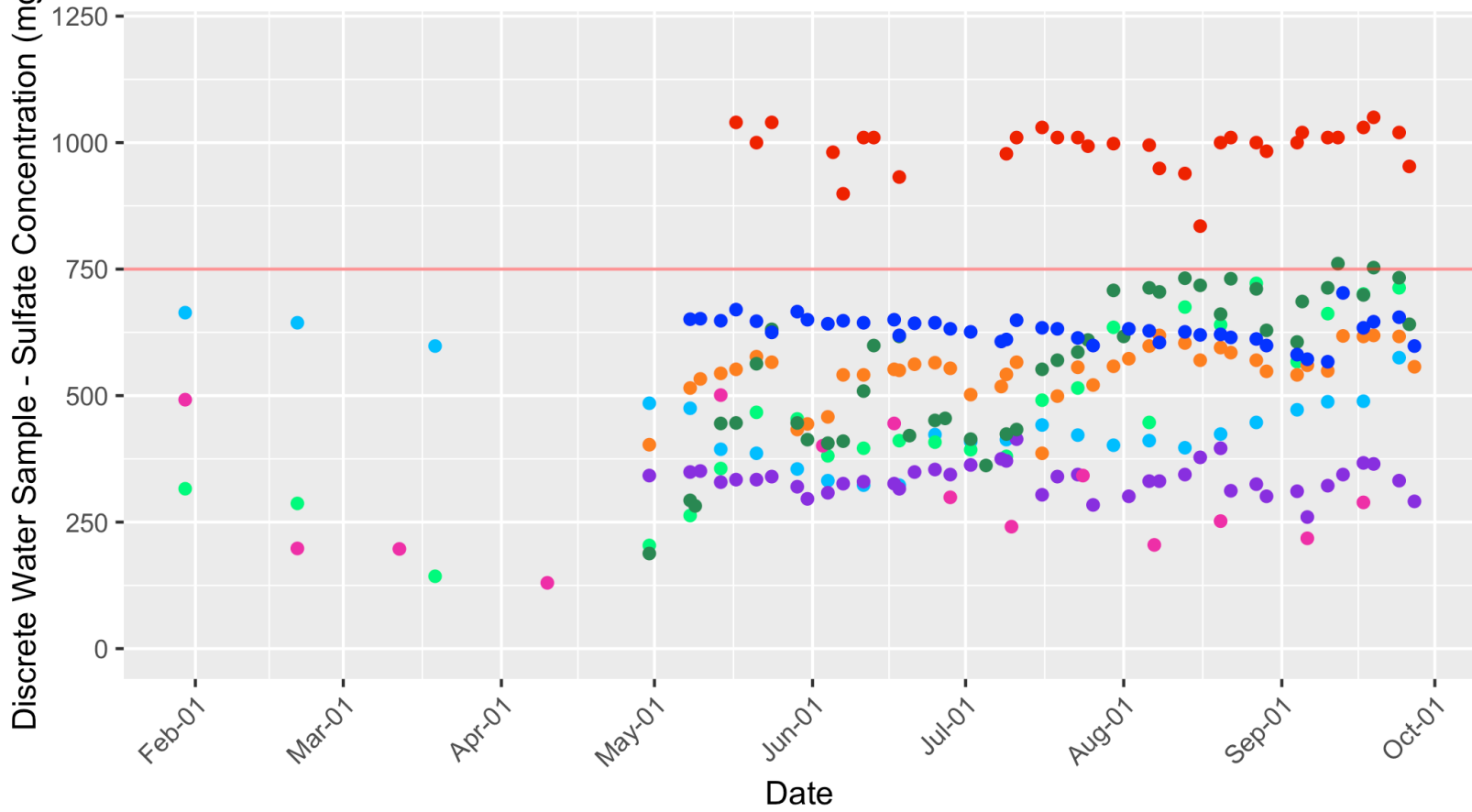
If you have any questions, please contact me at (701) 328-9049.

Sincerely,



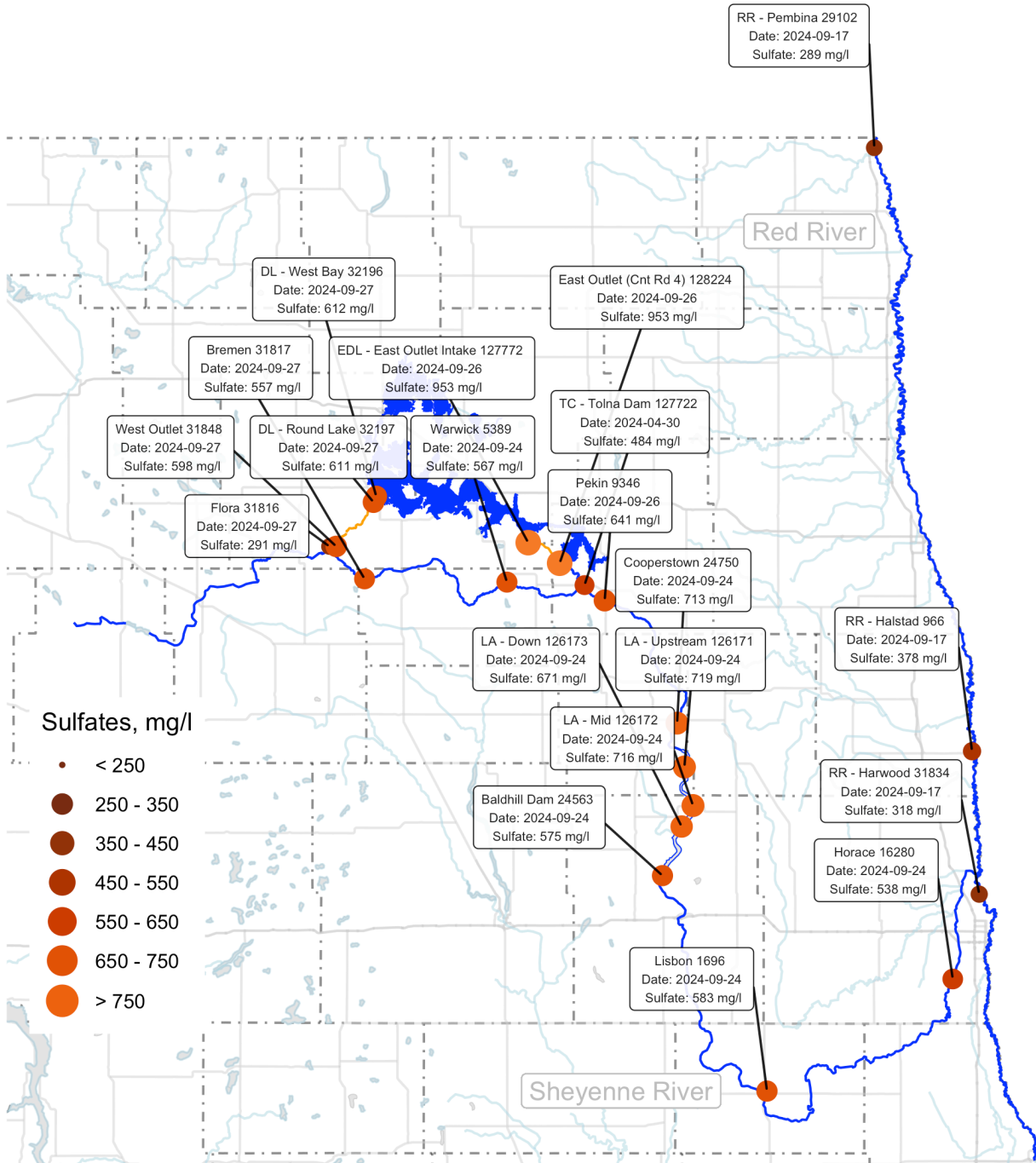
Yaping Chi, P.E.
Water Resource Engineer, Water Development Division
YC:/416-10
Enclosure

2024 Devils Lake Outlet Sulfate Trends



Devils Lake Outlet Operations Sulfate Concentrations

9/30/24



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
9/1/24	9/30/24

LOCATION: Benson Co, ND

Devils Lake West Outlet 12298 ac-ft over 30 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.68	8.86	8.77	SU	2 X Week	GRAB
SULFATE	567	703	620	mg/l	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	570	669	619	mg/L	Average	GRAB
OUTLET DISCHARGE	186	215	207	cfs	Continuous	Recorder
SIGNATURE	<i>Yaping Chi</i>			10/8/24	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
9/1/24	9/30/24

LOCATION: Ramsey, Benson, Nelson Co, ND

Devils Lake East Outlet 10708 ac-ft over 30 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.66	8.87	8.75	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	2650	3030	2815	µS/cm	Continuous	Recorder
SULFATE	953	1050	1012	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	987	1040	1015	mg/l	Average	GRAB
OUTLET DISCHARGE	64	222	180	cfs	Continuous	Recorder
SIGNATURE	<i>Yaping Chi</i>			10/8/24	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
9/1/24	9/30/24

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.23	8.45	8.34	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	1200	1450	1358	µS/cm	Continuous	Recorder
SULFATE	260	367	324	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	286	366	326	mg/l	Average	GRAB
FLOW, INSTREAM	29	91	48	cfs	Continuous	Recorder
SIGNATURE	<i>Yaping Chi</i>			10/8/24	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
9/1/24	9/30/24

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.56	8.79	8.66	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	1860	2000	1938	µS/cm	Continuous	Recorder
SULFATE	541	619	585	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	541	618	584	mg/l	Average	GRAB
FLOW, INSTREAM	210	295	230	cfs	Continuous	Recorder
SIGNATURE	<i>Yaping Chi</i>			10/8/24	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
9/1/24	9/30/24

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.5	8.62	8.56	SU	2 X Week	GRAB
SULFATE	606	761	699	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	606	743	697	mg/L	Average	GRAB
FLOW, INSTREAM	NA	NA	NA	cfs	Continuous	Recorder
SIGNATURE	<i>Yaping Chi</i>			10/8/24	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
9/1/24	9/30/24

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.46	8.53	8.5	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	1980	2260	2168	µS/cm	Continuous	Recorder
SULFATE	567	713	661	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	567	713	661	mg/l	Average	GRAB
FLOW, INSTREAM	424	651	524	cfs	Continuous	Recorder
SIGNATURE	<i>Yaping Chi</i>			10/8/24	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)
9/1/2024	91	1190	209	18035000	295	1700	156	13472000	156	2870	589	2140	365	31507000
9/2/2024	77	1190	206	17817000	278	1740	193	16696000	199	2980	621	2130	399	34513000
9/3/2024	71	-	205	17719000	265	1840	214	18522000	221	2980	651	2040	419	36241000
9/4/2024	65	1230	208	18008000	254	1860	191	16513000	216	3030	628	1980	400	34521000
9/5/2024	57	1180	207	17926000	245	1880	210	18171000	217	3000	611	1980	418	36097000
9/6/2024	49	1200	203	17558000	235	1890	205	17731000	210	-	600	2070	408	35289000
9/7/2024	45	1280	207	17898000	227	1910	199	17182000	218	3020	578	2120	406	35080000
9/8/2024	40	1310	208	17944000	223	1930	141	12188000	136	2970	556	2120	349	30132000
9/9/2024	38	1340	209	18024000	220	1960	192	16560000	186	2830	537	2140	400	34584000
9/10/2024	35	1370	215	18570000	218	1970	217	18741000	228	2740	511	2180	432	37311000
9/11/2024	33	1390	215	18551000	219	1990	212	18353000	219	2710	472	2200	427	36904000
9/12/2024	32	1410	213	18385000	219	1990	203	17548000	216	2680	474	2180	416	35933000
9/13/2024	29	1420	207	17876000	217	2000	188	16260000	191	2660	495	2260	395	34136000
9/14/2024	30	1450	212	18315000	213	1990	211	18237000	224	2640	501	2270	423	36552000
9/15/2024	29	1470	208	17968000	212	1990	206	17775000	209	2640	502	2270	414	35743000
9/16/2024	30	1470	203	17575000	210	1980	212	18297000	218	2620	521	2280	415	35872000
9/17/2024	34	1450	204	17634000	211	1980	222	19204000	234	2660	554	2250	426	36838000
9/18/2024	44	1440	213	18431000	226	1960	218	18872000	230	2620	547	2210	432	37303000
9/19/2024	45	1420	212	18330000	230	1960	213	18407000	224	2650	530	2180	425	36737000
9/20/2024	41	1400	203	17571000	224	1960	211	18265000	216	2680	527	2210	415	35836000
9/21/2024	42	1390	208	17941000	218	1950	186	16075000	212	2720	523	2260	394	34016000
9/22/2024	47	1390	206	17811000	221	1950	144	12408000	130	2750	518	2270	350	30219000
9/23/2024	47	1370	205	17681000	224	1950	168	14525000	185	2800	517	2270	373	32206000
9/24/2024	52	1370	209	18073000	227	1940	136	11754000	133	2830	497	2260	345	29827000
9/25/2024	56	1380	206	17799000	230	1920	133	11481000	131	2850	468	2260	339	29280000
9/26/2024	59	1390	208	17984000	235	1910	139	11997000	136	2930	468	2260	347	29981000
9/27/2024	57	1400	202	17453000	237	1900	132	11375000	129	2860	444	2270	334	28828000
9/28/2024	55	1410	206	17785000	232	1900	137	11821000	132	2870	433	2200	343	29606000
9/29/2024	55	1430	197	16989000	232	1910	145	12518000	141	2780	430	2170	342	29507000
9/30/2024	47	1440	186	16071000	214	1910	64	5503000	70	2800	424	2160	250	21574000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Minimum	29	1180	186	16071000	210	1700	64	5503000	70	2620	424	1980	250	21574000
Maximum	91	1470	215	18570000	295	2000	222	19204000	234	3030	651	2280	437	37774000
Average	48	1319	207	17857400	230	1862	180	15548367	186	2706	524	2116	387	33405767
			Total (Mgal)	4007			Total (Mgal)	3489					Total (Mgal)	7496
			Total (Ac-ft)	12298			Total (Ac-ft)	10708					Total (Ac-ft)	23006

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 (μ 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
9/1/24	-	-	-	-	-	-	-
9/2/24	-	-	-	-	-	-	-
9/3/24	-	-	-	-	-	-	-
9/4/24	8:05:00	1230	8.27	311	311	30	1
9/5/24	-	-	-	-	-	-	-
9/6/24	8:40:00	1200	8.23	260	286	NA	2
9/7/24	-	-	-	-	-	-	-
9/8/24	-	-	-	-	-	-	-
9/9/24	-	-	-	-	-	-	-
9/10/24	8:10:00	1370	8.31	322	291	NA	2
9/11/24	-	-	-	-	-	-	-
9/12/24	-	-	-	-	-	-	-
9/13/24	8:40:00	1420	8.3	344	333	NA	2
9/14/24	-	-	-	-	-	-	-
9/15/24	-	-	-	-	-	-	-
9/16/24	-	-	-	-	-	-	-
9/17/24	8:10:00	1450	8.37	367	356	NA	2
9/18/24	-	-	-	-	-	-	-
9/19/24	11:00:00	1420	8.39	365	366	NA	2
9/20/24	-	-	-	-	-	-	-
9/21/24	-	-	-	-	-	-	-
9/22/24	-	-	-	-	-	-	-
9/23/24	-	-	-	-	-	-	-
9/24/24	8:10:00	1370	8.41	332	349	NA	2
9/25/24	-	-	-	-	-	-	-
9/26/24	-	-	-	-	-	-	-
9/27/24	8:40:00	1400	8.45	291	312	NA	2
9/28/24	-	-	-	-	-	-	-
9/29/24	-	-	-	-	-	-	-
9/30/24	-	-	-	-	-	-	-
Minimum		1200	8.23	260	286	30	
Maximum		1450	8.45	367	366	30	
Average		1358	8.34	324	326	30	

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

**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
9/1/24	-	-	-	-	-	-	-
9/2/24	-	-	-	-	-	-	-
9/3/24	-	-	-	-	-	-	-
9/4/24	8:15:00	-	8.78	581	581	16	1
9/5/24	-	-	-	-	-	-	-
9/6/24	8:30:00	-	8.86	572	577	NA	2
9/7/24	-	-	-	-	-	-	-
9/8/24	-	-	-	-	-	-	-
9/9/24	-	-	-	-	-	-	-
9/10/24	8:20:00	-	8.75	567	570	NA	2
9/11/24	-	-	-	-	-	-	-
9/12/24	-	-	-	-	-	-	-
9/13/24	8:25:00	-	8.8	703	635	NA	2
9/14/24	-	-	-	-	-	-	-
9/15/24	-	-	-	-	-	-	-
9/16/24	-	-	-	-	-	-	-
9/17/24	8:20:00	-	8.68	634	669	NA	2
9/18/24	-	-	-	-	-	-	-
9/19/24	11:10:00	-	8.78	646	640	NA	2
9/20/24	-	-	-	-	-	-	-
9/21/24	-	-	-	-	-	-	-
9/22/24	-	-	-	-	-	-	-
9/23/24	-	-	-	-	-	-	-
9/24/24	8:20:00	-	8.68	655	651	NA	2
9/25/24	-	-	-	-	-	-	-
9/26/24	-	-	-	-	-	-	-
9/27/24	8:30:00	-	8.84	598	627	NA	2
9/28/24	-	-	-	-	-	-	-
9/29/24	-	-	-	-	-	-	-
9/30/24	-	-	-	-	-	-	-
Minimum			8.68	567	570	16	
Maximum			8.86	703	669	16	
Average			8.77	620	619	16	

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 (μ 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
9/1/24	-	-	-	-	-	-	-
9/2/24	-	-	-	-	-	-	-
9/3/24	-	-	-	-	-	-	-
9/4/24	7:36:00	1860	8.62	541	541	40	1
9/5/24	-	-	-	-	-	-	-
9/6/24	9:00:00	1890	8.67	560	551	NA	2
9/7/24	-	-	-	-	-	-	-
9/8/24	-	-	-	-	-	-	-
9/9/24	-	-	-	-	-	-	-
9/10/24	7:45:00	1970	8.64	549	555	NA	2
9/11/24	-	-	-	-	-	-	-
9/12/24	-	-	-	-	-	-	-
9/13/24	9:00:00	2000	8.77	618	584	NA	2
9/14/24	-	-	-	-	-	-	-
9/15/24	-	-	-	-	-	-	-
9/16/24	-	-	-	-	-	-	-
9/17/24	7:40:00	1980	8.56	617	618	NA	2
9/18/24	-	-	-	-	-	-	-
9/19/24	10:40:00	1960	8.67	619	618	NA	2
9/20/24	-	-	-	-	-	-	-
9/21/24	-	-	-	-	-	-	-
9/22/24	-	-	-	-	-	-	-
9/23/24	-	-	-	-	-	-	-
9/24/24	7:40:00	1940	8.58	617	618	NA	2
9/25/24	-	-	-	-	-	-	-
9/26/24	-	-	-	-	-	-	-
9/27/24	9:00:00	1900	8.79	557	587	NA	2
9/28/24	-	-	-	-	-	-	-
9/29/24	-	-	-	-	-	-	-
9/30/24	-	-	-	-	-	-	-
Minimum		1860	8.56	541	541	40	
Maximum		2000	8.79	619	618	40	
Average		1938	8.66	585	584	40	

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

**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
9/1/24	-	-	-	-	-	-	-
9/2/24	-	-	-	-	-	-	-
9/3/24	-	-	-	-	-	-	-
9/4/24	9:25:00	3030	8.66	1000	1000	12	1
9/5/24	10:30:00	3000	8.78	1020	1010	NA	2
9/6/24	-	-	-	-	-	-	-
9/7/24	-	-	-	-	-	-	-
9/8/24	-	-	-	-	-	-	-
9/9/24	-	-	-	-	-	-	-
9/10/24	9:35:00	2740	8.7	1010	1015	NA	2
9/11/24	-	-	-	-	-	-	-
9/12/24	11:20:00	2680	8.8	1010	1010	NA	2
9/13/24	-	-	-	-	-	-	-
9/14/24	-	-	-	-	-	-	-
9/15/24	-	-	-	-	-	-	-
9/16/24	-	-	-	-	-	-	-
9/17/24	9:35:00	2660	8.71	1030	1020	NA	2
9/18/24	-	-	-	-	-	-	-
9/19/24	9:20:00	2650	8.78	1050	1040	NA	2
9/20/24	-	-	-	-	-	-	-
9/21/24	-	-	-	-	-	-	-
9/22/24	-	-	-	-	-	-	-
9/23/24	-	-	-	-	-	-	-
9/24/24	9:36:00	2830	8.73	1020	1035	NA	2
9/25/24	-	-	-	-	-	-	-
9/26/24	11:30:00	2930	8.87	953	987	NA	2
9/27/24	-	-	-	-	-	-	-
9/28/24	-	-	-	-	-	-	-
9/29/24	-	-	-	-	-	-	-
9/30/24	-	-	-	-	-	-	-
Minimum		2650	8.66	953	987	12	
Maximum		3030	8.87	1050	1040	12	
Average		2815	8.75	1012	1015	12	

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

**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
9/1/24	-	-	-	-	-	-	-
9/2/24	-	-	-	-	-	-	-
9/3/24	-	-	-	-	-	-	-
9/4/24	9:50:00	-	8.51	606	606	40	1
9/5/24	10:50:00	-	8.6	686	646	NA	2
9/6/24	-	-	-	-	-	-	-
9/7/24	-	-	-	-	-	-	-
9/8/24	-	-	-	-	-	-	-
9/9/24	-	-	-	-	-	-	-
9/10/24	10:00:00	-	8.54	713	700	NA	2
9/11/24	-	-	-	-	-	-	-
9/12/24	11:45:00	-	8.59	761	737	NA	2
9/13/24	-	-	-	-	-	-	-
9/14/24	-	-	-	-	-	-	-
9/15/24	-	-	-	-	-	-	-
9/16/24	-	-	-	-	-	-	-
9/17/24	10:00:00	-	8.52	699	730	NA	2
9/18/24	-	-	-	-	-	-	-
9/19/24	9:40:00	-	8.61	753	726	NA	2
9/20/24	-	-	-	-	-	-	-
9/21/24	-	-	-	-	-	-	-
9/22/24	-	-	-	-	-	-	-
9/23/24	-	-	-	-	-	-	-
9/24/24	10:00:00	-	8.5	733	743	NA	2
9/25/24	-	-	-	-	-	-	-
9/26/24	11:50:00	-	8.62	641	687	NA	2
9/27/24	-	-	-	-	-	-	-
9/28/24	-	-	-	-	-	-	-
9/29/24	-	-	-	-	-	-	-
9/30/24	-	-	-	-	-	-	-
Minimum			8.5	606	606	40	
Maximum			8.62	761	743	40	
Average			8.56	699	697	40	

Notes:

µS/cm - microsiemens per Centimeter at 25 degrees Celsius

mg/L - milligrams per liter or parts per million

NA - Not analyzed

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 (μ 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
9/1/24	-	-	-	-	-	-	-
9/2/24	-	-	-	-	-	-	-
9/3/24	-	-	-	-	-	-	-
9/4/24	10:45:00	1980	8.5	567	567	102	1
9/5/24	-	-	-	-	-	-	-
9/6/24	-	-	-	-	-	-	-
9/7/24	-	-	-	-	-	-	-
9/8/24	-	-	-	-	-	-	-
9/9/24	-	-	-	-	-	-	-
9/10/24	11:00:00	2180	8.53	662	662	NA	1
9/11/24	-	-	-	-	-	-	-
9/12/24	-	-	-	-	-	-	-
9/13/24	-	-	-	-	-	-	-
9/14/24	-	-	-	-	-	-	-
9/15/24	-	-	-	-	-	-	-
9/16/24	-	-	-	-	-	-	-
9/17/24	11:00:00	2250	8.52	701	701	NA	1
9/18/24	-	-	-	-	-	-	-
9/19/24	-	-	-	-	-	-	-
9/20/24	-	-	-	-	-	-	-
9/21/24	-	-	-	-	-	-	-
9/22/24	-	-	-	-	-	-	-
9/23/24	-	-	-	-	-	-	-
9/24/24	10:50:00	2260	8.46	713	713	NA	1
9/25/24	-	-	-	-	-	-	-
9/26/24	-	-	-	-	-	-	-
9/27/24	-	-	-	-	-	-	-
9/28/24	-	-	-	-	-	-	-
9/29/24	-	-	-	-	-	-	-
9/30/24	-	-	-	-	-	-	-
Minimum		1980	8.46	567	567	102	
Maximum		2260	8.53	713	713	102	
Average		2168	8.5	661	661	102	

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