

September 23, 2021

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

RE: August 2021 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 2021 is enclosed. The West Outlet discharged the entire month and operated at an average rate of 69 cubic feet per second (cfs). The East Outlet was tested during the middle of the month. A total of 3,939 acre-feet were discharged in August, with only 85 acre-feet from the East Outlet.

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.

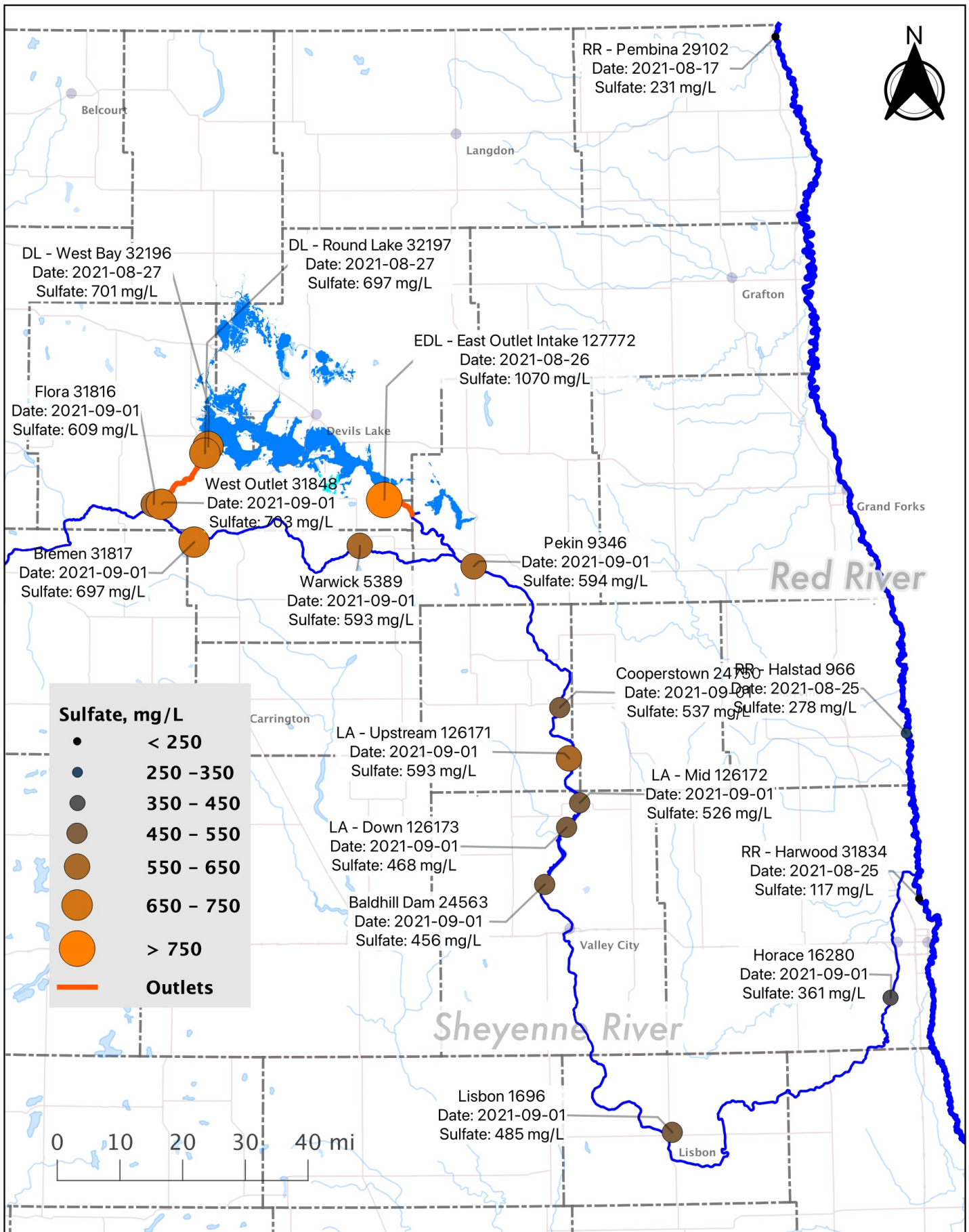
If you have any questions, please contact me at (701) 328-4948.

Sincerely,

Jon Kelsch

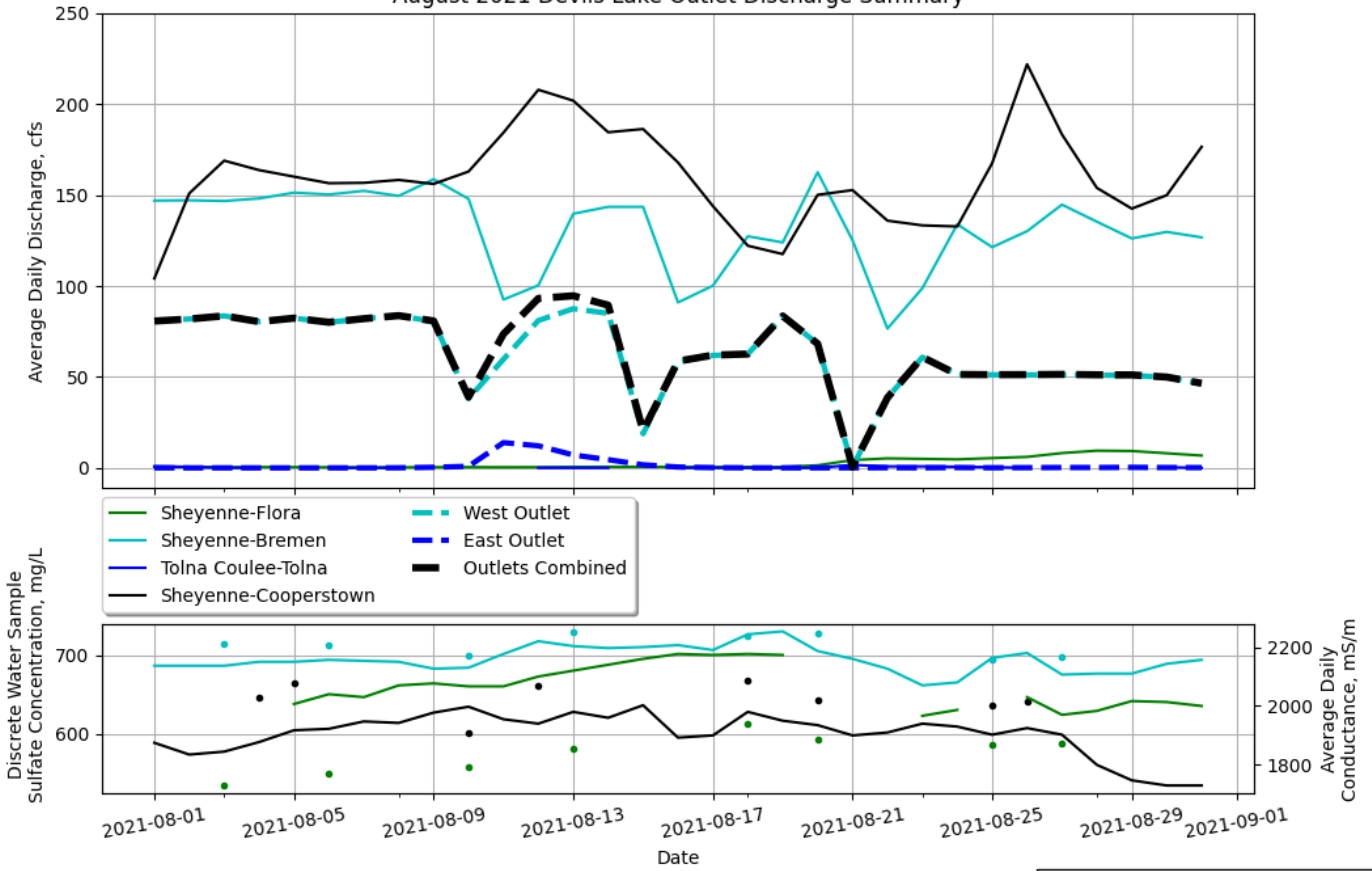
Jonathan Kelsch P.E.
Director of Water Development

JK:DG/416-10
Enclosure



**Devils Lake Outlet Operations
Preliminary Sulfate Concentrations
09/03/2021**

August 2021 Devils Lake Outlet Discharge Summary



Sulfate		Conductance	
• Flora	— Flora	— Flora	— Flora
• Bremen	— Bremen	— Bremen	— Bremen
• Pekin	— Cooperstown		

	Monthly Discharge Vol., ac-ft
West End Outlet	3,854
East End Outlet	85
Combined Total	3,939

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
8/1/21	8/31/21

LOCATION: Benson Co, ND

Devils Lake West Outlet discharged 3,854 ac-ft over 31 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.65	8.78	8.70	SU	2 x Week	GRAB
SULFATE	696	721	708	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	697	718	707	mg/L	Average	GRAB
OUTLET DISCHARGE	0	88	69	cfs	Continuous	Recorder
SIGNATURE	Jon Kelsch			9/23/21	701-328-4948	
NAME AND TITLE	JONATHAN KELSCH, DIRECTOR, 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 locations 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 State Water Commission
 ADDRESS: 900 E Boulevard Avenue,
 Bismarck ND 58505

MONTHLY DISCHARGE REPORT

LOCATION: EAST END OUTLET

FACILITY: Devils Lake Outlet Project

LOCATION: Ramsey, Benson, Nelson, ND

MONITORING PERIOD	
START DATE	END DATE
8/1/21	8/31/21

Devils Lake East Outlet discharged 85 ac-ft over 26 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	0.00	0.00	#DIV/0!	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	0	0	#DIV/0!	µS/cm	Continuous	Recorder
SULFATE	0	0	#DIV/0!	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	0	0	#DIV/0!	mg/L	Average	GRAB
OUTLET DISCHARGE	0	14	2	cfs	Continuous	Recorder
SIGNATURE	Jon Kelsch			9/23/21	701-328-4948	
NAME AND TITLE	JONATHAN KELSCH, DIRECTOR, 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 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
8/1/21	8/31/21

LOCATION: Benson Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.58	8.81	8.69	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	1,870	2,177	2,056	µS/cm	Continuous	Recorder
SULFATE	535	613	576	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	523	604	571	mg/L	Average	GRAB
FLOW, INSTREAM	0	9	3	cfs	Continuous	Recorder
SIGNATURE	Jon Kelsch			9/23/21	701-328-4948	
NAME AND TITLE	JONATHAN KELSCH, DIRECTOR, 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:

- 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

LOCATION: Eddy Co, ND

MONITORING PERIOD	
START DATE	END DATE
8/1/21	8/31/21

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.68	8.98	8.84	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	2,070	2,253	2,158	µS/cm	Continuous	Recorder
SULFATE	695	730	713	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	696	728	713	mg/L	Average	GRAB
FLOW, INSTREAM	77	163	131	cfs	Continuous	Recorder
SIGNATURE	Jon Kelsch			9/23/21	701-328-4948	
NAME AND TITLE	JONATHAN KELSCH, DIRECTOR, 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 locations is 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 BOTH OUTLETS (PEKIN)

FACILITY: Devils Lake Outlet Project

MONITORING PERIOD	
START DATE	END DATE
8/1/21	8/31/21

LOCATION: Nelson Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.54	8.73	8.68	SU	2 x Week	GRAB
SULFATE	601	668	645	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	632	665	645	mg/L	Average	GRAB
FLOW, INSTREAM	NA	NA	NA	cfs	Continuous	Recorder
SIGNATURE	Jon Kelsch			9/23/21	701-328-4948	
NAME AND TITLE	JONATHAN KELSCH, DIRECTOR, 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 locations is 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
- NA - Not available

OUTLET OPERATOR NAME/ADDRESS

NAME: ND State Water Commission
 ADDRESS: 900 E Boulevard Avenue,
 Bismarck ND 58505

MONTHLY DISCHARGE REPORT

LOCATION: DOWNSTREAM OF BOTH OUTLETS (COOPERSTOWN)

FACILITY: Devils Lake Outlet Project

MONITORING PERIOD	
START DATE	END DATE
8/1/21	8/31/21

LOCATION: Griggs Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.56	8.70	8.64	SU	Weekly	GRAB
SPECIFIC CONDUCTANCE	1,730	2,003	1,905	µS/cm	Continuous	Recorder
SULFATE	576	623	600	mg/L	Weekly	GRAB
7 DAY AVERAGE OF SULFATE	576	623	594	mg/L	Average	GRAB
FLOW, INSTREAM	104	222	160	cfs	Continuous	Recorder
SIGNATURE	Jon Kelsch			9/23/21	701-328-4948	
NAME AND TITLE	JONATHAN KELSCH, DIRECTOR, 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 locations is 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
- NA - Not available

**Daily Outlet Discharge and Upstream and Downstream Flows
Devils Lake Outlets**

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 (ft ³)	Average Streamflow USGS Gage (cfs)	Average Specific Conductance USGS Gage (µS/cm)	Average Daily Outlet Discharge (cfs)	Total Daily Volume (ft ³)	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 ³)
8/1/21	0.56	-	80.7638889	6978000	147	2136.66667	0	0	0.84	2930	104.2	1875	80.7638889	6978000
8/2/21	0.5	1870	81.8865741	7075000	147.2	2136.66667	0	0	0.56	2943.33333	151	1835	81.8865741	7075000
8/3/21	0.46	-	83.599537	7223000	146.8	2136.66667	0.01157407	1000	0	2953.33333	169	1845	83.6111111	7224000
8/4/21	0.46	-	80.4282407	6949000	148.2	2150	0	0	0	2940	163.8	1877.5	80.4282407	6949000
8/5/21	0.42	2006.66667	82.3611111	7116000	151.4	2150	0	0	-	-	160.2	1917.5	82.3611111	7116000
8/6/21	0.36	2040	80.0925926	6920000	150.4	2156.66667	0.01157407	1000	0	2863.33333	156.6	1922.5	80.1041667	6921000
8/7/21	0.36	2030	82.0717593	7091000	152.4	2153.33333	0	0	0	2723.33333	156.8	1947.5	82.0717593	7091000
8/8/21	0.32	2070	83.7037037	7232000	149.6	2150	0.0462963	4000	0	2723.33333	158.4	1942.5	83.75	7236000
8/9/21	0.4	2076.66667	80.4976852	6955000	158.8	2126.66667	0.32407407	28000	-	-	156.2	1977.5	80.8217593	6983000
8/10/21	0.42	2066.66667	38.0902778	3291000	148	2130	0.86805556	75000	0	2743.33333	163	1997.5	38.9583333	3366000
8/11/21	0.36	2066.66667	59.7569444	5163000	92.6	2176.66667	13.8888889	1200000	-	-	184.4	1955	73.6458333	6363000
8/12/21	0.4	2100	81.0763889	7005000	100.4	2220	12.1296296	1048000	0	2770	208	1940	93.2060185	8053000
8/13/21	0.52	2120	87.5578704	7565000	139.8	2203.33333	7.10648148	614000	0	2786.66667	202	1980	94.6643519	8179000
8/14/21	0.58	2140	85	7344000	143.6	2196.66667	4.51388889	390000	0	2796.66667	184.6	1960	89.5138889	7734000
8/15/21	0.58	2160	18.75	1620000	143.6	2200	1.68981481	146000	-	-	186.4	2002.5	20.4398148	1766000
8/16/21	0.54	2176.66667	58.2523148	5033000	91	2206.66667	0.46296296	40000	0	2773.33333	168	1892.5	58.7152778	5073000
8/17/21	0.56	2173.33333	61.8634259	5345000	100.2	2190	0.13888889	12000	0	2773.33333	144	1900	62.0023148	5357000
8/18/21	0.52	2176.66667	62.6041667	5409000	127.4	2243.33333	0.03472222	3000	0	2766.66667	122.2	1980	62.6388889	5412000
8/19/21	0.52	2173.33333	83.5416667	7218000	124	2253.33333	0.01157407	1000	0	2763.33333	117.6	1950	83.5532407	7219000
8/20/21	1.4	-	68.2523148	5897000	162.6	2186.66667	0.02314815	2000	0	2576.66667	150.2	1935	68.275463	5899000
8/21/21	4.3	1986.66667	0.46296296	40000	125.2	2160	0.03472222	3000	1.62	1940	152.8	1900	0.49768519	43000
8/22/21	5.22	-	38.5300926	3329000	76.6	2126.66667	0.08101852	7000	0.82	1520	136	1910	38.6111111	3336000
8/23/21	4.96	1966.66667	60.8796296	5260000	98.8	2070	0.03472222	3000	0.82	1420	133.4	1940	60.9143519	5263000
8/24/21	4.68	1986.66667	51.2037037	4424000	134	2080	0.18518519	16000	0.6	1303.33333	132.8	1930	51.3888889	4440000
8/25/21	5.38	-	51.2152778	4425000	121.4	2163.33333	0.06944444	6000	0.38	1266.66667	167.6	1902.5	51.2847222	4431000
8/26/21	6.04	2030	51.1805556	4422000	130.2	2180	0.12731481	11000	0.02	1283.33333	222	1925	51.3078704	4433000
8/27/21	8.14	1970	51.2268519	4426000	144.8	2106.66667	0.20833333	18000	-	-	183.4	1902.5	51.4351852	4444000
8/28/21	9.46	1983.33333	51.0185185	4408000	135.4	2110	0.19675926	17000	0.94	977.666667	154	1800	51.2152778	4425000
8/29/21	9.28	2016.66667	50.8564815	4394000	126.2	2110	0.28935185	25000	-	-	142.6	1747.5	51.1458333	4419000
8/30/21	8.04	2013.33333	49.7800926	4301000	129.8	2143.33333	0.18518519	16000	0.34	1053.33333	150	1730	49.9652778	4317000
8/31/21	6.78	2000	46.3773148	4007000	126.8	2156.66667	0.15046296	13000	0.02	1073.33333	176.6	1730	46.5277778	4020000
Minimum	0	1,870	0	40,000	77	2,070	0	0	0	978	104	1,730	0	43,000
Maximum	9	2,177	88	7,565,000	163	2,253	14	1,200,000	2	2,953	222	2,003	95	8,179,000
Average	3	2,056	69	5,809,000	131	2,158	2	162,500	0	2,267	160	1,905	69	5,971,500
			Total (Mgal)	1,256			Total (Mgal)	28				Total (Mgal)	1,283	
			Total (Ac-ft)	3,854			Total (Ac-ft)	85				Total (Ac-ft)	3,939	

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 (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
8/1/21	-	-	-	-	-	-	-
8/2/21	-	-	-	-	-	-	-
8/3/21	9:15	1,830	8.71	535	523	NA	2
8/4/21	-	-	-	-	-	-	-
8/5/21	-	-	-	-	-	-	-
8/6/21	7:50	2,030	8.62	550	543	NA	2
8/7/21	-	-	-	-	-	-	-
8/8/21	-	-	-	-	-	-	-
8/9/21	-	-	-	-	-	-	-
8/10/21	8:11	2,060	8.68	558	554	56	2
8/11/21	-	-	-	-	-	-	-
8/12/21	-	-	-	-	-	-	-
8/13/21	8:05	2,100	8.76	582	570	NA	2
8/14/21	-	-	-	-	-	-	-
8/15/21	-	-	-	-	-	-	-
8/16/21	-	-	-	-	-	-	-
8/17/21	-	-	-	-	-	-	-
8/18/21	7:52	2,170	8.77	613	598	NA	2
8/19/21	-	-	-	-	-	-	-
8/20/21	8:05	2,130	8.81	594	604	NA	2
8/21/21	-	-	-	-	-	-	-
8/22/21	-	-	-	-	-	-	-
8/23/21	-	-	-	-	-	-	-
8/24/21	-	-	-	-	-	-	-
8/25/21	8:00	2,060	8.62	587	591	NA	2
8/26/21	-	-	-	-	-	-	-
8/27/21	7:40	2,020	8.58	588	588	NA	2
8/28/21	-	-	-	-	-	-	-
8/29/21	-	-	-	-	-	-	-
8/30/21	-	-	-	-	-	-	-
8/31/21	-	-	-	-	-	-	-
Minimum		1,830	8.58	535	523	56	
Maximum		2,170	8.81	613	604	56	
Average		2,050	8.69	576	571	56	

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
Italic font denotes preliminary result

**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
8/1/21	-	-	-	-	-	-	-
8/2/21	-	-	-	-	-	-	-
8/3/21	9:00	-	8.73	715	708	NA	2
8/4/21	-	-	-	-	-	-	-
8/5/21	-	-	-	-	-	-	-
8/6/21	8:00	-	8.72	709	712	NA	2
8/7/21	-	-	-	-	-	-	-
8/8/21	-	-	-	-	-	-	-
8/9/21	-	-	-	-	-	-	-
8/10/21	8:20	-	8.66	701	705	8	2
8/11/21	-	-	-	-	-	-	-
8/12/21	-	-	-	-	-	-	-
8/13/21	7:55	-	8.68	714	708	NA	2
8/14/21	-	-	-	-	-	-	-
8/15/21	-	-	-	-	-	-	-
8/16/21	-	-	-	-	-	-	-
8/17/21	-	-	-	-	-	-	-
8/18/21	8:05	-	8.71	721	718	NA	2
8/19/21	-	-	-	-	-	-	-
8/20/21	7:55	-	8.65	698	710	NA	2
8/21/21	-	-	-	-	-	-	-
8/22/21	-	-	-	-	-	-	-
8/23/21	-	-	-	-	-	-	-
8/24/21	-	-	-	-	-	-	-
8/25/21	8:10	-	8.70	696	697	NA	2
8/26/21	-	-	-	-	-	-	-
8/27/21	7:30	-	8.78	708	702	NA	2
8/28/21	-	-	-	-	-	-	-
8/29/21	-	-	-	-	-	-	-
8/30/21	-	-	-	-	-	-	-
8/31/21	-	-	-	-	-	-	-
Minimum			8.65	696	697	8	
Maximum			8.78	721	718	8	
Average			8.70	708	707	8	

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 (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
8/1/21	-	-	-	-	-	-	-
8/2/21	-	-	-	-	-	-	-
8/3/21	9:40	2,120	8.90	715	708	NA	2
8/4/21	-	-	-	-	-	-	-
8/5/21	-	-	-	-	-	-	-
8/6/21	7:25	2,140	8.84	712	714	NA	2
8/7/21	-	-	-	-	-	-	-
8/8/21	-	-	-	-	-	-	-
8/9/21	-	-	-	-	-	-	-
8/10/21	7:35	2,100	8.90	699	706	47	2
8/11/21	-	-	-	-	-	-	-
8/12/21	-	-	-	-	-	-	-
8/13/21	8:30	2,180	8.98	730	715	NA	2
8/14/21	-	-	-	-	-	-	-
8/15/21	-	-	-	-	-	-	-
8/16/21	-	-	-	-	-	-	-
8/17/21	-	-	-	-	-	-	-
8/18/21	7:30	2,230	8.68	725	728	NA	2
8/19/21	-	-	-	-	-	-	-
8/20/21	8:30	2,150	8.87	727	726	NA	2
8/21/21	-	-	-	-	-	-	-
8/22/21	-	-	-	-	-	-	-
8/23/21	-	-	-	-	-	-	-
8/24/21	-	-	-	-	-	-	-
8/25/21	7:34	2,160	8.74	695	711	NA	2
8/26/21	-	-	-	-	-	-	-
8/27/21	8:00	2,180	8.84	697	696	NA	2
8/28/21	-	-	-	-	-	-	-
8/29/21	-	-	-	-	-	-	-
8/30/21	-	-	-	-	-	-	-
8/31/21	-	-	-	-	-	-	-
Minimum		2,100	8.68	695	696	47	
Maximum		2,230	8.98	730	728	47	
Average		2,158	8.84	713	713	47	

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
Italic font denotes preliminary result

**East End Outlet
Monthly Water Quality Summary
Devils Lake 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
8/1/21	-	-	-	-	-	-	-
8/2/21	-	-	-	-	-	-	-
8/3/21	-	-	-	-	-	-	-
8/4/21	-	-	-	-	-	-	-
8/5/21	-	-	-	-	-	-	-
8/6/21	-	-	-	-	-	-	-
8/7/21	-	-	-	-	-	-	-
8/8/21	-	-	-	-	-	-	-
8/9/21	-	-	-	-	-	-	-
8/10/21	-	-	-	-	-	-	-
8/11/21	-	-	-	-	-	-	-
8/12/21	-	-	-	-	-	-	-
8/13/21	-	-	-	-	-	-	-
8/14/21	-	-	-	-	-	-	-
8/15/21	-	-	-	-	-	-	-
8/16/21	-	-	-	-	-	-	-
8/17/21	-	-	-	-	-	-	-
8/18/21	-	-	-	-	-	-	-
8/19/21	-	-	-	-	-	-	-
8/20/21	-	-	-	-	-	-	-
8/21/21	-	-	-	-	-	-	-
8/22/21	-	-	-	-	-	-	-
8/23/21	-	-	-	-	-	-	-
8/24/21	-	-	-	-	-	-	-
8/25/21	-	-	-	-	-	-	-
8/26/21	-	-	-	-	-	-	-
8/27/21	-	-	-	-	-	-	-
8/28/21	-	-	-	-	-	-	-
8/29/21	-	-	-	-	-	-	-
8/30/21	-	-	-	-	-	-	-
8/31/21	-	-	-	-	-	-	-
Minimum		0	0.00	0	0	0	
Maximum		0	0.00	0	0	0	
Average		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

Notes:

mg/L - Milligrams per liter or parts per million
 NA - Not Analyzed
 Italic font denotes preliminary result

**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
8/1/21	-	-	-	-	-	-	-
8/2/21	-	-	-	-	-	-	-
8/3/21	-	-	-	-	-	-	-
8/4/21	8:20	-	8.72	646	633	NA	2
8/5/21	9:15	-	8.69	664	655	NA	2
8/6/21	-	-	-	-	-	-	-
8/7/21	-	-	-	-	-	-	-
8/8/21	-	-	-	-	-	-	-
8/9/21	-	-	-	-	-	-	-
8/10/21	9:48	-	8.65	601	637	130	3
8/11/21	-	-	-	-	-	-	-
8/12/21	11:10	-	8.73	662	632	NA	2
8/13/21	-	-	-	-	-	-	-
8/14/21	-	-	-	-	-	-	-
8/15/21	-	-	-	-	-	-	-
8/16/21	-	-	-	-	-	-	-
8/17/21	-	-	-	-	-	-	-
8/18/21	9:35	-	8.71	668	665	NA	2
8/19/21	-	-	-	-	-	-	-
8/20/21	9:35	-	8.73	643	656	NA	2
8/21/21	-	-	-	-	-	-	-
8/22/21	-	-	-	-	-	-	-
8/23/21	-	-	-	-	-	-	-
8/24/21	-	-	-	-	-	-	-
8/25/21	9:37	-	8.54	637	640	NA	2
8/26/21	11:55	-	8.66	641	640	NA	3
8/27/21	-	-	-	-	-	-	-
8/28/21	-	-	-	-	-	-	-
8/29/21	-	-	-	-	-	-	-
8/30/21	-	-	-	-	-	-	-
8/31/21	-	-	-	-	-	-	-
Minimum			8.54	601	632	130	
Maximum			8.73	668	665	130	
Average			8.68	645	645	130	

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

**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
8/1/21	-	-	-	-	-	-	-
8/2/21	-	-	-	-	-	-	-
8/3/21	-	-	-	-	-	-	-
8/4/21	9:15	1,850	8.64	576	576	NA	1
8/5/21	-	-	-	-	-	-	-
8/6/21	-	-	-	-	-	-	-
8/7/21	-	-	-	-	-	-	-
8/8/21	-	-	-	-	-	-	-
8/9/21	-	-	-	-	-	-	-
8/10/21	10:40	2,000	8.70	621	599	41	2
8/11/21	-	-	-	-	-	-	-
8/12/21	-	-	-	-	-	-	-
8/13/21	-	-	-	-	-	-	-
8/14/21	-	-	-	-	-	-	-
8/15/21	-	-	-	-	-	-	-
8/16/21	-	-	-	-	-	-	-
8/17/21	-	-	-	-	-	-	-
8/18/21	10:25	1,980	8.65	623	623	NA	1
8/19/21	-	-	-	-	-	-	-
8/20/21	-	-	-	-	-	-	-
8/21/21	-	-	-	-	-	-	-
8/22/21	-	-	-	-	-	-	-
8/23/21	-	-	-	-	-	-	-
8/24/21	-	-	-	-	-	-	-
8/25/21	10:30	1,900	8.56	578	578	NA	1
8/26/21	-	-	-	-	-	-	-
8/27/21	-	-	-	-	-	-	-
8/28/21	-	-	-	-	-	-	-
8/29/21	-	-	-	-	-	-	-
8/30/21	-	-	-	-	-	-	-
8/31/21	-	-	-	-	-	-	-
Minimum		1,850	8.56	576	576	41	
Maximum		2,000	8.70	623	623	41	
Average		1,933	8.64	600	594	41	

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