

November 18, 2021

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

RE: October 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 October 2021 is enclosed. The West Outlet discharged the entire month and operated at an average rate of 45 cubic feet per second (cfs). The East Outlet was not run during the month. A total of 2,376 acre-feet were discharged in October. The system was shut down for the year on October 28th.

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.

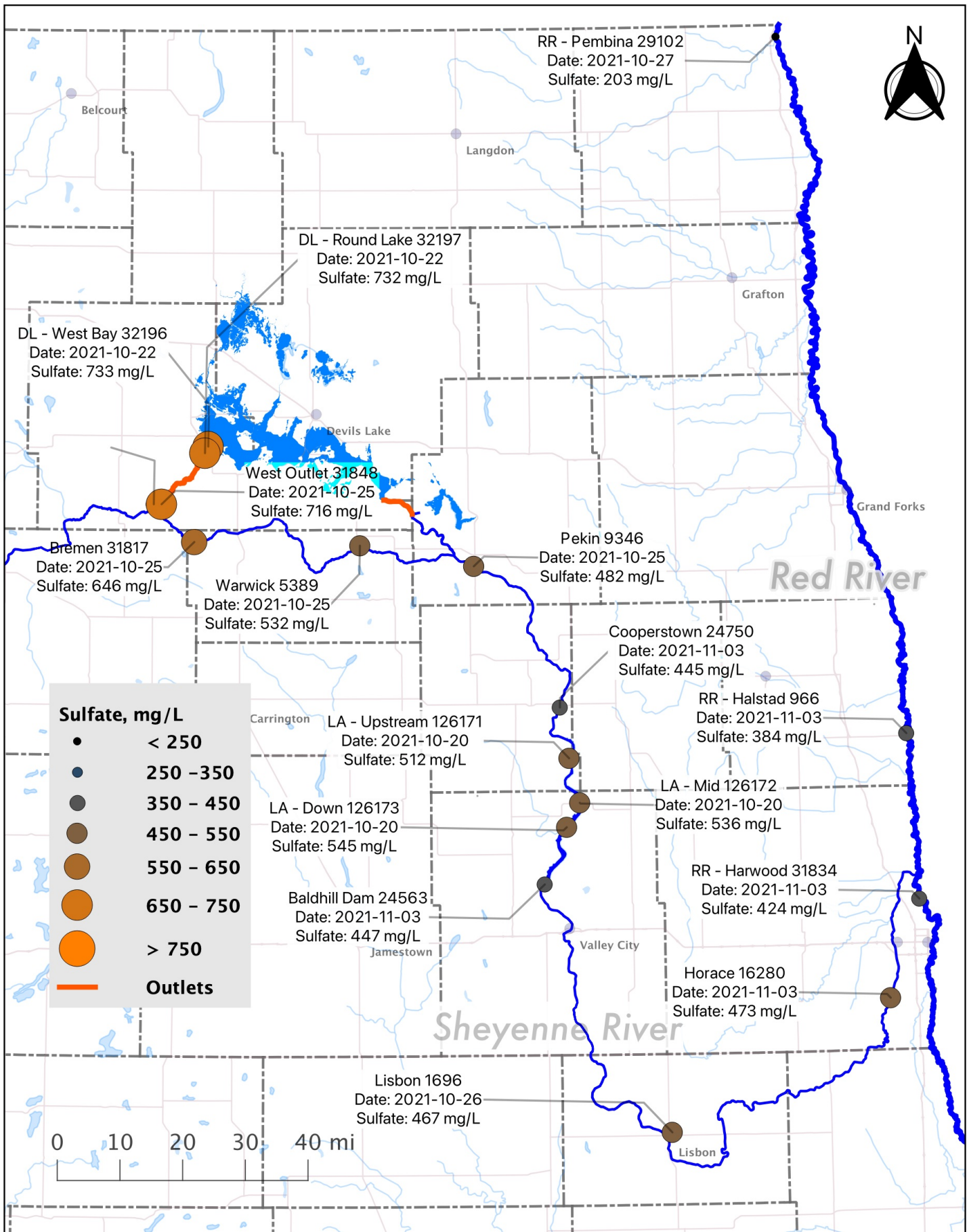
If you have any questions, please contact me at (701) 328-4948.

Sincerely,



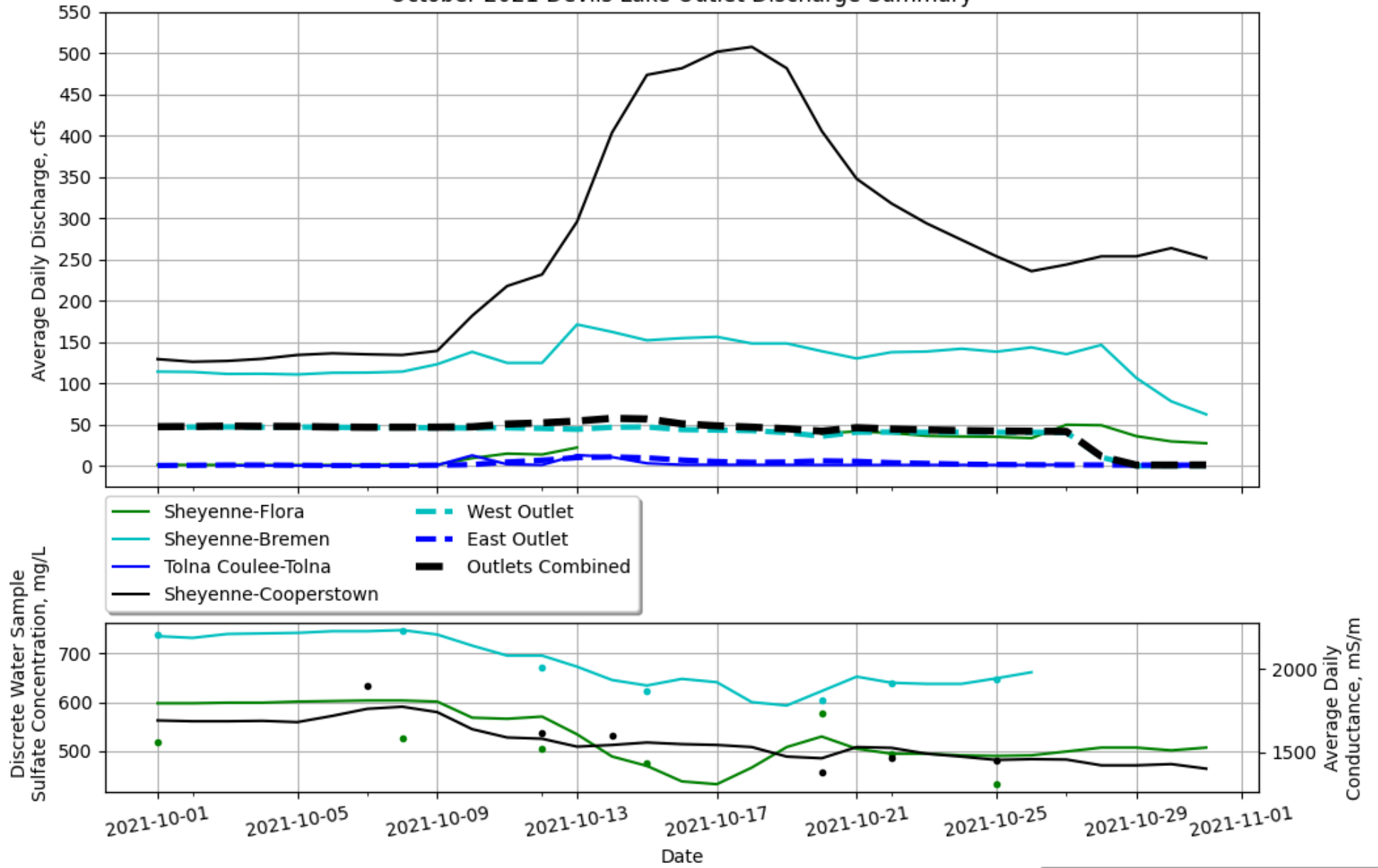
Jonathan Kelsch P.E.
Director of Water Development

JK:DG:pd/416-10
Enclosure



**Devils Lake Outlet Operations
Preliminary Sulfate Concentrations
11/18/2021**

October 2021 Devils Lake Outlet Discharge Summary



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

	Monthly Discharge Vol., ac-ft
West End Outlet	2,377
East End Outlet	194
Combined Total	2,571

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
10/1/21	10/31/21

LOCATION: Benson Co, ND

Devils Lake West Outlet discharged 2,376 ac-ft over 28 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.48	8.74	8.59	SU	2 x Week	GRAB
SULFATE	716	744	731	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	726	744	733	mg/L	Average	GRAB
OUTLET DISCHARGE	0	47	45	cfs	Continuous	Recorder
SIGNATURE				11/18/21	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

MONITORING PERIOD	
START DATE	END DATE
10/1/21	10/31/21

LOCATION: Ramsey, Benson, Nelson, ND

Devils Lake East Outlet discharged 0 ac-ft over 0 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	0	0	cfs	Continuous	Recorder
SIGNATURE				11/18/21	701-328-4948	
NAME AND TITLE	JONATHAN KELSCH, DIRECTOR, WATER DEVELOPMENT DIVISION			DATE	TELEPHONE NUMBER	

COMMENT AND EXPLANATION OF ANY VIOLATIONS

The east end outlet did not run during October 2021.

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

LOCATION: Benson Co, ND

MONITORING PERIOD	
START DATE	END DATE
10/1/21	10/31/21

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.31	8.59	8.42	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	1,307	1,810	1,597	µS/cm	Continuous	Recorder
SULFATE	432	577	504	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	490	536	516	mg/L	Average	GRAB
FLOW, INSTREAM	1	50	21	cfs	Continuous	Recorder
SIGNATURE				11/18/21	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
10/1/21	10/31/21

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.54	8.86	8.65	SU	2 x Week	GRAB
SPECIFIC CONDUCTANCE	1,780	2,233	2,038	µS/cm	Continuous	Recorder
SULFATE	603	748	667	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	613	748	673	mg/L	Average	GRAB
FLOW, INSTREAM	62	171	129	cfs	Continuous	Recorder
SIGNATURE				11/18/21	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
10/1/21	10/31/21

LOCATION: Nelson Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.35	8.60	8.43	SU	2 x Week	GRAB
SULFATE	457	635	522	mg/L	2 x Week	GRAB
7 DAY AVERAGE OF SULFATE	472	635	533	mg/L	Average	GRAB
FLOW, INSTREAM	NA	NA	NA	cfs	Continuous	Recorder
SIGNATURE				11/18/21	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
10/1/21	10/31/21

LOCATION: Griggs Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.35	8.38	8.37	SU	Weekly	GRAB
SPECIFIC CONDUCTANCE	1,400	1,773	1,563	µS/cm	Continuous	Recorder
SULFATE	451	497	467	mg/L	Weekly	GRAB
7 DAY AVERAGE OF SULFATE	451	497	467	mg/L	Average	GRAB
FLOW, INSTREAM	126	508	270	cfs	Continuous	Recorder
SIGNATURE				11/18/21	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)
10/1/21	1.24	1793.33333	47.0486111	4065000	114.2	2196.66667	0	0	1002	129.4	1690	47.4652778	4101000	
10/2/21	1.18	1793.33333	47.037037	4064000	113.8	2186.66667	0	0	1008.66667	126.2	1685	47.6967593	4121000	
10/3/21	1.16	1796.66667	47.2337963	4081000	111.4	2210	0	0	0.38 1008.33333	127.2	1685	48.1828704	4163000	
10/4/21	1.02	1796.66667	46.9560185	4057000	111.6	2213.33333	0	0	0.36 1009.33333	129.8	1687.5	47.9166667	4140000	
10/5/21	1	1803.33333	47.0833333	4068000	110.8	2216.66667	0	0	0.4 995.333333	134.4	1680	47.7546296	4126000	
10/6/21	1.04	1806.66667	46.7013889	4035000	112.8	2226.66667	0	0	0.08 975.333333	136.4	1717.5	47.0949074	4069000	
10/7/21	1.2	1810	46.4467593	4013000	113	2226.66667	0	0	0.1 971.333333	135.2	1760	46.8055556	4044000	
10/8/21	1.22	1810	46.400463	4009000	114.2	2233.33333	0	0	0.36 964	134.4	1772.5	46.8634259	4049000	
10/9/21	1.36	1803.33333	46.1342593	3986000	123.2	2206.66667	0	0	0.8 953.333333	139.4	1740	46.8865741	4051000	
10/10/21	9.34	1706.66667	45.8333333	3960000	138.2	2140	0	0	12.66 976.333333	182	1637.5	47.337963	4090000	
10/11/21	14.8	1700	46.099537	3983000	124.8	2080	0	0	1.9 1196.66667	218	1587.5	50.6944444	4380000	
10/12/21	13.72	1713.33333	45.3240741	3916000	124.8	2080	0	0	1.14 1520	232	1580	52.1180556	4503000	
10/13/21	22.2	1606.66667	44.3055556	3828000	171.4	2013.33333	0	0	13.06 1351	296	1532.5	54.3055556	4692000	
10/14/21 -		1473.33333	46.7824074	4042000	162.4	1933.33333	0	0	10.62 1040.66667	404	1542.5	57.6157407	4978000	
10/15/21 -		1416.66667	47.1064815	4070000	152.2	1900	0	0	3.1 1110	474	1557.5	56.7939815	4907000	
10/16/21 -		1323.33333	43.9236111	3795000	154.8	1940	0	0	1.4 1180	482	1547.5	50.9490741	4402000	
10/17/21 -		1306.66667	43.3449074	3745000	156.4	1920	0	0	1.3 1283.33333	502	1542.5	48.5069444	4191000	
10/18/21 -		1406.66667	42.650463	3685000	148.4	1800	0	0	1.2 1280	508	1530	46.9097222	4053000	
10/19/21 -		1530	40.2893519	3481000	148.4	1780	0	0	1.18 1250	482	1472.5	44.9305556	3882000	
10/20/21	39	1593.33333	35.9143519	3103000	139	1866.66667	0	0	1.1 1230	406	1462.5	41.9791667	3627000	
10/21/21	41.8	1520	40.8333333	3528000	130.2	1953.33333	0	0	1.04 1210	348	1530	46.2731481	3998000	
10/22/21	39.8	1490	40.8680556	3531000	137.8	1916.66667	0	0	1.08 1176.66667	318	1525	44.6064815	3854000	
10/23/21	36.4	1490	40.625	3510000	138.6	1910	0	0	1.08 1176.66667	294	1490	43.5300926	3761000	
10/24/21	35.6	1480	40.7986111	3525000	142	1910	0	0	1.12 1173.33333	274	1472.5	42.7893519	3697000	
10/25/21	35.2	1476.66667	40.6597222	3513000	138.4	1943.33333	0	0	1.08 1166.66667	254	1452.5	42.2685185	3652000	
10/26/21	33.6	1480	40.6712963	3514000	143.6	1980	0	0	1.06 1140	236	1457.5	42.0138889	3630000	
10/27/21	49.8	1503.33333	40.5208333	3501000	135.4	-	0	0	1.48 1143.33333	244	1455	41.6203704	3596000	
10/28/21	49.2	1526.66667	10.4050926	899000	146.6	-	0	0	-	254	1420	11.4351852	988000	
10/29/21	36	1526.66667	0	0	106.6	-	0	0	-	254	1420	0.92592593	80000	
10/30/21	29.6	1510	0	0	78.2	-	0	0	-	264	1427.5	0.96064815	83000	
10/31/21	27.4	1526.66667	0	0	62.4	-	0	0	-	252	1400	1.07638889	93000	
Minimum	1	1,307	0	0	62	1,780	0	0	0	953	126	1,400	1	80,000
Maximum	50	1,810	47	4,081,000	171	2,233	0	0	13	1,520	508	1,773	58	4,978,000
Average	21	1,597	45	3,865,682	129	2,038	0	0	2	1,129	270	1,563	49	4,200,955
			Total (Mgal)	774			Total (Mgal)	0				Total (Mgal)	774	
			Total (Ac-ft)	2,376			Total (Ac-ft)	0				Total (Ac-ft)	2,376	

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
10/1/21	8:15	0	8.51	517	516	NA	2
10/2/21	-	-	-	-	-	-	-
10/3/21	-	-	-	-	-	-	-
10/4/21	-	-	-	-	-	-	-
10/5/21	-	-	-	-	-	-	-
10/6/21	-	-	-	-	-	-	-
10/7/21	-	-	-	-	-	-	-
10/8/21	8:05	0	8.59	527	527	NA	1
10/9/21	-	-	-	-	-	-	-
10/10/21	-	-	-	-	-	-	-
10/11/21	-	-	-	-	-	-	-
10/12/21	8:20	0	8.38	505	516	14	2
10/13/21	-	-	-	-	-	-	-
10/14/21	-	-	-	-	-	-	-
10/15/21	8:20	0	8.42	474	490	NA	2
10/16/21	-	-	-	-	-	-	-
10/17/21	-	-	-	-	-	-	-
10/18/21	-	-	-	-	-	-	-
10/19/21	-	-	-	-	-	-	-
10/20/21	8:10	0	8.31	577	526	NA	2
10/21/21	-	-	-	-	-	-	-
10/22/21	8:50	0	8.32	495	536	NA	2
10/23/21	-	-	-	-	-	-	-
10/24/21	-	-	-	-	-	-	-
10/25/21	15:30	0	8.43	432	501	NA	3
10/26/21	-	-	-	-	-	-	-
10/27/21	-	-	-	-	-	-	-
10/28/21	-	-	-	-	-	-	-
10/29/21	-	-	-	-	-	-	-
10/30/21	-	-	-	-	-	-	-
10/31/21	-	-	-	-	-	-	-
Minimum		0	8.31	432	490	14	
Maximum		0	8.59	577	536	14	
Average		0	8.42	504	516	14	

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
10/1/21	8:30	-	8.61	741	736	NA	2
10/2/21	-	-	-	-	-	-	-
10/3/21	-	-	-	-	-	-	-
10/4/21	-	-	-	-	-	-	-
10/5/21	-	-	-	-	-	-	-
10/6/21	-	-	-	-	-	-	-
10/7/21	-	-	-	-	-	-	-
10/8/21	8:15	-	8.61	744	744	NA	1
10/9/21	-	-	-	-	-	-	-
10/10/21	-	-	-	-	-	-	-
10/11/21	-	-	-	-	-	-	-
10/12/21	8:30	-	8.48	736	740	9	2
10/13/21	-	-	-	-	-	-	-
10/14/21	-	-	-	-	-	-	-
10/15/21	8:30	-	8.58	719	728	NA	2
10/16/21	-	-	-	-	-	-	-
10/17/21	-	-	-	-	-	-	-
10/18/21	-	-	-	-	-	-	-
10/19/21	-	-	-	-	-	-	-
10/20/21	8:20	-	8.53	734	727	NA	2
10/21/21	-	-	-	-	-	-	-
10/22/21	9:00	-	8.58	729	732	NA	2
10/23/21	-	-	-	-	-	-	-
10/24/21	-	-	-	-	-	-	-
10/25/21	15:45	-	8.74	716	726	NA	3
10/26/21	-	-	-	-	-	-	-
10/27/21	-	-	-	-	-	-	-
10/28/21	-	-	-	-	-	-	-
10/29/21	-	-	-	-	-	-	-
10/30/21	-	-	-	-	-	-	-
10/31/21	-	-	-	-	-	-	-
Minimum			8.48	716	726	9	
Maximum			8.74	744	744	9	
Average			8.59	731	733	9	

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
10/1/21	7:55	0	8.86	739	741	NA	2
10/2/21	-	-	-	-	-	-	-
10/3/21	-	-	-	-	-	-	-
10/4/21	-	-	-	-	-	-	-
10/5/21	-	-	-	-	-	-	-
10/6/21	-	-	-	-	-	-	-
10/7/21	-	-	-	-	-	-	-
10/8/21	7:45	0	8.83	748	748	NA	1
10/9/21	-	-	-	-	-	-	-
10/10/21	-	-	-	-	-	-	-
10/11/21	-	-	-	-	-	-	-
10/12/21	7:53	0	8.60	671	710	20	2
10/13/21	-	-	-	-	-	-	-
10/14/21	-	-	-	-	-	-	-
10/15/21	7:55	0	8.54	623	647	NA	2
10/16/21	-	-	-	-	-	-	-
10/17/21	-	-	-	-	-	-	-
10/18/21	-	-	-	-	-	-	-
10/19/21	-	-	-	-	-	-	-
10/20/21	7:48	0	8.56	603	613	NA	2
10/21/21	-	-	-	-	-	-	-
10/22/21	8:30	0	8.54	640	622	NA	2
10/23/21	-	-	-	-	-	-	-
10/24/21	-	-	-	-	-	-	-
10/25/21	15:10	0	8.60	646	630	NA	3
10/26/21	-	-	-	-	-	-	-
10/27/21	-	-	-	-	-	-	-
10/28/21	-	-	-	-	-	-	-
10/29/21	-	-	-	-	-	-	-
10/30/21	-	-	-	-	-	-	-
10/31/21	-	-	-	-	-	-	-
Minimum		0	8.54	603	613	20	
Maximum		0	8.86	748	748	20	
Average		0	8.65	667	673	20	

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 (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
10/1/21	-	-	-	-	-	-	-
10/2/21	-	-	-	-	-	-	-
10/3/21	-	-	-	-	-	-	-
10/4/21	-	-	-	-	-	-	-
10/5/21	-	-	-	-	-	-	-
10/6/21	-	-	-	-	-	-	-
10/7/21	-	-	-	-	-	-	-
10/8/21	-	-	-	-	-	-	-
10/9/21	-	-	-	-	-	-	-
10/10/21	-	-	-	-	-	-	-
10/11/21	-	-	-	-	-	-	-
10/12/21	-	-	-	-	-	-	-
10/13/21	-	-	-	-	-	-	-
10/14/21	-	-	-	-	-	-	-
10/15/21	-	-	-	-	-	-	-
10/16/21	-	-	-	-	-	-	-
10/17/21	-	-	-	-	-	-	-
10/18/21	-	-	-	-	-	-	-
10/19/21	-	-	-	-	-	-	-
10/20/21	-	-	-	-	-	-	-
10/21/21	-	-	-	-	-	-	-
10/22/21	-	-	-	-	-	-	-
10/23/21	-	-	-	-	-	-	-
10/24/21	-	-	-	-	-	-	-
10/25/21	-	-	-	-	-	-	-
10/26/21	-	-	-	-	-	-	-
10/27/21	-	-	-	-	-	-	-
10/28/21	-	-	-	-	-	-	-
10/29/21	-	-	-	-	-	-	-
10/30/21	-	-	-	-	-	-	-
10/31/21	-	-	-	-	-	-	-
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
10/1/21	-	-	-	-	-	-	-
10/2/21	-	-	-	-	-	-	-
10/3/21	-	-	-	-	-	-	-
10/4/21	-	-	-	-	-	-	-
10/5/21	-	-	-	-	-	-	-
10/6/21	-	-	-	-	-	-	-
10/7/21	12:40	-	8.60	635	635	NA	1
10/8/21	-	-	-	-	-	-	-
10/9/21	-	-	-	-	-	-	-
10/10/21	-	-	-	-	-	-	-
10/11/21	-	-	-	-	-	-	-
10/12/21	10:00	-	8.40	538	587	78	2
10/13/21	-	-	-	-	-	-	-
10/14/21	11:15	-	8.43	533	536	NA	2
10/15/21	-	-	-	-	-	-	-
10/16/21	-	-	-	-	-	-	-
10/17/21	-	-	-	-	-	-	-
10/18/21	-	-	-	-	-	-	-
10/19/21	-	-	-	-	-	-	-
10/20/21	9:45	-	8.37	457	495	NA	2
10/21/21	-	-	-	-	-	-	-
10/22/21	8:25	-	8.35	487	472	NA	2
10/23/21	-	-	-	-	-	-	-
10/24/21	-	-	-	-	-	-	-
10/25/21	5:30	-	8.40	482	475	NA	3
10/26/21	-	-	-	-	-	-	-
10/27/21	-	-	-	-	-	-	-
10/28/21	-	-	-	-	-	-	-
10/29/21	-	-	-	-	-	-	-
10/30/21	-	-	-	-	-	-	-
10/31/21	-	-	-	-	-	-	-
Minimum			8.35	457	472	78	
Maximum			8.60	635	635	78	
Average			8.43	522	533	78	

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
10/1/21	-	-	-	-	-	-	-
10/2/21	-	-	-	-	-	-	-
10/3/21	-	-	-	-	-	-	-
10/4/21	-	-	-	-	-	-	-
10/5/21	-	-	-	-	-	-	-
10/6/21	-	-	-	-	-	-	-
10/7/21	-	-	-	-	-	-	-
10/8/21	-	-	-	-	-	-	-
10/9/21	-	-	-	-	-	-	-
10/10/21	-	-	-	-	-	-	-
10/11/21	-	-	-	-	-	-	-
10/12/21	10:50	0	8.38	497	497	98	1
10/13/21	-	-	-	-	-	-	-
10/14/21	-	-	-	-	-	-	-
10/15/21	-	-	-	-	-	-	-
10/16/21	-	-	-	-	-	-	-
10/17/21	-	-	-	-	-	-	-
10/18/21	-	-	-	-	-	-	-
10/19/21	-	-	-	-	-	-	-
10/20/21	10:35	0	8.37	451	451	NA	1
10/21/21	-	-	-	-	-	-	-
10/22/21	-	-	-	-	-	-	-
10/23/21	-	-	-	-	-	-	-
10/24/21	-	-	-	-	-	-	-
10/25/21	-	-	-	-	-	-	-
10/26/21	9:00	-	8.35	453	452	NA	2
10/27/21	-	-	-	-	-	-	-
10/28/21	-	-	-	-	-	-	-
10/29/21	-	-	-	-	-	-	-
10/30/21	-	-	-	-	-	-	-
10/31/21	-	-	-	-	-	-	-
Minimum		0	8.35	451	451	98	
Maximum		0	8.38	497	497	98	
Average		0	8.37	467	467	98	

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