

November 22, 2022

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

RE: October 2022 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 2022 is enclosed. The East Outlet operated at an average rate of 39 cubic feet per second (cfs) and the West Outlet operated at an average rate of 96 cfs. A total of 8,336 acre-feet was discharged in October.

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.

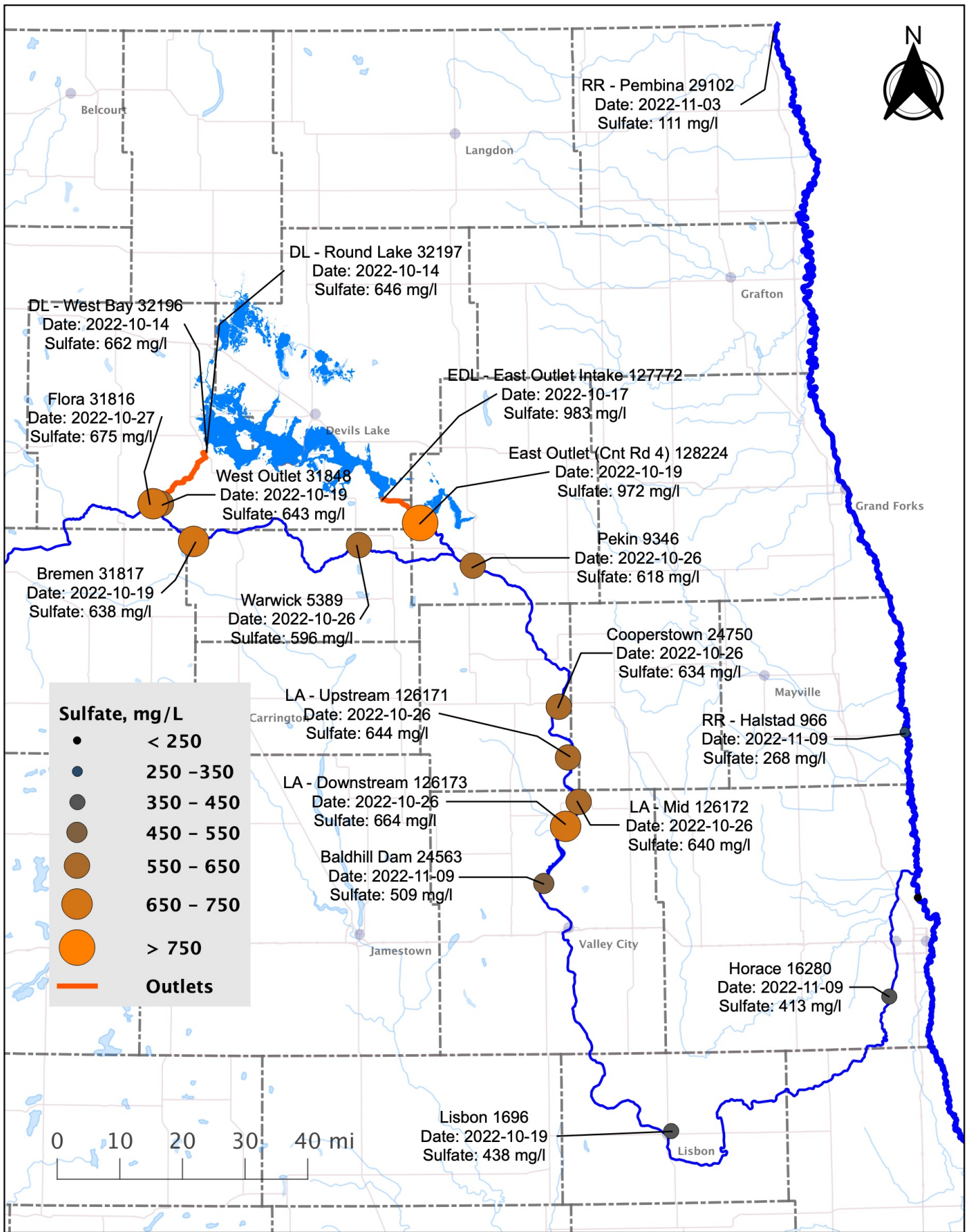
If you have any questions, please contact me at (701) 328-2762.

Sincerely,

Chris Korkowski

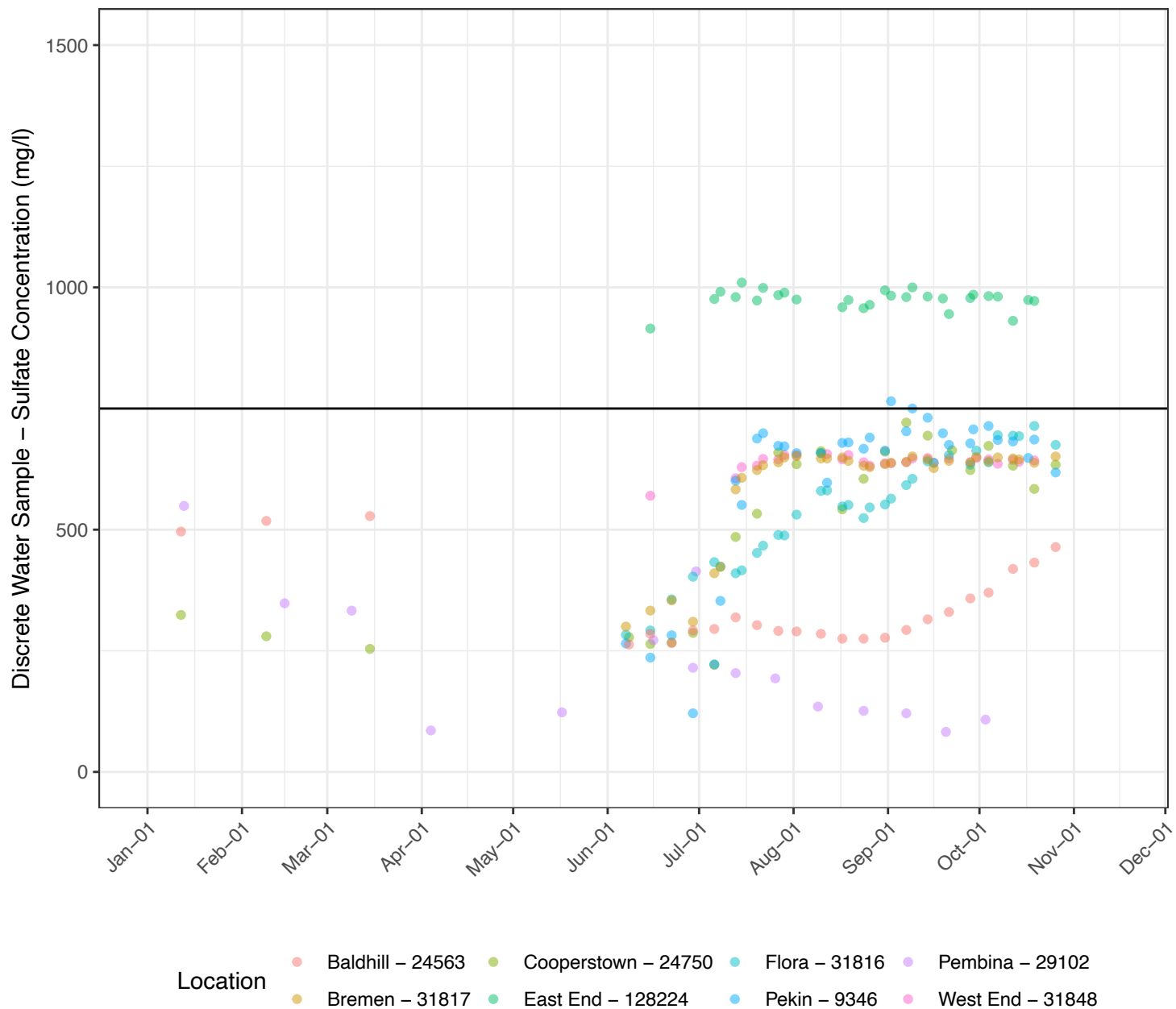
Christopher Korkowski, P.E.
Chief of the Investigations Section, Water Development

CK:416-10
Enclosure

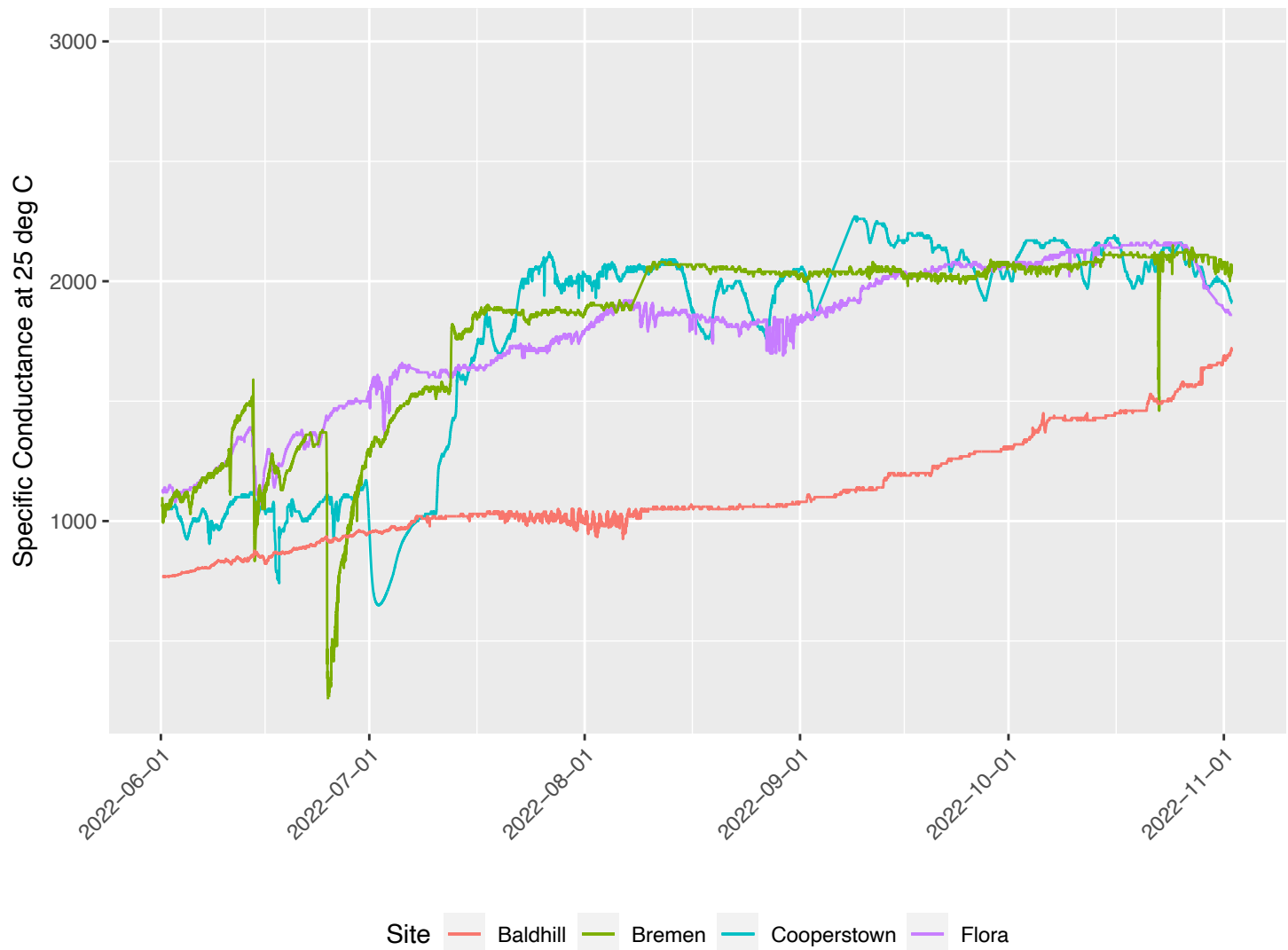


**Devils Lake Outlet Operations
Preliminary Sulfate Concentrations
11/16/2022**

2022 Devils Lake Outlet Sulfate Trends



2022 Upper Sheyenne River Specific Conductance



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
10/1/22	10/31/22

LOCATION: Benson Co, ND

Devils Lake West Outlet 5909 ac-ft over 20 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.64	8.77	8.69	SU	2 X Week	GRAB
SULFATE	636	645	642	mg/l	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	640	645	642	mg/L	Average	GRAB
OUTLET DISCHARGE	0	161	96.1	cfs	Continuous	Recorder
SIGNATURE	<i>Chris Korkowski</i>			11/16/22	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: EAST END OUTLET

FACILITY: Devils Lake Outlet Project

MONITORING PERIOD	
START DATE	END DATE
10/1/22	10/31/22

LOCATION: Ramsey, Benson, Nelson Co, ND

Devils Lake East Outlet 2426 ac-ft over 24 Days

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.47	8.81	8.69	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	2920	2950	2935	µS/cm	Continuous	Recorder
SULFATE	931	982	968	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	953	982	969	mg/l	Average	GRAB
OUTLET DISCHARGE	0	81	39.4	cfs	Continuous	Recorder
SIGNATURE	<i>Chris Korkowski</i>			11/16/22	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

MONITORING PERIOD	
START DATE	END DATE
10/1/22	10/31/22

LOCATION: Benson, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.42	8.52	8.48	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	2080	2160	2132	µS/cm	Continuous	Recorder
SULFATE	639	714	685	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	639	704	679	mg/l	Average	GRAB
FLOW, INSTREAM	0.05	3.3	1.7	cfs	Continuous	Recorder
SIGNATURE	<i>Chris Korkowski</i>			11/16/22	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: DOWNSTREAM OF THE WEST END OUTLET (BREMEN)
 UPSTREAM OF THE EAST END OUTLET

FACILITY: Devils Lake Outlet Project

MONITORING PERIOD	
START DATE	END DATE
10/1/22	10/31/22

LOCATION: Eddy Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.65	8.81	8.71	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	2060	2130	2095	µS/cm	Continuous	Recorder
SULFATE	638	651	645	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	641	651	646	mg/l	Average	GRAB
FLOW, INSTREAM	37.5	171	121	cfs	Continuous	Recorder
SIGNATURE	<i>Chris Korkowski</i>			11/16/22	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: DOWNSTREAM OF BOTH OUTLETS (PEKIN)

FACILITY: Devils Lake Outlet Project

MONITORING PERIOD	
START DATE	END DATE
10/1/22	10/31/22

LOCATION: Nelson Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.58	8.7	8.63	SU	2 X Week	GRAB
SULFATE	618	714	672	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	618	714	675	mg/L	Average	GRAB
FLOW, INSTREAM	NA	NA	NA	cfs	Continuous	Recorder
SIGNATURE	<i>Chris Korkowski</i>			11/16/22	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: DOWNSTREAM OF BOTH OUTLETS (COOPERSTOWN)

FACILITY: Devils Lake Outlet Project

MONITORING PERIOD	
START DATE	END DATE
10/1/22	10/31/22

LOCATION: Griggs Co, ND

PARAMETER	MINIMUM	MAXIMUM	AVERAGE	UNITS	SAMPLING FREQUENCY	TYPE
pH	8.52	8.53	8.52	SU	2 X Week	GRAB
SPECIFIC CONDUCTANCE	2020	2170	2110	µS/cm	Continuous	Recorder
SULFATE	584	673	631	mg/L	2 X Week	GRAB
7 DAY AVERAGE OF SULFATE	584	673	631	mg/l	Average	GRAB
FLOW, INSTREAM	102	293	236	cfs	Continuous	Recorder
SIGNATURE	<i>Chris Korkowski</i>			11/16/22	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

	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	
Date	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)
10/1/2022	0.05	2080	160	13813000	171	2080	79	6849000	92.1	2960	278	2100	239	20662000
10/2/2022	0.12	2080	161	13893000	171	2070	78	6699000	90	2950	283	2150	238	20592000
10/3/2022	0.26	2080	160	13805000	171	2060	73	6338000	86.1	2930	288	2170	233	20143000
10/4/2022	0.28	2080	161	13868000	168	2060	60	5161000	68.7	2920	293	2170	220	19029000
10/5/2022	0.29	2100	160	13843000	169	2060	45	3931000	60.3	2930	293	2160	206	17774000
10/6/2022	0.38	2110	157	13605000	170	2060	10	899000	13.1	2940	289	2170	168	14504000
10/7/2022	3.3	2110	156	13509000	167	2060	68	5877000	60.5	2950	281	2180	224	19386000
10/8/2022	2.8	2120	151	13043000	166	2070	73	6289000	83.5	2960	268	2170	224	19332000
10/9/2022	2.05	2130	151	13046000	165	2070	61	5288000	64.7	2950	244	2160	212	18334000
10/10/2022	1.68	2130	152	13151000	165	2080	81	7003000	89.1	2950	244	2130	233	20154000
10/11/2022	1.22	2130	151	13065000	163	2080	47	4059000	64.3	2950	271	2090	198	17124000
10/12/2022	0.87	2140	148	12816000	158	2080	8	681000	8.81	-	274	2140	156	13497000
10/13/2022	0.85	2150	150	12971000	156	2100	22	1892000	12.4	2930	286	2160	172	14863000
10/14/2022	0.79	2150	147	12661000	162	2120	26	2254000	27.4	2920	277	2170	173	14915000
10/15/2022	1.72	2160	147	12671000	161	2120	41	3514000	46.5	2910	243	2190	187	16185000
10/16/2022	2.19	2140	148	12775000	163	2110	36	3072000	42.7	2940	227	2190	183	15847000
10/17/2022	2.14	2150	150	12921000	166	2120	61	5310000	69.3	2950	226	2130	211	18231000
10/18/2022	1.96	2160	148	12826000	167	2120	60	5185000	69.3	2960	232	2010	208	18011000
10/19/2022	1.72	2160	148	12753000	168	2120	62	5381000	67.5	2920	234	2020	210	18134000
10/20/2022	1.73	2160	74	6378000	164	2110	69	5999000	87	2900	246	2080	143	12377000
10/21/2022	1.68	2170	0	0	100	2120	48	4152000	55.4	2860	261	2090	48	4152000
10/22/2022	1.68	2160	0	0	59.6	2120	43	3712000	46.4	2830	269	2130	43	3712000
10/23/2022	1.55	2160	0	0	58.3	2120	38	3305000	36.4	2890	278	2140	38	3305000
10/24/2022	2.6	2160	0	0	46.7	2150	33	2841000	48.8	2920	272	2140	33	2841000
10/25/2022	2.98	2160	0	0	37.5	2120	0	-	5.37	2870	260	2160	0	0
10/26/2022	3.05	2150	0	0	41.5	2130	0	-	4.96	2840	233	2110	0	0
10/27/2022	3.07	2110	0	0	42.1	2140	0	-	0.57	2720	199	2090	0	0
10/28/2022	2.78	2060	0	0	41.5	2110	0	-	0.44	2520	153	2060	0	0
10/29/2022	2.61	-	0	0	42.5	2110	0	-	0.45	2230	123	2000	0	0
10/30/2022	2.53	-	0	0	42.6	2100	0	-	0.45	2050	111	2020	0	0
10/31/2022	2.36	-	0	0	41.8	2090	0	-	0.46	1840	102	2010	0	0
Minimum	0.05	2060	0	0	37.5	2060	0	681000	0.44	1840	102	2000	0	0
Maximum	3.3	2170	161	13893000	171	2150	81	7003000	92.1	2960	293	2190	242	20896000
Average	1.7	2057	96.1	8303645	121	2033.125	39.4	4403792	43.8	2722	236	2053	135	11713032
			Total (Mgal)	1925			Total (Mgal)	791					Total (Mgal)	2716
			Total (Ac-ft)	5909			Total (Ac-ft)	2426					Total (Ac-ft)	8336

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
10/1/22	-	-	-	-	-	-	-
10/2/22	-	-	-	-	-	-	-
10/3/22	-	-	-	-	-	-	-
10/4/22	08:10:00	2080	8.52	639	639	NA	1
10/5/22	-	-	-	-	-	-	-
10/6/22	-	-	-	-	-	-	-
10/7/22	09:15:00	2110	8.42	695	667	NA	2
10/8/22	-	-	-	-	-	-	-
10/9/22	-	-	-	-	-	-	-
10/10/22	-	-	-	-	-	-	-
10/11/22	-	-	-	-	-	-	-
10/12/22	08:20:00	2140	8.46	694	695	NA	2
10/13/22	-	-	-	-	-	-	-
10/14/22	08:30:00	2150	8.5	693	694	NA	2
10/15/22	-	-	-	-	-	-	-
10/16/22	-	-	-	-	-	-	-
10/17/22	-	-	-	-	-	-	-
10/18/22	-	-	-	-	-	-	-
10/19/22	08:25:00	2160	8.48	714	704	10	2
10/20/22	-	-	-	-	-	-	-
10/21/22	-	-	-	-	-	-	-
10/22/22	-	-	-	-	-	-	-
10/23/22	-	-	-	-	-	-	-
10/24/22	-	-	-	-	-	-	-
10/25/22	-	-	-	-	-	-	-
10/26/22	08:38:00	2150	-	675	675	NA	1
10/27/22	-	-	-	-	-	-	-
10/28/22	-	-	-	-	-	-	-
10/29/22	-	-	-	-	-	-	-
10/30/22	-	-	-	-	-	-	-
10/31/22	-	-	-	-	-	-	-
Minimum		2080	8.42	639	639	10	
Maximum		2160	8.52	714	704	10	
Average		2132	8.48	685	679	10	

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 results

**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
10/1/22	-	-	-	-	-	-	-
10/2/22	-	-	-	-	-	-	-
10/3/22	-	-	-	-	-	-	-
10/4/22	09:20:00	-	8.64	645	645	NA	1
10/5/22	-	-	-	-	-	-	-
10/6/22	-	-	-	-	-	-	-
10/7/22	09:30:00	-	8.71	636	641	NA	2
10/8/22	-	-	-	-	-	-	-
10/9/22	-	-	-	-	-	-	-
10/10/22	-	-	-	-	-	-	-
10/11/22	-	-	-	-	-	-	-
10/12/22	08:30:00	-	8.64	644	640	NA	2
10/13/22	-	-	-	-	-	-	-
10/14/22	08:10:00	-	8.77	640	642	NA	2
10/15/22	-	-	-	-	-	-	-
10/16/22	-	-	-	-	-	-	-
10/17/22	-	-	-	-	-	-	-
10/18/22	-	-	-	-	-	-	-
10/19/22	08:55:00	-	8.7	643	642	9	2
10/20/22	-	-	-	-	-	-	-
10/21/22	-	-	-	-	-	-	-
10/22/22	-	-	-	-	-	-	-
10/23/22	-	-	-	-	-	-	-
10/24/22	-	-	-	-	-	-	-
10/25/22	-	-	-	-	-	-	-
10/26/22	-	-	-	-	-	-	-
10/27/22	-	-	-	-	-	-	-
10/28/22	-	-	-	-	-	-	-
10/29/22	-	-	-	-	-	-	-
10/30/22	-	-	-	-	-	-	-
10/31/22	-	-	-	-	-	-	-
Minimum			8.64	636	640	9	
Maximum			8.77	645	645	9	
Average			8.69	642	642	9	

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

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
10/1/22	-	-	-	-	-	-	-
10/2/22	-	-	-	-	-	-	-
10/3/22	-	-	-	-	-	-	-
10/4/22	07:45:00	2060	8.65	641	641	NA	1
10/5/22	-	-	-	-	-	-	-
10/6/22	-	-	-	-	-	-	-
10/7/22	08:45:00	2060	8.81	649	645	NA	2
10/8/22	-	-	-	-	-	-	-
10/9/22	-	-	-	-	-	-	-
10/10/22	-	-	-	-	-	-	-
10/11/22	-	-	-	-	-	-	-
10/12/22	07:55:00	2080	8.65	647	648	NA	2
10/13/22	-	-	-	-	-	-	-
10/14/22	08:50:00	2120	8.76	645	646	NA	2
10/15/22	-	-	-	-	-	-	-
10/16/22	-	-	-	-	-	-	-
10/17/22	-	-	-	-	-	-	-
10/18/22	-	-	-	-	-	-	-
10/19/22	08:05:00	2120	8.7	638	642	15	2
10/20/22	-	-	-	-	-	-	-
10/21/22	-	-	-	-	-	-	-
10/22/22	-	-	-	-	-	-	-
10/23/22	-	-	-	-	-	-	-
10/24/22	-	-	-	-	-	-	-
10/25/22	-	-	-	-	-	-	-
10/26/22	08:15:00	2130	-	651	651	NA	1
10/27/22	-	-	-	-	-	-	-
10/28/22	-	-	-	-	-	-	-
10/29/22	-	-	-	-	-	-	-
10/30/22	-	-	-	-	-	-	-
10/31/22	-	-	-	-	-	-	-
Minimum		2060	8.65	638	641	15	
Maximum		2130	8.81	651	651	15	
Average		2095	8.71	645	646	15	

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 results

**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
10/1/22	-	-	-	-	-	-	-
10/2/22	-	-	-	-	-	-	-
10/3/22	-	-	-	-	-	-	-
10/4/22	09:35:00	2920	8.68	982	982	NA	1
10/5/22	-	-	-	-	-	-	-
10/6/22	-	-	-	-	-	-	-
10/7/22	07:20:00	2950	8.81	981	982	NA	2
10/8/22	-	-	-	-	-	-	-
10/9/22	-	-	-	-	-	-	-
10/10/22	-	-	-	-	-	-	-
10/11/22	-	-	-	-	-	-	-
10/12/22	09:45:00	-	8.47	931	956	NA	2
10/13/22	-	-	-	-	-	-	-
10/14/22	-	-	-	-	-	-	-
10/15/22	-	-	-	-	-	-	-
10/16/22	-	-	-	-	-	-	-
10/17/22	08:50:00	2950	8.79	974	953	NA	2
10/18/22	-	-	-	-	-	-	-
10/19/22	09:55:00	2920	8.72	972	973	25	2
10/20/22	-	-	-	-	-	-	-
10/21/22	-	-	-	-	-	-	-
10/22/22	-	-	-	-	-	-	-
10/23/22	-	-	-	-	-	-	-
10/24/22	-	-	-	-	-	-	-
10/25/22	-	-	-	-	-	-	-
10/26/22	-	-	-	-	-	-	-
10/27/22	-	-	-	-	-	-	-
10/28/22	-	-	-	-	-	-	-
10/29/22	-	-	-	-	-	-	-
10/30/22	-	-	-	-	-	-	-
10/31/22	-	-	-	-	-	-	-
Minimum		2920	8.47	931	953	25	
Maximum		2950	8.81	982	982	25	
Average		2935	8.69	968	969	25	

Notes:

μ 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
10/1/22	-	-	-	-	-	-	-
10/2/22	-	-	-	-	-	-	-
10/3/22	-	-	-	-	-	-	-
10/4/22	10:00:00	-	8.58	714	714	NA	1
10/5/22	-	-	-	-	-	-	-
10/6/22	-	-	-	-	-	-	-
10/7/22	07:50:00	-	8.7	685	700	NA	2
10/8/22	-	-	-	-	-	-	-
10/9/22	-	-	-	-	-	-	-
10/10/22	-	-	-	-	-	-	-
10/11/22	-	-	-	-	-	-	-
10/12/22	10:05:00	-	8.59	682	684	NA	2
10/13/22	-	-	-	-	-	-	-
10/14/22	-	-	-	-	-	-	-
10/15/22	-	-	-	-	-	-	-
10/16/22	-	-	-	-	-	-	-
10/17/22	07:50:00	-	8.67	648	665	NA	2
10/18/22	-	-	-	-	-	-	-
10/19/22	10:20:00	-	8.61	686	667	22	2
10/20/22	-	-	-	-	-	-	-
10/21/22	-	-	-	-	-	-	-
10/22/22	-	-	-	-	-	-	-
10/23/22	-	-	-	-	-	-	-
10/24/22	-	-	-	-	-	-	-
10/25/22	-	-	-	-	-	-	-
10/26/22	10:05:00	-	-	618	618	NA	1
10/27/22	-	-	-	-	-	-	-
10/28/22	-	-	-	-	-	-	-
10/29/22	-	-	-	-	-	-	-
10/30/22	-	-	-	-	-	-	-
10/31/22	-	-	-	-	-	-	-
Minimum			8.58	618	618	22	
Maximum			8.7	714	714	22	
Average			8.63	672	675	22	

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 (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
10/1/22	-	-	-	-	-	-	-
10/2/22	-	-	-	-	-	-	-
10/3/22	-	-	-	-	-	-	-
10/4/22	11:00:00	2170	8.52	673	673	NA	1
10/5/22	-	-	-	-	-	-	-
10/6/22	-	-	-	-	-	-	-
10/7/22	-	-	-	-	-	-	-
10/8/22	-	-	-	-	-	-	-
10/9/22	-	-	-	-	-	-	-
10/10/22	-	-	-	-	-	-	-
10/11/22	-	-	-	-	-	-	-
10/12/22	11:00:00	2140	8.52	632	632	NA	1
10/13/22	-	-	-	-	-	-	-
10/14/22	-	-	-	-	-	-	-
10/15/22	-	-	-	-	-	-	-
10/16/22	-	-	-	-	-	-	-
10/17/22	-	-	-	-	-	-	-
10/18/22	-	-	-	-	-	-	-
10/19/22	11:05:00	2020	8.53	584	584	32	1
10/20/22	-	-	-	-	-	-	-
10/21/22	-	-	-	-	-	-	-
10/22/22	-	-	-	-	-	-	-
10/23/22	-	-	-	-	-	-	-
10/24/22	-	-	-	-	-	-	-
10/25/22	-	-	-	-	-	-	-
10/26/22	16:45:00	2110	-	634	634	NA	1
10/27/22	-	-	-	-	-	-	-
10/28/22	-	-	-	-	-	-	-
10/29/22	-	-	-	-	-	-	-
10/30/22	-	-	-	-	-	-	-
10/31/22	-	-	-	-	-	-	-
Minimum		2020	8.52	584	584	32	
Maximum		2170	8.53	673	673	32	
Average		2110	8.52	631	631	32	

Notes:

μ 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

Bold font denotes sample sulfate concentration exceeds 750 mg/L