

**North Dakota Department of Environmental Quality Public Notice
Reissue of an NDPDES Permit**

Public Notice Date: 2/26/2020

Public Notice Number: ND-2020-009

Purpose of Public Notice

The Department intends to reissue the following North Dakota Pollutant Discharge Elimination System (NDPDES) Discharge Permit under the authority of Section 61-28-04 of the North Dakota Century Code.

Permit Information

Application Date: 12/13/2019

Application Number: ND0022896

Applicant Name: Minot City Of

Mailing Address: 1025 31st St SE, Minot, ND 58701-5006

Telephone Number: 701.857.4140

Proposed Permit Expiration Date: 3/31/2025

Facility Description

The North Dakota Department of Environmental Quality proposes to reissue NDPDES permit #ND0022896 for the waste water treatment facility servicing the City of Minot, ND. Treated wastewater is discharged to the Souris River, a Class IA stream, via a modified waterway. Permitted Outfall 001 is located in the SE ¼ of Section 11, Township 154 North, Range 82 West, and permitted Outfall 002 is located in the NE ¼ of Section 11, Township 154 North Range 82 West.

Tentative Determinations

Proposed effluent limitations and other permit conditions have been made by the Department. They assure that State Water Quality Standards and applicable provisions of the FWPCA will be protected.

Information Requests and Public Comments

Copies of the application, draft permit, and related documents are available for review. Comments or requests should be directed to the ND Dept of Env Quality, Div of Water Quality, 918 East Divide Ave, Bismarck ND 58501-1947 or by calling 701.328.5210.

All comments received by March 26, 2020 will be considered prior to finalizing the permit. If there is significant interest, a public hearing will be scheduled. Otherwise, the Department will issue the final permit within sixty (60) days of this notice. If you require special facilities or assistance relating to a disability, call TDD at 1.800.366.6868.

**FACT SHEET FOR NDPDES PERMIT
ND0022896**

**CITY OF MINOT
MINOT, ND**

DATE OF FACT SHEET – FEBRUARY 2020

INTRODUCTION

The Federal Clean Water Act (CWA, 1972, and later amendments in 1977, 1981, and 1987, etc.) established water quality goals for the navigable (surface) waters of the United States. One mechanism for achieving the goals of the CWA is the National Pollutant Discharge Elimination System (NPDES), which the US Environmental Protection Agency (EPA) oversees. In 1975, the State of North Dakota was delegated primacy of the NPDES program by EPA. The North Dakota Department of Environmental Quality, hereafter referred to as “department”, has been designated the state water pollution control agency for all purposes of the Federal Water Pollution Control Act, as amended [33.1 U.S.C. 1251, et seq.], and is authorized to take all action necessary or appropriate to secure to this state the benefits of that act and similar federal acts. The department’s authority and obligations for the wastewater discharge permit program is in the North Dakota Administrative Code (NDAC) 33.1.1-16 which was adopted under North Dakota Century Code (NDCC) chapter 61-28. In North Dakota, these permits are referred to as North Dakota Pollutant Discharge Elimination System (NDPDES) permits.

The following regulations apply to municipal NDPDES permits:

- Procedures the department use for issuing NDPDES permits (NDAC chapter 33.1-16-01),
- Standards of Quality for Waters of the State (NDAC chapter 33.1-16-02.1).

These rules require any treatment facility operator to obtain an NDPDES permit before discharging wastewater to state waters. They also define the basis for limits on each discharge and for other requirements imposed by the permit.

According to the NDAC, section 33.1-16-01-08, the department must prepare a draft permit and accompanying fact sheet and make it available for review. The department must also publish an announcement (public notice) during a period of thirty days, informing the public where a draft permit may be obtained and where comments regarding the draft permit may be sent (NDAC section 33.1-16-01-07). For more information regarding preparing and submitting comments about the fact sheet and permit, please see **Appendix A – Public Involvement**. Following the public comment period, the department may make changes to the draft NDPDES permit. The department will summarize the responses to comments and any changes to the permit in **Appendix D – Response to Comments**.

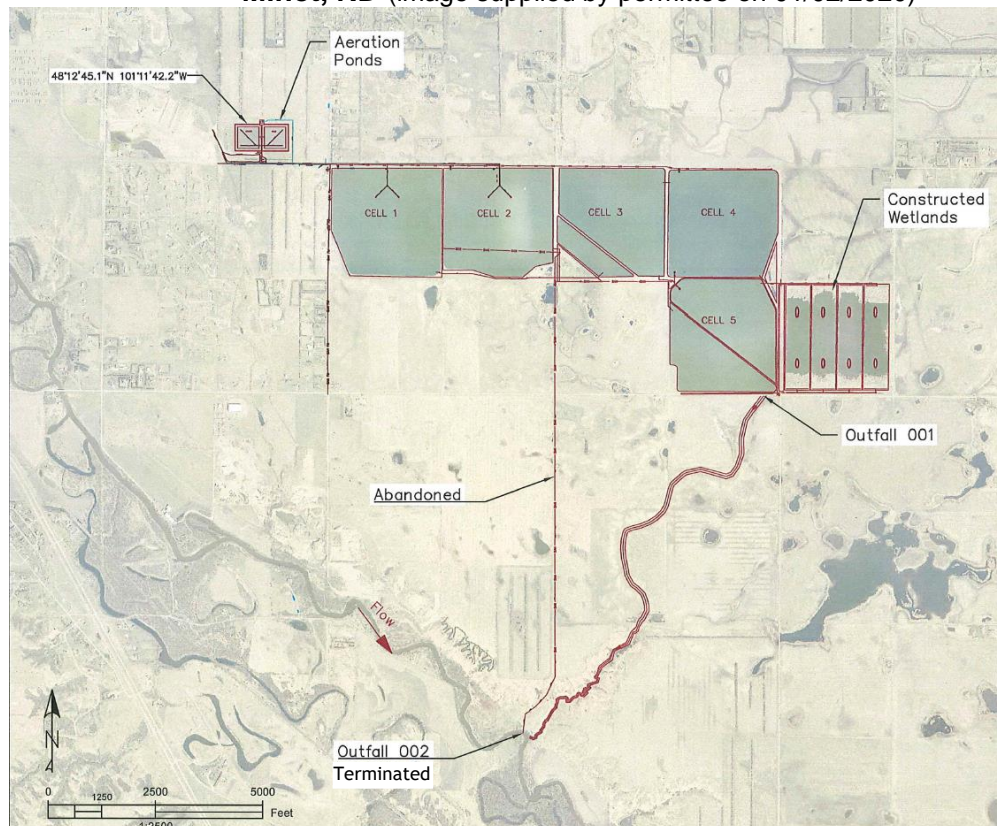
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BACKGROUND INFORMATION

Table 1 – General Facility Information	
Permittee:	The City of Minot
Facility Name and Address:	Wastewater Treatment Facility 512 2 nd Ave, Minot, ND 58701-3739
Permit Number:	ND0022896
Permit Type:	Major Municipal Permit Reissuance
Type of Treatment	Wastewater Stabilization Ponds - Secondary Treatment
SIC Code:	4952
Discharge Locations:	Outfall 001: Souris River, Class IA stream Latitude: 48.199913 Longitude: -101.26850 Outfall 002: Souris River, Class IA stream Latitude: 48.199913 Longitude: -101.14666
Hydrologic Code:	09010008 – Moose Mountain – Souris River
Population:	Approximately 50,000

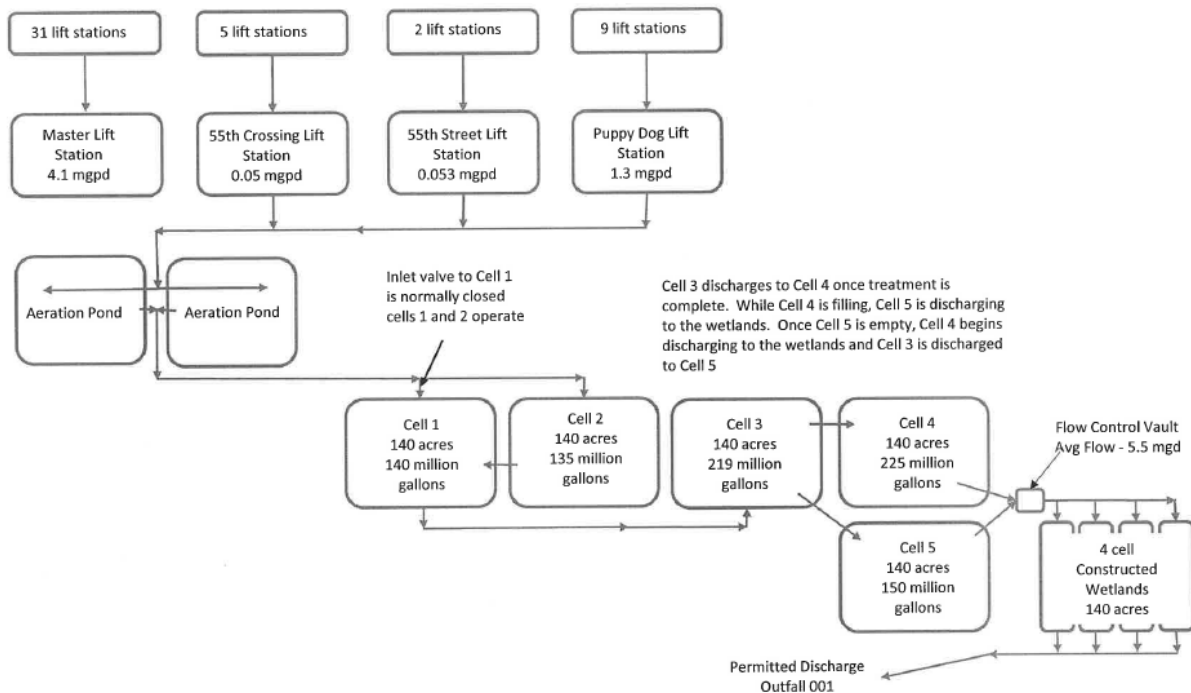
Figure 1 – Aerial Photograph of the City of Minot Wastewater Treatment Facility – Minot, ND (image supplied by permittee on 01/02/2020)



FACILITY DESCRIPTION

The NDPDES permit reapplication is for a 5-cell waste stabilization pond system and artificial wetlands treatment system. The Minot Wastewater Treatment Plant (WWTP) was first built in 1960, with additions added in 1973, 1983, and 1990 (**table 2**). Fifty-one (51) lift stations across the City of Minot direct all wastewater into the facilities 2 aeration ponds. From there water is gravity piped into the 5-cell waste stabilization system and the constructed wetland for final treatment (**Figure 2**). The wastewater from the aeration ponds enters the stabilization cell system through cell 2 which has a connecting pipe with cell 1. Water then exits from cell 1 and enters cell 3 for further retention and biological treatment. Cell 3 water is then moved to either cell 4 or cell 5. Cells 4 and 5 rotate filling with treated water from cell 3 and transferring into the constructed wetlands. The water flows through the 140-acre constructed wetland before being discharged from outfall 001. The discharge enters a modified drainage way and travels approximately 2.5 miles before entering the Souris River, a Class IA stream. The lagoons are located in the N ½, Sections 35 and 36, and the SE ¼, Section 36, Township 155 North, Range 82 West in Ward County. The wastewater treatment plant presently services a population of approximately 50,000 people in the City of Minot and receives an average daily influent flow of 1,700,000 gallons per day (gpd).

Figure 2 – City of Minot Wastewater Process Flow Diagram



The Souris River periodically experiences extended periods of low flow. This presented limited opportunities for the city to discharge during select time periods. In order to provide the city more flexibility, several advanced wastewater treatment options were examined, and the constructed wetlands system was the alternative selected by the city. In August 1991, the newly constructed artificial wetlands system went online at the City of Minot’s wastewater treatment facility. The wetland system covers approximately 140 acres and is in the SW ¼,

Section 31, Township 155 North, Range 81 West in Ward County. The city once had the capability to discharge directly from lagoon Cell No. 5 (Outfall 002) to the Souris River; however, this discharge point has not been used in approximately 15 years and the pump house has been removed which enabled this point to discharge.

Table 2 – Treatment Cells Surface areas		
Cell	Surface Area (in acres)	Year Built
Aeration ponds (2)	8 (each)	-
1	143	1960
2	138	1960
3	140	1973
4	154	1983
5	154	1983
Wetlands	160	1991

Outfall Descriptions

Discharges at any location not authorized under a NDPDES permit is a violation of the Clean Water Act (CWA) and could subject the person(s) responsible for such discharge to penalties under section 309 of the CWA. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge within the specified timeframe outlined in this permit could subject such person(s) to criminal penalties as provided under the CWA.

The authorization to discharge provided under Minot’s WWTP permit is limited to those outfalls specifically designated below:

Outfall 001. Active. Final.			
Latitude: 48.1747	Longitude: -101.1686	County: Ward	
Township: 154N	Range: 82W	Section: 11	QQ: DAA
Receiving Stream: Souris River		Classification: Class IA Stream	
Outfall Description: Controlled discharge deemed to be non-continuous. Discharges from the artificial wetland treatment system into a modified drainage way which flows approximately 2.5 miles before entering the Souris River.			

Outfall 002. Active. Final.			
Latitude: 48.1750	Longitude: -101.1688	County: Ward	
Township: 154N	Range: 82W	Section: 11	QQ: ADA
Receiving Stream: Souris River		Classification: Class IA Stream	
Outfall Description: Controlled discharge deemed to be non-continuous. An abandoned pipe leading from Cell 5 that could discharge directly into the Souris River.			

SIGNIFICANT PERMIT CHANGES

- Monitoring parameters have been changed for nitrogen. Total Nitrogen will be monitored and reported to the department in place of nitrate and nitrite and Total Kjeldahl Nitrogen (TKN). Total nitrogen is the sum of total kjeldahl nitrogen (ammonia, organic and reduced nitrogen) and nitrate-nitrite, and is a more comprehensive test for nitrogen.
- The department has made a determination to increase monitoring frequency for total phenols from annually to quarterly for the 2020-2024 permit cycle. Two (2) sample results for the annual phenols monitoring were in exceedance of the water quality and human health standards.
- E. coli sampling and analysis frequency was specified to be 2 times in a week during a discharge. The previous permit did not specify the sampling frequency.
- Updated facility and outfall location information to be more specific.
- Discharge monitor reporting (DMR) for in-stream hardness as CaCO₃ has been added to the reporting requirements. This parameter was tested for previously but was not reported in the DMRs.
- Whole effluent toxicity (WET) testing has been changed from monthly to quarterly to maintain constancy with like facilities. The previous permit had required monthly WET testing. This facility has had no permit excursions over the current permit cycle.
- Language throughout the proposed permit was made more consistent with other NDPDES POTW permits.

PERMIT STATUS

The department issued the previous permit for this facility on April 1, 2015. The previous permit had effluent monitoring requirements for: Biochemical Oxygen Demand (BOD₅), Total Suspended Solids (TSS), pH, Ammonia as N, TKN, Nitrate & Nitrite, Phosphorus, *Escherichia coli* (*E. coli*), Oil and Grease, Whole Effluent Toxicity (WET), and metals. There were additional requirements for upstream monitoring of pH, temperature, hardness, flow, and ammonia as N, as well as monitoring the influent for metals, BOD₅, and TSS.

SUMMARY OF COMPLIANCE WITH PREVIOUS PERMIT

Department staff last conducted a non-sampling compliance inspection on July 30, 2019. The department's compliance assessment is based on review of the facility's Discharge Monitoring Report (DMR) forms, records, and facility operation.

Historical Data

The concentration of pollutants upstream in the Souris river, in the influent, and the effluent was reported in DMR forms. The data is summarized in the tables below:

Parameter	Units	Range	Average
Flow	ft ³ /sec	10.4 – 2180	148.7
Ammonia as N	mg/l	0.11 – 2.85	0.20
pH	SU	7.48 – 7.78	7.78
Temperature	°C	0 – 28	12.6

Parameter	Units	Range	Average
BOD ₅ (30-day Avg.)	mg/l	130 – 248	228
TSS (30-day Avg.)	mg/l	59 – 270	160
Antimony**	ug/l	1.0	1.0
Arsenic**	ug/l	2.0 – 4.0	3.0
Beryllium**	ug/l	0.5 ‡	0.5 ‡
†Cadmium**	ug/l	0.1 ‡	0.1 ‡
†Chromium**	ug/l	2.0 – 8.0	4.5
†Copper**	ug/l	19 – 71	47.2
Cyanide**	mg/l	0.005 – 0.009	0.0065
†Lead**	ug/l	0 – 4.0	2.0
Mercury**	ug/l	0.2 ‡	0.2 ‡
†Nickel**	ug/l	4.0 – 10.0	5.3
Phenols	mg/l	0.087 – 80.6	33.1
Selenium**	ug/l	3.0 – 5.0	4.5
†Silver**	ug/l	0 – 2.0	0.75
Thallium**	ug/l	0.1 ‡	0.1 ‡
†Zinc**	ug/l	80 – 230	155

Notes:

- * These data are the daily maximums for the discharge events.
- ** These data fall under the testing requirements for total metals.
- † These values have a hardness dependent water quality standard.
- ‡ These parameter testing results were below detect and are reported at the detection level

Table 5 – City of Minot Effluent Data for Outfall 001 (submitted by DMR 2015-2019)

Parameter	Units	Range	Average	Permit Limit	Excursions
BOD ₅ (7-day Avg.)	mg/l	6 – 19.9	8.35	45	0
BOD ₅ (30-day Avg.)	mg/l	6 – 14.2	6.75	25	0
TSS (7-day Avg.)	mg/l	5 – 29.5	13.8	45	0
TSS (30-day Avg.)	mg/l	5 – 26.3	7.93	30	1
<i>E. coli</i> (Monthly Avg.)	#/100ml	3.4 – 1853	274	126	84
<i>E. coli</i> (Daily Max)	#/100ml	9.6 – 2419.6	845	409	84
pH	SU	7.24 – 9.28	7.77	7 – 9	0
Ammonia as N (Monthly Avg.)	mg/l	0.56 – 11.7	2.05	calculated	34
TKN	mg/l	0.1 – 9.0	4.97	-	NA
Nitrate & Nitrite	mg/l	0.1 – 6.2	0.67	-	NA
Phosphorus	mg/l	0.3 – 68	2.05	-	NA
Oil and Grease	mg/l	0	0	10	0
Acute Toxicity	Pass or Fail	N/A	N/A	No failure	0
Acute Toxicity	TU _a	<1	NA	<1	0
Flow*	MGD	1.7 – 9.9	4.4	-	NA
Total Drain	MG	26.6 – 610	145.4	-	NA
Antimony**	ug/l	1.0	1.0	-	NA
Arsenic**	ug/l	2.0 – 8.0	4.5	-	NA
Beryllium**	ug/l	0.5 ‡	0.5 ‡	-	NA
†Cadmium**	ug/l	0.1 ‡	0.1 ‡	-	NA
†Chromium**	ug/l	2.0	2.0	-	NA
†Copper**	ug/l	2.0 – 8.0	3.5	-	NA
Cyanide**	mg/l	0.005 – 0.007	0.0055	-	NA
Hardness**	mg/l	426 – 586	504	-	NA
†Lead**	ug/l	0.5 ‡	0.5 ‡	-	NA
Mercury**	ug/l	0.2 ‡	0.2 ‡	-	NA
†Nickel**	ug/l	2.0 – 4.0	4.0	-	NA
Phenols	mg/l	0.01 – 25.1	11.8	-	NA
Selenium**	ug/l	2.0 – 5.0	3.5	-	NA
†Silver**	ug/l	0.5 ‡	0.5 ‡	-	NA
Thallium**	ug/l	0.1 ‡	0.1 ‡	-	NA
†Zinc**	ug/l	50	50	-	NA

Notes:

- * These data are the daily maximums for the discharge events.
- ** These data fall under the testing requirements for total metals.
- † These values have a hardness dependent water quality standard.
- ‡ These parameter testing results were below detect and are reported at the detection level.

Summary of DMR Data Excursions

The following table is a summary of all limit exceedances reported in the last permit cycle from April 2015 – December 2019:

Table 6 – Summary of DMR reported limit excursions from outfall 001 (2015-2019)		
Parameter	Date	Excursions
TSS	October 2018	1
<i>E. coli</i>	July 2015	3
<i>E. coli</i>	August 2015	2
<i>E. coli</i>	September 2015	1
<i>E. coli</i>	July 2016	1
<i>E. coli</i>	August 2016	5
<i>E. coli</i>	June 2017	1
<i>E. coli</i>	July 2017	2
<i>E. coli</i>	August 2017	10
<i>E. coli</i>	September 2017	7
<i>E. coli</i>	October 2017	2
<i>E. coli</i>	May 2018	1
<i>E. coli</i>	June 2018	4
<i>E. coli</i>	July 2018	9
<i>E. coli</i>	August 2018	9
<i>E. coli</i>	October 2018	3
<i>E. coli</i>	June 2019	3
<i>E. coli</i>	July 2019	7
<i>E. coli</i>	August 2019	6
<i>E. coli</i>	September 2019	8
Ammonia as N	May 2015	1
Ammonia as N	June 2015	2
Ammonia as N	July 2015	7
Ammonia as N	November 2015	4
Ammonia as N	December 2015	14
Ammonia as N	April 2016	1
Ammonia as N	May 2016	4
Ammonia as N	June 2016	1

Bypasses

There were 3 bypass events during the last permit cycle. On June 6, 2015 a bypass occurred at puppy dog lift station when a pump overheated which led to the discharge of 900,000 gallons of wastewater. The pump has since been replaced. On November 15, 2017 a backup generator did not work properly, and 2,000 gallons of wastewater was discharged. The generator was fixed and returned to service. On August 25, 2018 a pipe broke at the wastewater treatment facility and caused 100,000 gallons of wastewater to be discharged. The water was pumped back into the system, and the pipe was fixed.

PROPOSED PERMIT LIMITATIONS AND MONITORING REQUIREMENTS

EFFLUENT LIMITATIONS

The discharge of wastewater generated by the WWTP is regulated by secondary treatment limitations as well as state rules. Secondary treatment limitations may be found in Title 40 of the Code of Federal Regulations, Part 133 (or 40 CFR 133) and in NDAC section 33.1-16-01-30. These regulations describe the minimum level of effluent quality attainable by secondary treatment of municipal wastewater in terms of BOD₅, TSS and pH. The regulations also include requirements to remove at least 85 percent of the BOD₅ and TSS found in the influent or provide treatment equivalent to secondary treatment under certain circumstances. NDAC section 33.1-16-01-14 also establishes additional treatment standards for municipal wastes.

Limitations also may be generated using Best Professional Judgment (BPJ) in the absence of a federal standard to ensure reasonable control technologies are used to prevent potential harmful effects of the discharge. In addition, the department must consider and include limitations necessary to protect water quality standards applicable to the receiving waters.

Limitations based on numeric nutrient criteria are not being included in the proposed permit. Numeric nutrient criteria have yet to be developed for the state of North Dakota. Currently, the WQS contains a narrative standard stating that surface waters must be free from nutrients in concentration loadings that cause objectionable growth of vegetation, algae, or other impairments.

The effluent limitations become effective on the permit effective date. The limitations and basis are described in the table below (**table 7**):

Table 7 – Permit Effluent Limitations and Limit Basis for Outfalls 001 and 002				
Effluent Parameter	30- Day Avg.	7-Day Avg.	Daily Max	Basis
BOD ₅ , mg/l ^a	25	45	*	NDAC 33.1-16-01-14(3)(1) 40 CFR 133.1.102(a)(2)
TSS, mg/l ^b	30	45	*	40 CFR 133.1.102(b)
<i>E. coli</i> , cfu/100ml ^c	126	*	409	WQS
Ammonia as N, mg/l ^{d, e}	Applicable Water Quality Standard Calculation (see table 8)			WQS
pH, SU	7.0 to 9.0			WQS
Oil and Grease, mg/l ^f	*	*	10	WQS and BPJ
Whole Effluent Toxicity	No Acute Toxicity			40 CFR 122.44(d)(1)(iv),(v)
There shall be no discharge of floating solids or visible foam in other than trace amounts, nor a discharge that causes a visible sheen in the receiving waters.				WQS
Notes:				
The basis of the effluent limitations is given below:				
- “BPJ” refers to the best professional judgement of the permit writer and the department.				
- “CFR” refers to the effluent limitations found in the Current Federal Register.				
- “NDAC” refers to the effluent limitations found in the North Dakota Administrative Code.				
- “WQBEL” refers to water quality-based effluent limits that are site-specific evaluations of the discharge and its effect on the receiving water and is designed to protect the quality of the receiving water by ensuring that State water quality standards are met.				
- “WQS” refers to effluent limitations based on North Dakota’s “Standards of Quality for Waters of the State”, NDAC Chapter 33.1.1-16-02.1.				
a. The limits for biochemical oxygen demand (BOD ₅) are based on 40 CFR 133.1.102(a) “Secondary Treatment Standards”, and NDAC section 33.1.1-16-01-14(3)(c)(1) and are the same as in the previous permit.				
b. The limits for TSS are based on 40 CFR 133.1.102(b), “Secondary Treatment Standards.”				
c. The limit for <i>E. coli</i> applies from April 1 through October 31.				
d. A discharge ammonia criterion will be dependent on river flow, discharge rate, river pH and temperature, and the effluent concentration. This determination shall be in accordance to the formula specified in the latest revision of the state water quality standards.				
e. Permittee will use Souris River parameters to calculate the real-time water quality standard for ammonia. This calculated limit will be compared to facility effluent data on ammonia, and if the effluent value is greater than the calculated limit, the permittee will report a violation.				
f. There shall be no floating oil or visible sheen present in the discharge. If floating oil or a visible sheen is detected in the discharge, the department shall be contacted, and a grab sample analyzed to ensure compliance with the concentration limitation. Any single analysis and/or measurement beyond this limitation shall be considered a violation of the conditions of the permit.				

The permittee must limit and monitor all discharges as specified below (**table 8**):

Table 8 – Permit Limits			
Effluent Monitoring Parameters and Limitations for Outfalls 001 and 002			
Parameter	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit
Biochemical Oxygen Demand (BOD ₅)	25 mg/l	45 mg/l	*
Temperature (°C)	*	*	Report
pH	Shall remain between 7.0 to 9.0 s.u.		
Total Suspended Solids (TSS)	30 mg/l	45 mg/l	*
Escherichia coli (E. coli) ^b	126/100 ml	*	409/100 ml
Oil & Grease ^c	*	*	10 mg/l
Nitrogen, Total	*	*	*
Ammonia as N ^d	Refer to the Ammonia Table below (Table 9)		
Phosphorus, Total (as P)	*	*	*
Effluent Flow, MGD	Report	*	Report Max Daily Values
Total Flow, mgal	*	*	Report Monthly Total
Whole Effluent Toxicity (WET)	Refer to Whole Effluent Toxicity (WET) Requirements		
Metals, Total (40 CFR 122 - App D; Table III) ^e	Influent and Effluent		
Phenols, Total	*	*	Report
Souris River Upstream Parameters - Collect same days as effluent ammonia as N			
Parameter	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit
Flow (cfs) ^{a, f}	*	*	Report
pH (s.u.) ^a	*	*	Report
Temperature (°C) ^a	*	*	Report
Ammonia as N (mg/l) ^a	*	*	Report
Hardness as CaCO ₃	*	*	Report
Notes:			
* . This parameter is not limited. However, the department may impose limitations based on sample history and to protect the receiving waters.			
a. A pre-discharge sample must be taken prior to the start of any discharge. This analysis shall be reported to the department. A pre-discharge sample shall be sampled and analyzed as specified above. This pre-discharge sample shall represent the first week discharge sample. An additional sample of the actual discharge shall be taken and analyzed at a frequency specified below (table 10) for the duration of the discharge.			
b. <i>E. coli</i> shall not exceed 126 organisms per 100 milliliters (ml) as a geometric mean of representative samples collected during any 30-day consecutive period, nor shall it exceed 409 organisms per 100 ml. This limit applies from April 1 through October 31.			

- c. If a visible sheen or floating oil is observed at the discharge point, an oil & grease sample shall be collected to determine compliance with the 10 milligrams per liter (mg/l) concentration limit.
- d. When there is stream flow, the permittee will use in-stream parameters to calculate (refer to formula in table 9) the real-time water quality standard for ammonia as N. This calculated limit will be compared to facility effluent data on ammonia, and if the effluent value is greater than the calculated limit, the permittee will report an ammonia as N exceedance.
- e. A total hardness of the receiving stream needs to be determined every time metals are sampled and analyzed. The hardness is used to calculate parameter criteria according to the state water quality standards. This sample shall be collected upstream of the final discharge sites.
- f. River flow shall be recorded from a representative location upstream of the mixing point with the Souris River. If there is no Souris River flow, ammonia as N must meet the state water quality standard at end-of-pipe.

Stipulations:

The discharge shall not contain, in sufficient amounts to be unsightly or deleterious, any floating debris, oil, scum, and other floating materials attributable to municipal wastewater operations.

Samples taken in compliance with the monitoring requirements specified in this permit shall be taken prior to leaving city property or entering the receiving stream.

The following table contains the applicable formula for calculating the ammonia as N water quality standard limits (**table 9**):

Table 9 - Ammonia Effluent Limitations for Outfalls 001 and 002
<p>Average Monthly Ammonia as N Limitation</p> <p>The 30-day average concentration of total ammonia (expressed as N in mg/l) does not exceed the numerical value given by the following formula; and the highest four-day average concentration of total ammonia within the 30-day averaging period does not exceed 2.5 times the numerical value given by the following formula:</p> $\frac{0.0577}{(1+10^{7.688-pH})} + \frac{2.487}{(1+10^{pH-7.688})} \bullet CV;$ <p style="text-align: center;">where CV = 2.85, when T < 14°C; or CV = 1.45 * 100.028*(25-T), when T > 14°C. Receiving stream pH is used for the calculation</p>
<p>Daily Maximum Limitation</p> <p>For acute toxicity, the one-hour average concentration of total ammonia (expressed as N in mg/l) does not exceed the numerical value given by the following formula:</p> $\frac{0.411}{1 + 10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$ <p style="text-align: center;">Receiving stream pH is used for the calculation</p>

Note – During periods when the Souris River is flowing, the permittee may utilize up to ten percent of stream flow for calculating effluent concentrations at the time of discharge. During periods of no flow in the Souris River, the permittee must meet ammonia as N state water quality standards at the end-of-pipe. During periods of stream flow, in-stream concentrations will be calculated on a mass balance basis using the following formula:

In-stream concentration = $(Q_u * C_u + Q_e * C_e) / (Q_u + Q_e)$ where
 Q_u = 10% of the Souris River Flow parameter
 C_u = Souris River ammonia parameter
 Q_e = Effluent flow parameter
 C_e = Ammonia as N parameter

All discharges from Outfalls 001 and 002 are required to meet the water quality standard for ammonia as N at any time during the discharge period.

The sampling frequency and sample type for all required monitored parameters is specified below (**table 10**):

Table 10 – Monitoring Frequency Requirements		
Effluent Monitoring Frequency Requirements for Outfalls 001 and 002		
Parameter	Sample Frequency	Sample Type
Biochemical Oxygen Demand (BOD ₅)	2/week ^a	Composite
Temperature (°C)	2/week ^a	Grab
pH	Daily	Grab
Total Suspended Solids (TSS)	2/week ^a	Composite
Escherichia coli (E. coli)	2/week ^{a, b}	Grab
Oil & Grease ^c	Daily	Visual
Nitrogen, Total	1/month	Composite
Ammonia as N ^d	3/week	Composite
Phosphorus, Total (as P)	1/month	Composite
Effluent Flow, MGD	1/day	Instantaneous
Total Flow, mgal	1/month	Calculated
Whole Effluent Toxicity (WET)	1/quarter	Grab
Metals, Total (40 CFR 122 - App D; Table III)	1/year ^d	Composite
Phenols, Total	1/quarter	Grab
Influent Monitoring Requirements		
Parameter	Sample Frequency	Sample Type
Biochemical Oxygen Demand (BOD ₅)	2/month	Composite
Total Suspended Solids (TSS)	2/month	Composite
Metals, Total (40 CFR 122 - App D; Table III)	1/year	Composite

Table 10 – Monitoring Frequency Requirements

Souris River Upstream Monitoring Requirements –
 (Collect same days as effluent ammonia as N)

Parameter	Sample Frequency	Sample Type
Flow (cfs)	3/week ^{a, c}	USGS stream data
pH (s.u.) ^a	3/week ^a	Grab
Temperature (°C) ^a	3/week ^a	USGS stream data
Ammonia as N (mg/l) ^a	3/week ^a	Grab
Hardness as CaCO ₃	Annually	Grab

Notes:

- a. A pre-discharge sample must be taken prior to the start of any discharge. This analysis shall be reported to the department. A pre-discharge sample shall be sampled and analyzed for the parameters specified above. This pre-discharge sample shall represent the first week discharge sample. An additional sample of the actual discharge shall be taken and analyzed as specified in this table (**table 10**) for the duration of the discharge.
- b. *E. coli* shall not exceed 126 organisms per 100 milliliters (ml) as a geometric mean of representative samples collected during any 30-day consecutive period, nor shall samples collected during any 30-day consecutive period individually exceed 409 organisms per 100 ml. This limit applies from April 1 through October 31.
- c. River flow shall be recorded from a representative location upstream of the mixing point with the Souris River. If there is no Souris River flow, ammonia as N must meet the state water quality standard at end-of-pipe.
- d. A total hardness of the receiving stream needs to be determined every time metals are sampled and analyzed. The hardness is used to calculate parameter criteria according to the state water quality standards. This sample shall be collected upstream of the final discharge sites.

SECONDARY TREATMENT EFFLUENT LIMITS

Federal and state regulations define technology-based effluent limits for municipal wastewater treatment plants. These effluent limits are given in 40 CFR part 133.1 and in NDAC section 33.1-16-01-30. These regulations are performance standards that constitute all known, available, and reasonable methods of prevention, control, and treatment for municipal wastewater.

NDAC section 33.1-16-01-30 incorporates by reference 40 CFR 133.1, which lists the following technology-based limits for BOD₅, TSS, and pH:

Table 11 – Secondary Treatment Limits

Parameter	30-Day Average	7-Day Average
BOD ₅	30 mg/l	45 mg/l
TSS	30 mg/l	45 mg/l
pH	Remain between 6.0 – 9.0 S.U.	NA
Percent Removal	85% BOD ₅ and TSS	NA

NDAC section 33.1-16-01-14(3)(c)(1) allows for adjustment of the secondary treatment criteria to reflect site specific considerations. A five-day biochemical oxygen demand limit of twenty-five milligrams per liter (consecutive thirty-day average) may be applied in instances in which limits expressed in terms of secondary treatment standards would be impractical or deemed inappropriate to protect receiving waters.

The department acknowledges that 40 CFR 133 requires an 85% removal for BOD₅ and TSS. The percent removal rate in 40 CFR 133 is dependent upon the influent and effluent samples being taken at the approximate same time, and which lagoon systems have a hydraulic residency time of greater than 30 days. Therefore, the influent and effluent samples are not representative of the same wastewater. Therefore, the department has made a determination to not include the 85% removal for this facility.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITS

The North Dakota State Water Quality Standards (NDAC Chapter 33.1-16-02.1) are designed to protect water quality and preserve the beneficial uses of North Dakota's surface waters. Wastewater discharge permits must include conditions that ensure the discharge will meet the surface water quality standards. Water quality-based effluent limits may be based on an individual waste load allocation or on a waste load allocation developed during a basin wide total maximum daily load (TMDL) study. TMDLs result from a scientific study of the water body and are developed in order to reduce pollution from all sources.

The Souris River is identified as a Class IA stream in the State's standard of water quality, and the portion of the Souris River that includes the permitted outfall sites is not listed as impaired in the Section 303(d) report¹. The quality of the waters in class IA streams shall be the same as the quality of class I streams, except where natural conditions exceed class I criteria for municipal and domestic use, the availability of softening or other treatment methods may be considered in determining whether ambient water quality meets the drinking water requirements of the department (NDAC 33.1-16-02.1-09).

Numerical Criteria for the Protection of Aquatic Life and Recreation

Numerical water quality criteria are listed in the water quality standards for surface waters (NDAC Chapter 33.1-16-02.1). These specify the maximum pollutants allowed in receiving water to protect aquatic life and recreation in and on the water. The department uses numerical criteria along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limits, the discharge must meet the water quality-based limits.

Numerical Criteria for the Protection of Human Health

The U.S. EPA has published numeric water quality criteria for the protection of human health that are applicable to dischargers. These criteria are designed to protect humans from exposure to pollutants linked to cancer and other diseases, based on consuming fish and

¹ Table VI-1. 2018 List of Section 303(d) TMDL Waters for the Souris River Basin in North Dakota.

shellfish and drinking contaminated surface waters. The water quality standards also include radionuclide criteria to protect humans from the effects of radioactive substances.

Narrative Criteria

Narrative water quality criteria (NDAC section 33.1-16-02.1-08) limit concentrations of pollutants from exceeding applicable standards of the receiving waters. The department adopted a narrative biological goal solely to provide an additional assessment method that can be used to identify impaired surface waters.

Antidegradation

The purpose of North Dakota's Antidegradation Policy (NDAC Chapter 33.1-16-02.1 (Appendix IV)) is to:

- Provide all waters of the state one of three levels of antidegradation protection.
- Determine whether authorizing the proposed regulated activity is consistent with antidegradation requirements.

The department's fact sheet demonstrates that existing and designated uses of the receiving water will be protected under the conditions of the proposed permit.

Mixing Zones

North Dakota's WQS contain a Mixing Zone and Dilution Policy and Implementation Procedure, NDAC Chapter 33.1-16-02.1 (Appendix III). This policy addresses how mixing and dilution of point source discharges with receiving waters will be addressed in developing chemical-specific and whole effluent toxicity discharge limitations for point source discharges. Depending upon site-specific mixing patterns and environmental concerns, some pollutants/criteria may be allowed a mixing zone or dilution while others may not. In all cases, mixing zone and dilution allowances shall be limited, as necessary, to protect the integrity of the receiving water's ecosystem and designated uses.

Whole Effluent Toxicity (WET) Requirements

Acute Toxicity Testing

Acute toxicity tests shall be conducted in general accordance with the procedures set out in the latest revision of "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms," EPA-821-R-02-012 (Fifth Ed., October 2002). The permittee shall conduct an acute 48-hour static renewal toxicity test using freshwater fleas, *Ceriodaphnia dubia* and an acute 96-hour static renewal toxicity test using fathead minnows, *Pimephales promelas*.

Table 12 – Acute WET requirements for Outfall 001 and 002						
Effluent Dilution	0%(Control)	12.5%	25%	50%	75%	100%
Dilution Water	Souris River					
Species and Test Type	<i>Ceriodaphnia dubia</i> - 48 Hour Acute - Static Renewal - 20°C					
	Fathead minnow - 96 Hour Acute - Static Renewal - 20°C					
Endpoint	TU _a					
Compliance Point	End-of-pipe					
Sample Frequency	1/Quarter					
Sample Type	Grab					
Maximum Daily Limit (MDL)	<1 TU _a					
Average Monthly Limit (AML)	<1 TU _a					
Test Failure	The 48-hour LC ₅₀ effluent value must be <1 TU _a to indicate a passing test. Any 48-hour LC ₅₀ effluent value >1 TU _a will constitute a failure. Tests in which the control survival is less than 90% are invalid and must be repeated.					
Reporting Requirements	The permittee shall report the following results of each toxicity test on the DMR for that reporting period: Report the highest TU _a for <i>C. dubia</i> , Parameter No. TSM3B. Report the highest TU _a for <i>P. promelas</i> , Parameter No. TSN6C.					
<p>Notes:</p> <p>WET tests shall be performed with both species on the first discharge made each calendar year, unless specifically waived by the department (See below: Reduced Monitoring for Toxicity Testing). Thereafter, tests shall be performed at least once every calendar quarter on both species in which there is a discharge.</p> <p>If toxicity occurs in a routine test, an additional test shall be initiated within 14 days from the date of the initial toxicity findings. Should acute toxicity occur in the second test, testing shall be conducted at a frequency of once a month and the implementation of a <u>Toxicity Reduction Evaluation (TRE)</u> shall be determined by the department. Should there be no discharge during a specified sampling time frame; sampling shall be performed as soon as there is a discharge.</p>						

Chronic Toxicity Testing

No chronic toxicity limits are imposed on this permit. Therefore, the permittee is not required to monitor or test for chronic toxicity.

EVALUATION OF SURFACE WATER QUALITY-BASED EFFLUENT LIMITS FOR NUMERIC CRITERIA

pH

Discharges to class IA streams shall have an instantaneous limitation between 7.0 (s.u.) and 9.0 (s.u.). A determination was made to continue with NDAC 33.1-16-01-14(3)(1) and 40 CFR 133.102(c) in the proposed permit.

E. coli

Based on the WQS, the department has determined that an *E. coli* limitation of 126 organisms per 100 mL as a monthly geometric mean and 409 organisms per 100 mL as a daily maximum is appropriate for this type of facility. The standards of water quality apply during the recreation season from May 1 through September 30. However, the limitation in the permit is meant to cover the period one month before and one month after the recreation season (April 1 through October 30). This will ensure the recreational standard will be covered.

Oil & Grease

The WQS state that waters of the state must be free from oil or grease attributable to wastewater which causes a visible sheen or film upon the water. Using BPJ the department has determined that a daily maximum limitation of 10 mg/l is appropriate for this type of facility if a visible sheen is detected. Other similar treatment systems in the state have this limitation.

Total Nitrogen

Based on the anticipation of the department's nutrient reduction strategy for nutrient reduction in waterways, the previous permit, and NDAC 33.1-16-02.1, the department has determined that total nitrogen testing and monitoring will be added to the permit testing requirements. Total nitrogen is the sum of total kjeldahl nitrogen (ammonia, organic and reduced nitrogen) and nitrate-nitrite, and is a more comprehensive test for nitrogen.

Ammonia as N

Ammonia, a nonconventional pollutant present in cell discharges could potentially be present in toxic amounts. Ammonia toxicity, both acute and chronic, is variable and is dependent on pH levels and temperature. As temperatures rise or pH levels increase, ammonia toxicity increases. North Dakota's aquatic life standards for ammonia also are dependent upon pH and temperature of the receiving water body.

The department conducted a Reasonable Potential (RP) analysis to determine whether effluent limits for ammonia would be required in this permit, using procedures given in "Technical Support Document (TSD) For Water Quality based Toxics Control"; EPA/505/2-90-001; March 1991. The department found reasonable potential (Appendix C) for the WRF to cause a violation of the state WQS for ammonia.

Metals

The department reviewed the metals data for the City of Minot WWTP. The maximum reported values for the effluent metals testing results were used to perform a reasonable potential analysis for exceeding water quality and human health standards (see appendix C).

Phenols

Two (2) sampling results for the annual phenols monitoring were in exceedance of the water quality and human health standards. The department has decided to increase monitoring frequency for total phenols from annually to quarterly for the 2020-2024 permit cycle.

Whole Effluent Toxicity (WET)

The permittee must conduct *Ceriodaphnia dubia* (Water Flea) and *Pimephales promelas* (Fathead Minnow) WET tests. Acute toxicity testing shall occur once each calendar quarter. Acute test failure (LC₅₀) is defined as lethality of 50% or more of each test organism at any effluent concentration. No chronic toxicity testing will be required in the proposed permit. If the additional test fails, then WET testing must be conducted once per month. The department also will determine whether a Toxicity Reduction Evaluation (TRE) is necessary. Monthly WET testing may return to quarterly when either the results of a TRE are accepted by the department or a period of time has passed indicating no toxicity.

Human Health

North Dakota's water quality standards include numeric human health-based criteria that the department must consider when writing NDPDES permits. These criteria were established in 1992 by the U.S. EPA in its National Toxics Rule (40 CFR 131.36). The National Toxics Rule allows states to use mixing zones to evaluate whether discharges comply with human health criteria. The department determined the applicant's discharge is unlikely to contain chemicals regulated to protect human health.

MONITORING REQUIREMENTS

The department requires monitoring, recording, and reporting (NDAC section 33.1-16-01(21 through 23) and 40 CFR 122.41) to verify that the treatment process is functioning correctly and that the discharge complies with the permit limits.

Biosolids

Currently the department does not have the authority to regulate biosolids. Therefore, the permittee is required under the Direct Enforceability provision of 40 CFR §503.3(b) to meet the applicable requirements of the regulation.

Test Procedures

The collection and transportation of all samples shall conform to EPA preservation techniques and holding times. All laboratory tests shall be performed by a North Dakota certified laboratory in conformance with test procedures pursuant to 40 CFR 136, unless other test procedures have been specified or approved by EPA as an alternate test procedure under 40 CFR 136.5. The method of determining the total amount of water discharged shall provide results within 10 percent of the actual amount.

OTHER PERMIT CONDITIONS

Pretreatment

Under the terms of the “Memorandum of Understanding between North Dakota Department of Environmental Quality and the United States Environmental Protection Agency, Region 8 (2019), the department was delegated authority to administer the Pretreatment Program. Under this delegation of authority, the department issues wastewater discharge permits for significant industrial users discharging to POTWs which have not been delegated as the permitting authority. The requirements for a Pretreatment Program are contained in Title 40, part 403 of the Code of Federal Regulations. Under the requirements of the Pretreatment Program (40 CFR 403.8(f)(1)(iii)), the department has the approval and control authority for industrial users (IUs) within Minot’s jurisdiction. The department is required to approve, create conditions, or deny new discharges, or a significant increase in the discharge for, existing significant industrial users (SIUs) (40 CFR 403.8(f)(1)(i)).

The permittee has an average daily effluent flow ranging from 1.7 – 6.9 MGD and has no significant industrial users as defined in the permit application. Therefore, the city is not required to have an approved pretreatment program.

In addition to the general limitations and requirements, the facility must sample and analyze the effluent from discharge points 001 and 002 for those parameters listed in 40 CFR 122, Appendix D, Table III (**Table 13**). Samples must be collected annually, generally from the first discharge of the year. Sample analyses must be conducted in compliance with approved methods in 40 CFR 136.

Table 13 – Parameters from 40 CFR 122, Appendix D, Table III		
Antimony, Total	Lead, Total	Zinc, Total
Arsenic, Total	Mercury, Total	Cyanide, Total
Beryllium, Total	Nickel, Total	Phenols, Total
Cadmium, Total	Selenium, Total	* Hardness as CaCO ₃
Chromium, Total	Silver, Total	
Copper, Total	Thallium, Total	
* A total hardness of the receiving stream needs to be determined every time metals are sampled and analyzed. The hardness is used to calculate parameter criteria according to the state water quality standards. This sample shall be collected upstream of the final discharge sites.		

Mercury Pollutant Minimization Plan

The proposed permit contains requirements for the permittee to complete and submit a Mercury Pollutant Minimization Plan (MMP) within 180 days of permit issuance. The MMP associated with the previous permit can be updated to meet this requirement. The purpose of the plan is to determine possible sources of mercury that can contribute to the collection and treatment system and evaluate options to reduce mercury in the system. The plan is intended to minimize the amount of mercury that enters the system, consequently minimizing the amount of mercury that discharges from the facility.

PERMIT ISSUANCE PROCEDURES

Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. This includes the establishment of limitations or prohibitions based on changes to the WQS, the development and approval of waste load allocation plans, the development or revision to water quality management plans, changes in sewage sludge practices, or the establishment of prohibitions or more stringent limitations for toxic or conventional pollutants and/or sewage sludges. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Proposed Permit Issuance

This proposed permit meets all statutory requirements for the department to authorize a wastewater discharge. The permit includes limits and conditions to protect human health and aquatic life, and the beneficial uses of waters of the State of North Dakota. The department proposes to issue this permit for a term of five (5) years.

APPENDIX A – PUBLIC INVOLVMENT INFORMATION

The department proposes to reissue a permit to the **City of Minot WWTP**. The permit includes wastewater discharge limits and other conditions. This fact sheet describes the facility and the department's reasons for requiring permit conditions.

The department placed a Public Notice of Draft on **February 26, 2020** in the **Minot Daily News** to inform the public and to invite comment on the proposed draft North Dakota Pollutant Discharge Elimination System permit and fact sheet.

The Notice –

- Information where copies of the draft Permit and Fact Sheet are available for public evaluation.
- Offers to provide assistance to accommodate special needs.
- Urges people to submit their comments before the end of the comment period.
- Informs the public that if there is significant interest, a public hearing will be scheduled.

You may obtain further information from the department by telephone, 701.328.5210 or by writing to the address listed below.

North Dakota Department of Environmental Quality
Division of Water Quality
918 East Divide Avenue, 4th Floor
Bismarck, ND 58501

The primary author of this permit and fact sheet is Allison Lightfoot.

PUBLIC NOTICE DOCUMENTATION

Please arrange to have the following public notice(s) printed in the legal column of the designated newspaper(s) as close to 2/26/2020 as possible

The Affidavit of Publication and billing notice should be sent to: North Dakota Department of Environmental Quality, Judicial Wing, Division of Accounting, 600 East Boulevard Ave, Bismarck ND 58505.

Name of the Newspaper: Minot Daily News

North Dakota Department of Environmental Quality Public Notice Reissue of an NDPDES Permit

Public Notice Date: 2/26/2020

Purpose of Public Notice

The Department intends to reissue the following North Dakota Pollutant Discharge Elimination System (NDPDES) Discharge Permit under the authority of Section 61-28-04 of the North Dakota Century Code.

Permit Information

Public Notice Number: ND-2020-009
Application Date: 12/13/2019 Application Number: ND0022896
Applicant Name: Minot City Of
Mailing Address: 1025 31st St SE, Minot, ND 58701-5006
Telephone Number: 701.857.4140
Proposed Permit Expiration Date: 3/31/2025

Facility Description

The North Dakota Department of Environmental Quality proposes to reissue NDPDES permit #ND0022896 for the wastewater treatment facility servicing the City of Minot, ND. Treated wastewater is discharged to the Souris River, a Class IA stream, via a modified waterway. Permitted Outfall 001 is located in the SE ¼ of Section 11, Township 154 North, Range 82 West, and permitted Outfall 002 is located in the NE ¼ of Section 11, Township 154 North Range 82 West.

Tentative Determinations

Proposed effluent limitations and other permit conditions have been made by the Department. They assure that State Water Quality Standards and applicable provisions of the FWPCA will be protected.

Information Requests and Public Comments

Copies of the application, draft permit, and related documents are available for review. Comments or requests should be directed to the ND Dept of Env Quality, Div of Water Quality, 918 East Divide Ave, Bismarck ND 58501-1947 or by calling 701.328.5210. All comments received by March 26, 2020 will be considered prior to finalizing the permit. If there is significant interest, a public hearing will be scheduled. Otherwise, the Department will issue the final permit within sixty (60) days of this notice. If you require special facilities or assistance relating to a disability, call TDD at 1.800.366.6868.

APPENDIX B - DEFINITIONS

DEFINITIONS Standard Permit BP 2019.05.29

1. “**Act**” means the Clean Water Act.
2. “**Average monthly discharge limitation**” means the highest allowable average of “daily discharges” over a calendar month, calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month.
3. “**Average weekly discharge limitation**” means the highest allowable average of “daily discharges” over a calendar week, calculated as the sum of all “daily discharges” measured during a calendar week divided by the number of “daily discharges” measured during that week.
4. “**Best management practices**” (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage areas.
5. “**Bypass**” means the intentional diversion of waste streams from any portion of a treatment facility.
6. “**Composite**” sample means a combination of at least 4 discrete sample aliquots, collected over periodic intervals from the same location, during the operating hours of a facility not to exceed a 24-hour period. The sample aliquots must be collected and stored in accordance with procedures prescribed in the most recent edition of Standard Methods for the Examination of Water and Wastewater.
7. “**Daily discharge**” means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the “daily discharge” is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the “daily discharge” is calculated as the average measurement of the pollutant over the day.
8. “**Department**” means the North Dakota Department of Environmental Quality, Division of Water Quality.
9. “**DMR**” means discharge monitoring report.
10. “**EPA**” means the United States Environmental Protection Agency.

11. “**Geometric mean**” means the n^{th} root of a product of n factors, or the antilogarithm of the arithmetic mean of the logarithms of the individual sample values.
12. “**Grab**” for monitoring requirements, means a single "dip and take" sample collected at a representative point in the discharge stream.
13. “**Instantaneous**” for monitoring requirements, means a single reading, observation, or measurement. If more than one sample is taken during any calendar day, each result obtained shall be considered.
14. “**Maximum daily discharge limitation**” means the highest allowable “daily discharge.”
15. “**Salmonid**” means of, belonging to, or characteristic of the family Salmonidae, which includes the salmon, trout, and whitefish.
16. “**Sanitary Sewer Overflows (SSO)**” means untreated or partially treated sewage overflows from a sanitary sewer collection system.
17. “**Severe property damage**” means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
18. “**Total drain**” means the total volume of effluent discharged.
19. “**Upset**” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

APPENIX C – DATA AND TECHNICAL CALCULATIONS

CRITICAL LOW FLOWS

The department obtained stream flow data from USGS site 05117500 from April 1, 2007 to March 31, 2018. Below are the critical low flows calculated by USGS SW Toolbox (1.0.4).

RESULTS: USGS 05117500 SOURIS RIVER ABOVE MINOT, ND			
File Edit View Help			
All available data from Apr 1, 2008 through Mar 31, 2018 are included in analysis			
Climatic year defined as Apr 1 - Mar 31.		Display Options: 05117500	Copy to Clipboard
Seasonal Calculation?	No		
Season Or Year Start	1-Apr		
Season Or Year End	31-Mar		
Years Included in Calculations	2007~2018		
Start	2007		
End	2018		
Flow Statistic	Flow Value	Percentile	x-day avg. Excur. per 3 yr.
1B3	0	0.00%	0
4B3	0.16962	4.18%	0.81818
30B3	0.16731	4.18%	0.81818
30B10	0	0.00%	0
Flow Statistic	Flow Value	Percentile	1-day Excur. per 3 yr.
1Q10	2.5142	13.14%	2.4545
7Q10	2.6007	13.32%	2.7273
Harmonic Mean	1.0984	11.27%	N/A
Harmonic Mean, Adjusted	1.0785	11.25%	N/A

Double-click on biological flow value (xBy column) to view excursion analysis result for a gage

Metals Analysis

The department conducted a metals analysis utilizing the maximum concentration for the identified metals and compared them to the WQS. Parameters which were below method detection level were entered at the detection limit value.

The department has developed the following tool to evaluate a single sample result to the North Dakota Standards of Quality for Waters of the State. A detailed explanation of the calculations and limits for the parameters listed can be found in NDAC 33.1-16-02.1, Table 1.

Parameters indicated as "HD-Hardness Dependent" are less toxic as the calcium carbonate hardness of the receiving stream increases. The calcium carbonate hardness of the effluent or the receiving stream is entered above. A hardness value in grains per gallon can also be entered.

Items in bold or and underlined indicate a parameter that needs further evaluation. Parameters listed above must be analyzed using an EPA approved method that has a detection limit at or below the limits as listed in the current version of the North Dakota Standards of Quality for Waters of the State chapter 33.1-16-02.1.

Facility Name		Minot WWTP					Print Date:	2/4/2020		
Location		Outfall 001					Below are the current or calculated acute, chronic and human health standards based on the data entered.			
Enter Grains/Gallon or				0						
Hardness - Total (CaCO3) mg/l				455						
Safety Factor(multiplier):										
Enter Concentration Values						µg/l	µg/l	µg/l	µg/l	
Parameter		Detect	MDL/D L/RL	mg/l	µg/l	µg/l	Acute	Chronic	Human Health Class I ,IA,II	Human Health Class III
Antimony			0.001	0.001	1	1			5.6	640
Arsenic			0.002	0.008	8	8	340	150	10	
Beryllium			0.0005	0.0005	0.5	0.5			4	
Cadmium	HD		0.0001	0.0001	0.1	0.1	8.4	2.65	5.00	
Chromium - Total			0.002	0.002	2	2			100	
Chromium (III)	HD					0	6236	298		
Chromium (VI)						0	16	11		
Copper	HD		0.002	0.008	8	8	58	34.0	1000.0	
Lead	HD		0.0005	0.0005	0.5	0.5	562	34.0	15.0	
Mercury			0.0002	0.0002	0.2	0.2	1.7	0.012	0.05	0.051
Molybdenum - Total					-	-				
Nickel	HD		0.002	0.007	7	7	1690	187.9	100.0	4200
Selenium			0.005	0.005	5	5	20	5	50	
Silver	HD		0.0005	0.0005	0.5	0.5	51			
Thallium			0.0001	0.0001	0.1	0.1			0.24	0.47
Zinc	HD		0.05	0.05	50	50	433	432.6	7400.0	26000
Cyanide - Total			0.007	0.007	7	7	22	5.2	4	400
Phenols			0.01	25.1	25100	25100		300	4000	300000

Metals Comments:

The maximum values reported for each parameter are from discharges that occurred between April 2015 and December 2019. Non-detects were entered at the detection limit values.

Antimony: All results were below method detection level.

Arsenic: All results were below water quality and human health standards.

Beryllium: All results were below method detection level.

Cadmium: All results were below method detection level.

Chromium - Total: All results were below method detection level.

Copper: All results were below water quality and human health standards.

Lead: All results were below method detection level.

The reasonable potential determination for ammonia is provided below. The determination is conducted utilizing the Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991 (TSD; March 1991). The coefficient of variation used was 0.7. It was determined that there is reasonable potential for exceedance of the above calculated ammonia WQS.

**Receiving Water Concentration (RWC)
 Reasonable Potential (RP)
 Determination**

**Technical Support Document (TSD) For Water Quality-based Toxics Control
 EPA/505/2-90-001; March 1991**

Facility Name:	City of Minot	Receiving Stream:	Souris River
NDPDES Permit:	ND002896		2.51 cfs
Daily Maximum Flow (mgd):	9.90	1Q10	0 cfs
Daily Average Flow (mgd):	4.40	7Q10	2.6 cfs
Stream Design Mixing:	10.0%	4B3	0.17 cfs
Statistical Multiplier:	1.4		
Upstream Concentration:	0.2000 mg/l		Parameter:
Effluent Concentration (max):	11.7000 mg/l		ammonia
			Outfall:
			001

$$RWC = \frac{(StatQeCe) + (Cs(pmf)Qs)}{Qe + (pmf)Qs}$$

RWC = Receiving water concentration, the resultant magnitude of concentration in the receiving water after effluent discharge concentration (also known as the in-stream waste concentration)
 Stat = Statistical multiplier for effluent parameter (Table 3-1 and 3-2; page 57 of the TSD)
 Qe = Effluent Design Flow
 Ce = Highest effluent concentration reported.
 pmf = Partial mix factor, percent of Qs allowed for mixing by State authority.
 Qs = Receiving Water Flow (1Q10 or 1B3 for acute and 7Q10 or 4B3 for chronic)
 Cs = Background concentration of the receiving water.

Qe - Acute	9.90	mgd	Qs - 1Q10	1.62	mgd
Qe - Chronic	4.40	mgd	Qs - 1B3	0.00	mgd
Ce	11.7000	mg/l	Qs - 7Q10	1.68	mgd
Cs	0.2000	mg/l	Qs - 4B3	0.11	mgd
Stat	1.40				
pmf	10.0%				

Acute RP		Chronic RP	
RWC - 1Q10	16.1193 mg/l	RWC - 7Q10	15.7851 mg/l
RWC - 1B3	16.3800 mg/l	RWC - 4B3	16.3397 mg/l

Criterion Maximum Concentration (CMC)		Criterion Continuous Concentration (CCC)	
Acute Criterion	12.6 mg/l	Chronic Criterion	3.3000 mg/l

If the calculated RWC is greater than its respective criterion then there is RP and if RWC is less than the criterion then there is no RP.

CMC RP Present:		CCC RP Present:	
1Q10 Acute OR	YES	7Q10 Chronic OR	YES
1B3 Acute	YES	4B3 Chronic	YES

The North Dakota State Water Quality Standards (WQS) Chapter 33.1-16-02.1 use biologically based design and harmonic mean flows to determine Water Quality Based Effluent Limits (WQBELs) and Whole Effluent Toxicity (WET) limits.

APPENDIX D – RESPONSE TO COMMENTS

Comments received during the public comment period to be placed here.

DRAFT

Permit No: ND0022896
Effective Date: April 1, 2020
Expiration Date: March 31, 2025

AUTHORIZATION TO DISCHARGE UNDER THE
NORTH DAKOTA POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with Chapter 33.1-16-01 of the North Dakota Department of Environmental Quality rules as promulgated under Chapter 61-28 (North Dakota Water Pollution Control Act) of the North Dakota Century Code,

City of Minot
Minot Publicly Owned Treatment Works (POTW)

is authorized to discharge from outfall 001 and 002

to the Souris River a Class IA stream via a modified drainage way

provided all the conditions of this permit are met.

This permit and the authorization to discharge shall expire at midnight,
March 31, 2025.

Signed this _____ day of _____, _____.

Karl H. Rockeman, P.E.
Director
Division of Water Quality

BP 2019.05.29

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DEFINITIONS Standard Permit BP 2019.05.29

1. “**Act**” means the Clean Water Act.
2. “**Average monthly discharge limitation**” means the highest allowable average of “daily discharges” over a calendar month, calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month.
3. “**Average weekly discharge limitation**” means the highest allowable average of “daily discharges” over a calendar week, calculated as the sum of all “daily discharges” measured during a calendar week divided by the number of “daily discharges” measured during that week.
4. “**Best management practices**” (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage areas.
5. “**Bypass**” means the intentional diversion of waste streams from any portion of a treatment facility.
6. “**Composite**” sample means a combination of at least 4 discrete sample aliquots, collected over periodic intervals from the same location, during the operating hours of a facility not to exceed a 24-hour period. The sample aliquots must be collected and stored in accordance with procedures prescribed in the most recent edition of Standard Methods for the Examination of Water and Wastewater.
7. “**Daily discharge**” means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the “daily discharge” is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the “daily discharge” is calculated as the average measurement of the pollutant over the day.
8. “**Department**” means the North Dakota Department of Environmental Quality, Division of Water Quality.
9. “**DMR**” means discharge monitoring report.
10. “**EPA**” means the United States Environmental Protection Agency.
11. “**Geometric mean**” means the n^{th} root of a product of n factors, or the antilogarithm of the arithmetic mean of the logarithms of the individual sample values.
12. “**Grab**” for monitoring requirements, means a single "dip and take" sample collected at a representative point in the discharge stream.
13. “**Instantaneous**” for monitoring requirements, means a single reading, observation, or measurement. If more than one sample is taken during any calendar day, each result obtained shall be considered.
14. “**Maximum daily discharge limitation**” means the highest allowable “daily discharge.”
15. “**Salmonid**” means of, belonging to, or characteristic of the family Salmonidae, which includes the salmon, trout, and whitefish.
16. “**Sanitary Sewer Overflows (SSO)**” means untreated or partially treated sewage overflows from a sanitary sewer collection system.

17. **“Severe property damage”** means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
18. **“Total drain”** means the total volume of effluent discharged.
19. **“Upset”** means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

DEFINITIONS Whole Effluent Toxicity (WET) BP 2017.04.06

20. **“Acute toxic unit”** (“TUa”) is a measure of acute toxicity. TUa is the reciprocal of the effluent concentration that causes 50 percent of the organisms to die by the end on the acute exposure period (i.e., $100/“LC50”$).
21. **“Chronic toxic unit”** (“TUc”) is a measure of chronic toxicity. TUc is the reciprocal of the effluent concentration that causes no observable effect on the test organisms by the end of the chronic exposure period (i.e., $100/“IC25”$).
22. **“Inhibition concentration”**, (“IC”), is a point estimate of the toxicant concentration that causes a given percent reduction (p) in a non-quantal biological measurement (e.g., reproduction or growth) calculated from a continuous model (e.g., Interpolation Method).
23. **“LC50”** means the concentration of toxicant (e.g., effluent) which is lethal to 50 percent of the organisms exposed in the time period prescribed by the test.
24. **“No observed effect concentration”**, (“NOEC”), is the highest concentration of toxicant (e.g., effluent) to which organisms are exposed in a chronic toxicity test [full life-cycle or partial life-cycle (short term) test], that causes no observable adverse effects on the test organisms (i.e., the highest concentration of effluent in which the values for the observed responses are not statistically significantly different from the controls).

OUTFALL DESCRIPTION

The authorization to discharge provided under this permit is limited to those outfalls specifically designated below as discharge locations.

Outfall 001. Active. Final.			
Latitude: 48.1747	Longitude: -101.1686	County: Ward	
Township: 154N	Range: 82W	Section: 11	QQ: DAA
Receiving Stream: Souris River		Classification: Class IA Stream	
Outfall Description: Controlled discharge deemed to be non-continuous. Discharges from the artificial wetland treatment system into a modified drainage way which flows approximately 2.5 miles before emptying into the Souris River.			

Outfall 002. Active. Final.			
Latitude: 48.1750	Longitude: -101.1688	County: Ward	
Township: 154N	Range: 82W	Section: 11	QQ: ADA
Receiving Stream: Souris River		Classification: Class IA Stream	
Outfall Description: Controlled discharge deemed to be non-continuous. An abandoned pipe leading from Cell 5 that discharges directly into the Souris River.			

PERMIT SUBMITTALS SUMMARY

Coverage Point	Submittal	Frequency	First Submittal Date
001A and 002A	Discharge Monitoring Report	Monthly	May 31, 2020
001W and 002W	Discharge Monitoring Report	Quarterly	July 31, 2020
001M and 002M	Discharge Monitoring Report	Yearly	April 30, 2021
Mercury Management	Mercury Pollutant Minimization Plan	1/permit cycle	September 30, 2020
Application Renewal	NPDES Application Renewal – EPA Forms 1 and 2A	1/permit cycle	November 1, 2023

SPECIAL CONDITIONS

A. Mercury Pollutant Minimization Plan

The permittee is required to complete and submit a Mercury Pollutant Minimization Plan (MMP) to the North Dakota Department of Health (department) as detailed in this section. If it has previously submitted an MMP, the permittee must update the MMP and submit it to the department. The purpose of the MMP is to evaluate collection and treatment systems to determine possible sources of mercury as well as potential mercury reduction options. Guidelines for developing a MMP are detailed in this section.

The permittee shall submit a Pollutant Minimization Plan within 180 days of permit issuance. At a minimum, the MMP must include the following:

- i. A summary of mercury influent and effluent concentrations and biosolids monitoring data using the most recent five years of monitoring data, if available.
- ii. Identification of existing and potential sources of mercury concentrations and/or loading to the facility. As appropriate for your facility, you should consider residential, institutional, municipal, and commercial sources (such as dental clinics, hospitals, medical clinics, nursing homes, schools, and industries with potential for mercury contributions). You should also consider other influent mercury sources, such as stormwater inputs, ground water inflow and infiltration (I/I) inputs, and waste streams or sewer tributaries to the wastewater treatment facility.
- iii. An evaluation of past and present WWTF operations to determine those operating procedures that maximize mercury removal.
- iv. A summary of any mercury reduction activities implemented during the last five years.
- v. A plan to implement mercury management and reduction measures during the next five years.

In addition to the sampling required in this permit, the permittee shall sample effluent from the total facility discharge station for total mercury annually throughout the life of this permit. The sampling method is a concurrent grab sample. Total mercury shall be analyzed using an EPA approved mercury analysis method. Samples shall be taken at any time during the calendar year and reported to the department. A trip blank shall be analyzed for each sampling event. The mercury analyses must be submitted with the DMR for the last month of the reporting period it was collected.

B. Reporting, Record Keeping, and Public Notification for Unauthorized Sewage Overflows.

1. Immediate Reporting

- A. The permittee shall report to the department any overflow that may endanger health or the environment from a sanitary sewer or any unauthorized combined sewer overflow that the permittee owns and/or operates. Any information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. At a minimum, the report shall identify:
 - i. The location of the overflow;
 - ii. The receiving water (if there is one);
 - iii. The duration of the overflow; and
 - iv. The estimated volume of the overflow.
- B. An overflow is any spill, release, or diversion of municipal sewage, including:
 - ii. An overflow that results in a discharge to water of the state (other than a combined sewer overflow that is authorized by a permit); and
 - iii. An overflow of wastewater, including a wastewater backup into a building (other than a backup caused solely by a blockage or other malfunction in a privately-owned sewer or building lateral), even if that overflow does not reach waters of the state.

2. Written Reports

- A. The permittee shall also provide a written report to the department for any overflow identified under paragraph 1 of this section within five (5) days from the time the permittee becomes aware of the circumstances. The written report shall contain a description of:
- i. The location of the overflow;
 - ii. The receiving water (if there is one);
 - iii. An estimate of the overflow volume;
 - iv. A description of the sewer-system component that caused the release (e.g. manhole, constructed overflow pipe, pipe break, etc.);
 - v. The estimated date and time when the overflow began and stopped or will be stopped;
 - vi. The cause or suspected cause of the overflow;
 - vii. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
 - viii. If possible, the number of persons who came into contact with wastewater from the overflow; and
 - ix. Steps taken or planned to mitigate the impact(s) from the overflow and a schedule of major milestones for those steps.
- B. The department may waive the written report on a case-by-case basis for reports under paragraph A. of this section if the verbal report required under Part II paragraph 1 has been received within twenty-four (24) hours.
- C. Discharge Monitoring Reports (DMRs) – the permittee shall report any overflow that is not reported under Part II.1 or 2.A. in the DMR required by this permit. The DMR shall contain the information listed in Part II 2.A of this permit.

3. Record Keeping

The permittee must maintain a record of the following information for a period of at least three (3) years from the date of the reported overflow event:

- A. Any report submitted under paragraph 2 above; and
- B. Any report, including work orders that are associated with investigation of system problems related to an overflow that describes the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow, or documents system performance.

4. Third-Party Notice

The department may require the permittee to notify specified third parties of overflows that may endanger health. Where the permittee is required to make such notification, the following can be used:

- A. The permittee is to develop a plan describing how to notify the public and other entities in the event of various overflow, unanticipated bypass, and upset scenarios that may endanger human health. This plan should identify all reportable overflows and the specific information reported to each entity receiving notification.
- B. The permittee must immediately notify the public, health agencies, and other affected entities (e.g. public water systems) of a sanitary sewer overflow and/or any unauthorized combined sewer overflow that the permittee owns or has operational control that meet the criteria outlined in paragraph A of this section.

5. Proper Operation and Maintenance

The permittee is to implement proper operation and maintenance of the collection system (40 CFR 122.41(d) and (e)). At the request of the department, this may include the development and implementation of capacity, management, operation, and management (CMOM) programs.

LIMITATIONS AND MONITORING REQUIREMENTS

A. Discharge Authorization

During the effective period of this permit, the permittee is authorized to discharge pollutants from the outfalls as specified to the following: **Souris River** (a Class 1A stream) **via a modified drainage way**.

No discharge shall occur from the wastewater treatment facility until all pre-discharge parameters have been reviewed by the department. After the review process, the permittee shall comply with conditions and effluent limitations outlined in this permit.

This permit authorizes the discharge of only those pollutants resulting from facility processes, waste streams, and operations that have been clearly identified in the permit application process.

B. Effluent Limitations and Monitoring

The permittee must limit and monitor all discharges as specified below (**table 1**):

Table 1 – Limitations and Monitoring Requirements for Minot WWTP					
Effluent Limits and Monitoring Frequency Requirements for Outfalls 001 and 002					
Parameter	Effluent Limitations			Monitoring Requirements	
	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Sample Frequency	Sample Type
Biochemical Oxygen Demand (BOD ₅)	25 mg/l	45 mg/l	N/A	2/week ^a	Composite
Temperature (°C)	*	*	Report	2/week ^a	Grab
pH	Shall remain between 7.0 to 9.0 s.u.			Daily	Grab
Total Suspended Solids (TSS)	30 mg/l	45 mg/l	*	2/week ^a	Composite
Escherichia coli (E. coli)	126/100 ml	*	409/100 ml	2/week ^{a, b}	Grab
Oil & Grease ^c	*	*	10 mg/l	Daily	Visual
Nitrogen, Total	Monitor only (mg/l)			1/month during discharge	Composite
Ammonia as N ^e	Refer to the Ammonia table below.			3/week during discharge	Composite
Phosphorus, Total (as P)	Average for the month	Monitor only (mg/l)	Monitor only (mg/l)	1/week during discharge	Composite
Phosphorus, Total (as P)	Average for the month	Monitor only (lbs/day)	Monitor only (lbs/day)	1/week during discharge	Calculated
Effluent Flow, MGD	Report	*	Report Max Daily Values	1/day	Instantaneous
Total Flow, mgal	*	*	Report Monthly Total	1/month	Calculated
Phenols, Total	*	*	*	1/quarter	Grab
Whole Effluent Toxicity (WET) ^d	Part A.I in Permit			1/month	Grab
Metals, Total (40 CFR 122 - App D; Table III) ^f	Report			1/year	Composite
Influent Monitoring Frequency Requirements					
Parameter	Effluent Limitations			Sample Frequency	Sample Type
Biochemical Oxygen Demand (BOD ₅)	Report			2/month	Composite
Total Suspended Solids (TSS)	Report			2/month	Composite
Metals, Total (40 CFR 122 - App D; Table III)	Report			1/year	Composite

Table 1 – Limitations and Monitoring Requirements for Minot WWTP

**Souris River Monitoring Frequency Requirements –
(Collect same days as effluent ammonia as N)**

Parameter	Effluent Limitations	Sample Frequency	Sample Type
Flow (cfs) ^{a, g}	Report	3/week	USGS stream data
pH (s.u.) ^a	Report	3/week	Grab
Temperature (°C) ^a	Report	3/week	USGS stream data
Ammonia as N (mg/l) ^a	Report	3/week	Grab

Notes:

- *. This parameter is not limited. However, the department may impose limitations based on sample history and to protect the receiving waters.
- a. A pre-discharge sample must be taken prior to the start of any discharge and this analysis is reported to the department. A pre-discharge sample shall be sampled and analyzed as specified above. This pre-discharge sample shall represent the first week discharge sample. An additional sample of the actual discharge shall be taken and analyzed at a frequency specified above for the duration of the discharge.
- b. *E. coli* shall not exceed 126 organisms per 100 milliliters (ml) as a geometric mean of representative samples collected during any 30-day consecutive period, nor shall it exceed 409 organisms per 100 ml. This limit applies from April 1 through October 31.
- c. If a visible sheen or floating oil is observed at the discharge point, an oil & grease sample shall be collected to determine compliance with the 10 milligrams per liter (mg/l) concentration limit.
- d. Acute static-renewal toxicity tests shall be conducted on separate samples from Outfalls 001 and 002 as directed in the WET portion of this permit.
- e. When there is stream flow, the permittee will use in-stream parameters to calculate (**table 2**) the real-time water quality standard for ammonia as N. This calculated limit will be compared to facility effluent data on ammonia, and if the effluent value is greater than the calculated limit, the permittee will report an ammonia as N exceedance.
- f. A total hardness of the receiving stream needs to be determined every time metals are sampled and analyzed. The hardness is used to calculate parameter criteria according to the state water quality standards. This sample shall be collected upstream of the final discharge sites.
- g. River flow shall be recorded from a representative location upstream of the mixing point with the Souris River. If there is no Souris River flow, ammonia as N must meet the state water quality standard at end-of-pipe.

Stipulations:

- The metal sampling events shall be flow proportioned and follow the definition as stated in this permit.
- The discharge shall not contain, in sufficient amounts to be unsightly or deleterious, any floating debris, oil, scum, and other floating materials attributable to municipal wastewater operations.
- Samples taken in compliance with the monitoring requirements specified in this permit shall be taken prior to leaving city property or entering the receiving stream.

Table 2 – Ammonia Effluent Limitations – Outfalls 001 and 002

Average Monthly Ammonia as N Limitation

The 30-day average concentration of total ammonia (expressed as N in mg/l) does not exceed the numerical value given by the following formula; and the highest four-day average concentration of total ammonia within the 30-day averaging period does not exceed 2.5 times the numerical value given by the following formula:

$$\frac{(0.0577)}{(1+10^{7.688-pH})} + \frac{2.487}{1+10^{pH-7.688}} \bullet CV;$$

where CV = 2.85, when T ≤ 14°C; or
 CV = 1.45 * 10^{0.028*(25-T)}, when T > 14°C.
 Receiving stream pH is used for the calculation

Daily Maximum Limitation

For acute toxicity, the one-hour average concentration of total ammonia (expressed as N in mg/l) does not exceed the numerical value given by the following formula:

$$\frac{0.411}{1 + 10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}},$$

where salmonids are absent
 Receiving stream pH is used for the calculation

Note – During periods when the receiving stream is flowing, permittee may receive ten percent of stream flow for dilution at time of discharge based on the flow of the receiving stream. During periods of no flow in the receiving stream, permittee must meet ammonia as N state water quality standards at the end-of-pipe. During periods of stream flow, in-stream concentrations will be calculated on a mass balance basis using the following formula:

In-stream concentration= (Q_u*C_u + Q_e*C_e)/(Q_u+ Q_e) where
 Q_u = 10% of the Souris River Flow parameter
 C_u = Souris River ammonia parameter
 Q_e = Effluent flow parameter
 C_e = Ammonia as N parameter

All discharges from Outfalls 001 and 002 will be regulated accordingly to avoid exceeding the water quality standard for ammonia as N at any time during the discharge period.

C. Whole Effluent Toxicity (WET) Requirements

1. Acute Toxicity Testing

Acute toxicity tests shall be conducted in general accordance with the procedures set out in the latest revision of "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms," EPA-821-R-02-012 (Fifth Ed., October 2002). The permittee shall conduct an acute 48-hour static renewal toxicity test using freshwater fleas, *Ceriodaphnia dubia* and an acute 96-hour static renewal toxicity test using fathead minnows, *Pimephales promelas*.

The table below (**table 4**) specifies acute WET testing requirements:

Table 4 – Acute WET requirements for Outfall 001 and 002						
Effluent Dilution	0%(Control)	12.5%	25%	50%	75%	100%
Dilution Water	Souris River					
Species and Test Type	Ceriodaphnia dubia - 48 Hour Acute - Static Renewal - 20°C					
	Fathead minnow - 96 Hour Acute - Static Renewal - 20°C					
Endpoint	TU _a					
Compliance Point	End-of-pipe					
Sample Frequency	1/Quarter					
Sample Type	Grab					
Maximum Daily Limit (MDL)	<1 TU _a					
Average Monthly Limit (AML)	<1 TU _a					
Test Failure	The 48-hour LC ₅₀ effluent value must be <1 TU _a to indicate a passing test. Any 48-hour LC ₅₀ effluent value >1 TU _a will constitute a failure. Tests in which the control survival is less than 90% are invalid and must be repeated.					
Reporting Requirements	The permittee shall report the following results of each toxicity test on the DMR for that reporting period: Report the highest TU _a for <i>C. dubia</i> , Parameter No. TSM3B. Report the highest TU _a for <i>P. promelas</i> , Parameter No. TSN6C.					
<p>Notes:</p> <p>WET tests shall be performed with both species on the first discharge made each calendar year, unless specifically waived by the department (See below: Reduced Monitoring for Toxicity Testing). Thereafter, tests shall be performed at least once every calendar quarter on both species in which there is a discharge.</p> <p>If toxicity occurs in a routine test, an additional test shall be initiated within 14 days from the date of the initial toxicity findings. Should acute toxicity occur in the second test, testing shall be conducted at a frequency of once a month and the implementation of a <u>Toxicity Reduction Evaluation (TRE)</u> shall be determined by the department. Should there be no discharge during a specified sampling time frame; sampling shall be performed as soon as there is a discharge.</p>						

2. Chronic Toxicity Testing

No chronic toxicity limits are imposed on this permit. Therefore, the permittee is not required to monitor or test for chronic toxicity.

The chronic toxicity tests shall be conducted in general accordance with the procedures set out in the latest revision of, "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," EPA-821-R-02-013 (Fourth Ed., October 2002). Test species shall consist of freshwater fleas, *Ceriodaphnia dubia* and fathead minnows, *Pimephales promelas*

3. Reduced Monitoring for Toxicity Testing

a. Alternating Species

If the results of a minimum of four consecutive samples taken over at least a 12-month period indicate no toxicity, the permittee may request the department for a test reduction. This reduction would only be testing one species per sampling frequency. If fathead minnows are used first, then the next test would be *C. dubia* or vice versa and continue alternating. The department may approve or deny the request, based on the biomonitoring results and other available information. If the request is approved, the test procedures are to be the same as outlined in 1. Acute Toxicity Testing and/or 2. Chronic Toxicity Testing.

If toxicity occurs in any single species test the provision for alternating species shall be immediately revoked and 1. Acute Toxicity Testing and/or 2. Chronic Toxicity Testing shall be followed in whole.

b. Monthly Testing

If the results of 5. Toxicity Reduction Evaluation (TRE) have been accepted by the department or a period of time has indicated no toxicity, the permittee may request the department to allow a reduction from monthly to quarterly toxicity testing for both species. The department may approve or deny the request, based on the bio-monitoring results and other available information. If the request is approved, the test procedures are to be the same as outlined in 1. Acute Toxicity Testing and/or 2. Chronic Toxicity Testing.

4. Reporting Requirements

Test results shall be submitted with the Discharge Monitoring Report (DMR) form for each reporting period. The format for the report shall be consistent with the above reference manual(s) as outlined in the section, "Report Preparation and Test Review." Each lab generated report shall document the findings for each species reference toxicity testing chart.

5. Toxicity Reduction Evaluation (TRE)

If toxicity is detected, and it is determined by the department that a TRE is necessary, the permittee shall be so notified and shall initiate a TRE immediately thereafter. A TRE shall reference the latest revision of "Technical Support Document For Water Quality-based Toxics Control," EPA/505/2-90-001 – PB91-127415 (March 1991). The purpose of the TRE will be to establish the cause of the toxicity, locate the source(s) of the toxicity, and control or provide treatment for the toxicity.

If the TRE establishes that the toxicity cannot be eliminated by the current treatment system, the permittee shall submit a proposed compliance plan to the department. The plan shall include the proposed approach to control toxicity and a proposed compliance schedule for achieving control. If the approach and schedule are acceptable to the department, this permit may be reopened and modified.

If the TRE shows that the toxicity is caused by a toxicant(s) that may be controlled with specific numerical limitations or proper discharge management as approved by the department, the permittee may:

- a. Submit an alternative control program for compliance with the numerical requirements; or
- b. If necessary, provide a modified biomonitoring protocol which compensates for the pollutant(s) being controlled numerically.

If acceptable to the department, this permit may be reopened and modified to incorporate any additional numerical limitations, a modified compliance schedule if judged necessary by the department, and/or a modified biomonitoring protocol.

Failure to conduct an adequate TRE, or failure to submit a plan or program as described above, or the submittal of a plan or program judged inadequate by the department, shall in no way relieve the permittee from maintaining compliance with the whole effluent toxicity requirements of this permit.

II. MONITORING, RECORDING, AND REPORTING REQUIREMENTS BP 2019.05.29

A. Representative Sampling (Routine and Non-Routine Discharges)

All samples and measurements taken shall be representative of the monitored discharge.

In order to ensure that the effluent limits set forth in this permit are not violated at times other than when routine samples are taken, the permittee must collect additional samples at the appropriate outfall whenever any discharge occurs that may reasonably be expected to cause or contribute to a violation that is unlikely to be detected by a routine sample. The permittee must analyze the additional samples for those parameters limited under **Part I Effluent Limitations and Monitoring** requirements of this permit that are likely to be affected by the discharge.

The permittee must collect such additional samples as soon as the spill, discharge, or bypassed effluent reaches the outfall. The samples must be analyzed in accordance with **B. Test Procedures**. The permittee must report all additional monitoring in accordance with **D. Additional Monitoring**.

B. Test Procedures

The collection and transportation of all samples shall conform with EPA preservation techniques and holding times found in 40 CFR 136. All laboratory tests shall be performed by a North Dakota certified laboratory in conformance with test procedures pursuant to 40 CFR 136, unless other test procedures have been specified in this permit or approved by EPA as an alternate test procedure under 40 CFR 136.5. The method of determining the total amount of water discharged shall provide results within 10 percent of the actual amount.

C. Recording of Results

Records of monitoring information shall include:

1. the date, exact place and time of sampling or measurements;
2. the name(s) of the individual(s) who performed the sampling or measurements;
3. the name of the laboratory;
4. the date(s) and time(s) analyses were performed;

5. the name(s) of the individual(s) who performed the analyses;
6. the analytical techniques or methods used; and
7. the results of such analyses.

D. Additional Monitoring

If the discharge is monitored more frequently than this permit requires, all additional results, if in compliance with B. Test Procedures, shall be included in the summary on the Discharge Monitoring Report.

E. Reporting of Monitoring Results

1. Monitoring results shall be summarized and reported to the department using Discharge Monitoring Reports (DMRs). If no discharge occurs during a reporting period, "No Discharge" shall be reported. The permittee must submit DMRs electronically using the electronic information reporting system unless requirements in subsection 3 are met.
2. Prior to December 21, 2020, the permittee may elect to electronically submit the following compliance monitoring data and reports instead of mailing paper forms. Beginning December 21, 2020, the permittee must report the following using the electronic reporting system:
 - i. General permit reports [e.g., notices of intent (NOI); notices of termination (NOT); no exposure certifications (NOE)];
 - ii. Municipal separate storm sewer system program reports;
 - iii. Pretreatment program reports;
 - iv. Sewer overflow/bypass event reports; and
 - v. Clean Water Act 316(b) annual reports
3. The permittee may seek a waiver from electronic reporting. To obtain a waiver, the permittee must complete and submit an Application for Temporary Electronic Reporting Waiver form (SFN 60992) to the department. The department will have 120 days to approve or deny the waiver request. Once the waiver is approved, the permittee may submit paper versions of monitoring data and reports to the department.
 - i. One of the following criteria must be met in order to obtain a waiver. The department reserves the right to deny any waiver request, even if they meet one of the criteria below.
 1. No internet access,
 2. No computer access,
 3. Annual DMRs (upon approval of the department),
 4. Employee turnover (3-month periods only), or
 5. Short duration permits (upon approval of the department)

All reports must be postmarked by the last day of the month following the end of each reporting period. All original documents and reports required herein shall be signed and submitted to the department at the following address:

ND Department of Environmental Quality
Division of Water Quality
918 East Divide Ave
Bismarck ND 58501-1947

F. Records Retention

All records and information (including calibration and maintenance) required by this permit shall be kept for at least three years or longer if requested by the department or EPA.

III. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

B. Proper Operation and Maintenance

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. If necessary to achieve compliance with the conditions of this permit, this shall include the operation and maintenance of backup or auxiliary systems.

C. Planned Changes

The department shall be given advance notice of any planned changes at the permitted facility or of an activity which may result in permit noncompliance. Any anticipated facility expansions, production increase, or process modifications which might result in new, different, or increased discharges of pollutants shall be reported to the department as soon as possible. Changes which may result in a facility being designated a "new source" as determined in 40 CFR 122.29(b) shall also be reported.

D. Duty to Provide Information

The permittee shall furnish to the department, within a reasonable time, any information which the department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the department, upon request, copies of records required to be kept by this permit. When a permittee becomes aware that it failed to submit any relevant facts or submitted incorrect information in a permit application or any report, it shall promptly submit such facts or information.

E. Signatory Requirements

All applications, reports, or information submitted to the department shall be signed and certified.

All permit applications shall be signed by a responsible corporate officer, a general partner, or a principal executive officer or ranking elected official.

All reports required by the permit and other information requested by the department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

The authorization is made in writing by a person described above and submitted to the department;
and

The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.

If an authorization under E. Signatory Requirements is no longer accurate for any reason, a new authorization satisfying the above requirements must be submitted to the department prior to or together with any reports, information, or applications to be signed by an authorized representative.

Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

F. Twenty-four Hour Notice of Noncompliance Reporting

1. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstances. The following occurrences of noncompliance shall be included in the oral report to the department at 701.328.5210:
 - a. Any lagoon cell overflow or any unanticipated bypass which exceeds any effluent limitation in the permit under G. Bypass of Treatment Facilities;
 - b. Any upset which exceeds any effluent limitation in the permit under H. Upset Conditions; or
 - c. Violation of any daily maximum effluent or instantaneous discharge limitation for any of the pollutants listed in the permit.
2. A written submission shall also be provided within five days of the time that the permittee became aware of the circumstances. The written submission shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times;
 - c. The estimated time noncompliance is expected to continue if it has not been corrected; and
 - d. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

Reports shall be submitted to the address in Part II. E. - Reporting of Monitoring Results. The department may waive the written report on a case by case basis if the oral report has been received within 24 hours by the department at 701.328.5210 as identified above.

All other instances of noncompliance shall be reported no later than at the time of the next Discharge Monitoring Report submittal. The report shall include the four items listed in this subsection.

G. Bypass of Treatment Facilities

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to any of the following provisions in this section.
2. Bypass exceeding limitations - notification requirements.
 - a. Anticipated Bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least ten (10) days before the date of bypass.
 - d. Unanticipated Bypass. The permittee shall submit notice of an unanticipated bypass as required under F. Twenty-four Hour Notice of Noncompliance Reporting.
3. Prohibition of Bypass. Bypass is prohibited, and the department may take enforcement action against a permittee for bypass, unless:
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - c. The permittee submitted notices as required under the 1. Anticipated Bypass subsection of this section.

The department may approve an anticipated bypass, after considering its adverse effects, if the department determines that it will meet the three (3) conditions listed above.

H. Upset Conditions

An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of the following paragraph are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and the permittee can identify its cause(s);
2. The permitted facility was, at the time of upset, properly operated;
3. The permittee submitted notice of the upset as required under F. Twenty-four Hour Notice of Noncompliance Reporting and;
4. The permittee complied with any remedial measures required under I. Duty to Mitigate.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

I. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. The permittee, at the department's request, shall provide accelerated or additional monitoring as necessary to determine the nature and impact of any discharge.

J. Removed Materials

Collected screenings, grit, solids, sludges, or other pollutants removed in the course of treatment shall be buried or disposed of in such a manner to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not be directly blended with or enter either the final plant discharge and/or waters of the state. The permit issuing authority shall be contacted prior to the disposal of any sewage sludges. At that time, concentration limitations and/or self-monitoring requirements may be established.

K. Duty to Reapply

Any request to have this permit renewed should be made six months prior to its expiration date.

IV. GENERAL PROVISIONS

A. Inspection and Entry

The permittee shall allow department and EPA representatives, at reasonable times and upon the presentation of credentials if requested, to enter the permittee's premises to inspect the wastewater treatment facilities and monitoring equipment, to sample any discharges, and to have access to and copy any records required to be kept by this permit.

B. Availability of Reports

Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the department and EPA. As required by the Act, permit applications, permits, and effluent data shall not be considered confidential.

C. Transfers

This permit is not transferable except upon the filing of a Statement of Acceptance by the new party and subsequent department approval. The current permit holder should inform the new controller, operator, or owner of the existence of this permit and also notify the department of the possible change.

D. New Limitations or Prohibitions

The permittee shall comply with any effluent standards or prohibitions established under Section 306(a), Section 307(a), or Section 405 of the Act for any pollutant (toxic or conventional) present in the discharge or removed substances within the time identified in the regulations even if the permit has not yet been modified to incorporate the requirements.

E. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. This includes the establishment of limitations or prohibitions based on changes to Water Quality Standards, the development and approval of waste load allocation plans, the development or revision to water quality management plans, changes in sewage sludge practices, or the establishment of prohibitions or more stringent limitations for toxic or conventional pollutants and/or sewage sludges. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

F. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

G. State Laws

Nothing in this permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation preserved under Section 510 of the Act.

H. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

I. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

J. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

V. INDUSTRIAL WASTE MANAGEMENT BP 2019.05.29

Major POTWs - Non-Approved Pretreatment Program Requirements

A. General Responsibilities

The permittee has the responsibility to protect the Publicly Owned Treatment Works (POTW) from pollutants which would inhibit, interfere, or otherwise be incompatible with operation of the treatment works including interference with the use or disposal of municipal sludge.

B. Pollutant Restrictions

Pretreatment Standards (40 CFR Section 403.5) developed pursuant to Section 307 of the Federal Clean Water Act (the Act) require that the permittee shall not allow, under any circumstances, the introduction of the following pollutants to the POTW from any source of nondomestic discharge:

1. Any other pollutant which may cause Pass Through or Interference;
2. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, waste streams with a closed cup flashpoint of less than sixty (60) degrees Centigrade (140 degrees Fahrenheit) using the test methods specified in 40 CFR Section 261.21;
3. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with a pH of lower than 5.0 s.u., unless the treatment facilities are specifically designed to accommodate such discharges;
4. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, or other interference with the operation of the POTW;
5. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with any treatment process at the POTW;

6. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds forty (40) degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;
7. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through at the POTW;
8. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
9. Any trucked or hauled pollutants, except at discharge points designated by the POTW; and
10. Any specific pollutant which exceeds a local limitation established by the permittee in accordance with the requirements of 40 CFR Section 403.5 (c) and (d).

C. Approval Authority

North Dakota was delegated the Industrial Pretreatment Program in September of 2005. The North Dakota Department of Environmental Quality, Division of Water Quality shall be the Approval Authority and the mailing address for all reporting and notifications to the Approval Authority shall be:

**ND Department of Environmental Quality
Division of Water Quality
918 East Divide Ave
Bismarck ND 58501-1947**

D. Industrial Categories

In addition to the general limitations expressed above, more specific Pretreatment Standards have been and will be promulgated for specific industrial categories under Section 307 of the Act (40 CFR Part 405 et. Seq.).

E. Notification Requirements

The permittee must notify the Approval Authority, of any new introductions by new or existing industrial users or any substantial change in pollutants from any industrial user within sixty (60) days following the introduction or change. Such notice must identify:

1. Any new introduction of pollutants into the POTW from an industrial user which would be subject to Sections, 301, 306, and 307 of the Act if it were directly discharging those pollutants; or
2. Any substantial change in the volume or character of pollutants being introduced into the POTW by any industrial user;
3. For the purposes of this section, adequate notice shall include information on:
 - a. The identity of the industrial user;
 - b. The nature and concentration of pollutants in the discharge and the average and maximum flow of the discharge to be introduced into the POTW; and
 - c. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from or biosolids produced at such POTW.
4. For the purposes of this section, a significant industrial user shall include:

- a. Any discharger subject to Categorical Pretreatment Standards under Section 307 of the Act and 40 CFR chapter I, subchapter N;
- b. Any discharger which has a process wastewater flow of 25,000 gallons or more per day;
- c. Any discharger contributing five percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant;
- d. Any discharger who is designated by the Approval Authority as having a reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standards or requirements.

F. Sampling and Reporting Requirements

The permittee shall sample and analyze the influent and effluent annually for the following pollutants:

Table 5 – 40 CFR 122 Appendix D Table III				
Antimony, Total	Arsenic, Total	Beryllium, Total	Cadmium, Total	Chromium, Total
Copper, Total	Lead, Total	Mercury, Total	Nickel, Total	Selenium, Total
Silver, Total	Thallium, Total	Zinc, Total	Cyanide, Total	Phenols, Total
Hardness, Total				
Notes:				
a. A total hardness of the receiving stream needs to be determined every time the above parameters are tested. The hardness is used to calculate parameter criterion(s) according to the North Dakota State Water Quality Standards.				

The sampling shall commence within thirty (30) days of the effective date of this permit and continue at a frequency of once per year.

Sampling and analytical procedures shall be in accordance with guidelines established in 40 CFR Part 136. Where sampling methods are not specified the effluent samples collected shall be composite samples consisting of at least twelve (12) aliquots collected at approximately equal intervals over a representative 24-hour period and composited according to flow. Where a flow proportioned composite sample is not practical, the permittee shall collect at least three (3) grab samples, taken at equal intervals over a representative 24-hour period. Lagoon treatment systems may collect a single effluent grab sample.

The results of all analyses shall be attached to and reported along with the Discharge Monitoring Report (DMR) submitted for the end of that reporting period.

G. Approval Authority Options

At such time as a specific pretreatment limitation becomes applicable to an industrial user of the permittee, the Approval Authority may, as appropriate:

- 1. Amend the permittee's North Dakota Pollutant Discharge Elimination System (NDPDES) discharge permit to specify the additional pollutant(s) and corresponding effluent limitation(s) consistent with the applicable Pretreatment Standards;
- 2. Require the permittee to specify, by ordinance, order, or other enforceable means, the type of pollutant(s) and the maximum amount which may be discharged to the permittee's POTW for treatment. Such requirement shall be imposed in a manner consistent with the POTW program development requirements of the General Pretreatment Regulations at 40 CFR Part 403; and/or,

3. Require the permittee to monitor its discharge for any pollutant which may likely be discharged from the permittee's POTW, should the industrial user fail to properly pre-treat its waste.

H. Enforcement Authority

The Approval Authority retains, at all times, the right to take legal action against any source of nondomestic discharge, whether directly or indirectly controlled by the permittee, for violations of a permit, order or similar enforceable mechanism issued by the permittee, violations of any Pretreatment Standard or requirement, or for failure to discharge at an acceptable level under national standards issued by EPA under 40 CFR, chapter I, subchapter N. In those cases where a North Dakota Pollutant Discharge Elimination System (NDPDES) permit violation has occurred because of requirements as necessary to protect the POTW, the North Dakota Department of Environmental Quality and/or Approval Authority shall hold the permittee and/or industrial user responsible and may take legal action against the permittee as well as the industrial user(s) contributing to the permit violation.

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