

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

Public Notice Date: 5/19/2021

Public Notice Number: ND-2021-014

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: 3/2/2021

Application Number: ND0023370

Applicant Name: Jamestown City Of

Mailing Address: 102 3rd Ave SE, Jamestown, ND 58401-4205

Telephone Number: 701.252.9149

Proposed Permit Expiration Date: 6/30/2026

Facility Description

The reapplication is for a combination mechanical treatment plan and four waste stabilization ponds which service the City of Jamestown. The outfalls are located in Section 4, Township 139N, Range 63W. Discharges would be to the James River, a Class IA stream, via an unnamed drainage channel.

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. For further information on making public comments/public comment tips please visit: <https://deq.nd.gov/PublicCommentTips.aspx>. 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 June 21, 2021 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
ND0023370**

**CITY OF JAMESTOWN, NORTH DAKOTA
Publicly Owned Treatment Works (Domestic, Major Municipal – Mechanical Plant and
Lagoon System)**

DATE OF THIS FACT SHEET – March 17, 2021

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 U.S.C. 1251, et seq.], and is authorized to take all action necessary or appropriate to secure to this state the benefits of the 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) 33.1-16 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 rules or regulations apply to NDPDES permits:

- Procedures the department follows 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 NDAC section 33.1-16-01-08, the department must prepare a draft permit and accompanying fact sheet, and make it available for public 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 changes to the permit in **Appendix D – Response to Comments**.

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BACKGROUND INFORMATION

Table 1 – General Facility Information

Applicant:	The City of Jamestown, North Dakota
Mailing Address:	102 3rd Ave SE Jamestown, ND 58401-4205
Physical Address:	4940 18 th St. SE Jamestown, ND 58401
Permit Number:	ND0023370
Permit Type:	Domestic- Major Municipal
Type of Treatment:	Mechanical and Waste Stabilization Pond System
SIC Code:	4952 – Sewerage Systems
NAICS Code:	221320 – Sewage Treatment Facilities
Discharge Location:	Outfall 001: James River, Class IA Stream Latitude: 46.8821678161 Longitude: -98.6539154052 Outfall 002: James River, Class IA Stream Latitude: 46.88560314 Longitude: -98.63712399
Hydrologic Code:	10160003 – Upper James River
Population:	15,084 – Per permit application



Figure 1 – Jamestown Wastewater Treatment Facility - Jamestown, ND (Google Earth Imagery Date: 6/4/2017)

FACILITY DESCRIPTION

History

Originally the City of Jamestown was serviced by a four-cell waste stabilization lagoon system. In 1997, the city began to continuously discharge from the mechanical treatment train while still utilizing the four-cell lagoon system.

Treatment System

The City of Jamestown's Publicly Owned Treatment Works (POTW) treats wastewater through two separate treatment trains. The facility treats an average of 3.1 million gallons per day (MGD) between both treatment trains and has a design capacity of 3.5 MGD. According to the facility's application, the City of Jamestown services a population of 15,084 people, resulting in approximately 1.3 MGD of domestic wastewater. The facility treats approximately 1.8 MGD of industrial wastewater.

The first treatment train treats a mixture of domestic and industrial wastewater through a four-cell lagoon system, totaling 229 acres. Cell A, a 6-acre cell, is aerated with 90 aerators split into ten rows with nine aerators in each row. Cell B, a 20-acre cell, is also aerated but with only three rows of aeration. Cell C, a 135-acre cell, and Cell D, a 68-acre cell, are not aerated. The effluent from this treatment train is discharged through Outfall 001 through a discharge structure located on the north side of Cell D. Outfall 001 intermittently discharges.

The second train is a mechanical treatment plant that uses sequential batch reactors (SBR) to treat industrial waste from Cavendish Farms, Inc., one of the significant industrial users that discharges to the Jamestown POTW. The wastewater flows through the SBR to an equalization basin and is then disinfected through chlorination and dechlorination. The effluent from this treatment train is discharged through Outfall 002. Solids generated during this process are cycled through an aerobic digester. The facility discharges continuously through Outfall 002. The effluent can also be routed to the lagoon system for continued treatment should it not meet discharge limitations. The discharge from both Outfall 001 and Outfall 002 flow through natural drainages and then through a culvert to the James River, a Class IA stream. A diagram of the flow for both treatment trains can be found in Figure 2.

The facility has submitted a facility improvement schedule with their application which includes installing a new programmable logic controller (PLC) system and a valve replacement plan which will occur during the new permit cycle. These improvements are not expected to affect the quality of the effluent.

The city currently has four (4) permitted significant industrial users. The department is the Approval and Control Authorities for these significant industrial users according to the regulations set forth in the NDCC Chapter 33-16-01.1, 40 CFR 403, and applicable local regulations.

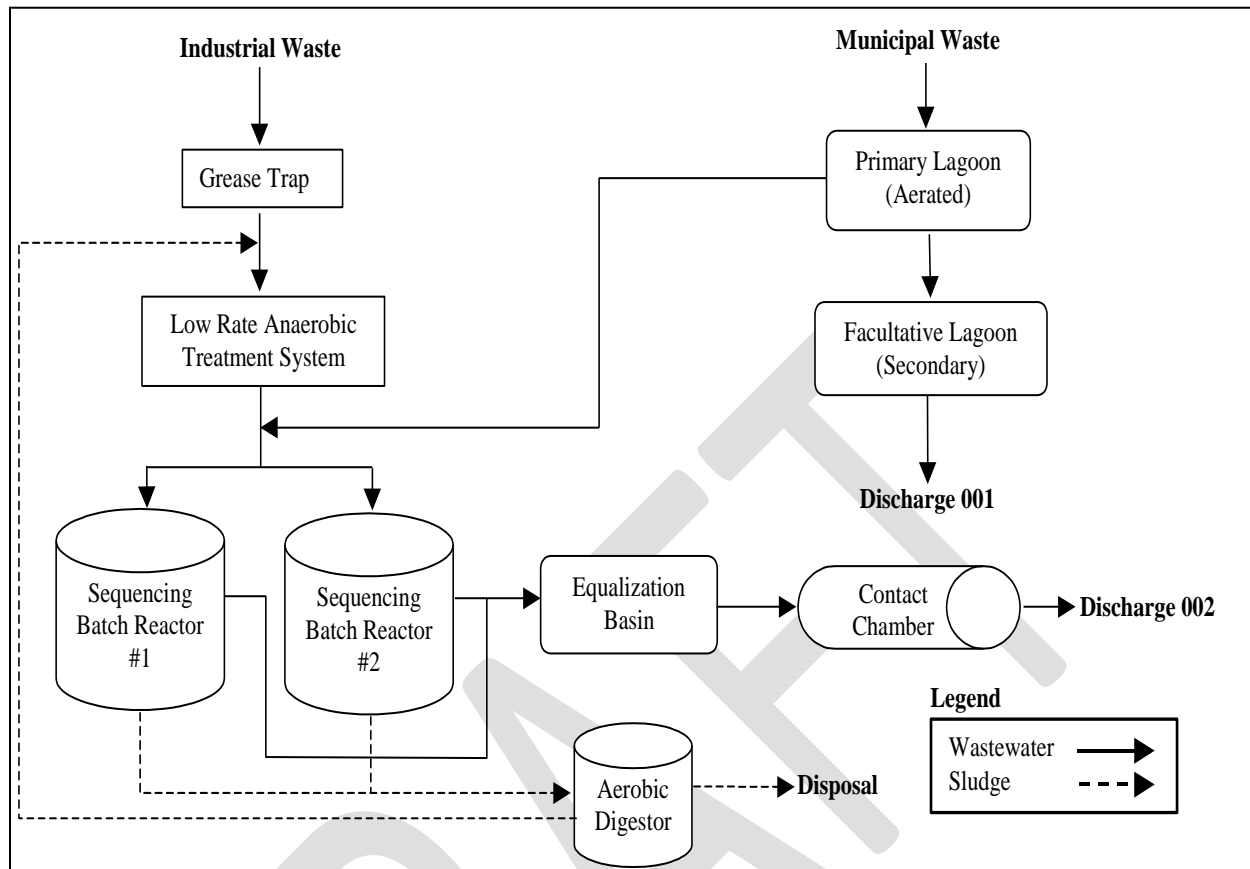


Figure 2 - Facility Flow Diagram

Outfall Description

The authorization to discharge provided under this permit is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under a NDPDES permit is a violation of the 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 penalties as provided under the CWA.

There are two active outfalls at the facility. The descriptions for the active outfalls are as follows:

Outfall 001. Active. Final Outfall.			
Latitude: 46.8821678161	Longitude: -98.6539154052	County: Stutsman	
Township: 139 North	Range: 63 West	Section: 4	Q: B
Receiving Stream: James River		Classification: Class IA Stream	
Outfall Description: This is the final outfall for treated domestic and industrial wastewater from the waste stabilization pond system. The compliance point is where the effluent leaves Cell D.			

Outfall 002. Active. Final Outfall.			
Latitude: 46.8856031400		Longitude: -98.6371239900	
County: Stutsman			
Township: 139 North		Range: 63 West	
Section: 4		Q: B	
Receiving Stream: James River		Classification: Class IA Stream	
Outfall Description: This is the final outfall for treated industrial wastewater from the mechanical wastewater treatment system. The compliance point is where the effluent leaves the disinfection chamber.			

PERMIT STATUS

The department issued the previous permit for this facility on July 1, 2016. The previous permit placed limits on Biochemical Oxygen Demand (BOD₅), Total Suspended Solids (TSS), pH, Ammonia as N, *E. coli*, Oil and Grease, Total Residual Chlorine (TRC) and Whole Effluent Toxicity (WET).

The department has been in contact with the City of Jamestown to obtain information to reissue this permit. The department received EPA application Form 2A on March 3, 2021. The application was accepted by the department on April 20, 2021. Effluent sample data has been provided to the department through official laboratory reports, discharge monitoring reports, and the permit application.

SUMMARY OF COMPLIANCE WITH PREVIOUSLY ISSUED PERMIT

The last non-sampling compliance inspection was conducted on July 7, 2020. The department's compliance assessment is based on review of the facility's Discharge Monitoring Reports (DMRs) and departmental inspections. The department found *E. coli* reporting issues during the inspection which were immediately corrected by the facility.

Past Discharge Data

The concentrations of pollutants from both outfalls and associated stream data were reported on DMRs. The data are characterized in the below tables.

Table 2 – DMR Data for Outfall 001 (July 1, 2016 through March 10, 2021)

Parameter	Range	Average	Permit Limit	Number of Exceedances
BOD ₅ (mg/l)	1.56 – 26	5.86	25 Monthly avg 45 Daily max	0 0
Temperature (°C)	2.5 – 25	12.47	N/A	N/A
pH (S.U.)	7.1 – 8.97	N/A	7.0-9.0	0
TSS (mg/l)	2.4 – 28.6	11.66	30 Monthly avg 45 Daily max	0 0
<i>E. coli</i> (#/100 ml)	0 – 63	7.79	126 Monthly avg 409 Daily max	0 0
Oil & Grease (mg/l)	No Visible Sheen	No Visible Sheen	10 Daily max	0
Nitrite Plus Nitrate, Total as N (mg/l)	0.34 – 57.5	5.15	N/A	N/A
Nitrogen, Kjeldahl, Total (mg/l)	7.5 – 22.5	14.5	N/A	N/A
Ammonia as N (mg/l)	0.02 – 10	2.09	Calculated	0
Phosphorus, Total as P (mg/l)	1.22 – 26.9	6.90	N/A	N/A
Whole Effluent Toxicity (TUa)	<1	<1	<1	0
Antimony Total (mg/l) – Influent	< 0.001	< 0.001	N/A	N/A
Antimony Total (mg/l) – Effluent	< 0.001	< 0.001	WQS	0
Arsenic Total (mg/l) – Influent	0.006 – 0.007	0.0063	N/A	N/A
Arsenic Total (mg/l) – Effluent	0.003 – 0.004	0.0037	WQS	0
Beryllium Total (mg/l) – Influent	< 0.0005 – 0.005	0.0023	N/A	N/A
Beryllium Total (mg/l) – Effluent	< 0.0005	< 0.0005	WQS	0
Cadmium Total (mg/l) – Influent	< 0.0001 – 0.007	0.0027	N/A	N/A
Cadmium Total (mg/l) – Effluent	< 0.0001	< 0.0001	Calculated	0
Chromium Total (mg/l) – Influent	0.011 – 0.084	0.0367	N/A	N/A
Chromium Total (mg/l) – Effluent	< 0.002	< 0.002	WQS	0
Copper Total (mg/l) – Influent	0.029 – 0.043	0.0357	N/A	N/A

Parameter	Range	Average	Permit Limit	Number of Exceedances
Copper Total (mg/l) – Effluent	< 0.002	< 0.002	Calculated	0
Cyanide (mg/l) – Influent	0.007 – 0.008	0.0073	N/A	N/A
Cyanide (mg/l) – Effluent	< 0.007 – 0.1	0.008	WQS	2
Hardness as CaCO ₃	260 – 399	330.67	N/A	N/A
Lead Total (mg/l) – Influent	0.003 – 0.006	0.0043	N/A	N/A
Lead Total (mg/l) – Effluent	< 0.0005 – 0.001	0.0003	Calculated	0
Mercury Total (mg/l) – Influent	< 0.0002	< 0.0002	N/A	N/A
Mercury Total (mg/l) – Effluent	< 0.0002	< 0.0002	WQS	0
Nickel Total (mg/l) – Influent	0.008 – 0.119	0.0457	N/A	N/A
Nickel Total (mg/l) – Effluent	0.003 – 0.005	0.0037	Calculated	0
Phenols Total (µg/l) – Influent	22 – 345.96	203.9	N/A	N/A
Phenols Total (µg/l) – Effluent	< 10	< 10	WQS	0
Selenium Total (mg/l) – Influent	< 0.005	< 0.005	N/A	N/A
Selenium Total (mg/l) – Effluent	< 0.005	< 0.005	WQS	0
Silver (mg/l) – Influent	< 0.0005	< 0.0005	N/A	N/A
Silver (mg/l) – Effluent	< 0.0005	< 0.0005	WQS	0
Thallium Total (mg/l) – Influent	< 0.0001	< 0.0001	N/A	N/A
Thallium Total (mg/l) – Effluent	< 0.0001	< 0.0001	WQS	0
Zinc Total (mg/l) – Influent	0.88 – 22	7.43	N/A	N/A
Zinc Total (mg/l) – Effluent	< 0.05	< 0.05	Calculated	0
Dissolved Oxygen (mg/l) – Downstream	7.02 – 14.25	10.15	N/A	N/A
Temperature (°C) – Upstream	5.9 – 25	13.70	N/A	N/A

Parameter	Range	Average	Permit Limit	Number of Exceedances
Temperature (°C) – Downstream	2 – 26	13.28	N/A	N/A
Stream Flow (cfs)	1.62 – 2536	450.94	N/A	N/A
Ammonia as N (mg/l) – Upstream	0.04 – 1.25	0.185	N/A	N/A
Ammonia as N (mg/l) – Downstream	0 – 19.55	0.55	N/A	N/A
pH (S.U.) – Upstream	6.8 – 9.1	N/A	N/A	N/A
pH (S.U.) – Downstream	7.0 – 9.58	N/A	N/A	N/A
Effluent Flow (MGD)	1.57 – 132.37	12.71	N/A	N/A
Total Monthly Effluent Flow (MG)	1.71 – 585.12	113.34	N/A	N/A
Notes:				
The City of Jamestown discharged from Outfall 001 twenty-four (24) times between July 2016 and March 2021 for a total of 288 days with the average discharge lasting twelve (12) days.				

Table 3 – DMR Data for Outfall 002 (July 1, 2016 through March 10, 2021)

Parameter	Range	Average	Permit Limit	Number of Exceedances
BOD ₅ (mg/l) – Influent	23.3 – 8260	3287.2	N/A	N/A
BOD ₅ (mg/l) – Effluent	1.76 – 12.35	4.55	25 Monthly avg 45 Daily max	0 0
Temperature (°C)	7.62 – 29	19.05	N/A	N/A
pH (S.U.)	6.95 – 8.37	N/A	7.0-9.0	3
TSS (mg/l) – Influent	27.4 – 10050	1856.4	N/A	N/A
TSS (mg/l) – Effluent	4.8 – 22.13	8.07	30 Monthly avg 45 Daily max	0 0
<i>E. coli</i> (#/100 ml)	0 – 21.6	1.02	126 Monthly avg 409 Daily max	0 0
Oil & Grease (mg/l)	No Visible Sheen	No Visible Sheen	10 Daily max	0
Total Residual Chlorine (mg/l)	0 – 0.05	0.044	0.10 Daily max	1
Nitrite Plus Nitrate, Total as N (mg/l)	0.06 – 82	51.46	N/A	N/A
Nitrogen, Kjeldahl, Total (mg/l)	7.5 – 22.5	13.59	N/A	N/A

Parameter	Range	Average	Permit Limit	Number of Exceedances
Ammonia as N (mg/l)	0.02 – 1.71	0.09	Calculated	0
Phosphorus, Total as P (mg/l)	21.9 – 74.6	29	N/A	N/A
Whole Effluent Toxicity (TUa)	<1	<1	<1	0
Whole Effluent Toxicity (TUC)	1	1	N/A	0
Antimony Total (mg/l) – Influent	< 0.001	< 0.001	N/A	N/A
Antimony Total (mg/l) – Effluent	< 0.001	< 0.001	WQS	0
Arsenic Total (mg/l) – Influent	0.006 – 0.007	0.0063	N/A	N/A
Arsenic Total (mg/l) – Effluent	0.004 – 0.006	0.0047	WQS	0
Beryllium Total (mg/l) – Influent	< 0.0005 – 0.002	0.0007	N/A	N/A
Beryllium Total (mg/l) – Effluent	< 0.0005	< 0.0005	WQS	0
Cadmium Total (mg/l) – Influent	< 0.0001 – 0.007	0.0027	N/A	N/A
Cadmium Total (mg/l) – Effluent	< 0.0001	< 0.0001	Calculated	0
Chromium Total (mg/l) – Influent	0.011 – 0.084	0.0367	N/A	N/A
Chromium Total (mg/l) – Effluent	< 0.002	< 0.002	WQS	0
Copper Total (mg/l) – Influent	0.029 – 0.043	0.0357	N/A	N/A
Copper Total (mg/l) – Effluent	< 0.002	< 0.002	Calculated	0
Cyanide (mg/l) – Influent	< 0.007 – 0.008	0.0073	N/A	N/A
Cyanide (mg/l) – Effluent	< 0.007	< 0.007	WQS	0
Hardness as CaCO ₃	324 – 485.7	380.9	N/A	N/A
Lead Total (mg/l) – Influent	0.003 – 0.006	0.0043	N/A	N/A
Lead Total (mg/l) – Effluent	< 0.0005	< 0.0005	Calculated	0
Mercury Total (mg/l) – Influent	< 0.0002	< 0.0002	N/A	N/A

Parameter	Range	Average	Permit Limit	Number of Exceedances
Mercury Total (mg/l) – Effluent	< 0.0002	< 0.0002	WQS	0
Nickel Total (mg/l) – Influent	0.008 – 0.119	0.0457	N/A	N/A
Nickel Total (mg/l) – Effluent	0.003 – 0.006	0.0043	Calculated	0
Phenols Total (µg/l) – Influent	22 – 345.96	203.9	N/A	N/A
Phenols Total (µg/l) – Effluent	< 10	< 10	WQS	0
Selenium Total (mg/l) – Influent	< 0.005	< 0.005	N/A	N/A
Selenium Total (mg/l) – Effluent	< 0.005	< 0.005	WQS	0
Silver (mg/l) – Influent	< 0.0005	< 0.0005	N/A	N/A
Silver (mg/l) – Effluent	< 0.0005	< 0.0005	WQS	0
Thallium Total (mg/l) – Influent	< 0.0001	< 0.0001	N/A	N/A
Thallium Total (mg/l) – Effluent	< 0.0001	< 0.0001	WQS	0
Zinc Total (mg/l) – Influent	0.088 – 22	7.4327	N/A	N/A
Zinc Total (mg/l) – Effluent	< 0.05	< 0.05	Calculated	0
Dissolved Oxygen (mg/l) – Downstream	1.5 – 16.12	10.19	N/A	N/A
Temperature (°C) – Upstream	0.9 – 32	12.09	N/A	N/A
Stream Flow (cfs)	16.4 – 2536	274.78	N/A	N/A
Ammonia as N (mg/l) – Upstream	0 – 66.3	0.69	N/A	N/A
pH (S.U.) – Upstream	6.8 – 9.2	N/A	N/A	N/A
Effluent Flow (MGD)	0.712 – 8.4	1.43	N/A	N/A
Total Monthly Effluent Flow (MG)	1.74 – 54.24	41.15	N/A	N/A
Notes:				
The City of Jamestown discharged from Outfall 002 for a total of 1675 days between July 2016 and March 2021. The facility averaged 99.4% BOD ₅ removal and 98.2% TSS removal.				

Sanitary Sewer Overflows

Overflows of untreated or partially treated sewage from a sanitary sewer collection system have been termed Sanitary Sewer Overflow (SSOs) by EPA. According to department records, there was one (1) SSO from July 1, 2016 through March 1, 2021. This SSO occurred on April 13, 2019 when a pipe broke running from Cavendish to the POTW.

One (1) other event was reported to the department on April 5, 2019. This event resulted in unsampled effluent flowing from Cell D due to a muskrat hole in the side of the dike.

PROPOSED PERMIT LIMITS

Technology-Based Effluent Limits

The City of Jamestown is subject to the secondary treatment standards. Federal and state regulations define technology-based effluent limits for municipal wastewater treatment plants. These effluent limits are given in 40 CFR part 133 and in NDAC Chapter 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.

Table 4 – 40 CFR 133 Technology-Based Effluent 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.	
Percent Removal	85% BOD ₅ and TSS	

NDAC Chapter 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. Lagoon systems have a hydraulic residency time of greater than 30 days. Therefore, influent and effluent samples would not be representative of the same wastewater. In addition, influent enters the lagoon system through multiple points, one main lift station from the City of Jamestown, and an additional lift station from one of the industrial pretreatment facilities, therefore any sample grabbed would not be representative of the entire influent. The department has determined not to include the permit removal requirements in the proposed permit for Outfall 001 based on the infeasibility to determine percent removal.

Effluent Limitations

The department proposes the following effluent limitations for Outfall 001:

Table 5 – Effluent Limitations for Outfall 001

Effluent Parameter	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Basis ^a
BOD ₅ , mg/l	25	45	*	40 CFR 133.102(a)(2); NDAC 33.1-16-01-14(3); Previous Permit
TSS, mg/l	30	45	*	40 CFR 133.102(b); NDAC 33.1-16-01-14(3); Previous Permit
<i>Escherichia coli</i> (<i>E. coli</i>), #/100 ml ^b	126	*	409	WQS Previous Permit
Ammonia as N, mg/l ^c	Refer to Ammonia Table (Table 7)			WQS
pH, s.u. ^d	Shall Remain Between 7.0 – 9.0			WQS Previous Permit
Oil & Grease – Visual ^e	*	*	*	WQS Previous Permit
Oil & Grease, mg/l ^e	*	*	10	Previous Permit BPJ
Whole Effluent Toxicity (WET), TU _a	Refer to Whole Effluent Toxicity (WET) Requirements			40 CFR 122.44(d)(1)(iv-v) WQS Previous Permit
Whole Effluent Toxicity (WET), TU _c	Refer to Whole Effluent Toxicity (WET) Requirements			40 CFR 122.44(d)(1)(iv-v) WQS Previous Permit
Notes:				
*	This parameter is not limited. However, the department may impose limitations based on sample history and to protect receiving waters.			
a.	<p>The basis for the effluent limitations is given below:</p> <p>“Previous Permit” refers to limitations in the previous permit. The NDPDES regulations 40 CFR Part 122.44(l)(1) Reissued Permits require that when a permit is renewed or reissued, interim limitations, standards, or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit unless the circumstances on which the previous permit was issued have materially and substantially changed since the previous permit was issued and would constitute cause for permit modification or revocation and reissuance under 40 CFR Part 122.62.</p> <p>“WQS” refers to effluent limitations based on the State of North Dakota’s “Standards of Quality for Waters of the State”, NDAC Chapter 33.1-16-02.1.</p> <p>“BPJ” refers to best professional judgment.</p>			
b.	<i>E. coli</i> limits shall be effective from April 1 through October 31. Averages for <i>E. coli</i> shall be determined as a geometric mean.			
c.	A discharge ammonia as N criterion will be dependent on temperature, river flow, discharge rate, river pH, and the effluent ammonia as N concentration. This			

	determination shall be in accordance to the formula specified in the latest version of the state WQS. Permittee will use James River parameters to calculate the real-time water quality standard for ammonia as N. This calculated limit will be compared to the facility effluent ammonia as N data, and if the effluent value is greater than the calculated limit, the permittee will report an exceedance on the DMR for that reporting period.
d.	The pH, an instantaneous limitation, shall be between 7.0 S.U. and 9.0 S.U. Any single analysis and/or measurement outside this limitation shall be considered a violation of the conditions of this permit.
e.	A daily visual check shall be performed. There shall be no discharge of oily wastes that produce a visible sheen on the surface of the receiving water. If present, a grab sample shall be analyzed for oil and grease to ensure compliance with the concentration limitation.
Stipulations:	
Best Management Practices (BMPs) are to be utilized so that there shall be no discharge of floating debris, oil, scum and other floating materials in sufficient amounts to be unsightly or deleterious, or oil wastes that produce a visible sheen on the surface of the receiving water.	

Table 6 – Effluent Limitations for Outfall 002

Effluent Parameter	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Basis ^a
BOD ₅ , mg/l	25	45	*	40 CFR 133.102(a)(2); NDAC 33.1-16-01-14(3); Previous Permit
TSS, mg/l	30	45	*	40 CFR 133.102(b); NDAC 33.1-16-01-14(3); Previous Permit
<i>Escherichia coli</i> (<i>E. coli</i>), #/100 ml ^b	126	*	409	WQS Previous Permit
Ammonia as N, mg/l ^c	Refer to Ammonia Table (Table 7)			WQS
pH, s.u. ^d	Shall Remain Between 7.0 – 9.0			WQS Previous Permit
Oil & Grease – Visual ^e	*	*	*	WQS Previous Permit
Oil & Grease, mg/l ^e	*	*	10	Previous Permit BPJ
Total Residual Chlorine (TRC), mg/l ^{f, g, h}	0.011	*	0.019	WQS BPJ
Whole Effluent Toxicity (WET), TU _a	Refer to Whole Effluent Toxicity (WET) Requirements			40 CFR 122.44(d)(1)(iv-v) WQS Previous Permit
Whole Effluent Toxicity (WET), TU _c	Refer to Whole Effluent Toxicity (WET) Requirements			40 CFR 122.44(d)(1)(iv-v) WQS Previous Permit
Notes:				

*	This parameter is not limited. However, the department may impose limitations based on sample history and to protect receiving waters.
a.	<p>The basis for the effluent limitations is given below:</p> <p>“Previous Permit” refers to limitations in the previous permit. The NDPDES regulations 40 CFR Part 122.44(l)(1) Reissued Permits require that when a permit is renewed or reissued, interim limitations, standards, or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit unless the circumstances on which the previous permit was issued have materially and substantially changed since the previous permit was issued and would constitute cause for permit modification or revocation and reissuance under 40 CFR Part 122.62.</p> <p>“WQS” refers to effluent limitations based on the State of North Dakota’s “Standards of Quality for Waters of the State”, NDAC Chapter 33.1-16-02.1.</p> <p>“BPJ” refers to best professional judgment.</p>
b.	<i>E. coli</i> limits shall be effective from April 1 through October 31. Averages for <i>E. coli</i> shall be determined as a geometric mean.
c.	A discharge ammonia as N criterion will be dependent on temperature, river flow, discharge rate, river pH, and the effluent ammonia as N concentration. This determination shall be in accordance to the formula specified in the latest version of the state WQS. Permittee will use James River parameters to calculate the real-time water quality standard for ammonia as N. This calculated limit will be compared to the facility effluent ammonia as N data, and if the effluent value is greater than the calculated limit, the permittee will report an exceedance on the DMR for that reporting period.
d.	The pH, an instantaneous limitation, shall be between 7.0 S.U. and 9.0 S.U. Any single analysis and/or measurement outside this limitation shall be considered a violation of the conditions of this permit.
e.	A daily visual check shall be performed. There shall be no discharge of oily wastes that produce a visible sheen on the surface of the receiving water. If present, a grab sample shall be analyzed for oil and grease to ensure compliance with the concentration limitation.
f.	Applied only when chlorination is utilized for disinfection.
g.	The minimum limit of analytical reliability for TRC is considered to be 0.05 mg/l. The analysis for TRC shall be conducted using reliable devices equivalent to EPA Method 4500-Cl G, Spectrophotometric, DPD. This method achieves a method detection limit of less than 0.05 mg/l. For purposes of this permit and reporting on the DMR form, analytical values less than 0.05 mg/l shall be considered in compliance with this permit.
h.	In the calculation of average TRC concentrations, analytical results that are less than the method detection limit shall be considered the value of the detection limit for calculation purposes. If all analytical results using in the calculation are below the method detection limit, then the method detection limit shall be reported on the DMR; otherwise report the calculated average value.
Stipulations:	
Best Management Practices (BMPs) are to be utilized so that there shall be no discharge of floating debris, oil, scum and other floating materials in sufficient amounts to be unsightly or deleterious, or oil wastes that produce a visible sheen on the surface of the receiving water.	

Table 7 – Ammonia Effluent Limitation Requirements for Outfall 001 and Outfall 002

		Effluent Limitations		
Parameters		Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit
Ammonia as N, mg/l ^a		†	*	‡
James River Parameters				
Flow (cfs) ^b		*	*	*
pH (s.u.), upstream ^{b, c}		*	*	*
Temperature (°C), Upstream ^{b, c}		*	*	*
Ammonia as N (mg/l), Upstream		*	*	*
*	This parameter is not limited. However, the department may impose limitations based on sample history to protect the receiving waters.			
a.	Calculations must be performed for each discharge sample. If an exceedance is detected on any single sample, the exceedance must be reported on the DMR.			
b.	Sample must be collected/recorded the same day as the ammonia sample. The upstream flow and temperature may be obtained from the USGS gauging station 06470000 or can be collected by the facility.			
c.	When dangerous conditions exist for personnel (i.e. thin ice, melting ice, flooding, etc.) the permittee may utilize the following minimum values based on the 90 th percentile upstream reported data during the previous permit cycle: pH 8.89 S.U., Temperature 22.94°C, and ammonia 0.79 mg/l. If the upstream flow is not available, then 30B10 critical low flow of 1.89 cfs shall be used. The maximum mixing factor is 10.0%.			
†	Chronic Standard (Average Monthly Limit):			
	<p>The 30-day average concentration of total ammonia (expressed as N in mg/l) does not exceed, more often than once every three years on the average, the numerical value given by the following formula; and the highest 4-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> $\frac{(0.0577}{(1+10^{7.688-\text{pH}})} + \frac{2.487}{1+10^{\text{pH}-7.688}} \bullet \text{CV};$ <p>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.</p>			
‡	Acute Standard (Daily Maximum Limit):			
	The one-hour average concentration of total ammonia (expressed as N in mg/l) does not exceed, more often than once every three years on the average, the numerical value given by the following formula:			

	$\frac{(0.411}{(1+10^{7.204-\text{pH}}}} + \frac{58.4)}{1+10^{\text{pH}-7.204}})$ <p>where salmonids are absent; or</p> $\frac{(0.275}{(1+10^{7.204-\text{pH}}}} + \frac{39.0)}{1+10^{\text{pH}-7.204}})$ <p>where salmonids are present.</p>
Notes:	
<p>For all of the above calculations, the permittee receives a maximum of ten percent (10%) of stream flow for dilution at the time of discharge based on the flow of the James River. In-stream concentration will be calculated on a mass balance basis using the following formula:</p> <p>In-stream concentration = $(Q_u * C_u + C_e)/(Q_u + Q_e)$ where Q_u = 10 of the receiving water flow C_u = Receiving water ammonia as N Q_e = Effluent Flow C_3 = Effluent Ammonia as N</p> <p>Effluent from Outfall 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.</p>	

SELF-MONITORING REQUIREMENTS

All effluent samples shall be collected at a point following the treatment system and prior to entering the James River.

A pre-discharge sample must be taken prior to the start of any discharge from Outfall 001. This analysis shall be reported to the department. A pre-discharge sample shall be tested for BOD₅, TSS, pH, Temperature, *E. coli*, and Ammonia as N. This pre-discharge sample shall represent the first required sample. An additional sample of the actual discharge shall be taken and analyzed with samples between taken twice a week for the duration of the discharge.

Table 8 – Self-Monitoring Requirements for Outfall 001

Effluent Parameter	Frequency	Sample Type ^a
BOD ₅ , mg/l	2/week	Grab
TSS, mg/l	2/week	Grab
<i>E. coli</i> , #/100 ml ^b	2/week	Grab
Ammonia as N, mg/l	2/week	Grab
pH, s.u.	2/week	Grab
Oil and Grease – Visual ^c	Daily	Visual
Oil and Grease, mg/l ^c	Conditional/Daily	Grab
Temperature, °C	2/week	Grab
Nitrogen Total, mg/l ^d	Monthly	Grab
Phosphorus Total, mg/l	Monthly	Grab

Effluent Flow, MGD	Daily	Calculated
Drain, MG	Monthly	Calculated
WET, TU _a	Quarterly	Grab
Metals ^e	Yearly	Grab
Priority Pollutants	1/permit	Grab
James River Parameters		
Flow, cfs	Daily	Instantaneous
pH, s.u. – Upstream	2/week	Grab
Temperature, °C – Upstream	2/week	Instantaneous
Ammonia as N, mg/l – Upstream	Weekly	Grab
Dissolved Oxygen, mg/l - Downstream	2/week	Grab
Notes:		
a.	Refer to Appendix B for definitions	
b.	Monitoring for <i>E.coli</i> shall be in effect only during the recreational season (April 1 through October 31).	
c.	If a visible sheen is observed in the discharge, a grab sample shall be collected, and the department shall be contacted.	
d.	Total nitrogen is a combination of nitrate, nitrite, and Total Kjeldahl Nitrogen (TKN).	
e.	Refer to Part V(C) , Industrial Pretreatment Program, Sampling and Reporting Requirements of the permit.	

Table 9 – Self-Monitoring Requirements for Outfall 002

Effluent Parameter	Frequency	Sample Type ^a
BOD ₅ , mg/l (Effluent)	3/week	Grab
BOD ₅ , mg/l (Influent)	Weekly	Grab
BOD ₅ (Removal Efficiency)	Monthly	Calculated
TSS, mg/l (Effluent)	3/week	Grab
TSS, mg/l (Influent)	Weekly	Grab
TSS (Removal Efficiency)	Monthly	Calculated
<i>E. coli</i> , #/100 ml ^b	3/week	Grab
Ammonia as N, mg/l	3/week	Grab
pH, s.u.	Daily	Grab
Oil and Grease – Visual	Daily	Visual
Oil and Grease, mg/l ^c	Conditional	Grab
Total Residual Chlorine, mg/l ^d	Daily	Grab
Temperature, °C	Daily	Grab
Nitrogen Total, mg/l ^e	Monthly	Grab
Phosphorus Total, mg/l	Monthly	Grab
Effluent Flow, MGD	Daily	Instantaneous
Drain, MG	Monthly	Calculated
WET, TU _a	Quarterly	Grab
WET, TU _c	1/permit	Grab
Metals ^f	Yearly	Composite

Priority Pollutants	1/permit	Composite
James River Parameters		
Flow, cfs	Daily	Instantaneous
pH, s.u. – Upstream	3/week	Grab
Temperature, °C – Upstream	3/week	Instantaneous
Ammonia as N, mg/l – Upstream	Weekly	Grab
Dissolved Oxygen, mg/l - Downstream	3/week	Grab
Notes:		
a.	Refer to Appendix B for definitions	
b.	Monitoring for <i>E. coli</i> shall be in effect only during the recreational season (April 1 through October 31).	
c.	If a visible sheen is observed in the discharge, a grab sample shall be collected and the department shall be contacted.	
d.	Monitoring only required when chlorinating.	
e.	Total nitrogen is a combination of nitrate, nitrite, and Total Kjeldahl Nitrogen (TKN).	
f.	Refer to Part V(C) , Industrial Pretreatment Program, Sampling, and Reporting Requirements of the permit.	

SURFACE WATER QUALITY-BASED EFFLUENT LIMITS

The North Dakota State Water Quality Standards (NDAC Chapter 33.1-16-02.1) are designed to protect existing water quality and preserve the beneficial uses of North Dakota's surface water. 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 a waste load allocation developed during a basin-wide total maximum daily load (TMDL) study. TMDLs result from the scientific study of the water body and are developed in order to reduce pollution from all sources.

The James River is classified as a Class IA stream. The quality of waters in this class shall be the same as the quality of Class I streams, except that where natural conditions exceed Class I criteria for municipal and domestic use. Class I streams shall be suitable for the propagation or protection, or both, of resident fish species and other aquatic biota and for swimming, boating, and other water recreating. The quality of the waters shall be suitable for irrigation, stock water, and wildlife without injurious effects. After treatment consisting of coagulation, settling, filtration, and chlorination, or equivalent treatment processes, the water quality shall meet the bacteriological, physical, and chemical requirements of the department for municipal or domestic use.

The James River segment receiving the POTW effluent is listed as "Fully Supporting, but Threatened" on the 2018 North Dakota Section 303(d) List of Waters Need Total Maximum Daily Loads. The designated use for this segment of the James River is "Fish and Other Aquatic Biota" with the impairment listed as "Benthic-Macroinvertebrate Bioassessments". In addition, no TMDL listing exists for any parameter known to be in the POTW effluent.

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). They specify the maximum pollutants allowed in the 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 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 Chapter 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 the existing and designated uses of the receiving water will be protected under the conditions of the proposed permit.

Mixing Zones

The department'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.

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

BOD₅

Outfall 001: The department has reviewed the BOD₅ data and sampling frequency, and no exceedances occurred for this parameter during the current permit. The department proposes to continue with the 25 mg/l (average monthly limit) and 45 mg/l (average weekly limit) with a sampling frequency of twice per week.

Outfall 002: The department has reviewed the BOD₅ data and sampling frequency, and no exceedances occurred for this parameter during the current permit. The facility achieved 99% removal in BOD₅ during the treatment process. The department proposes to continue with the 25 mg/l (average monthly limit) and 45 mg/l (average weekly limit) with a sampling frequency of three times per week, with a required 85% removal.

TSS

Outfall 001: The department has reviewed the TSS data and sampling frequency, and no exceedances occurred for this parameter during the current permit. The department proposes to continue with the 30 mg/l (average monthly limit) and 45 mg/l (average weekly limit) with a sampling frequency of two times per week.

Outfall 002: The department has reviewed the TSS data and sampling frequency, and no exceedances occurred for this parameter during the current permit. The facility achieved 98% removal in TSS during the treatment process. The department proposes to continue with the 30 mg/l (average monthly limit) and 45 mg/l (average weekly limit) with a sampling frequency of three times per week, with a required 85% removal.

pH

Outfall 001: The department has reviewed the pH data and sampling frequency, and no exceedances occurred for this parameter during the current permit. The department proposes to continue with the limitation of shall remain between 7.0 and 9.0 s.u. with a sampling frequency of twice per week.

Outfall 002: The department has reviewed the pH data and sampling frequency, and three exceedances occurred for this parameter during the current permit, with all three exceedances occurring on the low end of the limitation. The department proposes to continue with the limitation of shall remain between 7.0 and 9.0 s.u. with a sampling frequency of three times per week.

Oil and Grease

The WQS state that waters of the state must be free from oil and grease attributable to wastewater which causes a visible sheen or film upon the water. No visible sheen was detected at Outfall 001 or Outfall 002 during the previous permit. 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. Comparable treatment systems throughout the state have a similar limitation.

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 standard only applies during the recreation season from May 1 through September 30. The limitation in the permit is meant to cover the period one month before to one month after the recreation season, from April 1 through October 31.

Outfall 001: The department has reviewed the *E. coli* data and sampling frequency, and no exceedances occurred for this parameter during the current permit. The department proposes to continue with a limit of 126 organisms per 100 ml as a monthly geometric mean and 409 organisms per 100 ml as a daily maximum limit with a sampling frequency of twice per week.

Outfall 002: The department has reviewed the *E. coli* data and sampling frequency, and no exceedances occurred for this parameter during the current permit. The department proposes to continue with a limit of 126 organisms per 100 ml as a monthly geometric mean and 409 organisms per 100 ml as a daily maximum limit with a sampling frequency of three times per week.

Total Residual Chlorine (TRC)

Outfall 002: The POTW chlorinates the treated wastewater for disinfection in a contact chamber prior to discharge. The current permit included a TRC limitation of 0.1 mg/l. The department reviewed the TRC data and sampling frequency, and one exceedance occurred for this parameter during the current permit. The WQS list an acute standard of 0.019 mg/l and a chronic standard of 0.011 mg/l. The minimum limit of analytical reliability for TRC is considered to be 0.05 mg/l. The analysis for TRC shall be conducted using reliable devices equivalent to EPA Method 4500-Cl, spectrophotometric, DPD. The method achieves a method detection limit of less than 0.05 mg/l. For purposes of this permit and reporting on the DMR form, analytical values of less than 0.05 shall be considered in compliance with this permit. Therefore, the department proposes a monthly average limit of 0.011 mg/l with a daily maximum limit of 0.019 mg/l with a sampling frequency of daily. Monitoring for TRC is only required when chlorinating.

Ammonia as Nitrogen

The department considers the potential for contaminants (ammonia, metals, and organic chemicals) commonly associated with domestic waste facilities to compromise a water quality standard. The most prominent parameter of concern with domestic-waste discharges and the treatment of other organic-type waste is ammonia. Ammonia is generated during the decay or the process of stabilizing organic materials that commonly occur during domestic wastewater treatment.

Ammonia presents both acute and chronic toxicity to aquatic life at variable levels depending on receiving stream conditions (pH, temperature, and ambient ammonia). Federal Regulations (40 CFR 122.44) require the department to place limits in NDPDES permits on toxic chemicals in an

effluent whenever there is a reasonable potential for those chemicals to exceed the surface water quality criteria.

Outfall 001: The department has conducted a reasonable potential analysis for ammonia as N. Based upon this analysis it was determined that there is a reasonable potential to exceed the WQS for ammonia as N (**Appendix C**). The department reviewed the ammonia as N data and sampling frequency and no WQS exceedances occurred during the current permit. The department has determined to include effluent limitations for ammonia as N with a sampling frequency of twice per week based upon the calculations in the WQS for ammonia. Discharges from this outfall shall be based on the test results of the pre-discharge samples for each cell. Sampling shall be performed two (2) times per week during the discharge, and the discharge flow rate shall be monitored on a daily basis. A numeric ammonia as N limit will not be established for this permit issuance, however, ammonia as N limits will be calculated during discharge in compliance with the WQS to provide the POTW with real-time ammonia limitations. The department and the facility will verify compliance with the acute and chronic standards through the use of an ammonia spreadsheet based on the WQS for ammonia as N. Receiving stream parameters of pH (s.u.), temperature (°C), and DO (mg/l) shall be tested twice per week with receiving stream ammonia as N (mg/l) tested weekly.

Outfall 002: The department has conducted a reasonable potential analysis for ammonia as N. Based upon this analysis it was determined that there is a reasonable potential to exceed the WQS for ammonia as N (**Appendix C**). The department reviewed the ammonia as N data and sampling frequency and no WQS exceedances occurred during the current permit. The department has determined to include effluent limitations for ammonia as N with a sampling frequency of three times per week based upon the calculations in the WQS for ammonia. A numeric ammonia as N limit will not be established for this permit issuance, however, ammonia as N limits will be calculated during discharge in compliance with the WQS to provide the POTW with real-time ammonia limitations. The department and the facility will verify compliance with the acute and chronic standards through the use of an ammonia spreadsheet based on the WQS for ammonia as N. Receiving stream parameters of pH (s.u.), temperature (°C), and DO (mg/l) shall be tested three times per week with receiving stream ammonia as N (mg/l) tested weekly.

The department proposes the following requirements for ammonia as N:

Table 10 – Ammonia Effluent Limitations and Monitoring Requirements for Outfall 001 and Outfall 002

Parameters	Effluent Limitations		
	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit
Ammonia as N, mg/l ^a	†	*	‡
James River Parameters			
Flow (cfs) ^b	*	*	*
pH (s.u.), upstream ^{b, c}	*	*	*
Temperature (°C), Upstream ^{b, c}	*	*	*
Ammonia as N (mg/l), Upstream	*	*	*

*	This parameter is not limited. However, the department may impose limitations based on sample history to protect the receiving waters.
a.	Calculations must be performed for each discharge sample. If an exceedance is detected on any single sample, the exceedance must be reported on the DMR.
b.	Sample must be collected/recorded the same day as the ammonia sample. The upstream flow and temperature may be obtained from the USGS gauging station 06470000 or can be collected by the facility.
c.	If the upstream values are not collected then following minimum value based on the 90 th percentile upstream reported data during the pervious permit cycle: pH 8.89 S.U., Temperature 22.94°C, and ammonia 0.79 mg/l. If the upstream flow is not available, then 30B10 critical low flow of 1.89 cfs shall be used. The maximum mixing factor is 10.0%.
†	<p>Chronic Standard (Average Monthly Limit):</p> <p>The 30-day average concentration of total ammonia (expressed as N in mg/l) does not exceed, more often than once every three years on the average, the numerical value given by the following formula; and the highest 4-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> $\frac{(0.0577)}{(1+10^{7.688-\text{pH}})} + \frac{2.487}{1+10^{\text{pH}-7.688}} \bullet \text{CV};$ <p>where CV = 2.85, when $T \leq 14^{\circ}\text{C}$; or CV = $1.45 \cdot 10^{0.028 \cdot (25-T)}$, when $T > 14^{\circ}\text{C}$. Receiving stream pH is used for the calculation.</p>
‡	<p>Acute Standard (Daily Maximum Limit):</p> <p>The one-hour average concentration of total ammonia (expressed as N in mg/l) does not exceed, more often than once every three years on the average, the numerical value given by the following formula:</p> $\frac{(0.411)}{(1+10^{7.204-\text{pH}})} + \frac{58.4}{1+10^{\text{pH}-7.204}}$ <p>where salmonids are absent; or</p> $\frac{(0.275)}{(1+10^{7.204-\text{pH}})} + \frac{39.0}{1+10^{\text{pH}-7.204}}$ <p>where salmonids are present.</p>
Notes:	
<p>For all of the above calculations, the permittee receives a maximum of ten percent (10%) of stream flow for dilution at the time of discharge based on the flow of the James River. In-stream concentration will be calculated on a mass balance basis using the following formula:</p> <p>In-stream concentration = $(Q_u \cdot C_u + C_e)/(Q_u + Q_e)$ where Q_u = 10 of the receiving water flow C_u = Receiving water ammonia as N</p>	

Q_e = Effluent Flow

C_3 = Effluent Ammonia as N

Effluent from Outfall 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.

Phosphorus and Nitrogen (Nutrients)

Nutrient monitoring was included in this permit. According to the North Dakota Nutrient Reduction Strategy for Surface Waters, Jamestown is classified as a Category I facility. The first step in implementing the nutrient reduction strategy for Category I facilities is to include effluent monitoring for Total Nitrogen and Total Phosphorus. The current permit included monitoring for Nitrite plus Nitrate, Total Nitrogen and Total Phosphorus. Total nitrogen is a combination of Nitrite, Nitrate, and Total Kjeldahl Nitrogen. Therefore, this permit renewal will only include monitoring for Total Nitrogen and Total Phosphorus to be consistent with other Category I facilities under the Nutrient Reduction Strategy.

Metals

Outfall 001: The department has reviewed the metals data and sampling frequency for the City of Jamestown and performed a metals analysis (**Appendix C**) to compare the effluent results to the limits listed in the WQS.

Mercury: Mercury exceeded the chronic WQS limit as well as the human health limit for Class I, IA, and II streams. All results were below the method detection level.

Selenium: Selenium exceeded the chronic WQS. All results were below the method detection level.

Cyanide: Cyanide exceeded the chronic WQS limit as well as the human health limit for Class I, IA, and II streams.

With the exception of cyanide, the metal parameter that exceeded the WQS limits was below the method detection level. Therefore, the department proposes to continue monitoring the influent and effluent for metals with a sampling frequency of annually.

Outfall 002: The department has reviewed the metals data and sampling frequency for the City of Jamestown and performed a metals analysis (**Appendix C**) to compare the effluent results to the limits listed in the WQS.

Mercury: Mercury exceeded the chronic WQS limit as well as the human health limit for Class I, IA, and II streams. All results were below the method detection level.

Selenium: Selenium exceeded the chronic WQS. All results were below the method detection level.

Cyanide: Cyanide exceeded the chronic WQS limit as well as the human health limit for Class I, IA, and II streams. All results were below the method detection level.

All samples for mercury, selenium, and cyanide were below the method detection level. All other metals included in the metal's analysis met the limits in the WQS. Therefore, the department proposes to continue monitoring the influent and effluent for metals with a sampling frequency of annually.

Whole Effluent Toxicity (WET)

Outfall 001: The department has reviewed the WET testing data and sampling frequency for acute WET tests. The dataset consisted of 26 tests and indicated no occurrences of toxicity to *Ceriodaphnia dubia* (Water Flea) nor *Pimephales promelas* (Fathead Minnow).

Outfall 002: The department has reviewed the WET testing data and sampling frequency for both acute and chronic WET tests. The dataset consisted of 68 tests and indicated no occurrences of toxicity to *Ceriodaphnia dubia* (Water Flea) nor *Pimephales promelas* (Fathead Minnow).

Acute Toxicity Testing

The department is proposing to continue with TU_a of less than 1 (<1) in order to meet the requirements of NDAC 33.1-16-02.1-08(a)(4), which states that “[a]ll waters of the state shall be:…Free from substances attributable to municipal, industrial, or other discharges or agricultural practices in concentrations or combinations which are toxic or harmful to humans, animals, plants, or resident aquatic biota. For surface water, this standard will be enforced in part through appropriate whole effluent toxicity requirements in North Dakota pollutant discharge elimination system permits.” Since the treated wastewater travels in an open drainage channel from the plant to the James River, the Jamestown POTW must meet the WET limits at the end-of-pipe.

The department is proposing the following requirements for acute WET testing:

Table 11 – Acute WET Requirements for Outfall 001 and Outfall 002

Outfall 001						
WET tests on both species shall be performed on the first discharge made each calendar year. Thereafter, WET testing shall be performed at least once every calendar quarter in which there is a discharge.						
Outfall 002						
WET tests shall be performed at least once per calendar quarter on both species.						
Acute WET Requirements for Outfalls 001 and 002						
Implementation	Limitations Imposed					
Effluent Dilution	0%(Control)	12.5%	25%	50%	75%	100%
Dilution Water	James River ^a					
Testing Type	Acute Toxicity					
Species and Test Type	<i>Ceriodaphnia dubia</i> – 48 Hour Acute – Static Renewal – 20°C					
	<i>Pimephales promelas</i> – 96 Hour Acute – Static Renewal – 20°C					
Endpoint	Survival reported as TU_a					
Compliance Point	End-of-pipe					

Sample Frequency	Quarterly
Sample Type	Grab
Maximum Daily Limit (MDL)	<1 TU _a
Average Monthly Limit (AML)	<1 TU _a
Test Failure	Acute test failure (LC ₅₀) is defined as lethality to 50% or more of the test organisms exposed to 100% effluent for <i>Ceriodaphnia dubia</i> 48-hour and <i>Pimephales promelas</i> 96-hour test. The 48-hour and 96-hour LC ₅₀ effluent value must be <1 TU _a to indicate a passing test. Any 48-hour or 96-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>Ceriodaphnia dubia</i> , Parameter No. TSM3B. Report the highest TU _a for <i>Pimephales promelas</i> , Parameter No. TSN6C.
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 there be no discharge during a specified sampling time frame; sampling shall be performed as soon as there is a discharge. Should toxicity occur in the second test, testing shall be conducted at a frequency of once a month and the implementation of a <u>5.Toxicity Reduction Evaluation (TRE)</u> shall be determined by the department. If no toxicity is found in the second test, testing shall occur as outlined in the permit.	
a. When dangerous conditions exist for personnel (i.e. thin ice, melting ice, flooding, etc.) the permittee may utilize moderately hard reconstituted water upon request and approval by the department.	

Acute toxicity test requirements are set out in the latest revision of “Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organism.” EPA-821-R-02-012 (Fifth Ed., October 2002).

Chronic Toxicity Testing

The department is proposing monitoring for chronic toxicity with a sampling frequency of once per permit cycle. The following table lays out the requirements for chronic WET testing:

Table 12 - Chronic WET Requirements for Outfall 002

Chronic WET requirements for Outfall 002						
Implementation	Monitoring Only					
Effluent Dilution	0%(Control)	6.25%	12.5%	25%	50%	100%
Dilution Water	James River					
Species and Test Type	<i>Ceriodaphnia dubia</i> – 7-Day Chronic – Static Renewal – 25°C					
	Fathead Minnow – 7-Day Chronic – Static Renewal – 25°C					
Endpoint	Survival and Reproduction (<i>Ceriodaphnia dubia</i>) – IC25 reported as TUc					
	Larval Growth and Survival (Fathead Minnow) – IC25 reported as TUc					
Compliance Point	Monitoring Only at End-of-Pipe					
Sample Type	Grab					

Sample Frequency	Once per permit cycle
Test Acceptability	<p>Test acceptability for <i>Ceriodaphnia dubia</i> chronic must have a 80% or greater survival of all control organisms and an average of 15 or more young per surviving female in the control solutions, and 60% of surviving control females must produce three broods. If this condition is not satisfied, the test must be repeated.</p> <p>Test acceptability for <i>Pimephales promelas</i> chronic must have 80% or greater survival in controls and an average dry weight per surviving organism in control chambers equals or exceeds 0.25 mg. If this condition is not satisfied, the test must be repeated.</p>
Reporting Requirements	<p>The permittee shall report the following results of each toxicity test on the DMR for that reporting period:</p> <p><i>Pimephales promelas</i> (Fathead Minnow) Report the highest TU_c for Fathead minnow, Parameter No. TTP3B</p> <p><i>Ceriodaphnia dubia</i> (Water Flea) Report the highest TU_c for <i>Ceriodaphnia dubia</i>, Parameter No. TTB6C.</p>

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*.

Biosolids

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

Human Health

North Dakota's water quality standards include numeric human health-base criteria that department must consider when writing NDPDES permit. 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. The department will re-evaluate this discharge for impacts to human health during the next permit reissuance.

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 – Federal and State Pretreatment Program Requirements

The department was delegated authority to administer the Industrial Pretreatment Program in 2005. With the delegation of authority, the department issues wastewater discharge permits for significant industrial users to POTWs that have not been delegated authority to issue their own industrial wastewater discharge permits. The requirements for approved pretreatment programs are contained in 40 CFR 403. Under the requirements of the pretreatment program (40 CFR 403.8(f)(1)(iii)), the department is required to approve, condition, 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 permit shall contain the pretreatment requirements for Industrial Waste Management for Majors with a Non-Approved Pretreatment Program. Since the POTW receives industrial wastewater from categorical users, the permittee shall sample, analyze, and report according to the following table.

Table 13 – Pretreatment Monitoring Requirements

		Minimum Frequency of Monitoring
Appendix A – 40 CFR 423 – Priority Pollutants		1/permit cycle
Table III – Other Toxic Pollutants (Metals and Cyanide) and Total Phenols (40 CFR 122 Appendix D) (see below)		1/year
Antimony, Total	Copper, Total	Selenium, Total
Arsenic, Total	Cyanide, Total	Silver, Total
Beryllium, Total	Lead, Total	Thallium, Total
Cadmium, Total	Mercury, Total	Zinc, Total
Chromium, Total	Nickel, Total	Phenols, Total
Hardness, Total as Calcium Carbonate ^a		
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. This sample shall be collected upstream of the final discharge site.		

In a letter dated November 19, 2018, the department notified the city that they were required to develop and implement a pretreatment program in accordance with 40 CFR 403.8 and 403.9.

The city of Jamestown is currently in the process of developing and receiving approval for an Industrial Pretreatment Program. The city has submitted an "Industrial Pretreatment Program Implementation Timeline" which lists the major steps that must be completed to develop and run an approved pretreatment program. Compliance with this timeline is laid out in the permit. Until the city receives department approval for their industrial pretreatment program, the department will continue to permit the categorical users that discharge to the Jamestown POTW, and the city will follow the pretreatment requirements laid out in the permit.

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 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 sludge. 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, 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 INVOLVEMENT INFORMATION

The department proposes to reissue a NDPDES permit to the **Jamestown POTW**. 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 **May 19, 2021** in the **Jamestown Sun** to inform the public and to invite comment on the proposed draft North Dakota Pollutant Discharge Elimination System permit and fact sheet.

The Notice –

- Indicates 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 Sarah Waldron Feld.

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

Public Notice Date: 5/19/2021

Public Notice Number: ND-2021-014

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: 3/2/2021

Application Number: ND0023370

Applicant Name: Jamestown City Of

Mailing Address: 102 3rd Ave SE, Jamestown, ND 58401-4205

Telephone Number: 701.252.9149

Proposed Permit Expiration Date: 6/30/2026

Facility Description

The reapplication is for a combination mechanical treatment plan and four waste stabilization ponds which service the City of Jamestown. The outfalls are located in Section 4, Township 139N, Range 63W. Discharges would be to the James River, a Class IA stream, via an unnamed drainage channel.

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 FWPCAA will be protected.

Information Requests and Public Comments

Copies of the application, draft permit, and related documents are available for review. For further information on making public comments/public comment tips please visit: <https://deq.nd.gov/PublicCommentTips.aspx>. 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 June 21, 2021 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.

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., $100/\text{"LC50"}$).
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., $100/\text{"IC25"}$).
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).

DRAFT

APPENDIX C – DATA AND TECHNICAL CALCULATIONS**DFLOW**

USGS gage station 06470000 on the James River by Jamestown, ND was used to determine critical low flows using the DFLOW (3.1b) program. Data used for these calculations ranged from years 2000 through 2020.

DFLOW 1B3 (ACUTE)	1.34	CFS	DFLOW 1Q10 (ACUTE)	1.33	CFS
DFLOW 4B3 (CHRONIC)	1.50	CFS	DFLOW 7Q10 (CHRONIC)	1.61	CFS
DFLOW 30B10 (AMMONIA)	1.89	CFS			

REASONABLE POTENTIAL**Ammonia**

Outfall 001: The reasonable potential determination for ammonia is provided below. The determination was 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 1.2.

The North Dakota State Water Quality Standards (WQS) Chapter 33-16-02.1 use biologically based design and harmonic mean flows to determine Water Quality Based Effluent Limits (WQBELs) and Whole Effluent Toxicity (WET) limits.

The department used the following criteria to determine the acute and chronic ammonia criterion for the reasonable potential analysis for Outfall 001:

Flow Variable Calculated Effluent Ammonia Concentrations in mg/l										Estimated			
Discharger:		Jamestown City of - Outfall 001				Enter the upstream ammonia in mg/l:				90th %		0.19	
Stream:		James River				Enter the receiving stream pH:				No		9.58	
Enter receiving stream flow (CFS):				2		Enter the receiving stream temperature in Deg C: 77 F				Yes		25.00	
Mixing Zone Percentage/CFS:			10%		0.2		Enter the effluent drain rate (MGD):				Yes 132.37		
Enter increments to calculate stream flow:						Enter increments to calculate drain rate:						0.1	
										Mixing Zone Dilution Rate:		1.0	
										Overall Dilution Rate:		1.0	
Maximum allowable ammonia in mg/l													
Water Quality Standard:			0.6540		Water Quality Standard:			0.3207		Water Quality Standard:			0.1283
DRAIN MGD	Intermittent 1hr Acute				Intermittent 4 Day Chronic				Continuous 30 Day Chronic				
	132.27	132.37	132.47	132.57	132.27	132.37	132.47	132.57	132.27	132.37	132.47	132.57	
STREAM FLOW in CFS													
↓	0.16	0.65	0.65	0.65	0.65	0.32	0.32	0.32	0.32	0.13	0.13	0.13	0.13
	0.16	0.65	0.65	0.65	0.65	0.32	0.32	0.32	0.32	0.13	0.13	0.13	0.13
	0.16	0.65	0.65	0.65	0.65	0.32	0.32	0.32	0.32	0.13	0.13	0.13	0.13
	0.16	0.65	0.65	0.65	0.65	0.32	0.32	0.32	0.32	0.13	0.13	0.13	0.13
	0.16	0.65	0.65	0.65	0.65	0.32	0.32	0.32	0.32	0.13	0.13	0.13	0.13
	0.16	0.65	0.65	0.65	0.65	0.32	0.32	0.32	0.32	0.13	0.13	0.13	0.13
	0.16	0.65	0.65	0.65	0.65	0.32	0.32	0.32	0.32	0.13	0.13	0.13	0.13
	0.16	0.65	0.65	0.65	0.65	0.32	0.32	0.32	0.32	0.13	0.13	0.13	0.13
	0.16	0.65	0.65	0.65	0.65	0.32	0.32	0.32	0.32	0.13	0.13	0.13	0.13
	0.16	0.65	0.65	0.65	0.65	0.32	0.32	0.32	0.32	0.13	0.13	0.13	0.13

Outfall 002: The reasonable potential determination for ammonia is provided below. The determination was 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 1.4.

The North Dakota State Water Quality Standards (WQS) Chapter 33-16-02.1 use biologically based design and harmonic mean flows to determine Water Quality Based Effluent Limits (WQBELs) and Whole Effluent Toxicity (WET) limits.

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The department used the following criteria to determine the acute and chronic ammonia criterion for the reasonable potential analysis for Outfall 002:

Flow Variable Calculated Effluent Ammonia Concentrations in mg/l											Estimated		
Discharger:		Jamestown City of - Outfall 002				Enter the upstream ammonia in mg/l:					90th %	0.69	
Stream:		James River				Enter the receiving stream pH:					No	9.20	
Enter receiving stream flow (CFS):					16		Enter the receiving stream temperature in Deg C: 90 F				Yes	32.00	
Mixing Zone Percentage/CFS:				10%		1.6		Enter the effluent drain rate (MGD):			Yes	8.40	
Enter increments to calculate stream flow:							Enter increments to calculate drain rate:					0.1	
										Mixing Zone Dilution Rate:		1.1	
										Overall Dilution Rate:		2.3	
Maximum allowable ammonia in mg/l													
Water Quality Standard:			0.9904		Water Quality Standard:			0.3005		Water Quality Standard:			0.1202
DRAIN MGD	Intermittent 1hr Acute				Intermittent 4 Day Chronic				Continuous 30 Day Chronic				
	→ 8.30	8.40	8.50	8.60	8.30	8.40	8.50	8.60	8.30	8.40	8.50	8.60	
STREAM FLOW in CFS													
↓	1.64	1.03	1.03	1.03	1.03	0.25	0.25	0.25	0.25	0.05	0.05	0.05	0.05
	1.64	1.03	1.03	1.03	1.03	0.25	0.25	0.25	0.25	0.05	0.05	0.05	0.05
	1.64	1.03	1.03	1.03	1.03	0.25	0.25	0.25	0.25	0.05	0.05	0.05	0.05
	1.64	1.03	1.03	1.03	1.03	0.25	0.25	0.25	0.25	0.05	0.05	0.05	0.05
	1.64	1.03	1.03	1.03	1.03	0.25	0.25	0.25	0.25	0.05	0.05	0.05	0.05
↓	1.64	1.03	1.03	1.03	1.03	0.25	0.25	0.25	0.25	0.05	0.05	0.05	0.05
	1.64	1.03	1.03	1.03	1.03	0.25	0.25	0.25	0.25	0.05	0.05	0.05	0.05
	1.64	1.03	1.03	1.03	1.03	0.25	0.25	0.25	0.25	0.05	0.05	0.05	0.05
	1.64	1.03	1.03	1.03	1.03	0.25	0.25	0.25	0.25	0.05	0.05	0.05	0.05

Metals

Outfall 001: 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 NDDEQ 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 ch 33.1-16-02.1-9, 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 italic and underline indicate a parameter that needs further evaluation. Parameters listed above must be analyzed using an EPA approved method (40 CFR 136) that has a detection limit at or below the limits listed in 40 CFR 136 or the current version of the North Dakota Standards of Quality for Waters

Facility Name		Jamestown City of					Print Date:	Mar-21			
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 (CaCO ₃) mg/l		260									
Safety Factor(multiplier):											
Enter Concentration Values							µg/l	µg/l	µg/l	µg/l	
Parameter		Detect	MDL/DL /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			5.6	640	
Arsenic			0.002	0.004		4	340	150	10		
Beryllium			0.0005	0.0005		0.5			4		
Cadmium	HD		0.0001	0.0001		0.1	4.8	1.69	5.00		
Chromium - Total			0.002	0.002		2			100		
Chromium (III)	HD					0	3943	188			
Chromium (VI)						0	16	11			
Copper	HD		0.002	0.002		2	34	21.1	1000.0		
Lead	HD		0.0005	0.001		1	276	10.7	15.0		
Mercury			0.0002	0.0002		0.2	1.7	<u>0.012</u>	<u>0.05</u>	<u>0.051</u>	
Molybdenum - Total						0					
Nickel	HD		0.002	0.005		5	1053	117.1	100.0	4200	
Selenium			0.005	0.005		5	20	<u>5</u>	50		
Silver	HD		0.0005	0.0005		0.5	20				
Thallium			0.0001	0.0001		0.1			0.24	0.47	
Zinc	HD		0.05	0.05		50	269	269.2	7400.0	26000	
Cyanide - Total			0.007	0.01		10	22	<u>5.2</u>	<u>4</u>	400	
Phenols			10		10	10		300	4000	300000	

Comments:

The maximum values reported for each parameter from the Outfall 001 discharges that occurred from July 2016 - March 2021 were used. Non-detects were entered at the detection limit value.

Mercury: Methods were below method detection level.

Selenium: Methods were below method detection level.

Cyanide: Cyanide exceeded chronic limits and limits for human health.

Outfall 002: 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.

DRAFT

The NDDEQ 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 ch 33.1-16-02.1-9, 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 italic and underline indicate a parameter that needs further evaluation. Parameters listed above must be analyzed using an EPA approved method (40 CFR 136) that has a detection limit at or below the limits listed in 40 CFR 136 or the current version of the North Dakota Standards of Quality for Waters

Facility Name		Jamestown City of					Print Date:	Mar-21			
Location		Outfall 002					Below are the current or calculated acute, chronic and human health standards based on the data entered.				
Enter Grains/Gallon or		0									
Hardness - Total (CaCO ₃) mg/l		324									
Safety Factor(multiplier):											
Enter Concentration Values							µg/l	µg/l	µg/l	µg/l	
Parameter		Detect	MDL/DL /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			5.6	640	
Arsenic			0.002	0.006		6	340	150	10		
Beryllium			0.0005	0.0005		0.5			4		
Cadmium	HD		0.0001	0.0001		0.1	6.0	2.02	5.00		
Chromium - Total			0.002	0.002		2			100		
Chromium (III)	HD					0	4722	226			
Chromium (VI)						0	16	11			
Copper	HD		0.002	0.002		2	42	25.5	1000.0		
Lead	HD		0.0005	0.0005		0.5	365	14.2	15.0		
Mercury			0.0002	0.0002		0.2	1.7	<u>0.012</u>	<u>0.05</u>	<u>0.051</u>	
Molybdenum - Total						0					
Nickel	HD		0.002	0.006		6	1268	141.0	100.0	4200	
Selenium			0.005	0.005		5	20	<u>5</u>	50		
Silver	HD		0.0005	0.0005		0.5	29				
Thallium			0.0001	0.0001		0.1			0.24	0.47	
Zinc	HD		0.05	0.05		50	324	324.4	7400.0	26000	
Cyanide - Total			0.007	0.007		7	22	<u>5.2</u>	<u>4</u>	400	
Phenols			10		10	10		300	4000	300000	

Comments:

The maximum values reported for each parameter from the Outfall 002 discharges that occurred from July 2016 - March 2021 were used. Non-detects were entered at the detection limit value.

Mercury: Results were below method detection level.

Selenium: Results were below method detection level.

Cyanide: Results were below method detection level.

APPENDIX D – RESPONSE TO COMMENTS

Any comments received during the public comment period will be addressed here.

DRAFT

Permit No: ND0023370
Effective Date: July 1, 2021
Expiration Date: June 30, 2026

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,

The City of Jamestown
Jamestown Publicly Owned Treatment Works (POTW)

is authorized to discharge from its wastewater treatment system at Outfall 001 and Outfall 002

to the James 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,
June 30, 2026.

Signed this _____ day of _____, _____.

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

BP 2019.05.29

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DRAFT

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. Discharges at any location not authorized under a NDPDES permit is a violation of the Act and could subject the person(s) responsible for such discharge to penalties under Section 309 of the Act. 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 penalties as provided under the Act.

Outfall 001. Active. Final Outfall.			
Latitude: 46.8821678161	Longitude: -98.6539154052	County: Stutsman	
Township: 139 North	Range: 63 West	Section: 4	Q: B
Receiving Stream: James River		Classification: Class IA Stream	
Outfall Description: This is the final outfall for treated domestic and industrial wastewater from the waste stabilization pond system. The compliance point is where the effluent leaves Cell D.			

Outfall 002. Active. Final Outfall.					
Latitude: 46.8856031400		Longitude: -98.6371239900		County: Stutsman	
Township: 139 North		Range: 63 West		Section: 4	Q: B
Receiving Stream: James River				Classification: Class IA Stream	
Outfall Description: This is the final outfall for treated industrial wastewater from the mechanical wastewater treatment system. The compliance point is where the effluent leaves the disinfection chamber.					

PERMIT SUBMITTALS SUMMARY

Coverage Point ^a	Submittal	Frequency	First Submittal Date
001A	Discharge Monitoring Report	Monthly	August 31, 2021
001W	Discharge Monitoring Report	Quarterly	October 31, 2021
001M	Discharge Monitoring Report	Annually	July 31, 2022
001P	Priority Pollutant Report	1/permit cycle	July 31, 2026
002A	Discharge Monitoring Report	Monthly	August 31, 2021
002W	Discharge Monitoring Report	Quarterly	October 31, 2021
002M	Discharge Monitoring Report	Annually	July 31, 2022
002P	Priority Pollutant Report	1/permit cycle	July 31, 2026
Industrial Pretreatment Program	Industrial Pretreatment Program Submission Package	1/permit cycle	June 30, 2022
Industrial Pretreatment Program	Annual Report	Annually ^b	March 28, 2024
Application Renewal	NPDES Application Renewal	1/permit cycle	December 31, 2025
a.	A, W, M, and P are pollutant report designators. "A" is the conventional designation, "W" is the WET designation, "M" is the metals designation, and "P" is the priority pollutant designation.		
b	The Industrial Pretreatment Program Annual Report will be due March 28 th each year after the city receives approval for their Industrial Pretreatment Program.		

SPECIAL CONDITIONS

Industrial Pretreatment Program Implementation and Compliance Schedule

The City of Jamestown is in the process of developing an Industrial Pretreatment Program. This pretreatment program will need to be compliant with 40 CFR Parts 403.8 and 403.9 and be approved by the department.

Prior to submitting the final Industrial Pretreatment Program Submission Package, the city shall complete the following steps:

1. Program enforcement response plan and local limits adopted by the City Council.
2. Identify all sewer industrial users, includes significant industrial users and categorical industrial users.
3. Finalize the city's sewer use ordinance.

The final submission package must be submitted to the department no later than **June 30, 2022**. The permittee shall notify the department, in writing, no later than 14 days, of its compliance with this deadline in

accordance with 40 CFR Part 122.47(4). The final submission package must include the following items:

1. A statement from the city solicitor or a city official acting in a comparable capacity (or the attorney for the POTW) that the POTW has authority adequate to care out the programs described in the North Dakota Administrative Code (NDAC) 33.1-16-01.1 Appendix A. This statement must:
 - a. Identify the provision of legal authority which provides the basis for each procedure described in "Procedures" in NDAC 33.1-16-01.1 Appendix A;
 - b. Identify the manner in which the POTW will implement the program requirements set forth in NDAC 33.1-16-01.1 Appendix A, including the means by which pretreatment standards will be applied to individual industrial users (e.g., by order, permit, ordinance, etc.); and
 - c. Identify how the POTW intends to ensure compliance with pretreatment standards and requirements, and to enforce them in the event of noncompliance by industrial users.
2. A copy of any statutes, ordinances, regulations, agreements, or other authorities relied upon by the POTW for its administration of the program. This submission shall include a statement reflecting the endorsement or approval of the local boards or bodies responsible for supervising or funding the POTW's pretreatment program, or both, if approved;
3. A brief description, including organization charts, of the POTW's organization which will administer the pretreatment program. If more than one agency is responsible for the administration of the program, the responsible agencies should be identified, their respective responsibilities delineated, and their procedures for coordination set forth; and
4. A description of the funding levels and full-time or part-time manpower available to implement the program.

Upon approval of the Industrial Pretreatment Program Submission Package, the city will complete implementation of the Industrial Pretreatment Program by **June 30, 2023**. The permittee shall notify the department, in writing, no later than 14 days, of its compliance with this deadline in accordance with 40 CFR Part 122.47(4).

I. 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: **James River, a Class IA stream.**

No discharge shall occur from the lagoons until all pre-discharge parameters have been reviewed by the department. After the review process has been completed the permittee shall comply with the limitations of 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

1. The permittee must limit and monitor all discharges as specified below:

Table 1: Effluent Limitations and Monitoring Requirements Outfall 001					
Parameter	Effluent Limitations			Monitoring Requirements	
	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Sample Frequency	Sample Type
Biochemical Oxygen Demand (BOD ₅) ^a	25 mg/l	45 mg/l	*	2/week	Grab
Total Suspended Solids (TSS) ^a	30 mg/l	45 mg/l	*	2/week	Grab
pH ^{a, b}	Shall remain between 7.0 to 9.0 s.u.			2/week	Grab
<i>Escherichia coli</i> (<i>E. coli</i>) ^{a, c}	126/100 ml	*	409/100 ml	Conditional/ 2/week	Grab
Ammonia as N ^a	Refer to Ammonia Table (Table 3)			2/week	Grab
Oil and Grease – Visual ^d	*	*	*	Daily	Visual
Oil and Grease ^d	*	*	10 mg/l	Conditional/ Daily	Grab
Temperature, (°C) ^a	Report	*	Report	2/week	Grab
Nitrogen, Total ^e	Monitor Only (mg/l)			Monthly	Grab
Phosphorus, Total	Monitor Only (mg/l)			Monthly	Grab
Effluent Flow, mgd	Report	*	Report Max. Daily Value	Daily	Calculated
Drain, MG	Report Monthly Total			Monthly	Calculated
Dissolved Oxygen, Downstream	Monitor Only (mg/l)			2/week	Grab
Whole Effluent Toxicity (WET), TU _a	Refer to Part I.C			Quarterly	Grab
Metals, Total (Appendix A; Table 3) ^f	Effluent			Yearly	Grab
Priority Pollutants	Report			1/permit	Grab
Notes:					
*	This parameter is not limited. However, the department may impose limitations based on sample history and to protect 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. The pre-discharge sample shall be tested for BOD ₅ , TSS, pH, <i>E. coli</i> , Ammonia as N, and Temperature. This pre-discharge sample shall represent the first discharge sample. An additional sample of the actual discharge shall be taken the first week of discharge and two samples per week shall be taken after the first seven day of discharge for the duration of the discharge.				

Table 1: Effluent Limitations and Monitoring Requirements Outfall 001						
Parameter		Effluent Limitations			Monitoring Requirements	
		Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Sample Frequency	Sample Type
b	The pH, an instantaneous limit, shall be between 7.0 s.u. and 9.0 s.u. Any single analysis and/or measurement outside this limitation shall be considered a violation of the conditions of this permit.					
c	<i>E. coli</i> limits shall be effective from April 1 through October 31. Averages for <i>E. coli</i> shall be determined as a geometric mean.					
d	A daily visual check shall be performed. There shall be no discharge of oily wastes that produce a visible sheen on the surface of the receiving water. If present, a grab sample shall be analyzed for oil and grease to ensure compliance with the concentration limitation.					
e	Total nitrogen is a combination of nitrate, nitrite, and Total Kjeldahl Nitrogen (TKN).					
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 criterion(s) according to the WQS. This sample shall be collected upstream of the final discharge site.					
Stipulations						
Best Management Practices (BMPs) are to be utilized so that there shall be no discharge of floating debris, oil, scum, and other floating materials in sufficient amounts to be unsightly or deleterious, or oil wastes that produce a visible sheen on the surface of the receiving water.						
Samples taken in compliance with the monitoring requirements specified in this permit shall be taken prior to leaving company property or entering the receiving stream.						

Table 2: Effluent Limitations and Monitoring Requirements Outfall 002					
Parameter	Effluent Limitations			Monitoring Requirements	
	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Sample Frequency	Sample Type
Biochemical Oxygen Demand (BOD ₅) (Influent)	Monitor only (mg/l)			Weekly	Grab
Biochemical Oxygen Demand (BOD ₅) (Effluent)	25 mg/l	45 mg/l	*	3/week	Grab
BOD ₅ (Removal Efficiency)	Shall not be less than 85%	*	*	Monthly	Calculated
Total Suspended Solids (TSS) (Influent)	Monitor Only (mg/l)			Weekly	Grab
Total Suspended Solids (TSS) (Effluent)	30 mg/l	45 mg/l	*	3/week	Grab
TSS (Removal Efficiency)	Shall not be less than 85%	*	*	Monthly	Calculated
pH ^a	Shall remain between 7.0 to 9.0 s.u.			Daily	Grab
<i>Escherichia coli</i> (E. coli) _b	126/100 ml	*	409/100 ml	Conditional/ 3/week	Grab
Ammonia as N	Refer to Ammonia Table (Table 3)			3/week	Grab
Oil and Grease – Visual _c	*	*	*	Daily	Visual
Oil and Grease _c	*	*	10 mg/l	Conditional/ Daily	Grab
Temperature, (°C)	Report	*	Report	Daily	Grab
Total Residual Chlorine (TRC) _{d, e, f}	0.011 mg/l	*	0.019 mg/l	Daily	Grab
Nitrogen, Total _g	Monitor Only (mg/l)			Monthly	Grab
Phosphorus, Total	Monitor Only (mg/l)			Monthly	Grab
Effluent Flow, mgd	Report	*	Report Max. Daily Value	Daily	Instantaneous
Drain, MG	Report Monthly Total			Monthly	Calculated
Dissolved Oxygen, Downstream	Monitor Only (mg/l)			3/week	Grab
Whole Effluent Toxicity (WET), TU _a	Refer to Part I.C			Quarterly	Grab
Whole Effluent Toxicity (WET), TU _a	Refer to Part I.C			1/permit	Grab

Table 2: Effluent Limitations and Monitoring Requirements Outfall 002					
Parameter	Effluent Limitations			Monitoring Requirements	
	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Sample Frequency	Sample Type
Metals, Total (Appendix A; Table 3) ^h	Influent and Effluent			Yearly	Composite
Priority Pollutants	Report			1/permit	Composite
Notes:					
*	This parameter is not limited. However, the department may impose limitations based on sample history and to protect receiving waters.				
a	The pH, an instantaneous limit, shall be between 7.0 s.u. and 9.0 s.u. Any single analysis and/or measurement outside this limitation shall be considered a violation of the conditions of this permit.				
b	<i>E. coli</i> limits shall be effective from April 1 through October 31. Averages for <i>E. coli</i> shall be determined as a geometric mean.				
c	A daily visual check shall be performed. There shall be no discharge of oily wastes that produce a visible sheen on the surface of the receiving water. If present, a grab sample shall be analyzed for oil and grease to ensure compliance with the concentration limitation.				
d	Applied only when chlorination is utilized for disinfection.				
e	The minimum limit of analytical reliability for TRC is considered to be 0.05 mg/l. The analysis for TRC shall be conducted using reliable devices equivalent to EPA Method 4500-Cl G, Spectrophotometric, DPD. This method achieves a method detection limit of less than 0.05 mg/l. For purposes of this permit and reporting on the DMR form, analytical values less than 0.05 mg/l shall be considered in compliance with this permit.				
f	In the calculation of average TRC concentrations, analytical results that are less than the method detection limit shall be considered the value of the detection limit for calculation purposes. If all analytical results using in the calculation are below the method detection limit, then the method detection limit shall be reported on the DMR; otherwise report the calculated average value.				
g	Total nitrogen is a combination of nitrate, nitrite, and Total Kjeldahl Nitrogen (TKN).				
h	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 criterion(s) according to the WQS. This sample shall be collected upstream of the final discharge site.				
Stipulations					
Best Management Practices (BMPs) are to be utilized so that there shall be no discharge of floating debris, oil, scum, and other floating materials in sufficient amounts to be unsightly or deleterious, or oil wastes that produce a visible sheen on the surface of the receiving water.					
Samples taken in compliance with the monitoring requirements specified in this permit shall be taken prior to leaving company property or entering the receiving stream.					

Table 3: Ammonia Effluent Limitation Requirements Outfall 001 and Outfall 002					
Parameter	Effluent Limitations			Monitoring Requirements	
	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Sample Frequency	Sample Type
Outfall 001					
Ammonia as N, mg/l ^a	†	*	‡	2/week	Grab
James River Parameters					
Flow (cfs) ^b	*	*	*	Daily	Instantaneous
pH (s.u.), Upstream ^{b, c}	*	*	*	2/week	Grab
Temperature (°C), Upstream ^{b, c}	*	*	*	2/week	Instantaneous
Ammonia as N (mg/l), Upstream	*	*	*	Weekly	Grab
Outfall 002					
Ammonia as N, mg/l ^a	†	*	‡	3/week	Grab
James River Parameters					
Flow (cfs) ^b	*	*	*	Daily	Instantaneous
pH (s.u.), Upstream ^{b, c}	*	*	*	3/week	Grab
Temperature (°C), Upstream ^{b, c}	*	*	*	3/week	Instantaneous
Ammonia as N (mg/l), Upstream	*	*	*	Weekly	Grab
Notes:					
*	This parameter is not limited. However, the department may impose limitations based on sample history and to protect receiving waters.				
a	Calculations must be performed for each discharge sample. If an exceedance is detected on any single sample, the exceedance must be reported on the DMR.				
b	Sample must be collected/recorded the same day as the ammonia sample. The upstream flow and temperature may be obtained from the USGS gauging station 06470000 or can be collected by the facility.				
c	When dangerous conditions exist for personnel (i.e. thin ice, melting ice, flooding, etc.) the permittee may utilize the following minimum values based on the 90 th percentile upstream reported data during the previous permit cycle: pH 8.89 S.U., Temperature 22.94°C, and ammonia 0.79 mg/l. If the upstream flow is not available, then 30B10 critical low flow of 1.89 cfs shall be used. The maximum mixing factor is 10.0%.				

Table 3: Ammonia Effluent Limitation Requirements Outfall 001 and Outfall 002						
Parameter		Effluent Limitations			Monitoring Requirements	
		Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Sample Frequency	Sample Type
†	Chronic Standard (Average Monthly Limit)					
	The 30-day average concentration of total ammonia (expressed as N in mg/l) does not exceed, more often than once every three years on the average, the numerical value given by the following formula; and the highest 4-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: $\frac{(0.0577)}{(1+10^{7.688-\text{pH}})} + \frac{2.487}{1+10^{\text{pH}-7.688}} \bullet \text{CV};$ 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.					
‡	Acute Standard (Daily Maximum Limit)					
	The one-hour average concentration of total ammonia (expressed as N in mg/l) does not exceed, more often than once every three years on the average, the numerical value given by the following formula: $\frac{(0.411)}{(1+10^{7.204-\text{pH}})} + \frac{58.4}{1+10^{\text{pH}-7.204}}$ where salmonids are absent; or $\frac{(0.275)}{(1+10^{7.204-\text{pH}})} + \frac{39.0}{1+10^{\text{pH}-7.204}}$ where salmonids are present.					
For all of the above calculations, the permittee receives a maximum of ten percent (10%) of stream flow for dilution at the time of discharge based on the flow of the James River. In-stream concentration will be calculated on a mass balance basis using the following formula: In-stream concentration = (Q _u * C _u + C _e)/(Q _u + Q _e) where Q _u = 10 of the receiving water flow C _u = Receiving water ammonia as N Q _e = Effluent Flow C ₃ = Effluent Ammonia as N						

C. Whole Effluent Toxicity (WET) Requirements BP 2021.01.26

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*.

Outfall 001

WET tests on both species shall be performed on the first discharge made each calendar year. Thereafter, WET testing shall be performed at least once every calendar quarter in which there is a discharge.

Outfall 002

WET tests shall be performed at least once per calendar quarter on both species.

Acute WET Requirements for Outfalls 001 and 002

Implementation	Limitations Imposed					
Effluent Dilution	0%(Control)	12.5%	25%	50%	75%	100%
Dilution Water	James River ^a					
Testing Type	Acute Toxicity					
Species and Test Type	<i>Ceriodaphnia dubia</i> – 48 Hour Acute – Static Renewal – 20°C					
	<i>Pimephales promelas</i> – 96 Hour Acute – Static Renewal – 20°C					
Endpoint	Survival reported as TU _a					
Compliance Point	End-of-pipe					
Sample Frequency	Quarterly					
Sample Type	Grab					
Maximum Daily Limit (MDL)	<1 TU _a					
Average Monthly Limit (AML)	<1 TU _a					
Test Failure	Acute test failure (LC₅₀) is defined as lethality to 50% or more of the test organisms exposed to 100% effluent or >1.0 TU_a for <i>Ceriodaphnia dubia</i> 48-hour and <i>Pimephales promelas</i> 96-hour test. The 48-hour and 96-hour LC₅₀ effluent value must be <1.0 TU_a to indicate a passing test. Any 48-hour or 96-hour LC₅₀ effluent value >1.0 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>Ceriodaphnia dubia</i> , Parameter No. TSM3B. Report the highest TU _a for <i>Pimephales promelas</i> , Parameter No. TSN6C.					

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 there be no discharge during a specified sampling time frame; sampling shall be performed as soon as there is a discharge. Should toxicity occur in the second test, testing shall be conducted at a frequency of once a month and the implementation of a 5.Toxicity Reduction Evaluation (TRE) shall be determined by the department. If no toxicity is found in the second test, testing shall occur as outlined in the permit.

a. When dangerous conditions exist for personnel (i.e. thin ice, melting ice, flooding, etc.) the permittee may utilize moderately hard reconstituted water upon request and approval by the department.

2. Chronic Toxicity Testing

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*.

Chronic WET requirements for Outfall 002						
Implementation	Monitoring Only					
Effluent Dilution	0%(Control)	6.25%	12.5%	25%	50%	100%
Dilution Water	James River					
Species and Test Type	<i>Ceriodaphnia dubia</i> – 7-Day Chronic – Static Renewal – 25°C					
	Fathead Minnow – 7-Day Chronic – Static Renewal – 25°C					
Endpoint	Survival and Reproduction (<i>Ceriodaphnia dubia</i>) – IC25 reported as TU _c					
	Larval Growth and Survival (Fathead Minnow) – IC25 reported as TU _c					
Compliance Point	Monitoring Only at End-of-Pipe					
Sample Type	Grab					
Sample Frequency	Once per permit cycle					
Test Acceptability	<p>Test acceptability for <i>Ceriodaphnia dubia</i> chronic must have a 80% or greater survival of all control organisms and an average of 15 or more young per surviving female in the control solutions, and 60% of surviving control females must produce three broods. If this condition is not satisfied, the test must be repeated.</p> <p>Test acceptability for <i>Pimephales promelas</i> chronic must have 80% or greater survival in controls and an average dry weight per surviving organism in control chambers equals or exceeds 0.25 mg. If this condition is not satisfied, the test must be repeated.</p>					
Reporting Requirements	<p>The permittee shall report the following results of each toxicity test on the DMR for that reporting period:</p> <p><i>Pimephales promelas</i> (Fathead Minnow) Report the highest TU_c for Fathead minnow, Parameter No. TTP3B</p> <p><i>Ceriodaphnia dubia</i> (Water Flea) Report the highest TU_c for <i>Ceriodaphnia dubia</i>, Parameter No. TTB6C.</p>					

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.

This provision is revoked at the time of permit reissuance/renewal. Permittees may request alternating species after the conditions of this section are met under the reissued permit.

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:

1. Submit an alternative control program for compliance with the numerical requirements; or
2. 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 2020.10.19

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, 2025, the permittee may elect to electronically submit the following compliance monitoring data and reports instead of mailing paper forms. Beginning December 21, 2025, the permittee must report the following using the electronic reporting system:
 - a. General permit reports [e.g., notices of intent (NOI); notices of termination (NOT); no exposure certifications (NOE)];
 - b. Municipal separate storm sewer system program reports;
 - c. Pretreatment program reports;
 - d. Sewer overflow/bypass event reports; and
 - e. 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.
 - a. 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:

3. The authorization is made in writing by a person described above and submitted to the department; and
4. 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.
 - b. 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 being, 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 effluent for the following pollutants:

Table 5: Pretreatment Monitoring Requirements				
			Minimum Frequency of Monitoring	
Appendix A – 40 CFR 426 – Priority Pollutants			1/permit cycle	
Table III – Other Toxic Pollutants (Metals and Cyanide) and Total Phenols (40 CFR 122 Appendix D) (see below)			Yearly	
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 as Calcium Carbonate ^a				
Notes:				
<p>^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. This sample shall be collected upstream of the final discharge site.</p>				

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.