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

Public Notice Date: 8/15/2024 Public Notice Number: ND-2024-022

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: 1/22/2024 Application Number: ND0020559

Applicant Name: Valley City City Of

Mailing Address: 254 2nd Ave NE, Valley City, ND 58072

Telephone Number: 701.845.0380

Proposed Permit Expiration Date: 9/30/2029

Facility Description

The reapplication is for three waste stabilization ponds which service the City of Valley City. The discharge facility is located in the SW1/4, Section 32, Township 140N, Range 58W in Barnes County. Any discharge would be to the Sheyenne River, a Class IA stream.

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, 4201 Normandy Street, Bismarck ND 58503-1324 or by calling 701.328.5210.

All comments received by September 16, 2024 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.

The NDDEQ will consider every request for reasonable accommodation to provide an accessible meeting facility or other accommodation for people with disabilities, language interpretation for people with limited English proficiency (LEP), and translations of written material necessary to access programs and information. Language assistance services are available free of charge to you. To request accommodations, contact the NDDEQ Non-discrimination Coordinator at 701-328-5210 or deqEJ@nd.gov. TTY users may use Relay North Dakota at 711 or 1-800-366-6888.

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FACT SHEET FOR NDPDES PERMIT ND0020559

VALLEY CITY PUBLICLY OWNED TREATMENT WORKS CITY OF VALLEY CITY, NORTH DAKOTA

DATE OF THIS FACT SHEET - JUNE 2024

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) has oversight authority. In 1975, the State of North Dakota was delegated primacy of the NPDES program by EPA. The North Dakota Department of Environmental Quality (NDDEQ), 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 regulations apply to municipal 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 them available for a public review period (NDAC 33.1-16-01-07). The department must also publish an announcement (public notice) for 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 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 Information**. Following the public comment period, the department may make changes to the draft NDPDES permit. The department will summarize the responses to comments and any changes to the permit in **Appendix D - Response to Comments**.

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BACKGROUND INFORMATION

Table 1 - General Facility Description

Applicant:	City of Valley City
Facility Name and Address:	Valley City Publicly Owned Treatment Works 254 2nd Ave NE Valley City, ND 58072
Permit Number:	ND0020559
Permit Type:	Major Municipality – POTW – Renewal
Type of Treatment:	Waste Stabilization Pond System
SIC Code:	4952 - Sewerage Systems
Discharge Location:	Outfall 002: Sheyenne River, Class IA stream Latitude: 46.899444 Longitude: -98.016389
Hydrologic Code:	09020204 – Lower Sheyenne
Population:	6,500 (provided on application)

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Figure 1 - Valley City Wastewater Treatment Facility Overview (Google Earth 2/21/2024)

FACILITY DESCRIPTION

The city of Valley City wastewater treatment facility consists of a collection system comprised of 12 lift stations which transfer water to the main lift station. The main lift station pumps wastewater to the lagoon system via a force main. The lagoon system consists of three waste stabilization ponds located in the SW ¼ Section 32 of Township 140N and Range 58 West. Cell 1 is located in the northwest corner of the quarter section and has a surface area of thirty-six (36) acres; Cell 2 is located in the northeast corner of the quarter section and has a surface area of thirty-seven (37) acres; and Cell 3 is located in the south half of the quarter section and has a surface area of forty-five (45) acres.

Raw wastewater (sewage) is primarily sent to cell one to facilitate the breakdown of organic matter but can also be routed to Cell 2 if needed. From there the wastewater is transferred to a series of two facultative cells, where detention time is used to continue the wastewater treatment process.

The treatment ponds discharge from Cell 3 through a diffuser located in the Sheyenne River approximately 3/4 miles away. The system treats industrial and domestic wastewater.

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According to the NDPDES permit application, the city of Valley City services a population of approximately 6,500 people. The facility also accepts hauled waste from regional septic pumpers.

Inflow and infiltration have been a problem for the city. To combat this the city has scheduled the following improvements over the next permit cycle: manhole rehabilitation and sewer main replacement and relining.

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 a discharge to penalties under Section 309 of the CWA. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge within the specified timeframe outlined in this permit could subject such person(s) to criminal penalties as provided under the CWA.

The previous permit had one (1) active Outfall, Outfall 002.

Outfall 002. Active. Final Outfall					
Latitude: 46.899444	Longitude: -98.016389 County: Barnes				
Township: 140 N	Range: 58 W		Section: 32	Q: C	
Receiving Stream: Sheyenne River		Classification: C	lass IA		

Outfall Description: The treated effluent flows into the Sheyenne River. This Outfall can discharge water from both Cell 2 and Cell 3. The discharge is directly piped to the Sheyenne River through a submerged diffuser. This diffuser was added to facilitate the discharge from the holding pond of the water treatment plant. To keep cost down, both the Valley City Water Treatment Plant and the Valley City wastewater system utilize the same discharge line. The type of discharge from this system is called a "Controlled Discharge" and is deemed to be non-continuous.

PERMIT STATUS

The department issued the previous permit for this facility on October 1, 2019 which will expire on September 30, 2024. The previous permit placed effluent limits on Biochemical Oxygen Demand (BOD₅), Total Suspended Solids (TSS), pH, Ammonia as N, *E. coli*, Oil and Grease, Metals, and Whole Effluent Toxicity (WET).

Valley City submitted an application for permit renewal on January 22, 2024 which was accepted as complete on August 13, 2024. Effluent sample data has been provided to the department through official laboratory reports, discharge monitoring reports (DMRs) and EPA Application Form 2A.

SUMMARY OF COMPLIANCE WITH PREVIOUS PERMIT ISSUED

The department's assessment of compliance is based on review of the facility's DMRs and inspection conducted by the department. The department's Division of Water Quality and Division of Municipal Facilities conduct yearly inspections of the facility. Eight (8) inspections of the facility were conducted from October 1, 2019 through June 1, 2024.

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Bypasses

The city reported one bypass since October 1, 2019, which occurred on May 12, 2022 when an air relief valve on the force main from the master lift station to the lagoon broke resulting in raw sewage being discharged into a field. This bypass was fixed the same day and no further bypasses were reported during the current permit cycle.

Past Discharge Data

The concentration of pollutants in the discharge was reported in DMR forms. The effluent is characterized as shown in Table 2.

Table 2 - Effluent Information for the City of Valley City (October 2019 to June 2024)

		,		October 2019 to	Number of		
Parameter	Units	Range	Average	Permit Limit	Exceedances		
Effluent – Outfall	Effluent – Outfall 002						
BOD ₅	mg/l	2 – 28.8	10.05	25 Monthly Average 45 Weekly Average	0		
TSS	mg/l	2 – 81	20.95	30 Monthly Average 45 Weekly Average	5		
рН	s.u.	7.07 - 9.85	N/A	7.0 to 9.0	5		
E. coli	Colonies per 100 ml	1 – 4.1	1.87	129 Monthly Average 409 Daily Maximum	0		
Ammonia as N	mg/l	0 – 15.40	3.09	WQS	5		
Oil and Grease	mg/l	No Visible Sheen	N/A	10	0		
Flow	MGD	0.65 – 7.7	4.49	N/A	N/A		
Drain	MG	37.24 – 152.9	92.32	N/A	N/A		
Nitrogen, Total	mg/l	5 – 19	8.35	N/A	N/A		
Phosphorus, Total	mg/l	0.26 – 4.03	1.47	N/A	N/A		
WET	TUa	<1	<1	<1	0		
Antimony	μg/l	1	1	WQS	0		
Arsenic	μg/l	2 – 2.1	2.03	WQS	0		
Beryllium	μg/l	0.5	0.5	WQS	0		
Cadmium	μg/l	0.1 – 0.5	0.23	WQS	0		
Chromium	μg/l	2 – 50	18	WQS	0		
Copper	μg/l	7.9 – 50	23.47	WQS	0		
Lead	μg/l	1 – 1.2	1.1	WQS	0		

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Mercury	μg/l	0.2	0.2	WQS	3
Nickel	μg/l	3.8 – 40	17.17	WQS	0
Selenium	μg/l	5	5	WQS	3
Silver	μg/l	0.5	0.5	WQS	0
Thallium	μg/l	0.1 – 0.5	0.23	WQS	0
Zinc	μg/l	50 – 100	73.3	WQS	0
Cyanide	mg/l	0.007 - 0.01	0.008	WQS	1
Phenols	mg/l	15	15	WQS	3
Hardness as CaCO3	mg/l	367 – 540	469	N/A	N/A

Notes:

The Valley City POTW discharged nine (9) times for a total of 148 days from **Outfall 002** during the stated time frame.

- Three discharges starting in the month of May and extending into June;
- One discharge in the month of June;
- Five discharges in the month of November.

PROPOSED PERMIT LIMITS

Technology-Based Effluent Limits

The City of Valley City 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 Section 33.1-16-01-30. These regulations are performance standards that constitute all known, available, and reasonable methods of prevention, control, and treatment for municipal wastewater.

NDAC Section 33.1-16-01-30 incorporates by reference 40 CFR 133 which list the following technology-based limits for BOD5, TSS, and pH:

Table 3 - Technology-Based Effluent Limits (40 CFR 133)

Parameter	30 – Day Average	7 – Day Average		
BOD₅	30 mg/l	45 mg/l		
TSS	30 mg/l	45 mg/l		
рН	Remain between 6.0 to 9.0			
Percent Removal	85% BOD₅ and TSS			

NDAC 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 (25) 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.

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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 approximately the same time. This facility utilizes waste stabilization ponds to treat wastewater. Due to the infeasibility of determining percent removal for waste stabilization ponds, the department has determined not to include the percent removal requirements for the facility. Influent and effluent samples would not be representative of the same wastewater. Therefore, the department has calculated an estimated percent removal for this facility. The average BOD concentration of domestic wastewater is 220 mg/l (Metcalf & Eddy, Inc., 2nd Edition, 1979). Facilities meeting a discharge limitation of 25 mg/l BOD theoretically would be achieving 88% removal efficiency. The department would then assume that this facility, meeting the average TSS concentration of domestic wastewater is 220 mg/l (Metcalf & Eddy, Inc., 2nd Edition, 1979). Facilities meeting the discharge limitation of 30 mg/l TSS theoretically would be achieving 86% removal efficiency. The department would then assume that this facility, meeting the permit limitation of 30 mg/l, would therefore be meeting the percent removal requirement.

Effluent Limitations

The department proposes the following effluent limitations for Outfall 002:

Table 4 - Proposed Effluent Limitations and Basis

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)(c)(1); Previous Permit
Total Suspended Solids (TSS), mg/l	30	45	*	40 CFR 133.102(b)(1) & (2) NDAC 33.1-16-01-14(3) Previous Permit
pH, s.u. ^b	Shall remain between 6.5 to 9.0			40 CFR 133.102(c) WQS
Escherichia coli (E. coli), #/ 100 ml °	126	* 409		WQS Previous Permit
Ammonia as N, mg/l	Refer to A	mmonia Ta	able (Table 5)	WQS Previous Permit
Oil & Grease, mg/l d	*	* 10		Previous Permit BPJ
Whole Effluent Toxicity (WET), TU _a	No Acute Toxicity			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 the receiving waters.

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	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Basis ^a		
The basis of the effluent limitations is given below: "Previous Permit" refers to limitations in the previous permit. The NPDES regulations 40 CFR Part 122.44(I)(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. "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.						
The pH, an instantaneous limitation, shall be between 6.5 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. coli limits shall not exceed 126 organisms per 100 ml as a geometric mean of representative samples collected during any 30-day consecutive period, nor shall samples exceed 409 organisms per 100 ml for any one day.						
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.						
	"Previous Permit" r CFR Part 122.44(I) reissued, interim lir final effluent limitati circumstances on v changed since the modification or revo "WQS" refers to eff Quality for Waters "BPJ" refers to bes The pH, an instanta analysis and/or me conditions of this po E. coli limits shall n representative sam exceed 409 organis A daily visual checl produce a visible si	The basis of the effluent limitar "Previous Permit" refers to limit CFR Part 122.44(I)(1) Reissureissued, interim limitations, standacircumstances on which the prochanged since the previous permodification or revocation and "WQS" refers to effluent limitated Quality for Waters of the State "BPJ" refers to best profession. The pH, an instantaneous limit analysis and/or measurement conditions of this permit. E. coli limits shall not exceed a representative samples collect exceed 409 organisms per 100. A daily visual check shall be produce a visible sheen on the	The basis of the effluent limitations is given "Previous Permit" refers to limitations in the CFR Part 122.44(I)(1) Reissued permits reissued, interim limitations, standards or final effluent limitations, standards, or concircumstances on which the previous permit was is modification or revocation and reissuance "WQS" refers to effluent limitations based Quality for Waters of the State", NDAC Cl. "BPJ" refers to best professional judgement The pH, an instantaneous limitation, shall analysis and/or measurement outside this conditions of this permit. E. coli limits shall not exceed 126 organis representative samples collected during a exceed 409 organisms per 100 ml for any A daily visual check shall be performed. Sproduce a visible sheen on the surface of	The basis of the effluent limitations is given below: "Previous Permit" refers to limitations in the previous per CFR Part 122.44(I)(1) Reissued permits require that w reissued, interim limitations, standards or conditions mustinal effluent limitations, standards, or conditions in the pricroumstances on which the previous permit was issued changed since the previous permit was issued and woul modification or revocation and reissuance under 40 CFR "WQS" refers to effluent limitations based on the State of Quality for Waters of the State", NDAC Chapter 33.1-16-16-16-16-16-16-16-16-16-16-16-16-16		

Stipulations:

The permittee must not discharge any floating solids, visible foam in other than trace amounts, or oily wastes that produce a sheen or floating oil in the effluent or on the surface of the receiving water. The discharge shall be visibly inspected for sheen or floating oil. If present, grab samples shall be analyzed for oil and grease.

Table 5 - Ammonia as N Effluent Limitations

	Effluent Limitations			
Parameter	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	
Ammonia ^a	†	*	‡	
Sheyenne River Parameters				
Stream flow upstream, cfs b	*	*	*	
Temperature upstream, ° C b, c	*	*	*	
pH upstream, S.U. ^c	*	*	*	
Ammonia as N upstream, mg/l	*	*	*	

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		Effluent Limitations				
Par	rameter	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit		
a.	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 on the Sheyenne River below Baldhill Dam (USGS gage station 05058000) or can be collected by the permittee.					
C.	If the upstream values are not collected, the following minimum values based on the 90 th percentile upstream USGS data and facility collected data are to be used: pH: 8.86 and.					

† Chronic Standard (Average Monthly Limit (AML))

The 30-day average concentration of total ammonia (expressed as N in mg/L) does not exceed the numerical value given by the following formula:

$$2.5 \times 0.8876 \times \left(\frac{0.0278}{1+10^{7.688-pH}} + \frac{1.1994}{1+10^{pH-7.688}}\right) \times \left(2.126 \times 10^{0.028 \times (20-MAX(T,7))}\right)$$

Receiving stream pH and temperature are used for the calculation.

‡ Acute Standard (Maximum Daily Limit (MDL))

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

$$0.7249 \times \left(\frac{0.0114}{1+10^{7.204-pH}} + \frac{1.6181}{1+10^{pH-7.204}}\right) \times MIN(51.93,23.12 \times 10^{0.036 \times (20-T)})$$

Receiving stream pH and temperature are used for the calculation.

Stipulations

For the MDL calculation, the permittee receives 10% of the stream flow for dilution at the time of discharge based on the flow of the Sheyenne River. If the upstream flow is not available or collected, then the 30B10 critical low flow of 8.13 cfs shall be used. MDL concentration will be calculated on a mass balance basis using the following formula. The permittee is responsible for units matching in the equation.

MDL Ammonia Effluent Limitation = $(Q_u * C_u + Q_e * C_e)/(Q_u + Q_e)$ where

 $Q_u = 10\%$ of the upstream flow parameter

C_u = Upstream ammonia parameter

Q_e = Effluent flow parameter

C_e = Ammonia as N parameter

The maximum mixing factor with receiving stream is 10.0%.

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Self-Monitoring Requirements

All effluent samples shall be collected at a point leaving Cell 2 and/or Cell 3 but prior to entering the Sheyenne River.

Table 6 - Self-Monitoring Requirements, Outfall 002

	Effluent Parameter	Frequency	Sample Type ^a				
BOD ₅ , mg/l		2/Week	Grab				
TSS, mg/l		2/Week	Grab				
рН	, s.u.	2/Week	Instantaneous				
<i>E.</i>	coli, #/100 ml ^b	Conditional/2/Week	Grab				
Am	monia as N, mg/l	2/Week	Grab				
Oil	& Grease – Visual	Daily	Visual				
Oil	& Grease, mg/l	Conditional/Daily	Grab				
Niti	ogen, Total mg/l ^d	Monthly	Grab				
Pho	osphorus, Total mg/l	Monthly	Grab				
WE	T	Quarterly	Grab				
Metals		Yearly	Grab				
Flow, MGD		Daily	Instantaneous				
Tot	al Drain, MG	Monthly	Calculated				
Sh	eyenne River Parameter						
Flo	w, cfs	2/Week	Usable Data Source				
рН	, s.u. – Upstream	2/Week	Usable Data Source				
Ter	mperature, °C - Upstream	2/Week	Usable Data Source				
	monia as N, mg/l – stream	2/Week	Usable Data Source				
No	tes:						
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).						

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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 waters. Wastewater discharge permits must include conditions that ensure the discharge will meet the surface water quality standards. Water quality-based effluent limits may be based on an individual waste load allocation or on a waste load allocation developed during a basin wide total maximum daily load (TMDL) study. TMDLs result from a scientific study of the water body and are developed in order to reduce pollution from all sources.

The Sheyenne River is listed as a class IA stream in the Standards of Quality for Waters of the State. Class IA streams must be suitable for resident fish and other aquatic life, as well as recreation use. The quality of water in class IA streams also must be suitable for irrigation, stock watering and wildlife. The quality must be able to meet the bacteriological, physical, and chemical requirements for municipal or domestic use.

The segment of the Sheyenne River that receives discharges from the facility is listed as impaired in the 2020-2022 North Dakota Section 303(d) List of Waters Needing Total Maximum Daily Loads (303(d) List). The designated use of the stream is listed as Fish and Other Aquatic Biota with the impairment listed as Benthic Macroinvertebrates Bioassessments and Sedimentation/Siltation. The TMDL priority for this stream reach is low. The department is addressing sedimentation impairment by continuing with a TSS permit limit.

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 levels of pollutants allowed in receiving water to protect aquatic life and recreation in and on the water. The department uses numerical criteria along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limits, the discharge must meet the water quality-based limits.

Numerical Criteria for the Protection of Human Health

The U.S. EPA has published numeric water quality criteria for the protection of human health that are applicable to dischargers. These criteria are designed to protect humans from exposure to pollutants linked to cancer and other diseases, based on consuming fish and shellfish and drinking contaminated surface waters. The Water Quality Standards also include radionuclide criteria to protect humans from the effects of radioactive substances.

Narrative Criteria

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

Antidegradation

The purpose of North Dakota's Antidegradation Policy (NDAC Chapter 33.1-16-02(Appendix IV)) is to:

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- 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

The department has reviewed the BOD₅ data and sampling frequency for the Valley City POTW. No exceedances occurred for this parameter during the reviewed time frame. The department proposes to continue with limits of 25 mg/l (monthly average) and 45 mg/l (weekly average) with an increase in sampling frequency to twice per week.

TSS

The department has reviewed the TSS data and sampling frequency for the Valley City POTW. There were two monthly average exceedances, however none of them exceeded the Technical Review Criteria (TRC). There were three weekly average exceedances, with one exceeding the TRC. The TRC values for TSS was determined by the following equation:

```
Monthly Average TRC = 1.4 * TSS 30 mg/l = TSS 42 mg/l
Weekly Average TRC = 1.4 * TSS 45 mg/l = TSS 63 mg/l
```

The department has determined that there is not sufficient data to proceed with the implementation of "Equivalent-to-Secondary Treatment Standards" or "Alternative State Requirements" (ASRs). The department proposes to continue with limits of 30 mg/l (monthly average) and 45 mg/l (weekly average) with an increase in sampling frequency to twice per week.

Hq

Based on the WQS, discharges to class IA streams shall have an instantaneous limitation between 6.5 s.u. and 9.0 s.u. The department proposes to update the current limit of 7.0 s.u. to 9.0 s.u. to reflect the WQS with an increase in sampling frequency to twice per week.

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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 and one month after the recreation season (April 1 through October 30).

The department has reviewed the *E. coli* data and sampling frequency for the Valley City POTW. No exceedances occurred during the reviewed time frame. 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 limitation with an increase in sampling frequency to twice per week.

Ammonia as Nitrogen

Discharges from Outfall 002 have the reasonable potential to exceed the acute and chronic WQS for ammonia. The reasonable potential analysis (**Appendix C**) was conducted using the procedures given in "Technical Support Document (TSD) For Water Quality based Toxics Control"; EPA/505/2-90-001; March 1991.

Numeric ammonia as nitrogen effluent limitations limit will not be established in the proposed permit. Instead, effluent limitations will be calculated based on the acute (*Oncorhynchus* absent) and chronic water quality standards to provide real-time effluent limitations. Receiving stream parameters (pH and temperature) will be tested two times per week. Both the acute and chronic WQS are variable and dependent on pH levels and temperature of the receiving water. As temperatures rise or pH levels increase, ammonia toxicity increases. In 2021, the acute and chronic WQS changed. As such, the acute and chronic WQS used in the 2019 permit are no longer valid. The "*Oncorhynchus* absent" acute water quality standard is applicable to discharges from the facility due to the absence of the *Oncorhynchus* genus of fish in the receiving water.

The Valley City POTW discharged for a total of 148 days during the previous permit cycle. The longest discharged lasted 28 days while the average discharge was 16 days. The department proposes that the 4-day chronic criterion is more appropriate than the 30-day average criterion.

The department proposes to implement the current WQS with an ammonia sampling frequency of twice per week. In addition, receiving stream parameters of pH, temperature, ammonia, and flow shall be sampled when effluent ammonia samples are collected.

Whole Effluent Toxicity (WET)

The permittee must conduct *Ceriodaphnia dubia* (Water Flea) and *Pimephales promelas* (Fathead Minnow) WET tests. Acute toxicity testing shall occur once each calendar quarter. After four consecutive passing tests, the facility can request to reduce testing to alternating species. Acute test failure (LC_{50}) is defined as lethality of 50 percent or more of each test organism at any effluent concentration. No chronic toxicity limits are imposed on this permit. If an acute toxicity test failure occurs, an additional test must be initiated within fourteen days of the initial toxicity findings. If the additional test fails, the department will determine whether a Toxicity Reduction Evaluation (TRE) is necessary.

The department is proposing to continue with TUa of less than 1 (<1) in order to meet the

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requirements of NDAC 33.1-16-02.1-08(a)(4), which states that "[a]II 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." This limit will need to be met at the end-of-pipe with no allowance for a zone of initial dilution (ZID), in accordance with NDAC 33.1-16-02.1, Appendix III, which states: "Acute whole effluent toxicity (WET) limits shall be achieved at the end-of-pipe with no allowance for a ZID."

40 CFR 122.21(j) specifies which POTWs must conduct whole effluent toxicity (WET) testing. WET testing is required for facilities with (1) a design influent flow greater than one million gallons per day; (2) an approved pretreatment program. The department may require other facilities to conduct WET testing based on the following considerations: (1) variability of the pollutants or pollutant parameters in the POTW effluent; (2) ratio of effluent flow to receiving stream flow; (3) existing controls on point and nonpoint sources, including total maximum daily load calculations for the water body segment and the relative contribution of the POTW; (4) receiving stream characteristics.

Valley City did not have a WET failure during the current permit cycle.

Metals

The department has reviewed the metals data and sampling frequency for the City of Valley City and performed a metals analysis (**Appendix C**) to compare the effluent results to the limits listed in the WQS. A hardness concentration of 400 mg/l as CaCO₃ was used for hardness dependent trace elements. The hardness concentration was the highest concentration listed in the WQS for use with hardness dependent criteria.

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

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

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

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

Sample results for mercury, selenium, and phenols were all below the reporting level. Therefore, the department proposes to continue monitoring the effluent for metals with a sampling frequency of annually.

The department further evaluated sample results for cyanide by looking at the previous ten (10) years of data. This evaluation showed that two (2) data points out of eight (8) had an actual value as the other six (6) were reported as below the method detection level. The department has determined that two (2) data points is not sufficient to conduct a reliable reasonable potential analysis. Therefore, the department proposes to continue monitoring effluent for cyanide with a sampling frequency of annually.

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Phosphorus and Nitrogen (Nutrients)

Nutrient monitoring was included in this permit. According to the North Dakota Nutrient Reduction Strategy for Surface Waters, Valley City POTW 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 nutrients (total nitrogen (TN) and total phosphorus (TP)) during the permit This monitoring information will be evaluated as part of the nutrient evaluation of the Sheyenne River.

BIOSOLIDS

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

HUMAN HEALTH

North Dakota's water quality standards include numeric human health-based criteria that the department must consider when writing NDPDES permits. These criteria were established in 1992 by the U.S. EPA in its National Toxics Rule (40 CFR 131.36). The National Toxics Rule allows states to use mixing zones to evaluate whether discharges comply with human health criteria. The department has not identified any chemicals in the applicant's discharge for regulations based on the human health criteria. The department will re-evaluate this discharge for impacts to human health at the next permit reissuance.

MONITORING REQUIREMENTS

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

Test Procedures

The collection and transportation of all samples shall conform to 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 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.

Discharge Monitoring Report (DMR) Requirements

The proposed permit requires the permittee to monitor discharges and submit discharge monitoring reports (DMRs) to the department. DMRs summarize monitoring results obtained during specified monitoring periods. If no discharge occurs during a monitoring period, "no discharge" must be reported.

The proposed permit includes specified internals for submitting monthly, quarterly, and yearly DMRs. DMRs must be submitted electronically to the department in accordance with 40 CFR 127 unless otherwise waived and in compliance with 40 CFR 3. The requirement to submit the 'A' reports monthly, 'W' reports quarterly, and 'M' reports yearly is similar to other major POTWs.

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Table 7 - DMR Submittal Requirements

Outfall	Report Designator	Report Type	Report Interval
002	А	Conventional and Non-Conventional Pollutants, Flow and Volume Information	Monthly
002	W	Whole Effluent Toxicity Results	Quarterly
002	M	Metals Results	Yearly

OTHER PERMIT CONDITIONS

DMR QA Study

The permittee participates in the Discharge Monitoring Report – Quality Assurance (DMR-QA) Study as a requirement outlined in Section 308 of the CWA. Language was added to the proposed permit reiterating the permittees requirement to participate in and discontinue the DMR-QA Study.

Special Conditions

The Valley City POTW and the Valley City WTP (NDPDES Permit No. ND0026395) utilize the same discharge point which includes a submerged diffuser in the Sheyenne River. Each permittee shall coordinate a discharge independently from each other. If a situation arises that both facility's need to discharge at the same time, the department shall be notified to help facilitate a discharge plan.

INDUSTRIAL WASTE MANAGEMENT

The proposed permit contains general pretreatment language and requirements. The general requirements include protection from any source of non-domestic wastewater which causes Pass Through or Interference; creates a fire or explosive hazard; causes corrosive structural damage; causes obstruction; interferes with the treatment process; includes excessive heat; contains petroleum oil and other products which causes Interference or Pass Through; results in the presence of toxic gases, vapors, or fumes in the facility; and is tucked or hauled pollutant except at designated discharge points.

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 and categorical industrial users to the POTWs that have not been delegated authority to issue their own industrial wastewater discharge permits. The requirements of approved 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 significant increase in the discharge for existing significant industrial users (SIUs) (40 CFR 403.8(f)(1)(ii)).

The permit shall contain the pretreatment requirements for Industrial Waste Management Majors with a Non-Approved Pretreatment Program. Since the Valley City POTW receives industrial wastewater from three (3) permitted categorial industrial users (John Deere Seeding Group – NDPG00021, Malach USA – NDP000022, and Tri W-G Inc. – NDPG00024), the

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permittee shall sample, analyze, and report according to the following table. Sample must be collected on an annual basis.

Table 8 - Parameters from 40 CFR 122, Appendix D, Table III

Ant	imony, Total	Copper, Total	Silver, Total				
Ars	enic, Total	Lead, Total	Thallium, Total				
Ber	yllium, Total	Mercury, Total	Zinc, Total				
Cad	dmium, Total	Nickel, Total	Cyanide, Total				
Chr	romium, Total	Selenium, Total	Phenols, Total				
Har	dness, Total as Calcium Ca	rbonate (CaCO ₃) ^a					
Notes:							
a.	The 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						

BENEFICIAL REUSE

The proposed permit contains conditions for the beneficial reuse of wastewater for irrigation, construction, and oil and gas production. Wastewater that has met secondary treatment or tertiary treatment standards may be beneficially reused in lieu of discharging.

to the WQS. This sample shall be collected upstream of the final discharge site.

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 sludges. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Proposed Permit Issuance

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

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APPENDIX A - PUBLIC INVOVLEMENT INFORMATION

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

The department will place a Public Notice of Draft on **August 15**, **2024** in the **Valley City Times Record** 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 individuals 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
4201 Normandy Street – 3rd Floor
Bismarck, ND 58503-1324

The primary author of this permit and fact sheet is Sarah Waldron Feld.

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

Public Notice Date: 8/15/2024 Public Notice Number: ND-2024-022

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: 1/22/2024 Application Number: ND0020559

Applicant Name: Valley City City Of

Mailing Address: 254 2nd Ave NE, Valley City, ND 58072

Telephone Number: 701.845.0380

Proposed Permit Expiration Date: 9/30/2029

Facility Description

The reapplication is for three waste stabilization ponds which service the City of Valley City. The discharge facility is located in the SW1/4, Section 32, Township 140N, Range 58W in Barnes County. Any discharge would be to the Sheyenne River, a Class IA stream.

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, 4201 Normandy Street, Bismarck ND 58503-1324 or by calling 701.328.5210.

All comments received by September 16, 2024 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.

The NDDEQ will consider every request for reasonable accommodation to provide an accessible meeting facility or other accommodation for people with disabilities, language interpretation for people with limited English proficiency (LEP), and translations of written material necessary to access programs and information. Language assistance services are available free of charge to you. To request accommodations, contact the NDDEQ Non-discrimination Coordinator at 701-328-5210 or deqEJ@nd.gov. TTY users may use Relay North Dakota at 711 or 1-800-366-6888.

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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 nth 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.

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- 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 2023.01.05

- 1. "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 of the acute exposure period (i.e., 100/"LC50").
- 2. "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").
- 3. "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).
- 4. "**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.
- 5. "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).
- 6. "Static Non-Renewal Test", the test organisms are exposed to the same test solution for the duration of the test.

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- 7. "Static-Renewal Test", the test organisms are exposed to a fresh solution of the same concentration of sample every 24 h or other prescribed interval, either by transferring the test organisms from one test chamber to another, or by replacing all or a portion of solution in the test chambers.
- 8. "Toxicity Reduction Evaluation (TRE)", is a site-specific study conducted in a stepwise process to identify the causative agents of effluent toxicity, isolate the source of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in effluent toxicity after the control measures are put in place.



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APPENDIX C - DATA AND TECHNICAL CALCULATIONS

Critical Low Flow

USGS gage station 05058000 on the Sheyenne River below Baldhill Dam was used to determine critical low flows using the DFLOW (3.1b) program. USGS gage station 05058500 on the Sheyenne River at Valley City is closer to the discharge point, but there was not enough data to run critical low flows for the defined season. The season defined was 2004 to 2024.

DFLOW 1B3 (ACUTE)	14.4	CFS	DFLOW 1Q10 (ACUTE)	11.6	CFS
DFLOW 4B3 (CHRONIC)	14.4	CFS	DFLOW 7Q10 (CHRONIC)	12.3	CFS
	0.40	CEC			

DFLOW 30B10 (AMMONIA) 8.13 CFS

REASONABLE POTENTIAL

Ammonia as N

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 variations that was used was 0.7.

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

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

Facility Name:	ility Name: Valley C		Receiving Stream:	Sheyenne Riv	ver	
NDPDES Permit:	ND0020559		1Q10 Acute	11.6	cfs	
Daily Maximum Flow	/ (mgd):	7.70	1B3 Acute	14.4	cfs	
Daily Average Flow (mgd):	4.49	7Q10 Chronic	12.3	cfs	
Stream Design Mixin	g:	90.0%	4B3 Chronic	14.4 cfs		
Statistical Multiplier	:	2.7				
Upstream Concentra	ition:	0.2430	mg/l		Parameter:	
Effluent Concetration (max):		15.4000	mg/l	Α	mmonia as N	
RWC		(StatQe	Ce)+(Cs(pmf)Qs)	_	Outfall:	
		Q	e+(pmf)Qs		002	

RWC = Receiving water concentration, the resultant magnitude of concentration in the receiving water after effluent discharge concentration (also known as the in-stream waste concentration)

Stat = Statistical multiplier for effluent parameter (Table 3-1 and 3-2; page 57 of the TSD)

Qe = Effluent Design Flow

Ce = Highest effluent concentration reported.

pmf = Partial mix factor, percent of Qs allowed for mixing by State authority.

Qs = Receiving Water Flow (1Q10 or 1B3 for acute and 7Q10 or 4B3 for chronic)

Cs = Background concentration of the receiving water.

Qe - Acute	7.70	mgd	Qs - 1Q10	7.49	mgd
Qe - Chronic	4.49	mgd	Qs - 1B3	9.30	mgd
Ce	15.4000	mg/l	Qs - 7Q10	7.95	mgd
Cs	0.2430	mg/l	Qs - 4B3	9.30	mgd
Stat	2.70				
pmf	90.0%				
Acute RP			Chronic RP		
RWC - 1Q10	22.2791	mg/l	RWC - 7Q10	16.1866	mg/l
RWC - 1B3	20.0471	mg/l	RWC - 4B3	14.6732	mg/l
Criterion Maximum (Concentratio	n (CMC)	Criterion Continuous	Concentrat	ion (CCC)
Acute Criterion	1.6637	mg/l	Chronic Criterion	0.8613	mg/l

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

CMC RP Present: CCC RP Present:

 1Q10 Acute OR
 YES
 7Q10 Chronic OR
 YES

 1B3 Acute
 YES
 4B3 Chronic
 YES

The North Dakota State Water Quality Standards (WQS) Chapter 33-16-02.1 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.

	Flow Variable Calculated Effluent Ammonia Concentrations in mg/l										Estimated	
Discharger:	Discharger: Valley City Of					Enter the upst	ream amm	onia in mg/l:			90th %	0.24
Stream:	Stream: Sheyenne River					Enter the rece	iving strea	m pH:			90th %	8.86
Enter receiving stream flow (CFS):					Enter the rece	iving strea	m temperature	in Deg C:	74 F	90th %	23.15	
Mixing Zone Percentage/CFS: 10% 0.8					0.8	Enter the efflu	Enter the effluent drain rate (MGD):				Yes	7.70
Enter incremen	nts to calculat	e stream flo	ow:		0.1	Enter increments to calculate drain rate:				0.1		
									Mixing Zone	Dilution R	ate:	1.1
									Overall Dilu	tion Rate:		1.7
	Maximum allowable ammonia in mg/l											
Water Quality Standard: 1.6637 Water C					Quality Standard: 0.8613 Water Quality Sta			andard:	0.3445			
Intermittent 1hr Acute Intermittent				t 4 Day Chro	nic		Continuou	ıs 30 Day	Chronic			
DRAIN MGD	→ 7.60	7.70	7.80	7.90	7.60	7.60 7.70 7.80 7.90 7.60 7.70				7.80	7.90	

Metals

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 the method detection level were entered at the detection level value.

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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 of

Facility Name			Valley Cit	y City of			Print Da	ite:	7/17/2024	
Location			Outfall 00				Below are the current or calculated			
Enter Grains/Gallon or					0 acute, chronic and human health					
Hardness - Total (CaCO3)	mg/l				400		standa	rds based	d on the data	entered.
Safety Factor(multiplier):	_									
Enter Concentration Value							μg/l	μg/l	μg/l	μg/l
Parameter		Detect	MDL/DL /RL	mg/l	μg/l	μg/l	Human Hum Health Class Heal			Human
Antimony		0.001		0.001		1			5.6	640
Arsenic		0.002		0.0021		2.1	340	150	10	
Beryllium		0.0005		0.0005		0.5		4		
Cadmium	HD	0.0001		0.0005		0.5	7.4	2.39	5.00	
Chromium - Total		0.05		0.05		50			100	
Chromium (III)	HD					0	5612	268		
Chromium (VI)						0	16	11		
Copper	HD			0.0125		12.5	52	30.5	1000.0	
Lead	HD			0.0012		1.2	477	18.6	15.0	
Mercury		0.0002		0.0002		0.2	1.7	0.88	0.05	<u>0.051</u>
Molybdenum - Total						0				
Nickel	HD			0.0077		7.7	1516	168.5	100.0	4200
Selenium		0.005		0.005		5	20	<u>5</u>	50	
Silver	HD	0.0005		0.0005		0.5	41			
Thallium		0.0001		0.0001		0.1			0.24	0.47
Zinc	HD			0.1		100	388	387.8	7400.0	26000
Cyanide - Total				0.01		10	22	<u>5.2</u>	4	400
Phenols		15		15		15000		300	4000	300000

Comments

The maximum values reported for each parameter from the Outfall 002 discharges that occurred from October 2019 - June 2024 were used. Non-detects were entered at the detection limit value.

Mercury: Results were below the method detection level. Selenium: Results were below the method detection level. Phenols: Results were below the method detection level.

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

EXPIRATION DATE: SEPTEMBER 30, 2029

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APPENDIX D - RESPONSE TO COMMENTS

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



Permit No: ND0020559
Effective Date: October 01, 2024
Expiration Date: September 30, 2029

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 Valley City Valley City Publicly Owned Treatment Works (POTW) Valley City, ND
is authorized to discharge from its waste stabilization ponds
to the Sheyenne River, a Class IA stream
provided all the conditions of this permit are met.
This permit and the authorization to discharge shall expire at midnight, September 30, 2029.
Signed this day of
Karl H. Rockeman, P.E. Director Division of Water Quality

BP 2019.05.29

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DEFINITIONS Standard Permit BP 2019.05.29

- 1. "Act" means the Clean Water Act.
- 2. "Average monthly discharge limitation" means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.
- 3. "Average weekly discharge limitation" means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.
- 4. "Best management practices" (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage areas.
- 5. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- 6. "Composite" sample means a combination of at least 4 discrete sample aliquots, collected over periodic intervals from the same location, during the operating hours of a facility not to exceed a 24 hour period. The sample aliquots must be collected and stored in accordance with procedures prescribed in the most recent edition of Standard Methods for the Examination of Water and Wastewater.
- 7. "Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.
- 8. "Department" means the North Dakota Department of Environmental Quality, Division of Water Quality.
- 9. "DMR" means discharge monitoring report.
- 10. "EPA" means the United States Environmental Protection Agency.
- 11. "**Geometric mean**" means the nth 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 2023.01.05

- 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 of 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).
- 25. "Static Non-Renewal Test", the test organisms are exposed to the same test solution for the duration of the test.
- 26. "Static-Renewal Test", the test organisms are exposed to a fresh solution of the same concentration of sample every 24 h or other prescribed interval, either by transferring the test organisms from one test chamber to another, or by replacing all or a portion of solution in the test chambers.
- 27. "Toxicity Reduction Evaluation (TRE)", is a site-specific study conducted in a step-wise process to identify the causative agents of effluent toxicity, isolate the source of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in effluent toxicity after the control measures are put in place.

OUTFALL DESCRIPTION

Outfall 002. Active. Final Outfall						
Latitude: 46.99444	.99444 Longitude: -98.016389 County: Barnes					
Township: 140 N	Range: 58 W		Section: 32	Q: C		
Receiving Stream: Sheyenne Riv	Classification: C	lass IA				

Outfall Description: The treated effluent flows into the Sheyenne River. This Outfall can discharge water from both Cell 2 and Cell 3. The discharge is directly piped to the Sheyenne River through a submerged diffuser. This diffuser was added to facilitate the discharge from the holding pond of the water treatment plant. To keep cost down, both the Valley City Water Treatment Plant and the Valley City wastewater system utilize the same discharge line. The type of discharge from this system is called a "Controlled Discharge" and is deemed to be non-continuous.

PERMIT SUBMITTALS SUMMARY

Coverage Point	Submittal	Frequency	First Submittal Date
002A	Discharge Monitoring Report	Monthly	January 31, 2025
002W	Discharge Monitoring Report	Quarterly	January 31, 2025
002M	Discharge Monitoring Report	Yearly	October 31, 2025
Application Renewal	NDPDES Application Renewal	1/permit cycle	April 1, 2029

SPECIAL CONDITIONS

- **A.** The Valley City POTW and the Valley City Water Treatment Plant (NDPDES Permit No. ND0026395) utilize the same discharge point which includes a submerged diffuser in the Sheyenne River. Each permittee shall coordinate a discharge independently from each other. If a situation should arise that both facility's need to discharge at the same time, the department shall be notified to help facilitate a discharge plan.
- **B.** This facility has been selected to take part in the annual Discharge Monitoring Report Quality Assurance (DMR-QA) Study. This participation is a requirement as outlined in Section 308 of the Clean Water Act (CWA). EPA will mail you a copy of the annual DMR-QA Study notification letter. Additional information may be found by visiting the following website: https://www.epa.gov/compliance/discharge-monitoring-report-quality-assurance-study-program#about. Discontinuation from the DMR-QA Study may take place upon a written letter from the State DMR-QA Coordinator.

I. LIMITATIONS AND MONITORING REQUIREMENTS

A. Discharge Authorization

During the effective period of this permit, the permittee is authorized to discharge pollutants from the outfall as specified to the following: **Sheyenne River, Class 1A**

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 002						
	Eff	luent Limitat	Monitoring Requirements			
Parameter	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Sample Frequency	Sample Type	
Biological Oxygen Demand (BOD₅)	25 mg/l	45 mg/l	*	2/Week	Grab	
Total Suspended Solids (TSS)	30 mg/l	45 mg/l	*	2/Week	Grab	
pH ^a	Shall remai	in between 6	6.5 to 9.0 s.u.	2/Week	Instantaneous	
Escherichia coli (E. coli) ^{b, c}	126/100 ml	*	409/100 ml	Conditional/ 2/Week	Grab	
Total Ammonia as N, mg/l	Refer to A	mmonia Tab	ele (Table 2)	2/Week	Grab	
Oil & Grease, Visual ^d	*	*	*	Daily	Visual	
Oil & Grease d	*	*	10 mg/l	Conditional/ Daily	Grab	
Nitrogen, Total mg/l ^e		Monitor Onl	y	Monthly	Grab	
Phosphorus, Total mg/l		Monitor Onl	у	Monthly	Grab	
Whole Effluent Toxicity (WET)	R	efer to Part I	(C)	Quarterly	Grab	
Metals, Total	R	efer to Part \	/(F)	Yearly	Grab	
Effluent Flow, MGD	Report Avg. Monthly Value	*	Report Max. Daily Value	Daily	Instantaneous	
Total Drain, MGAL	*	*	Report Monthly Total	Monthly	Calculated	
Sheyenne River Param	eters					
River Flow, cfs	* * *			2/Week	Usable Data Source	
Temperature, °C – Upstream	*	*	*	2/Week	Usable Data Source	
pH – Upstream	*	*	*	2/Week	Usable Data Source	
Ammonia as N, mg/l - Upstream	*	*	*	2/Week	Usable Data Source	

	Table 1: Effluent Limitations and Monitoring Requirements Outfall 002						
	Effluent Limitations				Monitoring Requirements		
	Parameter Avg. Avg. Daily Monthly Weekly Maximum Limit Limit Limit				Sample Frequency	Sample Type	
Note	es:						
II .	This parameter is not sample history and to		•		oose limitations	based on	
a.	The pH, and instantaneous limitation, shall be between 6.5 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.	E.coli limits shall not exceed 126 organisms per 100 ml as a geometric mean of representative samples collected during any 30-day consecutive period, nor shall samples exceed 409 organisms per 100 ml for any one day.						
C.	c. Monitoring for <i>E.coli</i> shall be in effect only during the recreational season (April 1 through October 31).						
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).						

Stipulations:

The permittee must not discharge any floating solids, visible foam in other than trace amounts, or oily wastes that produce a sheen or floating oil in the effluent or on the surface of the receiving water. The discharge shall be visibly inspected for sheen or floating oil. If present, grab samples shall be analyzed for oil and grease.

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

Table 2: Ammonia Effluent Limitations and Monitoring Requirements Outfall 002					
		Effluent Limitation	ns		
Parameter	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit		
Ammonia ^a	†	*	‡		
Sheyenne River Parameters					
Stream flow upstream, cfs b	*	*	*		
Temperature upstream, ° C b, c	*	*	*		
pH upstream, S.U. ^c	*	*	*		
Ammonia as N upstream, mg/l	*	*	*		

	Table 2: Ammonia Effluent Limitations and Monitoring Requirements Outfall 002					
	Effluent Limitations					
Pai	rameter	Avg. Weekly Limit	Daily Maximum Limit			
a.	Calculations must be performed for each discharge sample. If an exceedance is detected on					
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 on the Sheyenne River below Baldhill Dam (USGS gage station 05058000) or can be collected by the permittee.					
C.	If the upstream values are not collected, the following minimum values based on the 90 th percentile upstream USGS data and facility collected data are to be used: pH: 8.86 and.					

† Chronic Standard (Average Monthly Limit (AML))

The 30-day average concentration of total ammonia (expressed as N in mg/L) does not exceed the numerical value given by the following formula:

$$2.5 \times 0.8876 \times \left(\frac{0.0278}{1 + 10^{7.688 - pH}} + \frac{1.1994}{1 + 10^{pH - 7.688}}\right) \times \left(2.126 \times 10^{0.028 \times \left(20 - MAX(T, 7)\right)}\right)$$

Receiving stream pH and temperature are used for the calculation.

‡ Acute Standard (Maximum Daily Limit (MDL))

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

$$0.7249 \times \left(\frac{0.0114}{1+10^{7.204-pH}} + \frac{1.6181}{1+10^{pH-7.204}}\right) \times MIN(51.93,23.12 \times 10^{0.036 \times (20-T)})$$

Receiving stream pH and temperature are used for the calculation.

Stipulations

For the MDL calculation, the permittee receives 10% of the stream flow for dilution at the time of discharge based on the flow of the Sheyenne River. If the upstream flow is not available or collected, then the 30B10 critical low flow of 8.13 cfs shall be used. MDL concentration will be calculated on a mass balance basis using the following formula. The permittee is responsible for units matching in the equation.

MDL Ammonia Effluent Limitation = $(Q_u * C_u + Q_e * C_e)/(Q_u + Q_e)$ where

 $Q_u = 10\%$ of the upstream flow parameter

C_u = Upstream ammonia parameter

Q_e = Effluent flow parameter

C_e = Ammonia as N parameter

The maximum mixing factor with receiving stream is 10.0%.

C. Whole Effluent Toxicity (WET) Requirements BP 2023.10.16

1. Acute Toxicity Testing

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

Table 3: Acute WET Requirements Outfall 002

WET tests shall be performed on the first discharge made each calendar year, unless specifically waived by the department. Thereafter, tests shall be performed at least once every calendar quarter in which there is a discharge.

Toxicity is defined as:

Acute test failure is defined as lethality to 50% or more of the test organisms exposed to 100% effluent or >1.0 TU_a for *Ceriodaphnia dubia* 48-hour and fathead minnow 96-hour test.

Implementation	Limitations Impo	sed				
Effluent Dilution	0%(Control)	12.5%	25%	50%	75%	100%
Dilution Water	Sheyenne River	r a				
Species and Test	Ceriodaphnia du	ıbia - 48 Hou	r Acute - S	tatic Renewa	al - 20°C	
Type	Fathead minnow	- 96 Hour A	cute - Stati	c Renewal -	20°C	
Endpoint	Mortality LC ₅₀ re	Mortality LC ₅₀ reported as TU _a				
Compliance Point	End-of-pipe					
Sampling Frequency	Quarterly					
Sample Type	Grab					
Maximum Daily Limit (MDL)	<1 TUa					
Average Monthly Limit (AML)	<1 TUa					
Test Failure	The 48-hour and 96-hour effluent value must be <1.0 TU _a to indicate a passing test. Any 48-hour or 96-hour effluent value of >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 *Ceriodaphnia dubia*, Parameter No. TSM3B. Report the highest TU_a for *Pimephales promelas*, Parameter No. TSN6C.

The use of alternate testing procedures or methods shall be approved in advance by the department (including, but not limited to the use of EDTA, CO₂ overlay, chlorine removal from the effluent sample if the effluent is chlorinated, etc.).

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

Notes:

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.

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

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 restarts 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 <u>5. Toxicity Reduction Evaluation (TRE)</u> 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 <u>1. Acute Toxicity</u> 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 "<u>Technical Support Document for Water Quality-based Toxics Control,</u>" EPA/505/2-90-001 – PB91-127415 (March 1991). The purpose of the TRE will be to establish the cause of the toxicity, locate the source(s) of the toxicity, and control or provide treatment for the toxicity.

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

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

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

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

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

II. MONITORING, RECORDING, AND REPORTING REQUIREMENTS BP 2021.09.09

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 <u>B. Test Procedures</u>. 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 <u>B. Test Procedures</u>, shall be included in the summary on the Discharge Monitoring Report.

E. Reporting of Monitoring Results

- 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 4201 Normandy Street Bismarck, ND 58503-1324

F. Records Retention

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

III. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply

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

B. Proper Operation and Maintenance

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

C. Planned Changes

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

D. Duty to Provide Information

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

E. Signatory Requirements

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

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

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

- The authorization is made in writing by a person described above and submitted to the department;
 and
- 2. 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 <u>E. Signatory Requirements</u> 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 <u>G. Bypass of Treatment Facilities</u>;
 - 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 <u>Part II.E. Reporting of Monitoring Results.</u> 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. <u>Bypass not exceeding limitations</u>. 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. <u>Bypass exceeding limitations-notification requirements.</u>
 - 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 <u>F. Twenty-four Hour Notice of Noncompliance Reporting</u>.
- 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 <u>1. Anticipated Bypass</u> 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 <u>F. Twenty-four Hour Notice of Noncompliance Reporting</u> 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 filing a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee and subsequent department approval. The written agreement shall be filed with the department at least thirty days in advance of the proposed transfer date. The current permit holder must inform the new controller, operator, or owner of the existence of this permit and 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 2021.09.28 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 4201 Normandy Street Bismarck, ND 58503-1324

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 4: 40 CFR 122 Appendix D Table III						
Antimony, Total	Arsenic, Total	Beryllium, Total	Cadmium, Total	Chromium, Total		
Copper, Total	Lead, Total	Mercury, Total	Nickel, Total	Selenium, Total		
Silver, Total	Thallium, Total	Zinc, Total	Cyanide, Total	Phenols, Total		
Hardness, Total ^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.

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.

VI. BENEFICIAL REUSES BP 2015.09.03

A. Irrigation

Only wastewater that has received secondary or tertiary treatment may be used for irrigation provided soil and water compatibility testing confirms the water is suitable for irrigation. Wastewater used for irrigation shall be applied at a rate which would allow complete infiltration and not result in ponding or runoff from the irrigated area.

Agricultural land may be irrigated provided the crop is not used for human consumption. Forage crops used for livestock consumption or pastures irrigated with wastewater shall not be harvested or grazed within 30 days of a wastewater application.

Public properties such as golf courses or parks may be irrigated provided the treated wastewater meets the following quality criteria.

Table 5: Irrigation Beneficial Reuse Limitations and Monitoring Requirements					
	Limitations Monitoring Requirements				
Parameter	Daily Max	Measurement Frequency	Sample Type		
BOD₅	30 mg/l	1 per 14 days	Grab		
TSS	45 mg/l	1 per 14 days	Grab		
E. Coli	126/100 mL	Weekly	Grab		

Whenever possible, irrigation shall take place during hours when the public does not have access to the area being irrigated. If the public has constant access to an area, signs must be posted in visible areas during irrigation and for two hours after irrigation is completed. The signs must advise people that the water could pose a health concern and to avoid the irrigated area.

Worker and public contact with treated wastewater should be minimized. Where frequent contact is likely, a higher level of disinfection should be provided such as achieving *E. coli* counts less than 14 colonies per 100 ml.

Avoid application within 100 feet of areas which have unlimited access (i.e., yards) or within 300 feet of potable water supply wells.

Runoff that occurs from irrigated areas shall be monitored at the frequencies and with the types of measurements described in **Part I(B)**.

The permittee shall maintain monitoring records indicating the location and usage (e.g., park or agricultural) of the land being irrigated, the dates irrigation occurred, the amount of wastewater used, and the total flow. In addition, monitoring records must include results from collected samples.

B. Construction

Treated domestic wastewater may be used for construction purposes such as soil compaction, dust suppression and washing aggregate, provided the following conditions are met.

The wastewater intended for use in construction, must at a minimum, receive secondary treatment.

Prior to using treated wastewater a sample from the prospective source must be tested and meet the criteria set below. In addition, the test results for *E. coli* must be provided to the department prior to use. Results from samples up to two (2) weeks old will be considered valid. The water quality limitations and minimum sampling frequencies recommended for wastewater used in construction are provided in the following table.

Table 6: Construction Beneficial Reuse Limitations and Monitoring Requirements						
	Limitations (Maximum) Monitoring Requirements					
Parameter	Daily Max	Measurement Frequency	Sample Type			
BOD ₅	30 mg/l	Monthly	Grab			
TSS	100 mg/l	Monthly	Grab			
E. Coli	126/100 mL	Weekly	Grab			

While the conventional methods for treating domestic wastewater are generally effective in reducing infectious agents (bacteria, viruses, parasites) to acceptable levels, direct reuse of treated wastewater can pose a health concern. Additional precautions to consider are:

- 1. Worker and public contact with treated wastewater should be minimized.
- 2. Where frequent worker contact is likely a higher level of disinfection should be provided, such as achieving *E. coli* counts less than 14/100 ml.
- 3. Work closely with the treatment system operator to ensure treated wastewater quality is suitable when it is drawn for construction purposes.
- 4. Apply the treated wastewater in a manner that does not result in runoff or ponding.

Runoff that occurs from application areas shall be monitored at the frequencies and with the types of measurements described in Part I(B).

The permittee shall maintain monitoring records indicating the location and usage of the land where application occurs, the dates application occurred, the amount of wastewater used, and the total flow. In addition, monitoring records must include results from collected samples.

C. Oil and Gas Production (including Hydraulic Fracturing)

The specific user of the wastewater may determine the specific treatment requirements for receiving wastewater.

The permittee shall maintain monitoring records indicating the specific user, the amount of wastewater used, and the total flow. In addition, monitoring records must include results from collected samples.

D. Other Uses as Approved

The permittee must consult with the department before beneficially reusing wastewater for purposes not identified in this permit.