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

Public Notice Date: 8/14/2024 Public Notice Number: ND-2024-024

## 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: 1/26/2024 Application Number: ND0022616

Applicant Name: West Fargo City Of

Mailing Address: 810 12th Ave NW, West Fargo, ND 58078

Telephone Number: 701.433.5411

Proposed Permit Expiration Date: 9/30/2029

## Facility Description

The reapplication is for five (5) wastewater stabilization ponds servicing the City of West Fargo. The City of West Fargo has one permitted outfall (001) and two (2) inactive outfall (002 and 003) that do not discharge. The discharge facility is located in the SE 1/4, Section 36, Township 140N, Range 50W and in the SW 1/4, Section 31, Township 140N, Range 49W of Cass County. Discharges from the permitted outfall will be to the Sheyenne River, a Class IA stream, via a drainage ditch #21.

## 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 13, 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.

**FACT SHEET FOR NDPDES PERMIT ND0022616**

**CITY OF WEST FARGO**

**DATE OF THIS FACT SHEET – July 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, 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 authorized to take all action necessary or appropriate to secure to this state the benefits of the act and similar federal acts. The department's authority and obligations for the wastewater discharge permit program is in the North Dakota Administrative Code (NDAC) 33.1-16 which was adopted under North Dakota Century Code (NDCC) chapter 61-28. In North Dakota, these permits are referred to as North Dakota Pollutant Discharge Elimination System (NDPDES) permits.

The following rules or regulations apply to NDPDES permits:

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

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

According to the NDAC, section 33.1-16-01-08, the department must prepare a draft permit and accompanying fact sheet and make it available for public review period (NDAC chapter 33-16-01-07). The department must also publish an announcement (public notice) during a period of thirty days, informing the public where a draft permit may be obtained and where comments regarding the draft permit may be sent (NDAC 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**.

# Table of Contents

**BACKGROUND INFORMATION** ..... **4**
**FACILITY DESCRIPTION** ..... **7**
History ..... 7
Treatment System ..... 7
Pretreatment ..... 8
Outfall Description ..... 8
**PERMIT STATUS** ..... **9**
**SUMMARY OF COMPLIANCE WITH PREVIOUS PERMIT ISSUED** ..... **9**
Sanitary Sewer Overflows (SSOs) ..... 9
Past Discharge Data ..... 9
**PROPOSED PERMIT LIMITS AND SELF MONITORING REQUIREMENTS** ..... **15**
Effluent Limitations ..... 15
Self-Monitoring Requirements ..... 19
**SURFACE WATER QUALITY-BASED EFFLUENT LIMITS** ..... **21**
Numerical Criteria for the Protection of Aquatic Life and Recreation ..... 21
Numerical Criteria for the Protection of Human Health ..... 22
Narrative Criteria ..... 22
Antidegradation ..... 22
Mixing Zones ..... 22
**EVALUATION OF SURFACE WATER QUALITY-BASED EFFLUENT LIMITS FOR NUMERIC CRITERIA** ..... **22**
$BOD_5$ ..... 22
TSS ..... 23
pH ..... 23
Oil and Grease Visual ..... 23
Oil and Grease ..... 23
Phosphorus and Nitrogen (Nutrients) ..... 23
Ammonia as N ..... 23
Escherichia coli (*E coli*) ..... 24
Metals ..... 24
Whole Effluent Toxicity (WET) ..... 24
Chronic Toxicity Testing ..... 25
Biosolids ..... 25
Human Health ..... 25
Test Procedures ..... 26
Discharge Monitoring Report (DMR) Requirements ..... 26
**OTHER PERMIT CONDITIONS** ..... **26**
Mercury Pollutant Minimization Plan ..... 26
Discharge Monitoring Report – Quality Assurance (DMR-QA) Study ..... 27
Notification of Decommissioning ..... 27
Pretreatment ..... 27
Sanitary Sewer Overflows (SSOs) ..... 28

Beneficial Reuse ..... 30
**PERMIT ISSUANCE PROCEDURES ..... 31**
Permit Actions ..... 31
Proposed Permit Issuance ..... 31
**APPENDIX A – PUBLIC INVOLVEMENT INFORMATION ..... 33**
**APPENDIX B – DEFINITIONS ..... 35**
**APPENDIX C – DATA AND TECHNICAL CALCULATIONS ..... 38**
Critical Low Flow: ..... 38
Reasonable Potential ..... 39
Metals Analysis ..... 42
**APPENDIX D – RESPONSE TO COMMENTS ..... 43**

## BACKGROUND INFORMATION

**Table 1:** General Facility Information

| | |
|---|---|
| **Applicant:** | City of West Fargo |
| **Facility Name and Address:** | West Fargo City of<br>810 12th Ave NW West Fargo, ND 58078<br>701.261.6701 |
| **Permit Number:** | ND0022616 |
| **Permit Type:** | Major POTW – Reissuance |
| **Type of Treatment:** | Facultative Lagoon System |
| **SIC Code:** | 4952 – Sewerage Systems |
| **Discharge Location(s):** | Outfall 001:<br>Sheyenne River, Class IA Stream<br>Latitude: 46.902222<br>Longitude: -96.919444 |
| **Hydrologic Code:** | 09020204 – Red River |
| **Population:** | 41,000 |

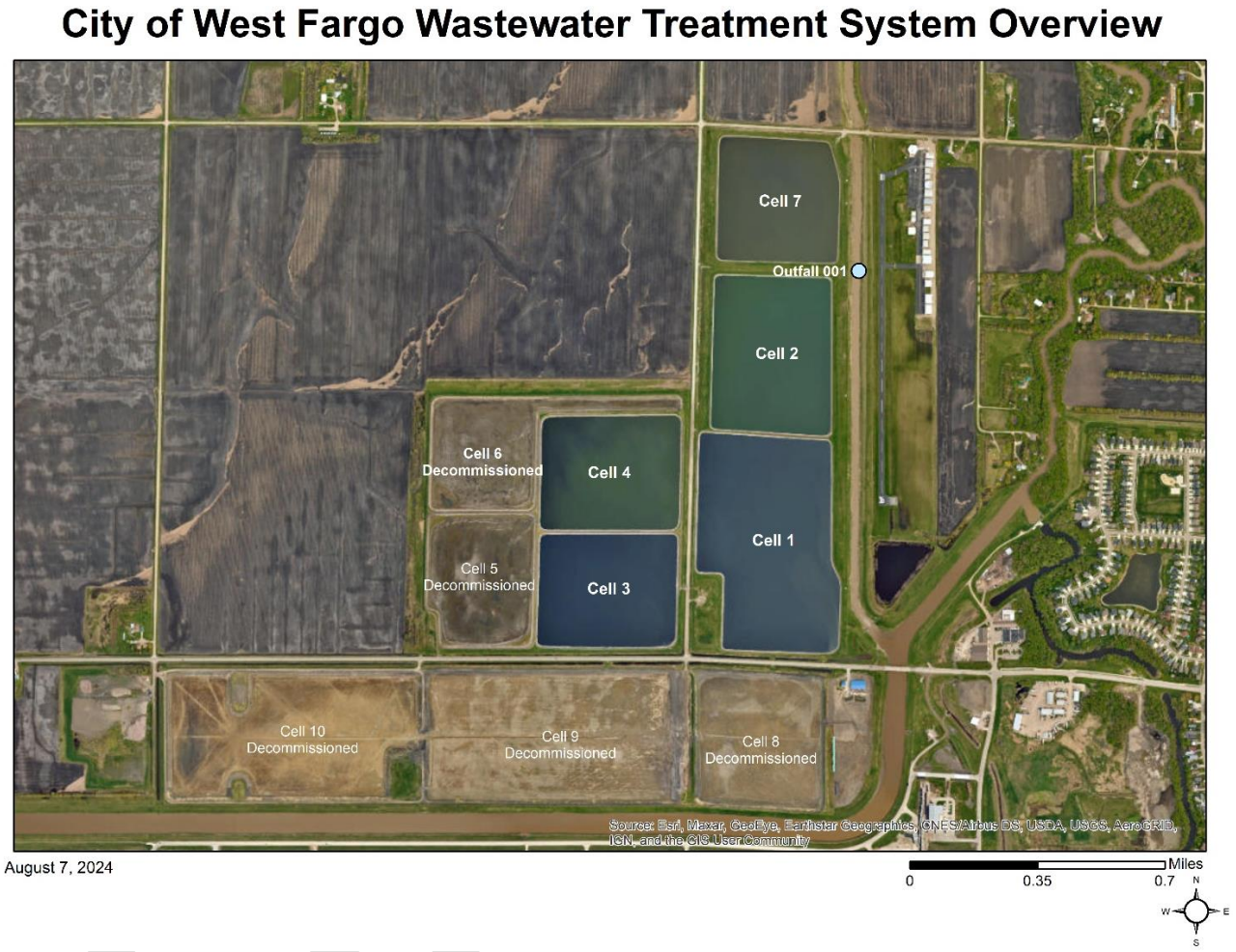
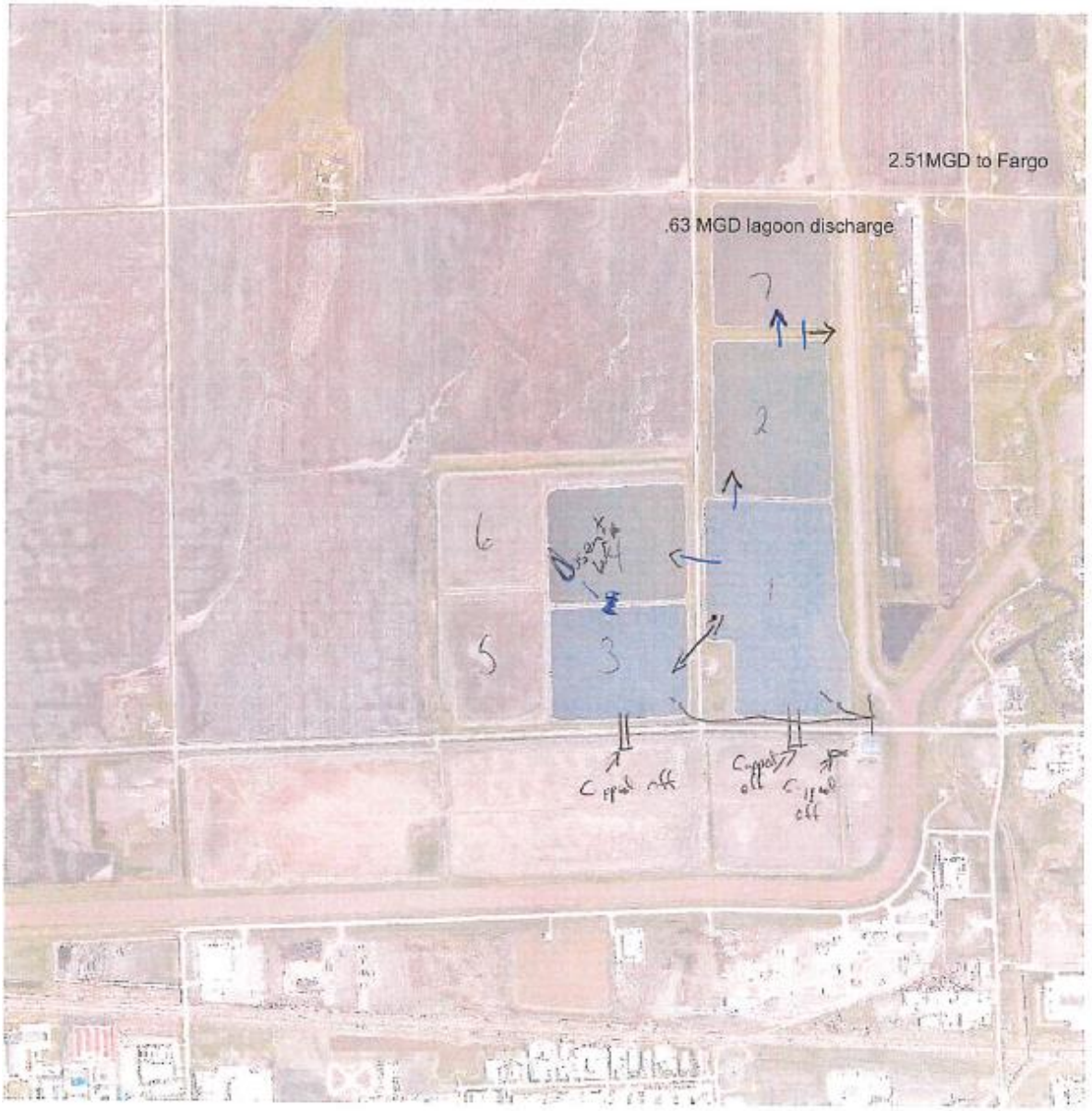



**Figure 1:** City of West Fargo Wastewater Treatment Overview. Cells 5, 6, 8, 9, and 10 have been decommissioned.




- Flow can only go into cells 1 & 3.
- Everything on the south side has had the pipe filled with concrete.
- The only usable cells are 1, 2, 3, 4, 7 with cell 4 being decommissioned this summer

**Figure 2:** Overview of wastewater treatment system and flow through the lagoon system.

## FACILITY DESCRIPTION

### History

The West Fargo lagoon system was nearing hydraulic capacity and organic loading was exceeding the capacity of the primary treatment cells, Cell 1 and Cell 3. To address the current and future capacity demands, the City of West Fargo coordinated a sewer agreement with the City of Fargo to convey 100% of the West Fargo wastewater flow to Fargo. The City of West Fargo and Fargo executed the sewer agreement for the City of Fargo to accept the wastewater of the City of West Fargo on July 1, 2017.

The agreement provides for West Fargo to decommission the wastewater lagoon system. Fargo is currently adding on to its wastewater treatment plant to accommodate the development in the region. It is anticipated that by 2025, all of West Fargo's wastewater will go to the City of Fargo.

Cells 5, 6, 8, 9, and 10 have been decommissioned, along with outfall 002. Cell 4 is scheduled to be the next cell in the treatment system to be decommissioned. The city is currently using Cell 4 as an overflow cell, in case of flooding. Decommissioning notification requirements are listed in the permit.

### Treatment System

The City of West Fargo owns and operates a municipal wastewater treatment system that treats wastewater generated from residential, commercial, and industrial entities in West Fargo.

This wastewater treatment system consists of four (4) facultative waste stabilization ponds, and one (1) active outfall. Wastewater enters Cell 1, where it can be transferred to either Cells 2 or 3. Cell 3 can be transferred back to Cell1. Cell 2 can either be transferred to Cell 7 or discharged from Outfall 001. Cell 7 can also be discharged via Outfall 001. Outfall 001 discharges to Drainage Ditch #21, a Class III stream.

The sizes of the active waste stabilization ponds are as follows:

| Cell | Size (acres) |
|---|---|
| Cell 1 | 70 |
| Cell 2 | 40 |
| Cell 3 | 34.4 |
| Cell 4 | 41.6 |
| Cell 7 | 37 |
| **Total** | 223 |

Currently, approximately 2.75 MGD of wastewater is being sent to the City of Fargo.

**Pretreatment**

EPA approved West Fargo's Industrial Pretreatment Program June 1999 in accordance with 40 CFR 403.11. The department was delegated primacy for the Industrial Pretreatment Program on September 9, 2005. The city currently has a total of nine (9) industrial users of which five (5) are categorical industrial users and four (4) are significant industrial users.

**Outfall Description**

The authorization to discharge provided under this permit is limited to those outfalls specifically designated below. Discharges at any location not authorized under a NDPDES permit is a violation of the CWA and could subject the person(s) responsible for such discharge to penalties under Section 309 of the CWA. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge within the specified timeframe outlined in this permit could subject such person(s) to penalties as provided under the CWA.

There is one active final outfall associated with the facility. The description of the active and inactive outfalls is provided below:

| **Outfall 001. Active. Final.** | | | |
|---|---|---|---|
| Latitude: 46.902222 | Longitude: -96.919444 | County: Cass | |
| Township: 140N | Range: 49W | Section: 31 | Quarter: SE/NW |
| Receiving Stream: Sheyenne River via Drain #21 | | Classification: Class III | |
| Outfall Description: Any discharge from this point is from any Cell in the system via Cell 2 or 7 to the Sheyenne River – a Class IA stream - via Drain #21, a Class III stream. | | | |

| **Outfall 002. Inactive.** | | | |
|---|---|---|---|
| Latitude: 46.887506 | Longitude: -96.936631 | County: Cass | |
| Township: 139N | Range: 50W | Section: 1 | Quarter: SE/NW |
| Receiving Stream: Sheyenne River via Sheyenne River Diversion. | | Classification: Class III | |
| Outfall Description: This outfall is capped off and filled with concrete. Permittee states Cell 9 and Cell 10 have met the 503 guidelines and requirements. Any discharge from this outfall would be unauthorized and subject to the bypass provisions set forth in Part III(G) for the permit. | | | |

| **Outfall 003. Inactive.** | | | |
|---|---|---|---|
| Latitude: 46.925287 | Longitude: -96.78585 | County: Cass | |
| Township: 139N | Range: 49W | Section: 6 | Quarter: SW/NW |
| Receiving Stream: Sheyenne Diversion | | Classification: Class III | |

Outfall Description: Inactive gate valve that can be opened to the Sheyenne Diversion. Permittee states that the valve is never used. Any discharge from this outfall would be unauthorized and subject to the bypass provisions set forth in Part III(G) of the permit.

## PERMIT STATUS

The department issued the previous permit for this facility on October 1, 2019. The previous permit placed limits on Biochemical Oxygen Demand ($BOD_5$), pH, Total Suspended Solids (TSS), *Escherichia coli* (*E. coli*), Oil and Grease, Ammonia as N, and Whole Effluent Toxicity (WET).

The department has been in contact with the City of West Fargo to obtain information to reissue the permit. The department received EPA application Form 2A on January 26, 2024. The application was accepted as complete by the department on February 2, 2024. Effluent sample data has been provided to the department through official laboratory reports, discharge monitoring reports, and the permit application Form 2A.

## SUMMARY OF COMPLIANCE WITH PREVIOUS PERMIT ISSUED

The department's assessment of the compliance is based on review of the facility's Discharge Monitoring Report (DMR) forms and inspections conducted by department staff. The department's Division of Water Quality and Division of Municipal Facilities conducted annual inspection of the facility. A total of Six (6) facility inspections and three (3) pretreatment programs inspections/audits of the city were conducted between October 1, 2019, and April 30, 2024. The facility had effluent exceedances during the previous permit cycle as indicated in **Table 2** and **Table 3.**

### Sanitary Sewer Overflows (SSOs)

Four SSOs were identified during the previous permit cycle. Any bypasses/SSOs for the City of West Fargo from October 2019 – July 2024 was due to infrastructure failures, such as pipe breaks and air relief valve failures.

### Past Discharge Data

The City of West Fargo is a controlled intermittent discharger. During the last permit cycle, the city reported discharges from both outfall 001 and 002. The concentration of pollutants in the discharge were reported in DMRs reviewed by the department. A summary of the data follows:

**Table 2 –** City of West Fargo POTW Outfall 001 (October 1, 2019 to April 30, 2024)

| Parameter | Units | Range | Average | Permit Limit | Number of Exceedances |
|---|---|---|---|---|---|
| ***Effluent*** | | | | | |
| BOD5 | mg/l | 4.3 – 30.5 | 11.8 | 25 – Avg.<br>45 – Weekly | 2 |

**Table 2 –** City of West Fargo POTW Outfall 001 (October 1, 2019 to April 30, 2024)

| Parameter | Units | Range | Average | Permit Limit | Number of Exceedances |
|---|---|---|---|---|---|
| TSS | mg/l | 3.3 – 28.5 | 15.9 | 30 – Avg.<br>45 – Weekly | 0 |
| *E. coli* | Colonies per 100 ml | 1 – 128 | 26 | 126 – Avg.<br>409 – Max. | 1 |
| pH | S.U. | 7.3 – 8.89 | NA | 7.0 to 9.0 | 0 |
| Ammonia as N | mg/l | 0.12 – 18.5 | 6.99 | WQS | 10 |
| Temperature | °C | 1.1 – 25.6 | 15.9 | NA | 0 |
| Flow | MGD | 4.29 – 8 | 6.56 | NA | NA |
| Drain | MG | 30 – 145 | 62.1 | NA | NA |
| Nitrogen, Total | mg/l | 0.2 – 22.6 | 7.39 | NA | 0 |
| Phosphorus, Total | mg/l | 0.78 – 6.21 | 2.46 | NA | 0 |
| Oil and Grease, Visual | Y=1; N=0 | 0 - 0 | 0 | NA | 0 |
| Oil and Grease | mg/l | 0 - 0 | 0 | 10 | 0 |
| Antimony | mg/l | 0.001 – 0.002 | 0.001 | WQS | 0 |
| Arsenic | mg/l | 0.002 – 0.003 | 0.003 | WQS | 0 |
| Beryllium | mg/l | 0.0005 – 0.0005 | 0.0005 | WQS | 0 |
| Cadmium | mg/l | 0.0001 – 0.0001 | 0.0001 | WQS | 0 |
| Chromium | mg/l | 0.002 – 0.002 | 0.002 | WQS | 0 |
| Copper | mg/l | 0.002 – 0.005 | 0.004 | WQS | 0 |
| Lead | mg/l | 0.0005 – 0.0005 | 0.0005 | WQS | 0 |
| Mercury | mg/l | 0.0002 – 0.0002 | 0.0002 | WQS | 0 |
| Nickel | mg/l | 0.002 – 0.01 | 0.005 | WQS | 0 |
| Selenium | mg/l | 0.005 – 0.005 | 0.005 | WQS | 0 |
| Silver | mg/l | 0.0005 – 0.0005 | 0.0005 | WQS | 0 |
| Thallium | mg/l | 0.0001 – 0.0001 | 0.0001 | WQS | 0 |
| Zinc | mg/l | 0.05 – 0.05 | 0.05 | WQS | 0 |

**Table 2 –** City of West Fargo POTW Outfall 001 (October 1, 2019 to April 30, 2024)

| Parameter | Units | Range | Average | Permit Limit | Number of Exceedances |
|---|---|---|---|---|---|
| Cyanide | mg/l | 0.007 – 0.013 | 0.008 | WQS | 0 |
| Phenols | µg/l | 10 – 16.8 | 14.4 | WQS | 0 |
| Ceriodaphnia dubia | 0=Pass; 1=Fail | 0 – 0 | 0 | NA | NA |
| Fat Head Minnow | 0=Pass; 1=Fail | 0 – 0 | 0 | NA | NA |
| WET | $TU_a$ | <1 – <1 | <1 | <1 | 0 |
| ***Influent*** | | | | | |
| Antimony | mg/l | 0.001 – 0.001 | 0.001 | NA | NA |
| Arsenic | mg/l | 0.002 – 0.004 | 0.003 | NA | NA |
| Beryllium | mg/l | 0.0005 – 0.0005 | 0.0005 | NA | NA |
| Cadmium | mg/l | 0.0001 – 0.0001 | 0.0001 | NA | NA |
| Chromium | mg/l | 0.002 – 0.05 | 0.015 | NA | NA |
| Copper | mg/l | 0.008 – 0.07 | 0.032 | NA | NA |
| Lead | mg/l | 0.0005 – 0.002 | 0.0009 | NA | NA |
| Mercury | mg/l | 0.0002 – 0.0002 | 0.0002 | NA | NA |
| Nickel | mg/l | 0.003 – 0.04 | 0.014 | NA | NA |
| Selenium | mg/l | 0.005 – 0.007 | 0.006 | NA | NA |
| Silver | mg/l | 0.0005 – 0.0005 | 0.0005 | NA | NA |
| Thallium | mg/l | 0.0001 – 0.0001 | 0.0001 | NA | NA |
| Zinc | mg/l | 0.05 – 029 | 0.29 | NA | NA |
| Cyanide | mg/l | 0.007 – 0.007 | 0.007 | NA | NA |
| Phenols | µg/l | 64.2 - 116 | 103.6 | NA | NA |
| ***Upstream*** | | | | | |
| Flow Receiving Stream | $ft^3/sec$ | 64.6 - 4580 | 2629 | NA | NA |
| Ammonia as N | mg/l | 0.12 – 9.92 | 0.93 | NA | NA |
| pH | S.U. | 7.01 – 8.44 | NA | NA | NA |

**Table 2 –** City of West Fargo POTW Outfall 001 (October 1, 2019 to April 30, 2024)

| Parameter | Units | Range | Average | Permit Limit | Number of Exceedances |
|---|---|---|---|---|---|
| Temperature | °C | 0.6 - 26 | 16.3 | NA | NA |
| Hardness as CaCO3 | mg/l | 342 - 699 | 520 | NA | NA |

**Notes:**

The West Fargo POTW discharged fourteen (14) times from **Outfall 001** during the stated time frame.

- One discharge in the month of May;
- Four discharges in the month of June;
- Two discharges in the month of July;
- One discharge in the month of August;
- One discharge in the month of September;
- Three discharges in the month of October;
- Two discharges in the month of November.

**Table 3 –** City of West Fargo POTW Outfall 002 (October 1, 2019 to April 30, 2024

| Parameter | Units | Range | Average | Permit Limit | Number of Exceedances |
|---|---|---|---|---|---|
| ***Effluent*** | | | | | |
| BOD5 | mg/l | 3 – 25.7 | 9.72 | 25 – Avg.<br>45 – Weekly | 1 |
| TSS | mg/l | 9 – 140 | 24.3 | 30 – Avg.<br>45 – Weekly | 7 |
| *E. coli* | Colonies per 100 ml | 1 – 291 | 38.4 | 126 – Avg.<br>409 – Max. | 3 |
| pH | S.U. | 6.86 – 8.91 | NA | 7.0 to 9.0 | 1 |
| Ammonia as N | mg/l | 0.2 – 10.5 | 2.5 | WQS | 5 |
| Temperature | °C | 3.7 – 29.2 | 14.7 | NA | 0 |
| Flow | MGD | 0.43 – 13.21 | 6.71 | NA | NA |
| Drain | MG | 3 – 185 | 75.6 | NA | NA |
| Nitrogen, Total | mg/l | 0.21 – 53.2 | 10.4 | NA | 0 |
| Phosphorus, Total | mg/l | 0.2 – 58 | 6.16 | NA | 0 |

**Table 3 –** City of West Fargo POTW Outfall 002 (October 1, 2019 to April 30, 2024

| Parameter | Units | Range | Average | Permit Limit | Number of Exceedances |
|---|---|---|---|---|---|
| Oil and Grease, Visual | Y=1; N=0 | 0 – 0 | 0 | NA | NA |
| Oil and Grease | mg/l | 0 – 0 | 0 | 10 | 0 |
| Antimony | mg/l | 0.001 – 0.001 | 0.001 | WQS | 0 |
| Arsenic | mg/l | 0.003 – 0.005 | 0.004 | WQS | 0 |
| Beryllium | mg/l | 0.0005 – 0.0005 | 0.0005 | WQS | 0 |
| Cadmium | mg/l | 0.0001 – 0.0001 | 0.0001 | WQS | 0 |
| Chromium | mg/l | 0.002 – 0.002 | 0.002 | WQS | 0 |
| Copper | mg/l | 0.0026 – 0.02 | 0.011 | WQS | 0 |
| Lead | mg/l | 0.0005 – 0.0005 | 0.0005 | WQS | 0 |
| Mercury | mg/l | 0.0002 – 0.0002 | 0.0002 | WQS | 0 |
| Nickel | mg/l | 0.0051 – 0.01 | 0.0075 | WQS | 0 |
| Selenium | mg/l | 0.005 – 0.005 | 0.005 | WQS | 0 |
| Silver | mg/l | 0.0005 – 0.0005 | 0.0005 | WQS | 0 |
| Thallium | mg/l | 0.0001 – 0.0001 | 0.0001 | WQS | 0 |
| Zinc | mg/l | 0.05 – 0.05 | 0.05 | WQS | 0 |
| Cyanide | mg/l | 0.007 – 0.009 | 0.008 | WQS | 0 |
| Phenols | µg/l | 10 – 15 | 12.5 | WQS | 0 |
| Ceriodaphnia dubia | 0=Pass; 1=Fail | 0 – 0 | 0 | NA | NA |
| Fat Head Minnow | 0=Pass; 1=Fail | 0 – 0 | 0 | NA | NA |
| WET | $TU_a$ | <1 – <1 | <1 | <1 | 0 |
| ***Influent*** | | | | | |
| Antimony | mg/l | 0.001 – 0.001 | 0.001 | NA | NA |
| Arsenic | mg/l | 0.002 – 0.003 | 0.002 | NA | NA |
| Beryllium | mg/l | 0.0005 – 0.0005 | 0.0005 | NA | NA |
| Cadmium | mg/l | 0.0001 – 0.0001 | 0.0001 | NA | NA |

**Table 3 –** City of West Fargo POTW Outfall 002 (October 1, 2019 to April 30, 2024

| Parameter | Units | Range | Average | Permit Limit | Number of Exceedances |
|---|---|---|---|---|---|
| Chromium | mg/l | 0.002 – 0.003 | 0.003 | NA | NA |
| Copper | mg/l | 0.029 – 0.037 | 0.033 | NA | NA |
| Lead | mg/l | 0.0005 – 0.001 | 0.0007 | NA | NA |
| Mercury | mg/l | 0.0002 – 0.0002 | 0.0002 | NA | NA |
| Nickel | mg/l | 0.004 – 0.008 | 0.006 | NA | NA |
| Selenium | mg/l | 0.005 – 0.005 | 0.005 | NA | NA |
| Silver | mg/l | 0.0005 – 0.0005 | 0.0005 | NA | NA |
| Thallium | mg/l | 0.0001 – 0.0001 | 0.0001 | NA | NA |
| Zinc | mg/l | 0.11 – 0.16 | 0.13 | NA | NA |
| Cyanide | mg/l | 0.007 – 0.007 | 0.007 | NA | NA |
| Phenols | µg/l | 10 – 134 | 72 | NA | NA |
| ***Upstream*** | | | | | |
| Flow Receiving Stream | $ft^3/sec$ | 107 - 4430 | 1484 | NA | NA |
| Ammonia as N | mg/l | 0.2 – 0.25 | 0.20 | NA | NA |
| pH | S.U. | 7.06 – 8.34 | NA | NA | NA |
| Temperature | °C | 1.1 – 26.4 | 11.7 | NA | NA |
| Hardness as CaCO3 | mg/l | 554 – 581 | 567.5 | NA | NA |

**Notes:**

The West Fargo POTW discharged twelve (12) times from **Outfall 002** during the stated time frame. The last discharge from Outfall 002 was in May 2022, the outfall has since been decommissioned. The facility requested inactivation of Outfall 002 May 2024 as it has met sludge requirements and has been cemented shut.

- Two discharges in the month of April;
- Two discharges in the month of May;
- One discharge in the month of June;
- Two discharges in the month of July;
- Two discharges in the month of October;
- Two discharges in the month of November.

## PROPOSED PERMIT LIMITS AND SELF MONITORING REQUIREMENTS

The City of West Fargo is subject to 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.

Below are the technology-based limits specified in 40 CFR Part 133 for $BOD_5$, TSS, pH, and Percent Removal:

**Table 4:** 40 CFR 133 Technology-Based Effluent Limitations

| Parameter | 30-Day Average | 7-Day Average |
|---|---|---|
| $BOD_5$ | 30 mg/l | 45 mg/l |
| $CBOD_5$ | 25 mg/l | 40 mg/l |
| TSS | 30 mg/l | 45 mg/l |
| pH | 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 $BOD_5$ limit of twenty-five milligrams per liter (consecutive thirty-day average) may be applied in instances in which limits expressed in terms of secondary treatment standards would be impractical or deemed inappropriate to protect receiving waters. The department has determined that a 25 mg/l (consecutive 30-day average) for $BOD_5$ is appropriate for this facility. Similar facilities with waste stabilization ponds have the same limit.

### Effluent Limitations

Based on the continued work towards the West Fargo to Fargo wastewater connection, the department considered the existing receiving stream as the West Fargo diversion. However, the ultimate end point for the effluent is the Sheyenne River, a Class IA stream, the department proposes the following effluent limitations for Outfalls 001:

**Table 5:** Effluent Limitations and Monitoring Requirements for **Outfalls 001**

| Effluent Limitations | | | | |
|---|---|---|---|---|
| **Parameter** | **Avg. Monthly Limit** | **Avg. Weekly Limit** | **Daily Maximum Limit** | **Basis [a]** |
| $BOD_5$ (mg/l) | 25 mg/l | 45 mg/l | * | 40 CFR 133.102(a)(2); NDAC 33.1-16-01-14(3)(c)(1); Previous Permit |
| TSS (mg/l) | 30 mg/l | 45 mg/l | * | 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 and 9.0 S.U. | | | 40 CFR 133.102(c);<br>WQS |
| Ammonia as N (mg/l) | Refer to Ammonia Table (**Table 6**) | | | WQS;<br>Previous Permit |
| *Escherichia coli* (*E.coli*) (#/100ml) [c] | 126 | * | 409 | WQS;<br>Previous Permit |
| Oil & Grease (mg/l) [d] | * | * | 10 mg/l | Previous Permit;<br>WQS;<br>BPJ |
| Whole Effluent Toxicity (WET) ($TU_a$) | No Acute Toxicity | | | 40 CFR 122.44(d)(1)(iv-v);<br>WQS;<br>Previous Permit |

**Notes:**

| | |
|---|---|
| * | This parameter is not limited. However, the department may impose limitations based on sample history and to protect the receiving waters. |
| a | The basis of the effluent limitations is given below:<br><br>"Previous Permit" refers to limitations in the previous permit. The NPDES regulations **40 CFR Part 122.44(1)(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**.<br><br>"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.<br><br>"BPJ" refers to best professional judgement. |
| b | 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. |
| c | *E. coli* shall not exceed 126 organisms per 100 ml as a geometric mean of the representative samples collected during any 30-day consecutive period, nor shall samples exceed 409 organisms per 100 ml for any one day.<br><br>The limit for *E. coli* shall only apply during the recreational season, April 1 through October 31. Averages for *E. coli* shall be determined as a geometric mean. |
| d | A daily visual check shall be performed. There shall be no discharge of oily wastes that produce a visible sheen on the surface of the receiving water. If present, a grab sample shall be analyzed for oil and grease to ensure compliance with the concentration limitation. |

**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 6:** Ammonia as N Effluent Limitations Calculations

| Parameter | Avg. Monthly Limit [a] | Avg. Weekly Limit | Daily Maximum Limit |
|---|---|---|---|
| Ammonia (mg/l) [b] | † | * | ‡ |
| **Sheyenne River Parameters** | | | |
| Stream Flow Upstream (cfs) [c] | * | * | * |
| Temperature Upstream (°C) [c] | * | * | * |
| pH Upstream (S.U.) [c] | * | * | * |
| Ammonia as N upstream (mg/l) | * | * | * |

**Notes:**

| | |
|---|---|
| * | This parameter is not limited. |
| a | When discharges are 7 days or less, the 4-day average concentration limitation shall apply. When discharges are more than 7 days, the 30-day average concentration limitation shall apply. |
| b | 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. |
| c | Sample must be collected/recorded the same day as the ammonia sample. The flow, temperature, and pH may be obtained from the nearest United States Geological Survey (USGS) gauging station 05059500 at West Fargo, North Dakota or can be sampled by the permittee. If the permittee cannot feasibly sample flow, temperature, and pH, effluent information shall be used when calculating ammonia and no mixing will be allowed. |
| † | Chronic Standard (Average Monthly Limit)<br><br>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:<br><br>$$2.5 \times 0.8876 \times \left(\frac{0.0278}{1+10^{7.688-pH}} + \frac{1.1994}{1+10^{pH-7.688}}\right) \times \left(2.126 \times 10^{0.028\times(20-MAX(T,7))}\right)$$<br><br>Receiving stream pH and temperature is used for the calculation if applicable, otherwise effluent pH and temperature is used for the calculation. |

| | |
|---|---|
| ‡ | Acute Standard (Daily Maximum Limit)<br><br>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:<br><br>$$0.7249 \times \left(\frac{0.0114}{1+10^{7.204-pH}} + \frac{1.6181}{1+10^{pH-7.204}}\right) \times MIN\left(51.93, 23.12 \times 10^{0.036\times(20-T)}\right)$$<br><br>where *Oncorhynchus* are absent<br><br>Receiving stream pH and temperature is used for the calculation if applicable, otherwise effluent pH and temperature is used for the calculation. |

**Stipulations:**

Calculations must be performed for each discharge sample. If an exceedance is detected on any single sample during a discharge, the exceedance must be reported on the DMR.

If the upstream values are not collected, then the following values are to be used:

- pH: 8.35 S.U., based on the 90th percentile of collected upstream data,
- Temperature values used during the winter months can be extrapolated from available USGS data using best professional judgement,
- Permittee shall use the 90th percentile upstream ammonia value of 0.92 mg/l,
- If the upstream flow is not available, the 30B10 critical low flow value of 60.7 cfs must be used.

The maximum mixing factor with the receiving stream is 10.0%.

**Self-Monitoring Requirements**

All effluent samples shall be collected at a point following the treatment system and prior to entering Drain #21 to the Sheyenne River.

A pre-discharge sample shall be taken prior to the start of any discharge from Outfall 001. This analysis shall be reported to the department. A pre-discharge sample shall be tested for $BOD_5$, TSS, pH, Temperature, *E. coli*., and Ammonia as N. This pre-discharge sample shall represent the first week discharge sample. An additional sample of the actual discharge shall be taken and analyzed on a weekly basis for each additional week of the discharge.

**Table 7:** Self-Monitoring Requirement for **Outfalls 001**

| Parameter | Frequency | Sample Type [a] |
|---|---|---|
| ***Effluent*** | | |
| $BOD_5$ (mg/l) | 2/Week | Grab |
| TSS (mg/l) | 2/Week | Grab |
| pH (S.U.) | 2/Week | Grab |

| | | |
|---|---|---|
| Oil and Grease Visual [b] | Daily | Visual |
| Oil & Grease (mg/l) [b] | Conditional/Daily | Grab |
| Ammonia as N (mg/l) | 3/Week | Grab |
| *Escherichia coli* (*E.coli*) (#/100ml) [c] | Weekly/Conditional | Grab |
| Temperature (ºC) | 2/Week | Grab |
| Total Nitrogen (mg/l) [d] | 1/Month | Grab |
| Total Phosphorus (mg/l) | 1/Month | Grab |
| Whole Effluent Toxicity (WET) ($TU_a$) | 1/Quarter | Grab |
| Metals (mg/l) [e] | 1/Year | Grab |
| Total Flow (MGD) | Daily | Calculated |
| Total Drain (MG) | Monthly | Calculated |
| ***Upstream – Sheyenne River*** | | |
| Ammonia as N (mg/l) - Upstream [f] | 3/Week | Usable Data Source |
| Receiving Stream Flow (cfs) [f] | 3/Week | Usable Data Source |
| Temperature (ºC) - Upstream [f] | 3/Week | Usable Data Source |
| pH (S.U.) - Upstream [f] | 3/Week | Usable Data Source |

**Notes:**

| | |
|---|---|
| a | Refer to **Appendix B** for definitions. |
| b | There shall be no floating oil or visible sheen present in the discharge. If floating oil or a visible sheen is detected in the discharge, the department shall be contacted, and a grab sample analyzed to ensure compliance with the concentration limitation. Any single analysis and/or measurement beyond this limitation shall be considered a violation of the conditions of the permit. |
| c | Monitoring for *E. coli* shall be in effect only during the recreational season, April 1 through October 31. |
| d | Total nitrogen is a combination of nitrate, nitrite, and Total Kjeldahl Nitrogen (TKN). |
| e | The following metals shall be sampled and analyzed for:<br><br>Antimony, Total — Arsenic, Total — Beryllium, Total — Cadmium, Total<br>Chromium, Total — Copper, Total — Lead, Total — Mercury, Total<br>Nickel, Total — Selenium, Total — Silver, Total — Thallium, Total<br>Zinc, Total — Cyanide, Total — Phenols, Total — Hardness as $CaCO_3$, Total<br><br>A total hardness as ($CaCO_3$) of the receiving stream shall be determined and reported every time the above parameters are tested. The hardness is used to calculate parameter criterion(s) according to the North Dakota State Water Quality Standards. This sample shall be collected upstream of the outfall. |
| f | Sample must be collected/recorded the same day as the ammonia sample. The flow, temperature, and pH may be obtained from the nearest United States Geological Survey (USGS) gauging station if applicable or can be sampled by the permittee. |

| **Stipulations:** |
| --- |
| If the upstream values are not collected, then the following values are to be used:<br><br>• pH: 8.35 S.U., based on the 90th percentile of collected upstream data,<br>• Temperature values used during the winter months can be extrapolated from available USGS data using best professional judgement,<br>• Permittee shall use the 90th percentile upstream ammonia value of 0.92 mg/l,<br>• If the upstream flow is not available, the 30B10 critical low flow value of 60.7 cfs must be used. |

## SURFACE WATER QUALITY-BASED EFFLUENT LIMITS

The North Dakota Standards of Water Quality for Waters of the State (NDAC Chapter 33.1-16-02.1), or Water Quality Standards (WQS), 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.

Currently, the stream reach of the receiving water body that the facility discharges to, ND-09020204-001-S_00 is listed as impaired on the *North Dakota 2020 – 2022 Integrated Section 305(b) Water Quality Assessment Report and Section 303(d) List of Waters Needing Total Maximum Daily Loads*. The Sheyenne River is listed as impaired under Section 303(d) for recreation due to fecal coliform. The impairment is for the Sheyenne River from it confluence with an unnamed tributary watershed downstream to its confluence with the Maple River. The TMDL priority level for this stream reach is listed as low. West Fargo monitors its effluent for *E. coli* instead of fecal coliform. The state water quality standards NDAC 33.1-16 removed the fecal coliform standard and replaced it with an *E. coli* standard. The proposed permit includes *E. coli* limits, which will be protective of the Sheyenne River and meet the water quality standards.

### 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 SectionChapter 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:

- 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 contains 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

**$BOD_5$**

The department reviewed the $BOD_5$ data and sampling frequency. Two (2) exceedances occurred for this parameter from Outfall 001. 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. This is based on 40 CFR 133.102, NDAC 33.1-16-01-14, and other similar permits (BPJ).

**TSS**

The department reviewed the TSS data and sampling frequency. No excursions occurred for this parameter from Outfall 001. The department proposes to continue with the 30 mg/l (30-day arithmetic average) and 45 mg/l (average weekly limit) limitations with an increase in sampling frequency to twice per week. This is based on 40 CFR 133.102, NDAC 33.1-16-01-14, and other similar permits (BPJ).

**pH**

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. This is based on other similar permits and NDAC 33.1-16-02.1.

**Oil and Grease Visual**

The department reviewed the Oil and Grease, visual data and sampling frequency. No excursions occurred for this parameter from either permitted outfall. The department proposes to continue visual checks for sheen with a sampling frequency of daily. This is based on other similar permits and NDAC 33.1-16-02.1.

**Oil and Grease**

The department reviewed the Oil and Grease data and sampling frequency. No excursions occurred for this parameter from either permitted outfall. The department proposes to continue with a 10 mg/l (daily maximum) limitation when a sheen is present with a sampling frequency of conditional daily. This is based on other similar permits and NDAC 33.1-16-02.1.

**Phosphorus and Nitrogen (Nutrients)**

No phosphorus and nitrogen discharge limits currently exist for this facility. However, nutrient monitoring is included in this permit. According to the North Dakota Nutrient Reduction Strategy for Surface Waters, West Fargo 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 cycle. This monitoring information will be evaluated as part of the nutrient evaluation of the Sheyenne River. The department proposes to continue monitoring for TN and TP with a monthly sample frequency, this is in line with nutrient reduction strategy and other similar permits.

**Ammonia as N**

Discharges from Outfall 001 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 three 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 West Fargo POTW discharged for a total of 123 days during the previous permit cycle. The longest discharge lasted for 21 days while the average discharge was 8 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 three times per week. In addition, receiving stream parameters of pH, temperature, ammonia, and flow shall be sampled at the same time effluent ammonia samples are collected.

***Escherichia coli* (*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 reviewed the *E. coli* data and sampling frequency. There was one (1) exceedance of the Daily Max for this parameter for Outfall 001 in June 2022. 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. This is based on NDAC 33.1-16-02.1 and BPJ.

**Metals**

The department conducted a metals analysis utilizing the maximum concentration for the identified metals and compared them to the WQS (**Appendix C**). The maximum concentration for mercury exceeded the WQS for Class IA streams. All mercury analysis were reported below the method detection level. The maximum concentration for selenium exceeded the chronic criteria, however, all analysis were below the method detection limit. The maximum concentration for cyanide exceeded the chronic criteria, human health criteria, and WQS for Class IA streams. The City of West Fargo submitted the required Mercury Minimization Plan during the previous permit cycle with no indications of problems existing within its service area. The city implements the Amalgam Rule (40 CFR Part 441) to ensure mercury minimization within its service area. The department proposes to continue with monitoring for these parameters with a sampling frequency of annually. This is based on other similar permits (BPJ) and NDAC 33.1-16-02.1.

**Whole Effluent Toxicity (WET)**

The permittee must conduct *Ceriodaphnia dubia* (Water Flea) and *Pimephales promelas* (Fathead Minnow) WET tests. Acute toxicity testing shall occur as follows: two fathead minnow and two *Ceriodaphnia* dubia WET tests shall be performed during the life of the proposed permit with a minimum of six months between tests. The initial test shall be performed on the first discharge of the new permit. 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 requirements of NDAC 33.1-16-02.1-08(a)(4), which states that "[a]ll waters of the state shall be:…Free from substances attributable to municipal, industrial, or other discharges or agricultural practices in concentrations or combinations which are toxic or harmful to humans, animals, plants, or resident aquatic biota. For surface water, this standard will be enforced in part through appropriate whole effluent toxicity requirements in North Dakota pollutant discharge elimination system permits." 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.

West Fargo did not have a WET failure during the current permit cycle.

**Chronic Toxicity Testing**

The WET reasonable potential analysis indicates no reasonable potential of chronic toxicity. Therefore, no chronic limits are imposed on this permit. The permittee is not required to monitor or test for chronic toxicity. The department will reevaluate during the next permit reissuance.

**Biosolids**

Currently, the department does not have the authority to regulate biosolids. Therefore, the permittee is required under the Direct Enforceability provisions of 40 CFR 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 determined the applicant's discharge is unlikely to contain chemicals regulated to protect human health. The department will re-evaluate this discharge for impacts to human health at the next permit reissuance.

**Test Procedures**

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

**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 intervals for submitting monthly, quarterly, and yearly DMRs (**Table 9**). 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 Publicly Owned Treatment Works.

**Table 9: DMR Submittal Requirements**

| Outfall | Report Designator | Report Type | Report Interval |
|---|---|---|---|
| 001 | A | Conventional and Non-Conventional Pollutants, Volume Information | Monthly |
| 001 | W | Whole Effluent Toxicity | Quarterly |
| 001 | M | Trace Elements - Metals | Annually |

## OTHER PERMIT CONDITIONS

**Mercury Pollutant Minimization Plan**

The current permit requires the permittee to implement a Mercury Pollutant Minimization Plan (MMP). The MMP is a best management practice (40 CFR 122.44(k)(4)) intended to minimize the amount of mercury that enters the POTW, consequently minimizing the amount of mercury that discharges from the POTW. The MMP is meant to control sources of mercury in the collection system as an alternative to analyzing mercury samples at Outfall 005 using EPA Method 1631, Revision E to a sufficiently sensitive report/detection level below the mercury water quality standard. The acute and chronic aquatic life water quality standards for mercury

are 1.7 and 0.012 micrograms/liter, respectively. The human health water quality standard for a Class IA stream is 0.050 micrograms/liter.

**Discharge Monitoring Report – Quality Assurance (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 Clean Water Act. Language was added to the proposed permit reiterating the permittees requirement to participate in and discontinue the DMR-QA Study.

**Notification of Decommissioning**

As the City of West Fargo continues to work towards decommissioning the lagoon treatment system and completing the connection to convey all of its effluent wastewater to the City of Fargo. The permittee shall notify the department in writing when any lagoon cell and/or outfall is decommissioned.

**Pretreatment**

The department has been delegated authority to administer the Industrial Pretreatment Program in 2005. With the delegation of authority, the department issues wastewater discharge permits for significant industrial users to POTWs that have not been delegated authority to issue their own industrial wastewater discharge permits. The requirements for approved pretreatment programs are contained in 40 CFR 403.

West Fargo's pretreatment program was approved in June 1999. With an approved pretreatment program, the permit shall contain general pretreatment language and requirements. In addition to the general limitations and requirements, the permittee shall sample and analyze the following:

**Table 10:** Additional Pretreatment Sampling Requirements.

| | **Minimum Frequency of Monitoring** |
|---|---|
| Table II Priority Pollutants 40 CFR 122 Appendix D | 1/2 Years |
| Table III Metals 40 CFR 122 Appendix D | 1/Year |

**Table 11**: Monitoring Requirements 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. |

**Sanitary Sewer Overflows (SSOs)**

To assure proper implementation relating to SSOs, POTWs may be required to implement special conditions in their NDPDES permit (see 40 CFR 122.41 and 122.42). These conditions apply to portions of the collection system for which the permittee has ownership or has operational control. Standard permit conditions that have particular application to SSOs and municipal sanitary sewer collection systems are discussed below.

Reporting, Record Keeping, and Public Notification for Unauthorized Sanitary Sewer Overflows.

1. Immediate Reporting

    A. The permittee shall report to the department any sanitary sewer overflow or any unauthorized sanitary sewer overflow that the permittee owns and/or operates. Any information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. At a minimum, the report shall identify:

        i. The location of the overflow;

        ii. The receiving water (if there is one);

        iii. The duration of the overflow; and

        iv. The estimated volume of the overflow.

    B. An overflow is any spill, release, or diversion of municipal sewage, including:

        i. An overflow that results in a discharge to water of the state; and

        ii. An overflow of wastewater, including a wastewater backup into a building (other than a backup caused solely by a blockage or other malfunction in a privately-owned sewer or building lateral), even if that overflow does not reach waters of the state.

2. Written Reports

    A. The permittee shall also provide a written report to the department for any overflow identified under paragraph 1 of this section within five (5) days from the time the permittee becomes aware of the circumstances. The written report shall contain a description of:

        i. The location of the overflow;

        ii. The receiving water (if there is one);

        iii. An estimate of the overflow volume;

iv. A description of the sewer-system component that caused the release (e.g. manhole, constructed overflow pipe, pipe break, etc.);

iv. The estimated date and time when the overflow began and stopped or will be stopped;

v. The cause or suspected cause of the overflow;

vi. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;

vii. If possible, the number of persons who came into contact with wastewater from the overflow; and

ix. Steps taken or planned to mitigate the impact(s) from the overflow and a schedule of major milestones for those steps.

B. The department may waive the written report on a case-by-case basis for reports under paragraph A. of this section if the verbal report required under Part II paragraph 1 has been received within twenty-four (24) hours.

3. Record Keeping

A. The permittee shall maintain all records in accordance with Part II(F) of the permit including:

i. Any report submitted under paragraph 2 of the special conditions above, and

ii. Any report, including work orders that are associated with the investigation of system problems related to an overflow that describes the steps taken or planned to reduce, eliminate, or prevent reoccurrence of the overflow, or documents system performance.

4. Public Notice

The department may require the permittee to notify specified parties of overflows that may endanger public health.

A. The permittee shall develop a plan describing how to notify, under various overflow (and unanticipated bypass and upset) scenarios, the public and other entities of overflows that may endanger health.

i. The plan shall identify all reportable overflows and the specific information reported to each entity receiving notification.

B. The permittee shall immediately notify the public, health agencies, and other affected entities (e.g. public water systems) of any sanitary sewer overflow that the permittee controls.

C. The permittee shall sample at the SSO location(s) and at any receiving water to identify and illustrate any potential impacts on the receiving stream. These data must be reported to any downstream users.

5. Proper Operation and Maintenance

A. The permittee shall implement proper operation and maintenance of the collection system. Upon request of the department, this may include the development and implementation of capacity, management, operation, and management (CMOM) programs.

**Beneficial Reuse**

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

**Irrigation**

Treated effluent may be used for irrigation provided it has gone through secondary or tertiary treatment and is suitable for irrigation. The effluent must be applied in a manner that allows complete infiltration and does not result in ponding or a discharge to waters of the state. Crop used for human consumption cannot be irrigated. Forage crops and pastureland may be irrigated but cannot be harvested or grazed for thirty days following application of treated effluent.

Treated effluent may be used to irrigate public properties if it meets the treatment levels in Table 10. Irrigation must be done during times when the public does not have access to the irrigated area to minimize human contact. Signs must be posted if the public has constant access to the area to keep the public aware. A higher level of disinfection is recommended when frequent contact is likely. Irrigation should be avoided within 100 feet of areas that have unlimited access, such as a private residence to minimize human contact. Irrigation also should be avoided within 300 feet of drinking water wells to minimize impact to the water source.

Irrigation water must be tested in accordance with Table 10 at a minimum; the results of more frequent testing may be used. Runoff from irrigated areas must be tested the same as a direct discharge.

**Table 8** - Irrigation Beneficial Reuse Limitations and Monitoring Requirements

| Parameter | Units | Secondary Treatment Level (Daily Maximum) | Monitoring Frequency | Sample Type | Basis |
|---|---|---|---|---|---|
| $BOD_5$ | mg/L | 30 | 1 per 14 days | Grab | BPJ |
| TSS | mg/L | 45 | 1 per 14 days | Grab | BPJ |
| *E. Coli* | #/100 mL | 126 | 1/Week | Grab | BPJ |

**Construction**

Treated effluent that has gone through secondary treatment may be used for construction purposes (e.g., soil compaction, dust suppression, aggregate washing). Treated effluent must be tested and meet the treatment levels in Table 10. The department considers sample results up to two weeks old to be valid. Runoff from construction areas must be tested the same as a direct discharge.

**Table 9** - Construction Beneficial Reuse Limitations and Monitoring Requirements

| Parameter | Units | Secondary Treatment Level (Daily Maximum) | Monitoring Frequency | Sample Type | Basis |
|---|---|---|---|---|---|
| $BOD_5$ | mg/L | 30 | 1/Month | Grab | BPJ |
| TSS | mg/L | 100 | 1/Month | Grab | BPJ |
| *E. Coli* | #/100 mL | 126 | 1/Week | Grab | BPJ |

While 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 include:

- Minimize worker and public contact with treated wastewater.
- Provide a higher level of disinfection where frequent worker contact is likely such as achieving *E. coli* counts less than 14/100 mL
- Ensure treated wastewater quality is suitable for construction purposes.
- Apply treated wastewater in a manner that does not result in runoff or ponding.

**Other Uses as Approved**

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

## PERMIT ISSUANCE PROCEDURES

**Permit Actions**

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

**Proposed Permit Issuance**

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

## APPENDIX A – PUBLIC INVOLVEMENT INFORMATION

The department proposes to reissue a permit to the **City of West Fargo.** 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 14, 2024,** in the **Fargo Forum** to inform the public and to invite comment(s) 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

The primary author of this permit and fact sheet is Montana Kruske.

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

Public Notice Date: 8/14/2024 Public Notice Number: ND-2024-024

**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: 1/26/2024 Application Number: ND0022616

Applicant Name: West Fargo City Of
Mailing Address: 810 12th Ave NW, West Fargo, ND 58078
Telephone Number: 701.433.5411

Proposed Permit Expiration Date: 9/30/2029

**Facility Description**
The reapplication is for five (5) wastewater stabilization ponds servicing the City of West Fargo. The City of West Fargo has one permitted outfall (001) and two (2) inactive outfall (002 and 003) that do not discharge. The discharge facility is located in the SE 1/4, Section 36, Township 140N, Range 50W and in the SW 1/4, Section 31, Township 140N, Range 49W of Cass County. Discharges from the permitted outfall will be to the Sheyenne River, a Class IA stream, via a drainage ditch #21.

**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 13, 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.

## APPENDIX B – DEFINITIONS

**DEFINITIONS Standard Permit** BP 2019.05.29

1. "**Act**" means the Clean Water Act.

2. "**Average monthly discharge limitation**" means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

3. "**Average weekly discharge limitation**" means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

4. "**Best management practices**" (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage areas.

5. "**Bypass**" means the intentional diversion of waste streams from any portion of a treatment facility.

6. "**Composite**" sample means a combination of at least 4 discrete sample aliquots, collected over periodic intervals from the same location, during the operating hours of a facility not to exceed a 24-hour period. The sample aliquots must be collected and stored in accordance with procedures prescribed in the most recent edition of Standard Methods for the Examination of Water and Wastewater.

7. "**Daily discharge**" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

8. "**Department**" means the North Dakota Department of Environmental Quality, Division of Water Quality.

9. "**DMR**" means discharge monitoring report.

10. "**EPA**" means the United States Environmental Protection Agency.

11. "**Geometric mean**" means the $n^{th}$ root of a product of n factors, or the antilogarithm of the arithmetic mean of the logarithms of the individual sample values.

12. "**Grab**" for monitoring requirements, means a single "dip and take" sample collected at a representative point in the discharge stream.

13. "**Instantaneous**" for monitoring requirements, means a single reading, observation, or measurement. If more than one sample is taken during any calendar day, each result obtained shall be considered.

14. "**Maximum daily discharge limitation**" means the highest allowable "daily discharge."

15. "**Salmonid**" means of, belonging to, or characteristic of the family Salmonidae, which includes the salmon, trout, and whitefish.

16. "**Sanitary Sewer Overflows (SSO)**" means untreated or partially treated sewage overflows from a sanitary sewer collection system.

17. "**Severe property damage**" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

18. "**Total drain**" means the total volume of effluent discharged.

19. "**Upset**" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

**DEFINITIONS Whole Effluent Toxicity (WET)** BP 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.

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 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.

## APPENDIX C – DATA AND TECHNICAL CALCULATIONS

The North Dakota Department of Environmental Quality reviewed the NDPDES permit application, DMR information, applicable water quality standards for class IA streams, and available stream data to determine the appropriate requirements to be placed in the permit.

**Critical Low Flow:**

The department obtained stream flow data from USGS Gauge Station 05059500 on the Sheyenne River at West Fargo from January 1, 2004, through May 8, 2024. Below are the critical low flows calculated by DFlow (3.1b).

| | | | | | |
|---|---|---|---|---|---|
| DFLOW 1B3 (ACUTE) | 44.9 | CFS | DFLOW 1Q10 (ACUTE) | 52.1 | CFS |
| DFLOW 4B3 (CHRONIC) | 52.9 | CFS | DFLOW 7Q10 (CHRONIC) | 59.0 | CFS |
| DFLOW 30B10 (AMMONIA) | 60.7 | CFS | | | |

## Reasonable Potential

## Ammonia

Outfall 001:

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

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

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

| | | | | |
|---|---|---|---|---|
| Facility Name: | City of West Fargo | Receiving Stream: | Sheyenne River | |
| NDPDES Permit: | ND0022616 | 1Q10 Acute | 52.1 | cfs |
| Daily Maximum Flow (mgd): | 8.00 | 1B3 Acute | 44.9 | cfs |
| Daily Average Flow (mgd): | 6.56 | 7Q10 Chronic | 59 | cfs |
| Stream Design Mixing: | 10.0% | 4B3 Chronic | 52.9 | cfs |
| Statistical Multiplier: | 1.6 | | | |
| Upstream Concentration: | 9.9200 | mg/l | **Parameter:** | |
| Effluent Concetration (max): | 18.5000 | mg/l | **Ammonia as N** | |

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

**Outfall: 001**

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 | 8.00 | mgd | Qs - 1Q10 | 33.66 | mgd |
| Qe - Chronic | 6.56 | mgd | Qs - 1B3 | 29.01 | mgd |
| Ce | 18.5000 | mg/l | Qs - 7Q10 | 38.11 | mgd |
| Cs | 9.9200 | mg/l | Qs - 4B3 | 34.17 | mgd |
| Stat | 1.60 | | | | |
| pmf | 10.0% | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Acute RP | | | Chronic RP | | |
| RWC - 1Q10 | 23.7723 | mg/l | RWC - 7Q10 | 22.3678 | mg/l |
| RWC - 1B3 | 24.3633 | mg/l | RWC - 4B3 | 22.8594 | mg/l |

| | | | |
|---|---|---|---|
| Criterion Maximum Concentration (CMC) | | Criterion Continuous Concentration (CCC) | |
| Acute Criterion | 1.3773 mg/l | Chronic Criterion | 0.8419 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.

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: | City of West Fargo | | | | Enter the upstream ammonia in mg/l: | | | | | | 90th % | 0.91 |
| Stream: | Sheyenne River | | | | Enter the receiving stream pH: | | | | | | 90th % | 8.35 |
| Enter receiving stream flow (CFS): | | | 61 | | Enter the receiving stream temperature in Deg C: | 76 F | | | | | 90th % | 24.42 |
| Mixing Zone Percentage/CFS: | | 10% | 6.1 | | Enter the effluent drain rate (MGD): | | | | | | 90th % | 7.50 |
| Enter increments to calculate stream flow: | | | 0.1 | | Enter increments to calculate drain rate: | | | | | | | 0.1 |
| | | | | | | | | | Mixing Zone Dilution Rate: | | | 1.5 |
| | | | | | | | | | Overall Dilution Rate: | | | 6.2 |
| Maximum allowable ammonia in mg/l | | | | | | | | | | | | |
| | Water Quality Standard: | | | 1.3773 | Water Quality Standard: | | | 0.8419 | Water Quality Standard: | | | 0.3368 |
| | 1hr Acute (Daily Maximum) | | | | Intermittent 4 Day Chronic | | | | Continuous 30 Day Chronic | | | |
| DRAIN MGD → | 7.40 | 7.50 | 7.60 | 7.70 | 7.40 | 7.50 | 7.60 | 7.70 | 7.40 | 7.50 | 7.60 | 7.70 |
| STREAM FLOW in CFS | | | | | | | | | | | | |
| 5.67 | 1.61 | 1.60 | 1.60 | 1.60 | 0.81 | 0.81 | 0.81 | 0.81 | 0.05 | 0.06 | 0.06 | 0.06 |
| 5.77 | 1.61 | 1.61 | 1.61 | 1.60 | 0.81 | 0.81 | 0.81 | 0.81 | 0.05 | 0.05 | 0.05 | 0.06 |
| 5.87 | 1.62 | 1.61 | 1.61 | 1.61 | 0.81 | 0.81 | 0.81 | 0.81 | 0.04 | 0.05 | 0.05 | 0.05 |
| 5.97 | 1.62 | 1.62 | 1.61 | 1.61 | 0.81 | 0.81 | 0.81 | 0.81 | 0.04 | 0.04 | 0.04 | 0.05 |
| 6.07 | 1.62 | **1.62** | 1.62 | 1.61 | 0.80 | **0.81** | 0.81 | 0.81 | 0.03 | **0.04** | 0.04 | 0.04 |
| 6.17 | 1.63 | 1.62 | 1.62 | 1.62 | 0.80 | 0.80 | 0.81 | 0.81 | 0.03 | 0.03 | 0.03 | 0.04 |
| 6.27 | 1.63 | 1.63 | 1.63 | 1.62 | 0.80 | 0.80 | 0.80 | 0.81 | 0.02 | 0.03 | 0.03 | 0.03 |
| 6.37 | 1.64 | 1.63 | 1.63 | 1.63 | 0.80 | 0.80 | 0.80 | 0.80 | 0.02 | 0.02 | 0.03 | 0.03 |
| 6.47 | 1.64 | 1.64 | 1.63 | 1.63 | 0.80 | 0.80 | 0.80 | 0.80 | 0.01 | 0.02 | 0.02 | 0.02 |

**Whole Effluent Toxicity (WET)**

Outfall 001:

The reasonable potential determination for WET is provided below. The determination is conducted utilizing the Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991 (TSD; March 1991). The coefficient of variation used was 0.1.

## Whole Effluent Toxicity (WET)
## Resonable Potential (RP)
## Determination

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

| | | | | |
|---|---|---|---|---|
| Facility Name: | City of West Fargo | Receiving Stream: | Sheyenne River | |
| NDPDES Permit: | ND0022616 | 1Q10 Acute | 52.1 | cfs |
| Effluent Flow (mgd): | 8.000 | 1B3 Acute | 44.9 | cfs |
| Stream Design Mixing: | 10.0% | 7Q10 Chronic | 59 | cfs |
| WET TUa (max): | 0.99 | 4B3 Chronic | 52.9 | cfs |
| ACR: | | | | |
| Statistical Multiplier: | 1.1 | | | |

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

**Outfall:** 001

RWC = Receiving water concentration, the resultant magnitude of toxicity in the receiving water after effluent discharge in TUs (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 Toxicity Unit (TU) reported. (Use 1 if no WET data is available.)
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)

| | | | | | |
|---|---|---|---|---|---|
| Qe | 8.000 | mgd | Qs - Acute | 33.657 | mgd |
| Ce | 0.99 | TU | Qs - Acute 1B3 | 29.005 | mgd |
| pmf | 10.0% | | Qs - Chronic | 38.114 | mgd |
| Stat | 1.1 | | Qs - Chronic 4B3 | 34.173 | mgd |
| ACR | 0.00 | | | | |
| | | | | | |
| Acute RP | | | Chronic RP | | |
| RWC - 1Q10 | 0.77 | TUa | RWC - 7Q10 | 0.00 | TUc |
| RWC - 1B3 | 0.80 | TUa | RWC - 4B3 | 0.00 | TUc |
| | | | | | |
| Criterion Maximum Concentration (CMC) | | | Criterion Continuous Concentration (CCC) | | |
| Acute Criterion | 0.3 | TUa | Chronic Criterion | 1.0 | TUc |

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** | **NO** |
| **1B3 Acute** | **YES** | **4B3 Chronic** | **NO** |

The North Dakota State Water Quality Standards (WQS) Chapter 33-16-02.1 use biologically based design flows to determine Whole Effluent Toxicity (WET) limits for acute and chronic endpoints.

**Metals Analysis**

Outfall 001:

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

The NDDEQ has developed the following tool to evaluate a single sample result to the North Dakota Standards of Quality for Waters of the State. A detailed explanation of the calculations and limits for the parameters listed can be found in ch 33.1-16-02.1-9, Table 1.

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

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

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Facility Name | | | City of West Fargo | | | | Print Date: | 8/1/2024 | | |
| Location | | | Outfall 001 | | | | Below are the current or calculated acute, chronic and human health standards based on the data | | | |
| Enter Grains/Gallon or | | | | | 0 | | | | | |
| Hardness - Total (CaCO3) mg/l | | | | | 699 | | | | | |
| Safety Factor(multiplier): | | | | | | | | | | |
| Enter Concentration Values | | | | | | | µg/l | µg/l | µg/l | µg/l |
| Parameter | | Detect | MDL/DL /RL | mg/l | µg/l | µg/l | Acute | Chronic | Human Health Class I ,IA,II | Human Health Class III |
| **Antimony** | | < | 0.002 | 0.002 | | **2** | | | 5.6 | 640 |
| **Arsenic** | | | 0.002 | 0.0038 | | **3.8** | 340 | 150 | 10 | |
| **Beryllium** | | < | 0.0005 | 0.0005 | | **0.5** | | | 4 | |
| **Cadmium** | HD | < | 0.0001 | 0.0001 | | **0.1** | 12.7 | 3.73 | 5.00 | |
| **Chromium - Total** | | < | 0.002 | 0.002 | | **2** | | | 100 | |
| Chromium (III) | HD | | | | | 0 | 8864 | 424 | | |
| Chromium (VI) | | | | | | 0 | 16 | 11 | | |
| **Copper** | HD | | 0.002 | 0.005 | | **5** | 87 | 49.1 | 1000.0 | |
| **Lead** | HD | < | 0.0005 | 0.0005 | | **0.5** | 970 | 37.8 | 15.0 | |
| **Mercury** | | < | 0.0002 | 0.0002 | | 0.2 | 1.7 | 0.88 | **0.05** | ***0.051*** |
| Molybdenum - Total | | | | | | 0 | | | | |
| **Nickel** | HD | | 0.002 | 0.0109 | | **10.9** | 2431 | 270.3 | 100.0 | 4200 |
| **Selenium** | | < | 0.005 | 0.005 | | **5** | 20 | **5** | 50 | |
| **Silver** | HD | < | 0.0005 | 0.0005 | | **0.5** | 107 | | | |
| **Thallium** | | < | 0.0001 | 0.0001 | | **0.1** | | | 0.24 | 0.47 |
| **Zinc** | HD | < | 0.05 | 0.05 | | **50** | 622 | 622.4 | 7400.0 | 26000 |
| **Cyanide - Total** | | | 0.007 | 0.013 | | **13** | 22 | **5.2** | **4** | 400 |
| **Phenols** | | | 15 | | 16.8 | **16.8** | | 300 | 4000 | 300000 |

**Comments:**
The maximum values reported for each parameter from the fourterrn (14) discharges that occurred from October 1, 2019 - April 30, 2024 were used. Non-detects were entered at the detection limit value.

**Antimony:** All sample results were below method detection level. No further analysis was conducted.
**Beryllium:** All sample results were below method detection level. No further analysis was conducted.
**Cadmium:** All sample results were below method detection level. No further analysis was conducted.
**Chromium - Total:** All sample results were below method detection level. No further analysis was conducted.
**Lead:** All sample results were below method detection level. No further analysis was conducted.
**Mercury:** All sample results were below method detection level. No further analysis was conducted.
**Selenium:** All sample results were below method detection level. No further analysis was conducted.
**Silver:** All sample results were below method detection level. No further analysis was conducted.
**Thallium:** All sample results were below method detection level. No further analysis was conducted.
**Zinc:** All sample results were below method detection level. No further analysis was conducted.

## APPENDIX D – RESPONSE TO COMMENTS

Comments received during the public notice period will be placed here.

Permit No: ND0022616
Effective Date: October 1, 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 West Fargo
West Fargo Publicly Owned Treatment Works (POTW)
West Fargo, ND

is authorized to discharge from its wastewater treatment system

to the Sheyenne River, a Class IA Stream, via Drainage Ditch # 21

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

This page is intentionally left blank.

**TABLE OF CONTENTS**

**DEFINITIONS Standard Permit BP 2019.05.29** ..... **5**
**DEFINITIONS Whole Effluent Toxicity (WET) BP 2023.01.05** ..... **6**
**OUTFALL DESCRIPTION** ..... **7**
**PERMIT SUBMITTALS SUMMARY** ..... **7**
**SPECIAL CONDITIONS** ..... **8**
**Mercury Pollutant Minimization Plan** ..... **8**
**Discharge Monitoring Report – Quality Assurance (DMR-QA) Study** ..... **8**
**Notification of Decommissioning** ..... **8**
**Sanitary Sewer Overflows (SSOs)** ..... 9
**I. LIMITATIONS AND MONITORING REQUIREMENTS** ..... **11**
**A. Discharge Authorization** ..... 11
**B. Effluent Limitations and Monitoring** ..... 11
**C. Whole Effluent Toxicity (WET) Requirements** BP 2023.10.16 ..... 15
**II. MONITORING, RECORDING, AND REPORTING REQUIREMENTS BP 2021.09.09** ..... **18**
**A. Representative Sampling (Routine and Non-Routine Discharges)** ..... 18
**B. Test Procedures** ..... 18
**C. Recording of Results** ..... 18
**D. Additional Monitoring** ..... 18
**E. Reporting of Monitoring Results** ..... 19
**F. Records Retention** ..... 20
**III. COMPLIANCE RESPONSIBILITIES** ..... **20**
**A. Duty to Comply** ..... 20
**B. Proper Operation and Maintenance** ..... 20
**C. Planned Changes** ..... 20
**D. Duty to Provide Information** ..... 20
**E. Signatory Requirements** ..... 20
**F. Twenty-four Hour Notice of Noncompliance Reporting** ..... 21
**G. Bypass of Treatment Facilities** ..... 21
**H. Upset Conditions** ..... 22
**I. Duty to Mitigate** ..... 22
**J. Removed Materials** ..... 22
**K. Duty to Reapply** ..... 22
**IV. GENERAL PROVISIONS** ..... **23**
**A. Inspection and Entry** ..... 23
**B. Availability of Reports** ..... 23
**C. Transfers** ..... 23
**D. New Limitations or Prohibitions** ..... 23
**E. Permit Actions** ..... 23
**F. Need to Halt or Reduce Activity Not a Defense** ..... 23
**G. State Laws** ..... 23
**H. Oil and Hazardous Substance Liability** ..... 23
**I. Property Rights** ..... 23
**J. Severability** ..... 24
**V. INDUSTRIAL PRETREATMENT PROGRAM BP 2009.09.10** ..... **24**
**A. Standard Requirements** ..... 24
**B. Local Limits** ..... 25

**C. Sampling and Reporting Requirements** ..... 25
**D. Sludge Sampling and Reporting Requirements** ..... 26
**E. Sample Analysis and Sampling Procedure** ..... 27
**F. Annual Reporting Requirements** ..... 27
**G. Pollutant Restrictions** ..... 28
**H. Notification Requirements** ..... 29
**I. Enforcement Actions** ..... 29
**J. Enforcement Authority** ..... 29
**VI. BENEFICIAL REUSES BP 2015.09.03 ..... 29**
**A. Irrigation** ..... 29
**B. Construction** ..... 30
**C. Other Uses as Approved** ..... 31

**DEFINITIONS Standard Permit** BP 2019.05.29

1. "**Act**" means the Clean Water Act.

2. "**Average monthly discharge limitation**" means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

3. "**Average weekly discharge limitation**" means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

4. "**Best management practices**" (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage areas.

5. "**Bypass**" means the intentional diversion of waste streams from any portion of a treatment facility.

6. "**Composite**" sample means a combination of at least 4 discrete sample aliquots, collected over periodic intervals from the same location, during the operating hours of a facility not to exceed a 24-hour period. The sample aliquots must be collected and stored in accordance with procedures prescribed in the most recent edition of Standard Methods for the Examination of Water and Wastewater.

7. "**Daily discharge**" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

8. "**Department**" means the North Dakota Department of Environmental Quality, Division of Water Quality.

9. "**DMR**" means discharge monitoring report.

10. "**EPA**" means the United States Environmental Protection Agency.

11. "**Geometric mean**" means the $n^{th}$ root of a product of n factors, or the antilogarithm of the arithmetic mean of the logarithms of the individual sample values.

12. "**Grab**" for monitoring requirements, means a single "dip and take" sample collected at a representative point in the discharge stream.

13. "**Instantaneous**" for monitoring requirements, means a single reading, observation, or measurement. If more than one sample is taken during any calendar day, each result obtained shall be considered.

14. "**Maximum daily discharge limitation**" means the highest allowable "daily discharge."

15. "**Salmonid**" means of, belonging to, or characteristic of the family Salmonidae, which includes the salmon, trout, and whitefish.

16. "**Sanitary Sewer Overflows (SSO)**" means untreated or partially treated sewage overflows from a sanitary sewer collection system.

17. "**Severe property damage**" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

18. "**Total drain**" means the total volume of effluent discharged.

19. "**Upset**" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

**DEFINITIONS Whole Effluent Toxicity (WET)** BP 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.

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 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**

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

| **Outfall 001. Active. Final.** | | | |
|---|---|---|---|
| Latitude: 46.902222 | Longitude: -96.919444 | County: Cass | |
| Township: 140N | Range: 49W | Section: 31 | Quarter: SE/NW |
| Receiving Stream: Sheyenne River via Drain #21 | | Classification: Class III | |
| Outfall Description: Any discharge from this point is from any Cell in the system via Cell 2 or 7 to the Sheyenne River – a Class IA stream - via Drain #21, a Class III stream. | | | |

**PERMIT SUBMITTALS SUMMARY**

| Coverage Point | Submittal | Monitoring Period | Submittal Frequency | First Submittal Date |
|---|---|---|---|---|
| 001A | Discharge Monitoring Report | 1/Month | 1/Month | November 30, 2024 |
| 001W | Discharge Monitoring Report | 1/Quarter | 1/Quarter | January 31, 2025 |
| 001M | Discharge Monitoring Report | 1/Year | 1/Year | October 31, 2025 |
| IPP | Pretreatment Annual Report | Not Applicable | 1/Year | March 28, 2025 |
| MMP | Mercury Pollutant Minimization Plan | Not Applicable | 1/Permit Cycle | April 30, 2025 |
| Application Renewal | NPDES Application Renewal | Not Applicable | 1/Permit Cycle | March 31, 2029 |
| **Notes:** | | | | |
| The A, M, and W are pollutant designators referring to Conventional (A), Metals (M), and Whole Effluent Toxicity (W). | | | | |

## SPECIAL CONDITIONS

### Mercury Pollutant Minimization Plan

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

The permittee shall submit the MMP to the department by **April 30, 2025**. At a minimum, the MMP must include the following:

A. A summary of mercury influent and effluent concentrations and biosolids monitoring data using the most recent five years of monitoring data, if available.

B. Identification of existing and potential sources of mercury concentrations and/or loading to the Publicly Owned Treatment Works (POTW). Residential, institutional, municipal, and commercial sources – such as dental clinics, hospitals, medical clinics, nursing homes, schools, and industries – that have the potential to contribute mercury to the POTW should be considered. Other influent sources of mercury, such as stormwater inputs, ground water inflow and infiltration (I/I), and waste streams and sewer tributaries to the POTW also should be considered.

C. An evaluation of past and present POTW operations that maximize mercury removal.

D. A summary of mercury reduction activities implemented during the last five years.

E. A plan to implement mercury management and reduction measures during the next five years.

The permittee shall sample effluent for dissolved mercury throughout the life of this permit in addition to the sampling required by this permit. Effluent samples shall be collected annually from Outfall 001. Effluent must be sampled prior to discharging from the POTW and before entering waters of the state. The sampling method shall be a concurrent grab sample. Dissolved mercury shall be analyzed using an EPA approved mercury analysis method. Samples may be taken at any time during the calendar year. A trip blank shall be collected and analyzed for each sampling event. Sample results shall be reported on a custom supplemental form provided by the department. The custom supplemental form must be submitted with the DMR for the month in which the sample was collected.

### Discharge Monitoring Report – Quality Assurance (DMR-QA) Study

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.

### Notification of Decommissioning

As the City of West Fargo continues to work towards decommissioning the lagoon treatment system and completing the connection to convey all of its effluent wastewater to the City of Fargo. The permittee shall notify the department in writing when any lagoon cell and/or outfall is decommissioned.

**Sanitary Sewer Overflows (SSOs)**

These conditions apply to portions of the collection system for which the permittee has ownership or has operational control. SSOs that occur must be reported to the department in accordance with 40 CFR 122.41(6), Part III(G) of the permit, and as specified in under the Reporting, Record Keeping, and Public Notification for Unauthorized Sanitary Serwer Overflow Section outlined below:

Reporting, Record Keeping, and Public Notification for Unauthorized Sanitary Sewer Overflows.

1. Immediate Reporting

   A. The permittee shall report to the department any sanitary sewer overflow or any unauthorized sanitary sewer overflow that the permittee owns and/or operates. Any information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. At a minimum, the report shall identify:

      i. The location of the overflow;

      ii. The receiving water (if there is one);

      iii. The duration of the overflow; and

      iv. The estimated volume of the overflow.

   B. An overflow is any spill, release, or diversion of municipal sewage, including:

      i. An overflow that results in a discharge to water of the state; and

      ii. An overflow of wastewater, including a wastewater backup into a building (other than a backup caused solely by a blockage or other malfunction in a privately-owned sewer or building lateral), even if that overflow does not reach waters of the state.

2. Written Reports

A. The permittee shall also provide a written report to the department for any overflow identified under paragraph 1 of this section within five (5) days from the time the permittee becomes aware of the circumstances. The written report shall contain a description of:

   i. The location of the overflow;

   ii. The receiving water (if there is one);

   iii. An estimate of the overflow volume;

   iv. A description of the sewer-system component that caused the release (e.g. manhole, constructed overflow pipe, pipe break, etc.);

   v. The estimated date and time when the overflow began and stopped or will be stopped;

   vi. The cause or suspected cause of the overflow;

   vii. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;

viii. If possible, the number of persons who came into contact with wastewater from the overflow; and

ix. Steps taken or planned to mitigate the impact(s) from the overflow and a schedule of major milestones for those steps.

B. The department may waive the written report on a case-by-case basis for reports under paragraph A. of this section if the verbal report required under Part II paragraph 1 has been received within twenty-four (24) hours.

3. Record Keeping

A. The permittee shall maintain all records in accordance with Part II(F) of the permit including:

i. Any report submitted under paragraph 2 of the special conditions above, and

ii. Any report, including work orders that are associated with the investigation of system problems related to an overflow that describes the steps taken or planned to reduce, eliminate, or prevent reoccurrence of the overflow, or documents system performance.

4. Public Notice

The department may require the permittee to notify specified parties of overflows that may endanger public health.

i. The permittee shall develop a plan describing how to notify, under various overflow (and unanticipated bypass and upset) scenarios, the public and other entities of overflows that may endanger health.

i. The plan shall identify all reportable overflows and the specific information reported to each entity receiving notification.

ii. The permittee shall immediately notify the public, health agencies, and other affected entities (e.g. public water systems) of any sanitary sewer overflow that the permittee controls.

iii. The permittee shall sample at the SSO location(s) and at any receiving water to identify and illustrate any potential impacts on the receiving stream. These data must be reported to any downstream users.

5. Proper Operation and Maintenance

A. The permittee shall implement proper operation and maintenance of the collection system in accordance with Part III(B) and (l) of this permit. Upon request of the department, this may include the development and implementation of capacity, management, operation, and management (CMOM) programs.

# 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 IA Stream, via Drain #21.**

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

## B. Effluent Limitations and Monitoring

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

A pre-discharge sample shall be taken prior to the start of any discharge from Outfall 001. This analysis shall be reported to the department. A pre-discharge sample shall be tested for $BOD_5$, TSS, pH, Temperature, *E. coli*., and Ammonia as N. This pre-discharge sample shall represent the first week discharge sample. An additional sample of the actual discharge shall be taken and analyzed on a weekly basis for each additional week of the discharge.

**Table 1:** Proposed Effluent Limitations and Self-Monitoring Requirements for **Outfall 001**

| Parameter | Effluent Limitations | | | Monitoring Requirements | |
|---|---|---|---|---|---|
| | Avg. Monthly Limit | Avg. Weekly Limit | Daily Maximum Limit | Sample Frequency | Sample Type |
| $BOD_5$ (mg/l) | 25 | 45 | * | 2/Week | Grab |
| TSS (mg/l) | 30 | 45 | * | 2/Week | Grab |
| pH (S.U.) [a] | Shall be between 6.5 to 9.0 S.U. [a] | | | 2/Week | Grab |
| Temperature (°C) | * | * | * | 2/Week | Grab |
| *E. coli* (#/100 ml) [b] | 126 | * | 409 | Weekly/Conditional [b] | Grab |
| Ammonia as N (mg/l) | Refer to Ammonia Table (**Table 2**) | | | 3/Week | Grab |
| Oil & Grease Visual [c] | * | * | * | Daily | Visual |
| Oil & Grease (mg/l) [c] | * | * | 10.0 mg/l | Conditional/Daily [c] | Grab |
| Nitrogen, Total (mg/l) [d] | Monitor Only | | | Monthly | Grab |
| Phosphorus, Total (mg/l) | Monitor Only | | | Monthly | Grab |
| Effluent Flow (MGD) | Report Monthly Average | * | Report Daily Max | Daily | Calculated |
| Total Drain (MG) | * | * | Report Monthly Total | Monthly | Calculated |
| Whole Effluent Toxicity ($TU_a$) | Refer to Part I(C) | | | 1/Quarter | Grab |
| Metals (mg/l) [e] | Refer to Part V(F) | | | 1/Year | Grab |
| ***Sheyenne River Parameters*** | | | | | |
| Ammonia as N (mg/l) - Upstream [f] | * | * | * | 3/Week | Usable Data Source |
| Receiving Stream Flow (cfs) [f] | * | * | * | 3/Week | Usable Data Source |
| Temperature (ºC) - Upstream [f] | * | * | * | 3/Week | Usable Data Source |
| pH (S.U.) - Upstream [f] | * | * | * | 3/Week | Usable Data Source |

**Notes:**

| | |
|---|---|
| * | This parameter is not limited. However, the department may impose limitations based on sample history and to protect the receiving waters. |
| a | The pH, an instantaneous limitation, shall be between 6.0 S.U. and 9.0 S.U. |

**Table 1:** Proposed Effluent Limitations and Self-Monitoring Requirements for **Outfall 001**

| Parameter | | Effluent Limitations | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|
| | | Avg. Monthly Limit | Avg. Weekly Limit | Daily Maximum Limit | Sample Frequency | Sample Type |
| b | *E. coli* shall not exceed 126 organisms per 100 ml as a geometric mean of the representative samples collected during any 30-day consecutive period, nor shall samples exceed 409 organisms per 100 ml for any one day.<br><br>The limit for *E. coli* shall only apply during the recreational season, April 1 through October 31. Averages for *E. coli* shall be determined as a geometric mean. | | | | | |
| c | There shall be no floating oil or visible sheen present in the discharge. If floating oil or a visible sheen is detected in the discharge, the department shall be contacted, and a grab sample analyzed to ensure compliance with the concentration limitation. Any single analysis and/or measurement beyond this limitation shall be considered a violation of the conditions of the permit. | | | | | |
| d | Total nitrogen is a combination of nitrate, nitrite, and Total Kjeldahl Nitrogen (TKN). | | | | | |
| e | The following metals shall be sampled and analyzed for:<br><br>Antimony, Total; Arsenic, Total; Beryllium, Total; Cadmium, Total<br>Chromium, Total; Copper, Total; Lead, Total; Mercury, Total<br>Nickel, Total; Selenium, Total; Silver, Total; Thallium, Total<br>Zinc, Total; Cyanide, Total; Phenols, Total; Hardness as $CaCO_3$, Total<br><br>A total hardness as ($CaCO_3$) of the receiving stream shall be determined and reported every time the above parameters are tested. The hardness is used to calculate parameter criterion(s) according to the North Dakota State Water Quality Standards. This sample shall be collected upstream of the outfall. | | | | | |
| f | Sample must be collected/recorded the same day as the ammonia sample. The flow, temperature, and pH may be obtained from the nearest United States Geological Survey (USGS) gauging station if applicable or can be sampled by the permittee. | | | | | |

**Stipulations:**

Dates of discharge and number of exceedances shall be included in the Discharge Monitoring Reports.

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

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 floating oil or a visible sheen is observed at the discharge point, the department shall be contacted, and grab samples analyzed for oil and grease.

If the upstream values are not collected, then the following values are to be used:

- pH: 8.35 S.U., based on the 90th percentile of collected upstream data,
- Temperature values used during the winter months can be extrapolated from available USGS data using best professional judgement,
- Permittee shall use the 90th percentile upstream ammonia value of 0.92 mg/l,
- If the upstream flow is not available, the 30B10 critical low flow value of 60.7 cfs must be used.

**Table 2:** Ammonia as N Effluent Limitations Calculations for Outfall 001

| Parameter | Avg. Monthly Limit [a] | Avg. Weekly Limit | Daily Maximum Limit |
|---|---|---|---|
| Ammonia (mg/l) [b] | † | * | ‡ |
| **Sheyenne River Parameters** | | | |
| Stream Flow Upstream (cfs) [c] | * | * | * |
| Temperature Upstream (°C) [c] | * | * | * |
| pH Upstream (S.U.) [c] | * | * | * |
| Ammonia as N upstream (mg/l) | * | * | * |

**Notes:**

| | |
|---|---|
| * | This parameter is not limited. |
| a | When discharges are 7 days or less, the 4-day average concentration limitation shall apply. When discharges are more than 7 days, the 30-day average concentration limitation shall apply. |
| b | 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. |
| c | Sample must be collected/recorded the same day as the ammonia sample. The flow, temperature, and pH may be obtained from the nearest United States Geological Survey (USGS) gauging station 05059500 at West Fargo, North Dakota or can be sampled by the permittee. If the permittee cannot feasibly sample flow, temperature, and pH, effluent information shall be used when calculating ammonia and no mixing will be allowed. |
| † | Chronic Standard (Average Monthly Limit)<br><br>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:<br><br>$$2.5 \times 0.8876 \times \left(\frac{0.0278}{1+10^{7.688-pH}} + \frac{1.1994}{1+10^{pH-7.688}}\right) \times \left(2.126 \times 10^{0.028\times(20-MAX(T,7))}\right)$$<br><br>Receiving stream pH and temperature is used for the calculation if applicable, otherwise effluent pH and temperature is used for the calculation. |
| ‡ | Acute Standard (Daily Maximum Limit)<br><br>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:<br><br>$$0.7249 \times \left(\frac{0.0114}{1+10^{7.204-pH}} + \frac{1.6181}{1+10^{pH-7.204}}\right) \times MIN\left(51.93, 23.12 \times 10^{0.036\times(20-T)}\right)$$<br><br>where *Oncorhynchus* are absent<br><br>Receiving stream pH and temperature is used for the calculation if applicable, otherwise effluent pH and temperature is used for the calculation. |

**Stipulations:**

| **Table 2:** Ammonia as N Effluent Limitations Calculations for Outfall 001 | | | |
|---|---|---|---|
| **Parameter** | **Avg. Monthly Limit** [a] | **Avg. Weekly Limit** | **Daily Maximum Limit** |
| Calculations must be performed for each discharge sample. If an exceedance is detected on any single sample during a discharge, the exceedance must be reported on the DMR.<br><br>If the upstream values are not collected, then the following values are to be used:<br>• pH: 8.35 S.U., based on the 90th percentile of collected upstream data,<br>• Temperature values used during the winter months can be extrapolated from available USGS data using best professional judgement,<br>• Permittee shall use the 90th percentile upstream ammonia value of 0.92 mg/l,<br>• If the upstream flow is not available, the 30B10 critical low flow value of 60.7 cfs must be used.<br><br>The maximum mixing factor with the 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 *"Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms,"* EPA-821-R-02-012 (Fifth Ed., October 2002). The permittee shall conduct an acute 48-hour static renewal toxicity test using freshwater fleas, *Ceriodaphnia dubia* and an acute 96-hour static renewal toxicity test using fathead minnows, *Pimephales promelas*.

| **Table 3:** Acute WET Requirements – Outfall 001 | | | | | | |
|---|---|---|---|---|---|---|
| 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.<br><br>**Toxicity is defined as:**<br><br>**Acute test failure is defined as lethality to 50% or more of the test organisms exposed to 100% effluent or >1.0 TUa for *Ceriodaphnia dubia* 48-hour and fathead minnow 96-hour test.** The 48-hour and 96-hour effluent value must be <**1.0 TUa** to indicate a passing test. Any 48-hour or 96-hour effluent value of >**1.0 TUa** will constitute a failure. Tests in which the control survival is less than 90% are invalid and must be repeated. | | | | | | |
| Implementation | Limitations Imposed | | | | | |
| Effluent Dilution | 0%(Control) | 12.5% | 25% | 50% | 75% | 100% |
| Dilution Water | **Sheyenne River** | | | | | |
| Species and Test Type | *Ceriodaphnia dubia* - 48 Hour Acute - Static Renewal - 20°C | | | | | |
| | *Pimephales promelas* - 96 Hour Acute - Static Renewal - 20°C | | | | | |
| Endpoint | Mortality $LC_{50}$ reported as $TU_a$ | | | | | |
| Compliance Point | **End-of-pipe** | | | | | |
| Sampling Frequency | WET tests shall be performed on the first discharge made each calendar year. Thereafter, tests shall be performed at least once every calendar | | | | | |

| | |
|---|---|
| | quarter in which there is a discharge. |
| Sample Type | Grab |
| Maximum Daily Limit (MDL) | <1 TUa |
| Average Monthly Limit (AML) | <1 TUa |

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, $CO_2$ 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 Toxicity Reduction Evaluation (TRE) shall be determined by the department. If no toxicity is found in the second test, testing shall occur as outlined in the permit. Should there be no discharge during a specified sampling time frame; sampling shall be performed as soon as there is a discharge.

The permittee shall report the following results of each toxicity test on the DMR for that reporting period:

***Pimephales promelas* (Fathead Minnow)**
a. Report the highest TUa for Fathead minnow, Parameter No. TSN6C.

***Ceriodaphnia dubia* (Water Flea)**
a. Report the highest TUa for *Ceriodaphnia dubia*, Parameter No. TSM3B.

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

**3. 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.

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

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

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

a. Submit an alternative control program for compliance with the numerical requirements; or

b. If necessary, provide a modified biomonitoring protocol which compensates for the pollutant(s) being controlled numerically.

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

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

## II. MONITORING, RECORDING, AND REPORTING REQUIREMENTS BP 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 B. Test Procedures. The permittee must report all additional monitoring in accordance with D. Additional Monitoring.

### B. Test Procedures

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

### C. Recording of Results

Records of monitoring information shall include:

1. the date, exact place and time of sampling or measurements;
2. the name(s) of the individual(s) who performed the sampling or measurements;
3. the name of the laboratory;
4. the date(s) and time(s) analyses were performed;
5. the name(s) of the individual(s) who performed the analyses;
6. the analytical techniques or methods used; and
7. the results of such analyses.

### D. Additional Monitoring

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

**E. Reporting of Monitoring Results**

1. Monitoring results shall be summarized and reported to the department using Discharge Monitoring Reports (DMRs). If no discharge occurs during a reporting period, "No Discharge" shall be reported. The permittee must submit DMRs electronically using the electronic information reporting system unless requirements in subsection 3 are met.

2. Prior to December 21, 2025, the permittee may elect to electronically submit the following compliance monitoring data and reports instead of mailing paper forms. Beginning December 21, 2025, the permittee must report the following using the electronic reporting system:

   a. General permit reports [e.g., notices of intent (NOI); notices of termination (NOT); no exposure certifications (NOE)];

   b. Municipal separate storm sewer system program reports;

   c. Pretreatment program reports;

   d. Sewer overflow/bypass event reports; and

   e. Clean Water Act 316(b) annual reports

3. The permittee may seek a waiver from electronic reporting. To obtain a waiver, the permittee must complete and submit an Application for Temporary Electronic Reporting Waiver form (SFN 60992) to the department. The department will have 120 days to approve or deny the waiver request. Once the waiver is approved, the permittee may submit paper versions of monitoring data and reports to the department.

   a. One of the following criteria must be met in order to obtain a waiver. The department reserves the right to deny any waiver request, even if they meet one of the criteria below.

      1. No internet access,

      2. No computer access,

      3. Annual DMRs (upon approval of the department),

      4. Employee turnover (3-month periods only), or

      5. Short duration permits (upon approval of the department)

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

   ND Department of Environmental Quality
   Division of Water Quality
   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

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

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

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

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

**F. Twenty-four Hour Notice of Noncompliance Reporting**

1. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstances. The following occurrences of noncompliance shall be included in the oral report to the department at 701.328.5210:

    a. Any lagoon cell overflow or any unanticipated bypass which exceeds any effluent limitation in the permit under G. Bypass of Treatment Facilities;

    b. Any upset which exceeds any effluent limitation in the permit under H. Upset Conditions; or

    c. Violation of any daily maximum effluent or instantaneous discharge limitation for any of the pollutants listed in the permit.

2. A written submission shall also be provided within five days of the time that the permittee became aware of the circumstances. The written submission shall contain:

    a. A description of the noncompliance and its cause;

    b. The period of noncompliance, including exact dates and times;

    c. The estimated time noncompliance is expected to continue if it has not been corrected; and

    d. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

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

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

**G. Bypass of Treatment Facilities**

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to any of the following provisions in this section.

2. Bypass exceeding limitations-notification requirements.

    a. Anticipated Bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of bypass.

    b. Unanticipated Bypass. The permittee shall submit notice of an unanticipated bypass as required under F. Twenty-four Hour Notice of Noncompliance Reporting.

3. Prohibition of Bypass. Bypass is prohibited, and the department may take enforcement action

against a permittee for bypass, unless:

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

c. The permittee submitted notices as required under the 1. Anticipated Bypass subsection of this section.

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

**H. Upset Conditions**

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

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

1. An upset occurred and the permittee can identify its cause(s);

2. The permitted facility was, at the time being, properly operated;

3. The permittee submitted notice of the upset as required under F. Twenty-four Hour Notice of Noncompliance Reporting and

4. The permittee complied with any remedial measures required under I. Duty to Mitigate.

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

**I. Duty to Mitigate**

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

**J. Removed Materials**

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

**K. Duty to Reapply**

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

## IV. GENERAL PROVISIONS

### A. Inspection and Entry

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

### B. Availability of Reports

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

### C. Transfers

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

### D. New Limitations or Prohibitions

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

### E. Permit Actions

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

### F. Need to Halt or Reduce Activity Not a Defense

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

### G. State Laws

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

### H. Oil and Hazardous Substance Liability

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

### I. Property Rights

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

**J. Severability**

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

## V. INDUSTRIAL PRETREATMENT PROGRAM BP 2009.09.10
## Contributing Industries and Pretreatment Program Requirements

**A. Standard Requirements**

Permittee shall operate an industrial pretreatment program in accordance with the following permit requirements developed pursuant to Section 402(b)(8) of the Clean Water Act, the General Pretreatment Regulations (40 CFR Part 403), and the approved pretreatment program submitted by the permittee. The approved pretreatment program, and any approved modifications thereto, is hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:

1. Industrial user information shall be updated at a minimum of once per year or at that frequency necessary to ensure that all Industrial Users are properly permitted and/or controlled. The records shall be maintained and updated as necessary;

2. The permittee shall sample and inspect each Significant Industrial User (SIU) at least once per calendar year (40 CFR Section 403.8(f)(2)(v)). This is in addition to any industrial self-monitoring activities. If the permittee performs sampling for any SIU, then the permittee shall perform any repeat sampling and analysis within 30 days of becoming aware of the violation (40 CFR Section 403.12(g)(2));

3. The permittee shall evaluate whether each SIU needs a plan to control sludge. SIUs must be evaluated within 1 year of being designated an SIU. Where needed, the permittee shall require the SIU to prepare or update, and then implement the plan. Where a slug prevention plan is required, the permittee shall ensure that the plan contains at least the minimum elements required in 40 CFR Section 403.8(f)(2)(vi). If required, the permittee shall incorporate slug control requirements into the control mechanism for the SIU. (40 CFR, Section 403.8(f)(1)(iii)(B)(6)).;

4. The permittee shall investigate instances of non-compliance with Pretreatment Standards and requirements indicated in reports and notices required under 40 CFR 403.12, or indicated by analysis, inspection, and surveillance activities.

5. The permittee shall enforce all applicable Pretreatment Standards and requirements and obtain remedies for noncompliance by any industrial user.

6. The permittee shall control, through the legal authority in the approved pretreatment program, the contribution to the Publicly Owned Treatment Works (POTW) by each industrial user to ensure compliance with applicable Pretreatment Standards and requirements. In the case of industrial users identified as significant under 40 CFR Section 403.3(v), this control shall be achieved through permit, order, or similar means and shall contain, at a minimum, the following conditions:

   a. Statement of duration (in no case more than five (5) years);

   b. Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator.

   c. Effluent limits based on applicable pretreatment standards, categorical pretreatment standards, local limits, and state and local law.

   d. Self-monitoring, sampling, reporting, notification and recordkeeping requirements, including an

identification of the pollutants to be monitored, sampling location, sampling frequency, and sample type, based on the applicable general pretreatment standards in 40 CFR 403, categorical pretreatment standards, local limits, and state and local law.

e. Statement of applicable civil and criminal penalties for violation of Pretreatment Standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond deadlines mandated by federal statute or regulation.

f. Requirements to control Slug Discharges, if determined by the POTW to be necessary.

7. The permittee shall provide adequate staff, equipment, and support capabilities to carry out all elements of the pretreatment program as required by 40 CFR Section 403.8(f)(3);

8. The approved program shall not be substantially modified by the permittee without the approval of the Approval Authority. Substantial and non-substantial modifications shall follow the procedures outlined in 40 CFR Section 403.18.

9. The permittee shall develop, implement, and maintain an enforcement response plan as required by 40 CFR Section 403.8(f)(5); and

10. The permittee shall notify all Industrial Users of the users' obligations to comply with applicable requirements under Subtitles C and D of the Resource Conservation and Recovery Act (RCRA) as required by 40 CFR Section 403.8(f)(2)(iii).

**B. Local Limits**

The permittee shall establish and enforce specific local limits to implement the provisions of 40 CFR sections 403.5(a) and (b), as required by 40 CFR Section 403.5(c). The permittee shall continue to develop these limits as necessary and effectively enforce such limits.

In accordance with EPA policy and with the requirements of 40 CFR sections 403.8(f)(4) and 403.5(c), the permittee shall determine if technically based local limits are necessary to implement the general and specific prohibitions of 40 CFR sections 403.5(a) and (b).

This evaluation should be conducted in accordance with the latest revision of the *"EPA Region VIII Strategy for Developing Technically Based Local Limits"*, and after review of EPA's *"Local Limits Development Guidance"* **July 2004**. Where the permittee determines that revised or new local limits are necessary, the permittee shall submit the proposed local limits to the Approval Authority in an approvable form in accordance with 40 CFR Section 403.18.

**C. Sampling and Reporting Requirements**

The permittee shall analyze the treatment facility influent and effluent for the presence of the toxic pollutants listed in 40 CFR Part 122 Appendix D (NPDES Application Testing Requirements) Table II and the toxic pollutants in Table III as follows:

| | **Minimum Frequency of Monitoring** |
|---|---|
| **Table II Priority Pollutants 40 CFR 122 Appendix D** | 1 Every Other Year |
| **Table III Metals 40 CFR 122 Appendix D** | 1/Year |

| **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. |

If, based upon information available to the permittee, there is reason to suspect the presence of any toxic or hazardous pollutant listed in Table V, or any other pollutant in a quantity or concentration known or suspected to adversely affect POTW operation, receiving water quality, or solids disposal procedures, analysis for those pollutants shall be performed on both the influent and the effluent as follows:

| | **Minimum Frequency of Monitoring** |
|---|---|
| **Table V Other Toxics** | Conditional as specified above |

1. Along with the permittee's pretreatment annual report, the permittee will submit a list of compounds included in Table V that are suspected or known to be present in its influent wastewater. This determination shall be based on a review of the permittee's pretreatment program records. The state permitting authority and/or Approval Authority may review and comment on the list and the list may be revised if, in the opinion of the state permitting authority and/or Approval Authority, the list is incomplete. The permittee will perform the analysis on the influent for the revised list of compounds for which there are acceptable testing procedures as follows:

| | **Minimum Frequency of Monitoring** |
|---|---|
| **Revised List of Compounds** | 0/Year |

2. Where the pollutants monitored in accordance with this section are reported as being above the method detection limit, the results for these pollutants shall be reported in the permittee's pretreatment annual report, if required by EPA.

**D. Sludge Sampling and Reporting Requirements**

The permittee shall analyze the treatment facility sludge (biosolids) prior to disposal, for the presence of toxic pollutants listed in 40 CFR 122 Appendix D (NPDES Application Testing Requirements) Table III at least once per year. If the permittee does not dispose of biosolids during the calendar year, the permittee shall certify to that in the Pretreatment Annual Report and the monitoring requirements in this paragraph shall be suspended for that calendar year.

1. The permittee shall review the pollutants in 40 CFR Part 122, Appendix D, tables II and V. If any of the pollutants in these tables were above detection in the influent samples during the previous 2 years or the last two analyses, whichever is greater, the permittee shall sample and analyze its sewage sludge for these pollutants. The permittee shall perform this evaluation and analysis at least once per year.

2. The permittee shall use sample collection and analysis procedures as approved for use under 40 CFR Part 503 or specified in the EPA Region 8 General Permit for biosolids.

3. The permittee shall report the results for these pollutants in the permittee's pretreatment annual report, if required by EPA.

**E. Sample Analysis and Sampling Procedure**

All analyses shall be in accordance with procedures established in 40 CFR Part 136. Where sampling methods are not specified, the influent and 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 automated composite sampling is inappropriate, at least four (4) grab samples shall be manually taken at equal intervals over a representative 24-hour period, and composited prior to analysis using approved methods; alternatively, the individual grab samples may be analyzed separately and the results from the respective grab samples mathematically combined based on flow (i.e., flow weighted) for the final result.

**Additional Sampling Requirements**

In addition, the following are identified as pollutants of concern by sampling and analysis of your influent, effluent and/or sludge during local limits development, other chemical monitoring, or through activities associated with or as a result of whole effluent toxicity testing. The following pollutants of concern shall be sampled and analyzed in the influent and effluent as follows:

| Parameters | Minimum Frequency of Monitoring |
|---|---|
| No additional parameters have been identified at this time. | |

**F. Annual Reporting Requirements**

The permittee shall prepare annually a list of industrial users, which during the preceding twelve (12) months have significantly violated Pretreatment Standards or requirements. This list is to be published annually in a newspaper of general circulation in the permittee's service area as required by 40 CFR Section 403.8(f)(2)(viii).

In addition, on or before March 28, the permittee shall submit a pretreatment program annual report to the Approval Authority and the state permitting authority that contains the information requested by EPA, or at a minimum the following information:

1. An updated list of all SIUs as defined at 40 CFR Section 403.3(v). For each SIU listed the following information shall be included:

   a. All applicable Standard Industrial Classification (SIC) codes and categorical determinations, as appropriate. In addition, a brief description of the industry and general activities;

   b. Permit status. Whether each SIU has an unexpired control mechanism and an explanation as to why any SIUs are operating without a current, unexpired control mechanism (e.g. permit);

   c. A summary of all monitoring activities performed within the previous twelve (12) months. The following information shall be reported.

      Total number of SIUs inspected; and
      Total number of SIUs sampled.

2. For all industrial users that were in Significant Non-Compliance during the previous twelve (12) months, provide the name of the violating industrial user; indicate the nature of the violations, the type and number of actions taken (administrative order, criminal or civil suit, fines or penalties collected, etc.) and current compliance status. Indicate if the company returned to compliance and the date

compliance was attained. Determination of Significant Non-Compliance shall be performed as defined at 40 CFR Section 403.8(f)(2)(viii)(A-H).

3. A summary of all enforcement actions not covered by the paragraph above conducted in accordance with the approved Enforcement Response Plan, as required in 40 CFR Section 403.8(f)(5).

4. A list of all SIUs whose authorization to discharge was terminated or revoked during the preceding twelve (12) month period and the reason for termination;

5. A report on any Interference, Pass Through, upset or NPDES permit violations known or suspected to be caused by non-domestic discharges of pollutant and actions taken by the permittee in response;

6. Verification of publication of industrial users in Significant Non-Compliance;

7. Identification of the specific locations, if any, designated by the permittee for receipt (discharge) of trucked or hauled waste, if modified;

8. Information as required by the Approval Authority or state permitting authority on the discharge to the POTW from the following activities:

   a. Ground water clean-up from underground storage tanks;
   b. Trucked or hauled waste; and,
   c. Ground water clean-up from RCRA or Superfund sites.

9. A description of all changes made during the previous calendar year to the permittee's pretreatment program that were not submitted as substantial or non substantial modifications to EPA.

10. The permittee shall evaluate actual pollutants loadings against the approved Maximum Allowable Headworks Loadings (MAHLs). Where the actual loading exceeds the MAHL, the permittee shall immediately begin a program to either revise the existing local limit and/or undertake such other studies as necessary to evaluate the cause(s) of the excursion. The permittee shall provide a summary of its intended action.

11. Other information that may be deemed necessary by the Approval Authority.

**G. Pollutant Restrictions**

The permittee shall prohibit the introduction of the following pollutants into the POTW:

1. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limit to, wastestreams 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;

2. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;

3. 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;

4. 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 the POTW;

5. 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;

6. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;

7. 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;

8. Any trucked or hauled pollutants, except at discharge points designated by the POTW; and,

9. Any specific pollutant that exceeds a local limitation established by the POTW in accordance with the requirements of 40 CFR Section 403.5(c) and (d).

10. Any other pollutant which may cause Pass Through or Interference.

**H. Notification Requirements**

The permittee shall provide the pretreatment Approval Authority with adequate notice of any substantial change in the volume or character of pollutants being introduced into the treatment works by any SIU introducing pollutants into the treatment works at the time of application for the discharge permit. For the purposes of this section, "substantial change" shall mean a level of change which has a reasonable probability of affecting the permittee's ability to comply with its permit conditions or to cause a violation of stream standards applied to the receiving water.

Adequate notice shall include information on: (1) the quality and quantity of effluent to be introduced into the treatment works, and (2) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

**I. Enforcement Actions**

Section 309(f) of the Act provides that EPA may issue a notice to the POTW stating that a determination has been made that appropriate enforcement action must be taken against an industrial user for noncompliance with any Pretreatment Standards and requirements. The notice provides the POTW with thirty (30) days to commence such action. The issuance of such permit notice shall not be construed to limit the authority of the permit issuing authority or Approval Authority.

**J. Enforcement Authority**

The state permitting authority and/or the EPA retains, at all times, the right to take legal action against the industrial contributor for violations of a permit 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 NPDES permit violation has occurred because of the failure of the permittee to properly develop and enforce Pretreatment Standards and requirements as necessary to protect the POTW, the state permitting authority and/or Approval Authority shall hold the permittee responsible and may take legal action against the permittee as well as the Indirect Discharger(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

| Parameter | Units | Secondary Treatment Level (Daily Maximum) | Monitoring Frequency | Sample Type |
|---|---|---|---|---|
| $BOD_5$ | mg/L | 30 | 1 per 14 days | Grab |
| TSS | mg/L | 45 | 1 per 14 days | Grab |
| *E. Coli* | #/100 mL | 126 | 1/Week | 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 | | | | |
|---|---|---|---|---|
| **Parameter** | **Units** | **Secondary Treatment Level (Daily Maximum)** | **Monitoring Frequency** | **Sample Type** |
| $BOD_5$ | mg/L | 30 | 1/Month | Grab |
| TSS | mg/L | 100 | 1/Month | Grab |
| *E. Coli* | #/100 mL | 126 | 1/Week | Grab |

In some systems chlorination is available. Chlorination is particularly desirable when frequent worker contact with the treated wastewater is likely or when the public may have constant access to areas where the wastewater is being used. Maintaining a chlorine residual of at least 0.1 mg/l is recommended.

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. Other Uses as Approved**

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