

**U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 8 NATIONAL POLLUTANT
DISCHARGE ELIMINATION SYSTEM STATEMENT OF BASIS**

PERMITTEE:	Three Affiliated Tribes Utilities
FACILITY NAME AND ADDRESS:	Thunder Butte Wastewater Treatment Facility 307 5th Ave New Town, North Dakota 58763
PERMIT NUMBER:	ND-0000005
RESPONSIBLE OFFICIAL:	Micheal Bintliff, Utilities Director 701-421-1432 mbintliff@mhanation.com
FACILITY CONTACT:	Micheal Bintliff, Utilities Director
PERMIT TYPE:	Minor, New Permit, POTW
FACILITY LOCATION:	NW 1/4 of Section 29, Township 152 N, and Range 94 W

1 INTRODUCTION

This statement of basis (SoB) is for the issuance of a National Pollutant Discharge Elimination System (NPDES) permit (the Permit) to the Three Affiliated Tribes Utilities for the Thunder Butte Wastewater Treatment Facility (Facility). The Permit establishes discharge limitations for any discharge of wastewater from the Facility through Outfall 001 to an unnamed tributary of Clarks Creek. The SoB explains the expected nature of the discharges, the EPA's decisions for limiting the pollutants in the wastewater, and the regulatory and technical basis for these decisions.

The Facility, which has not been constructed at the time of this permit issuance, will be located on the Fort Berthold Reservation. The EPA Region 8 is the permitting authority for facilities located in Indian country, as defined in 18 U.S.C. § 1151, located within Region 8 states and implements federal environmental laws in Indian country consistent with the [EPA Policy for the Administration of Environmental Programs on Indian Reservations](#) and the federal government's general trust responsibility to federally recognized Indian tribes.

2 MAJOR CHANGES FROM PREVIOUS PERMIT

This is the first issuance of a NPDES permit for the Facility.

3 BACKGROUND INFORMATION

The Facility is a publicly owned treatment works (POTW) for the Thunder Butte subdivision and will be located at latitude 47.95750° N and longitude 102.74491° W. The Facility will treat sewage from the Thunder Butte subdivision and will be located within the external boundaries of the Fort Berthold Reservation. The Facility is owned and operated by the Three Affiliated Tribes Utilities (the Permittee) of the Mandan, Hidatsa & Arikara Nation (MHA Nation). The Facility will have a single outfall, Outfall 001, that will discharge treated wastewater.

As of the drafting of this NPDES permit, construction of the Facility is scheduled to begin in April 2025. The Facility is anticipated to begin treating wastewater from the Thunder Butte subdivision late in 2025.

The following background information was obtained from the Thunder Butte Wastewater Treatment Facility's NPDES permit application.

3.1 Service Area Description

This Permit is for the discharge of effluent from the Facility. The Facility will serve up to 44 lots zoned for single family homes all located within the Thunder Butte subdivision in McKenzie County, North Dakota. The estimated population served will be 132 residents. The Facility will only receive wastewater from the Thunder Butte subdivision and the subdivision is only zoned for residential use, so there are no known industrial users that will discharge to the Facility.

3.2 Treatment Process

Domestic sewage will be conveyed from the Thunder Butte subdivision to the Facility through a gravity sewer system. While the Facility's design flow was reported as 0.1296 million gallons per day

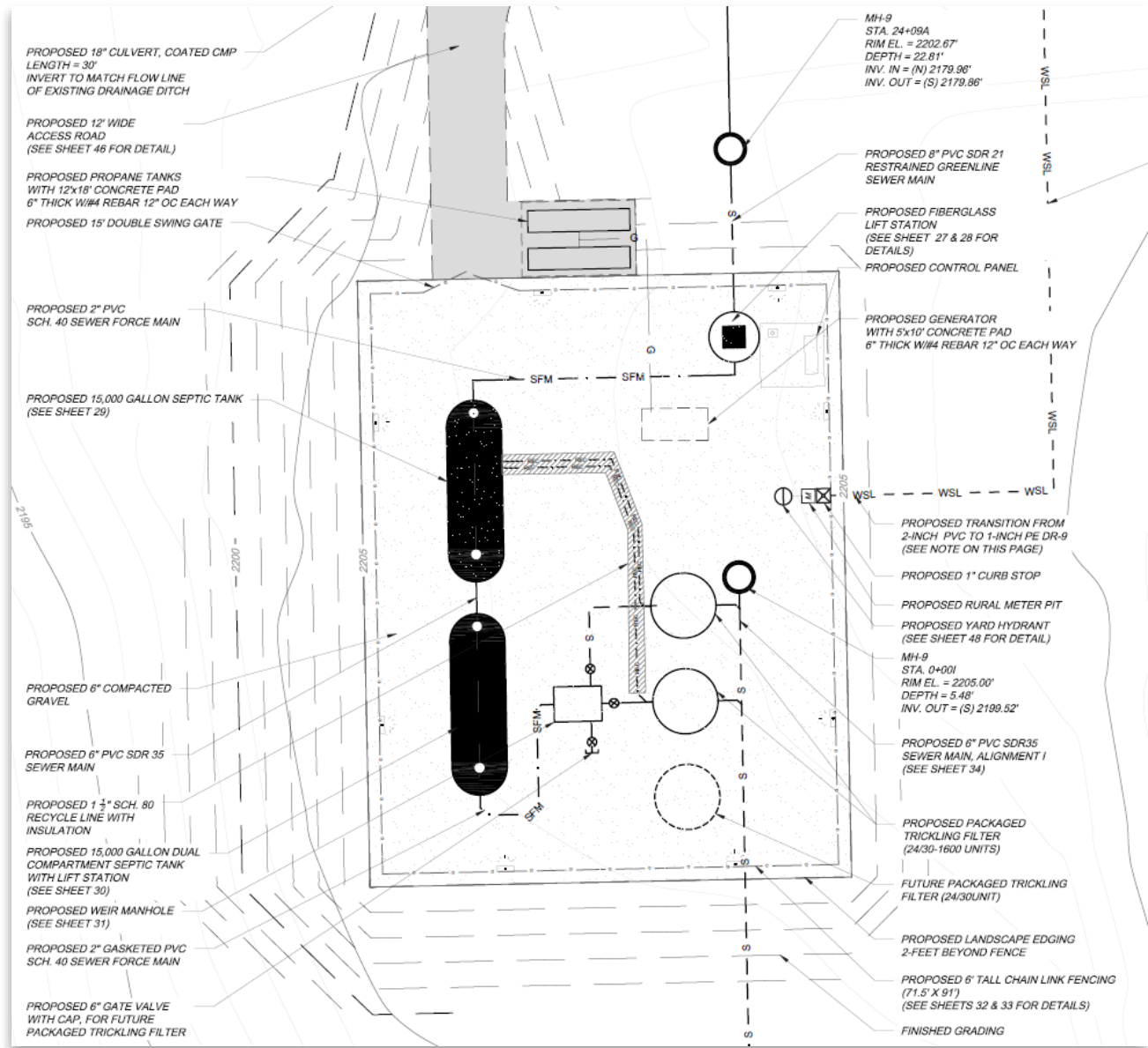
(MGD), the operator reported that the influent flow is anticipated to be approximately 0.0216 MGD. Supplementary information provided with the application indicates the Facility will utilize a Bioclere™ biological treatment system, which is based on a trickling filter treatment technology. The Thunder Butte subdivision's treatment system is designed with two primary settling/flow equalization tanks and two Bioclere™ tanks with a built-in filter module and clarifier. The Bioclere™ operation manual describes the first stage of treatment occurring in the settling tanks, where solids are settled and partially digested. The proposed layout for the Thunder Butte Facility has the two settling tanks in sequence (Figure 1). From the second settling tank, wastewater will flow to the two Bioclere™ tanks, which are designed in parallel and will run concurrently. A splitter box will distribute wastewater evenly to each Bioclere™ tank. Wastewater entering the Bioclere™ tanks starts at the baffled zone and is pumped to a distribution assembly above the filter media and flows by gravity over biological film growing on the media surface. The final clarifier, located in each Bioclere™ tank below the filter media, is the last step prior to discharge from the Bioclere™ tank. Any biological film that sloughs from the media and passes through the filter media bed will settle at the base of the clarifier and is automatically pumped via a sludge return to the first settling tank.

Upon discharge from the Bioclere™ tanks, effluent will flow by gravity to a lined holding pond. Under the Facility's current design, there is no chemical or ultraviolet treatment for bacteria upon discharge from the Bioclere™ tanks, nor is there any disinfection at Outfall 001.

The holding pond will be approximately six acres in size, with a total volume of approximately 13.7 million gallons. The holding pond is intended to retain effluent as a total retention system (i.e., non-discharging). However, the Permittee indicated that if discharge is needed, the capacity of the holding pond will allow the Facility to limit effluent release to the unnamed tributary to two seasonal discharges, one discharge in spring and a second discharge in the fall. If or when a discharge is needed, the permit application noted the Facility would discharge at a rate up to 950 gallons per minute for up to approximately 4.5 continuous days.

The Bioclere™ operations manual recommends the primary tanks be inspected quarterly or semi-annually by a certified operator or septic hauler for sludge, and to pump as needed.

Figure 1. Proposed layout for the Thunder Butte Wastewater Treatment Facility treatment system; holding pond is not pictured in this drawing



3.3 Chemicals Used

The permit application indicated that no chemicals will be used during the treatment process.

4 PERMIT HISTORY

This is the first NPDES permit issued to the Facility.

5 DESCRIPTION OF RECEIVING WATER

Wastewater discharged from the Facility will flow from Outfall 001 to an unnamed tributary located within the external boundaries of the Fort Berthold Reservation (Figure 2). From Outfall 001, effluent

will flow downstream approximately 0.3 stream miles to a historical impoundment located in the stream channel. Aerial imagery indicates that the impoundment, which is also a natural depression in the landscape, was breached at some point between 2010 and 2013 and water is able to freely flow through the impoundment and continue downstream. However, due to the natural depression, water is ponding at this location and only when the water surface reaches an approximately elevation of 2,145 feet, is the water able to freely flow through the breach. Continuing downstream approximately 2.9 stream miles, the unnamed tributary flows into Clarks Creek. From the confluence of the unnamed tributary and Clarks Creek it is approximately 5.2 stream miles to the Missouri River/Lake Sakakawea. The boundary between the Fort Berthold Reservation and North Dakota is approximately 78 stream miles downstream of Outfall 001.

Figure 2. Facility Receiving Water



6 PERMIT LIMITATIONS

6.1 Technology Based Effluent Limitations (TBELs)

The secondary treatment standards (40 CFR Part 133) have been developed by the EPA and represent the level of effluent quality attainable through the application of secondary or equivalent treatment. The regulation applies to all publicly owned treatment works (POTWs). The TBELs for the Facility are listed in Table 1.

Table 1. Secondary treatment standards

Parameter	30-day average (mg/L)	7-day average (mg/L)	30-day average percent removal (%)
BOD ₅	30	45	85
TSS	30	45	85
pH	Maintained within the limits of 6.0 to 9.0		

The EPA Region 8 has also developed technology-based and water quality-based guidance for oil and grease. It states “if a visible sheen or floating oil is detected in the discharge, a grab sample shall be taken immediately, analyzed, and recorded in accordance with the requirements of 40 CFR Part 136. The concentration of oil and grease shall not exceed 10 mg/L in any sample.” The visual narrative “sheen or floating oil” requirement was developed in alignment with 40 CFR § 401.16 which lists “oil and grease” as a conventional pollutant (as related to technology-based limitations in line with 40 CFR § 125.3(h)(1)) pursuant to section 304(a)(4) of the Clean Water Act (CWA; see section 6.2.2). This consideration for oil and grease will be included in the Permit.

6.2 Water Quality Based Effluent Limitations (WQBELs)

The permit application indicated the Facility will discharge to an unnamed tributary to Clarks Creek. The receiving water falls entirely within the Fort Berthold Reservation. At the time this permit was drafted, the MHA Nation does not have EPA-approved water quality standards under Section 303(c) of the CWA. Section 101(a)(2) of the CWA states, “[I]t is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water to be achieved by July 1, 1983.” To achieve this Congressional goal in the absence of federally-approved Tribal water quality standards (WQS) on the Fort Berthold Reservation, the EPA considers the beneficial uses of the receiving waters to include aquatic life and recreation. The EPA relied on CWA § 301(b)(1)(C) and principles of Tribal sovereignty in establishing WQBELs based on the EPA’s Section 304(a) recommended water quality criteria (WQC).

6.2.1 *Escherichia coli* (*E. coli*)

E. coli is a type of bacteria that is commonly found in human and animal feces and its presence in domestic sewage makes it a contaminant of concern for POTWs. *E. coli* is used as an indicator organism to identify fecal contamination in freshwater and its presence signals the possibility of other disease-causing bacteria and viruses (i.e., pathogens). Individuals exposed to water with elevated levels of *E. coli* are at an increased risk of infection, diarrhea, and other illnesses.

The EPA’s 2012 Recreational Water Quality Criteria provides protective criteria for pathogens for primary contact recreational uses (“Recreational Water Quality Criteria”, Office of Water 820-F-12-058, 2012). These contact values for *E. coli* in freshwater are 126 cfu/100 mL (geometric mean) and 410 colony forming units (cfu)/100 mL (statistical threshold value). To implement these standards in the Permit, a limitation will be included based on the geometric mean from the total number of samples collected during a 30-day period. The included daily maximum limitation will be based on the statistical threshold value, and no more than ten percent of the samples collected in the same 30-day period are allowed to exceed the selected statistical threshold value. The EPA

Region 8 does not allow for any type of mixing zone for bacteria and the above effluent limitations apply at the end of the discharge pipe.

The bacteria reporting and analytical measurement units used in the Permit are the number per volume analyzed (i.e., "Number/100 mL" or "no./100 mL"), to be inclusive of all potential approved analytical units of measure for EPA-approved bacteria analyses applicable to wastewater (i.e., Colony Forming Units (CFU) and Most Probable Number (MPN)).

6.2.2 Oil and Grease

Oil and grease can be present in wastewater from both organic wastes and mechanical sources of lubrication, etc. Oil and grease present an aesthetic issue and can contain compounds that may be toxic to aquatic life. The Facility is required to monitor effluent for oil and grease on a daily frequency during discharge events using a visual inspection. If a visible sheen or floating oil is detected in the discharge, a grab sample shall be taken immediately, analyzed and recorded in accordance with the requirements of 40 CFR Part 136. The concentration of oil and grease shall not exceed 10 mg/L in any sample.

The limit for oil and grease is based on a combination of EPA Region 8 professional judgement and protecting the receiving waters from a visible "sheen or floating oil." The visual narrative "sheen or floating oil" requirement was developed in alignment with 40 CFR § 401.16 which lists "oil and grease" as a conventional pollutant (as related to technology-based limitations in line with 40 CFR 125.3(h)(1)), pursuant to section 304(a)(4) of the Act, as well as the National Recommended Aquatic Life Criteria which recommends that "surface waters shall be virtually free" from floating oils of petroleum origin and floating nonpetroleum oils of vegetable or animal origin, as "floating sheens of such oils result in deleterious environmental effects."

6.2.3 pH

The Facility meets the definition of a POTW as defined in 40 C.F.R. § 403.3 (section 6.1). Additionally, the EPA considers the beneficial uses of the receiving waters to include the protection of aquatic life. Therefore, the National Secondary Standard (NSS) for POTWs in 40 C.F.R. part 133 should be applied in conjunction with the EPA National Recommended Aquatic Life Criteria. The pH range for NSS is 6.0 - 9.0; however, the Permit will apply the 6.5 - 9.0 range to ensure the protection of aquatic life in the receiving stream.

6.3 Final Effluent Limitations

Applicable TBELs and WQBELs were compared, and the most stringent of the two was selected for the following effluent limits (Table 2).

Table 2. Final Effluent Limitations for Outfall 001

Effluent Characteristic	30-Day Average Effluent Limitations <u>a/</u>	7-Day Average Effluent Limitations <u>a/</u>	Daily Maximum Effluent Limitations <u>a/</u>	Limit Basis <u>b/</u>
Flow, mgd	report only	N/A	report only	N/A
Biochemical Oxygen Demand (BOD ₅), mg/L	30	45	N/A	TBEL
BOD ₅ percent removal, % <u>c/</u>	≥ 85%	N/A	N/A	TBEL
Total Suspended Solids (TSS), mg/L	30	45	N/A	TBEL
TSS percent removal, % <u>c/</u>	≥ 85%	N/A	N/A	TBEL
<i>Escherichia coli</i> (<i>E. coli</i>), number/100 mL <u>d/</u>	126	N/A	410	WQBEL
Oil and Grease (O&G), mg/L	N/A	N/A	10	TBEL
Total Ammonia Nitrogen (as N), mg/L	report only	N/A	report only	N/A
Total Kjeldahl Nitrogen (TKN) (as N), mg/L	report only	N/A	report only	N/A
Nitrate-Nitrite (as N), mg/L	report only	N/A	report only	N/A
Total Nitrogen, mg/L	report only	N/A	report only	N/A
Total Phosphorus, mg/L	report only	N/A	report only	N/A
pH	Must remain in the range of 6.5 to 9.0 <i>at all times</i>			WQBEL
Oil and Grease, (Narrative Limit)	The discharge shall not cause a visible oil film or sheen in the receiving water or adjoining shoreline, nor shall there be any discharge of floating debris, scum, or other floating materials.			TBEL

a/ See section 1 of the Permit for definition of terms.

b/ TBEL = Limitation based on technology-based effluent limit; WQBEL = Limitation based on water quality-based effluent limit

c/ The BOD₅ and TSS percent removal shall be calculated using the 30-day average values for influent and the 30-day average values for effluent BOD₅ and TSS reported during that calendar month. To calculate percent removal, use the following equation (replacing X with either BOD₅ or TSS): Percent Removal = $(X_{30\text{-day average, influent}} - X_{30\text{-day average, effluent}}) / (X_{30\text{-day average, influent}}) * 100$

d/ The 30-day average limit for *E. coli* is calculated as a geometric mean.

6.4 Antidegradation

The MHA Nation does not have an antidegradation policy because they do not have approved water quality standards. As a result, there are no antidegradation requirements.

6.5 Anti-Backsliding

Federal regulations at 40 CFR § 122.44(l)(1) require that when a permit is renewed or reissued, interim effluent 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 were based have materially and substantially changed since the time the Permit was issued and would constitute cause for permit modification or revocation and reissuance under 40 CFR § 122.62.

This is the first permit issuance to the Facility and therefore, there are no anti-backsliding concerns.

7 MONITORING REQUIREMENTS

7.1 Self-Monitoring Requirements Outfall 001

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, as required in 40 CFR § 122.41(j), unless another method is required under 40 CFR subchapters N or O.

As discussed in section 3.2, the Facility is planning to restrict discharge from the holding pond, but may need to discharge effluent twice a year, once in the spring and once in the fall. Due to the anticipated intermittent nature of the discharge, the Facility will be required to monitor during each discharge event (Table 3). While the extended retention time in the holding pond is anticipated to result in a well-mixed effluent, due to the estimated discharge volume per discharge event (i.e., estimated up to 5.87 million gallons in the NPDES permit application) multiple samples will be required for each discharge event.

7.1.1 Flow

The Facility is required to monitor effluent flow on a daily frequency for all discharge events. A grab flow measurement for the Facility is appropriate since the effluent is anticipated to discharge intermittently and should have a consistent rate of flow.

7.1.2 BOD₅ and TSS

The Facility is required to monitor BOD₅ and TSS using a grab sample. The Facility must collect samples at the beginning, middle, and end of discharge events lasting less than a week. If a single, continuous discharge is greater than one week in duration, three samples shall be collected during the first week and one sample collected during each following week until the discharge ceases. A grab sample is appropriate due to the long retention time in the holding pond.

Influent sampling for both BOD₅ and TSS should occur at or near the same time as the effluent sampling. Influent samples shall be taken at any accessible influent structure or location that contains representative flow from the entire service area and is also prior to treatment. Influent grab samples shall be taken at the same frequency as the effluent for the reasons discussed above.

7.1.3 *E. coli*

The Facility is required to monitor for *E. coli* using a grab sample. The Facility must collect samples at the beginning, middle, and end of discharge events lasting less than a week. An additional weekly sample is required for all discharges lasting longer than a week. Grab samples are appropriate for *E. coli*, which is not amenable to compositing.

7.1.4 Oil and grease

The Facility is required to monitor effluent for oil and grease during each discharge event. A visual inspection is required on a daily frequency during each discharge event, followed by an immediate grab sample if any oil and grease are observed. A grab sample is appropriate because oil and grease is not amenable to compositing in the field.

7.1.5 Ammonia

The Facility will be required to monitor for ammonia. Effluent ammonia concentrations can be an indicator of a facility's treatment efficiency and operating performance. A single grab sample must be collected during each discharge event, at a frequency not to exceed one sample per quarter. A grab sample is appropriate due to the long retention time in the holding pond.

7.1.6 Nutrients

The EPA has put an increased emphasis on nutrients in the nation's streams as pollutants of concern. Due to the EPA's commitment to partnering with Tribal communities to collect more comprehensive nutrient data to better define nutrient levels and seasonal variability at individual facilities, effluent monitoring requirements for nitrate-nitrite, total kjeldahl nitrogen (TKN), total nitrogen (calculated from nitrate-nitrite and TKN), and total phosphorus will be included in the Permit. This will provide information on the concentrations being discharged and be used to inform future permitting actions. A single grab sample must be collected during each discharge event, at a frequency not to exceed one sample per quarter. A grab sample is appropriate due to the long retention time in the holding pond.

7.1.7 pH

The Facility is required to monitor for pH using a grab sample. The Facility must collect samples at the beginning, middle, and end of discharge events lasting less than a week. An additional weekly sample is required for all discharges lasting longer than a week. Grab samples are appropriate for pH, which is not amenable to compositing.

Table 3. Monitoring requirements for Outfall 001

Effluent Characteristic	Monitoring Frequency	Sample Type <u>a/</u>	Data Value Reported on DMR <u>b/</u>
Flow, mgd <u>c/</u>	Daily	Grab	Daily Max. 30-Day Avg.
BOD ₅ , mg/L <u>d/</u>	<u>e/</u>	Grab	Daily Max. 30-Day Avg. 30-Day Avg. % removal
TSS, mg/L <u>d/</u>	<u>e/</u>	Grab	Daily Max. 30-Day Avg. 30-Day Avg. % removal
<i>E. coli</i> , number/100 mL <u>f/</u>	<u>e/</u>	Grab	Daily Max. 30-Day Avg.
O&G, visual <u>g/</u>	Daily	Visual	Narrative
O&G, mg/L	Immediately if visual sheen detected	Grab	Daily Max.
Total Ammonia Nitrogen (as N), mg/L	Quarterly	Grab	Daily Max. 30-Day Avg.
Total Kjeldahl Nitrogen (TKN) (as N), mg/L	Quarterly	Grab	Daily Max. 30-Day Avg.
Nitrate-Nitrite (as N), mg/L	Quarterly	Grab	Daily Max. 30-Day Avg.
Total Nitrogen, mg/L <u>h/</u>	Quarterly	Calculation	Daily Max. 30-Day Avg.
Total Phosphorus, mg/L	Quarterly	Grab	Daily Max. 30-Day Avg.
pH, units	<u>e/</u>	Grab	Minimum Maximum

a/ See section 1 of the Permit for definition of terms.

b/ Refer to the Permit for requirements regarding how to report data on the DMR.

c/ Flow measurements of effluent volume shall be made in such a manner that the Permittee can affirmatively demonstrate that representative values are being obtained. The average flow rate in million gallons per day (mgd) during the reporting period and the maximum flow rate observed, in mgd, shall be reported.

d/ In addition to monitoring the final discharge, influent samples shall be taken and analyzed for these characteristics on the same day at Outfall 001-I.

e/ A minimum of three (3) samples or measurements shall be taken during any discharge. It is required that a sample be taken at the beginning, middle, and end of the discharge to ensure that the sampling is representative of the effluent. If the discharge lasts longer than a week, another sample per week must be collected until the discharge ceases. All the samples collected

during the 7-day, or 30-day period are to be used in determining averages. The Permittee always has the option of collecting additional samples if appropriate.

- f/ For compliance with Permit limitations, the 30-day average is to be calculated using the 30-day geometric mean. The 30-day geometric mean calculation will be based on the geometric mean from the total number of samples collected during the 30-day period. The Permittee may collect more samples than the number of samples specified in the self-monitoring requirements.
- g/ If a visible sheen or floating oil is observed in the discharge, a grab sample shall be taken immediately, and then analyzed and recorded in accordance with the requirements of 40 CFR Part 136. The concentration of oil and grease shall not exceed 10 mg/L in any sample (see Table 2).
- h/ For the purposes of the Permit, the term "Total Nitrogen" is defined as the calculated sum of analytical results from "Total Kjeldahl Nitrogen (TKN)" plus "Nitrate-Nitrite."

7.2 Self-Monitoring Requirements Outfall 001-I

Influent monitoring will consist of a grab sample at the same frequency as the effluent grab sample (Table 4). The influent sample results will be applied in the calculations for reporting the TSS and BOD₅ percent removal values. Influent samples shall be taken at any accessible influent structure or location that contains representative influent, prior to treatment. To ensure that potential variability in the influent is properly characterized, grab samples will be collected at the same frequency as the effluent samples.

Table 4. Monitoring requirements for Outfall 001-I

Effluent Characteristic	Monitoring Frequency	Sample Type <u>a/</u>	Data Value Reported on DMR <u>b/</u>
BOD ₅ , mg/L <u>c/</u>	<u>d/</u>	Grab	30-Day Avg. (use for % removal calculation at Outfall 001)
TSS, mg/L <u>c/</u>	<u>d/</u>	Grab	30-Day Avg. (use for % removal calculation at Outfall 001)

a/ See section 1 of the Permit for definition of terms.

b/ Refer to the Permit for requirements regarding how to report data on the DMR.

c/ Influent samples should be collected at or near the same time as the effluent sampling.

d/ A minimum of three (3) influent samples or measurements shall be taken during any discharge. It is required that an influent sample be taken at the beginning, middle, and end of the discharge to ensure that the sampling is representative. If the discharge lasts longer than a week, another sample per week must be collected until the discharge ceases. All the samples collected during the 7-day, or 30-day period are to be used in determining averages.

8 SPECIAL CONDITIONS

There are no special conditions in the Permit. However, an Asset Management Plan (AMP) requirement (see section 6.3.3 of the Permit) is included in the Permit and must be completed within one year after the Permit effective date and maintained thereafter.

9 REPORTING REQUIREMENTS

Reporting requirements are based on requirements in 40 CFR §§ 122.44, 122.48, and Parts 3 and 127. A discharge monitoring report (DMR) frequency of quarterly was chosen, because the Facility has indicated any discharges will occur on a semi-annual basis.

10 COMPLIANCE RESPONSIBILITIES AND GENERAL REQUIREMENTS

10.1 Inspection Requirements

On a weekly basis, unless otherwise modified in writing by the EPA, the Permittee shall inspect its treatment facility. The Permittee shall document the inspection, as required by the Permit. Inspections of the Facility are required to ensure proper operation and maintenance in accordance with 40 CFR § 122.41(e), and to identify and resolve any issues identified by the Permittee.

10.2 Operation and Maintenance

40 CFR § 122.41(e) requires permittees to properly operate and maintain at all times, all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. In addition to an operation and maintenance plan, regular facility inspections, an AMP, and consideration of staff and funding resources are important aspects of proper operation and maintenance. Asset management planning provides a framework for setting and operating quality assurance procedures and helps to ensure the Permittee has sufficient financial and technical resources to continually maintain a targeted level of service. Consideration of staff and funding provide the Permittee with the necessary resources to operate and maintain a well-functioning facility.

An AMP can be used to forecast relevant needs and costs associated with long-term compliance concerns, particularly in communities that could be impacted by emerging or increased flooding risk, risk of wildfires, or drought risk. While flooding and wildfires can lead to damage to critical infrastructure, droughts could reduce flows in receiving waters resulting in more stringent permit limits in the future. Long-term construction, additional operation and maintenance, and funding plans for upgrading or relocating critical infrastructure may be necessary to mitigate these concerns. Facilities may also consider optimizing their energy efficiency, which can yield substantial economic benefits and help cut down on associated emissions.

Operation and maintenance requirements have been established in sections 6.3.3 and 6.3.4 of the Permit to help ensure compliance with the provisions of 40 CFR § 122.41(e).

10.3 Industrial Waste Management

The Facility is a POTW as defined in 40 CFR § 403.3(q). Typically, a Permittee is required to complete an Industrial Waste Survey (IWS) as part of their permit requirements. An IWS ensures the POTW is able to identify potential pollutants from industrial sources that could inhibit, interfere with, or otherwise be incompatible with operation of the treatment works.

Since the Facility's collection system is limited to the Thunder Butte residential subdivision, an IWS is not required as part of the Permit.

10.4 Per- and Polyfluoroalkyl Substances (PFAS) Notification and Plan

The EPA's PFAS Strategic Roadmap directs the Office of Water to leverage NPDES permits to reduce PFAS discharges to waterways "at the source and obtain more comprehensive information through monitoring on the sources of PFAS and quantity of PFAS discharged by these sources." The EPA's December 5, 2022, memorandum, "Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs" suggests quarterly sampling is appropriate for many POTWs. However, there are no suspected sources of PFAS within the service area and the Facility serves only the residents of the Thunder Butte subdivision. Therefore, the EPA Region 8 is not requiring this Facility to monitor PFAS in the Permit.

If sources of PFAS or PFAS containing chemicals are identified in the Facility's collection system or the Facility's discharge, the Permit may be reopened (per section 9.15.5, Reopener Provision, of the Permit) to include PFAS monitoring and/or BMPs to confirm and/or address PFAS discharge concerns in alignment with the recommendations in the EPA's December 5, 2022 guidance memorandum.

11 ENDANGERED SPECIES CONSIDERATIONS

The Endangered Species Act of 1973 requires all Federal Agencies to ensure, in consultation with the U.S. Fish and Wildlife Service (FWS), that any Federal action carried out by the Agency is not likely to jeopardize the continued existence of any endangered species or threatened species (together, "listed" species), or result in the adverse modification or destruction of habitat of such species that is designated by the FWS as critical ("critical habitat"). See 16 U.S.C. § 1536(a)(2), 50 CFR Part 402. When a Federal agency's action "may affect" a protected species, that agency is required to consult with the FWS (formal or informal) (50 CFR § 402.14(a)).

The U.S. Fish and Wildlife Information for Planning and Conservation (IPaC) website (<https://ecos.fws.gov/ipac/>) was accessed on September 5, 2024, to determine federally-listed Endangered, Threatened, Proposed and Candidate Species for the area near the Facility. The IPaC Trust Resource Report findings are provided below. The designated area utilized was identified in the IPaC search and covers the Facility, holding pond, and immediate downstream receiving waters.

Table 5. IPaC Federally listed Threatened and Endangered Species

Species	Scientific Name	Species Status	Designated Critical Habitat
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Endangered	"No critical habitat has been designated for this species."
Piping Plover	<i>Charadrius melodus</i>	Threatened	"There is final critical habitat for this species. <u>Your location overlaps the critical habitat.</u> "
Red Knot	<i>Calidris canutus rufa</i>	Threatened	"There is proposed critical habitat for this species. Your location does not overlap the critical habitat."
Whooping Crane	<i>Grus americana</i>	Endangered	"There is final critical habitat for this species. Your location does not overlap the critical habitat."
Pallid Sturgeon	<i>Scaphirhynchus albus</i>	Endangered	"No critical habitat has been designated for this species."
Dakota Skipper	<i>Hesperia dacotae</i>	Threatened	"There is final critical habitat for this species. Your location does not overlap the critical habitat."
Monarch Butterfly	<i>Danaus plexippus</i>	Candidate	"No critical habitat has been designated for this species."
Western Regal Fritillary	<i>Argynnis idalia occidentalis</i>	Proposed Threatened	"No critical habitat has been designated for this species."

11.1 Biological Evaluation

Based on the information generated in IPaC, there are six terrestrial species, one aquatic dependent species, and one aquatic species listed in the vicinity of the project area. Of the species listed in the vicinity of the project area, four have final or proposed designated critical habitat, but only the piping plover's designated critical habitat is located in the vicinity of the project area (Table 5).

On September 5, 2024, the EPA and the North Dakota Fish and Wildlife Service (FWS) Field Office's Contaminant Specialist, Jessica Johnson, had a technical assistance meeting to discuss the NPDES permit issuance and the species provided in the IPaC report. This biological evaluation and associated effect determinations for each species were established from discussions held during the technical assistance meeting. The species effect determinations are grouped based on the potential impacts from both the construction of the Facility and discharge of effluent.

11.1.1 Impacts Evaluation: Construction of the Facility

Whooping Crane and Red Knot are both migratory species and would only potentially utilize the project area as stopover habitat. However, the stopover habitat preferred by both species are

generally wetlands and since there are no wetlands within the footprint of the proposed facility, impacts to Whooping Crane and Red Knot are “discountable” (i.e., not likely to happen) and “insignificant” (i.e., exposure would not likely reach the scale of “take”). A determination of “not likely to adversely affect” associated with the construction of the Facility has been made for these species.

Northern Long-eared Bat is a terrestrial species. Potential impacts to these species are associated with the removal of trees and roosting habitat. There are no trees in the footprint of the proposed facility and, as a result, impacts to Northern Long-eared Bat are “discountable” and “insignificant.” A determination of “not likely to adversely affect” associated with the construction of the Facility has been made for the Northern Long-eared Bat.

Western Regal Fritillary and Dakota Skipper are both terrestrial invertebrates. Each species is commonly found in native grasslands in North Dakota. The footprint of the proposed facility is located on converted grazing lands. Aerial imagery shows that the areas in and adjacent to the proposed treatment facility were historically used for grazing lands. In the absence of native grasslands and critical habitat in these areas, impacts to these species are anticipated to be “discountable” and “insignificant.” Due to the anticipated absence of impacts associated with the construction of the proposed facility, a determination of “not likely to adversely affect” has been made.

Piping Plover, Piping Plover critical habitat, and Pallid Sturgeon are located downstream in and adjacent to Lake Sakakawea and outside of the footprint for the proposed facility. As a result, impacts to both species and the critical habitat are not expected, and a determination of “no effect” has been made.

11.1.2 Impacts Evaluation: Facility Effluent

The terrestrial species (i.e., Whooping Crane, Red Knot, Northern Long-eared Bat, Western Regal Fritillary, and Dakota Skipper) are not anticipated to be impacted by the effluent from the Facility due to the limited discharge frequency and minimal risk associated with an exposure to the effluent. The listed species may have incidental contact with the effluent, but a prolonged exposure is not anticipated because each of these species are terrestrial and non-aquatic dependent. Also, there is a low risk with a potential exposure because the wastewater is treated effluent that is required to meet effluent limits that are protective of the receiving waters. As a result, a determination of “no effect” was made for each of the five terrestrial species.

For the aquatic species, aquatic dependent species, and critical habitat a determination of “not likely to adversely affect” was made. While both species are reported in McKenzie County, Pallid Sturgeon, Piping Plover, and the Piping Plover critical habitat are found at least 8.1 stream miles downstream at Lake Sakakawea. Additionally, an exposure of the Facility’s effluent to the Pallid Sturgeon, Piping Plover, and/or Piping Plover critical habitat may occur, but due to the intermittent nature of the discharge and low exposure risk, it has been determined that an exposure to the Facility’s effluent is “discountable” and “insignificant.”

11.2 Biological Evaluation Summary

Based on the IPaC information and the technical assistance meeting with the North Dakota FWS field office representative on September 5, 2024, the EPA determined the permitting action will either result in a "may affect, but is not likely to adversely affect" or will have "no effect" on the species listed above.

Before going to public notice, a copy of the draft Permit and this Statement of Basis was sent to the FWS requesting concurrence with the EPA's finding that issuance of this NPDES Permit "may affect, but is not likely to adversely affect" or will have "no effect" on the species listed as threatened or endangered in the action area by the FWS under the Endangered Species Act.

12 NATIONAL HISTORIC PRESERVATION ACT REQUIREMENTS

Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470(f) requires that federal agencies consider the effects of federal undertakings on historic properties. The first step in this analysis is to consider whether the undertaking has the potential to affect historic properties, if any are present. See 36 CFR § 800.3(a)(1). A review of the National Register of Historic Places found that there are no listings located within or adjacent to the Facility property boundary. During the public comment period, the MHA Nation's Tribal Historic Preservation Office (THPO) will be notified as an interested party to ensure that historic properties are not negatively affected by the conditions of the Permit.

In 2022, the MHA Nation's THPO conducted a class I & II cultural resources survey of the proposed project area at the request of the Indian Health Services, who is the Permittee's contracted engineer that designed the Facility. Based on the results from the class I & II cultural resource survey, the MHA Nation's THPO made a determination of "No Historic Properties Affected" for the proposed footprint of the Facility.

13 401 CERTIFICATION CONDITIONS

At the time of the Permit reissuance, the EPA was the Clean Water Act (CWA) Section 401 certifying authority for the Permit, because the MHA Nation has not received authorization to implement Section 303(c) of the CWA. The EPA is waiving § 401 certification.

14 MISCELLANEOUS

The effective date of the Permit and the Permit expiration date will be determined upon issuance of the Permit. The intention is to issue the Permit for a period not to exceed 5 years.

Permit drafted by Dan Guth, U.S. EPA, 303-312-6121, September 2024

ADDENDUM

AGENCY CONSULTATIONS

On November 27, 2024, the FWS concurred with the EPA's preliminary conclusion that the Permit reissuance is not likely to adversely affect listed species.

On November 6, 2024, an offer for consultation was provided to the MHA Nation's Tribal Historic Preservation Office (THPO). The MHA Nation's THPO did not comment on the EPA's preliminary determination that the Permit issuance will not impact any historic properties.

NEIGHBORING JURISDICTION

The EPA conducted a neighboring jurisdiction analysis of water resources located downstream from the Facility and outside the external boundaries of the Mandan, Hidatsa & Arikara Nation, in accordance with 40 CFR § 121.13. On December 9, 2024, the EPA permit signatory made a negative "may affect" determination for the authorized discharges from the Facility in the neighboring jurisdiction of North Dakota. The EPA documented the factors considered in this determination in the administrative record for this Permit.

PUBLIC NOTICE AND RESPONSE TO COMMENTS

The Permit and statement of basis, including the CWA Section 401 certification, were public noticed on EPA's website on November 6, 2024. No comments were received.