

STATEMENT OF BASIS

FOR THE REISSUANCE OF A NPDES PERMIT

U.S. Environmental Protection Agency
Region 5, Permits Branch - WP-16J
77 West Jackson Boulevard
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Public Notice No.: 24-04-01-A

Public Notice Issued On: April 23, 2024

Comment Period Ends: May 23, 2024

Permit No.: MN-0059439-6 (REISSUANCE)

Application No.: MN-0059439-6

Name and Address of Applicant:

**Name and Address of Facility
Where Discharge Occurs:**

White Earth Department of Public Works
White Earth Band of Chippewa Indians
P.O. Box 418
White Earth, Minnesota 56591

Ponsford Wastewater
Stabilization Lagoon
White Earth Indian Reservation
Pine Point Community, Minnesota
Becker County
(Sec. 32, T141N, R37W)

Receiving Water: Mission Lake

DESCRIPTION OF APPLICANT'S FACILITY AND DISCHARGE

The above facility is located within the exterior boundaries of the White Earth Indian Reservation. The EPA has retained the authority to issue NPDES permits to facilities with discharges to waters of the United States within the exterior boundaries of Indian Reservations. The EPA is issuing this NPDES permit under the authorities of the Clean Water Act.

The application and plans indicate that the existing wastewater treatment system consists of a 3-cell stabilization pond. The influent is pumped to two-primary cells that can be operated in series or in parallel. Effluent from either primary cell is sent to the secondary cell for final treatment. Each primary cell has approximately an area of 1.53 acres and the secondary cell has approximately an area of 1.68 acres. The facility has a controlled, intermittent discharge (Discharge 001) to Mission Lake and is designed to treat an average influent flow of 25,500 gallons per day (gpd) with a five-day biochemical oxygen demand (BOD₅) removal of 85%.

The draft permit requires the applicant to meet the following effluent limitations:

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			
	Concentration (Specified Units)			
Parameter	Daily Minimum	Monthly Average	Weekly Average	Daily Maximum
Flow (MG)	-	Report calendar month total	-	-
Flow (mgd)	-	-	-	-
Dissolved Oxygen (mg/L)	Report	-	-	-
pH (SU)	6.0	-	-	9.0
Total Suspended Solids (TSS) (mg/L)	-	45	65	-
Carbonaceous Biochemical Oxygen Demand (CBOD ₅) (mg/L)	-	25	40	-
E. coli (#/100ml) (April 1 – October 31)	-	126 (geometric mean)	-	410
Phosphorus, Total (mg/L)	-	Report	-	-
Phosphorus, Total (kg/year)	-	70 (Calendar Year to Date Total)	-	-
Sulfates, Total (mg/L)	-	Report	-	-
Ammonia Nitrogen, Total (as N) (mg/L)	-	Report	-	-
Nitrite Plus Nitrate, Total (as N) (mg/L)	-	Report	-	-
Nitrogen, Kjeldahl, Total	-	Report	-	-
Nitrogen, Total (as N) (mg/L)	-	Report	-	-
CBOD ₅ percent removal (%)	≥85	-	-	-
TSS percent removal (%)	≥65	-	-	-
Outfall observation (yes/no)	-	-	-	-

Discharge is limited to a maximum 6 inches per day. Discharge flow was calculated as follows:

$$1.68 \text{ acres} \times 0.5 \text{ feet/day (6 inches/day)} \times 325,900 \text{ gallons per acre-ft} \gg 0.27 \text{ million gallons/day}$$

Loading limits in the permit were calculated using the following formula:

$$(0.27 \text{ mgd} * \text{limit (mg/L)} * 3.785) = \text{Loading (kg/d)}.$$

Section 401 Water Quality Certification

EPA is the appropriate authority for purposes of certifying the proposed discharge under Section 401 of the CWA within the White Earth Indian Reservation and will be unless and until the White Earth Nation is approved for Treatment as a State (TAS) for CWA Sections 303 and 401. EPA is in the process of certifying pursuant to Section 401. EPA believes the effluent limitations included in the draft permit meet tribal and state water quality requirements where they are applicable. The draft certification is available for review. We have discussed our reissuance of the permit with the White Earth Nation, the Minnesota Pollution Control Agency (MPCA) and the permittee.

Basis for Permit Requirements

The limits were developed to ensure compliance with 40 CFR § 122.44(d) and 40 CFR Part 133, EPA's water quality criteria and protection of Minnesota's water quality requirements where they are applicable. The permittee's past performance has shown that it is in substantial compliance with the existing limits.

pH

The limits for pH are based on secondary treatment requirements pursuant to 40 CFR Part 133.

5-day Carbonaceous Biochemical Oxygen Demand (CBOD₅)

The limits for CBOD₅ are based on secondary treatment requirements pursuant to 40 CFR Part 133. A 7-day average limit of 40 mg/L and a 30-day average limit of 25 mg/L are carried from the previous permit. The permittee has been in substantial compliance with these limits. The 7-day average and the 30-day average are the arithmetic mean of pollutant parameter values for samples collected in a period of 7 and 30 consecutive days, respectively.

Total Suspended Solids (TSS)

The limits for TSS are based on equivalent to secondary treatment requirements pursuant to 40 CFR Part 133. A 7-day average limit of 65 mg/L and a 30-day average limit of 45 mg/L are carried from the previous permit. The permittee has been in substantial compliance with these limits. The 7-day average and the 30-day average are the arithmetic mean of pollutant parameter values for samples collected in a period of 7 and 30 consecutive days, respectively.

E. coli

The limits for E. coli are based on EPA's 2012 Recreational Water Quality Criteria. The previous permit had the following limits: the geometric mean of samples collected over a 30-day period shall not exceed 126 E. coli per 100 milliliters (ml) and any single sample shall not exceed 410 E. coli per 100 ml and shall remain in the permit.

Phosphorus

To be consistent with Minnesota water quality standards downstream of the reservation, we tried to determine whether the state's River Eutrophication Standards (RES) are being exceeded at the reservation boundary. We do not have any indication from the state that the applicable RES are being exceeded at the reservation boundary. However, the Minnesota Pollution Control Agency has requested that a phosphorus limit be developed for dischargers upstream of Lake Pepin. Ponsford is such a facility and is categorized as a small-size facility. Using the design flow and a Minnesota categorical effluent concentration of 2 mg/L, the permittee can discharge up to 70 kilograms/year of total phosphorus. The Mass limit is expressed as a calendar year to date total which is the total of all sample values measured from the first of the calendar year to the end date of a monitoring period up to the end of the calendar year. A 2.0 mg/L performance goal is generally achievable for Minnesota's stabilization pond wastewater treatment facilities. The purpose of these mass cap effluent limits is to minimize further expansion of TP loads from this class of wastewater treatment facilities.

Nitrogen

Nitrogen is a pollutant that can negatively impact the quality of Minnesota's water resources, including water used for drinking. Studies have shown that nitrogen in lakes and streams has a toxic effect on aquatic life such as fish. Like phosphorus, nitrogen is a nutrient that promotes algae and aquatic plant growth often resulting in decreased water clarity and oxygen levels. The MPCA's Statewide Nutrient Reduction Strategy (<https://www.pca.state.mn.us/air-water-land-climate/reducing-nutrients-in-waters>) identifies goals and milestones for nitrogen reductions for both point and non-point nitrogen sources within Minnesota.

Based on the data collected during the previous permit term, there is no reasonable potential for the effluent to exceed nitrogen water quality standards. As stated for phosphorus, none of the listed receiving waters are listed as impaired for nutrients. No limits are proposed for the upcoming permit. The draft permit continues to include requirements to monitor for ammonia (as N), Nitrite plus Nitrate-Nitrogen, Total Kjeldahl Nitrogen and Total Nitrogen at a frequency of one time per half year for the five-year term of the permit. This monitoring requirement has been maintained in the permit in accordance with Section 308 of the Clean Water Act.

This monitoring will provide the data necessary to develop a better understanding of the total nitrogen concentrations and loadings that are currently being received and discharged from municipal and industrial wastewater treatment plants within Minnesota and Indian Country. Once a more extensive total nitrogen data set is established nitrogen reduction work can begin to achieve the necessary reductions to meet Minnesota's goal of a 10-20% reduction in total nitrogen loads from point source dischargers by 2025. The changes and/or increases in total nitrogen monitoring in wastewater permits as a result of the Statewide Nutrient Reduction Strategy is outlined in the Minnesota NPDES Wastewater Permit Nitrogen Monitoring Implementation Plan available on the MPCA's website at

<https://www.pca.state.mn.us/business-with-us/wastewater-permit-additional-guidance-and-information>. It is our hope that the Minnesota Tribes will participate in this reduction effort.

Total Sulfates

Ponsford discharges to Mission Lake which does not have a use-classification. Water from the lake reaches the Shell River via Mission Creek. Neither the Shell River nor Mission Creek are listed as impaired. The Shell River is identified as a wild-rice-water and is listed as unimpaired. It has an ambient concentration of 9.34 mg/L SO₄, below Minnesota's water quality standard. In accordance with MPCA's updated sulfate implementation guidance:

“When setting effluent limits for toxic pollutants, if the standard is achieved in the local reach, then additional downstream reaches beyond the immediate local downstream reach of the WWTF are not considered. This is considered a “boundary condition” that essentially ends or re-sets the analysis and has been used in both effluent limit setting and TMDLs for multiple pollutants. Occasionally, there are waters between a discharge point and a water used for production of wild rice that have sulfate concentrations less than the water quality standard. This intervening, low-concentration water defines a boundary condition. **If the long-term average sulfate concentration in an intervening water is less than the applicable criterion, the empirical data demonstrate that an upstream discharge does not have RP, and the permit should follow permit writer monitoring guidance.**”

Considering that the immediate receiving water is listed as unimpaired, and discharges from the facility have never exceeded 3.0 mg/L, the permit will continue to require monitoring for sulfates.

Dissolved Oxygen

The existing permit required effluent monitoring for dissolved oxygen. Based on this data, we did not find a reasonable potential to cause or contribute to a violation of the state's WQS at the reservation boundary, so no limits are required. Monitoring is still required in the draft permit.

Per- and Polyfluoroalkyl Substances (PFAS)

PFAS are widely used, long lasting chemicals, components of which break down very slowly over time. Because of their widespread use and their persistence in the environment, many PFAS are found in the blood of people and animals all over the world and are present at low levels in a variety of food products and in the environment. PFAS are found in water, air, fish, and soil at locations across the nation and the globe. Scientific studies have shown that exposure to some PFAS in the environment may be linked to harmful health effects in humans and animals.

At this time, EPA has not finalized water quality criteria or effluent guidelines for any PFAS chemicals. We looked at the need for PFAS sampling at this facility. Wastewater is from domestic sources with no industrial users. This type of discharge has not been identified as a significant source of PFAS by EPA or MPCA. No sampling is required. A reopener clause has been

added if additional information becomes available indicating sampling or limits are needed.

Asset Management – Operation & Maintenance Plan

Regulations regarding proper operation and maintenance are found at 40 CFR § 122.41(e). These regulations require, “that the permittee shall at all times operate and maintain 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 the permit.” The treatment plant and the collection system are included in the definition of “facilities and systems of treatment and control” and are therefore subject to the proper operation and maintenance requirements of 40 CFR § 122.41(e).

Similarly, a permittee has a “duty to mitigate” pursuant to 40 CFR § 122.41(d), which requires the permittee to “take all reasonable steps to minimize or prevent any discharge in violation of the permit which has a reasonable likelihood of adversely affecting human health or the environment.”

The draft permit requirements are the first steps of an asset management program which contains goals of effective performance, adequate funding, adequate operator staffing and training. Asset management is a planning process that ensures that you get the most value from each of your assets and have the financial resources to rehabilitate and replace them when necessary, and typically includes five core elements which identify: 1) the current state of the asset; 2) the desired level of service (e.g., per the permit, or for the customer); 3) the most critical asset(s) to sustain performance; 4) the best life cycle cost; and 5) the long term funding strategy to sustain service and performance.

EPA believes that requiring a certified wastewater operator and adequate staffing is also essential to ensure that the treatment facilities will be properly operated and maintained. Mapping the collection system with the service area will help the operator better identify the assets that he/she is responsible for and consider the resources needed to properly operate and maintain them. This will help in the development of a budget and a user rate structure that is necessary to sustain the operation. The development and implementation of a proactive preventive maintenance program is one reasonable step that the permittee can take to demonstrate that it is at all times, operating and maintaining all the equipment necessary to meet the effluent limitations of the permit.

Special Conditions

- The permit requires electronic reporting.
- Dikes must be maintained and vegetation cut.
- The permit requires the continued implementation of an Operation & Maintenance Plan. The plan covers the use of a certified operator to oversee the facility, having adequate staff to help ensure compliance with the permit, mapping the treatment system, developing a preventive maintenance program, reporting and other items.
- The permit contains Industrial Waste Pretreatment Program requirements in accordance

with 40 CFR Parts 122 and 403.

- Compliance with 40 CFR Part 503 (sludge use and disposal regulations) if sludge is used or disposed within the Reservation. EPA is to be contacted prior to sewage sludge being removed from the pond system.
- The permit requires that if sewage sludge is to be land applied, the permittee must submit the following information to EPA prior to application:
 - i. certification that the application contractor has received all necessary information to comply with applicable provisions of 40 CFR Part 503;
 - ii. site location by latitude and longitude, and code number to identify field or field portion.
 - 1) Plat map showing location of the site relative to local landmarks.
 - 2) Proximity to surface waters of the United States.
 - 3) Potential presence of endangered species.
 - 4) Soil fertility test with fertilizer recommendations.
 - 5) Previous crop and future crop with yield goal.
 - 6) Participation Agreement signed by the landowner or operator, if different, of the site to receive sludge.
 - 7) Determination whether the site has previously been used for sewage applications.
 - 8) If previously used, determination of cumulative pollutant loading rate since July 19, 1993;
 - iii. certification that the local township supervisor has been notified that a site has been identified and is intended for use;
 - iv. certification that the County Health Department has been notified that hauling is scheduled to take place; and
 - v. certification that notice has been provided to landowners and occupants adjacent to, or abutting the proposed land application site. Such notice shall be accomplished by one of the following: written notice through the regular mail; public notice in the local newspaper; public reading of notice at open public meeting.
- The permit contains reopener clauses to include additional requirements PFAS and resulting from TMDL studies.

Significant Changes from The Last Permit

The draft permit contains the following significant changes from the last issued permit:

- Change to EPA Region 5 mailing addresses have been made throughout the permit.
- 'Summary of Regular Reporting' has been updated. (Pages I-2)

- The 'Stabilization Pond' requirements have been updated. (Part I.D)
- 'Reporting' requirements for electronic submittal of DMRs has been updated. (Part I.E.2)
- 'Operation and Maintenance Plan' requirements have been updated. (Part I.E.5)
- 'Industrial Waste Pretreatment Program' requirements have been updated. (Part I.E.6)
- 'Sludge Disposal Requirements' have been updated. (Part I.E.7)
- Reopener clause to include additional requirements for PFAS. (Part I.E.9)
- The 'Standard Conditions' have been revised. (Part II)

The permit is based on an application dated March 17, 2023 (determined complete May 17, 2023) and additional supporting documents found in the administrative record.

The permit will be effective for approximately five years from the date of reissuance as allowed by 40 CFR § 122.46.

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