

# STATEMENT OF BASIS

## FOR THE ISSUANCE OF A NPDES PERMIT

U.S. Environmental Protection Agency  
Region 5, Permits Branch - WP-16J  
77 West Jackson Boulevard  
Chicago, Illinois 60604  
(312) 886-6106

**Public Notice No.: 23-12-01-A**

**Public Notice Issued On: December 4, 2023**

**Comment Period Ends: January 3, 2024**

**Permit No.: MN-0059447-6 (REISSUANCE)**

**Application No.: MN-0059447-6**

**Name and Address of Applicant:**

Bois Forte Band of Chippewa  
P.O. Box 16  
Nett Lake, Minnesota 55772

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

Nett Lake Wastewater  
Stabilization Lagoon  
Bois Forte Indian Reservation  
Nett Lake, Minnesota  
St. Louis County  
(S ½ of Section 18, T65N, R21W)

**Receiving Water:** wetland area that drains to Nett Lake

**DESCRIPTION OF APPLICANT'S FACILITY AND DISCHARGE**

The above-named applicant has applied for an NPDES Permit to discharge into the designated receiving water. The above facility is a tribal facility located on the Bois Forte Indian Reservation. The U. S. Environmental Protection Agency has retained the authority to issue NPDES permits to facilities with discharges to waters of the United States within the boundaries of Indian Reservations. The permit will be issued by EPA under the authorities of the Clean Water Act.

The application and plans indicate that the treatment system consists of a 3-cell wastewater stabilization pond system. The two primary cells equal approximately 5.5 acres and the final cell is 5 acres at the average operating level. The facility has a controlled discharge {Outfall 001} to a wetland area which drains to Nett Lake. The pond system is designed to treat an average

influent flow of 40,000 gallons per day (gpd). Wastewater is from domestic sources only.

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

<b><u>Limitations and Monitoring Requirements</u></b>		
<b><u>Parameter</u></b>	<b><u>30-Day Average</u></b>	<b><u>7-Day Average</u></b>
CBOD <sub>5</sub>	25 mg/L	40 mg/L
TSS	45 mg/L	65 mg/L
Phosphorus	1.0 mg/L	2.0 mg/L
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	---
E. coli	126 E. coli/100ml	410 E. coli/100ml (daily maximum)
pH	6 S.U. (Minimum)	9 S.U.(Maximum)

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

$$5 \text{ acres} \times 0.5 \text{ feet/day (6 inches/day)} \times 325,900 \text{ gallons per acre-ft} \approx 0.81 \text{ million gallons/day}$$

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

$$(0.81 \text{ mgd} \times \text{limit (mg/L)} \times 3.785) = \text{Loading (kg/d)}.$$

#### **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 Bois Forte Indian Reservation and will be unless and until the Bois Forte Band of Chippewa 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 Bois Forte Band of Chippewa, the Minnesota Pollution Control Agency (MPCA) and the permittee.

### **Basis for Permit Requirements**

The limits were developed to ensure compliance with 40 CFR Parts 131 and 133 and protection of Minnesota's water quality standards 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 (CBOD<sub>5</sub>)**

The limits for CBOD<sub>5</sub> 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 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. These limits are adequate to protect the receiving water in Nett Lake.

### **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 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.

### **Dissolved Oxygen**

The existing permit required effluent monitoring for dissolved oxygen. Based on this data, no 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.

### **E. coli**

The limits for E. coli are based on EPA's 2012 Recreational Water Quality Criteria. The draft permit maintains 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.

### **Phosphorus**

Phosphorus is a common constituent in many wastewater discharges and a pollutant that has the potential to negatively impact the quality of Minnesota's lakes, wetlands, rivers, and streams. Phosphorus promotes algae and aquatic plant growth often resulting in decreased water clarity and oxygen levels. In addition to creating general aesthetic problems, these conditions can also impact a water body's ability to support healthy fish and other aquatic

species. Therefore, phosphorus discharges are being carefully evaluated throughout the state.

Due to these concerns, the existing phosphorus limits have been retained in this permit. The limits are technology based and are typical of what can be expected from a well-maintained wastewater pond.

### **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 existing permit term and using a 10:1 dilution ratio for Nett Lake, there is no reasonable potential for the effluent to exceed nitrogen water quality standards. 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 is 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**

Nett Lake has been identified as a wild rice water of the Bois Forte Band. During the previous permit term, the permittee was required to monitor its effluent for sulfate. Monitoring was required to provide information related to sulfate levels being discharged from wastewater treatment ponds and the possible impacts to wild rice waters. EPA used this data collected during the previous permit term to determine whether the discharge has a reasonable potential to cause or contribute to a water quality violation of the state's sulfate water quality standard. Using a 10:1 dilution for Nett Lake, there is no reasonable potential for the effluent to

exceed the 10 mg/L sulfate standard. Therefore, no limits are proposed for the upcoming permit. Monitoring is maintained at two times per year during periods of discharge.

#### **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 and therefore, no sampling is required. A reopener clause has been added if additional information becomes available indicating sampling or limits is 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 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). These requirements were developed using the Part 503 Implementation Guidance for sludge and 40 CFR Parts 122, 501, and 503. It is not expected that any sludge will be used or disposed of during this permit term. EPA is to be contacted if sewage sludge is to be removed from the pond system.
- Reopener clause to include additional requirements for PFAS.

### **Significant Changes from The Last Permit**

Following are the significant changes in the draft permit:

- Change to EPA Region 5 mailing addresses have been made throughout the permit.
- Facility description has been updated. (Pages I-2)
- '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.8)
- The 'Standard Conditions' have been revised. (Part II)

The permit is based on an application dated March 14, 2023 (determined complete June 7, 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.

Written By: Katie Rosenberg/John Colletti  
U.S. EPA, Region 5, WP-16J  
77 West Jackson Blvd.  
Chicago, IL 60604  
(312) 886-6774

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