

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
Chicago, Illinois 60604
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Public Notice No.: 22-08-01-A

Public Notice Issued On: August 1, 2022

Comment Period Ends: August 31, 2022

Permit No.: WI-0071501-3 (REISSUANCE)

Application No.: WI-0071501-3

Name and Address of Applicant:

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

Sokaogon Chippewa Community
3051 Sand Lake Road
Crandon, Wisconsin 54520

Sokaogon Chippewa Community
Wastewater Treatment System
3000 Ackley Circle
Crandon, Wisconsin 54520
Forest County
(SW ¼ of Section 28, T35N, R12E)

Receiving Water: Wetland 22 to Swamp Creek

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 facility is located within the exterior boundaries of the Mole Lake 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.

The application and plans indicate that the permittee owns and operates a 0.09 million gallons per day wastewater treatment system. The system consists of fine screening followed by septic tanks (2 primary and 2 secondary), recirculating sand filter beds (4) and ultraviolet disinfection. The discharge is continuous to a subsurface discharging system 50 feet from the edge of a wetland on the Mole Lake Indian Reservation (Latitude: 45° 28' 54" Longitude: 89° 00' 04"). The subsurface discharge almost immediately surfaces from the foot of the system and flows over riprap directly to Wetland 22. Sludge generated at the facility is hauled offsite by a private hauler when needed and land applied. The treatment system serves the Sokaogon Chippewa Community and Casino/Hotel.

Proposed Effluent Limitations:

Outfall 001- the permittee is authorized to discharge treated municipal wastewater from Outfall 001. Outfall 001 discharges to Wetland 22.

Parameter	Date	Monthly average	Weekly Average	Daily Maximum	Daily Minimum
Flow	All year	Report	Report	---	---
Carbonaceous Biochemical Oxygen Demand (CBOD ₅)	All Year	20 mg/L	30 mg/L	---	---
Total Suspended Solids (TSS)	All Year	20 mg/L	30 mg/L	---	---
Ammonia Nitrogen, Total (as N) (mg/L)	All Year	Report	---	Report	---
Dissolved Oxygen (mg/L)	All Year	---	---	---	5.0
E. coli	May 1 – September 30	126 E. coli/100 ml (geometric mean)	---	410 E. coli/100 ml	---
Phosphorus, Total (mg/L)	All Year	Report	---	---	---
Temperature (°F)	All Year	Report	-	Report	-
pH	All Year	---	---	8.5 S.U.	6.5 S.U.
Outfall Observation	All Year	Report	---	---	---

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

$$0.09 \text{ mgd} \times \text{limit (mg/L)} \times 8.34 = \text{Loading (lbs/d)}.$$

Section 401 Water Quality Certification

Where states or tribes have federally approved water quality standards that are applicable at the point of discharge, federal NPDES permits cannot be issued unless water quality certification for the discharge is granted or waived pursuant to Section 401 of the Clean Water Act. The tribal Section 401 authority within the Mole Lake Indian Reservation is the Sokaogon Natural Resources Board.

EPA provided a copy of the permittee’s NPDES permit application and a copy of the draft NPDES permit to the Sokaogon Natural Resources Board. EPA believes the discharges authorized under the NPDES permit will not violate the Sokaogon Chippewa Community’s (SCC) Water Quality Standards. The SCC’s Water Quality Standards can be obtained at: [Water Quality Standards Regulations: Sokaogon Chippewa Community \(formerly Mole Lake Band\) US EPA](#).

By letter dated June 30, 2022, the Sokaogon Natural Resources Board provided Section 401 certification.

Basis for Permit Requirements

As stated above, the facility discharges its effluent through a subsurface drainage system. Typically, EPA would not normally require a NPDES permit for a subsurface discharge unless it

is determined that there is a direct hydrological connection to surface waters and is functionally equivalent to a direct discharge. Since the subsurface discharge location is roughly only 50 feet from Wetland 22 and the discharge almost immediately surfaces from the foot of the system and flows directly to Wetland 22, EPA considers this a direct discharge to surface waters.

The effluent limits in the permit were developed to protect Wetland 22 and to ensure compliance with 40 CFR Part 133, the SCC's federally approved water quality standards (WQS) within the Mole Lake Indian Reservation and Wisconsin water quality standards where they are applicable. In this regard, the draft permit has been shared with the Wisconsin Department of Natural Resources (WDNR) and SCC's environmental staff. SCC's water quality standards are applicable at the point of discharge and specifically allows the discharge from this facility. Under those standards, Wetland 22 is classified as an Exceptional High Quality Water (EHQW) and is able to support the following designated uses: Cultural; Primary and Secondary Contact Recreational; Commercial; Agricultural/Forestry; Navigation; Aquatic life, and; Wildlife. Wetland 22 has not been listed as an impaired water. Under Wisconsin's WQS, Wetland 22 would be classified as a Limited Aquatic Life (LAL) water.

pH

Though the actual average effluent pH level discharged by the facility during the previous permit term is lower (6.94 S.U.), the maximum pH limit in the permit is set at 8.5 S.U., which is more stringent than EPA's secondary treatment standards (40 CFR Part 133). This maximum pH limit was set to limit the amount of ammonia-N (acute toxicity) that could be discharged. Monitoring indicates the permittee is in substantial compliance with the limit.

5-day Carbonaceous Biochemical Oxygen Demand (CBOD₅) and Total Suspended Solids (TSS)

The limits for CBOD₅ and TSS, a weekly average limit of 30 mg/L and a monthly average limit of 20 mg/L, are carried over from the previous permit. The weekly average and the monthly average are the arithmetic mean of pollutant parameter values for samples collected in a period of 7 and 30 consecutive days, respectively. The permittee has been in substantial compliance with these limits. The limits are based on protecting SCC's water quality standards and Wisconsin's limited aquatic life standard. For the previous permit, EPA received Section 401 of the CWA certification from SCC that the limits in that permit are protective of SCC's water quality standards. Since the standards have not changed since the issuance of the last permit and the design flow of the facility has not changed, EPA believes the limits will continue to protect SCC's Ambient Water Quality Values. We also believe the limits are protective of Wisconsin's dissolved oxygen standard at the boundary of the reservation. 40 CFR Part 133 requires POTWs to meet a minimum percent removal of 85%. This limit is not included in the permit for CBOD₅ and TSS because the concentration limits are more stringent than secondary treatment requirements and therefore the facility must remove more than 85% to be able to meet the concentration limits.

Dissolved Oxygen (DO)

A dissolved oxygen limit of 5.0 mg/L as a daily minimum is included in the permit. This limit will ensure protection of SCC's WQS for EHQWs. This limit is also appropriate for this facility as the limit would be protective of Wisconsin's dissolved oxygen standard at the boundary of the

reservation. Monitoring indicates the permittee has been in substantial compliance with the limit.

E. coli

The limits for E. coli are based on the EPA's 2012 Recreational Water Quality Criteria. The geometric mean of samples collected over a 30-day period shall not exceed 126 E. coli per 100 milliliters (ml). The statistical threshold value of 410 E. coli per 100 ml is set as the daily maximum. The limits are applicable May through October. Monitoring indicates the permittee is in substantial compliance with the limits.

Phosphorus

Phosphorus is a common constituent in many wastewater discharges and a pollutant that has the potential to negatively impact the quality of 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.

The previous permit required monitoring for phosphorus during discharge. We believe this is still appropriate. Based on existing effluent data, low discharge flow and the type of receiving water, EPA does not believe there is a reasonable potential that the discharge will cause or contribute to a violation of SCC's water quality standards in Wetland 22 or Wisconsin's water quality standards at the reservation boundary. Though not applicable at the point of discharge, Subchapter II of Chapter NR 217, Wis. Adm. Code, requires municipal wastewater treatment facilities that discharge greater than 150 pounds of Total Phosphorus per month to comply with a monthly average limit of 1.0 mg/L, or an approved alternative concentration limit. The highest monthly total submitted during the last permit term was 53.1 lbs of phosphorus, therefore no phosphorus limit would be required by NR217. Also, Wisconsin phosphorus water quality standards do not apply to discharges to wetlands (Limited Aquatic Life) (NR 102.06(6)(d)). Also, monitoring required by the permit of Wetland 22 has not demonstrated any adverse effects to the integrity of the wetland in accordance with SCC's narrative criteria and therefore no limits are included. As stated in the 2021 Wetland Monitoring Report, "As of 2021, Wetland 22 appears to be in a similar state that it was in before the treatment plant was constructed." Monitoring is still required as the information will be used with the Phosphorus Management Plan required below.

The permittee is also required to continue to implement a Phosphorus Management Plan (PMP). While the PMP does not require specific reductions at this time, the EPA strongly encourages the permittee to continually identify and eliminate/reduce sources of phosphorus to, and improve phosphorus management within, your wastewater treatment facility. Though it may be difficult to find "sources of high phosphorus loading" as the wastewater is mainly from domestic sources, optimizing treatment plant performance for phosphorus removal should be a more successful means for achieving phosphorus reductions at the facility.

Ammonia

Ammonia is a pollutant that can negatively impact the quality of the Tribe's and Wisconsin's water resources, including water used for drinking. Studies have shown that ammonia in lakes

and streams has a toxic effect on aquatic life such as fish. Using background data collected as part of required wetland monitoring and effluent data submitted during the previous permit term, we calculated limits that would both be protective of SCC's water quality standards and Wisconsin's standards at the reservation boundary. The previous permit had a daily maximum and monthly average ammonia-N limit of 9.87 mg/L to protect against acute toxicity. The permittee was in substantial compliance with these limits. The permittee also began monitoring the temperature of the effluent to be used for calculating future ammonia limits. Using this temperature data, actual effluent pH data and background levels found in the 2021 wetland monitoring report, new ammonia limits were calculated. The most stringent limit calculated was the summer monthly average limit at 34.95 mg/L. Based on this limit and effluent data submitted during the previous permit term, there is no reasonable potential to cause or contribute to a violation of water quality standards and therefore no limit is included in the permit. The permit will continue to require monitoring.

Temperature

Monitoring for temperature will continue in this permit for calculating future ammonia limits. Based on effluent data submitted during the previous term and background and downstream data found with the 2021 wetland monitoring report, there is no reasonable potential to cause or contribute to a violation of SCC's and/or Wisconsin's water quality standards. SCC's standards require no appreciable long term rise in temperature. Looking at effluent data from 2021 and corresponding background and downstream data, temperature change is either negligible or lowered at the downstream site. Wisconsin's temperature standard for Limited Aquatic Life waters is a daily maximum effluent temperature of 86° F and 120° F specifically for wetlands. The highest reported value during the previous permit was 70.34° F. As the state's water quality standards are not applicable at the point of discharge, however, based on the data, we do not believe the temperature standards would be violated at the reservation boundary.

Wetland Protection/Monitoring Plan

To assure that the water quality of Wetland 22 is maintained, monitoring is required to demonstrate that the discharge does not adversely affect the integrity of the wetland. Monitoring results are intended to document that the discharge does not have a significant impact on the downstream wetlands. It should be noted that as stated in the 2021 Wetland Monitoring Report, "As of 2021, Wetland 22 appears to be in a similar state that it was in before the treatment plant was constructed." The permittee shall continue to implement its wetland protection/monitoring plan that was developed during a previous permit term.

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 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.
- Implementation of a Phosphorus Management Plan.
- Continue implementing a Wetland Protection/Monitoring Plan.
- 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), though no sludge is expected to be used or disposed of during the permit term.

Significant Changes from the Previous Permit

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

1. Changes to EPA Region 5 mailing addresses have been made throughout the permit.

2. Added a downstream surface water from Wetland 22.
3. Updated 'Summary of Regular Reporting'.
4. The daily maximum and monthly average limits for ammonia-N have been deleted.
5. The Reporting requirements for electronic submittal of DMRs has been updated (Part I.C.2).
6. Requirements related to Asset Management have been updated (Part I.C.3).
7. Requirement to implement a Phosphorus Management Plan (Part I.C.4).
8. The septage land application sites under the 'Septage Disposal Requirements' have been removed as no septage is planned to be disposed from the facility during the permit term (Part I.C.6).
9. The "Standard Conditions" have been revised (Part II).
10. Reporting of bypasses and sanitary sewer overflows is required electronically (Part II.B.3.c) (Part II.D.8).

The permit is based on an NPDES application dated February 2, 2022, and additional 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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