

# STATEMENT OF BASIS

## FOR THE REISSUANCE OF A NPDES PERMIT

U.S. Environmental Protection Agency  
Region 5, NPDES Programs Branch - WN-16J  
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**Public Notice No.: 16-08-01-A**

**Public Notice Issued On: August 3, 2016**

**Comment Period Ends: September 2, 2016**

**Permit No.: WI-0073059-2 (REISSUANCE)**

**Application No.: WI-0073059-2**

**Name and Address of Applicant:**

Menominee Indian Tribe of Wisconsin  
Menominee Tribal Utilities  
P.O. Box 910  
Keshena, Wisconsin 54135

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

Neopit Wastewater Treatment Facility  
Menominee Indian Reservation  
County Road M, Neopit, Wisconsin  
Menominee County  
(S ½ of Sec 17, T29N, R14E)

Receiving Water: Groundwater via seepage cells to Tourtillotte 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 Menominee Indian Reservation. The permit will be issued by the U.S. Environmental Protection Agency.

The renovated treatment system consists of two aerated cells followed by a settling cell. These cells are meant to be operated in series with an operating depth of 12 feet. Following the settling cell, the operator can direct the effluent to any of three seepage cells for final disposal. The maximum daily average design flow rate to the new system is 0.17 million gallons per day (mgd) with a peak sustained flow of 0.34 mgd. This facility replaced an old groundwater discharging system that leaked from the stabilization cells that had not been permitted in the past.

The draft permit requires the applicant to meet the following limitations prior to the seepage cells:

<b>Parameter</b>	<b>Limit Type</b>	<b>Limit and Units</b>
Flow Rate	Monitor only	MGD
BOD <sub>5</sub>	Monthly Avg.	50 mg/L
Total Suspended Solids	Monitor only	mg/L
pH	Monitor only	S.U.
Nitrogen, Total Kjeldahl	Monitor only	mg/L
Nitrogen, Ammonia (NH <sub>3</sub> -N) Total	Monitor only	mg/L
Nitrogen, Organic Total	Monitor only	mg/L
Nitrogen, Nitrite + Nitrate Total	Monitor only	mg/L
Nitrogen, Total	Monitor only	mg/L
Total Dissolved Solids	Monitor only	mg/L
Chlorides	Monitor only	mg/L

The draft permit requires the applicant to meet the following limitations in the groundwater:

<b>Parameter</b>	<b>Units</b>	<b>Enforcement Standard</b>
Depth To Groundwater	feet	Monitor only
Ground Elevation	feet MSL	Monitor only
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	10
Chloride, Dissolved	mg/L	250
pH Field	S.U.	Monitor only
Nitrogen, Ammonia Dissolved	mg/L	Monitor only
Nitrogen, Organic Dissolved	mg/L	Monitor only
Solids, Total Dissolved	mg/L	500

### **Section 401 Water Quality Certification**

EPA is the appropriate authority for purposes of certifying the discharge under Section 401 of the Clean Water Act. Clean Water Act Section 401 certification is not needed from Wisconsin nor the Menominee Indian Tribe of Wisconsin as neither has federally approved water quality standards applicable to the receiving water at the point of discharge, however, EPA believes the effluent limitations included in the draft permit meet state water quality standards at the reservation boundary. We have discussed our reissuance of the permit with the Wisconsin Department of Natural Resources.

### **ESA and NHPA Compliance**

EPA has satisfied its requirements under the Endangered Species Act and the National Historical Preservation Act. This is an existing facility that has been permitted in the past by EPA. No new construction is planned during the permit term. Therefore, it is believed that the reissuance of the permit and the continued operation of the facility and associated discharge will have no effect on

endangered or threatened species or their critical habitat and will have no impact on historical, archeological, or cultural resources.

### **Basis for Permit Requirements**

The old leaking treatment facility had not been issued a NPDES permit by EPA in the past as this system was designed to discharge to groundwater via seepage cells. NPDES permits are generally not needed for facilities that do not have a direct discharge to surface waters, however, it has been EPA's position, supported by case law, that the regulations of the NPDES program are deemed to be applicable to operations that have a direct hydrologic connection to groundwater that has a direct hydrologic connection to surface water. This was detailed in the Preamble to proposed rules, guidelines and standards for Concentrated Animal Feeding Operations, Federal Register, vol. 66, No. 9, Fri., January 12, 2001, pp. 3015-3020. A NPDES permit would not be needed if the prospective permittee provides a hydrologist's statement that the discharge does not have a direct hydrologic connection to surface water via groundwater. The permittee has not provided such a statement for this facility and in fact, the Preliminary Assessment Report, Investigation of Leaking Septic Lagoons into Tourtillotte Creek, Neopit, Wisconsin, Earth Science Associates, Inc., North Branch Minnesota, December 2001, makes clear that the Neopit wastewater lagoon is a point source that has a direct hydrologic connection to groundwater beneath the site that has a direct hydrologic connection to the adjacent surface water, the navigable waters of Tourtillotte Creek. Therefore, since the renovated treatment facility's discharge is still to groundwater via seepage cells, EPA issued a NPDES permit for the renovated treatment facility. EPA is now in the process of reissuing a new permit for the facility. The permit language was modeled after language found in Wisconsin groundwater discharge permits.

In the development of this permit, EPA looked at protecting Federal drinking water standards, Menominee's Tribal Groundwater Ordinance (87-28) and the Wisconsin Department of Natural Resources' (WDNR) Groundwater Quality Standards (NR140). Also, since the groundwater has a direct hydrologic connection to surface water (Tourtillotte Creek), we looked at protecting Tribal water quality standards and Wisconsin water quality standards, where they are applicable. In this regard, the Tribe and WDNR were consulted regarding appropriate requirements. Prior to issuance of the previous permit, the Indian Health Service, on behalf of the Tribe, requested the US Geological Survey to model the expected discharge plume from the new facility and determine how long it would take to reach Tourtillotte Creek. Based on the modeling and the porosity of the soil, the first of the new discharge plume would take 3 to 5 years to reach the creek and 13 to 21 years before the entire breadth of the plume reaches the creek. However, since the existing facility had been discharging to the groundwater since the facility began operations in the 1970's, the existing discharge plume is already reaching Tourtillotte Creek.

#### **A. Federal Drinking Water Standards**

EPA has established National Primary Drinking Water Regulations that set mandatory water quality standards for drinking water contaminants. These are enforceable standards called "maximum contaminant levels" or "MCLs", which are established to protect the public against consumption of drinking water contaminants that present a risk to human health. An MCL is the

maximum allowable amount of a contaminant in drinking water which is delivered to the consumer. Parameters of concern related to a wastewater discharge are nitrate and nitrite. The MCLs for these parameters are 10 mg/L and 1 mg/L, respectively. The permit contains a limit of 10 mg/L for total nitrate + nitrite to ensure compliance with the above MCLs.

In addition, EPA has established National Secondary Drinking Water Regulations that set non-mandatory water quality standards for 15 contaminants. EPA does not enforce these "secondary maximum contaminant levels" or "SMCLs." They are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. These contaminants are not considered to present a risk to human health at the SMCL. Parameters of concern related to a wastewater discharge are chlorides and total dissolved solids. The SMCLs for these parameters are 250 mg/L and 500 mg/L, respectively.

#### **B. Menominee Tribal Groundwater Ordinance 87-28**

On January 7, 2010, the Menominee Tribal Legislature, on behalf of the Menominee Indian Tribe of Wisconsin, granted a variance (Resolution 09-84) to the Tribal Groundwater Ordinance 87-28 to Menominee Tribal Utilities allowing the Enforcement Standards listed in Ordinance 87-28 to be met as sampled in monitoring wells located within a 1200-foot down gradient radius of the discharge point. In order to monitor the full breadth of the discharge plume, down gradient monitoring wells have been installed at approximately 850 feet, 1050 feet and 500 feet (east to west) from the new seepage cells. The Tribe's Enforcement Standards are to be met at these monitoring wells. The permit includes limits for nitrate + nitrite, chlorides and total dissolved solids as these are the parameters of concern related to wastewater discharges.

#### **C. Wisconsin Department of Natural Resources' (WDNR) Groundwater Quality Standards (NR140)**

In accordance with NR 140, for a wastewater land application system, it is normally required that groundwater standards be met at a distance of 250 ft (or the property boundary if closer). In some cases this distance can be expanded by 50% to 375 feet (see NR 140.22). In situations where the groundwater plume from a wastewater infiltration system travels a short distance and then migrates up into a surface water that is 375 feet or less away, a determination can be made that groundwater standards are met because the plume doesn't travel further than the 250 (or 375 feet). In these cases, an alternative nitrogen effluent limit can be established, or have no nitrogen limit, if it is known that the community owns or controls the land above the plume so no water supply wells can be installed. In addition, verification that the surface water impacts will not be adverse must be made, but typically nitrogen is not an issue for the surface water. If the distance is greater than 375 feet, under NR 140.28, discretion is allowed to issue an exemption and still allow an alternative nitrogen limit if it is determined that this would not present a public health or welfare threat. When an exemption is given, there is an associated requirement that nitrogen still be reduced to the extent "technically and economically feasible". Since the distance is greater than 375 feet, an exemption would be sought if the WDNR were the permitting authority. It is EPA's belief that because of the facts related to this facility and the requirements of the permit, the groundwater discharge would not present a public health or welfare threat and complies with

the intent of NR 140. The distance between the new seepage cells and Tourtillotte Creek ranges from approximately 900 feet to 1600 feet. EPA believes the discharge to groundwater does not pose a public health concern because there are no existing potable wells (public or private) down gradient from the seepage cells within the projected discharge plume. The Menominee Indian Tribe of Wisconsin has also passed Resolution 09-18 that prohibits the construction and use of potable wells (private or public) within the area of the projected effluent plume up to Tourtillotte Creek in which the effluent/groundwater is projected to enter.

#### **D. Protection of Surface Water Quality Standards**

Groundwater monitoring wells have been installed up gradient and down gradient of the treatment system. Recent groundwater data taken from the existing discharge plume indicates that the quality of the groundwater discharging to Tourtillotte Creek is not causing or contributing to a violation of the Tribe's or state's water quality standards for ammonia, phosphorus and E. coli which we believe are the parameters of most concern related to the discharge. Continued groundwater monitoring is required at this site to assure that the flow of groundwater into surface water will not cause surface water quality standards be attained or exceeded, and to monitor both the effectiveness of site soil treatment processes and the quality of impacted groundwater flowing into surface water.

#### **Asset Management – Operation & Maintenance Plan**

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. Section 402(a)(2) of the CWA provides for inclusion of permit requirements to assure compliance with sections 301, 302, 306, 307 and 403 (codified essentially by 40 CFR 122.43(a)).

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.”

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**

1. The permit requires the development and 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.
2. The permit contains Industrial Waste Pretreatment Program requirements in accordance with 40 CFR parts 122 and 403.
3. The permit contains requirements related to sludge disposal in accordance with 40 CFR parts 122 and 503. It is not expected that sewage sludge will be disposed of during the permit term.
4. Dikes must be maintained and vegetation cut.
5. Additional monitoring as required for discharges with a design flow greater than 0.1 MGD. This monitoring is an application requirement of 40 CFR 122.21(j) (Part I.C.2 of the permit).

### **Significant Changes from the Previous Permit**

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

1. Added 'Summary of Regular Reporting'.
2. The Reporting requirements have been updated to require electronic submittal of DMRs (Part I.D.2).
3. Requirements related to Asset Management have been added (Part I.D.3).

The permit is based on NPDES permit applications dated February 12, 2016, and additional supporting documents found in the administrative record.

This permit will be effective for approximately five years from the date of issuance as allowed by 40 CFR 122.46.

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