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
(312) 886-6106

Public Notice No.: 20-03-01-A

Public Notice Issued On: March 11, 2020

Comment Period Ends: April 10, 2020

Permit No.: MI-0057366-4 (REISSUANCE)

Application No.: MI-0057366-4

Name and Address of Applicant:

Hannahville Indian Community
Water Operations Department
N14911 Hannahville B1 Road
Wilson, Michigan 49896

Name and Address of Facility Where Discharge Occurs:

Hannahville Indian Community WWTP
W374 Wandahsega Lane
Hannahville Indian Reservation
Harris, Michigan 49845
Menominee County
(South ½ of the SE ¼ of the NE ¼ of the SW ¼ of Section 12, and the North ½ of the NE ¼ of the SE ¼ of the Section 12, Township 38N, Range 25W)

Receiving Water: Unnamed Wetland which is a part of the Depas Creek watershed

Treatment Facility Description

The above-named applicant has applied for an NPDES Permit to discharge into the designated receiving water. The facility is located within the boundaries of the Hannahville Indian Community. 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 Indian Country. The permit will be issued by the EPA under the authorities of the Clean Water Act.

The permittee owns and operates a wastewater treatment plant consisting of headworks screening, a pre-equalization basin, two sequencing batch reactors (SBRs) system with biological and chemical treatment for phosphorus removal, post-equalization, and ultraviolet disinfection. The treated effluent flows through a diffuser (Latitude 45° 41’ 53.6” N: Longitude 87° 20’ 12.7” W) into a wetland which is part of the Depas Creek watershed. The existing facility is designed to treat an average daily flow of 230,000 gallons per day. The facility has been in operation

since 2006. The facility can be expanded by adding two additional SBR units and increasing the design flow to 456,000 gallons per day (Phase II). At this time there is no firm expansion timeline. Wastewater is from domestic sources only, including flows from the Hannahville Indian Community, Bark River Township and a casino.

Solids from the SBR units are collected and pumped to an aerobic digester. The permittee may also use geotech drying media to further reduce the volume of sludge to be land applied. The plant has 180-days of sludge storage. The sludge is land applied to farmland held in trust for the Hannahville Indian Community.

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

Proposed Effluent Limitations:

Monitoring Point 001A- the permittee is authorized to discharge of treated municipal wastewater from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to a wetland which is a part of the Depas Creek watershed.

Parameter	Date	30-day average	7-day Average	Daily Maximum	Daily Minimum
Flow	All year	Report		Report	---
Biochemical Oxygen Demand (BOD_5)	All Year	20 mg/L	30 mg/L		
Total Suspended Solids	All Year	20 mg/L	30 mg/L		
Ammonia	May 1- Sept. 30	15 mg/L		26 mg/L	
	Oct. 1- Apr. 30			26 mg/L	
Dissolved Oxygen	All Year				4 mg/L
E. coli	March 1 – October 31	126 E. coli/100 ml (geometric mean)		410 E. coli/100 ml	
Total Phosphorus*	All Year	1.0 mg/L	2.0 mg/L		
Total Mercury	All Year	3.0 ng/L 12-Month Rolling Average			
pH	All Year			8.0 S.U.	6.5 S.U.

Loading limits in the permit were calculated using the following formula based on the design flow:

Phase I: 0.23 mgd x limit (mg/L) x 8.34 = Loading (lbs/d)
Phase II: 0.456 mgd x limit (mg/L) x 8.34 = Loading (lbs/d)

* Phosphorus limits will be lowered to 0.5 mg/L and 1.0 mg/L upon completion of Phase II construction.

Basis for Permit Requirements
The limits were developed to ensure compliance with 40 CFR Parts 131 and 133 and protection of human health and EPA's water quality criteria, and protection of Michigan's WQS where they are applicable. Please note that this facility replaced two old wastewater treatment facilities. When the original permit for this facility was issued in 2004, a nondegradation review was completed by EPA at the Phase II design flow. Since the facility is being built in phases, the permit includes effluent tables for both Phase I (existing) and Phase II design flows with appropriate loading limits. These has been carried over from the previous permit. If and/or when the Phase II expansion is completed, if it is determined that the limits in the permit will not be protective of the state's or Tribe's water quality standards effective at the time, the permit will be modified with public notice with opportunity to comment as appropriate.

pH
The limits for pH are based on protecting Michigan water quality standards (Rule 53). The daily maximum limit is set at 8 S.U. to ensure the discharge does not cause ammonia acute toxicity. Monitoring indicates the permittee is in substantial compliance with the limits.

5-day Biochemical Oxygen Demand (BOD_5)
The limits in the previous permit are carried over to this permit as EPA believes they are still appropriate. For the previous permit, the limits were developed to be protective of Michigan's dissolved oxygen standard. The current limits meet the wetland dissolved oxygen (D.O.) water quality standard of 4 milligrams per liter (mg/l) as a daily minimum in the receiving stream. Monitoring indicates the permittee is in substantial compliance with the limits. Percent removal is not included as the permit application identified no significant I/I and the effluent limits are more stringent than secondary treatment limits.

Total Suspended Solids (TSS)
The limits in the previous permit are carried over to this permit as EPA believes they are still appropriate. Monitoring indicates the permittee is in substantial compliance with the limits. Percent removal is not included as the permit application identified no significant I/I and the effluent limits are more stringent than secondary treatment limits.

Dissolve Oxygen (DO)
The limit in the previous permit is carried over to this permit as we believe it is still appropriate. The limit was developed to protect Michigan's wetland dissolved oxygen water quality standard of 4 mg/L as a daily minimum where it is applicable. Monitoring indicates the permittee is 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 year round. Monitoring indicates the permittee is in substantial compliance with the limits.

Phosphorus

The discharge wetland and the Depas Creek watershed are not impaired due to nutrients at the point of discharge or at the reservation boundary. To protect the receiving stream against nuisance plant growth problems and ensure that Michigan's Water Quality Standards are met at the reservation boundary, the permit contains a monthly average limit for total phosphorus of 1.0 mg/l in accordance with Michigan's Water Quality Standards (R.323.1060). This permit also includes a weekly average load limit in accordance with 40 CFR 122.45(d). Because of the nutrient concerns in the Great Lakes Basin, dischargers have also been asked to decrease discharges of phosphorus, especially if expansion will occur. Therefore, the limit for total phosphorus, upon completion of Phase II, will be lowered to 0.5 mg/L, which is half of the existing limit. This limit could be lowered if needed to protect Michigan's Water Quality Standards. The permit would be public noticed with opportunity to comment. Performance data indicates that the existing facility cannot consistently comply with the new limit. The permittee will need to determine with the construction of Phase II if filtration or other type of treatment will be needed to meet this limit. In the mean time, the draft permit requires the permittee to continue to implement a Phosphorus Minimization Program (PMP).

Ammonia (as N)

The limits in the previous permit are carried over to this permit as EPA believes they are still appropriate as we believe they will continue to protect the state's water quality standards at the reservation boundary. We consider the wetland to be a limited aquatic life community and considered factors such as temperature, pH, water body classification, effluent discharge rates and available dilution in making this determination. Monitoring indicates the permittee is in substantial compliance with the limits.

Mercury

The final limit for total mercury is the Discharge Specific Level Currently Achievable (LCA) based on a multiple discharge variance from the Michigan water quality-based effluent limit of 1.3 ng/L. EPA approved this variance and the method to calculate the LCA.

An LCA limit of 3.0 ng/L is included for total mercury in the permit as a 12-monthly average. The LCA limit is based on existing effluent conditions. This limit is more stringent than the existing permit limit of 5.0 ng/L. In addition, the permit also requires a Mercury Minimization Program (MMP) to continue to be and implemented. The MMP is included in the draft permit to help identify possible sources of mercury in the system. Additional information related to the calculation of the LCA can be found in the administrative record.

EPA believes the use of the LCA limit is appropriate in this permit as there are no federally approved water quality standards for mercury applicable at the point of discharge.

Additional Monitoring

Additional monitoring Total Kjeldahl Nitrogen (TKN), Oil and Grease, Nitrate plus Nitrite Nitrogen and Total Dissolved Solids (TDS) is required for discharges with a design flow greater than 0.1 MGD. This monitoring is an application requirement of 40 CFR § 122.21(j).

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 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 implementation of pollutant minimization programs for mercury and phosphorus.
- 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).
- 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) (Part III of the permit) if sludge is used or disposed within the Reservation. Part III was developed using the Part 503 Implementation Guidance for sludge and 40 CFR Parts 122, 501, and 503.

- The permittee submitted the following land application sites that may be used during the permit term:

Site Name	Size	Latitude	Longitude
Site 1 - "400 Road Property"	14 acres	45^0 46' 25.2" N	87^0 25' 40.0" W
Site 2 - "400 Road Property"	28 acres	45º 46' 20.4" N	87º 25' 14.2" W
B-1 Road – Forest Site	100 acres	45º 38' 07.5" N	87º 21' 12.6" W
B-1 Road – Field Site	30 acres	45º 41' 17.1" N	87º 21' 03.0" W
Three Fires Site	38.5 acres	45º 39' 18.1" N	87º 18' 36.1" W

The permit only allows these sites to be used. If additional sites are needed, the permit may be modified, with public notice, to include the additional sites. It is not expected additional sites will be needed, however, the permit requires notification both to EPA and locally if additional sites will be used. As new sites are identified, information on those sites will be available for inspection at the Regional Office.

Significant Changes from the Previously Issued Permit

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

- Changes to EPA Region 5 mailing addresses have been made throughout the permit.
- The LCA for mercury has been revised (Part I.A. and Part I.B).
- Requirements for electronic reporting have been added (Part I.D.2).
- Additional requirements related to Asset Management have been added (Part I.D.3).
- The language for the pollutant minimization program for mercury and phosphorus have been revised (Part I.D.4 and Part I.D.5).
- Additional land application sites have been included in the permit (Part I.D.7).
- The "Standard Conditions" have been revised (Part II).
- The "Sewage Sludge Requirements" have been revised (Part III).

The permit is based on an NPDES application dated October 30, 2019 and additional application information dated December 5, 2019 (complete application) and additional documents found in the administrative record.

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

Written By: John Colletti March 2020
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