STATEMENT OF BASIS FOR THE REISSUANCE OF A NPDES PERMIT

U.S. Environmental Protection Agency
Region 5, Permits Branch - WP-16J
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Comment Period Ends: October 14, 2019

Permit No.: WI-0058424-5 (REISSUANCE)

Application No.: WI-0058424-5

Name and Address of Applicant:

Forest County Potawatomi Community
P.O. Box 340
Crandon, Wisconsin 54520

Name and Address of Facility Where Discharge Occurs:

Crandon Recirculating Sand Filter/Stone Lake WWTP
HWY 8 East
Crandon, Wisconsin 54520
(S ¼ of the Sec. 27, T36N, R13E)

Receiving Water: Unnamed Wetlands

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 discharge is located within the boundaries of the Forest County Potawatomi Indian Reservation. The EPA has retained the authority to issue NPDES permits to facilities with discharges to waters of the United States within Indian Country. The EPA is issuing this NPDES permit under the authorities of the Clean Water Act.

The application and plans indicate that the permittee owns and operates a 0.07 mgd wastewater treatment plant using a recirculating sand filter. Wastewater is collected via two lift stations, twelve effluent pumps, and several thousand feet of gravity sewer and force main. The permittee upgraded the treatment facility during the previous permit term. The Stone Lake Wastewater Facility Modifications provides Septic Receiving, Phosphorus removal and UV disinfection. The project also redirected influent wastewater to be screened prior to further treatment with the existing Recirculating Sand Filter. To accomplish this, the project included a new metal building with wastewater treatment equipment and exterior site improvements. In addition, the project included converting the existing Controls Building to storage and adding controls to tie the Main Lift Station Controls to the Septage Receiving. The Recirculating Sand Filter stayed in place as-is.

The discharge is continuous to a wetland from outfall 001: N ½ of Section 27, Township 36N, Range 13E (Latitude $45^0\ 34'\ 12''$; Longitude $88^0\ 51'\ 17''$) on the Reservation.

The sludge from this facility is transported to the new Carter Wastewater Treatment Facility (NPDES Permit # WI-0058432) for dewatering with the Carter sludge. Final disposal is to a municipal solid waste landfill.

The treatment system serves tribal residences, a Health and Wellness Center, Youth Center, Museum and Cultural Center, Administrative Building, Tribal Center, Family Services Center, Tribal Natural Resources Building, church, Housing Authority, Assisted Living Complex, Headstart, and Alternative Education School.

Receiving Water

The receiving stream is an unnamed wetland within the boundaries of the Forest County Potawatomi Indian Reservation.

Proposed Effluent Limitations:

Monitoring Point 001- The permittee is authorized to discharge treated municipal wastewater from Outfall 001 to the wetland.

Effluent Characteristics	Discharge Limitations			
	Concentration (Specified Units)			
Parameter	Daily Minimum	Monthly Average	Weekly Average	Daily Maximum
Flow (MGD)	-	-	-	-
Dissolved Oxygen (mg/L)	4.0	-	-	-
pH (SU)	6.0	-	-	9.0
Total Suspended Solids (TSS) (mg/L)	-	20	30	-
Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) (mg/L)	-	20	30	-
Phosphorus, Total (mg/L)	-	0.6	1.2	-
Ammonia (NH_3-N) (mg/L)	-	Report	-	Report
E. coli (#/100ml)	-	126*	-	410
Mercury	-	Report	-	-
Temperature	-	Report	Report	Report
$CBOD_5$ Percent Removal	-	$\geq$ 85%	-	-
TSS Percent Removal	-	$\geq$ 85%	-	-

* Geometric Mean

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

0.07 mgd x limit (mg/L) x 8.34 = Loading (lbs/d).

Basis for Permit Requirements
The limits were developed to ensure compliance with 40 CFR Parts 131 and 133, EPA's water quality criteria and protection of Wisconsin's water quality standards where they are applicable.

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

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)
A weekly average limit of 30 mg/L and a monthly average limit of 20 mg/L are carried from the previous permit that are designed to be protect limited aquatic life waters; these are the arithmetic mean of pollutant parameter values for samples collected in a period of 7 and 30 consecutive days, respectively. Also, for the average during the discharge period, the effluent concentration for $CBOD_5$ shall not exceed 15% of the arithmetic mean of the value for influent samples for $CBOD_5$ collected during the related treatment period which is based on secondary treatment requirements pursuant to 40 CFR Part 133. Monitoring indicates the permittee is in substantial compliance with the limits.

Total Suspended Solids (TSS)
A weekly average limit of 30 mg/L and a monthly average limit of 20 mg/L are carried from the previous permit that are designed to be protect limited aquatic life waters; these are the arithmetic mean of pollutant parameter values for samples collected in a period of 7 and 30 consecutive days, respectively. Also, for the average during the discharge period, the effluent concentration for TSS shall not exceed 15% of the arithmetic mean of the value for influent samples for TSS collected during the related treatment period which is based on secondary treatment requirements pursuant to 40 CFR Part 133. Monitoring indicates the permittee is in substantial compliance with the limits.

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 E. coli limits are applicable from May 1 to September 30, annually. Monitoring indicates that when the facility is operated optimally, the permittee is in substantial compliance with the limits.

Mercury
To help determine whether the permittee can meet EPA's Wildlife Water Quality Criteria of 1.3 ng/L, the permit will require monitoring for mercury for this permit term. A Mercury Minimization Program is also included in the permit to help identify possible sources of mercury in the system.

Phosphorus
The Forest County Potawatomi Community does not have federally approved water quality standards. Wisconsin's water quality standards for phosphorus are not applicable in wetlands. There is, however, still a concern related to excessive phosphorus loads being discharged to waters of the U.S. and its effects in downstream waters. The permit contains a monthly average limit for

total phosphorus of 0.6 mg/L, which is believed to be readily achievable using available technology, and a weekly average limit of 1.2 mg/L. These limits should protect Wisconsin's water quality standards where they are applicable. Monitoring indicates the permittee is in substantial compliance with the limits. Future permits may require more stringent limits to be protective of the Community's water quality standards when they are finalized.

To ensure the facility is using its phosphorus removal technology optimally, the draft permit also requires the permittee to submit an operational evaluation report that will include an evaluation of collected effluent data, possible source reduction measures, operational improvements or other minor facility modifications that will optimize reductions in phosphorus discharges from the wastewater treatment plant.

Dissolved Oxygen
The permit includes a minimum daily limit for dissolved oxygen of 4.0 mg/L which was carried over from the previous permit. The limit was developed to protect the state's limited aquatic life water quality standards where they are applicable. Monitoring indicates the permittee is in substantial compliance with the limit.

Ammonia Nitrogen
There are no federally-approved water quality standards that apply at the discharge. The permit does, however, require effluent monitoring for ammonia and instream monitoring near the discharge outfall for pH, temperature and ammonia to help develop limits so that a reasonable potential analysis can be conducted to ensure the effluent does not cause or contribute to a violation of Wisconsin's water quality standards where they are applicable. Previous instream monitoring required by the wetland monitoring requirement conducted by the permittee indicates the downstream waters comply with the standards. The permit also requires a quantitative mussel study within the discharge wetland complex annually to determine if mussels are present. The permit also contains a reopener clause if it is determined that limits are needed based on the additional monitoring.

Temperature
Monitoring for temperature has been included to help develop limits for ammonia and to help ensure the state's thermal water quality standards are met.

Wetland Monitoring
The permit requires monitoring of the discharge wetlands that will help identify impacts that might be caused by the effluent.

Asset Management
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 will help to ensure that the facilities and systems of treatment and control will be properly operated and maintained. Mapping the system service area will help the operator get a better handle on the assets that he/she is responsible for and 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, maintenance and repair of the system. Requiring the development and implementation of a preventive maintenance program is one reasonable step that the permittee can take to minimize or prevent a discharge in violation 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.
- 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.
- The permit requires implementation of a Mercury Minimization Program.
- The permit requires a phosphorus operations evaluation study.
- The permit contains a reopener clause for ammonia.
- The permit requires wetland monitoring and a mussel study.

Significant Changes

Following are the significant changes in the draft permit:

- The 'Treatment Plant Description' and the 'Summary of Regular Reporting' have been updated. (Page 2)
- The Interim Limit Table has been removed.
- The Reporting requirement has been changed to require electronic submittal of DMRs. (Part I.D.2)
- Additional requirements related to Asset Management have been added. (Part I.D.3)
- The Phosphorus and E. coli compliance schedule has been removed.

- Mercury Minimization Program language has been included. (Part I.D.4)
- The Sludge Disposal Requirements have been updated. (Part I.D.6)
- The "Standard Conditions" have been revised.

The permit is based on applications dated July 25, 2019 (2S) and July 29, 2019 (2A) 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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