STATEMENT OF BASIS FOR THE REISSUANCE
OF A
NPDES PERMIT

U.S. Environmental Protection Agency
Region 5, Permits Branch, Water Division - WP-16J
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Public Notice No.: 19-10-01-A

Public Notice Issued On: October 9, 2019 **Comment Period Ends:** November 13, 2019

Permit No.: WI-0058432-5 (REISSUANCE) **Application No.: WI-0058432-5**

Name and Address of Applicant:

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

Name and Address of Facility Where Discharge Occurs:

FCPC Carter WWTF
HWY 32 South
near Carter, Wisconsin
(NW¼ of the Sec. 28, T34N, R15E)

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 applicant recently constructed a new wastewater treatment system as described below to replace its existing lagoon facility. The system is designed to treat 0.06 mgd of domestic wastewater. The discharge uses the same outfall as the replaced lagoon facility and is continuous to a wetland from Outfall 001: E ½ of the NW ¼ of Section 28, Township 34N, Range 15E, (Latitude $45^0\,24'\,12''$; longitude $88^0\,37'\,35''$) on the Reservation. The facility was placed into operation in June 2019.

The FCPC Carter Wastewater Treatment Facility (WWTF) provides wastewater treatment services to the local community and the Casino. Lift Station #1 transfers flows from the sanitary sewer system to the WWTF via 8-inch sanitary force main to the WWTF Headworks where influent flow is measured with a magnetic flow meter.

The Headworks consists of a combination fine screen and grit classifier unit with a capacity of 0.4 mgd. The screenings and grit are discharged into separate dumpsters for disposal. An influent composite sampler samples the influent wastewater immediately after screening. Septage from the Carter area is hauled to the WWTF site. A Septage Receiving Station with a magnetic flow meter to record septage volume and to facilitate metering of flows into the treatment process.

After screening and grit removal, the wastewater flows by gravity through an 8-inch pipe to the aeration splitter box. Stop gates allow influent wastewater to be channeled into any of the three (3) aeration basins. At startup, only one (1) of the aeration basins will be in service while at design capacity, two (2) aeration basins will be used. The third aeration basin can be used in the event the other basins need to be serviced. The aeration basins are designed with anoxic and aerobic zones. Three (3) pH adjustment chemical feed skids and one (1) Phosphorus removal chemical feed skid is provided.

Following aeration, the wastewater flows into one (1) of two (2) final clarifiers. Only one (1) clarifier is required to be on-line at any given time; the second unit is provided as a backup for maintenance purposes. Following clarification, effluent flows to an Ultraviolet (UV) disinfection unit. The UV disinfection system has a design average flow of 275 gpm and a peak flow of 350 gpm. After UV disinfection, effluent is discharged to the current outfall by gravity incorporating a series of manholes. Spill plates are provided in each of the manholes to increase Dissolved Oxygen (D.O.) levels in the effluent prior to discharge.

Sludge Processes
Scum and waste sludge are sent to two (2) aerobic digesters. Both digesters can be used during normal operations. Polymer is added to the stabilized biosolids and then dewatered. Following dewatering, biosolids cake is bagged and sent to a dumpster for disposal in a municipal solid waste landfill.

The facility receives sludge from FCPC Crandon Recirculating Sand Filter/ Stone Lake WWTP (WI0058424-5) for treatment and then disposal in the landfill.

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)	6.5	-	-	8.5

Total Suspended Solids (TSS) (mg/L)	-	30	45	-
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 (geometric mean)	-	410
Mercury	-	Report	-	-
Temperature	-	Report	Report	Report
CBOD Percent Removal	-	$\geq$ 85%	-	-
TSS Percent Removal	-	$\geq$ 85%	-	-

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

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

* The old WWTF had a design flow of 0.04 mgd and the existing permit set limits based on this design flow. The design flow for the recently constructed WWTF is 0.06 mgd. The permittee, however, does not think flows to the new WWTF will reach that level for many years and did not complete a non-degradation analysis for this permit. Therefore, the load limits are still being calculated using the design flow from the previous permit.

Basis for Permit Requirements
The limits were developed to ensure compliance with 40 CFR Parts 131 and 133 and protection of Wisconsin's water quality standards where they are applicable. Though not applicable, we also looked at the Forest County Potawatomi Community's draft water quality standards.

pH
The limits for pH are based on permit writer's judgment from concerns related to ammonia. The minimum and maximum limits are carried over from previous permit. Monitoring data indicate that the permittee has been in substantial compliance with the limits.

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 CBOD5 shall not exceed 15% of the arithmetic mean of the value for influent samples for CBOD5 collected during the related treatment period which is based on secondary treatment requirements pursuant to 40 CFR Part 133. Monitoring data indicates the permittee is in substantial compliance with the limits.

Total Suspended Solids (TSS)
A weekly average limit of 45 mg/L and a monthly average limit of 30 mg/L are carried from the previous permit that are consistent with 40 CFR Part 133; 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 data 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 monthly average limit was also carried from the previous permit. The statistical threshold value of 410 E. coli per 100 ml is set as the daily maximum. The limits are only applicable May 1 to September 30, annually.

Mercury
To help determine whether the permittee can meet EPA 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. 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 data 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 cause or contribute to a violation of Wisconsin's water quality criteria where they are applicable. Previous instream monitoring required by the wetland monitoring requirement conducted by the permittee indicates the downstream waters comply with the criteria. 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
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 the 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. (Pages 2-3)
- The Interim Limit Table has been removed.
- The Reporting requirement has been changed to require electronic submittal of DMRs. (Part I.D.2)
- The Mercury Minimization Program language updated. (Part I.D.4)
- Additional requirements related to Asset Management have been added. (Part I.D.5)
- The Phosphorus compliance schedule has been removed.
- The Sludge Disposal Requirements have been updated. (Part I.D.7)
- The "Standard Conditions" have been revised.

The permit is based on an application dated March 28, 2018 and subsequent information submitted updating the application as it pertained to the new facility construction. This information and additional supporting documents can be found in the administrative record.

The permit can be effective for five years from the date of reissuance as allowed by 40 CFR 122.46.

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October 2019