STATEMENT OF BASIS

FOR THE ISSUANCE OF
A NPDES PERMIT

U.S. Environmental Protection Agency
Region 5, NPDES Programs Branch - WN-15J
77 West Jackson Boulevard
Chicago, Illinois 60604
(312) 886-6106

Public Notice No.: 19-03-02-A

Public Notice Issued On: March 29, 2019

Comment Period Ends: April 29, 2019

Permit No.: WI-0036188-4 (REISSUANCE)

Application No.: WI-0036188-4

Name and Address of Applicant:

Stockbridge-Munsee Utility Department
Stockbridge-Munsee Community
N8618 Oak Street
Bowler, Wisconsin 54416

Name and Address of Facility Where Discharge Occurs:

Stockbridge-Munsee Community
Wastewater Ponds
W13438 Birch Street
Bowler, Wisconsin 54416
Stockbridge-Munsee Indian Reservation
Shawano County
NE ¼ of Section 16, T28N, R13E

Receiving Water: West Branch of the Red River

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 above facility is a tribal facility located on the Stockbridge-Munsee 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 Stockbridge-Munsee Indian Reservation. The permit will be issued by EPA under the authorities of the Clean Water Act (CWA).

The Stockbridge-Munsee Band of the Mohican Indians operates a wastewater treatment system to serve the community in northern Shawano County, Wisconsin. The treatment works consists of a series of facultative lagoons, located in the NE ¼ of Section 16. T 28N, R 13E. The ponds are operated on a fill-and draw basis, discharging treated effluent into the West Branch of the Red River at approximately (44.910278, 88.9250), in the "Red River Watershed" (WR 16) in the Wolf River Basin.

The existing system consists of a 3-cell wastewater pond. Cell 1 is 6.36 acres in area. Cell 2 is approximately 3.1 acres in area. Cell 3 is 0.68 acres in area. Cells 2 and 3 are interconnected and act as one cell for filling and discharging purposes. The discharge pipe is located n Cell 3. The discharge is controlled, usually occurring a few weeks during the year. The design average influent flow for the system is 0.039 million gallons per day (mgd). The wastewater is from domestic sources only.

Section 401 Water Quality Certification

EPA is the appropriate authority for purposes of certifying the proposed discharge under Section 401 of the Clean Water Act. Section 401 certification is not needed from the state or the Stockbridge-Munsee Community as neither has federally approved water quality standards applicable to the receiving water at the point of discharge.

ESA and NHPA Compliance

The USFWS website was reviewed for threatened and endangered species and their critical habitat listed within Shawano County. The site identifies the Gray wolf, Karner blue butterfly and Snuffbox as endangered species and the Northern long-eared bat as threatened species. It also identifies the Whooping crane as a nonessential experimental population. This facility has been in existence for many years and no new construction is planned. The discharge from the above facility has been treated and should have no effect on any of the species or the species' critical habitat, especially for the Gray wolf, Karner blue butterfly, Northern long-eared bat and the Whooping crane.

Regarding the Snuffbox, the 2018 5-Year Review: Summary and Evaluation of Snuffbox populations did not identify populations within the receiving stream (West Branch of the Red River). Also, the permit has an ammonia limit based on protecting acute toxicity, the limiting factor for this facility. We believe the permit will protect the Snuffbox if the species returns to the West Branch of the Red River in the area of the discharge.

EPA believes it has satisfied its requirements under the National Historical Preservation Act. This is an existing facility that has previously been permitted by EPA. We do not have any records indicating any historical properties being in the area of potential effect (the existing site and discharge location). Also, no construction is planned at the site during the permit term. Therefore, we believe that no historic or archeological sites or cultural resources will be affected by the continued operation of the facility and its discharge with the reissuance of the permit.

Proposed Effluent Limitations:

Monitoring Point 001- the permittee is authorized to discharge of treated municipal wastewater from Monitoring Point 010 through Outfall 001, which discharges to the West Branch of the Red River.

Effluent Characteristics	Discharge Limitations			
	Concentration (Specified Units)			
Parameter	Minimum	Monthly	Weekly	Maximum
Flow (MGD)	-	-	-	-

Dissolved Oxygen (mg/L)	4.0	-	-	-
pH (SU)	6.0	-	-	8.5
Temperature	-	Report	Report	Report
Total Suspended Solids (TSS) (mg/L)	-	60	90	-
Biochemical Oxygen Demand (BOD_5) (mg/L)	-	30	45	-
Phosphorus, Total (mg/L)	-	Report	-	-
Ammonia (NH_3-N) (mg/L)	-	-	-	4.28
E. coli (#/100ml)	-	126	-	235
BOD_5 percent removal (%)	85	-	-	-
TSS percent removal (%)	65	-	-	-
Outfall observation (yes/no)	-	Report	-	-

Discharge is limited to a maximum 3 inches per day. Discharge flow was calculated as follows:

> 3.78 acres x 0.25 feet/day (3 inches/day) x 325,900 gallons per acre-ft ≈ 0.31million gallons/day

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. The Wisconsin Department of Natural Resources has designated the West Branch of the Red River as a Class II Trout Stream. Though the Stockbridge-Munsee Community does not have its own water quality designation of the receiving stream, it would agree with the state's designation. To be sufficiently protective of the high quality receiving water, EPA worked with the state and the Stockbridge-Munsee Community to develop limits for the previous permit that were protective of Wisconsin water quality standards where they are applicable. The calculations are part of the administrative record. We believe these limits are still applicable and will use them in this permit when applicable. The U.S. Geological Survey determined the low flow frequency statistics for the West Branch of the Red River near the discharge to be: Annual $Q_{7,10}$ = 18 cfs; Annual $Q_{7,2}$ = 22 cfs.

pH

The limits for pH are based on secondary treatment requirements pursuant to 40 CFR Part 133. The daily maximum limit is reduced to 8.5 S.U. to reduce possible ammonia acute toxicity.

Temperature

This permit requires temperature monitoring for calculating future ammonia limits and to obtain data to determine if the discharge has a reasonable potential to cause or contribute to a violation of Wisconsin's water quality standards. As the state's water quality standards are not applicable at the point of discharge, however, we do not believe the temperature standards would be violated at the reservation boundary. We do recognize that aquatic life do not discern boundaries

and will include effluent temperature monitoring in the permit with a reopener to possibly modify the permit to include temperature limits at a later time.

Biochemical Oxygen Demand (BOD_5)

The limits for BOD_5 are based on equivalent to secondary treatment requirements pursuant to 40 CFR Part 133. A 7-day average limit of 45 mg/L and a 30-day average limit of 30 mg/L are carried from the previous permit. The permittee has been in substantial compliance with these limits. The 7-day average and the 30-day average are the arithmetic mean of pollutant parameter values for samples collected in a period of 7 and 30 consecutive days, respectively.

Total Suspended Solids (TSS)

The limits for TSS are based on equivalent to secondary treatment requirements pursuant to 40 CFR Part 133. A 7-day average limit of 90 mg/L and a 30-day average limit of 60 mg/L are carried from the previous permit. The permittee has been in substantial compliance with these limits. The 7-day average and the 30-day average are the arithmetic mean of pollutant parameter values for samples collected in a period of 7 and 30 consecutive days, respectively.

E. coli

The limits for E. coli are based on the EPA's water quality criteria in existence at the time the previous permit was drafted. The geometric mean of samples collected over a 30-day period shall not exceed 126 E. coli per 100 milliliters (ml). Any single sample shall not exceed 235 E. coli per 100 ml. New water quality criteria were published in 2012 (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. Since the permittee has been in substantial compliance with the existing permit limits, in accordance with 40 CFR 122.44(l) (anti-backsliding), the limits from the previous permit have been carried over into the draft permit.

Ammonia

As there are no federally-approved water quality standards that apply at the discharge, we need to ensure that the state's water quality standards are protected at the downstream reservation boundary. Using WDNR procedures, we calculated new ammonia limits. The ammonia worksheet is included in the administrative record. As the calculated daily maximum limit is more stringent than the calculated weekly and monthly average limits, the permit will include a year-round daily maximum limit of 4.28 mg/L. Past performance of the facility indicates that the permittee is in substantial compliance with the new limit.

Phosphorus

As there are no federally-approved water quality standards that apply at the discharge, we need to ensure that the state's water quality standards are protected at the downstream reservation boundary. The instream water quality criterion for phosphorus applicable in the West Branch of the Red River is 0.075 mg/L. We looked at guidance from the WDNR on how they would develop a water quality-based effluent limit based on this criterion. Since this facility discharges intermittently, the guidance suggests determining the effluent flow on a case-by-case basis. We looked at the maximum allowed daily flow during discharge (0.31 mgd) and the design average influent flow (0.039) as possible flows to use in calculating the limit. The Stockbridge-Munsee Community provided instream phosphorus data so that we could determine the background concentration. The median value is 0.029 mg/L. Using these values and the $Q_{7,2}$ (22 cfs), the

calculated water quality-based limits would be 2.18 mg/L and 16.94 mg/L. Using the maximum allowed daily flow is not appropriate since the facility does not discharge at this level year-round. If you assume that the facility can discharge at this level for the entire discharge period, which is not feasible (April 1 through September 30), that would reduce the yearly average flow to 0.155 mgd. The water quality-based limit using this flow would be 4.29 mg/L. This flow would be conservative since the facility only discharges a few weeks of the year. Over the previous permit term, the facility's average concentration was 1.85 mg/L with a range of 0.8 to 3.5 mg/L. Based on the facilities existing effluent quality, we do not believe the discharge has a reasonable potential to cause or contribute to a violation of the state's water quality standard for phosphorus at the downstream reservation boundary. The permit will continue to require monitoring and also requires the submittal of a phosphorus 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.

We are aware, however, the state is working on a TMDL for the Upper Fox/Wolf River watershed. The West Branch of the Red River is within the watershed. Though the TMDL will not be applicable within the reservation boundaries, it is important for the Stockbridge-Munsee Community to be aware of what would be expected if the TMDL was applicable for future planning purposes. At this time, meeting the limits developed as part the TMDL would be voluntary. The proposed allowable load for the Stockbridge-Munsee facility is 36 lbs/year or 0.1 lbs/day. At existing permit conditions, the facility would discharge above those levels, however based on how the facility is being operated normally, the facility is close to achieving those levels. In addition, the above operational evaluation report should also help to reduce potential phosphorus discharges and could help the facility meet the proposed TMDL.

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 electronic reporting.
- Dikes must be maintained and vegetation cut.
- 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 submittal of a phosphorus operational evaluation report

Significant Changes From The Last Permit

Following are the significant changes in the draft permit:

- The Reporting requirement has been changed to require electronic submittal of DMRs. (Part I.E.2)
- Additional requirements related to Asset Management have been added. (Part I.E.5)

The permit is based on an application dated April 24, 2018 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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