

STATEMENT OF BASIS

FOR THE ISSUANCE OF A NPDES PERMIT

U.S. Environmental Protection Agency
Region 5, NPDES Programs Branch - WN-16J
77 West Jackson Boulevard
Chicago, Illinois 60604
(312) 886-6106

Public Notice No.: 12-06-02-A

Public Notice Issued On: June 22, 2012

Comment Period Ends: July 23, 2012

Permit No.: MI-0054861-4 (REISSUANCE)

Application No.: MI-0054861-4

Name and Address of Applicant:

Saginaw Chippewa Indian Tribe
Public Works Department
7070 East Broadway
Mt. Pleasant, Michigan 48858

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

Isabella Reservation WWTP
7375 East Tomah Road
Mt. Pleasant, Michigan
Isabella County
(S.E. ¼ of the N.W. ¼ of S20, T14N, R3W)

Receiving Water: Unnamed tributary to Onion 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 permit will be issued by the U.S. Environmental Protection Agency since the discharge is located within the Saginaw Chippewa's Isabella Reservation.

The permittee operates a 0.58 mgd (0.70 mgd maximum daily) wastewater treatment plant (WWTP). Headworks treatment consists of screening and grinding. Wastewater then flows into a pre-equalization tank where it is stored and batch fed to three sequencing batch reactors (SBR) with phosphorus removal. Treated water is then decanted to the post-equalization tank where it is pumped to either of two sand filters for final "polishing" prior to flowing through two ultraviolet disinfection units. The effluent gravity flows through a recirculation channel to the final discharge point at the unnamed tributary to Onion Creek. Two six million gallon aerated lagoons are available for additional treatment and holding if necessary. Solids from the SBR units will be wasted to one of two sludge reaction tanks for lime stabilization. Lime stabilized sludge will be transferred to one of two 500,000 gallon sludge storage tanks. From the storage tank, the sludge will be beneficially recycled via bulk land application to an agricultural site located within the Isabella Reservation boundaries.

Wastewater is generated by domestic sources only including a casino.

LIMITATIONS AND MONITORING REQUIREMENTS- OUTFALL 001

| Parameter | Date | Monthly Average | 7-day Average | Daily Maximum | Daily Minimum |
|------------------------------|--------------------|--------------------------------------|----------------------|-------------------------|---------------|
| CBOD ₅ | May - November | 7 mg/L 34 lbs/d | 38 lbs/d | 10 mg/L | |
| | December - March | 25 mg/L 121 lbs/d 85 % removal | 40 mg/L 193 lbs/d | | |
| | April | 13 mg/L 63 lbs/d | 97 lbs/d | 20 mg/L | |
| Total Suspended Solids (TSS) | May - November | 20 mg/L 97 lbs/d | 30 mg/L 145 lbs/d | | |
| | December - April | 30 mg/L 145 lbs/d 85 % removal | 45 mg/L 218 lbs/d | | |
| Ammonia | May - September | 2.2 mg/L 10.6 lbs/d | | | |
| | October - November | | 10 lbs/d | 2 mg/L | |
| | December - March | Report | | | |
| | April | | 29 lbs/d | 6 mg/L | |
| Dissolved Oxygen | May - September | | | | 3 mg/L |
| | October - November | | | | 6 mg/L |
| | December - March | | | | 5 mg/L |
| | April | | | | 4 mg/L |
| Total Phosphorus | All Year | 1 mg/L 4.8 lbs/d | | 1.5 mg/L 7.2 lbs/day | |
| E. coli | All Year | 126 E. coli/100ml* | | 235 E. coli/100ml | |
| pH | All Year | | | 9.0 S.U. | 6.5 S.U. |

* Geometric mean

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

$$0.58 \text{ mgd} \times \text{limit (mg/L)} \times 8.34 = \text{Loading (lbs/d)}.$$

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 tribe as neither has water quality standards applicable to the receiving water at the point of discharge.

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 Michigan's water quality standards where they are applicable.

5-day Carbonaceous Biochemical Oxygen Demand(CBOD₅), Total Suspended Solids (TSS), Dissolve Oxygen (D.O.), and Ammonia (as N)

The limits in the draft permit have been carried over from the original permit for this facility as we believe they are still applicable. They are based on protecting Michigan's D.O. standard during different seasons of the year and protection against ammonia chronic toxicity. The limits were developed using Michigan's Streeter-Phelps D.O. model. Information related to limit development and a January 16, 1996 letter from the Michigan Department of Environmental Quality (MDEQ) recommending effluent limits for the discharge are included in the administrative record. We have included corresponding load limits where they were not included before. However, load limits based on daily maximum concentrations are set as 7-day averages as this allows for some attenuation. This is done since we based the load limits on the annual average flow and not the peak daily maximum flow. We believe water quality standards are still being protected. Monitoring data indicates the permittee can consistently comply with these limits.

E. coli

The limits for E. coli are based on the EPA's water quality criteria. 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.

Mercury

The previous permit required the permittee to sample its effluent quarterly for mercury using low level testing procedures. Most of the results came back as <0.5 ng/L, the method quantification level. Based on these results, the effluent does not have a reasonable potential to cause or contribute to a violation of Michigan's chronic water quality standard of 1.3 ng/L. However, since some of the samples showed traces of mercury, the permit requires further monitoring, but only on a semi-annual bases so that we have data for the next permit issuance.

Phosphorus

The recommended limit for phosphorus in the previous permits was 1.0 mg/l as a monthly average. To be consistent with 40 CFR § 122.45(d), a daily maximum limit of 1.5 mg/L is being added to the permit. Monitoring data indicates the permittee can consistently comply with these limits.

Additional Monitoring

In accordance with 40 CFR § 122.21(j)(4)(iv)(C), EPA is requiring the permittee to monitor for the parameters found in Table 2 of Appendix J to 40 CFR Part 122 one time during the permit term with the data to be submitted with the next permit renewal application. The data will be used to determine if additional limits may be needed in the next permit.

Asset Management – Operation & Maintenance Plan

On February 6, 2012, Region 5 invited Tribal Governmental Leaders to consult on proposed new permit requirements regarding asset management. The new requirements are found in the draft permit and the basis for the language is below.

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 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.
- 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). Part III was developed using the Part 503 Implementation Guidance for sludge and 40 CFR Parts 122, 501, and 503.

- The permittee has identified in its March 12, 2012 permit application the following land application site that it plans to use for the land application of sewage sludge. The property is located within the exterior boundaries of the Isabella Reservation.

Section 4 Township 14N Range 3W Chippewa Township (Perotta)

If new sites are identified, information on those sites will be available for inspection at the Regional office.

Significant Changes From The Last Permit

Following are the significant changes in the draft permit:

- Load limits have been added where they were missing for ammonia and CBOD₅.
- Daily maximum limits for E. coli and phosphorus have been added to be consistent with 40 CFR § 122.45(d).
- Limits for phosphorus have been revised to be more stringent.
- Monitoring requirements for mercury have been reduced as data indicate no water quality concerns.
- Visual observation of the outfall is required.
- Requirements related to Asset Management have been added.
- The Industrial Waste Pretreatment Program language has been updated.
- The Sludge Disposal Requirements language has been updated.
- The “Standard Conditions” have been revised.

ESA and NHPA Compliance

EPA believes it has satisfied its requirements under the Endangered Species Act and is in the process of satisfying the National Historical Preservation Act. As this is an existing discharge, with no planned construction during the permit term, EPA believes that the issuance of the permit and the continued operation of the facility will have no effect on endangered or threatened species or their critical habitat and will have no impact to historical, archeological, or cultural resources.

The permit is based on an application dated March 12, 2012 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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June 2012