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.: 14-12-01-A

Public Notice Issued On: December 5, 2014

Comment Period Ends: January 5, 2015

Permit No.: MI-0058661-2 (REISSUANCE)

Application No.: MI-0058661-2

Name and Address of Applicant:

Gun Lake Tribal Gaming Authority
1123 129th Avenue
Wayland, Michigan 49348

Name and Address of Facility Where Discharge Occurs:

Gun Lake Tribal Gaming Authority
Wastewater Treatment Facility
1123 129th Avenue
Wayland, Michigan 49348
Allegan County
(N.W. ¼ of S19,T3N,R11W)

Receiving Water: Buskirk 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 on land held in trust for the Gun Lake Tribe. The Supreme Court has held in a variety of contexts that tribal trust lands are reservations whether or not they are part of a formally established reservation. Oklahoma Tax Comm'n v. Citizen Band Potawatomi Indian Tribe of Oklahoma, 498 U.S. 505, 511(1991); United States v. John, 437 U.S. 634, 649 ((1978) (finding no apparent reason" why lands held in trust should not be considered reservations under §1151(a)). This interpretation has been upheld recently in the environmental context in Arizona Pub. Service Co. v. U.S. Environmental Protection Agency, 211 F.3d 1280 (D.C. Cir. 2000) where the court upheld EPA's regulations governing the authority of Indian tribes to carry out certain provisions of the Clean Air Act.

Treatment Facility Description:

The permittee operates a 0.10 mgd (with plans to ultimately expand to 0.350 mgd) wastewater treatment facility (WWTF) with a continuous discharge to Buskirk Creek (Lat: N42º 38′ 8.34″; Long. W85º 39′ 10.55″). The treatment consists of an influent equalization basin with three

influent pumps followed by flow metering and fine screening. Following screening, the wastewater enters the activated sludge process at the anoxic basin which provides additional flow equalization as needed. Chemical addition of Alum for phosphorus removal and Sodium Hydroxide for pH adjustment occurs in the anoxic basin. Activated sludge is pumped from the anoxic basin to one or both pre-aeration basins which flow to one or both membrane bioreactor (MBR) for liquid/solids separation. Final effluent is pumped to ultra-violet light disinfection and post aeration prior to discharge to Buskirk Creek.

Waste activated sludge (WAS) is removed from the MBR basins as needed via the WAS pump. WAS is typically thickened using a drum thickener with polymer addition then pumped to the aerobic digester. WAS may be pumped directly to the aerobic digester without thickening. WAS is aerated in the aerobic digester. Additional thickening occurs in the digester when the solids are allowed to settle for supernatant removal. A loading standpipe and wash down station are provided to allow tankers to be loaded for biosolids disposal.

Outfall - 001 – Final

Parameter	Maximum Limits for Quantity or Loading				Maximum Limits for Quality or Concentration			
	30-Day	7-Day	Daily	Units	30-Day	7-Day	Daily	Units
Flow	Report	---	Report	MGD	---	---	---	---
Outfall observation					---	Report	---	Yes/No
Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)								
May 1- Sept 30	12	---	29	lbs/day	4	---	10	mg/L
Oct 1 – Nov 30	---	---	44	lbs/day	---	---	15	mg/L
Dec 1 – March 31	73	117	---	lbs/day	25	40	---	mg/L
April 1 – 30	---	---	61	lbs/day	---	---	21	mg/L
Total Suspended Solids (TSS)								
May 1 – Sept 30	58	88	---	lbs/day	20	30	---	mg/L
Oct 1 – April 30	88	131	---	lbs/day	30	45	---	mg/L
Ammonia Nitrogen (as N)								
May 1- Sept 30	1.4	---	5.8	lbs/day	0.5	---	2.0	mg/L
Oct 1 – Nov 30	---	---	15	lbs/day	---	---	5	mg/L
Dec 1 – March 31	---	---	---	lbs/day	Report	---	---	mg/L
April 1 – 30	20	---	38	lbs/day	7	---	13	mg/L
Total Phosphorus (as P)								
May 1 – Sept 30	0.29	0.58	---	lbs/day	0.1	---	---	mg/L
Oct 1 – April 30	2.9	5.8	---	lb/day	1.0	2.0	---	mg/L
E.coli					126	---	410	E.coli/100 ml
Mercury, Total					---	---	Report	ng/L

$CBOD_5$ Minimum % Removal					Minimum 30-Day			
Dec 1 – March 31	---	---	---	---	≥85	---	---	%
TSS Minimum % Removal								
Oct 1 – April 30	---	---	---	---	≥85	---	---	%
					Minimum Daily		Maximum Daily	
pH	---	---	---	---	6.5	---	9.0	S.U.
Dissolve Oxygen								
May 1 – Sept 30	---	---	---	---	7	---	---	mg/L
Oct 1 – Nov 30	---	---	---	---	6	---	---	mg/L
Dec 1 – March 31	---	---	---	---	5	---	---	mg/L
April 1 – 30	---	---	---	---	6	---	---	mg/L

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

(0.350 mgd * limit (mg/L) * 8.34) = 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 Gun Lake Tribe as neither has federally approved water quality standards applicable to the receiving water at the point of discharge.

ESA and NHPA Compliance

EPA has satisfied its requirements under the Endangered Species Act and the National Historical Preservation Act. Since this is an existing facility with no new planned expansion or construction expected within the permit term, it is believed that the issuance of the permit and the continued operation of the facility and associated discharge will have no effect on endangered or threatened species or their critical habitat and will have no impact on historical, archeological, or cultural resources.

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.

pH

The limits for pH are based on protecting Michigan water quality standards (Rule 53). Monitoring indicates the permittee is in substantial compliance with the limits and thus the frequency of monitoring has been reduced.

5-day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)

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 and 40 CFR Part 133. Information related to the development of the limits can be found in the Administrative Record. Monitoring indicates the permittee is in substantial compliance with the limits and thus the frequency of monitoring has been reduced.

Total Suspended Solids (TSS)
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 for October through April were based on 40 CFR Part 133. For May through September, the limits were set more stringent than secondary treatment (Part 133). Michigan requires the more stringent limits for new dischargers and EPA agreed that the limits were appropriate. Monitoring indicates the permittee is in substantial compliance with the limits and thus the frequency of monitoring has been reduced.

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 new discharger criteria and warmwater dissolved oxygen water quality standard of 5 mg/L as a daily minimum where it is applicable. Monitoring indicates the permittee is in substantial compliance with the limit and thus the frequency of monitoring has been reduced.

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.

Copper, Nickel and Zinc
The previous permit required the permittee to test semi-annually for these three parameters. Based on the data collected, EPA does not believe there is a reasonable potential to cause or contribute to a violation of Michigan's water quality standards where they are applicable. The data can be found in the Administrative Record.

Mercury
During the last permit term, the permittee sampled its effluent for mercury using low level testing procedures semi-annually. Based on the results, EPA believes the effluent does not have a reasonable potential to cause or contribute to a violation of Michigan's water quality standard where it is applicable. Because EPA still has concerns related to mercury discharges within the Great Lakes Basin, this permit will continue to require effluent monitoring for mercury but at a reduced level, annually. Though mercury discharges at this facility are not a concern at this time, the permit requires the development and implementation of a Mercury Minimization Program to help identify potential new sources of mercury.

Phosphorus
The limits in the previous permit are carried over to this permit as we believe they are still appropriate. The previous permit limits were developed to be protective of Michigan's water quality standards (Rule 60). Information related to the development of the limits can be found in

the Administrative Record. This permit also includes weekly average limits in accordance with 40 CFR 122.45(d). Monitoring indicates the permittee is in substantial compliance with the limits and thus the frequency of monitoring has been reduced.

Ammonia

The limits in the previous permit are carried over to this permit as we believe they are still appropriate. The previous limits were developed to protect Michigan's dissolved oxygen water quality standards, chronic toxicity, new discharger criteria and permit writer's judgment. Information related to the development of the limits can be found in the Administrative Record. Monitoring indicates the permittee is in substantial compliance with the limits and thus the frequency of monitoring has been reduced.

Additional Monitoring

Additional monitoring for 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 indentify 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.
- 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 site that may be used during the permit term:

Owner	Site ID#	Latitude	Longitude
Wayne and Sandra Larsen	02N11W13-WL01	N42, 38.895'	W85, 33.693'

The permit only allows this site to be used. If additional sites are needed, the permit requires the permittee to submit additional information and the permit may be modified, with public notice, to include the additional sites.

Significant Changes from the Last Permit

Following are the significant changes in the draft permit:

- Changed the name of the facility.
- Updated the treatment plant description.
- Added 'Summary of Regular Reporting'.
- A daily maximum limit for E. coli has been added to be consistent with 40 CFR § 122.45(d) and EPA 2012 Recreational Water Quality Criteria.
- Reduced the monitoring frequency for most parameters from 3 to 2 times per week. pH and dissolved oxygen monitoring has been reduced from daily to 2 times per week.
- Removed monitoring for copper, nickel and zinc.
- The permit requires weekly observations of the outfall to look for unusual characteristics of the discharge.
- Requirements related to Asset Management have been added (Part I.C.3).
- Reduced monitoring for mercury to annual and added requirement to develop and implement a mercury minimization program (Part I.C.4).
- The Industrial Waste Pretreatment Program language has been updated (Part I.C.5).
- The 'Sludge Disposal Requirements' have been updated (Part I.C.6)
- The "Standard Conditions" have been revised (Part II).
- The "Sewage Sludge Requirements" have been revised (Part III).

The permit is based on an application dated March 1, 2014 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.

Written By: John Colletti November 2014
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