

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.: 13-12-02-A

Public Notice Issued On: December 18, 2013

Comment Period Ends: January 17, 2014

Permit No.: MI-0055204-3 (REISSUANCE)

Application No.: MI-0055204-3

Name and Address of Applicant:

Lac Vieux Desert Utility Commission
P.O. Box 249
Watersmeet, Michigan 49969

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

Lac Vieux Desert Wastewater Facility
Water Tower Road
Lac Vieux Desert Indian Reservation
Watersmeet, Michigan 49969
Gogebic County
(SE ¼ of the NW ¼ of Section 22,
Township 45N, Range 39W)

Receiving Water: wetland tributary to Bonifas Creek

DESCRIPTION OF APPLICANT'S FACILITY AND DISCHARGE

The above facility is located within the boundaries of the Lac Vieux Desert Indian Reservation. The EPA has retained the authority to issue NPDES permits to facilities with discharges to waters of the United States within the boundaries of Indian Reservations. The EPA is issuing this NPDES permit under the authorities of the Clean Water Act.

The permittee has built and operates a 2-cell wastewater stabilization lagoon. The primary cell is approximately 6.1 acres and the secondary cell is approximately 2.9 acres. The treated effluent is discharged through Outfall 001 (lat: 46.285455 long: -89.167633) in a controlled manner during the spring and fall to a wetland that is tributary to Bonifas Creek.

The design average influent flow for the facility is 65,000 gallons per day. The treatment system provides service for the Lac Vieux Desert Indian Reservation.

The draft permit requires the applicant to meet the following effluent limitations:

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			
	Concentration (Specified Units)			
Parameter	Minimum	Monthly	Weekly	Maximum
Flow (MGD)	-	Report	-	-
Dissolved Oxygen (mg/L)	5.0	-	-	-
pH (SU)	6.5	-	-	9.0
Total Suspended Solids (TSS) (mg/L)	-	45	65	-
Biochemical Oxygen Demand (BOD ₅) (mg/L)	-	30	45	-
Phosphorus, Total (mg/L)	-	Report	-	-
Ammonia (NH ₃ -N) (mg/L)	-	Report	-	Report
E. coli (#/100ml)	-	126	-	235
BOD ₅ percent removal (%)	85	-	-	-
TSS percent removal (%)	65	-	-	-
Outfall observation (yes/no)	-	-	-	-

Discharge is limited to a maximum 6 inches per day. Discharge flow was calculated as follows:

$$2.9 \text{ acres} \times 0.5 \text{ feet/day (6 inches/day)} \times 325,900 \text{ gallons per acre-ft} \approx 0.47 \text{ million gallons/day.}$$

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

$$0.47 \text{ mgd} \times \text{limit (mg/L)} \times 8.34 = \text{Loading (lbs/d).}$$

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 Lac Vieux Desert Band of Lake Superior Chippewa as neither has federally approved water quality standards applicable to the receiving water at the point of discharge.

ESA and NHPA Compliance

EPA believes it has satisfied its requirements under the Endangered Species Act and 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.

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 secondary treatment requirements pursuant to 40 CFR Part 133 and Michigan's water quality standards (Part 4, Act 451).

Dissolve Oxygen

A minimum dissolved oxygen discharge limit of 5.0 mg/L is included in the permit based on water quality concerns and protection of Michigan's water quality standards.

5-day Biochemical Oxygen Demand (BOD₅)

The limits for BOD₅ are based on 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 over 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 65 mg/L and a 30-day average limit of 45 mg/L are carried over 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. 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.

Phosphorus

Due to concerns regarding nutrients being discharged to surface waters, the permit requires monitoring for phosphorus and ammonia to determine if the discharge is a substantial source of nutrients which could cause or contribute to water quality standards violations.

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 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). 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.
- Dikes must be maintained and vegetation cut.

Significant Changes From The Last Permit

Following are the significant changes in the draft permit:

- The Lac Vieux Desert Utility Commission has been designated as the permittee.
- A daily maximum limit for E. coli has been added to be consistent with 40 CFR § 122.45(d).
- During discharge, the permit requires weekly observations of the outfall to look for unusual characteristics of the discharge.
- The permit no longer authorizes the use of the effluent as irrigation water for the golf course or for snow making.

- The section “Special Requirements – Stabilization pond” has been updated (Part I.D).
- Requirements related to Asset Management have been added (Part I.E.5).
- The Industrial Waste Pretreatment Program language has been updated (Part I.E.6).
- The Sludge Disposal Requirements language has been updated (Part I.E.7).
- The “Standard Conditions” have been revised (Part II).

The permit is based on an application dated April 12, 2013 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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