INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

October 29, 2014

VIA ELECTRONIC MAIL

Mr. Ed Serowka, PE
Lakeland Innovatech
332 Persimmon Trail
Lafayette, Indiana 47909

Dear Mr. Serowka:

Re: Preliminary Effluent Limitations
Proposed Bill Monroe's Memorial Music Park & Campground Wastewater Treatment Plant
Brown County

This letter is in response to your request for preliminary effluent limitations for a proposed Bill Monroe's Memorial Music Park & Campground Wastewater Treatment Plant. As indicated in your request, the average design flow of the WWTP will be 0.02 MGD. The treatment type would be bio-mechanical. The proposed discharge location will be Lake Monroe. The $Q_{7,10}$ low-flow of the receiving stream at the point of discharge is considered to be zero cfs.

This letter also serves as notification that supplemental information is required to fully evaluate the proposed discharge. Construction and NPDES permitting may not proceed until the supplemental information specified herein has been submitted to, and been preliminarily approved by, this Office.

Preliminary effluent limitations are impacted by numeric and narrative water quality criteria as well as antidegradation requirements. Current Indiana Antidegradation Standards at 327 IAC 2-1.3-3 contain a provision for all surface waters of the State. The existing uses and the level of water quality necessary to protect existing uses shall be maintained and protected. The antidegradation rules for Indiana are found in 327 IAC 2-1.3.

Before approving a new discharge of treated wastewater, alternatives to the proposed discharge must be evaluated to satisfy antidegradation requirements. If this office makes a preliminary determination that the new discharge is necessary on the basis of economic or social factors, the effluent limitations contained herein (developed to minimize the potential lowering of water quality) may be utilized for construction and NPDES permitting. If this office determines the discharge is not necessary on the basis of economic or social factors, the proposed new discharge will not be allowed, and construction and NPDES permits will not be issued.

ANTIDEGRADATION DEMONSTRATION REQUIREMENTS FOR AMMONIA-NITROGEN

327 IAC 2-1.3-5(a) requires every antidegradation demonstration shall include the following basic information:

(1) The regulated pollutants known or believed to be present in the wastewater and proposed to be discharged.
(2) The estimated concentration and mass loading of all regulated pollutants proposed to be discharged.
(3) The location of the proposed discharge and a map of the area of the proposed discharge that shows the receiving water or waters that would be affected by the new or increased loading, including the area downstream of the proposed discharge.

Every antidegradation demonstration shall include the following necessary information:

(1) The availability, reliability, cost-effectiveness, and technical feasibility of the following:
    (A) No degradation.
    (B) Minimal degradation.
    (C) Degradation mitigation techniques or alternatives.
(2) An analysis of the effluent reduction benefits and water quality benefits associated with the degradation mitigation techniques or alternatives required to be assessed under subdivision (1)(C), including the following:
    (A) A review of pollution prevention alternatives and techniques that includes the following:
        (i) A listing of alternatives and techniques, including new and innovative technologies.
        (ii) A description of how the alternatives and techniques available to the applicant would minimize or prevent the proposed significant lowering of water quality.
        (iii) The effluent concentrations attainable by employing the alternatives and techniques.
        (iv) The costs associated with employing the alternatives and techniques.
        (v) An identification of the pollution prevention alternatives and techniques selected to be employed and an explanation of why those selections were made.
    (B) An evaluation of the feasibility and costs of connecting to an existing POTW or privately owned treatment works, within the vicinity of the proposed new or increased loading, that:
        (i) will effectively treat the proposed discharge; and
        (ii) is willing to accept wastewater from other entities.
    (C) For POTWs, if the proposed significant lowering of water quality is a result of a proposed new or increased loading from one (1) or more indirect dischargers, the analysis shall also include the following:
        (i) The requirements of clause (A) shall be completed for the indirect discharger or dischargers as well as for the POTW. The POTW may require

the indirect dischargers to prepare this information.
(ii) If one (1) or more of the indirect dischargers proposes or does discharge to a combined sewer or sanitary sewer that is connected to a combined sewer, all combined sewer overflows (CSOs) between the point of discharge to the sewer and the POTW shall be identified.

(3) The availability, cost-effectiveness, and technical feasibility of central or regional sewage collection and treatment facilities, including long-range plans for discharges outlined in:
(A) state or local water quality management planning documents; and
(B) applicable facility planning documents.

(4) The availability, cost-effectiveness, and technical feasibility of discharging to another waterbody that:
(A) is not an OSRW; or
(B) has a higher assimilative capacity for the regulated pollutant.

327 IAC 2-1.3-5(g) requires the antidegradation demonstration include the following social and economic analysis information:

(g) For each regulated pollutant in the proposed new or increased loading associated with activities in subsection (f), each antidegradation demonstration shall include the following social and economic analysis information:

(1) The anticipated impact on aquatic life and wildlife, considering the following:
(A) Endangered or threatened species.
(B) Important commercial or recreational sport fish species.
(C) Other individual species.
(D) The overall aquatic community structure and function.

(2) The anticipated impact on human health.

(3) The degree to which water quality may be lowered in waters located within the following:
(A) National, state, or local parks.
(B) Preserves or wildlife areas.
(C) OSRWs or ONRWs.

(4) The extent to which the resources or characteristics adversely impacted by the lowered water quality are unique or rare within the locality or state.

(5) Where relevant, the anticipated impact on economic and social factors, including the following:
(A) Creation, expansion, or maintenance of employment.
(B) The unemployment rate.
(C) The median household income.
(D) The number of households below the poverty level.
(E) Community housing needs.
(F) Change in population.
(G) The impact on the community tax base.
(H) Provision of fire departments, schools, infrastructure, and other necessary public services.
(I) Correction of a public health, safety, or environmental problem.

(J) Production of goods and services that protect, enhance, or improve the overall quality of life and related research and development.
(K) The impact on the quality of life for residents in the area.
(L) The impact on the fishing, recreation, and tourism industries.
(M) The impact on endangered or threatened species.
(N) The impact on economic competitiveness.
(O) Demonstration by the applicant that the factors identified and reviewed under clauses (A) through (N) are necessary to accommodate important social or economic development despite the proposed significant lowering of water quality.
(P) Inclusion by the applicant of additional factors that may enhance the social or economic importance associated with the proposed discharge, such as an approval that recognizes social or economic importance and is given to the applicant by:
(i) a legislative body; or
(ii) other government officials.

In determining whether a proposed discharge is necessary to accommodate important economic or social development in the area in which the waters are located under antidegradation standards and implementation procedures, the commissioner will give substantial weight to any applicable determinations by governmental entities.

Once an antidegradation demonstration has been received by this Office and determined complete, the antidegradation demonstration will be public noticed for a thirty day period requesting comment in accordance with 327 IAC 5-2-11.2. If this office makes a tentative determination to approve the submitted antidegradation demonstration, then construction and NPDES permitting may proceed with the understanding that a final determination will not be made until public input on the tentative decision has been considered. This office will seek public input on the tentative decision during the public participation process for the issuance of the NPDES permit. **It should be noted that the public participation process and/or permit appeal process included in the rules for the issuance of NPDES permits could alter (and possibly make more stringent) the limits that are established in the final NPDES permit, or result in the denial of the request.** Should the tentative decision be to deny the antidegradation demonstration, the tentative decision for denial will be public noticed for a thirty day period requesting comment in accordance with 327 IAC 5-2-11.2. The public process for an antidegradation demonstration can be found at 327 IAC 2-1.3-6.

Preliminary Effluent Limitations for Sanitary-Type Wastewater

TABLE 1

	Summer		Winter		
Parameter	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Units
$CBOD_5$	10	15	10	15	mg/l
TSS	12	18	12	18	mg/l
Ammonia-nitrogen	1.1	1.6	1.6	2.4	mg/l
Phosphorus	1.0	-----	1.0	-----	mg/l

TABLE 2

Parameter	Daily Minimum	Daily Maximum	Monthly Average	Units
pH	6.0	9.0	-----	s.u.
Dissolved Oxygen	6.0	-----	-----	mg/l
*E. coli**	-----	235	125	count/100 mls

The effluent flow must be measured. The mass limits for $CBOD_5$, NH_3-N, and TSS are calculated by multiplying the average design flow (in MGD) by the concentration value and by 8.345. Summer effluent limits apply from May 1 through November 30 of each year. Winter effluent limits apply December 1 through April 30 of each year.

*The effluent limitations for *E. coli* are 125 colonies/100 ml as a monthly average calculated as a geometric mean and 235 colonies/100 ml as a daily maximum. **Ultraviolet light disinfection or disinfection by other non-halogen compounds is required as a consideration in antidegradation. Disinfection by chlorination or other halogen compounds will require the applicant to demonstrate that disinfection by ultraviolet light is either not technically feasible or that it is not affordable.**

If the preliminary effluent limitations specified above are not acceptable to the discharger, then alternate limitations may be pursued. To pursue alternate limitations, an assessment of alternative feasible treatment technologies comparing the expected effluent concentrations with the expected capital and maintenance costs for each alternative, and the corresponding expected new or increased loading above the level generated by the effluent limits specified above must be submitted for review. The assessment must also include an affordability analysis and justification for selecting the most cost-effective treatment plant design that is affordable. In no case will limitations be approved which will result in exceedances of State water quality standards.

In addition, effluent limitations which would not cause a significant lowering to water quality in the receiving stream may be requested. Acceptance of the calculated non-significant lowering effluent limitations may eliminate the requirement to submit an antidegradation demonstration. Effluent limitations which would not cause a significant lowering to water quality in the receiving water have the potential to be significantly more stringent than the effluent limitations in Table 1 above.

If there are any questions regarding design requirements of the construction permit, please contact Mr. Don Worley at 317/232-5579. The NPDES permit will not be issued until the construction permit is finalized.

If there are any questions regarding the antidegradation requirements or NPDES permit requirements, please feel free to contact Leigh Voss of my staff at 317/232-8698.

Sincerely,

Jerry Dittmer, Chief
Municipal NPDES Permits Section
Office of Water Quality