INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

May 17, 2024

VIA ELECTRONIC MAIL

Mr. Gary Ladd, President
Ladd Engineering, Inc.
1127 Brookside Dr.
Lebanon, IN 46052

Dear Mr. Ladd:

Re: Preliminary Effluent Limitations
Proposed replacement of Colfax
Wastewater Treatment Plant
NPDES Permit No. IN002758
Clinton County

This letter is in response to your request for preliminary effluent limitations for a proposed replacement of the Town of Wastewater Treatment Plant (WWTP). As indicated in your request, the average design flow of the WWTP will be 0.25 MGD. The proposed discharge location will be to Withe Creek. The $Q_{7,10}$ low-flow of the receiving stream at the point of discharge is considered to be 0 cfs.

The following effluent limits are based on Best Available Demonstrated Control Technology (BADCT) for the treatment of sanitary wastewater and are appropriate for the aforementioned bio-mechanical wastewater treatment plant with an average design flow of 0.25 MGD with continuous discharge to Withe Creek:

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-N	1.1	1.6	1.6	2.4	mg/l

Table 2

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

327 IAC 2-1.3 outlines the state's Antidegradation Standards and Implementation Procedures. According to 327 IAC 2-1.3-1(b), the procedures apply to a proposed new or increased loading of a regulated pollutant to surface waters of the state from a deliberate activity subject to the Clean Water Act, including a change in process or operation, that will result in a significant lowering of water quality. **As the proposed activities would not result in a significant lowering of water quality, the Antidegradation Standards and Implementation Procedures do not apply.**

For the above referenced discharge scenario, the following requirements will apply: Flow must be measured. The mass limits for parameters are calculated by multiplying the average design flow (in MGD) by the corresponding concentration value and by 8.345. Summer effluent limitations apply from May 1 through November 30 of each year. Winter effluent limitations apply December 1 through April 30 of each year.

The effluent limitations for *E. coli* are 125 count/100 mls as a monthly average calculated as a geometric mean and 235 count/100 mls as a daily maximum. The *E.coli* limits apply from April 1 through October 31 of each year. **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.**

The BADCT limits set forth in this letter are based on the Indiana water quality standards in effect at this time and may not be the final limits once the NPDES permit is issued. If the water quality standards are modified by the Water Pollution Control Board and new water quality standards become effective prior to the date the NPDES permit for your facility is actually issued, then the IDEM is required by law to issue the NPDES permit with limits based on the new standards.

Also, note that these BADCT limitations only reflect the typical conventional pollutants. Since the wastestream has not been fully characterized, IDEM reserves the right to establish effluent limitations for additional pollutant parameters as deemed necessary. This letter does not guarantee the approval of any permits.

In addition, Indiana Code 13-18-26 requires the permit applicant to certify that the following documents have been prepared and completed for new facilities and/or facility expansions with a design capacity above 0.10 MGD:

· A Life Cycle Cost-Benefit Analysis, as described in IC 13-18-26-3;
· A Capital Asset Management Plan, as described in IC 13-18-26-4; and
· A Cybersecurity Plan, as described in IC 13-18-26-5.

The certification of completion must be submitted to IDEM along with the permit application, and must be notarized. IDEM will not issue a permit to an applicant that is subject to IC 13-18-26 if the required certification is not included with the application packet, as required by IC 13-18-26-1(b).

The plans and analyses must be reviewed and revised (as necessary) at least once every five years. A new certification must be submitted to IDEM (with the NPDES renewal application) if any plan or analysis is revised during the five-year review.

If you have any questions regarding construction permits associated with the proposed facility upgrade, please contact Ms. Missy Nunnery at 317-232-5579. The NPDES permit modification will not be issued to reflect the upgrade until the construction permit is finalized. At a minimum, the modification request should be submitted at least 180 days prior to completion of the upgrade activities. Please be advised that the modification request must be accompanied by a $50.00 fee in accordance with IC 13-18-20-12.

If there are any questions regarding the antidegradation requirements or NPDES permit requirements, please feel free to contact Nicholas Eilerman at neilerma@idem.IN.gov or 317/232-8619.

Sincerely,

Leigh Voss

Leigh Voss, Chief
Municipal NPDES Permits Section
Office of Water Quality

State Form 4336

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANAPOLIS

OFFICE MEMORANDUM

Date: April 15, 2024

To: File

Thru: Leigh Voss, Chief LAV
NPDES Municipal Permits Section
John Donnellan, Reviewer JTD
NPDES Municipal Permits Section

From: Nicholas Eilerman NJE
NPDES Municipal Permits Section

Subject: Stream Characterization Report for Town of Colfax WWTP in Clinton County (IN0020443, WLA002758)

A stream characterization was done in support of an antidegradation analysis for the proposed replacement of Town of Colfax WWTP. Effluent limitations for the proposed discharge will be determined as part of the antidegradation analysis. The proposed WWTP will treat sanitary-type wastewater from the town of Colfax and have an average design flow of 0.25 mgd. The discharge will be to Withe Creek to Sugar Creek to Wabash River. A map showing the location of the proposed outfall is included as an attachment. The proposed discharge is covered under the rules for the non-Great Lakes system. Information about the characteristics of the receiving stream and effluent limitations necessary to protect the designated stream uses is provided below.

Designated Stream Uses

The receiving stream of Withe Creek is designated for full body contact recreation and shall be capable of supporting a well-balanced, warm water aquatic community. The proposed discharge would not be directly to or tributary to an outstanding state resource water.

Assessment Unit and 303(d) Listing

The 2022 assessment unit for the Withe Creek at the proposed outfall is INB1045_T1002. This assessment unit is located in 12-Digit HUC 051201100405 and is not on the 2022 303(d) list for any parameters. A TMDL study for Withe Creek for this assessment unit has not been completed

Stream Design Flows

The drainage area at the outfall is estimated to be 4.8 mi^2. The nearest USGS (Partial) Gaging Station to the proposed outfall (Station 03339408 Little Potato Creek near Darlington, IN) has a drainage area of 31.8 mi^2, a Q7,10 and Q30,10 flows of zero cfs. Therefore, Q7,10 and Q30,10 flows of the Withe Creek of the proposed outfall are zero cfs.

The information for the gaging station was obtained from the book Low-Flow Characteristics of Indiana Streams by Kathleen K. Fowler and John T. Wilson, published in 2015 by the USGS.

Water Quality Information

No water quality data could be found for Withe Creek.

Nearby Dischargers

A search was made for nearby permitted point source dischargers and none were found that would impact the development of water quality-based effluent limitations for this proposed discharge.

Protection of Designated Stream Uses

Based on the above stream characterization, antidegradation-based effluent limitations equivalent to a monthly average CBOD5 of 10 mg/l, monthly average summer/winter ammonia-N of 1.1/1.6 mg/l and daily average DO of 6.0 mg/l are adequate to protect aquatic life from a discharge containing these pollutants of concern. In addition, *E. coli* limitations established based on meeting criteria in the undiluted discharge are adequate to protect recreational uses.

LADD ENGINEERING, INC.

March 18, 2024

Indiana Department of Environmental Management
Office of Water Quality – Mail Code 65-42
Municipal NPDES Permit Section
100 North Senate Avenue
Indianapolis, IN 46204-2251

Re: Wastewater Facilities Improvements Project
NPDES Permit Limits
Town of Colfax

Enclosed, herein, for your review and processing is a Preliminary Effluent Limitation Application for the Town of Colfax WWTP. The existing plant is a 0.110 MGD packaged activated sludge extended aeration type. It is proposed to replace the plant with a new 0.250 MGD activated sludge oxidation ditch plant.

Should you have any questions, feel free to contact me at (765) 482-9219.

Sincerely,

Gary D. Ladd

Gary D. Ladd, P.E., President
Ladd Engineering, Inc.

Xc: File

IDEM-WATER QUALITY

MAR 22 2024

RECEIVED

1127 Brookside Drive, Lebanon, IN 46052, (765) 482-9219, Fax (765) 482-9224

OVERVIEW AND PRELIMINARY EFFLUENT LIMITATIONS APPLICATION

Part of State Form 53912 (R / 7-15)

PURPOSE

This application form is utilized by the Indiana Department of Environmental Management, Office of Water Quality, and Municipal NPDES Permit Section's staff to gather information necessary to provide the applicant with accurate and timely preliminary effluent limitations for sanitary-type National Pollutant Discharge Elimination System (NPDES) permits. Preliminary effluent limitations are the anticipated effluent limitations for pollutants that will be included in a subsequently issued or modified NPDES permit. These limitations are a pre-requisite to the submittal of an NPDES permit application or a construction permit application. Factors affecting the preliminary effluent limitations include the type of treatment selected, the volume of water discharged, the location of the discharge, the characteristics of the receiving water body, et al.

Once preliminary effluent limitations are developed for the proposed activity, a letter including these limitations will be sent to the applicant by this Office. The letter will also include a determination of whether an antidegradation demonstration will be required. Once the applicant has received the preliminary effluent limits letter (and completed an antidegradation demonstration, if required), the applicant may then proceed with the design phase of the project and submit a construction permit application (if required) and then an NPDES permit application or modification request. Applications for both the NPDES permit and the construction permit should include a copy of the preliminary effluent limitations letter sent by this Office.

APPLICATION FEES

No fees are required for preliminary effluent limitation applications at this time. Fees are required for NPDES and Construction Permit applications.

REASONABLE SCOPE

More than one average design flow, treatment method, or receiving stream scenario may be submitted for preliminary effluent limitation development at one time. However, this Office reserves the right to request refinement of any request which includes multiple scenarios to provide the best use of Office resources to serve all applicants.

APPLICATION DEFICIENCIES

If the applicant fails to provide all necessary information, or if unique information is required for the proposed activity, this Office will attempt to obtain the information from the applicant via phone or via mailing in a reasonable time frame. Failure to submit the necessary information requested in a timely manner will result in delays in generating preliminary effluent limitations.

QUESTIONS?

For questions or forms related to preliminary effluent limitations, or NPDES permits please call 317-232-8698. For questions or forms related to Construction Permits, please contact staff of the Facility Construction and Engineering Support Section at 317-232-5579.

PRELIMINARY EFFLUENT LIMITATION APPLICATION

State Form 53912 (R / 7-15)
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER QUALITY – MAIL CODE 65-42
MUNICIPAL NPDES PERMIT SECTION
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

INSTRUCTIONS:
1. *Mail this completed application to the above address.*
2. *For questions or forms related to preliminary effluent limitations or NPDES permits please call 317-232-8698.*
3. *For questions or forms related to Construction Permits, please contact staff of the Facility Construction and Engineering Support Section at 317-232-5579.*

PERSON COMPLETING APPLICATION

Name	Title *(Consultant, Compliance Manager, etc.)*
Gary Ladd	Consultant
Mailing address *(number and street, city, state, and ZIP code)*	
1127 Brookside Drive, Lebanon, IN 46052	
Telephone number(s)	**Fax number**	**E-mail address**
(765) 482-9219	( )	gary@laddengr.com

FACILITY RESPONSIBLE PARTY

Name	Title of responsible party *(Owner, C.E.O., etc.)*
Julie Lewellen	Town Council President
Mailing address *(number and street, city, state, and ZIP code)*	
208 W. Main Street, Colfax, IN 46035	
Telephone number(s)	**Fax number**	**E-mail address**
(765) 324-2194	( )	lewellen1230@gmail.com

FACILITY CERTIFIED OPERATOR *(optional)*

Name	Certification number
Josh Surber	022210
Mailing address of facility *(number and street, city, state, and ZIP code)*	
208 W. Main Street, Colfax, IN 46035	
Telephone number(s)	**Fax number**	**E-mail address**
(765) 484-3587	( )	colfaxww@tctc.com

FACILITY INFORMATION

Name of facility	*Please check one:*
Colfax WWTP	☐ New ☑ Existing Facility
Mailing address *(number and street, city, state, and ZIP code)*	
208 W. Main Street, Colfax, IN 46035	
Telephone number of facility	**Fax number of facility**	**Is the collection system connected to another entity for wastewater treatment?**
(765) 324-2194	( )	☐ Yes ☑ No
If yes, identify the entity.	**NPDES number of entity**
	IN0020443
County facility is/will be in	**Nearest city or town**
Clinton	Frankfort
If new facility, list the identity and distance to the nearest publicly-owned wastewater treatment plant's collection system *(sewer lines)*	**If existing facility, NPDES permit number**
N/A - Replacement facility	

NOTE: Provide street address as well as latitude and longitude information; also include a copy of a portion of a topographic map as an attachment to this application form which indicates the exact location and/or proposed location(s) of the facility.

Facility location *(Existing and/or proposed location(s))*

Latitude 40 deg. 11' 23.6" N; Longitude 85 deg. 39' 37.9" W

NOTE: Use latitude and longitude to describe existing and/or proposed outfall location(s); also include a copy of a portion of a topographic map as an attachment to this application form which indicates the exact location and/or proposed location(s).

Outfall location *(Existing and/or proposed location(s))*

Latitude 40 deg. 11' 24.6" N; Longitude 86 deg. 39' 37.7" W - Existing & Proposed

RECEIVING STREAM

If an existing facility, provide the name of the stream, lake, drain, etc. that the plant outfall discharges into currently *(i.e. "An unnamed ditch to the Wabash River").*

Withe Creek to Sugar Creek to Wabash River

If a new facility, or if proposing to relocate the outfall of an existing facility, provide the name of the stream, lake, drain, etc. that the plant outfall is proposed to discharge into.

Type of wastewater to be treated *(i.e. sanitary only, commercial and sanitary, sanitary and industrial, landfill leachate, etc.)*

Sanitary only

If an existing facility, list the current average design flow in Millions of Gallons per Day (MGD)	New or Existing Facility, list the proposed average design flow(s) in MGD
0.110 MGD	0.250 MGD

TREATMENT FACILITY DESCRIPTION

Note: For each type of treatment selected, please provide specific information regarding the type of treatment proposed such as bio-mechanical (i.e. extended aeration, oxidation ditch, sequential batch reactor), or a waste stabilization lagoon, an aerated lagoon, etc. Please specify the type of disinfection equipment to be utilized.

For each type of treatment selected, please provide specific information regarding the type of treatment proposed.

Extended aeration activated sludge oxidation ditches with final clarifiers to UV disinfection & post aeration

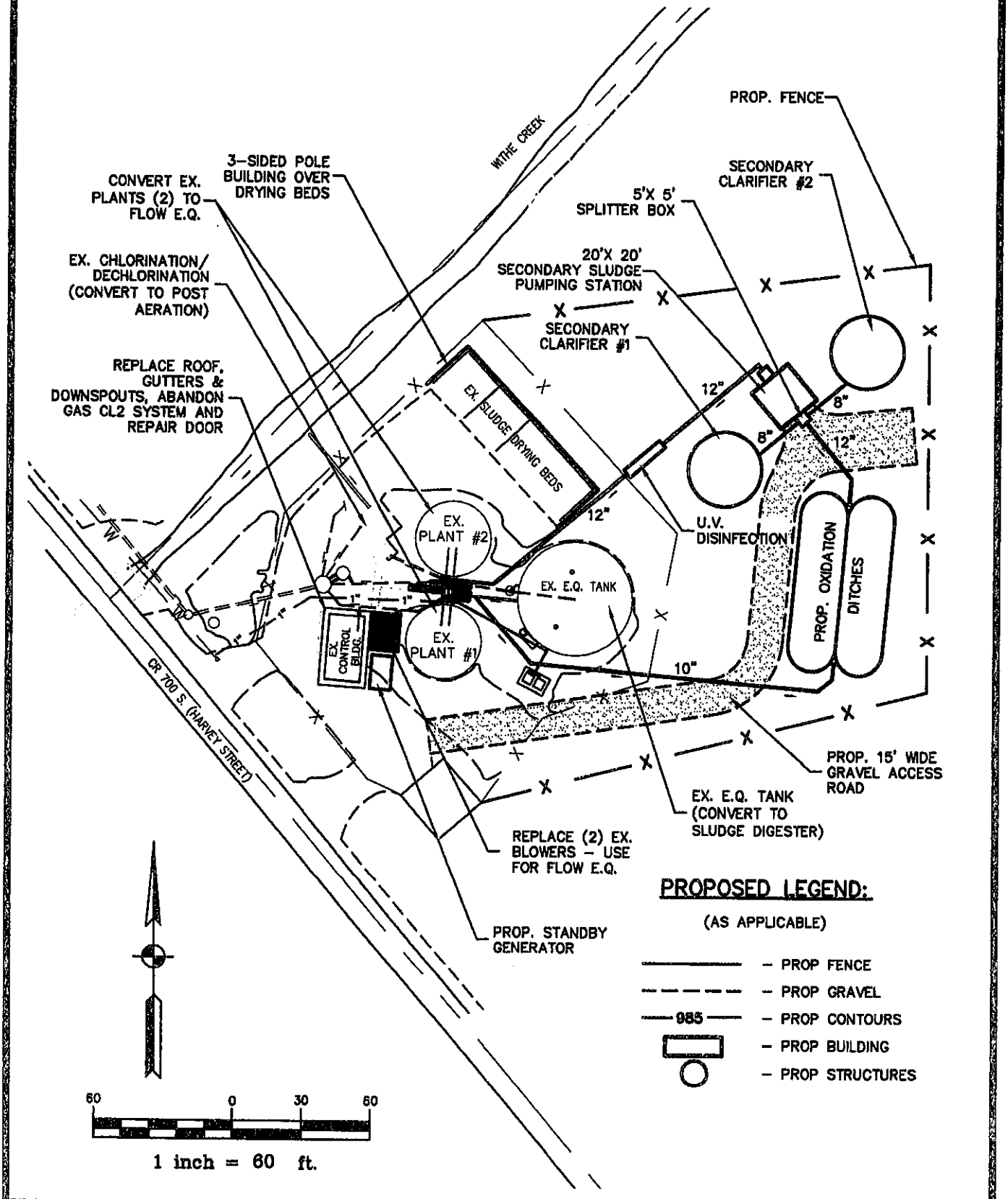
Type of disinfection equipment to be utilized

Ultraviolet Light

ADDITIONAL INFORMATION

Please provide any additional information which might be helpful in describing the proposed activity or special concerns. Feel free to attach additional pages as necessary.

The existing activated sludge treatment plant is proposed to be replaced with a new extended aeration activated sludge plant consisting of oxidation ditches and final clarifiers. The plant effluent will be directed to a UV disinfection then to post aeration.



LADD ENGINEERING, INC. *LEBANON, INDIANA*	Town of Colfax Preliminary Engineering Report	Exhibit 4.2 Prop. WWTP Improvements