



## Indiana Department of Environmental Management

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**Eric J. Holcomb**  
*Governor*

**Brian Rockensuess**  
*Commissioner*

June 28, 2024

Via Email to: [troswarski@lafayette.in.gov](mailto:troswarski@lafayette.in.gov)  
The Honorable Tony Roswarski, Mayor  
City of Lafayette  
20 North 6th South  
Lafayette, Indiana 47901

Dear Mayor Roswarski:

Re: Inspection Summary Letter  
Lafayette Wastewater Treatment Plant  
NPDES Permit No. IN0032468  
Lafayette, Tippecanoe County

An inspection of the above-referenced facility or location was conducted by a representative of the Indiana Department of Environmental Management, Office of Water Quality, pursuant to IC 13-18-3-9. A summary of the inspection is provided below:

Date(s) of Inspection: June 27, 2024  
Type of Inspection: Compliance Evaluation Inspection  
Inspection Results: Potential problems were discovered or observed.

Effective immediately, IDEM is initiating a program strongly encouraging domestic wastewater utilities to perform cybersecurity vulnerability assessments, and to take actions to mitigate identified vulnerabilities and increase the cybersecurity resilience of Indiana's water sector. Utilities can choose any assessment tool appropriate for the water sector, but IDEM is highlighting the following websites for information and helpful vulnerability assessment tools made available from the U.S. EPA and the American Water Works Association: <https://www.epa.gov/waterresilience/epa-cybersecurity-water-sector> and <https://www.awwa.org/Resources-Tools/Resource-Topics/Risk-Resilience/Cybersecurity-Guidance>. IDEM will continue to share important updates on the cybersecurity of the water sector.

A copy of the NPDES Wastewater Facility Inspection Report is enclosed for your records. Please direct any response to this letter and any questions to Maggie Kroeger at 317-619-3639 or by email to [mkroeger@idem.IN.gov](mailto:mkroeger@idem.IN.gov).

Sincerely,

Kim Rohr, Chief  
Wastewater Inspection Section  
Office of Water Quality

Enclosure



# NPDES Wastewater Facility Inspection Report

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

NPDES Permit Number: <b>IN0032468</b>	Facility Type: Municipality	Facility Classification: Major	TEMPO AI ID IV 12227
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Date(s) of Inspection: June 27, 2024

Type of Inspection: Compliance Evaluation Inspection

Name and Location of Facility Inspected: <b>Lafayette Wastewater Treatment Plant</b> 1700 Wabash Avenue Lafayette IN 47909	County: Tippecanoe	Receiving Waters: Wabash River	Permit Expiration Date: 7/31/2028	Design Flow: 33MGD
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On Site Representative(s):				
First Name	Last Name	Title	Email	Phone
Brad	Talley	Superintendent	btalley@lafayette.in.gov	765-807-1800
Brian	Beeler	Assistant Superintendent	bbeeler@lafayette.in.gov	765-807-1800
Pete	Corbin II	Maintenance		
Pete	Corbin III	Chief of Maintenance		
Rowan	Burdick	Chief of Lab	rburdick@lafayette.in.gov	

Was a verbal summary of findings presented to the on-site representative? **Yes**

Certified Operator: Brad Talley	Number: 13425	Class: IV	Effective Date: 7-1-21	Expiration Date: 6-30-24	Email: btalley@lafayette.in.gov
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Cyber Security Contact:  
Name: \_\_\_\_\_ Email: \_\_\_\_\_

Responsible Official: The Honorable Tony Roswarski, Mayor 20 North 6th South Lafayette, Indiana 47901	Permittee: City of Lafayette Email: troswarski@lafayette.in.gov Phone: 765-807-1002 Fax: _____	Contacted? No
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### INSPECTION FINDINGS

- Conditions evaluated were found to be satisfactory at the time of the inspection. (5)
- Violations were discovered but corrected during the inspection. (4)
- Potential problems were discovered or observed. (3)
- Violations were discovered and require a submittal from you and/or a follow-up inspection by IDEM. (2)
- Violations were discovered and may subject you to an appropriate enforcement response. (1)

### AREAS EVALUATED DURING INSPECTION

*(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)*

S	Receiving Waters	S	Facility/Site	S	Self-Monitoring	S	Enforcement
S	Effluent	S	Operation	S	Flow Measurement	S	Pretreatment
S	Permit	S	Maintenance	M	Laboratory	S	Effluent Limits Compliance
M	Collection System	S	Sludge Disposal	S	Records/Reports	N	Other:

### DETAILED AREA EVALUATIONS

**Receiving Waters:**

S 1. The receiving stream was visibly free of excessive deposits of settled solids, floating debris, oil, scum, or billowy foam.

Comments:

The receiving stream was observed near the concrete Outfall 014 structure and was free of settled solids, algae, or scum. White foam was observed near the outfall structure but appeared to dissipate quickly.

**Effluent:**

S 1. Final effluent was free of excessive solids, floating debris, oil, scum, or billowy foam.

Comments:

The final effluent was observed at the final weirs after the chlorine contact tank and at the concrete Outfall 014 structure. The effluent appeared clear and free of color at the time of the inspection.

**Permit:**

- S 1. Did the facility have a current copy of the permit available for reference?
- N 2. If the permit expires within 180 days, has a renewal application been submitted?
- S 3. Receiving waters and Facility Description in the permit reflect actual conditions at the facility.
- N 4. The permit has been properly transferred if there is a new owner.
- N 5. The NPDES Permit Schedule of Compliance monitoring and reporting milestones have been met.

Comments:

The facility was found to have a valid permit and the facility description, including units of treatment and receiving stream, is accurate.

**Collection System:**

- S 1. CSO's were found to be adequately monitored and maintained.
- M 2. There were three maintenance-related (clogged or blocked lines) overflow events in last 12 months.
- M 3. There were two hydraulic (I&I) overflow events in last 12 months.
- S 4. Facility has met SSO and dry weather CSO reporting requirements
- S 5. Any adverse impacts from SSO and CSO events have been properly mitigated.
- S 6. Lift stations were found to be adequately inspected, cleaned, and maintained, with adequate documentation of activities.
- S 7. Collection system maintenance activities appeared to be adequate.

Comments:

The Collection System evaluation generated a marginal rating due to three maintenance-related sewer overflow events and two hydraulic-related sewer overflow events in the last 12 months. The hydraulic-related event on 8/5/23 caused seven basement backups and the event on 5/24/24 caused 4 basement backups. The facility properly mitigated and reported all sanitary sewer overflow events.

All eleven CSO outfalls are inspected weekly on Fridays and after each CSO event. CSO inspections are documented in an online database and on physical CSO inspection checklists. CSOs 009, 001 and 021 are metered. Activation data from the remaining CSO outfalls is estimated using precipitation data. It was noted, this process must be recalibrated following completion of each LTCP project as collection system performance changes. CSO Outfalls 009, 006, 001, and 021 were evaluated during the inspection and were all equipped with backflow preventers on the CSO discharge points. CSO Outfall 009 appeared to be in good condition. The sign was located too far from CSO Outfall 009. The sign should be located on the concrete bulkhead of the CSO outfall structure. CSO Outfall 006 appeared to be in good condition. The signage was missing the outfall numbers but facility personnel corrected this issue during the inspection. CSO Outfall 001 appeared to be in good condition. 001 is activated once the subsurface storage tank (4.6 MGD) is full. CSO Outfall 021 appeared to be in good condition. 021 is activated once the subsurface storage tank (4.6 MGD) is full and CSO Outfall 001 effluent is at maximum flow.

All lift stations are inspected weekly on Thursdays. Lift station inspections are documented in an online database and on physical inspection sheets. Lift station inspections document pump hours, visual inspections, housekeeping, wet well levels, and generator conditions, if applicable. The Pearl River, Ashton Woods, Prairie Oaks, Chesapeake Bay, and Rainey Brook lift stations were evaluated at the time of the inspection. The Pearl Street lift station is the newest and largest lift station equipped with three pumps, backup generator, SCADA, and Omni-Site. Pearl Street appeared to be very well maintained. Ashton Woods is equipped with two pumps and a 30' wet well. The lift station appeared to be well maintained. Minimal debris was noted in the wet well. Prairie Oaks is equipped with four pumps, a 35' wet well, and a permanent generator. Prairie Oaks appeared very well maintained. Chesapeake Bay lift station was newly acquired from a subdivision HOA; an upgrade is planned before 2025. Significant sanitary debris and scum was noted in the wet well that will likely require maintenance in the near future. Chesapeake Bay lift station has a 25' wet well with two pumps.

**Facility/Site:**

- S 1. The facility was found to have standby power or equivalent provision.
- S 2. An adequate alarm or notification system for power or equipment failure was available for the treatment facility and lift stations.
- S 3. Safe and adequate access was provided for inspection of all units and outfalls.
- S 4. Facilities and equipment did not appear beyond their useful life.
- 5. List any safety concerns:

Comments:

The facility grounds appeared to be well maintained. Adequate access was provided to all units of treatment, Outfall 014, and CSO Outfalls. The facility has three standby generators to run different portions of the facility. All units of treatment and supporting units are monitored using a SCADA monitoring system. The lift stations in the collection system are monitored using an Omni-Site system that contacts facility personnel when problems occur. Pearl River, Ross Road, Prairie Oaks, and Greenbush lift stations are connected to SCADA and Omni-site. Roughly half of the lift stations have permanent standby power with all others being equipped with connection ports for portable generators or bypass pumping.

**Operation:**

- S 1. All facilities and systems necessary for achieving compliance with the terms and conditions of the permit were operated efficiently, including a report for an anticipated bypass report for steps of treatment taken out of service.
- S 2. An adequate, qualified operating staff was found to be provided to carry out the operation of the facility, including:
  - a. Certified Operator's on-site attendance and/or qualified operations personnel attendance was adequate.
  - b. Adequate documentation of operational activities, including system monitoring and cleaning.
  - c. Adequate funding to ensure proper operation.
- S 3. Solids handling procedures include:
  - a. Sufficient solids wasted from the treatment system, in a timely manner, to maintain process efficiency.
  - b. Wasting of solids based on appropriate operational targets and valid process control testing.
  - c. Adequate documentation of solids removal, handling, or control was available for review.
- S 4. The facility was found to be operated efficiently during wet weather events.

Comments:

All units of treatment appeared to be operated efficiently. The facility has two course screens that screen influent flow from the combined sewers and a very small portion of the separate sewers. One of the redundant course screens was removed due to a mechanical failure; the facility has ordered a new course screen that is expected to arrive this fall. See "Maintenance" section for additional details. The rest of the influent flow from the separate sewers is screened by two fine screens. The combined sewer flows are screened by both course and fine screens due to the extra debris that accumulate. The grit removal system and scum concentrator appeared to be operated efficiently. Four of the five primary clarifiers were in service and appeared to be operated efficiently. See "Maintenance" section for details regarding the fifth primary clarifier. The color of the primaries is not typical due to a large portion of the influent being industrial contributors. All six aeration basins were in service. Good color was observed in all basins with some white foam noted in two of the basins. Some diffusers were causing uneven, slightly erratic mixing. See "Maintenance" section for additional details. The facility has four larger secondary clarifiers and six smaller secondary clarifiers to be used depending on influent flow rates. The facility was using the six smaller clarifiers; all clarifiers were clear and free of algae and appeared to be settling very well. The facility injects ferric chloride for chemical removal of phosphorus during primary and secondary. The chlorination and de-chlorination system appeared to be operated efficiently. The facility has an effluent pump station to pump effluent through the disinfection system and out to the receiving stream during events of high levels or flooding of the receiving stream. Sludge wasting is determined by analytical testing performed daily by on-site operators. Operators are staffed 24 hours a day, seven days a week.

**Maintenance:**

- S 1. A maintenance record system has been established and includes maintenance/repair history and preventative maintenance plan.
- S 2. Facility maintenance activities appeared to be adequate.

Comments:

Maintenance records for the treatment facility were reviewed during the inspection. The maintenance program is well implemented and executed. Cleanings and repairs are documented using Microsoft Access. Facility personnel can generate work orders through Microsoft Access when maintenance, cleanings, or repairs are necessary. The work orders reviewed appeared to be complete and well documented. The preventative maintenance plan is well documented and completed at the frequency required. Sections of the preventative maintenance plan are printed monthly and initialed off when completed. Preventative Maintenance is conducted once yearly at each lift station. The facility's sewer system maintenance consists of yearly preventative maintenance with problem sections of sewers being attended to each spring and fall via a "hot list". The entire sewer system is divided into ordered number sections for preventative maintenance to keep track of sewer cleanings. The entire sewer system is cleaned every 5 years, with roughly 20% cleaned each year. January 2024 and February 2024 plant maintenance and 2024 lift station maintenance documents were reviewed during the inspection and appeared to be adequate.

Three maintenance concerns were noted during the inspection. One of the redundant course screens was removed to a mechanical failure; the facility has ordered a new course screen that is expected to arrive this fall. During the previous inspection, the course screen was broken and a part was on order to fix the issue. The issue could not be fixed and a new screen was ordered. Under typical conditions, the facility only uses one course screen and does not anticipate having any issues before the part is received. One of the primary clarifiers was out of service due to a broken chain. The facility has ordered the necessary components to repair the chain. Some diffusers in the aeration basins were causing uneven and erratic mixing. The facility is planning to replace the clay discs with membrane discs to improve aeration efficiency.

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**Sludge Disposal:**

S 1. Sludges, screenings, and slurries were found to be handled and disposed of properly.

Comments:

A records review during the inspection showed adequate handling, and disposal of sludge. The facility thickens sludge using a gravity belt thickener and pumps it to one of the four anaerobic digesters. Digested sludge is dewatered using a volute press and landfilled or land applied. May 2024 sludge hauling records were reviewed. 639.50 tons of sludge were land applied and 106.25 tons were landfilled under Lafayette's Land Application Permit #INLA000295. Merrell Brothers hauls the liquid sludge to be land applied and Waste Management hauls the dry solids to be landfilled.

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**Self-Monitoring:**

S 1. Samples were found to be taken at pre-designated locations and were found to be representative.

S 2. Flow-proportioned samples were found to be obtained where needed.

S 3. The facility was found to conduct sampling of all waste streams, including type and frequency, as required in the permit.

S 4. Sample collection procedures, including automatic sampling, were found to include:

- a. Samples refrigerated during compositing.
- b. Proper preservation techniques used.
- c. Containers and holding times conformed to 40 CFR 136.3.

S 5. Sample documentation was found to be adequate and included:

- a. Dates, times, and locations of sampling.
- b. Name of individual performing sampling.
- c. Instantaneous flow for flow-weighted aliquots.
- d. Chain of Custody records.

S 6. NPDES Permit Whole Effluent Toxicity (WET) testing requirements were found to be met.

Comments:

The Self Monitoring Program was rated as satisfactory. All sampling practices, including raw and intermediate unit process testing, are conducted accurately and at the frequency required by the permit. The facility is required to perform WET testing every six months and has met these requirements. WET Tests were performed in October 2023 and April 2024 and both generated passing results.

It was noted, the thermometers in the influent and primary composite sampler monitored temperatures from 20 degrees Celsius to 50 degrees Celsius. The facility must replace these thermometers with NIST certified thermometers that readout in a range that encompasses the required six degrees Celsius for sample refrigeration. The display on the composite samplers indicated the refrigerators were below six degrees Celsius at the time of the inspection.

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**Flow Measurement:**

S 1. Flow was found to be properly monitored as required by the permit.

S 2. Flow data and calibration records were available for review, and document that monitoring equipment has been calibrated at the frequency required in the permit.

N 3. The stream flow gauging station is calibrated as often as necessary to provide accurate and reliable data, but at least once every 12 months.

N 4. A copy of the stream flow calibration curve or table is submitted to IDEM (OWQ Compliance Data Section) no later than October 1 of each year.

Comments:

The facility's flow measurement program, including all documentation, was found to be adequate and representative. The influent and effluent flow meters were last calibrated on December 26, 2023 by Gripp Incorporated.

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**Laboratory:**

The following laboratory records were reviewed:

Chlorine Bench Sheets	CBOD Bench Sheets	TSS Bench Sheets
Ammonia Bench Sheets	Phos. Bench Sheets	E. coli Bench Sheets
Contract Lab Reports	Chain-of-Custody	Temp and Calibrations
Digester Bench Sheets	Settleable Solids Bench Sheets	GGA QC Bench Sheets
Total Nitrogen Bench Sheets		

M 1. The laboratory practices and protocol reviewed were adequate, including:

- a. A written laboratory QA/QC manual was available.
- b. Samples were found to be properly stored.
- c. Approved analytical methods were found to be used.
- d. Calibration and maintenance of instruments was found to be adequate.
- e. QA/QC procedures were found to be adequate.
- f. Dates of analyses (and times where required) were recorded.
- g. Name of person performing analyses was recorded.

S 2. Review of lab records and/or on-site field testing equipment and protocols was found to be adequate.

#### Contract Lab Information

Astbury Water Technology (Quarterly Metals)	Indianapolis, IN
Element (Sludge and WET)	Fort Wayne, IN

Comments:

The Laboratory evaluation generated a marginal rating. The following issues were noted:

- A. For Chlorine, when using the EPA approved methods, the limit of detection (LOD) is 0.02 mg/L. Until the facility performs a case-specific Method Detection Level, the facility needs to report any results below the LOD as less than 0.02 mg/L.
- B. For CBOD, it was noted that a few samples during January 2024 were above 9 mg/L of initial DO when set up. The method specifies that the DO of the samples being set up must have a DO no greater than 9 mg/L at 20 degrees C prior to incubation. Facility personnel noted fluctuating and freezing lab temperatures in January 2024 caused high initial DO readings.
- C. The bench sheet and MRO values for effluent CBOD on 5/1/24 did not match due to a rounding error. Facility personnel must ensure the bench sheets and MRO are accurate.
- D. For pH, the facility is performing a duplicate analyses and reporting the arithmetic mean of these analyses on the bench sheets and MROs. Results for pH should not be averaged using arithmetic mean but rather a true average defined as:  $-\log_{10}[(\sum Ci)/(n)]$ , where C is the concentration of hydronium ion and n is the number of measurements. Instead of averaging pH results, simply report the daily maximum and daily minimum values on the MRO.

Analyses for Chromium, Nickel, Copper, and Zinc are performed at the contract laboratory. All other analyses are performed on-site. All bench sheets from January 2024 and May 2024 were reviewed. Contract Lab reports and Chain-of-Custody sheets from April 2024 were reviewed. Internal chain-of-custody sheets were reviewed from January 2024 and February 2024. All bench sheets, contract lab reports, and chain-of-custody forms appeared to be accurate and complete barring the few exceptions noted above.

#### **Records/Reports:**

The following records/reports were reviewed:

DMRs for the period of May 2023 to May 2024 were reviewed as part of the inspection.

S 1. All facility records for the period including the previous three years were available for review.

S 2. DMRs and MROs were found to be completed properly and accurately including:

- a. "No Ex" column was accurate.
- b. Signatory requirements were met.
- c. Reports were prepared by or under the direction of a certified operator.

N 3. Bypass and Noncompliance reporting were found to be adequate.

Comments:

The monthly records were available on-site, but the reports were reviewed on Virtual File Cabinet or NetDMR by the inspector before the on-site inspection. The monthly records reviewed on NetDMR appeared to be accurate and complete.

**Enforcement:**

S 1. Agreed Order and/or Compliance Plan milestones have been met.

**09C01-0709-CC-00077**

**Dave Tennis**

Comments:

The facility is under State Judicial Order No. 79CO1-0709-PL-00056 associated with their combined collection system. The CSO Long Term Control Plan (LTCP) implementation schedule is enforced through Agreed Order Case No. 09C01-0709-CC-00077. The facility is current with the implementation schedule of their LTCP. The facility is currently in post construction monitoring for the projects completed in Phase II-C and will be beginning Phase II-D of their LTCP. Phase II-D consists of planning, designing, constructing, and post construction monitoring of a 119 MGD High Rate Treatment Facility near CSO Outfall 009. In addition to the High Rate Treatment facility, a 60-inch force main from the Pearl River Lift Station to the WWTP will be installed.

**Pretreatment:**

S 1. No evidence of interference from industrial or other sources of toxic substances was noted.

S 2. For both Delegated and Non-Delegated pretreatment programs:

- a. Industrial or commercial dischargers were found to be regulated as required.
- b. The permittee was found to enforce the Sewer Use Ordinance (SUO) and the Enforcement Response Plan (ERP).

N 3. If the non-delegated permittee accepts hauled waste:

- a. Does the POTW provide written permission to haulers?
- b. Does the POTW obtain samples from each hauled waste load and retain them for at least 48 hours?
- c. Does the POTW retain records of each load?

Comments:

All required pretreatment records were complete and available for review. A Pretreatment Audit was conducted by Mary Armacost on 9/19/23 and 9/20/23. Only minor issues were noted during the audit and have since been corrected. The facility regulates 13 industrial facilities. The 2023 Annual Pretreatment report was submitted on 3/15/24. Priority pollutant monitoring was completed and submitted to IDEM on 10/25/23.

During the Pretreatment Audit it was discovered the industrial user Ice Cream Specialties did not have a certified operator. Their treatment consisted of two dissolved air flotation (DAF) units and membrane bio-film filtration. At the time of the inspection, Ice Cream Specialties had still not hired a certified operator for their pretreatment system which is a requirement under IC 13-18-11-11.

**Effluent Limits Compliance:**

Yes 1. Were DMRs reviewed as part of the inspection?

DMRs for the period of May 2023 to May 2024 were reviewed as part of the inspection.

No 2. Were violations noted during the review of DMRs?

Comments:

A records review indicated no effluent violations have been reported during the period reviewed.

**IDEM REPRESENTATIVE**

Inspector Name:	Email:	Phone Number:
Maggie Kroeger	mkroeger@idem.IN.gov	317-619-3639
Other staff participating in the inspection:		
Name(s)	Phone Number(s)	
Nick Ream, IDEM	219-730-1691	
Porfirio Ascencio, IDEM	219-216-3235	
Dave Tennis, IDEM	317-234-9558	



Kara Wendholt, IDEM  
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317-233-5961  
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**IDEM MANAGER REVIEW**

IDEM Manager:

Date:

Kim Rohr

6/28/2024