



REGION 3

PHILADELPHIA, PA 19103

Report Title: Clean Water Act Compliance Inspection Report
Inspection Date(s): 06/11/2024
Regulatory Program(s): National Pollutant Discharge Elimination System (NPDES)
Type of Activity: Wastewater
Site/Facility Name: Locust Lake State Park Wastewater Treatment Plant
Permittee(s): Commonwealth of PA, DCNR, Bureau of State Parks, Locust Lake
Site/Facility Operator: DCNR
Site/Facility Address: Locust Lake Road
Barnesville, PA 18214
Latitude/Longitude: 40.7831/- 76.1183
County/Parish: Schuylkill County
Permit Number: PA0032131
NAICS/SIC Code: 221320/4952
DSB-ID #: ECAD-5497

Site/Facility Representative(s):

Point of Contact

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I. Introduction

On June 11, 2024, an inspection team composed of staff from the U.S. Environmental Protection Agency (EPA) Region 3 (hereinafter, “EPA Inspection Team”) conducted a wastewater inspection of Locust Lake State Park’s Wastewater Treatment Plant (hereinafter, “Facility”). The purpose of the inspection was to observe compliance with the Clean Water Act (CWA) and to verify compliance with the Facility’s Pennsylvania National Pollutant Discharge Elimination System (NPDES) Permit No. PA0032131 (hereinafter, the “Permit”) and applicable State and Federal regulations. The Permit is included as Attachment A.

A. Inspection Opening Conference

The EPA Inspection Team arrived at the site at approximately 11:00 AM for the inspection. Inspectors met with the following site representatives:

Table 1: Inspection Attendee List

Name	Affiliation	Telephone	Email
EPA Region III Inspectors			
Monica Crosby	Inspector	(410) 305-2930	Crosby.monica@epa.gov
Steven Maslowski	Inspector	(215) 814-2371	Maslowski.steven@epa.gov
Brian Tolton	Inspector In-Training	(215) 814-3291	tolton.brian@epa.gov
Site Representatives			
Robert Sweeney	DCNR-Parks	(570) 467-2404	robsweeney@pa.gov
Joe Herbstritt	DCNR-FDC	(717) 787-9290	joherbstri@pa.gov
Stephanie Coontess	DCNR-FDC	(717) 783-33329	scoontess@pa.gov
Lester Miller	DCNR- Tuscarora and Locust Lake Parks	(570) 4672404	lestmiller@pa.gov
Josh Swoltley	DCNR-Region 4	(215) 453-5011	jswoltley@pa.gov
Rex Bradish	DCNR-Region 4	(570) 406-9198	rbradish@pa.gov
Katherine Macaluso	WWTP Operator	(570) 573-6471	kamacaluso@pa.gov

Steve Maslowski and Monica Crosby displayed their credentials to Facility representatives at the outset of the inspection, and explained the purpose of the inspection was to observe compliance with its Permit.

B. Weather and Precipitation Conditions

During the inspection, weather was mostly sunny. National Oceanic and Atmospheric Administration (NOAA) National Weather Service precipitation data for the date of the inspection and five days prior are provided in Table 2 below:

Table 2. Precipitation Data

Station Name	Date	Precipitation Amount (inches) ¹
MAHANOY CITY 2 N, PA USC00365344	06/06/24	0
MAHANOY CITY 2 N, PA USC00365344	06/07/24	0.31
MAHANOY CITY 2 N, PA USC00365344	06/08/24	0
MAHANOY CITY 2 N, PA USC00365344	06/09/24	0
MAHANOY CITY 2 N, PA USC00365344	06/10/24	0
MAHANOY CITY 2 N, PA USC00365344	06/11/24	0

C. Summary of the Site

Pennsylvania Department of Conservation and Natural Resources (DCNR) owns and operates Locust Lake State Park Wastewater Treatment Plant. The Facility is an activated sludge treatment plant that serves Locust Lake State Park and its campground. The Facility has one (1) outlet that discharges into Locust Creek, a tributary to the Little Schuylkill River, and ultimately to the Schuylkill River. The Facility's coverage under the Permit became effective on May 1, 2019, and expired on April 30, 2024. The permit has been administratively extended.

II. Site Activity

The observations from the inspection are described in detail below in the Observations section. Photographs captured during the inspection were taken by Brian Tolton and are provided in Attachment B.

At the time of the inspection, the Facility operator described the treatment process (Attachment B, Photo 1). The Facility was first constructed in the 1960s. It treats about 3,000 gal/day, reaching upwards of 8,000 gal/day on the weekends during peak season. Flow feeds into the collection systems from the campground bathrooms and shower. The flow coming into the wastewater treatment plant (WWTP) comes into the comminutor (grinder) and moves through the flume with flow meter, then into the aeration tank, and clarifier (Attachment B, Photos 2- 8 & 18). Sludge is moved from the aeration tank to the digester through the return activated sludge (RAS) pipe. From the clarifier, wastewater flow is sent through the siphon tank. According to Mr. Miller, the siphon was supposed to provide additional aeration. From the siphon tank, the wastewater flow goes to two sand beds, the chlorine contact tank, and is then discharged.

Algae was observed on the sides of the aeration tank (Attachment B, Photos 9, 11, & 12). The aeration tank is 18 feet deep. The blowers are adjusted to control dissolved oxygen (DO) in the tank. According to Ms. Macaluso, the Facility was using rabbit food and supplemented with

¹ Source: NOAA National Climatic Data Center (<http://www.ncdc.noaa.gov/>).

carbon sources (Attachment B, Photos 13, 14, 15, & 20) to stimulate bacterial growth in the plant in the spring months. The Facility then turned to hog food, but at the time of the inspection, they were experiencing problems with the hog food forming grease balls that were observed in the aeration tank. The hog food was fed into the comminutor instead of the aeration tank, and the grease balls were formed.

From aeration, flow feeds into the clarifier (Attachment B, Photos 18 & 19). Poor settling and excess solids were observed in the clarifier. Algae was observed growing on the sides of the skimmer in the clarifier (Attachment B, Photo 26). Ms. Macaluso says she uses spray from potable water to push sludge from the clarifier to the sludge holding tank.

Locust Lake has had 35 phosphorous effluent violations since June 2019. The Facility is not sure where the source of phosphorous pollutant is coming from. Mr. Miller speculated the additional phosphorus was coming from cleaning products. Ferric chloride was observed in an unlabeled drum being used to drip feed into the clarifier (Attachment B, Photo 17). According to Ms. Macaluso, the facility was feeding the ferric chloride into the aeration tank, but it did not provide the desired results, so they moved the drum to the clarifier and got better results.

A vac-truck comes in and hauls off the sludge once a year, with the most recent hauling of sludge being November 2023. No sampling of the sludge is conducted prior to it being hauled off site by Biros Septic (Attachment B, Photo 56). Decant water is returned to the aeration tank. The sludge return runs when the aerator blowers run (Attachment B, Photo 47).

From the clarifiers, flow enters the siphon tank (Attachment B, Photos 27, 28, & 29). Grease balls were observed in the siphon tank. The operator, Ms. Macaluso stated that the tank is hosed out every day. Pipes were observed in the siphon tank that facility personnel weren't sure what their function was but suspected they were overflow pipes. The siphon tank had two overflow pipes that led to the sand filters.

The two sludge drying beds are used alternating one off and the other on (Attachment B, Photos 33, 34, 35, 36, 37, 38, & 39). Ms. Macaluso stated they use one as the drying bed while they are cleaning out the other. They then switch back to the cleaned drying bed while they clean out the other. The drying beds are alternated about once per month. In winter, there is only one drying bed in use since the flow is minimal. Ms. Macaluso stated they cleaned out the south dry bed the week prior to the inspection. Mr. Miller stated the sand beds have not been replaced since 1992 and was unsure how deep the sand filters are. The drying beds flood infrequently but don't overflow. There's a capped overflow pipe, the facility opens the cap and lets it flow out when the bed floods to prevent overflow. Only one sand bed has an overflow pipe. Mr. Miller stated when they notice the filter with no overflow pipe getting full, they switch it over to the filter with the overflow pipe.

From the sand filters, the flow moves to the chlorine contact tank (Attachment B, Photos 40, 42, & 43). The inspectors could not observe the bottom of the tank. The chlorine contact tank

is 12 feet deep. Algae was observed on the sides of the tank (Attachment B, Photo 44). Sodium hypochloride is drip-fed into a blue bucket, then it feeds into the chamber for contact time (Attachment B, Photos 41 & 42). There was no lid on the drum of sodium hypochloride. During the winter, chlorine tablets are used. There is no dechlorination at the Facility.

As part of the inspection, the Operator explained the sampling process, and the EPA Inspection Team observed the Facility's lab bench that is used for sample collection (Attachment B, Photo 48, 49, 50, 51, & 52). The facility did not have a composite sampler. The sample was collected into a 500 ml poly bottle and filled 4/5th full. The pH meter was calibrated with 7, 4, and 10 buffer solutions, in this order. Samples are taken to CWM Environmental to be analyzed.

Flow is measured via a flow meter that is positioned in the plant lab (Attachment B, Photos 54 & 55). The flow meter at the effluent was out of calibration.

The outfall was observed. The pipe was rusted at the headwall (Attachment B, Photos 59, 60, & 61).

III.Observations

NPDES Permit Effluent Exceedances

Requirement:	Part A.1.A of the Permit defines effluent discharge limitations, monitoring, and reporting requirements for Outfall No. 001. Permit citation: <i>"Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply."</i>
Observation 1:	According to EPA's Integrated Compliance Information System effluent data, the Frances Slocum State Park WWTP has had 71 effluent violations between March 2019 and October 2023 (Refer to Table 3).

Table 3: Effluent Violations from June 2019 to December 2023

Monitoring Period End Date	Parameter	Value Type	Reported Value/Units	Percent Exceed	Limit Value/Units
12/31/2023	Phosphorus, total [as P]	MO AVG	6.54 mg/l	227%	<=2 mg/l
11/30/2023	Phosphorus, total [as P]	MO AVG	4.92 mg/l	146%	<=2 mg/l

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Monitoring Period End Date	Parameter	Value Type	Reported Value/Units	Percent Exceed	Limit Value/Units
11/30/2023	Chlorine, total residual	MO AVG	.46 mg/l	12%	<=.41 mg/l
10/31/2023	Phosphorus, total [as P]	MO AVG	5.3 mg/l	165%	<=2 mg/l
10/31/2023	Chlorine, total residual	INST MAX	1.47 mg/l	23%	<=1.2 mg/l
09/30/2023	Oxygen, dissolved [DO]	INST MIN	2.25 mg/l	63%	>=6 mg/l
09/30/2023	Phosphorus, total [as P]	MO AVG	5.49 mg/l	175%	<=2 mg/l
09/30/2023	Chlorine, total residual	MO AVG	.45 mg/l	10%	<=.41 mg/l
08/31/2023	Oxygen, dissolved [DO]	INST MIN	2.1 mg/l	65%	>=6 mg/l
08/31/2023	Nitrogen, ammonia total [as N]	MO AVG	13 mg/l	32%	<=9.87 mg/l
08/31/2023	Phosphorus, total [as P]	MO AVG	4.06 mg/l	103%	<=2 mg/l
08/31/2023	Chlorine, total residual	MO AVG	.59 mg/l	44%	<=.41 mg/l
07/31/2023	Oxygen, dissolved [DO]	INST MIN	1.07 mg/l	82%	>=6 mg/l
07/31/2023	pH	INST MIN	5.65 su		>=6 su

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Monitoring Period End Date	Parameter	Value Type	Reported Value/Units	Percent Exceed	Limit Value/Units
07/31/2023	Nitrogen, ammonia total [as N]	MO AVG	12.64 mg/l	28%	<=9.87 mg/l
07/31/2023	Phosphorus, total [as P]	MO AVG	7.2 mg/l	260%	<=2 mg/l
07/31/2023	Coliform, fecal general	INST MAX	>2,420 #/100ml	99,999%	<=1,000 #/100ml
06/30/2023	Oxygen, dissolved [DO]	INST MIN	3.26 mg/l	46%	>=6 mg/l
06/30/2023	Phosphorus, total [as P]	MO AVG	4.26 mg/l	113%	<=2 mg/l
05/31/2023	Phosphorus, total [as P]	MO AVG	4.16 mg/l	108%	<=2 mg/l
04/30/2023	Phosphorus, total [as P]	MO AVG	2.7 mg/l	35%	<=2 mg/l
04/30/2023	Chlorine, total residual	MO AVG	.55 mg/l	34%	<=.41 mg/l
03/31/2023	Phosphorus, total [as P]	MO AVG	5.04 mg/l	152%	<=2 mg/l
03/31/2023	Chlorine, total residual	MO AVG	.6 mg/l	46%	<=.41 mg/l
02/28/2023	Phosphorus, total [as P]	MO AVG	4.42 mg/l	121%	<=2 mg/l
01/31/2023	Phosphorus, total [as P]	MO AVG	5.39 mg/l	170%	<=2 mg/l
01/31/2023	Chlorine, total residual	MO AVG	.83 mg/l	102%	<=.41 mg/l

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Monitoring Period End Date	Parameter	Value Type	Reported Value/Units	Percent Exceed	Limit Value/Units
12/31/2022	Phosphorus, total [as P]	MO AVG	3.64 mg/l	82%	<=2 mg/l
11/30/2022	Phosphorus, total [as P]	MO AVG	3.17 mg/l	59%	<=2 mg/l
10/31/2022	Phosphorus, total [as P]	MO AVG	3.32 mg/l	66%	<=2 mg/l
09/30/2022	Phosphorus, total [as P]	MO AVG	3.61 mg/l	81%	<=2 mg/l
09/30/2022	Chlorine, total residual	MO AVG	.55 mg/l	34%	<=.41 mg/l
08/31/2022	Phosphorus, total [as P]	MO AVG	6.23 mg/l	212%	<=2 mg/l
07/31/2022	Phosphorus, total [as P]	MO AVG	7.21 mg/l	261%	<=2 mg/l
07/31/2022	Chlorine, total residual	INST MAX	1.5 mg/l	25%	<=1.2 mg/l
06/30/2022	Phosphorus, total [as P]	MO AVG	3.82 mg/l	91%	<=2 mg/l
06/30/2022	Chlorine, total residual	MO AVG	.44 mg/l	7%	<=.41 mg/l
06/30/2022	BOD, carbonaceous [5-day, 20 C]	MO AVG	<18.7 mg/l	34%	<=14 mg/l
04/30/2022	Chlorine, total residual	MO AVG	.57 mg/l	12%	<=.51 mg/l

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Monitoring Period End Date	Parameter	Value Type	Reported Value/Units	Percent Exceed	Limit Value/Units
12/31/2021	Phosphorus, total [as P]	MO AVG	2.09 mg/l	5%	<=2 mg/l
11/30/2021	Phosphorus, total [as P]	MO AVG	2.67 mg/l	34%	<=2 mg/l
10/31/2021	Phosphorus, total [as P]	MO AVG	2.09 mg/l	5%	<=2 mg/l
10/31/2021	Chlorine, total residual	MO AVG	.66 mg/l	29%	<=.51 mg/l
09/30/2021	Phosphorus, total [as P]	MO AVG	2.88 mg/l	44%	<=2 mg/l
08/31/2021	Phosphorus, total [as P]	MO AVG	4.19 mg/l	110%	<=2 mg/l
08/31/2021	Chlorine, total residual	MO AVG	.54 mg/l	6%	<=.51 mg/l
08/31/2021	Coliform, fecal general	INST MAX	7,600 #/100ml	660%	<=1,000 #/100ml
07/31/2021	Phosphorus, total [as P]	MO AVG	3.75 mg/l	88%	<=2 mg/l
06/30/2021	Phosphorus, total [as P]	MO AVG	2.52 mg/l	26%	<=2 mg/l
02/28/2021	Coliform, fecal general	GEO MEAN	421 #/100ml	111%	<=200 #/100ml
01/31/2021	Coliform, fecal general	INST MAX	2,800 #/100ml	180%	<=1,000 #/100ml
11/30/2020	Phosphorus, total [as P]	MO AVG	2.67 mg/l	34%	<=2 mg/l

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Monitoring Period End Date	Parameter	Value Type	Reported Value/Units	Percent Exceed	Limit Value/Units
10/31/2020	Phosphorus, total [as P]	MO AVG	2.98 mg/l	49%	<=2 mg/l
09/30/2020	Phosphorus, total [as P]	MO AVG	5.91 mg/l	196%	<=2 mg/l
08/31/2020	Oxygen, dissolved [DO]	INST MIN	4.51 mg/l	25%	>=6 mg/l
08/31/2020	Phosphorus, total [as P]	MO AVG	7.6 mg/l	280%	<=2 mg/l
07/31/2020	Oxygen, dissolved [DO]	INST MIN	4.58 mg/l	24%	>=6 mg/l
07/31/2020	Phosphorus, total [as P]	MO AVG	2.42 mg/l	21%	<=2 mg/l
10/31/2019	Oxygen, dissolved [DO]	INST MIN	<6 mg/l	99,999%	>=6 mg/l
09/30/2019	Oxygen, dissolved [DO]	INST MIN	<6 mg/l	99,999%	>=6 mg/l
09/30/2019	Phosphorus, total [as P]	MO AVG	4.348 mg/l	117%	<=2 mg/l
08/31/2019	Oxygen, dissolved [DO]	INST MIN	<6 mg/l	99,999%	>=6 mg/l
08/31/2019	Phosphorus, total [as P]	MO AVG	3.314 mg/l	66%	<=2 mg/l
08/31/2019	Coliform, fecal general	GEO MEAN	1,960 #/100ml	880%	<=200 #/100ml
08/31/2019	Coliform, fecal general	INST MAX	1,960 #/100ml	96%	<=1,000 #/100ml

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Monitoring Period End Date	Parameter	Value Type	Reported Value/Units	Percent Exceed	Limit Value/Units
07/31/2019	Oxygen, dissolved [DO]	INST MIN	.1 mg/l	98%	>=6 mg/l
06/30/2019	Nitrogen, ammonia total [as N]	MO AVG	16.46 mg/l	67%	<=9.87 mg/l
06/30/2019	Phosphorus, total [as P]	MO AVG	3.143 mg/l	57%	<=2 mg/l
06/30/2019	Coliform, fecal general	GEO MEAN	2,300 #/100ml	1,050%	<=200 #/100ml
06/30/2019	Coliform, fecal general	INST MAX	2,300 #/100ml	130%	<=1,000 #/100ml
06/30/2019	BOD, carbonaceous [5-day, 20 C]	MO AVG	16.46 mg/l	18%	<=14 mg/l

Representative Sampling

Requirement: Part III.A.1 of the Permit states, “Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity (40 CFR 122.41(j)(1)). Representative sampling includes the collection of samples, where possible, during periods of adverse weather, changes in treatment plant performance and changes in treatment plant loading. If possible, effluent samples must be collected where the effluent is well mixed near the center of the discharge conveyance and at the approximate mid-depth point, where the turbulence is at a maximum and the settlement of solids is minimized. (40 CFR 122.48, 25 Pa. Code § 92a.61)”

Part A: II. Composite Sample. The composite must be flow-proportional; either the volume of each individual sample is proportional to discharge flow rates, or the sampling interval is proportional to the flow rates over the time period used to produce the composite.

Observation 2: At the time of the Inspection, the Facility was taking grab samples using a 500 mL poly bottle from the end of the chlorine contact tank. There was no

indication that the samples taken were flow proportional or time proportional composites.

Proper Operation and Maintenance

- Requirement:** Part B.E.2 of the Permit states, "The permittee shall at all times properly 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 terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to, adequate laboratory controls including appropriate quality assurance procedures. This provision also includes the operation of backup or auxiliary facilities or similar systems that are installed by the permittee, only when necessary to achieve compliance with the terms and conditions of this permit. (40 CFR 122.41(e))"
- Observation 3:** The EPA Inspection Team observed algae build up in the clarifier (Attachment B, Photo 26).
- Observation 4:** At the time of the inspection, there was algae build up in the aeration tank (Attachment B, photos 9, 11, & 12).
- Observation 5:** The EPA inspection Team observed algae build up in the chlorine contact tank (Attachment B, Photo 45).
- Observation 6:** At the time of the inspection, there was no lid on the chlorine poly drum containing ferric chloride and sodium hypochloride (Attachment B, Photos 17 & 41).
- Observation 7:** At the time of the inspection, there was no log for chemicals stored on site.
- Observation 8:** At the time of the inspection, there were weeds and leaf litter in one of the one of two sand beds (Attachment B, Photos 34, 35, & 38).

Records Keeping

- Requirement:** III. A. 2. Except for records of monitoring information required by this permit related to the permittee's sludge use and disposal activities which shall be retained for a period of at least 5 years, all records of monitoring activities and results (including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records), copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained by the permittee for 3 years from the date of the sample measurement, report or application. The 3-year period shall be extended as requested by DEP or the EPA Regional Administrator.

Observation 9: At the time of the inspection, EPA requested waste manifest for removal of solids. These documents were not submitted to EPA.

IV. Records Review

As part of the inspection, the EPA Inspection Team reviewed the following documentation: Operator's daily worksheet, last six (6) months of discharge monitoring reports, the Operator's certification, and the Permit.

V. Closing Conference

After the site walk, the EPA Inspection Team met with the Facility representatives for a closing conference. The EPA Inspection Team shared preliminary observations with the Facility. The EPA Inspection Team reiterated to the Facility representatives that all preliminary observations discussed were not compliance determinations. Any and all preliminary observations shared were subject to further investigation by EPA upon the additional review of records and documentation. Additional observations may be contained in this inspection report that were not identified at the time of the closing conference after EPA reviewed additional materials following the inspection.

The inspection concluded at 12:40p.m.

VI. List of Attachments

Attachment A: Permit

Attachment B: Photograph Log