Pennsylvania Department of Environmental Protection

Southeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0055697**
Facility Type	**Non-Municipal**	APS ID	**1136279**
Major / Minor	**Minor**	Authorization ID	**1525129**

Applicant and Facility Information

Applicant Name	**Tad Enterprises Limited T-A Spring Run Estates**	Facility Name	**Spring Run Estates**
Applicant Address	620 Telegraph Road	Facility Address	620 Telegraph Road
	Coatesville, PA 19320-1034		Coatesville, PA 19320-1034
Applicant Contact	Albert Levan	Facility Contact	Albert Levan
Applicant Phone	(610) 380-9880	Facility Phone	(610) 380-9880
Client ID	357921	Site ID	452323
Ch 94 Load Status	Not Overloaded	Municipality	West Caln Township
Connection Status		County	Chester
Date Application Received	April 30, 2025	EPA Waived?	No
Date Application Accepted		If No, Reason	Christina River Basin TMDL

Purpose of Application: Permit Renewal.

Summary of Review

This permittee requests the renewal of NPDES permit PA0055697 to discharge 0.049 MGD from the Spring Run Estates sewage treatment plant (STP) to the West Branch Brandywine Creek which is designated as High Quality – Trout Stock Fishes (HQ-TSF).

This facility is located in the Christina River Basin which contains three (3) TMDLs. The existing permit is consistent with these TMDLs. Effluent limitations, sampling type and monitoring frequencies remain the same as the previous permit issued in 2020.

The treatment facility consists of two (2) Sequencing Batch Reactors (SBRs), followed by two (2) sand filters (in parallel). The effluent then drains to a discharge tank then enters the UV system. The flow is then discharged to the stream. The influent is treated with soda ash to raise the pH and alum for phosphorous removal prior to the SBRs. There is also a sludge holding tank for wasting.

Sludge use and disposal description and location(s): 5.519 dry tons of sewage sludge produced for the year and 1000 gallons of seed sludge disposed to Historic Salem Village; Sewage sludge is hauled by Reliable Environmental Services and Wm. P. McGovern, Inc.

The reported flows in the past year ranged from 0.0169 MGD to 0.0278 MGD. All for the reported monthly average flows for 2020, 2021, 2022, and 2023 were all below the permitted value of 0.049 MGD.

Special Conditions:

A. No Stormwater
B. Necessary Property Rights

Approve	Deny	Signatures	Date
X		*Amy Boginsky* Amy Boginsky, EIT / Environmental Engineering Specialist	August 28, 2025
X		*Pravin Patel* Pravin C. Patel, P.E. / Environmental Engineer Manager	08/28/2025

Summary of Review

C. Collected Screenings, Slurries, Sludges and other Solids
D. Connect to Municipal Sewers
E. Responsible Operator
F. Remedial Measures if Unsatisfactory Effluent
G. Instantaneous Maximum Limitations
H. Twice per Month Sampling

Act 14 Notifications:
West Caln Township: April 10, 2025
Chester County Department of Health: April 10, 2025

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	.049
Latitude	40º 2' 24.04"	Longitude	-75º 49' 40.04"
Quad Name	Wagontown	Quad Code	1839
Wastewater Description:	Sewage Effluent		
Receiving Waters	West Branch Brandywine Creek	Stream Code	00085
NHD Com ID	26105814	RMI	22.57
Drainage Area	24.6 mi^2	Yield (cfs/mi^2)	0.064
Q_{7-10} Flow (cfs)	1.58	Q_{7-10} Basis	StreamStats
Elevation (ft)	540.19	Slope (ft/ft)	0.00696
Watershed No.	3-H	Chapter 93 Class.	HQ-TSF, MF
Existing Use	Aquatic life, potable water	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	Final	Name	Christina River Basin

Changes Since Last Permit Issuance: None

Treatment Facility Summary

Treatment Facility Name: Spring Run Estates STP

WQM Permit No.	Issuance Date

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Sequencing Batch Reactor	Ultraviolet	0.049

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.049		Not Overloaded		

Changes Since Last Permit Issuance: None

Compliance History

DMR Data for Outfall 001 (from July 1, 2024 to June 30, 2025)

Parameter	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24
Flow (MGD) Average Monthly	0.0216	0.0278	0.0197	0.0199	0.0181	0.0171	0.0196	0.018	0.0174	0.0169	0.0252	0.0209
pH (S.U.) Instantaneous Minimum	7.02	6.93	7.0	7.09	6.84	7.02	7.32	7.26	6.73	7.23	6.97	7.07
pH (S.U.) Instantaneous Maximum	8.53	7.63	7.9	7.57	7.43	7.7	7.81	7.79	7.86	7.71	7.70	7.65
DO (mg/L) Instantaneous Minimum	6.12	6.78	7.39	6.93	6.02	7.53	7.58	6.74	5.35	6.22	5.93	5.68
CBOD5 (lbs/day) Average Monthly	< 0.4	0.6	< 0.4	0.4	< 0.4	< 0.3	< 0.6	< 0.3	< 0.3	< 0.3	< 0.5	< 0.5
CBOD5 (mg/L) Average Monthly	< 2	2	< 2.0	2	< 2	< 2	< 4	< 2	< 2	< 2	< 2	< 2
TSS (lbs/day) Average Monthly	< 0.7	< 1	< 0.9	< 0.6	< 0.7	< 0.5	< 0.6	< 0.6	< 0.6	< 0.6	< 0.9	< 0.9
TSS (mg/L) Average Monthly	< 4	< 4	< 4.0	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Fecal Coliform (No./100 ml) Average Monthly	< 1	< 1	< 2.0	< 1	< 5	< 28	< 1	2	158	35	< 1	< 2
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 1	< 1	4.0	< 1	22	800	< 1	3	1600	43	< 1	6
UV Transmittance (%) Average Monthly	100	100	100	100	100.0	100	100	100	100	100	100	100
Nitrate-Nitrite (lbs/day) Average Monthly	0.8	2	2	< 0.02	2	1	1	0.8	1	0.6	1	2
Nitrate-Nitrite (mg/L) Average Monthly	4.8	6.16	8.43	< 0.1	10.5	7.88	8.62	5.62	7.18	4.58	4.65	9.21
Total Nitrogen (lbs/day) Average Monthly	0.8	1.5	1.9	2.8	2.4	1.2	1.4	0.8	1.3	0.6	1.1	2.3
Total Nitrogen (mg/L) Average Monthly	5	6	8	19	13	9	9	6	8	5	5	9

Ammonia (lbs/day) Average Monthly	< 0.02	< 0.02	< 0.02	< 0.02	0.30	< 0.01	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02
Ammonia (mg/L) Average Monthly	< 0.1	< 0.1	< 0.1	< 0.1	1.8	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.1	< 0.1
TKN (lbs/day) Average Monthly	< 0.1	< 0.2	< 0.2	0.2	0.4	0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.2	< 0.2
TKN (mg/L) Average Monthly	< 0.7	< 0.7	< 0.7	1.05	2.39	0.91	< 0.7	< 0.7	1.11	< 0.7	< 0.7	< 0.7
Total Phosphorus (lbs/day) Average Monthly	0.10	0.2	0.20	0.10	0.10	0.06	0.10	0.20	0.20	0.20	0.20	0.40
Total Phosphorus (mg/L) Average Monthly	0.81	0.90	0.85	0.65	0.57	0.44	0.72	1.05	1.54	1.43	1.07	1.60

Compliance History

Effluent Violations for Outfall 001, from: August 1, 2024 To: June 30, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	10/31/24	IMAX	1600	No./100 ml	1000	No./100 ml
Total Nitrogen	03/31/25	Avg Mo	19	mg/L	10	mg/L
Total Nitrogen	03/31/25	Avg Mo	19	mg/L	10	mg/L
Total Nitrogen	02/28/25	Avg Mo	13	mg/L	10	mg/L
Total Nitrogen	03/31/25	Avg Mo	19	mg/L	10	mg/L

Summary of Inspections: An inspection was conducted on 6/5/25 by Danielle Bogen, and no violations were noted.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
CBOD5	10.2	XXX	XXX	25	XXX	50	2/month	24-Hr Composite
TSS	12.2	XXX	XXX	30	XXX	60	2/month	24-Hr Composite
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	1000	2/month	Grab
UV Transmittance (%)	XXX	XXX	Report Min	XXX	XXX	XXX	1/day	Metered
Nitrate-Nitrite	Report	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Total Nitrogen	4.0	XXX	XXX	10	XXX	20	2/month	24-Hr Composite
Ammonia Nov 1 - Apr 30	1.86	XXX	XXX	4.5	XXX	9	2/month	24-Hr Composite
Ammonia May 1 - Oct 31	0.62	XXX	XXX	1.5	XXX	3	2/month	24-Hr Composite
TKN	Report	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Total Phosphorus	0.82	XXX	XXX	2.0	XXX	4	2/month	24-Hr Composite

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.049
Latitude 40º 2' 23.75" **Longitude** -75º 49' 41.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments:
The pH requirement from the above table is in the current permit and will remain in this permit renewal. The other parameters in the table are the same as, or less stringent than, other methods to develop effluent limitations and as such are not used for permit limits. The facility uses UV for disinfection, so TRC is not in the permit requirements. Fecal coliform limits will be 200 cfu/100 ml year-round with an instantaneous maximum (Imax) of 1,000 cfu/100ml for consistency with the Delaware River Basin (DRBC; see SOP BCW-PMT-033).

Water Quality-Based Limitations

The WQM model was run to assess waste load allocations (WLAs) for NH3-N and CBOD5, and minimum DO requirements. The results are shown in Attachment A. The effluent limits: $CBOD_5$ monthly average limit of 25 mg/l; NH_3-N monthly limit of 6.52 mg/l and an effluent maximum limit of 13.04 mg/l; an effluent limit minimum of 3 mg/l for DO. These limits are less stringent than the current permit limits, so the current permit limits will stay.

Comments:
The Christina River Basin has three (3) TMDLs, 1 for low-flow conditions and 2 for high-flow conditions. The Christina River Basin TMDL for Nutrients and Dissolved Oxygen Under Low-Flow Condition was issued by the Environmental Protections Agency (EPA) on January 19, 2001 and subsequently revised in October 2002 and April 2006. Subsequently, DEP prepared, and EPA acknowledged, an Alternative Reduction Scenario for the Christina River Basin for Low Flow TMDL dated June 27, 2012 which reassigned some of the allocations within the discharges but kept the total load to the basin the same. The allocations for this facility are: $CBOD_5$ 25 mg/l and 10.223 lb/d; NH_3-N is 1.5 mg/l and 0.613 lb/d; TN is 10 mg/l and 4.089 lb/d; TP is 2 mg/l and 0.818 lb/d; and DO is 3 mg/l.

The Christina River Basin also has approved High-Flow TMDLs for Bacteria and Sediment (dated September 2006) for Fecal Coliform, enterococci, and TSS, and for Nutrients and Dissolved Oxygen (dated September 2006) loads for phosphorus, ammonia-N, and CBOD5. This facility has allocations for Bacteria/Sediment of 30 mg/l TSS and 5.56 kg/d (12.26 lb/d); Fecal coliform of 200 cfu/100mL. This facility has WLAs for the High Flow Nutrients and DO which are: $CBOD_5$ is 25 mg/l and 4.64 kg/d (10.2 lb/d); NH_3-N is 1.5 mg/l and 0.28 kg/d (0.62 lb/d); TP is 2 mg/l and 0.37 kg/d (0.82 lb/d). The aforementioned WLAs are from Table 2-2, but Table 4-4 also has facility WLAs. The TN is 2.131 kg/d (4.7 lb/d) and TP is 0.525 kg/d (1.16 lb/d). The most stringent of these WLAs were used. Note that the TMDL WLAs are in kg/d which were converted to lb/d.

Best Professional Judgment (BPJ) Limitations

Comments:
Ultraviolet Transmittance (%) at a reporting frequency of once per day requirement was added in the previous permit renewal because the facility uses UV disinfection. This requirement will be continued in this permit renewal. Reporting requirement for Nitrate-Nitrite as N and Total Kjeldahl Nitrogen will continue in this permit renewal.

Sampling frequencies and sampling type are retained from the existing permit.

Anti-Backsliding

None.


WQM.pdf