Pennsylvania Department of Environmental Protection

Southeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0030228**
Facility Type	**Municipal**	APS ID	**1146285**
Major / Minor	**Minor**	Authorization ID	**1542218**

Applicant and Facility Information

Applicant Name	**East Brandywine Twp Municipal Auth.**	Facility Name	**Delaware County Comm College**
Applicant Address	1214 Horseshoe Pike	Facility Address	100 Bond Drive
	Downingtown, PA 19335-1132		Downingtown, PA 19335-1330
Applicant Contact	Gabby Brown	Facility Contact	Gabby Brown
Applicant Phone	(610) 269-8230	Facility Phone	(610) 942-3000
Client ID	226713	Site ID	446025
Ch 94 Load Status	Not Overloaded	Municipality	East Brandywine Township
Connection Status		County	Chester
Date Application Received	September 15, 2025	EPA Waived?	No
Date Application Accepted		If No, Reason	TMDL
Purpose of Application	Permit Renewal		

Summary of Review

The PA Department of Environmental Protection (PADEP) received a NPDES permit renewal request from Hydraterra Professionals on behalf of East Brandywine Twp. Municipal Authority to discharge 0.018 MGD of treated sewage from Keats Glen STP to an Unnamed Tributary to Beaver Creek. The STP is located at the Delaware County Community College northwest of Downingtown, along Route 322.

The facility is a PureStream Package plant consisting of anoxic zone, aeration tank, clarifier, post aeration tank and a sludge holding tank. The wastewater treatment chemicals listed in the application are 12.5% sodium hypochlorite (disinfection), PAC (phosphorus control) and Sodium Bisulfite (dichlorination). Sludge is hauled away to DELCORA WWTP.

The facility plans to transition from chlorine disinfection to UV disinfection within the next five years. Chlorine will remain in place as a backup disinfection system. A WQM permit was amended in June 2024 and UV monitoring will added in this renewal.

The existing permit limits are continued over in his renewal. There is no change in the flow, stream designation, and influent quality therefor the previous permit effluent limitations are carried over to the new permit. Those limits were based on TMDL document and model report.

This discharge is in the Christina River Basin and there is a low-flow TMDL for Nutrients and Dissolved Oxygen issued by EPA. The original TMDL document allocations were based on a flow of 0.0225 mgd.

Revisions to the Christina River Basin TMDL for nutrients and dissolved oxygen for low-flow conditions were made in a letter to EPA dated June 27, 2012 and confirmed by EPA on August 29, 2012. In the TMDL document, Table 14, the limits were updated to mirror the actual permitted discharge for the facility of 0.0181 mgd.

Approve	Deny	Signatures	Date
x		*Vasantha* Vasantha Palakurti / Environmental Engineering Specialist	December 11, 2025
X		*Pravin Patel* Pravin C. Patel, P.E. / Environmental Engineer Manager	12/12/2025

Summary of Review

Listed in Table 14: TMDL summary for Brandywine Creek East Branch - (Alternate Reduction Scenario) as below:

Keats Glen STP PA0030228	CBOD5	NH3-N	TN	TP	DO
mg/l	8.7	1.2	25	3.7	6.2
lb/day	1.314	0.188	3.773	0.563	0.939

Few permit renewals ago, the mass limits were calculated for CBOD5, NH3-N and TN using the original concentration limits (based of 0.225 mgd) and actual permitted flow of 0.0181 mgd and as below. Limits remained from previous permit to avoid back sliding of limits and ultimately the most stringent limits were used for these parameters in the permit.

Keats Glen STP PA0030228	CBOD5	NH3-N	TN	TP*	DO**
mg/l	7.0	1.0	25	2.0	6.2
lb/day	1.06	0.15	3.77	0.3	

*The phosphorus limit is based on Chapter 96, Section 96.5, which says that phosphorus discharges from point sources shall be limited to an average monthly concentration of 2 mg/l. Phosphorus limit is continued from previous permit.

This discharge is also listed under High-low (Table 2.2) TMDL for Bacteria and Sediment and the WLAs are as below:

TSS = 20 mg/l, Fecal Coliform = 200 cfu/100ml

Listed in TMDLs for Nutrient and low Dissolved Oxygen under High-Flow conditions (Table 2-2) under Brandywine Creek East Branch as below based on a flow of 0.0225 mgd.:

Keats Glen STP PA0030228	CBOD5	NH3-N	TP
mg/l	7	1	3
kg/day	0.6	0.09	0.26

The recommended NPDES permit limits meet or exceed the WLA requirements of the High Flow TMDL for Nutrients, Low Dissolved Oxygen, Bacteria and sediment.

Influent monitoring for CBOD5, TSS and BOD5 are continued in this permit to check compliance with the 85% removal requirement and Chapter 94 requirement.

Sludge use and disposal description and location(s): Sludge is hauled away to DELCORA WWTP.

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)	.0181
Latitude	40Âº 1' 8.30"	Longitude	-75Âº 47' 2.68"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Beaver Creek (CWF, MF)	Stream Code	00301
NHD Com ID	26105678	RMI	2.1
Watershed No.	3-H	Chapter 93 Class.	CWF, MF
Assessment Status	Attaining Use(s)		
TMDL Status	Final	Name	Christina River Basin

Changes Since Last Permit Issuance: None

Treatment Facility Summary

Treatment Facility Name: Keats Glen STP

WQM Permit No.	Issuance Date
1500413 A1	9/25/2024

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	Hypochlorite	0.0181

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0225	48.8	Not Overloaded	Holding Tank	Other WWTP

ompliance History

DMR Data for Outfall 001 (from October 1, 2024 to September 30, 2025)

Parameter	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24
Flow (MGD) Average Monthly	0.006	0.005	0.005	0.006	0.006	0.006	0.006	0.006	0.006	0.007	0.005	0.005
Flow (MGD) Daily Maximum	0.007	0.009	0.008	0.009	0.009	0.008	0.009	0.01	0.01	0.011	0.007	0.005
pH (S.U.) Instantaneous Minimum	6.99	6.99	6.92	6.85	7.14	7.06	6.95	6.43	7.1	7.02	7.04	7.0
pH (S.U.) Instantaneous Maximum	7.58	7.63	7.77	7.67	7.66	7.53	7.37	7.4	7.5	7.43	7.43	7.5
DO (mg/L) Instantaneous Minimum	7.42	6.85	7.25	6.74	7.02	8.22	7.01	8.86	6.33	6.26	6.0	7.49
TRC (mg/L) Average Monthly	0.23	0.23	0.26	0.25	0.19	0.22	0.22	0.24	0.13	0.24	0.17	0.25
TRC (mg/L) Instantaneous Maximum	0.34	0.38	0.35	0.39	1.16	0.31	0.6	0.55	0.43	0.8	0.48	0.5
CBOD5 (lbs/day) Average Monthly	0.20	< 0.10	0.20	0.20	0.10	0.20	1.15	0.20	0.20	< 0.30	< 0.09	< 0.08
CBOD5 (lbs/day) Raw Sewage Influent Average Monthly	11	7	12	18	21	12	21	20	12	7	6	6
CBOD5 (lbs/day) Raw Sewage Influent Weekly Average	17	9	12	31	28	13	23	21	12	11	7	6
CBOD5 (lbs/day) Weekly Average	0.2	0.1	0.4	0.3	0.1	0.3	1.5	0.4	0.20	0.4	0.1	< 0.08
CBOD5 (mg/L) Average Monthly	3.0	< 2.0	4.0	4.0	3.0	5	21	5	4	< 5	< 2	< 2.0
CBOD5 (mg/L) Raw Sewage Influent Average Monthly	204	162	238	397	425	229	379	406	291	151	168	142
CBOD5 (mg/L) Raw Sewage Influent Weekly Average	284	215	282	622	563	239	388	420	350	170	204	142

CBOD5 (mg/L) Weekly Average	4	2	6	5.0	3	7	26	7	4	6	3	< 2.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	14	9	12	26	29	14	21	23	12	8	6	6
BOD5 (lbs/day) Raw Sewage Influent Weekly Average	20	9	13	39	33	16	23	23	12	12	7	6
BOD5 (mg/L) Raw Sewage Influent Average Monthly	264	195	269	512	577	267	396	457	302	158	171	150
BOD5 (mg/L) Raw Sewage Influent Weekly Average	348	227	322	771	665	323	403	465	370	180	121	150
TSS (lbs/day) Average Monthly	< 0.2	< 0.05	0.1	0.5	< 0.05	0.2	1.1	0.4	0.6	0.3	< 0.1	< 0.04
TSS (lbs/day) Raw Sewage Influent Average Monthly	4	2	8	19	28	16	16	14	10	3	3	2
TSS (lbs/day) Raw Sewage Influent Weekly Average	6	2	10	26	43	21	20	15	12	5	3	2
TSS (lbs/day) Weekly Average	0.3	< 0.05	0.2	0.8	0.05	0.3	1.2	0.6	0.8	0.5	0.2	< 0.04
TSS (mg/L) Average Monthly	< 3	< 1	3	11	< 1	5	21	9	15	5	< 3	< 1
TSS (mg/L) Raw Sewage Influent Average Monthly	84	38	180	380	567	306	300	279	251	70	72	43
TSS (mg/L) Raw Sewage Influent Weekly Average	107	46	190	513	860	424	343	300	267	80	74	43
TSS (mg/L) Weekly Average	5	< 1	4	15	1	5	21	12	15	8	5	< 1
Fecal Coliform (No./100 ml) Geometric Mean	4	< 2	< 11	< 8	< 12	< 2	< 2	< 3	< 2	< 4	860	4900
Fecal Coliform (No./100 ml) Instantaneous Maximum	5	< 2	320	34	425	3	< 2	5	< 2	8	6300	4900

E. Coli (No./100 ml) Instantaneous Maximum										2420		
Total Nitrogen (lbs/day) Average Monthly	< 1.04	< 0.80	< 0.90	< 0.40	< 0.30	< 0.40	0.90	< 0.70	< 0.60	< 0.80	< 0.40	< 0.40
Total Nitrogen (mg/L) Average Monthly	< 20	< 17	< 17	< 10	< 6	< 8	16	< 13	< 17	< 15	< 10	< 8
Total Nitrogen (mg/L) Daily Maximum	< 22.2	< 17.5	< 19.5	< 11.7	< 6.9	< 12	22.1	< 16.9	< 23.2	< 18.3	< 11.5	< 8.4
Ammonia (lbs/day) Average Monthly	< 0.001	0.004	0.005	0.007	0.009	0.002	0.001	0.004	< 0.002	< 0.002	< 0.002	0.0008
Ammonia (mg/L) Average Monthly	< 0.02	0.08	0.12	0.16	0.18	0.04	0.02	0.08	< 0.06	< 0.06	< 0.05	0.02
Total Phosphorus (lbs/day) Average Monthly	0.05	0.01	0.009	0.01	0.009	0.007	0.01	0.009	0.008	0.005	0.003	0.002
Total Phosphorus (mg/L) Average Monthly	1.04	0.31	0.18	0.26	0.17	0.14	0.2	0.18	0.2	0.13	0.08	0.05

Compliance History

Effluent Violations for Outfall 001, from: November 1, 2024 To: September 30, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
DO	11/30/24	Inst Min	6.0	mg/L	6.2	mg/L
TRC	05/31/25	IMAX	1.16	mg/L	.9	mg/L
CBOD5	03/31/25	Avg Mo	21	mg/L	14	mg/L
CBOD5	03/31/25	Wkly Avg	26	mg/L	20	mg/L
TSS	03/31/25	Avg Mo	21	mg/L	20	mg/L
Fecal Coliform	11/30/24	Geo Mean	860	No./100 ml	200	No./100 ml
Fecal Coliform	11/30/24	IMAX	6300	No./100 ml	1000	No./100 ml

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	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	6.2 Inst Min	XXX	XXX	XXX	1/week	Grab
TRC	XXX	XXX	XXX	0.4	XXX	0.9	1/day	Grab
CBOD5 Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	2/month	24-Hr Composite
CBOD5 Nov 1 - Apr 30	2.12	3.0	XXX	14	20	28	2/month	24-Hr Composite
CBOD5 May 1 - Oct 31	1.06	1.5	XXX	7.0	10	14	2/month	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	2/month	24-Hr Composite
TSS	3.0	4.5	XXX	20	30	40	2/month	24-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	2/month	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Nitrogen	3.77	XXX	XXX	25	50 Daily Max	62.5	2/month	24-Hr Composite

Outfall 001, Continued (from 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	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Ammonia Nov 1 - Apr 30	0.45	XXX	XXX	3.0	XXX	6	2/month	24-Hr Composite
Ammonia May 1 - Oct 31	0.15	XXX	XXX	1.0	XXX	2	2/month	24-Hr Composite
Total Phosphorus	0.30	XXX	XXX	2.0	XXX	4	2/month	24-Hr Composite

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING 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: Startup of New or Upgraded Facilities 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	Daily Minimum	Average Monthly	Maximum	Instant. Maximum		
Ultraviolet light intensity (mW/cm^2)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded

Pennsylvania
Department of
Environmental Protection

Approve	Deny	Signatures	Date
x		*Vasantha* Vasantha Palakurti / Environmental Engineering Specialist	December 11, 2025
X		*Pravin Patel* Pravin C. Patel, P.E. / Environmental Engineer Manager	12/12/2025