pennsylvania DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office

CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0043982**
Facility Type	**Non-Municipal**	APS ID	**1104439**
Major / Minor	**Minor**	Authorization ID	**1468593**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Community Utilities of PA Inc. Broad Run**	Facility Name	**Broad Run STP**
Applicant Address	570 Hallet Road	Facility Address	1201 Sawmill Road
	East Stroudsburg, PA 18301-7274		Downingtown, PA 19335-3830
Applicant Contact	Emily Long	Facility Contact	Paul Thomas
Applicant Phone	(484) 215-5343	Facility Phone	(570) 534-7136
Client ID	70422	Site ID	452241
Ch 94 Load Status	Not Overloaded	Municipality	West Bradford Township
Connection Status	No Limitations	County	Chester
Date Application Received	October 18, 2023	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Renewal Application.

Summary of Review

The permittee has submitted a renewal application to discharge a treated sewage wastewater into East Branch Brandywine Creek (WWF, MF) through Outfall 001. The permittee name changed from Utilities Inc. of PA to Community Utilities of PA Inc. at this renewal.

The facility receives flow from West Bradford Township residential sewer system from (population: 4,580).

Treatment Plant Process Information:
Raw wastewater treatment consists of influent screening, equalization, extended aeration, clarification, disinfection with sodium hypochlorite, and post aeration before discharge to East Branch Brandywine Creek. Aluminum Chloride is added to aeration for phosphorus removal. Lime is added to headworks for alkalinity control. Screenings and grit are disposed of in a landfill.

There are 2 more stormwater runoffs outfalls (002 and 003) listed in application. No monitoring is needed.

DEP has conducted an inspection of the facility on 05/17/2023.
No issues or violations revealed.

No changes in quality or quantity of the discharge, therefore all previously established effluent limits and monitoring requirements are proposed in the draft permit except for quarterly E.coli monitoring based on recent DEP's guidance to collect data.

Act 14 Notification:
Chester County Commissioners and West Bradford Township Board of Supervisors have been notified on July 28, 2023.

Approve	Deny	Signatures	Date
X		Begay Omuralieva Begay Omuralieva / Environmental Engineering Specialist	April 16, 2024
X		Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	04/172024

Summary of Review
Sludge use and disposal description and location(s): 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)	0.4
Latitude	39Âº 58' 41.70"	Longitude	-75Âº 41' 2.02"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	East Branch Brandywine Creek (WWF, MF)	Stream Code	
NHD Com ID	26106858	RMI	5.9800
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	3-H	Chapter 93 Class.	WWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	CAUSE UNKNOWN, CAUSE UNKNOWN, FLOW REGIME MODIFICATION		
Source(s) of Impairment	MUNICIPAL POINT SOURCE DISCHARGES, URBAN RUNOFF/STORM SEWERS, URBAN RUNOFF/STORM SEWERS		
TMDL Status	Final	Name	Christina River Basin

Changes Since Last Permit Issuance: none

Treatment Facility Summary

Treatment Facility Name: Broad Run STP

WQM Permit No.	Issuance Date
1519404	05/14/2019

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia And Phosphorus	Extended Aeration	Ultraviolet	0.4

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.4	801	Not Overloaded	Holding Tank	DELCORA WWTP

Changes Since Last Permit Issuance: R01-780-6 Huber Fine Screen Rotamat, 1.5 HP motor influent screen was permitted in 2019.

Compliance History

DMR Data for Outfall 001 (from March 1, 2023 to February 29, 2024)

Parameter	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23
Flow (MGD) Average Monthly	0.351	0.462	0.338	0.243	0.249	0.260	0.260	0.265	0.250	0.274	0.262	0.270
Flow (MGD) Daily Maximum	0.437	0.905	0.634	0.294	0.290	0.303	0.320	0.369	0.369	0.362	0.300	0.306
pH (S.U.) Instantaneous Minimum	7.0	7.0	6.9	6.9	7.1	6.9	7.2	7.2	6.6	7.0	6.8	6.9
pH (S.U.) Instantaneous Maximum	7.7	7.5	7.5	7.6	7.5	7.7	8.4	7.7	7.6	7.5	7.5	7.4
DO (mg/L) Daily Minimum	6.0	7.5	7.1	5.6	7.1	6.4	6.8	5.7	6.6	6.3	6.0	6.8
TRC (mg/L) Average Monthly	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.4	0.3
TRC (mg/L) Instantaneous Maximum	0.3	0.3	0.8	0.6	0.8	0.5	0.5	0.4	0.4	0.3	0.8	0.5
CBOD5 (lbs/day) Average Monthly	< 6	8	< 6	< 5	< 4	< 4	4	5	5	5	4	4
CBOD5 (lbs/day) Raw Sewage Influent Average Monthly	186.3	135.5	185.1	161.2	190.9	179.9	137.4	136.6	180.8	251.5	299.9	313.2
CBOD5 (mg/L) Average Monthly	< 2	2	< 2	< 2	< 2	< 2	2	2	2	2	2	2
CBOD5 (mg/L) Raw Sewage Influent Average Monthly	67.3	35.4	72.2	75.8	92	85.2	66.7	62.7	90.5	118	155	151.4
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	179.8	317.1	218.3	187.9	223.3	181.7	134.3	167	200.2	316	320.2	331.8

BOD5 (mg/L) Raw Sewage Influent Average Monthly	65	76.2	93.8	88.9	119.5	83.6	65.1	71.3	95.6	152	162	178
TSS (lbs/day) Average Monthly	< 12	16	< 11	< 8	< 8	< 9	9	9	10	9	8	9
TSS (lbs/day) Raw Sewage Influent Average Monthly	105.5	225.4	136.1	146.3	157	207.7	144.9	160.1	158.6	110.3	200.1	252
TSS (mg/L) Average Monthly	< 4	4	< 4	< 4	< 4	< 4	4	4	5	4	4	4
TSS (mg/L) Raw Sewage Influent Average Monthly	37.9	52.6	53.4	68.5	82.5	98.3	70.2	74	79.5	51.2	101.5	123.2
Fecal Coliform (No./100 ml) Geometric Mean	< 1	1	< 1	< 1	< 1	< 1	2	1	1	1	1	1
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 1	1	< 1	3	< 1	< 1	25	2	1	2	1	1
Total Nitrogen (lbs/day) Average Monthly	56	70	62	49	52	49	51	49	64	69	55	57
Total Nitrogen (mg/L) Average Monthly	19.2	18.2	23.1	23.9	26.3	23.1	23.4	21.7	29.7	29.8	26.5	25.7
Ammonia (lbs/day) Average Monthly	< 0.3	0.4	< 0.3	< 0.2	< 0.2	< 0.2	0.2	0.2	0.2	0.2	0.2	0.2
Ammonia (mg/L) Average Monthly	< 0.1	0.1	0.1	< 0.1	< 0.1	< 0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Phosphorus (lbs/day) Average Monthly	0.7	1.2	< 0.7	< 0.5	0.8	0.6	0.5	0.5	0.5	0.8	0.4	0.4
Total Phosphorus (mg/L) Average Monthly	0.2	0.3	< 0.3	< 0.2	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.2

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .4
Latitude 39º 58' 42.00" **Longitude** -75º 41' 3.00"
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)

Water Quality-Based Limitations

Based previously issued permit's factsheet:

TMDL effluent limits
The facility is listed in EPA's Report of Total Maximum Daily Loads (TMDL): of Nutrients and Dissolved Oxygen under Low-flow and High-flow conditions in the Christina River Basin, Pennsylvania, Delaware, and Maryland. The previous permit renewal has established effluent limits based on the listed WLA. Since there no issues with compliance of the limits nutrient effluent limits will remain the same.

Influent monitoring

Influent for TSS and CBOD5 is proposed in this draft in accordance with requirements for non-municipal sewage facilities servicing municipalities (based on permittee's NPDES renewal application 100% of the flow is received from West Bradford Township). Special note is added in p.4 in "Additional requirements" for Part A of the permit: EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS as following:

"The monthly average percent removal of BOD5 or CBOD5 and TSS must be at least 85% for treatment facilities on a concentration basis except where 25 Pa. Code 92a.47(g) and (h) are applicable to facilities with combined sewer overflows (CSOs) or as otherwise specified in this permit. (25 Pa. Code § 92a.47(a)(3))"

BOD5 influent monitoring is added based on DRBC's requirements for discharges to Delaware River Basin.

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	Report Daily Max	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	4.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	73	XXX	XXX	22	XXX	44	1/week	24-Hr Composite
CBOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
TSS	100	XXX	XXX	30	XXX	60	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report IMax	1/quarter	Grab
Total Nitrogen	133	XXX	XXX	40.0	XXX	80	1/week	24-Hr Composite
Ammonia Nov 1 - Apr 30	20	XXX	XXX	6.0	XXX	12	1/week	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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Ammonia May 1 - Oct 31	6.7	XXX	XXX	2.0	XXX	4	1/week	24-Hr Composite
Total Phosphorus Nov 1 - Mar 31	6.7	XXX	XXX	2.0	XXX	4	1/week	24-Hr Composite
Total Phosphorus Apr 1 - Oct 31	5.8	XXX	XXX	1.7	XXX	3.4	1/week	24-Hr Composite

Compliance Sampling Location: Outfall 001.

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Approve	Deny	Signatures	Date
X		Begay Omuralieva Begay Omuralieva / Environmental Engineering Specialist	April 16, 2024
X		Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	04/172024