Pennsylvania Department of Environmental Protection

Southeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0042889**
Facility Type	**Non-Municipal**	APS ID	**1112841**
Major / Minor	**Minor**	Authorization ID	**1483509**

Applicant and Facility Information

Applicant Name	**Octorara Area School District**	Facility Name	**Octorara School District STP**
Applicant Address	228 Highland Road	Facility Address	228 Highland Road
	Atglen, PA 19310-1603		Atglen, PA 19310-1603
Applicant Contact	Scott Domowicz	Facility Contact	Scott Domowicz
Applicant Phone	(610) 593-8238	Facility Phone	(610) 593-8238
Client ID	83293	Site ID	257965
Ch 94 Load Status	Not Overloaded	Municipality	West Fallowfield Township
Connection Status		County	Chester
Date Application Received	May 1, 2024	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Renewal.

Summary of Review

The permittee has submitted NPDES permit renewal application to discharge sewage effluent to UNT Knight Run through Outfall 001.

The treatment facility consists of equalization, extended aeration, settling tank, sand filters, chlorine contact, post aeration and dichlorination.

DEP has conducted on 01/07/2025.
Multiple violations are noted. Below is comments in the inspection report:

"A review of the facility discharge monitoring reports (DMR's) over the past 6 months revealed numerous exceedances with the effluent limitations set forth in NPDES Permit No. PA0042889. The noncompliance report, accompanying the DMR submissions, attributed these violations to "equipment malfunction/failure" and "Insufficient/overdose chemical feed".
Be advised that failure to comply with the terms and conditions of a DEP permit constitutes a violation of Sections 201 and 202 of the Clean Streams Law, the Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. §§ 691.1 - 691.1001 (the Clean Streams Law). Such violations also constitute unlawful conduct under Section 611 of the Clean Streams Law, 35 P.S. § 691.611, and are subject to the enforcement provisions of Section 605 of the Clean Streams Law, 35 P.S, § 691.605 which includes the assessment of civil penalties. When asked about the cause of the effluent violations, the operator believes that one contributing factor was an abundance of leaves and algae in the clarifier that continually clogged the return lines, impeding normal operations. The returns, when not clogged, run fulltime. Mr. Chernesky was not aware of the return rate. On Saturday, 1/4/25, the clarifier and equalization tank were pumped out and the debris removed from the tanks. Mr. Chernesky believes that this should eliminate the return lines from clogging. The equipment malfunction/failure outlined both blower malfunctions and the sand filters not working. Currently there are two blowers in operation. There are 4 blowers dedicated to the plant and the operator indicated that the blower configuration permits the operator to control the amount of air sent to each unit. He has currently altered the valving to send more air to the equalization tank and believes the tank is not receiving

Approve	Deny	Signatures	Date
X		Begay Omuralieva Begay Omuralieva / Environmental Engineering Specialist	May 2, 2025
X		Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	05/02/2025

Summary of Review

enough aeration. Three of the six diffusers do not appear to be pushing air to the tank and it doesn't appear that good oxygen transfer is occurring. The dissolved oxygen levels are not measured in equalization. Mixed liquors in the aeration tank are off color and not medium brown in appearance. White foam is present in the tank. The biomass does not appear to be healthy. We discussed the possibility of a need to reseed the plant. The clarifiers remained empty and there were no conditions in the unit to observe. There is no forward flow through the plant and the sand filters are not being dosed. Ice is present on the surface of the filters, and it appears that there had been ponded water present prior to it freezing. Mr. Chernesky indicated that a purchase request to rehabilitate the filters was placed back in September. The work has not been completed.

The permittee has an obligation to ensure that all equipment is properly operated and maintained to comply with the terms and conditions of a DEP permit. This would include ensuring that the facilities blowers provide sufficient air to support the biology of the plant as well as ensuring that the filters function as they were intended. Failure to properly operate and maintain treatment facilities constitutes a violation of NPDES Permit No. PA0024058 and Section 202 of the Clean Streams Law, the Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. §§ 691.1 - 691.1001 (Clean Streams Law).

The facility should take immediate steps to ensure that all units and appurtenances designed to achieve compliance with the effluent limitations are functioning properly."

Based on the Operations feedback, the permittee has been given Notice of Violations (NOV) and after discussions, additional BMPs are expected to be implemented to get the maintenance of facility in compliance.

Previously established effluent limits and monitoring requirements (pages 9-10) are still applicable to the site (listed in p.11 of this factsheet).

Sludge use and disposal description and location(s): Delcora - Landfill

Act 14 Notification
Chester County Planning Commission - 04/17/2024
West Fallowfield Township - 04/17/2024

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)	.03
Latitude	39º 55' 7.54"	Longitude	-75º 57' 9.84"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Knight Run (TSF, MF)	Stream Code	07123
NHD Com ID	57466009	RMI	0.5
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-K	Chapter 93 Class.	TSF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	Tentative	Name	Octoraro Creek Watershed TMDL
	Final		Chesapeake Bay TMDL

Changes Since Last Permit Issuance: none

Treatment Facility Summary

Treatment Facility Name: Octorara Area School District STP

WQM Permit No.	Issuance Date
1503416	12/23/2003

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Extended Aeration With Solids Removal	Hypochlorite	0.03

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

Changes Since Last Permit Issuance: none

Compliance History

DMR Data for Outfall 001 (from February 1, 2024 to January 31, 2025)

Parameter	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24
Flow (GPD) Average Monthly	6877	7195	8467	11974	9164	11557	8719	6443	8919	12896	7929	9828
Flow (GPD) Daily Maximum	23700	20100	21800	35900	26200	23100	18000	14100	14900	72000	17100	21300
pH (S.U.) Instantaneous Minimum	7.6	7.3	7.0	3.3	4.7	6.3	7.0	6.5	6.7	6.5	7.0	7.02
pH (S.U.) Instantaneous Maximum	8.1	7.9	7.9	8.2	7.91	8.1	7.7	8.3	7.8	7.9	7.9	7.56
DO (mg/L) Instantaneous Minimum	7.24	7.1	5.9	4.7	2.15	2.1	6.3	6.2	5.3	5.4	7.7	6.7
TRC (mg/L) Average Monthly	< 0.02	< 0.01	< 0.03	< 0.05	< 0.03	< 0.04	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01
CBOD5 (lbs/day) Average Monthly	2.26	2.40	1.08	1.10	0.60	0.50	< 0.20	< 0.20	< 0.20	1.17	< 0.20	< 0.30
CBOD5 (mg/L) Average Monthly	19	38	10	9	5.0	3	< 3	< 2	< 2	8	< 3	< 3
TSS (lbs/day) Average Monthly	3.8	3.7	3.0	3.7	2.4	0.6	0.3	0.1	< 1.3	14.4	0.8	0.9
TSS (mg/L) Average Monthly	34	54	28	31	27	4	4	2	< 11	108	12	9
Fecal Coliform (No./100 ml) Geometric Mean	646	13497	< 38	148	< 20000	413	< 2	< 2	< 4	2798	< 44	< 33
Fecal Coliform (No./100 ml) Instantaneous Maximum	5800	18400	718	7300	< 20000	3700	< 2	< 2	7	2900	964	540
Nitrate-Nitrite (lbs/day) Annual Average		6										
Nitrate-Nitrite (mg/L) Annual Average		51.5										
Total Nitrogen (lbs/day) Annual Average		8										

Total Nitrogen (mg/L) Annual Average		71.4										
Ammonia (lbs/day) Average Monthly	6.3	3.7	2.5	2.0	1.6	0.009	0.01	< 0.001	0.01	0.03	0.004	0.2
Ammonia (mg/L) Average Monthly	56.1	59.9	23.7	17.5	15.8	0.1	0.2	< 0.02	0.1	0.2	0.1	2.1
TKN (lbs/day) Annual Average		2										
TKN (mg/L) Annual Average		19.9										
Total Phosphorus (lbs/day) Average Monthly	2.7	0.6	0.9	0.3	0.5	0.08	0.03	0.4	0.7	1.5	0.6	0.3
Total Phosphorus (mg/L) Average Monthly	22.1	10.9	8.6	2.8	4.4	0.7	0.6	4.9	7.2	11.0	7.4	2.8

Compliance History

Effluent Violations for Outfall 001, from: March 1, 2024 To: January 31, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	10/31/24	Inst Min	3.3	S.U.	6	S.U.
pH	09/30/24	Inst Min	4.7	S.U.	6	S.U.
pH	09/30/24	Inst Min	4.7	S.U.	6	S.U.
DO	09/30/24	Inst Min	2.15	mg/L	5.0	mg/L
DO	09/30/24	Inst Min	2.15	mg/L	5.0	mg/L
DO	08/31/24	Inst Min	2.1	mg/L	5.0	mg/L
DO	10/31/24	Inst Min	4.7	mg/L	5.0	mg/L
TRC	09/30/24	Avg Mo	< 0.03	mg/L	.02	mg/L
TRC	11/30/24	Avg Mo	< 0.03	mg/L	.02	mg/L
TRC	10/31/24	Avg Mo	< 0.05	mg/L	.02	mg/L

TRC	09/30/24	Avg Mo	< 0.03	mg/L	.02	mg/L
TRC	08/31/24	Avg Mo	< 0.04	mg/L	.02	mg/L
CBOD5	12/31/24	Avg Mo	38	mg/L	25	mg/L
TSS	04/30/24	Avg Mo	14.4	lbs/day	7.5	lbs/day
TSS	01/31/25	Avg Mo	34	mg/L	30	mg/L
TSS	04/30/24	Avg Mo	108	mg/L	30	mg/L
TSS	12/31/24	Avg Mo	54	mg/L	30	mg/L
TSS	10/31/24	Avg Mo	31	mg/L	30	mg/L
Fecal Coliform	04/30/24	Geo Mean	2798	No./100 ml	200	No./100 ml
Fecal Coliform	12/31/24	Geo Mean	13497	No./100 ml	200	No./100 ml
Fecal Coliform	09/30/24	Geo Mean	< 20000	No./100 ml	200	No./100 ml
Fecal Coliform	01/31/25	Geo Mean	646	No./100 ml	200	No./100 ml
Fecal Coliform	08/31/24	Geo Mean	413	No./100 ml	200	No./100 ml
Fecal Coliform	09/30/24	Geo Mean	< 20000	No./100 ml	200	No./100 ml
Fecal Coliform	09/30/24	IMAX	< 20000	No./100 ml	1000	No./100 ml
Fecal Coliform	08/31/24	IMAX	3700	No./100 ml	1000	No./100 ml
Fecal Coliform	04/30/24	IMAX	2900	No./100 ml	1000	No./100 ml
Fecal Coliform	10/31/24	IMAX	7300	No./100 ml	1000	No./100 ml
Fecal Coliform	12/31/24	IMAX	18400	No./100 ml	1000	No./100 ml
Fecal Coliform	01/31/25	IMAX	5800	No./100 ml	1000	No./100 ml
Fecal Coliform	09/30/24	IMAX	< 20000	No./100 ml	1000	No./100 ml
Ammonia	01/31/25	Avg Mo	6.3	lbs/day	1.5	lbs/day

Ammonia	11/30/24	Avg Mo	2.5	lbs/day	1.5	lbs/day
Ammonia	09/30/24	Avg Mo	1.6	lbs/day	.5	lbs/day
Ammonia	10/31/24	Avg Mo	2.0	lbs/day	.5	lbs/day
Ammonia	09/30/24	Avg Mo	1.6	lbs/day	.5	lbs/day
Ammonia	12/31/24	Avg Mo	3.7	lbs/day	1.5	lbs/day
Ammonia	09/30/24	Avg Mo	15.8	mg/L	2.0	mg/L
Ammonia	09/30/24	Avg Mo	15.8	mg/L	2.0	mg/L
Ammonia	10/31/24	Avg Mo	17.5	mg/L	2.0	mg/L
Ammonia	11/30/24	Avg Mo	23.7	mg/L	6.0	mg/L
Ammonia	12/31/24	Avg Mo	59.9	mg/L	6.0	mg/L
Ammonia	01/31/25	Avg Mo	56.1	mg/L	6.0	mg/L
Total Phosphorus	04/30/24	Avg Mo	1.5	lbs/day	.5	lbs/day
Total Phosphorus	03/31/24	Avg Mo	0.6	lbs/day	.5	lbs/day
Total Phosphorus	01/31/25	Avg Mo	2.7	lbs/day	.5	lbs/day
Total Phosphorus	12/31/24	Avg Mo	0.6	lbs/day	.5	lbs/day
Total Phosphorus	05/31/24	Avg Mo	0.7	lbs/day	.5	lbs/day
Total Phosphorus	11/30/24	Avg Mo	0.9	lbs/day	.5	lbs/day
Total Phosphorus	09/30/24	Avg Mo	4.4	mg/L	2.0	mg/L
Total Phosphorus	05/31/24	Avg Mo	7.2	mg/L	2.0	mg/L
Total Phosphorus	04/30/24	Avg Mo	11.0	mg/L	2.0	mg/L
Total Phosphorus	10/31/24	Avg Mo	2.8	mg/L	2.0	mg/L
Total Phosphorus	03/31/24	Avg Mo	7.4	mg/L	2.0	mg/L

Total Phosphorus	11/30/24	Avg Mo	8.6	mg/L	2.0	mg/L
Total Phosphorus	09/30/24	Avg Mo	4.4	mg/L	2.0	mg/L
Total Phosphorus	01/31/25	Avg Mo	22.1	mg/L	2.0	mg/L
Total Phosphorus	12/31/24	Avg Mo	10.9	mg/L	2.0	mg/L
Total Phosphorus	06/30/24	Avg Mo	4.9	mg/L	2.0	mg/L

Summary of Inspections: NOV are issued

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.03
Latitude 39° 55’ 30.00” **Longitude** 75° 56’ 26.00”
Wastewater Description: from Octorara Area School District

Technology-Based Limitations

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

Parameter	Minimum	Average Monthly	Average Weekly	IMAX	Basis	
					State Regulation	Federal Regulation
Flow (MGD)	XXX	Report	Report Max Daily	XXX	§§ 92a.27, 92a.61	
CBOD5 (mg/L)	XXX	25	40	50	§92a.47	133.102(a)(4)(i) ave. mo 133.102(a)(4)(ii) ave. wk
TSS (mg/L)	XXX	30	45	60	§92a.47	133.102(b)(1) ave. mo 133.102(b)(2) ave. wk
TRC (mg/L)	XXX	0.5	XXX	1.6	§§92a.47-48	
NH3-N (mg/L)	XXX	25	XXX	50	BPJ	
D.O. (mg/L)	4.0	XXX	XXX	XXX	BPJ	
pH (SU)	6.0	XXX	XXX	9.0	§92a.47, §95.2	133.102(c)
Total N (mg/L)	XXX	Report	XXX	XXX	92a.61	
Total P (mg/L)	XXX	Report	XXX	XXX	92a.61	
Fecal Coliform May-Sept (No./100 ml)	XXX	200 Geo Mean	XXX	1,000	§92a.47	

Water Quality-Based Limitations

The following limitations were determined through water quality modeling WQM 7.0

Parameter	Limit (mg/l)			SBC	Model
	Ave Mo	Max	Min		
CBOD5	25			Ave. mo.	WQM 7.0
Ammonia	2	4		Ave. mo.	WQM 7.0
Dissolved Oxygen			5	Minimum	WQM 7.0

TRC

TRC evaluation was performed in 1999. No changes are in the discharge characteristics, therefore TRC limits remain the same.

Chesapeake Bay TMDL

The facility discharges to unnamed tributary to Knights Run, which is in Octorara River Watershed which flows to Chasapeake Bay.
The U.S. Environmental Protection Agency (EPA) has established the Chesapeake Bay Total Maximum Daily Load (TMDL) on December 29, 2010.
TMDL implementation document: Supplement to Phase III Watershed Implementation Plan (dated March 30, 2012 and revised, April 2, 2025) states:

"For Phase 5 sewage facilities with individual permits (average annual design flow on August 29, 2005 > 0.002 MGD and < 0.2 MGD), DEP will issue individual permits with monitoring and reporting for TN and TP throughout the permit term at a frequency no less than annually, unless 1) the facility has already conducted at least two years of nutrient monitoring and 2) a summary of the monitoring results are included in the next permit's fact sheet. If, however, Phase 5 facilities choose to expand, the renewed or amended permits will contain Cap Loads based on the lesser of a) existing TN/TP concentrations at current design average annual flow or b) 7,306 lbs/yr TN and 974 lbs/yr TP."

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 (GPD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6 Inst Min	XXX	XXX	9	See Permit	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	See Permit	Grab
TRC	XXX	XXX	XXX	0.02	XXX	0.04	See Permit	Grab
CBOD5	6.25	XXX	XXX	25	XXX	50	2/month	8-Hr Composite
TSS	7.5	XXX	XXX	30	XXX	60	2/month	8-Hr Composite
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Nitrate-Nitrite	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Total Nitrogen	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	Calculation
Ammonia Nov 1 - Apr 30	1.5	XXX	XXX	6.0	XXX	12	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	0.5	XXX	XXX	2.0	XXX	4	2/month	8-Hr Composite
TKN	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Total Phosphorus	0.5	XXX	XXX	2.0	XXX	4	2/month	8-Hr Composite

Compliance Sampling Location: Outfall 001