Pennsylvania Department of Environmental Protection

Southeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Amendment, Major**	Application No.	**PA0030848 A-1**
Facility Type	**Non-Municipal**	APS ID	**1130398**
Major / Minor	**Minor**	Authorization ID	**1515055**

Applicant and Facility Information

Applicant Name	**Unionville Chadds Ford School District**	Facility Name	**Chadds Ford Elementary School**
Applicant Address	740 Unionville Road	Facility Address	3 Baltimore Pike
	Kennett Square, PA 19348-1531		Chadds Ford, PA 19317-9441
Applicant Contact	James Whitesel	Facility Contact	James Whitesel
Applicant Phone	(610) 347-0970	Facility Phone	(610) 347-0970
Client ID	1199	Site ID	443632
Ch 94 Load Status		Municipality	Pennsbury Township
Connection Status		County	Chester
Date Application Received	January 22, 2025	EPA Waived?	No
Date Application Accepted		If No, Reason	, DEP Discretion

Purpose of Application: Amendment of Permit

Summary of Review

This applicant requests permit approval for the replacement of the existing wastewater treatment plant with a Membrane Bioreactor Plant (MBR) at the Chadds Ford Elementary School located in Pennsbury Township, Chester County.

The existing wastewater treatment plant is permitted for 6,300 gpd. The Plant's components and roof will be removed, and the floor elevation will be raised 3 feet. The proposed design capacity for the new Membrane Bioreactor will be 3,000 gpd.

The Membrane Bioreactors treatment process consists of the following units: An anoxic Tank, an Aerobic and Membrane Tank, possible Carbon source to facilitate additional nitrogen removal if needed Disinfection for the new treatment plants effluent will be Ultraviolet Light (UV) designed for peak flow of 0.012mgd. Also proposed for sludge treatment is the use of aerobic digestion that will take place in a single tank to provide effective air mixing, reduction of the organic matter, supernatant separation and sludge concentration under controlled conditions.

The treated effluent will be discharged to Ring Run Creek

Changes to the permit:

- Updated limits for CBOD5, NH3N, TN, TN, TSS, and DO
  Limits were developed per BAT(Best Available Technology Economically Achievable) along with the provided report on the proposed tertiary treatment with a high degree of nitrification.
- UV monitoring requirement
- TRC limit will be removed at interim period 1

Approve	Deny	Signatures	Date
X		*Charley Yang* Charley Yang / Environmental Engineering Specialist	August 11, 2025
X		*Pravin Patel* Pravin C. Patel, P.E. / Environmental Engineer Manager	8/12/2025

Summary of Review

Christina River Basin Total Maximum Daily Load (TMDL):

Chadds Ford Elementary STP is part of an Alternative Reduction Scenario TMDL. However, the newly developed limits for the new system is more stringent than the existing limits (which is from TMDL). Mass Loading Limits are being updated along with the concentration limit.

Act 14 Notification:

Chester County: received on 10/28/2024
Pennsbury Township: received on 11/1/2024

WQM Permit 1525401 A-1 was issued on 6/23/2025.

Proposed Part C Conditions:

A. No Stormwater
B. Acquire Necessary Property Rights
C. Proper Sludge Disposal
D. Abandon STP when Municipal Sewers Available
E. Total Residual Chlorine Requirement
F. Small Stream Discharge
G. Notification of Designation of Operator
H. Remedial Measures if Unsatisfactory Effluent
I. 2/Month Sampling
J. I-max Requirements

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)	.003
Latitude	39Âº 52' 20.50"	Longitude	-75Âº 35' 52.85"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Ring Run (WWF, MF)	Stream Code	00038
NHD Com ID	26109704	RMI	0.14
Drainage Area	2.16 mi^2	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	0.533	Q_{7-10} Basis	Pennsylvania StreamStats
Elevation (ft)	346.4	Slope (ft/ft)	4.6
Watershed No.	3-H	Chapter 93 Class.	WWF, 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	Final	Name	Christina River Basin

Changes Since Last Permit Issuance: No Change

Other Comments:

Treatment Facility Summary

Treatment Facility Name: Chadds Ford Elementary School - STP

WQM Permit No.	Issuance Date
1525401 A-1	06/23/2025

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage			UV	0.003

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0036				

Changes Since Last Permit Issuance: Average Daily Flow was lowered from 0.0063 MGD to 0.003 MGD

Other Comments:

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
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab

Compliance Sampling Location:

Other Comments:

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Outfall 001, Effective Period: End of Interim Period 1 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		
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/week	Grab
CBOD5	0.250	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
TSS	0.250	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Metered
Total Nitrogen	0.250	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
Ammonia	0.250	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
Total Phosphorus	0.025	XXX	XXX	1.0	XXX	2	2/month	8-Hr Composite

Compliance Sampling Location:

Other Comments:

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Outfall 001, Effective Period: Permit Effective Date through End of Interim Period 1.

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		
DO	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/week	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.2	1/week	Grab
CBOD5	1.314	XXX	XXX	25.0	XXX	50	2/month	8-Hr Composite
TSS	1.576	XXX	XXX	30.0	XXX	60	2/month	8-Hr Composite
Total Nitrogen	2.627	XXX	XXX	50.0	XXX	100	2/month	8-Hr Composite
Ammonia	1.576	XXX	XXX	30.0	XXX	60	2/month	8-Hr Composite
Total Phosphorus	0.525	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite

Compliance Sampling Location:

Other Comments: