Pennsylvania Department of Environmental Protection

NORTHEAST REGIONAL OFFICE
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0034517**
Facility Type	**Industrial**	APS ID	**579423**
Major / Minor	**Minor**	Authorization ID	**1369291**

NPDES PERMIT FACT SHEET ADDENDUM

Applicant and Facility Information

Applicant Name	**East Stroudsburg Borough**	Facility Name	**East Stroudsburg Borough Water Filtration Plant**
Applicant Address	24 Analomink Street East Stroudsburg, PA 18301-2801	Facility Address	Fawn Road East Stroudsburg, PA 18301
Applicant Contact	Brian Bond, Borough Manager	Facility Contact	Cal Miller, Operator
Applicant Phone	(570) 421-8300	Facility Phone	(570) 421-4900
Client ID	71386	Site ID	305
SIC Code	4941	Municipality	Smithfield Township
SIC Description	Trans. & Utilities - Water Supply	County	Monroe
Date Published in PA Bulletin	December 17, 2022	EPA Waived?	Yes
Comment Period End Date	January 17, 2023	If No, Reason	-
Purpose of Application	Application for a renewal of an existing NPDES Permit.		

Internal Review and Recommendations

The first draft of this application appeared in the PA Bulletin on Saturday, December 17, 2022.

The purpose of this second draft NPDES permit renewal is due to a comment letter from the Borough of East Stroudsburg dated January 16, 2023. The letter was received by the Department via email on January 16, 2023. The letter offered three comments for the Department's consideration:

Comment #1 - The permittee requests the Total Residual Chlorine (TRC) average monthly limitation remain at 0.5 mg/L instead of being lowered to 0.31 mg/L. The permittee states that the previous permit utilized USGS Stream Gage 01442500 – Brodhead Creek at Minisink Hills, PA for modeling and requests that the same stream gage be used for modeling in the permit renewal.

Response – The first draft NPDES permit utilized the state-wide default Low-flow Yield (LFY) of 0.1 cfs/mi^2 for modeling. The modeling using the 0.1 cfs/mi^2 LFY and calculated $Q_{7\text{-}10}$ value of 0.286 cfs recommended the stricter TRC limitation of 0.31 mg/L. The drainage area at Outfall 001 is only 2.86 mi^2.

The previous permit utilized USGS Stream Gage 01442500 – Brodhead Creek at Minisink Hills, PA to calculate a $Q_{7\text{-}10}$ Flow of 0.5434 cfs/mi^2 and LFY of 0.19 cfs/mi^2. The drainage area at that stream gage is 259 mi^2 and is also not located close to the facility.

USGS Stream Gage 01440400 – Brodhead Creek near Analomink, PA was also reviewed. This stream gage provided a $Q_{7\text{-}10}$ Flow of 0.32 cfs/mi^2 and LFY of 0.112 cfs/mi^2. The drainage area at this stream gage is 65.9, which is a little smaller than the Brodhead Creek at Minisink Hills, PA stream gage, but the gage is still not close to the facility.

Approve	Return	Deny	Signatures	Date
X			Allison Seyfried Zukosky Allison Seyfried Zukosky / Project Manager	October 29, 2025
X			Edward Dudick, P.E. / Environmental Engineer Manager	October 29, 2025

Internal Review and Recommendations

Both Stream Gages have much larger drainage areas and are not representative of the smaller receiving stream that Outfall 001 is located on. USGS StreamStats data directly at Outfall 001 was not used because the drainage area is too small for USGS StreamStats to estimate accurate values. Therefore, a Q_{7-10} value was obtained using the second modeling point at the confluence with the Unnamed Tributary to Sambo Creek (4926) and used to calculate a LFY of 0.0596 and Q_{7-10} of 0.17cfs.

TRC modeling using these second point values results in even stricter TRC limitations. Therefore, the TRC limitations from the first draft permit will be maintained in the second draft permit because they are the median value of all reviewed sources. The DMR Data from September 1, 2024 to August 31, 2025 was also reviewed and is provided on page 8 of this fact sheet. The facility is already comfortably meeting the new limitation.

The stream gage data, Streamstats data, and calculations can be seen starting on page 3 of this fact sheet.

Comment #2 – The permittee requests that conditions relating to the receipt of residual wastes and municipal wastes that are hauled to the facility under Part A. III.C.3 be removed from the final permit because they do not apply to the facility.

***Response* –** NPDES Permit Part A.II through Part B.III.E is standard permit language that remains the same for all NPDES Permits for Industrial Wastewater Facilities. These sections cannot be edited in anyway or removed. Therefore, the conditions will remain in the permit. Please note that all permit documents have been updated to the most recent version (8/2025).

Comment #3 – The permittee requests the Part C.III. Sedimentation Cleaning Record Keeping from the previous permit remain instead of being replaced with the updated Part C. III. Sedimentation Basin Cleaning condition that appeared in the draft NPDES Permit.

***Response* –** The updated Sedimentation Basin Cleaning section from the first draft permit will be maintained in this second draft permit.

A second draft of the permit is being issued because 180 days have elapsed since the first draft was issued.

Please inform the Department via email if there has been a change in personnel or contact information for the facility since the first draft has been issued.

There are currently no open violations for this client/facility.

PA DEP COMMENT LETTER 230116.pdf

Internal Review and Recommendations

Using the state-wide Low-Flow Yield (LFY) of 0.1 cfs/mi² :

$$\frac{0.1\ ft^3/sec}{mi^2} \times 2.86\ mi^2 = \frac{\mathbf{0.286\ ft^3}}{\mathbf{sec}}$$

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.286	= Q stream (cfs)	0.5	= CV Daily
0.09	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 0.674	1.3.2.iii	WLA cfc = 0.650
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.251	5.1d	LTA_cfc = 0.378

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.309	AFC
		INST MAX LIMIT (mg/l) = 1.011	

WLA afc	(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))... ...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))... ...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)

Internal Review and Recommendations

Stream Gage Data for Brodhead Creek at Minisink Hills, PA:

Name	Value
USGS Station Number	01442500
Station Name	Brodhead Creek at Minisink Hills, Pa.
Station Type	Gaging Station, continuous record
Latitude	40.99871
Longitude	-75.14268
NWIS Latitude	40.998706
NWIS Longitude	-75.1426788
Is regulated?	false
Agency	United States Geological Survey
NWIS Discharge Period of Record	10/01/1950 - 10/23/2025

Basin Dimensional Characteristics

Characteristic Name	Value	Units
Drainage Area	259	square miles

Low-Flow Statistics

Statistic Name	Value	Units	Preferred?	Years of Record	Standard Error, percent	Citation	Comments
1 Day 10 Year Low Flow	44.7	cubic feet per second	✓	57		49	Statistic Date Range 4/1/1951 - 3/31/2008
7 Day 2 Year Low Flow	80.6	cubic feet per second	✓	57		49	Statistic Date Range 4/1/1951 - 3/31/2008
7 Day 10 Year Low Flow	48.4	cubic feet per second	✓	57		49	Statistic Date Range 4/1/1951 - 3/31/2008

$$\boldsymbol{LFY} = \frac{Q_{7-10}}{Stream\ Gage\ Drainage\ Area} \times \frac{48.4\ cfs}{259\ mi^2} = \mathbf{0.19}$$

$$\boldsymbol{Stream\ Flow} = Outfall\ 001\ Drainage\ Area \times LFY = 2.86\ mi^2 \times 0.19 = \mathbf{0.5434\ cfs}$$

Internal Review and Recommendations

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.5434	= Q stream (cfs)	0.5	= CV Daily
0.09	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 1.264	1.3.2.iii	WLA cfc = 1.225
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.471	5.1d	LTA_cfc = 0.712

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.635	

WLA afc	(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...
	...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...
	...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)

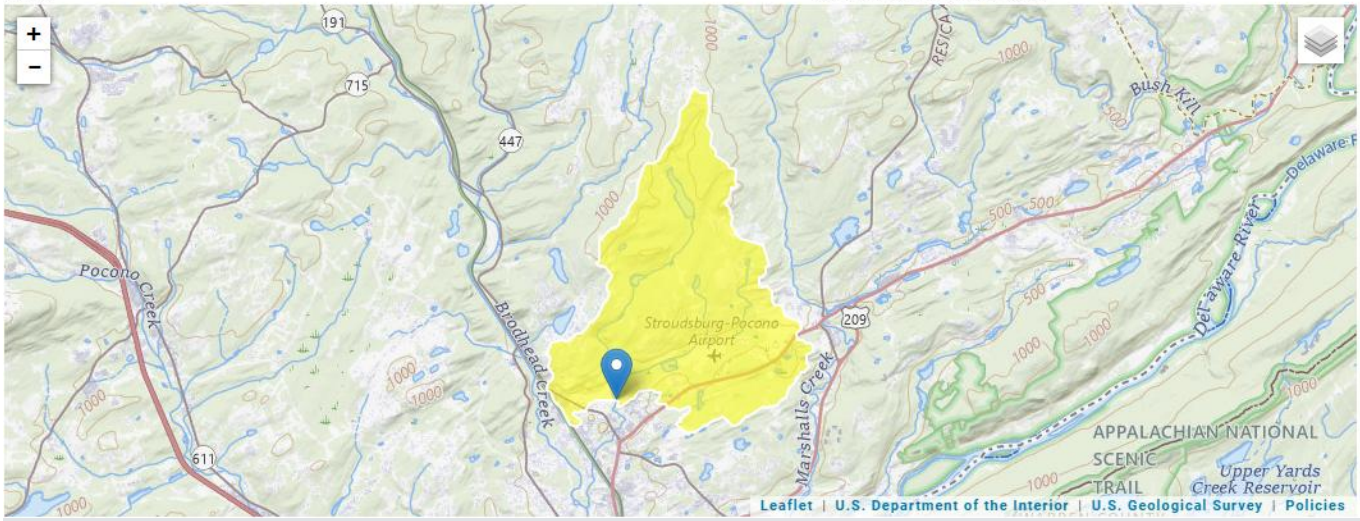
Internal Review and Recommendations

StreamStats Data at confluence with Unnamed Tributary to Sambo Creek (4926):

RMI	Elevation (ft)	Drainage Area (mi^2)
1.958	449.8	8.91

StreamStats Report

Region ID: PA
Workspace ID: PA20251024172611897000
Clicked Point (Latitude, Longitude): 41.02624, -75.18354
Time: 2025-10-24 13:26:36 -0400



Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	8.91	square miles

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	1.33	ft^3/s	38	38
30 Day 2 Year Low Flow	1.86	ft^3/s	33	33
7 Day 10 Year Low Flow	0.531	ft^3/s	57	57

$$\boldsymbol{LFY} = \frac{Q_{7-10}}{Drainage\ Area\ at\ 2nd\ Modeling\ Point} \times \frac{0.531\ cfs}{8.91\ mi^2} = \mathbf{0.0596}$$

$$\boldsymbol{Stream\ Flow} = Outfall\ 001\ Drainage\ Area \times LFY = 2.86\ mi^2 \times 0.0596 = \mathbf{0.17\ cfs}$$

Internal Review and Recommendations

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.17	= Q stream (cfs)	0.5	= CV Daily
0.09	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 0.408	1.3.2.iii	WLA cfc = 0.391
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.152	5.1d	LTA_cfc = 0.227

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.187	AFC
		INST MAX LIMIT (mg/l) = 0.613	

WLA afc	(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...
	...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...
	...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)

Internal Review and Recommendations

DMR Data for Outfall 001 (from September 1, 2024 to August 31, 2025)

Parameter	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24
Flow (MGD) Average Monthly	0.055	0.065	0.060	0.050	0.060	0.070	0.060	0.050	0.050	0.050	0.050	0.050
Flow (MGD) Daily Maximum	0.060	0.080	0.060	0.050	0.060	0.090	0.068	0.050	0.050	0.050	0.050	0.050
pH (S.U.) Minimum	7.03	6.63	7.04	7.10	7.04	6.91	7.04	7.32	6.98	6.98	7.52	6.99
pH (S.U.) Maximum	7.47	7.10	7.44	7.43	7.76	7.56	7.16	7.45	7.11	7.10	6.95	7.31
TRC (mg/L) Average Monthly	0.08	0.08	0.10	0.11	0.11	0.017	0.21	0.26	0.06	0.03	0.04	0.05
TRC (mg/L) Daily Maximum	0.15	0.17	0.15	0.14	0.15	0.33	0.48	0.48	0.10	0.040	0.06	0.06
TSS (mg/L) Average Monthly	< 5.00	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.00	< 5.0	< 5.0	< 5.00	< 5.0	< 5.0
TSS (mg/L) Daily Maximum	< 5.00	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.00	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Aluminum (mg/L) Average Monthly	< 0.100	< 0.100	< 0.100	0.105	0.103	0.217	0.159	0.259	0.204	< 0.100	< 0.100	0.125
Total Aluminum (mg/L) Daily Maximum	< 0.100	< 0.100	< 0.100	0.110	0.107	0.220	0.179	0.353	0.281	< 0.100	< 0.100	0.149
Total Iron (mg/L) Average Monthly	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.0465	< 0.040	< 0.040	< 0.040	< 0.040
Total Iron (mg/L) Daily Maximum	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.053	< 0.040	< 0.040	< 0.040	< 0.040
Total Manganese (mg/L) Average Monthly	0.201	0.183	0.0645	0.215	0.0345	0.298	0.0305	0.0605	0.040	0.0230	0.029	0.104
Total Manganese (mg/L) Daily Maximum	0.353	0.224	0.0660	0.400	0.0410	0.407	0.0330	0.086	0.0530	0.0250	0.0330	0.108