Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0035548**
Facility Type	**Non-Municipal**	APS ID	**1147200**
Major / Minor	**Minor**	Authorization ID	**1543776**

Applicant and Facility Information

Applicant Name	**PA DOT Maintenance & Operations Bureau**	Facility Name	**PA DOT Rest Area 15**
Applicant Address	400 North Street Floor 6	Facility Address	I-79 Northbound Exit 105
	Harrisburg, PA 17120-0206		Grove City, PA 16127
Applicant Contact	Nicholaus Sahd	Facility Contact	Nicholaus Sahd
Applicant Phone	(717) 951-8685	Facility Phone	(717) 951-8685
Client ID	189304	Site ID	445513
Ch 94 Load Status	Not Overloaded	Municipality	Plain Grove Township
Connection Status		County	Lawrence
Date Application Received	September 29, 2025	EPA Waived?	Yes
Date Application Accepted	--	If No, Reason	--

Purpose of Application: Renewal application for a Minor Sewage Facility (Rest Area)

Summary of Review

The Department received a renewal application for Individual Permit No. PA0035548 which would expire on March 31, 2026. There is one outfall (Outfall 001) that discharges to Tributary 34202 of Jamison Run (CWF).

Act 14 notifications were submitted and received.

The facility is currently in the eDMR system.

There are 15 open violations in WMS for the subject Client ID (189304) as of November 12, 2025. Tables 1 and 2 contain a summary of past inspections and current violations. None of the violations are associated with Rest Area 15.

Proposed Changes:

- Addition of E. Coli monitoring
- More stringent Ammonia-Nitrogen (NH3-N) limits (compliance schedule implemented)
- More stringent Dissolved Oxygen (DO) limit
- More stringent Carbonaceous Biological Oxygen Demand (CBOD5) limits
- More stringent Total Residual Chlorine (TRC) limits (compliance schedule implemented)

Notes:

- The previous permit renewals classified Tributary 34202 to Jamison Run as an intermittent stream and therefore conducted a dry stream degradation analysis. However, a site investigation and Point of First Use (POFU) survey was conducted by the Department's biologists that found there is Aquatic Life Use (ALU) at the discharge location. Therefore, a dry stream analysis was not implemented, and modeling was performed at the point of discharge in Tributary 34202 of Jamison Run.

Approve	Deny	Signatures	Date
X		Carlee Wilson Carlee Wilson / Environmental Engineering Trainee	November 13, 2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	March 4, 2026

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.008
Latitude	41º 4' 9.29"	Longitude	-80º 7' 24.84"
Quad Name	-	Quad Code	-
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary of Jamison Run (CWF)	Stream Code	34202
NHD Com ID	126222156	RMI	0.31
Drainage Area	0.12	Yield (cfs/mi^2)	0.005
Q_{7-10} Flow (cfs)	0.000606	Q_{7-10} Basis	USGS – StreamStats
Elevation (ft)	-	Slope (ft/ft)	-
Watershed No.	20-C	Chapter 93 Class.	CWF
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	-	Name	-

Background/Ambient Data		Data Source
pH (SU)	7.0	Default
Temperature (°F)	68	Default
Hardness (mg/L)	100	Default
Other:	-	-

Nearest Downstream Public Water Supply Intake	PA American Water Company – Ellwood City		
PWS Waters	Slippery Rock Creek	Flow at Intake (cfs)	53.1
PWS RMI	0.1	Distance from Outfall (mi)	21.0

Changes Since Last Permit Issuance: Drainage Area and Q_{7-10} Flow were adjusted using StreamStats data from USGS (Attachments 2 and 3). Elevation was updated using Google Earth.

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.

Treatment Facility Summary				
Treatment Facility Name: PA DOT Rest Area 15				
WQM Permit No.	**Issuance Date**			
3793403				
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary With Ammonia Reduction	Extended Aeration	Hypochlorite	0.008
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
		Not Overloaded	Aerobic Digestion	

Changes Since Last Permit Issuance: None

Sewerage Permit No. 3793403

A 3,000-gallon aerated equalization tank with bar screen, chemical addition for pH adjustment, two parallel 4,250-gallon extended aeration treatment trains, a 2,500-gallon aerobic sludge digestion tank, and liquid chlorine disinfection with a 3,245-gallon contact tank. There is also a 1,500-gallon dosing tank for an intermittent subsurface sand filter that is used primarily for summer ammonia-nitrogen removal.

Compliance 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	0.0031	0.0044	0.0054	0.0028	0.0024	0.0025	0.0023	0.0022	0.0018	0.0018	0.0028	0.0021
Flow (MGD) Daily Maximum	0.0033	0.0047	0.0059	0.0030	0.0033	0.0028	0.0027	0.0024	0.0021	0.0021	0.0037	0.0023
pH (S.U.) Instantaneous Minimum	6.9	6.8	6.9	6.9	6.7	6.7	6.7	6.9	6.8	6.7	6.8	6.8
pH (S.U.) Instantaneous Maximum	7.5	7.4	7.4	7.5	7.4	7.4	7.5	7.4	7.4	7.4	7.4	7.4
DO (mg/L) Instantaneous Minimum	6.8	6.9	6.9	6.9	6.7	6.8	6.8	7.1	6.7	6.8	7.1	6.9
TRC (mg/L) Average Monthly	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
TRC (mg/L) Instantaneous Maximum	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4
CBOD5 (mg/L) Average Monthly	4.7	4.5	4.3	3.9	3.9	4.1	4.7	4.1	4.4	4.4	4.8	3.9
CBOD5 (mg/L) Instantaneous Maximum	4.9	4.6	4.4	3.9	3.9	4.5	4.7	4.5	4.8	4.6	4.9	3.9
TSS (mg/L) Average Monthly	11.5	11.0	11.0	11.5	11.5	9.5	11.5	10.5	11.5	11.0	11.0	11.5
TSS (mg/L) Instantaneous Maximum	12.0	12.0	12.0	12.0	12.0	10.0	12.0	11.0	12.0	12.0	12.0	12.0
Fecal Coliform (No./100 ml) Geometric Mean	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Total Nitrogen (mg/L) Average Monthly	26.9	26.6	25.4	25.7	27.0	26.3	27.1	26.3	26.7	27.2	27.1	25.4

Ammonia (mg/L) Average Monthly	14.7	15.4	14.4	14.8	15.4	15.2	15.6	14.5	14.8	15.6	15.3	14.7
Ammonia (mg/L) Instantaneous Maximum	15.2	15.7	15.1	15.2	15.5	15.2	15.9	14.8	15.2	15.9	15.4	15.0
Total Phosphorus (mg/L) Average Monthly	2.765	2.885	2.865	2.990	2.885	2.620	2.725	2.910	2.730	2.795	2.625	2.735

Compliance History

Summary of Inspections:

Table 1. 5-Year Inspection Summary for PennDOT's Rest Area 15

Facility Name	Inspected Date	Inspection Type	Inspection Result	Inspector	No. of Violations
PA DOT REST AREA 15	12/14/2021	Compliance Evaluation	No Violations Noted	CARVER, MELISSA	0
PA DOT REST AREA 15	04/14/2025	Compliance Evaluation	Violation(s) Noted	CARVER, MELISSA	1

Summary of Violations:

Table 2. Open Violations in WMS for Client ID – 189304

Facility	Inspection Program	Violation Date	Violation
FINDLAY	Storage Tanks	10/23/2025	Failure to meet underground storage tank system operational requirements
PA DOT CLINTON CNTY MAINT FAC 023 – 01	Storage Tanks	07/23/2025	Failure to meet aboveground storage tank protective coating requirements
PA DOT CLINTON CNTY MAINT FAC 023 – 01	Storage Tanks	07/23/2025	Failure to meet aboveground storage tank protective coating requirements
MONTGOMERY CNTY MAINT BLDG 0640	Storage Tanks	09/24/2025	Failure to comply with petroleum underground storage tank periodic monitoring requirements.
MONTGOMERY CNTY MAINT BLDG 0640	Storage Tanks	09/24/2025	Failure to comply with petroleum underground storage tank periodic monitoring requirements.
MONTGOMERY CNTY MAINT BLDG 0640	Storage Tanks	09/24/2025	Failure to comply with UST system monthly operation and maintenance walkthrough inspections
NORTHUMBERLAND CNTY MAINT BLDG 0340	Storage Tanks	08/19/2025	Failure to meet performance standards for new and/or upgraded underground storage tank systems
PA DOT REST AREA 25	WPC NPDES	02/09/2022	NPDES – Violation of effluent limits in Part A of permit
PA DOT REST AREA 25	WPC NPDES	12/13/2023	NPDES – Violation of effluent limits in Part A of permit
PA DOT REST AREA 25	WPC NPDES	11/06/2025	NPDES – Violation of effluent limits in Part A of permit
PA DOT REST AREA 26	WPC NPDES	02/09/2022	NPDES – Violation of effluent limits in Part A of permit
PA DOT REST AREA 26	WPC NPDES	12/13/2023	NPDES – Violation of effluent limits in Part A of permit
PA DOT REST AREA 26	WPC NPDES	10/31/2025	NPDES – Violation of effluent limits in Part A of permit
PA DOT REST AREA 15	WPC NPDES	04/14/2025	NPDES – Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance
PA DOT REST AREA 16 – I-79	WPC NPDES	04/14/2025	NPDES – Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .008
Latitude 41º 4' 9.00" **Longitude** -80º 7' 25.00"
Wastewater Description: Sewage Effluent

1. Technology-Based Limitations

Table 3. Minimum Technology-Based and BPJ Standards for Individual Sewage Permits

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©	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)
E. Coli	Report	IMAX	-	92a.61
Total Phosphorous	Report	Average Monthly	-	92a.61
Total Nitrogen	Report	Average Monthly	-	92a.61

The above limits are minimum technology-based and BPJ standards for individual sewage permits which are found in the Department's "*Establishing Effluent Limitations for Individual Sewage Permits"* document (SOP. No. BCW-PMT-033). The limits for pH are technology-based on Chapter 93.7. The limits for Total Suspended Solids, and Fecal Coliforms are technology-based on Chapter 92a.47. Monitoring for E. Coli, Total Nitrogen, and Total Phosphorus are based on Chapter 92a.61.

2. Water Quality-Based Limitations

Table 4. WQM 7 Results

Parameter	Limit (mg/l)	SBC
CBOD5	23.52	Average Monthly
NH3-N	1.49	Average Monthly
	2.98	IMAX
DO	6	Instantons Minimum

The Department's Toxics Management Spreadsheet was not used for this case since no sampling other than sewage-related parameters was performed for this facility with the renewal application. The above parameters were evaluated using water quality modeling (Attachment 5). This model (WQM 7) is used to determine and/or establish WQBELs to protect water quality. In this evaluation, the model provided the above limits for CBOD5, Ammonia-Nitrogen and Dissolved Oxygen. The model recommends more stringent limits for CBOD5, DO, and NH3-N.

Carbonaceous Biological Oxygen Demand

The current average monthly limit for CBOD5 is 25 mg/l. Since the model recommends a more stringent limit an average monthly limit of 23.0 mg/l is proposed. A multiplier of 2 is applied to receive an IMAX limit of 46.0 mg/l. According to eDMR data, the permittee currently meets the new limits.

Ammonia-Nitrogen

The existing summer limits for ammonia-nitrogen are 18.0 mg/l (average monthly) and 36.0 mg/l (IMAX). More stringent limits are proposed in this renewal of 1.4 mg/l and 2.8 mg/l. A seasonal multiplier of 3 is applied to receive limits of 4.2 mg/l and 8.4 mg/l for the months of November through April. According to eDMR data, the permittee does not currently meet these new limits at least 75% of the time, therefore a compliance schedule has been implemented.

Dissolved Oxygen

It is proposed to change the current limit of 4.0 mg/l to 6.0 mg/l which is the desired D.O for effluents to Cold Water Fisheries (CWF). According to eDMR data, the permittee currently meets the new limit.

Total Residual Chlorine

Using the Department's Total Residual Chlorine (TRC) Spreadsheet (Attachment 6), it is proposed to establish more stringent limits of 0.016 mg/l (average monthly) and 0.052 mg/l (IMAX) for TRC in the permit. Since the permittee does not demonstrate its ability to comply with these new limits at least 75% of the time, a compliance schedule has been implemented into the permit with a three-year timeline to provide time for the new limits to be attained.

The calculated limits for TRC as specified in **Part A** of the permit are the limits necessary to comply with state water quality standards. These effluent limits are lower than the Quantitation Limit (0.02), as defined in 25 Pa. Code § 252.1, of the most sensitive existing EPA-approved test method or other DEP-approved method. Therefore, a Part C condition "TRC Effluent Limitations Below Quantitation Limits" has been added to the permit.

3. Anti-Backsliding

Table 5. Current Permit Effluent Limitations for Outfall 001

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	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50.0	2/month	Grab
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 – Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 – Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab
Ammonia Nov 1 – Apr 30	XXX	XXX	XXX	54.0	XXX	108.0	2/month	Grab
Ammonia May 1 – Oct 31	XXX	XXX	XXX	18.0	XXX	36.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab

Comments: More stringent limits are proposed for the highlighted items above. All other permit limitations, monitoring, requirements, and conditions will be retained into the next permit with the addition of E. Coli monitoring.

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 Three Years After Permit Effective 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	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	6.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	23.0	XXX	46.0	2/month	Grab
Total Suspended Solids	XXX	XXX	XXX	30.0	XXX	60.0	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	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	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	54.0	XXX	108.0	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	18.0	XXX	36.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab

Compliance Sampling Location: Outfall 001 – after disinfection

Proposed Effluent Limitations and Monitoring Requirements

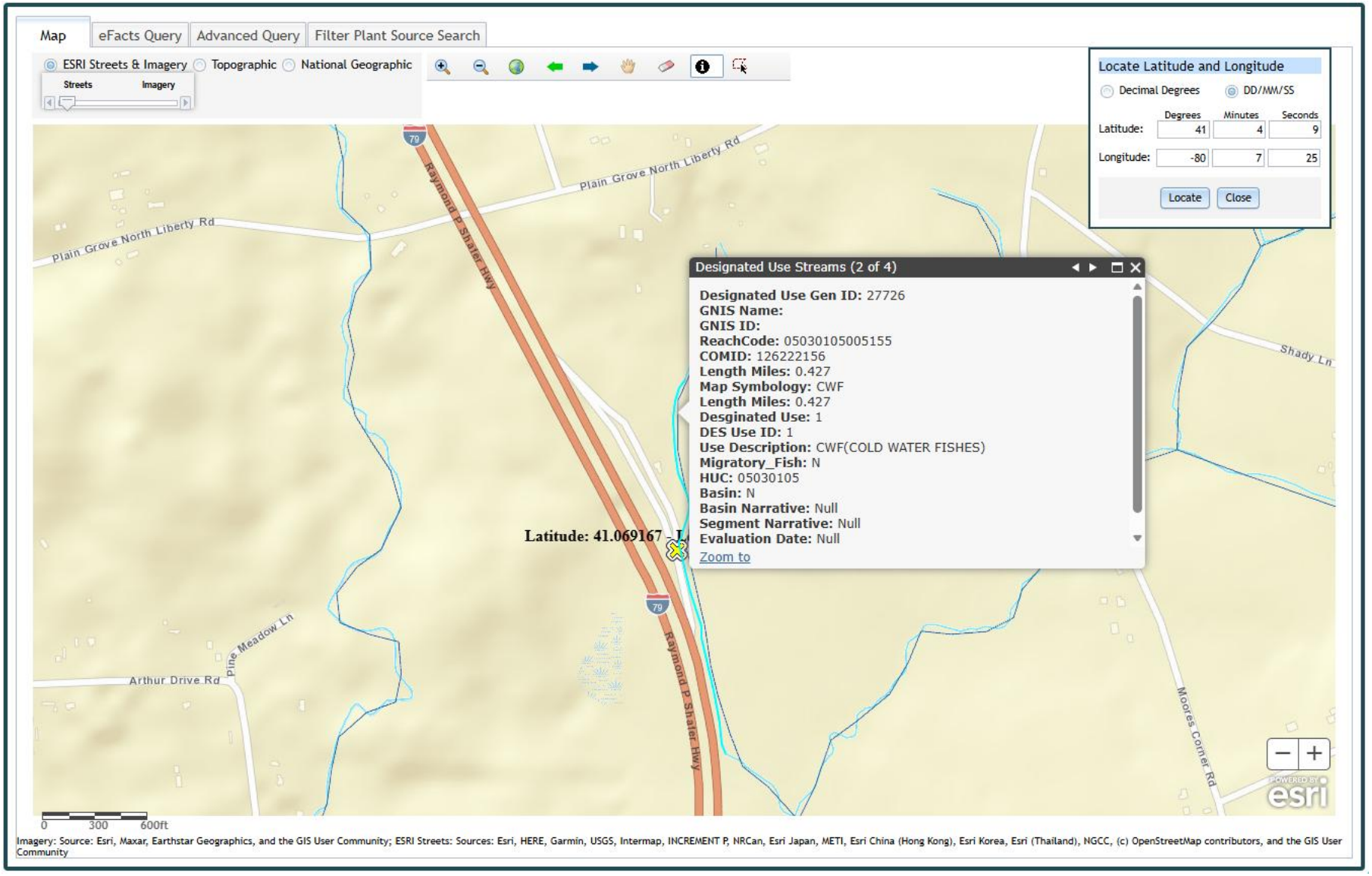
The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Three Years After 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	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	6.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.016	XXX	0.052	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	23.0	XXX	46.0	2/month	Grab
Total Suspended Solids	XXX	XXX	XXX	30.0	XXX	60.0	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	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	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	4.2	XXX	8.4	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	1.4	XXX	2.8	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab

Compliance Sampling Location: Outfall 001 – after disinfection

Attachment 1
eMapPA – Receiving Stream Details

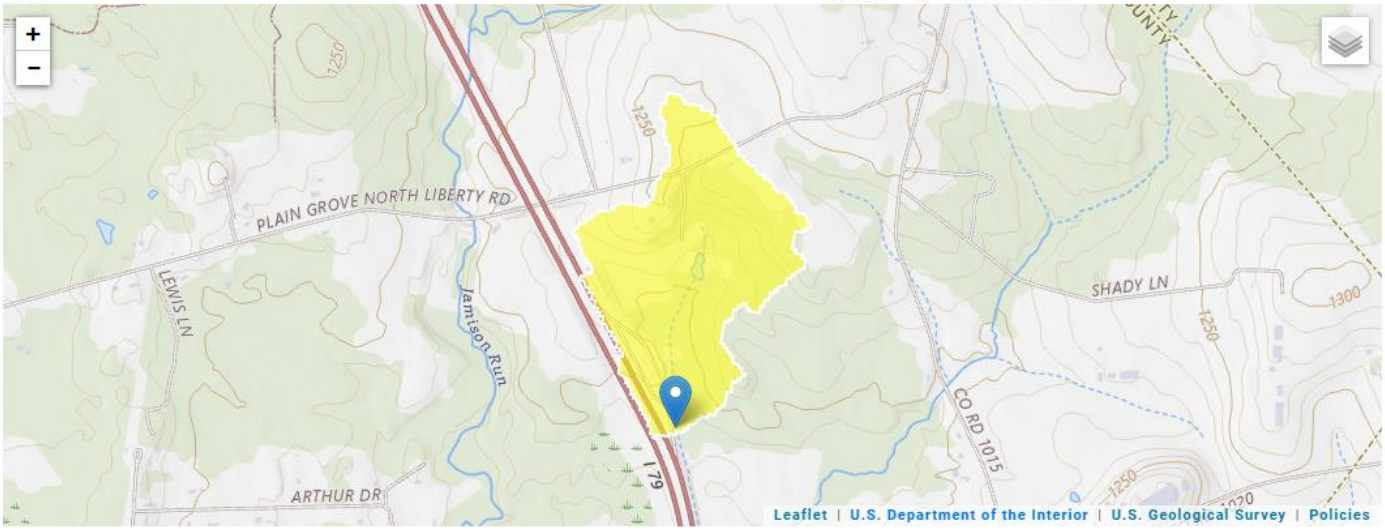


Attachment 2
Google Earth – Aerial Site View

Attachment 3
StreamStats Report (Point of First Use)

StreamStats Report

Region ID:	PA
Workspace ID:	PA20251112160112668000
Clicked Point (Latitude, Longitude):	41.06900, -80.12355
Time:	2025-11-12 11:01:33 -0500



Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.12	square miles	2.26	1400
ELEV	Mean Basin Elevation	1219	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Low-Flow Statistics Flow Report [Low Flow Region 4]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.00254	ft^3/s
30 Day 2 Year Low Flow	0.00542	ft^3/s
7 Day 10 Year Low Flow	0.000606	ft^3/s
30 Day 10 Year Low Flow	0.00153	ft^3/s
90 Day 10 Year Low Flow	0.00347	ft^3/s

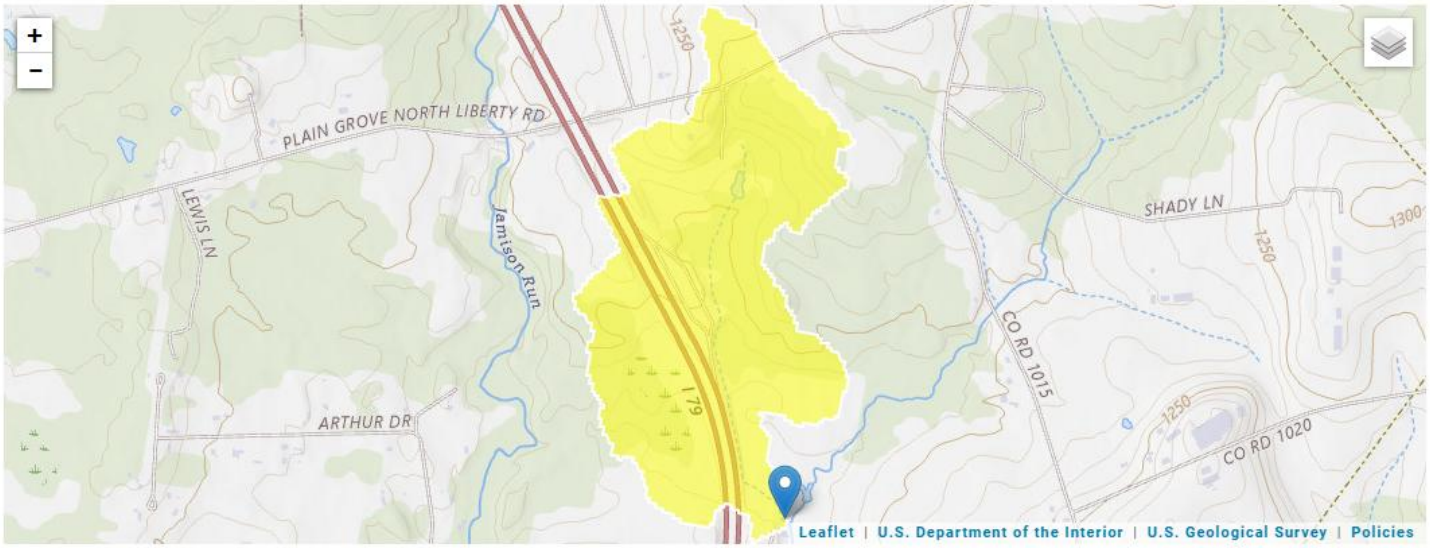
Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p.

Attachment 4
StreamStats Report (Endpoint)

StreamStats Report

Region ID:	PA
Workspace ID:	PA20251112160843336000
Clicked Point (Latitude, Longitude):	41.06499, -80.12130
Time:	2025-11-12 11:09:05 -0500



Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.24	square miles	2.26	1400
ELEV	Mean Basin Elevation	1205	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Low-Flow Statistics Flow Report [Low Flow Region 4]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.00554	ft^3/s
30 Day 2 Year Low Flow	0.0114	ft^3/s
7 Day 10 Year Low Flow	0.00142	ft^3/s
30 Day 10 Year Low Flow	0.00338	ft^3/s
90 Day 10 Year Low Flow	0.00742	ft^3/s

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p.

Attachment 5
WQM 7 Model Results

Input Data WQM 7.0

	SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
	20C	34202	Trib 34202 of Jamison Run	**0.310**	1186.00	0.12	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.005	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Rest Area 15	PA0035548	0.0080	0.0080	0.0080	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20C	34202	Trib 34202 of Jamison Run	**0.000**	1173.00	0.24	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.006	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
20C	34202	Trib 34202 of Jamison Run

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
0.310	0.00	0.00	0.00	.0124	0.00794	.265	1.6	6.05	0.03	0.620	24.77	7.00
Q1-10 Flow												
0.310	0.00	0.00	0.00	.0124	0.00794	NA	NA	NA	0.03	0.626	24.85	7.00
Q30-10 Flow												
0.310	0.00	0.00	0.00	.0124	0.00794	NA	NA	NA	0.03	0.614	24.69	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	6		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
20C	34202	Trib 34202 of Jamison Run

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.310	Rest Area 15	11.21	11.56	11.21	11.56	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.310	Rest Area 15	1.39	1.49	1.39	1.49	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
0.31	Rest Area 15	23.52	23.52	1.49	1.49	6	6	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
20C	34202	Trib 34202 of Jamison Run

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.310	0.008	24.769	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
1.603	0.265	6.051	0.031
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
22.53	1.401	1.42	1.010
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.104	27.401	Owens	6
Reach Travel Time (days)			
0.620			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.062	20.22	1.33	6.16
0.124	18.15	1.25	6.35
0.186	16.29	1.17	6.54
0.248	14.62	1.10	6.73
0.310	13.12	1.04	6.89
0.372	11.77	0.97	7.04
0.434	10.57	0.91	7.17
0.496	9.48	0.86	7.29
0.558	8.51	0.81	7.40
0.620	7.64	0.76	7.50

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
20C	34202	Trib 34202 of Jamison Run

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
0.310	Rest Area 15	PA0035548	0.008	CBOD5	23.52		
				NH3-N	1.49	2.98	
				Dissolved Oxygen			6

Attachment 6
TRC Spreadsheet

TRC EVALUATION

0.0006	= Q stream (cfs)	0.5	= CV Daily
0.008	= 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)
	= %Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 0.034	1.3.2.iii	WLA cfc = 0.026
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.013	5.1d	LTA_cfc = 0.015

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.016	AFC
		INST MAX LIMIT (mg/l) = 0.052	

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)**

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other: