Pennsylvania Department of Environmental Protection

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0050105**
Facility Type	**Municipal**	APS ID	**1127431**
Major / Minor	**Minor**	Authorization ID	**1509498**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Lower Frederick Township Montgomery County**	Facility Name	**Lower Frederick Township STP & Sewer System**
Applicant Address	53 Spring Mount Road Schwenksville, PA 19473-1738	Facility Address	133 Spring Mount Road Schwenksville, PA 19473
Applicant Contact	Jason Wager	Facility Contact	Thomas Manning
Applicant Phone	(610) 287-8857	Facility Phone	(610) 287-8857
Client ID	45262	Site ID	262297
Ch 94 Load Status	Not Overloaded	Municipality	Lower Frederick Township
Connection Status	No Limitations	County	Montgomery
Date Application Received	December 3, 2024	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application .

Summary of Review

This permittee requests the renewal of NPDES permit PA0050105 to discharge 500,000 gallons per day (gpd) of treated sewage effluent to the Perkiomen Creek.

The capacity of the plant was expanded from 0.2 MGD to 0.5 MGD during the last renewal. The wastewater plant accepts only municipal wastewater with no industrial users in the system. The plant does not accept imported wastewater. No construction or modifications are proposed.

Per the inspection on 1/21/2025, everything checked out and the site is functioning properly.

The effluent limit carries over from the previous renewal.

Sludge use and disposal description and location(s): hauled off site to Pottstown Borough Sewage Treatment Plant and the DELCORA Treatment Plant

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*

Approve	Deny	Signatures	Date
X		Charley Yang / Environmental Engineering Specialist	July 3, 2025
X		Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	07/03/2025

Summary of Review
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)	.5
Latitude	40Âº 16' 16.14"	Longitude	-75Âº 27' 32.71"
Quad Name	Perkiomenville	Quad Code	1642
Wastewater Description:	Sewage Effluent		

Receiving Waters	Perkiomen Creek (WWF, MF)	Stream Code	01017
NHD Com ID	25987584	RMI	13.1
Drainage Area	151	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	PA streamstats
Elevation (ft)	134.53	Slope (ft/ft)	
Watershed No.	3-E	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		Name	

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: RMI, DA, and elevation were updated.

Other Comments:

Treatment Facility Summary

Treatment Facility Name: Lower Frederick Township STP

WQM Permit No.	Issuance Date
4600427	2/2/2016

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Sequencing Batch Reactor W/Sol Removal	Ultraviolet	0.5

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
1.4	1750	Not Overloaded		Other WWTP

Changes Since Last Permit Issuance: None

Other Comments:

Compliance History	
Summary of DMRs:	A few Fecal Coliform issue back in 2021 due to UV issue, but it's been taken care of
Summary of Inspections:	During a 1/2/25 routine inspection the facility was cited (25 Pa. Code 92a.41(a)(5)) for not having the effluent flow meter calibrated within the past year. On 1/14/24 Mr. Manning forwarded a copy of flow meter calibration done on 1/9/25 (shown below). This will serve to address the Departments concerns.

Other Comments:

Compliance History

DMR Data for Outfall 001 (from June 1, 2024 to May 31, 2025)

Parameter	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24
Flow (MGD) Average Monthly	0.155	0.151	0.140	0.142	0.132	0.135	0.127	0.125	0.130	0.136	0.140	0.134
Flow (MGD) Daily Maximum	0.232	0.218	0.152	0.241	0.162	0.172	0.139	0.138	0.144	0.209	0.172	0.120
pH (S.U.) Instantaneous Minimum	7.0	7.0	7.5	7.3	7.2	7.8	7.9	7.9	7.9	7.7	7.7	7.8
pH (S.U.) Instantaneous Maximum	8.0	7.8	7.7	7.7	8.0	8.1	8.1	8.1	8.0	8.1	8.3	8.1
DO (mg/L) Instantaneous Minimum	6.16	7.51	6.59	8.06	8.74	8.24	7.72	6.94	6.11	6.09	6.1	5.51
CBOD5 (lbs/day) Average Monthly	< 3	< 3	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CBOD5 (lbs/day) Raw Sewage Influent Average Monthly	279	271	635	1373	310	443	329	287	383	236	274	324
CBOD5 (lbs/day) Weekly Average	< 2.7	< 2.8	< 2.5	< 3.2	< 2.4	< 2.9	< 2.2	2.3	< 2.3	< 2.4	< 2.5	< 2.4
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	225.5	218	543	931	284	374	306	266	350	209	227	283
CBOD5 (mg/L) Weekly Average	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.2	< 2.0	< 2.0	< 2.0	< 2.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	740	303	563	542	E	318	330	340	612	264	333	569
BOD5 (mg/L) Raw Sewage Influent Average Monthly	588	215	486	489	E	275	295	298	480	226	270	432

TSS (lbs/day) Average Monthly	< 2	< 2	< 1	< 1	< 2	< 2	< 2	< 1	< 3	< 3	< 1	< 1
TSS (lbs/day) Raw Sewage Influent Average Monthly	235	205	648	1894	309	519	394	504	501	411	435	438
TSS (lbs/day) Weekly Average	4	4	1	2	3	6	6	< 1	4	6	1	2
TSS (mg/L) Average Monthly	< 2	< 1	< 1	< 1	< 2	< 2	< 2	< 1	< 3	< 2	< 1	< 1
TSS (mg/L) Raw Sewage Influent Average Monthly	174	155	525	1190	256	441	332	430	422	337	361	349
TSS (mg/L) Weekly Average	3	3	1	2	3	6	6	1	4	5	1	2
Total Dissolved Solids (mg/L) Average Quarterly			723.0			703.0			679.0			601.0
Fecal Coliform (No./100 ml) Geometric Mean	< 2	< 2	< 2	< 4	< 4	< 2	< 3	< 3	< 4	< 2	< 2	< 2
Fecal Coliform (No./100 ml) Instantaneous Maximum	3	< 2	< 2	33	13	3	7	10	10	< 2	< 2	3
UV Intensity (µw/cm²) Daily Minimum	99	99	99	99	99	99	99	99	99	99	100	95
Total Nitrogen (lbs/day) Average Monthly	< 6	< 4	< 6	< 13	FF	< 5	< 4	< 4	< 7	< 7	< 10	6
Total Nitrogen (mg/L) Average Monthly	< 5.07	< 3.05	< 5.26	< 12.64	FF	< 4.48	< 3.42	< 3.64	< 5.99	< 6.8	< 7.95	4.86
Ammonia (lbs/day) Average Monthly	< 0.04	0.04	< 0.2	< 0.6	0.05	0.03	< 0.03	< 0.02	< 0.2	0.04	< 0.03	< 0.05
Ammonia (mg/L) Average Monthly	< 0.03	0.03	< 0.17	< 0.4	0.05	0.03	< 0.03	< 0.02	< 0.19	0.03	< 0.02	< 0.04
Total Phosphorus (lbs/day) Average Monthly	0.08	0.08	0.09	0.1	0.1	0.1	0.09	0.2	0.1	0.1	0.1	0.1
Total Phosphorus (mg/L) Average Monthly	0.07	0.06	0.08	0.09	0.11	0.1	0.08	0.16	0.12	0.11	0.1	0.11

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .5
Latitude 40º 16' 16.92" **Longitude** -75º 27' 32.99"
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)

Comments: the above limitations were evaluated but more restrictive limits, which were used in previously issued permits for this facility, were retained in this permit renewal. Chlorine is not used in this facility any longer; however daily UV monitoring was retained in this permit renewal which is in accordance with Standard Operating Procedures (SOPs) and Chapter 92a. In addition, the WQM model was run and the same limits as in the 2020 permit were obtained from the model and are thus retained for this renewal. The CBOD5 limit of 15 mg/l was retained in this renewal and was set in 1990.

Total Nitrogen monitoring was retained in this permit renewal and is consistent with standard procedures and regulations. Total Phosphorus limit from the previous permit was retained in this permit.

A Total Dissolved Solids (TDS) limit of 1,000 mg/l was added to the current DRBC docket for this facility. The TDS limit of monitoring was changed to 1,000 mg/l for this permit for consistency with DRBC.

Influent monitoring for CBOD5 and Total Suspended Solids (TSS) was retained in this permit renewal.

Influent BOD5 reporting was retained in this permit renewal to be consistent with Chapter 94.

Water Quality-Based Limitations

N/A

Best Professional Judgment (BPJ) Limitations

Comments: N/A

Anti-Backsliding

No permit limits were lowered compared to the existing permit.

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	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
CBOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
CBOD5	63	94	XXX	15	22.5	30	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
TSS Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	83	125	XXX	20	30	40	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	1000.0 Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000*	1/week	Grab
UV Intensity (µw/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Metered
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/month	Calculation

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	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Ammonia	12.5	XXX	XXX	3.0	XXX	6	1/week	24-Hr Composite
Total Phosphorus	2.1	XXX	XXX	0.5	XXX	1	1/week	24-Hr Composite

Compliance Sampling Location:

Other Comments: *10% DRBC rule applied.

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:

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
03E	1017	PERKIOMEN CREEK

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
13.100	Lower Frederick	16.25	6	16.25	6	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
13.100	Lower Frederick	1.87	3	1.87	3	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)		
13.10	Lower Frederick	15	15	3	3	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
03E	1017	PERKIOMEN CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
13.100	0.500	20.244	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
67.964	0.877	77.504	0.266
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.63	0.396	0.15	0.713
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.085	0.753	Tsivoglou	5
Reach Travel Time (days)			
0.092			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.009	2.62	0.15	8.07
0.018	2.61	0.14	8.06
0.028	2.60	0.14	8.05
0.037	2.60	0.14	8.04
0.046	2.59	0.14	8.03
0.055	2.58	0.14	8.02
0.064	2.57	0.14	8.01
0.073	2.56	0.14	8.00
0.083	2.55	0.14	7.99
0.092	2.54	0.14	7.98

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
03E	1017	PERKIOMEN CREEK

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)
13.100	Lower Frederick	PA0050105	0.500	CBOD5	15		
				NH3-N	3	6	
				Dissolved Oxygen			5

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
03E	1017	PERKIOMEN CREEK	**13.100**	134.53	151.00	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	0.100	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
Lower Frederick	PA0050105	0.5000	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	15.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.24	0.00	0.00
NH3-N	3.00	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
03E	1017	PERKIOMEN CREEK	**12.700**	133.66	207.00	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	0.100	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
03E	1017	PERKIOMEN CREEK

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												
13.100	15.10	0.00	15.10	.7735	0.00041	.877	67.96	77.5	0.27	0.092	20.24	7.00
Q1-10 Flow												
13.100	9.66	0.00	9.66	.7735	0.00041	NA	NA	NA	0.21	0.116	20.37	7.00
Q30-10 Flow												
13.100	20.54	0.00	20.54	.7735	0.00041	NA	NA	NA	0.31	0.078	20.18	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	5		