Pennsylvania Department of Environmental Protection

Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0246425**
Facility Type	**Municipal**	APS ID	**357588**
Major / Minor	**Minor**	Authorization ID	**1491951**

Applicant and Facility Information

Applicant Name	**Dublin Township Fulton County**	Facility Name	**Dublin Township Fort Littleton STP**
Applicant Address	8776 Waterfall Road	Facility Address	330 Sinoquipe Road
	Hustontown, PA 17229-9014		Fort Littleton, PA 17223-9640
Applicant Contact	John Mixell	Facility Contact	John Mixell
Applicant Phone	(717) 360-2294	Facility Phone	(717) 360-2294
Client ID	118127	Site ID	552715
Ch 94 Load Status	Existing Organic Overload	Municipality	Dublin Township
Connection Status	Dept. Imposed Connection Prohibitions	County	Fulton
Date Application Received	July 12, 2024	EPA Waived?	Yes
Date Application Accepted	July 15, 2024	If No, Reason	

Purpose of Application: NPDES permit renewal.

Summary of Review

On behalf of Dublin Township Fulton County, Mr. Craig Strait, Inc. has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit. This permit renewal application was received on July 12, 2024. The permit was last reissued on January 28, 2020; and became effective on February 1, 2020. The permit will expire on January 31, 2025.

The discharge of treated sewage located in Dublin Township, Fulton County into UNT to Little Aughwick Creek which designated for trout stocking.

Dublin Township Fulton County owns operates and maintains the wastewater treatment plant located in Dublin Township, Fulton County. The collection system has 100% sewers from Dublin Township. The facility has a design average annual flow and hydraulic capacity design of 0.045 MGD. The treatment plant utilizes Ultraviolet disinfection.

The WQM Permit Nos. 2902401 & 2902401 06-1 were issued on June 4, 2002 & September 26, 2006.

Sludge use and disposal description and location(s): N/A because sludge is hauling by Smith's Septic contractor.

Changes from the previous permit: The E. Coli. monitoring and report requirements will add to the permit.

Based on the review outline in this fact sheet, it is recommended that the permit be drafted and published in the Pennsylvania Bulletin for public comments for 30 days.

Approve	Deny	Signatures	Date
X		*Hilaryle* Hilary H. Le / Environmental Engineering Specialist	November 27, 2024
X		*Maria D. Bebenek for* Daniel W. Martin, P.E. / Environmental Engineer Manager	December 13, 2024

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.045
Latitude	40º 4' 2.00"	Longitude	-77º 57' 51.00"
Quad Name	Burnt Cabins	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Little Aughwick Creek (TSF)	Stream Code	13132
NHD Com ID	66213509	RMI	7.03 miles
Drainage Area	45.4 mi.^{2}	Yield (cfs/mi^2)	0.06
Q_{7-10} Flow (cfs)	2.54	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)		Slope (ft/ft)	
Watershed No.	12-C	Chapter 93 Class.	TSF
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	
Nearest Downstream Public Water Supply Intake	Mifflintown Borough Municipal Juniata County		
PWS Waters	Juniata River	Flow at Intake (cfs)	
PWS RMI	65.1 miles	Distance from Outfall (mi)	Approximate 72.15 miles

Changes Since Last Permit Issuance:

Drainage Area
The discharge is to Unnamed Tributary 13132 to Little Aughwick Creek at RMI 7.03 miles. A drainage area upstream of the discharge is estimated to be 45.4 mi.^{2}, according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/. The Q7-10 is 2.54 cfs, then the low flow yield is 0.06 cfs/mi.^{2} (2.54 cfs/45.4 mi.^{2}).

Little Aughwick Creek
Under 25 Pa Code § 93.9n, the Little Aughwick is designated as Trout Stocking Fishes (TSF).

Potable Water Supply Intake
The nearest downstream public water supply intake is the Mifflintown Borough Municipal Authority Milford Township intake on the Juniata River, approximately 72.15 miles from the point of discharge. Given the nature and dilution, the discharge is not expected to significantly impact the water supply.

Treatment Facility Summary				
Treatment Facility Name: Dublin Township Fort Littleton STP				
WQM Permit No.	**Issuance Date**			
2902401	6/4/2002			
2902401 06-1	9/26/2006			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Activated Sludge	Ultraviolet	0.045
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.045	90	Existing Organic Overload	Combination	Landfill

Changes Since Last Permit Issuance:

Other Comments:
Treatment plant includes bar screen (1) - anoxic tank (1) - clarifiers (2) - aeration tank (1) - sludge storage tank (1) - blowers (2) - sludge drying beds (3) - UV for disinfection - discharge.

Biosolids:
The total sewage sludge/biosolids production within the facility for the previous year was 3.626 dry tons.

Industrial/Commercial Users:
The permit application indicated there are no commercial or industrial contributors to the treatment plant.

Compliance History	
Summary of DMRs:	DMRs reported last 12 months are summarized in the next page.
Summary of Inspections:	6/04/2024: Mr. Clark, DEP's WQS, conducted a compliance evaluation inspection. The field test results were within permitted limits. Effluent appeared clear. There were no violations identified during inspection. The recommendations were to adjust skimmer level in clarifiers, submit a hauled-in waste form any month sludge brought in from other facilities, continue with repair of emergency, and remove influent test results from the effluent supplemental report. 5/12/2023: Mr. Clark, DEP's WQS, conducted a compliance evaluation inspection. There were no violations noted during the inspection. The recommendations were to investigate cause of floating sludge in clarifier, repair air leak in anoxic tank, and remove influent test results from the effluent supplemental report. The effluent was clear and field test results were within the permit limits.
Other Comments:	There are no open violations against the facility or the permittee.

Other Comments:

Compliance History

DMR Data for Outfall 001 (from October 1, 2023 to September 30, 2024)

Parameter	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23
Flow (MGD) Average Monthly	0.0137157	0.01797	0.013891	0.013012	0.015806	0.021583	0.03348	0.07776	0.07776	0.07482	0.0786	0.07743
Flow (MGD) Daily Maximum	0.02517	0.05398	0.0277	0.0303	0.03356	0.06987	0.10804	0.13684	0.12615	0.10905	0.15312	0.14878
pH (S.U.) Daily Minimum	7.02	7.01	7.01	7.0	7.03	7.04	7.04	7.04	7.01	7.01	7.01	7.02
pH (S.U.) Instantaneous Maximum	7.09	7.19	7.11	7.16	7.12	7.11	7.09	7.11	7.12	7.12	7.11	7.19
DO (mg/L) Daily Minimum	7.09	7.09	7.09	7.09	7.06	7.09	7.06	7.07	7.06	7.10	7.06	7.06
CBOD5 (lbs/day) Average Monthly	0.41	0.30	0.30	0.23	0.2	0.45	4.1	1.6	1.6	2.0	1.6	2.7
CBOD5 (lbs/day) Weekly Average	0.80	0.30	0.30	0.30	0.3	0.6	7.8	2.3	1.8	2.9	2.0	2.8
CBOD5 (mg/L) Average Monthly	5.15	2.35	3.02	2.73	2.13	2.84	7.04	3.91	2.64	4.03	2.82	3.86
CBOD5 (mg/L) Weekly Average	7.29	2.69	4.04	2.79	2.26	2.84	11.2	4.59	2.92	6.05	3.64	4.1
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	14.1	22.4	31.8	23.3	23.2	41.5	105.4	74.5	93.5	78.8	104.1	128
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	20.8	35.3	52.4	34.1	33.9	53.7	190.3	88.5	110.6	128.9	139.5	181
BOD5 (mg/L) Raw Sewage Influent Average Monthly	312	173	297	261	226	255	213	204	155	162.6	192	176
TSS (lbs/day) Average Monthly	0.30	0.40	0.30	0.30	0.2	0.4	1.7	2.0	2.0	3.5	1.5	2.2
TSS (lbs/day) Raw Sewage Influent Average Monthly	2.3	7.9	10.4	6.8	10.7	27.6	20.7	49	13.9	24.3	78.6	94.6
TSS (lbs/day) Raw Sewage Influent Daily Maximum	2.7	11.3	12.2	11.0	18.5	50.6	37.5	87	14.4	37.2	94.0	159.5
TSS (lbs/day) Weekly Average	0.50	0.50	0.40	0.30	0.3	0.5	2.8	3.0	2.1	4.3	1.6	2.7

TSS (mg/L) Average Monthly	4.0	3.0	3.0	3.0	2.0	2.3	4.3	4.8	3.3	7.0	2.8	3.0
TSS (mg/L) Raw Sewage Influent Average Monthly	69	65	110	74	93	149	41	108	23	50.0	105	126
TSS (mg/L) Weekly Average	5.0	3.0	3.0	3.0	2.5	2.5	4.5	6.0	3.5	9.0	3.0	3.5
Fecal Coliform (No./100 ml) Geometric Mean	7.0	16.0	4.0	3.0	3.0	5.0	10.0	7	1.0	4.0	4.0	46
Fecal Coliform (No./100 ml) Instantaneous Maximum	49.0	43.0	16.0	10.0	10.0	24.0	91.0	13	1.0	5.0	13.0	65
UV Transmittance (%) Daily Minimum	3.8	3.8	3.7	3.8	3.7	3.8	3.8	3.5	3.8	3.8	3.8	3.8
Total Nitrogen (lbs/day) Total Annual										174.84		
Total Nitrogen (mg/L) Annual Average										2.08		
Total Phosphorus (lbs/day) Total Annual										63.24		
Total Phosphorus (mg/L) Annual Average										0.773		

Existing Effluent Limitations and Monitoring Requirements

Outfall 001,

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
Ultraviolet light transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
Carbonaceous Biochemical Oxygen Demand (CBOD5)	9.4	15.0 Wkly Avg	XXX	25.0	40.0	50.0	2/month	8-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Suspended Solids	11.0	17.0 Wkly Avg	XXX	30.0	45.0	60.0	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200.0 Geo Mean	XXX	1,000	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Total Phosphorus	XXX	Report Total Annual	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Total Nitrogen	XXX	Report Total Annual	XXX	Report Annl Avg	XXX	XXX	1/year	Calculation

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.045
Latitude 40º 4' 2.00" **Longitude** -77º 57' 51.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

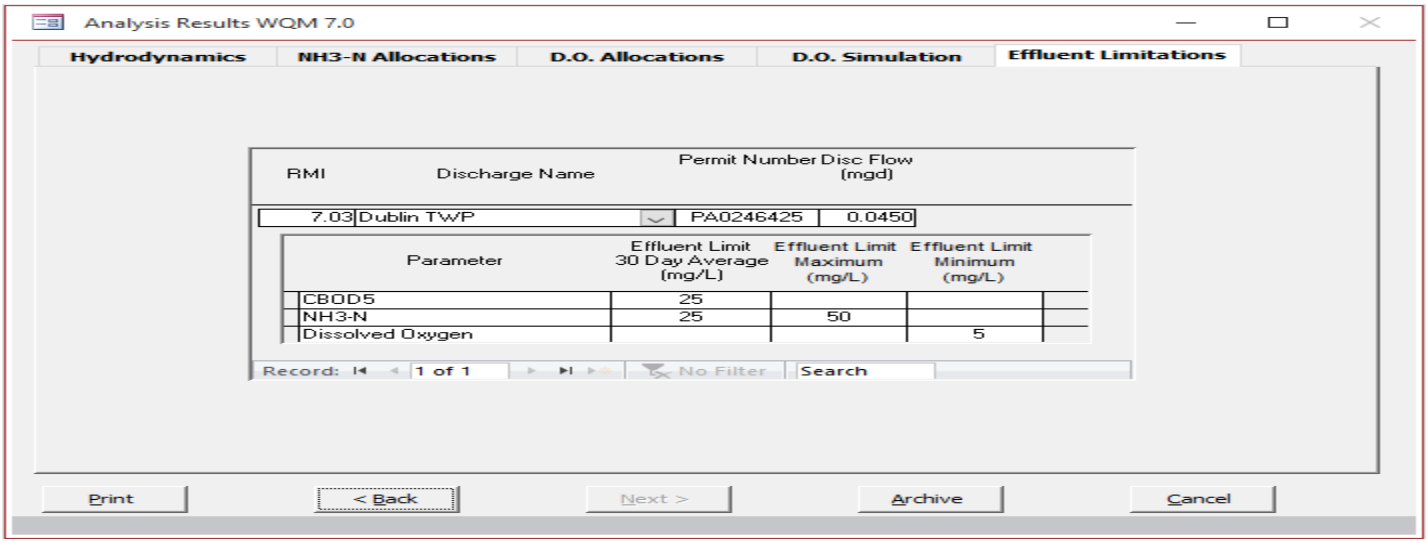
Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	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 TRC limit is not applied to this facility because the UV is disinfection.

Water Quality-Based Limitations

Ammonia (NH_3-N):
NH_3-N calculations were first based on the Department's Implementation Guidance of Section 93.7 Ammonia Criteria, dated 11/4/97 (ID No. 391-2000-013). The following data is necessary to determine the in-stream NH_3-N criteria used in the attached computer model of the stream:

- Discharge pH = 7.0 (Default)
- Discharge Temperature = 20°C (Default)
- Stream pH = 7.0 (Default)
- Stream Temperature = 20ºC (Default)
- Background NH_3-N = 0 (Default)



The attached computer printout of the WQM7.0 stream model shows that no NH_3-N requirements are needed to protect the aquatic life from NH_3-N toxicity.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):
The attached computer printout of the WQM 7.0 stream model indicates that a monthly average limit of 25.0 mg/L, or secondary treatment, is adequate to protect the water quality of the stream. However, the existing limits of 25.0 mg/L average monthly (AML), 40.0 mg/L average weekly limit (AWL), and 50.0 mg/L instantaneous maximum will remain in the proposed permit as per guidance document 391-2000-014. Recent DMRs and inspection reports show that the facility has been consistently achieving these limits. Mass limits are calculated as follows:

Mass based AML (lb/day) = 25.0 (mg/L) x 0.045 (MG/day) x 8.34 (lb/MG)(L/mg) = 9.38 (9.4) lb/day
Mass based AWL (lb/day) = 40.0 (mg/L) x 0.045 (MG/day) x 8.34 (lb/MG)(L/mg) = 15.01 (15.0) lb/day

Dissolved Oxygen (D.O.):
A minimum D.O. of 5.0 mg/L is required per 25 Pa. Code § 93.7. This is consistent with the previous permit and current Department criteria.

pH:
The effluent discharge pH should remain above 6.0 and below 9.0 standard units according to 25 Pa. Code § 95.2(2).

Fecal Coliform:
The recent coliform guidance in 25 Pa. Code § 92a.47.(a)(4) requires a summer technology limit of 200/100 ml as a geometric mean and an instantaneous maximum not greater than 1,000/100 ml and 25 Pa. Code § 92a.47.(a)(5) requires a winter limit of 2,000/100 ml as a geometric mean and an instantaneous maximum not greater than 10,000/100 ml.

E. Coli:
As recommended by DEP's SOP No. BCW-PMT-033, version 2.0 revised February 5, 2024, a routine monitoring for E. Coli will be included in the proposed permit under 25 Pa. Code § 92a.61. This requirement applies to all sewage dischargers greater than 0.002 MGD in their new and reissued permits. A monitoring frequency of 1/year will be included in the permit to be consistent with the recommendation from this SOP.

UV:
The UV system daily monitor and report the UV light transmittance (%) will remain in the proposed permit.

Raw Sewage Influent Monitoring:
As a result of negotiation with EPA, influent monitoring of TSS and BOD_5 are required for any POTWs; therefore, influent sampling of BOD_5 and TSS will be remain in the proposed permit. A 24-hr composite sample type will be required to be consistent with the proposed sampling frequency for TSS and BOD_5 in the effluent.

Toxics:
DEP utilizes a Toxics Management Spreadsheet (last modified on May 2023 ver. 1.4) to facilitate calculations necessary for completing a reasonable potential analysis and determining WQBELs for toxic pollutants. The effluent testing information renewal application (page # 8) indicates that there are no toxic pollutants of concern.

Total Suspended Solids (TSS):
There is no water quality criterion for TSS. A limit of 30.0 mg/L AML will be required based on the minimum level of effluent quality attainable by secondary treatment as defined in 40 CFR 133.102b(1) and 25 PA § 92a.47(a)(1), and an AWL of 45.0 mg/L per 40CFR 133.102(b)(2) and 25 PA § 92a.47(a)(2). Mass limits are calculated as follows:

Mass based AML (lb/day) = 30.0 (mg/L) x 0.045 (MG/day) x 8.34 (lb/MG)(L/mg) = 11.26 (11.0) lb/day
Mass based AWL (lb/day) = 45.0 (mg/L) x 0.045 (MG/day) x 8.34 (lb/MG)(L/mg) = 16.89 (17.0) lb/day

Phosphorus:
The Aughwick Creek is not designated as having nutrient problems. Therefore, no phosphorus limits are required for this discharge.

Stormwater:
There is no known stormwater outfall associated with this facility.

Chesapeake Bay Strategy:

The Department formulated a strategy to comply with the EPA and Chesapeake Bay Foundation requirements by reducing point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP). Sewage discharges have been prioritized by Central Office based on their delivered TN loadings to the Bay. The highest priority (Phases I, II, and III) dischargers will receive annual loading caps based on their design flow on August 29, 2005 and concentrations of 6 mg/L TN and 0.8 mg/L TP. These limits may be achieved through a combination of treatment technology, credits, or offsets. Phase IV (0.2 - 0.4 MGD) will be required to monitor and report TN and TP during permit renewal monthly and Phase V (below 0.2 MGD) will monitor during current permit renewal once a year. However, any facility in Phases IV and V that undergoes expansion is subjected to cap load right away. This plant is classified as a phase V, will be required to monitor and report TP and TN once a year. TN and TP monitoring is already included in the existing permit and will remain in the renewal permit.

Additional Considerations

Flow Monitoring

The requirement to monitor the volume of effluent will remain in the proposed permit per 40 CFR § 122.44(i)(1)(ii).

Antidegradation (93.4)

The effluent limits for this discharge have been developed to ensure that existing in-stream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. No High-Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

303d Listed Streams

This discharge is not located on a 303d listed stream segment.

Class A Wild Trout Fisheries

No Class A Wild Trout Fisheries are impacted by this discharge.

WQM 7.0 Data:

Two nodes were used for the WQM 7.0 model since there are no other WWTP discharges within close proximity.

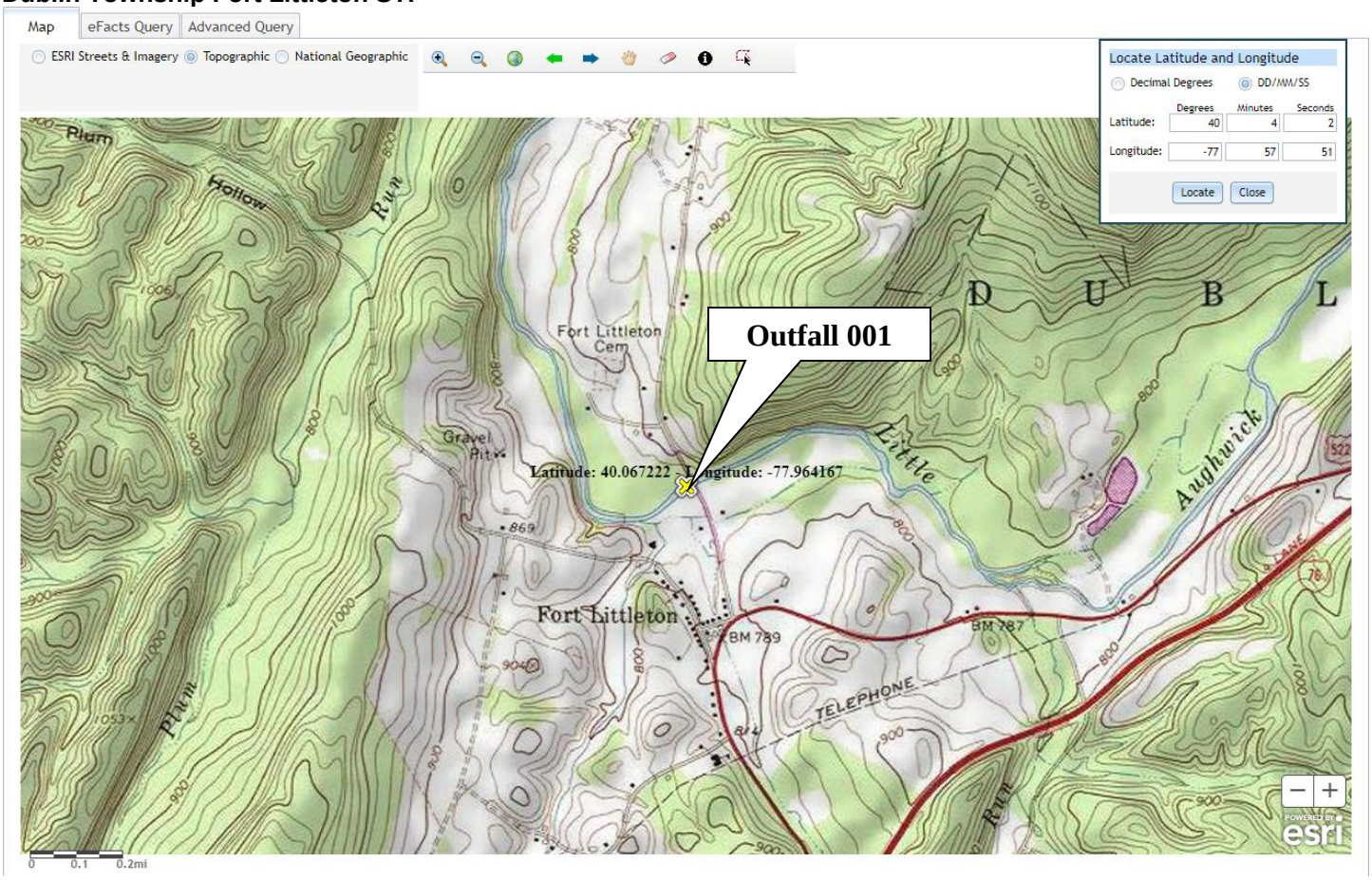
*	Discharge pH	=	7.0	(Default)
*	Discharge Temperature	=	20°C	(Default)
*	Stream pH	=	7.0	(Default)
*	Stream Temperature	=	20°C	(Default)
*	Background NH_3-N	=	0	(Default

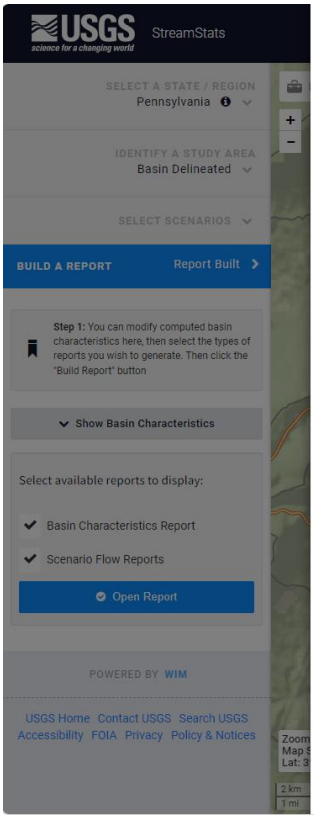
Node 1: Point of First Use on 13132 Little Aughwick Creek (node 104273)

Elevation:	775 ft (USGS National Map Viewer)
Drainage Area:	45.4 $mi.^2$ (USGS PA StreamStats)
River Mile Index:	7.03 miles (PA DEP eMapPA)
Low Flow Yield:	0.06 $cfs/mi.^2$
Discharge Flow:	0.045 MGD (NPDES PA0246425 Application)

Node 2: Just before confluence with UNT (node 104311)

Elevation:	766 ft (USGS National Map Viewer)
Drainage Area:	48.1 $mi.^2$ (USGS PA StreamStats)
River Mile Index:	6.95 miles (PA DEP eMapPA)
Low Flow Yield:	0.06 $cfs/mi.^2$
Discharge Flow:	0.00 MGD





Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	8.97	percent
DRNAREA	Area that drains to a point on a stream	45.4	square miles
PRECIP	Mean Annual Precipitation	39	inches
ROCKDEP	Depth to rock	4.5	feet
STRDEN	Stream Density -- total length of streams divided by drainage area	1.81	miles per square mile

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 2]

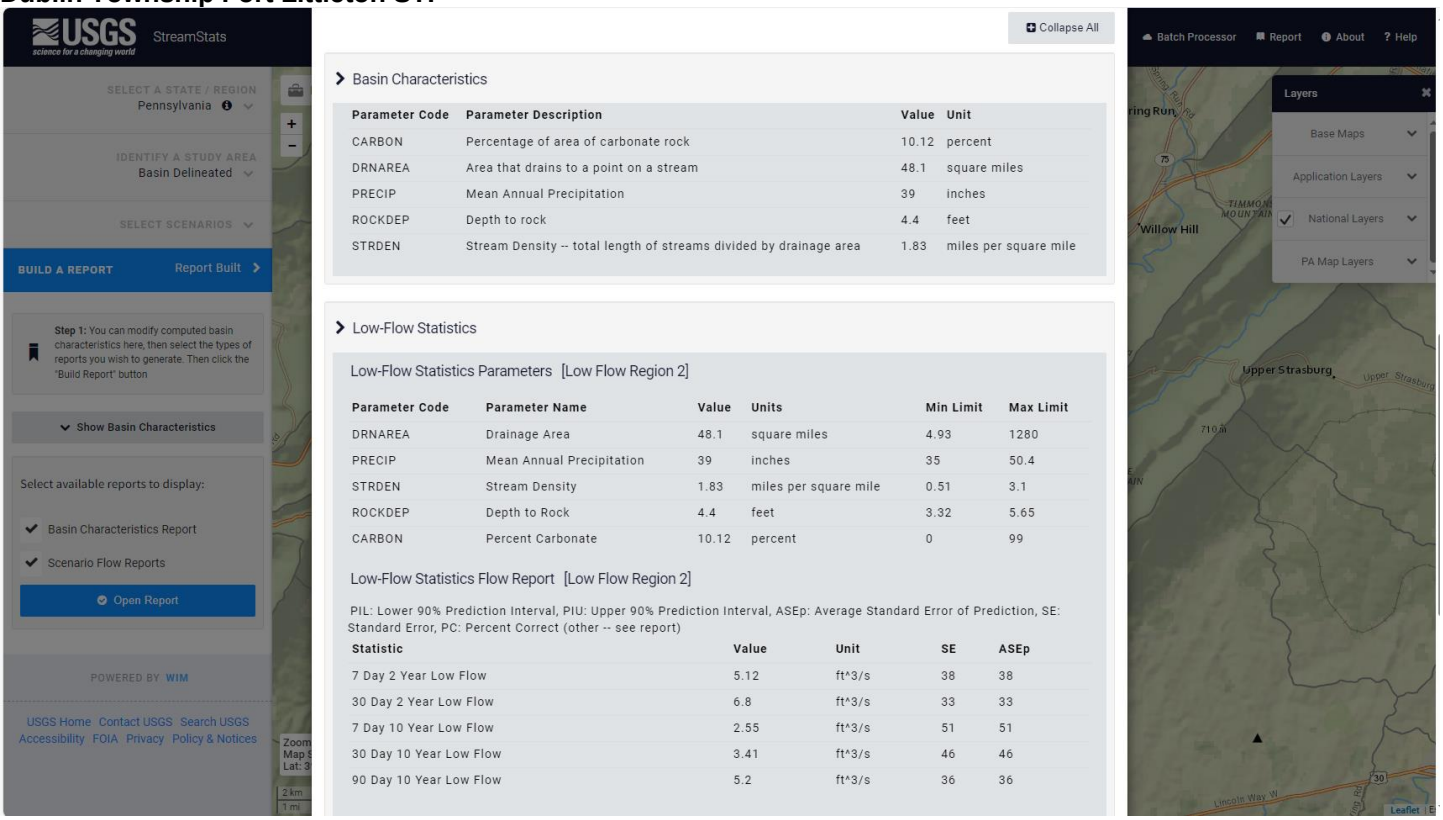
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	45.4	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	39	inches	35	50.4
STRDEN	Stream Density	1.81	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	4.5	feet	3.32	5.65
CARBON	Percent Carbonate	8.97	percent	0	99

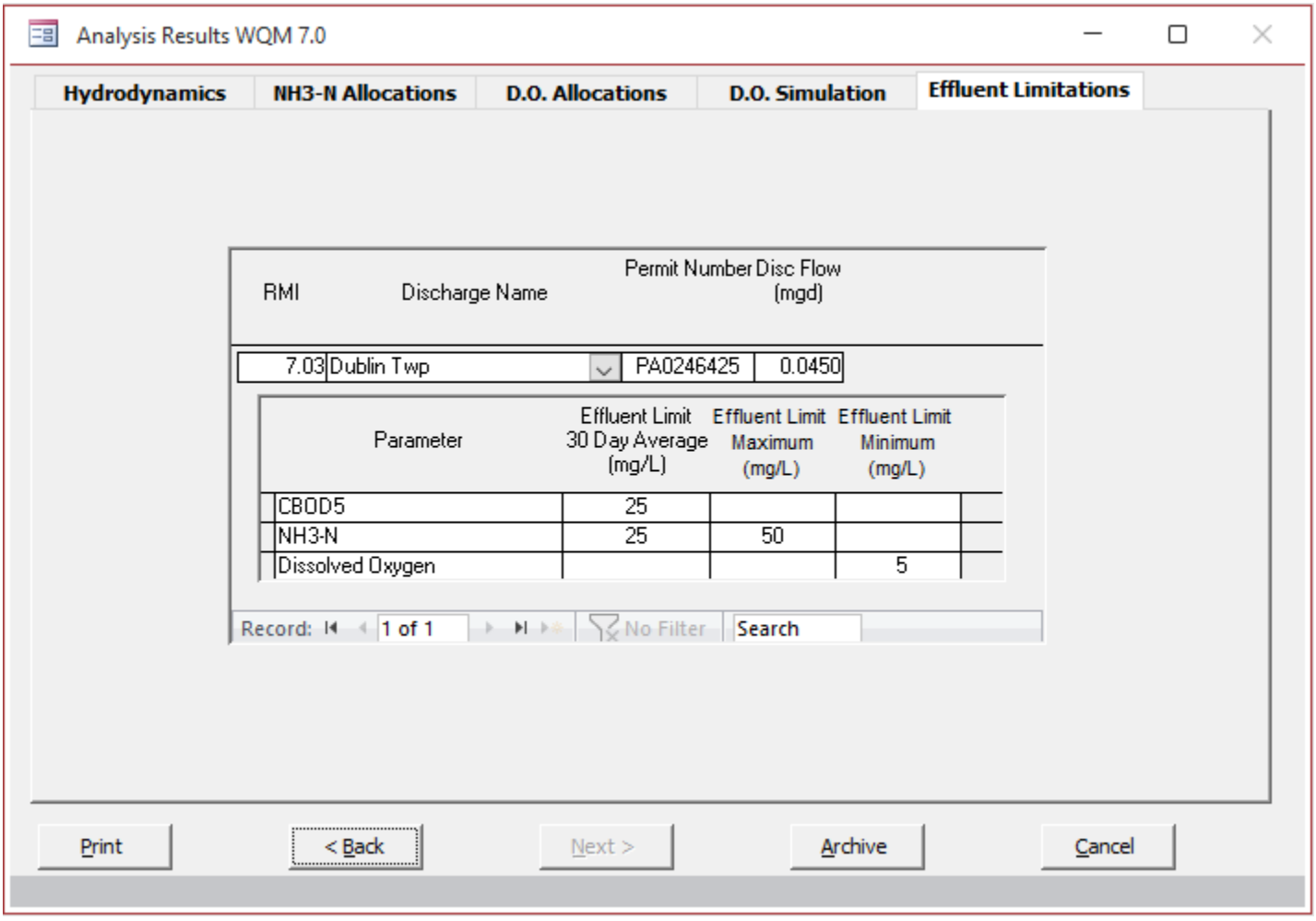
Low-Flow Statistics Flow Report [Low Flow Region 2]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	4.98	ft^3/s	38	38
30 Day 2 Year Low Flow	6.58	ft^3/s	33	33
7 Day 10 Year Low Flow	2.54	ft^3/s	51	51
30 Day 10 Year Low Flow	3.35	ft^3/s	46	46
90 Day 10 Year Low Flow	5.07	ft^3/s	36	36

Low-Flow Statistics Citations


USGS StreamStats
Collapse All
Basin Characteristics
Parameter Code | Parameter Description | Value | Unit
CARBON | Percentage of area of carbonate rock | 10.12 | percent
DRNAREA | Area that drains to a point on a stream | 48.1 | square miles
PRECIP | Mean Annual Precipitation | 39 | inches
ROCKDEP | Depth to rock | 4.4 | feet
STRDEN | Stream Density -- total length of streams divided by drainage area | 1.83 | miles per square mile
Low-Flow Statistics
Low-Flow Statistics Parameters [Low Flow Region 2]
Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit
DRNAREA | Drainage Area | 48.1 | square miles | 4.93 | 1280
PRECIP | Mean Annual Precipitation | 39 | inches | 35 | 50.4
STRDEN | Stream Density | 1.83 | miles per square mile | 0.51 | 3.1
ROCKDEP | Depth to Rock | 4.4 | feet | 3.32 | 5.65
CARBON | Percent Carbonate | 10.12 | percent | 0 | 99
Low-Flow Statistics Flow Report [Low Flow Region 2]
PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct (other -- see report)
Statistic | Value | Unit | SE | ASEp
7 Day 2 Year Low Flow | 5.12 | ft^3/s | 38 | 38
30 Day 2 Year Low Flow | 6.8 | ft^3/s | 33 | 33
7 Day 10 Year Low Flow | 2.55 | ft^3/s | 51 | 51
30 Day 10 Year Low Flow | 3.41 | ft^3/s | 46 | 46
90 Day 10 Year Low Flow | 5.2 | ft^3/s | 36 | 36
Batch Processor
Report
About
Help
Layers
Base Maps
Application Layers
National Layers
PA Map Layers
Willow Hill
Upper Strasburg


Analysis Results WQM 7.0
Hydrodynamics
NH3-N Allocations
D.O. Allocations
D.O. Simulation
Effluent Limitations
RMI
Discharge Name
Permit Number
Disc Flow (mgd)
7.03
Dublin Twp
PA0246425
0.0450
Parameter
Effluent Limit 30 Day Average (mg/L)
Effluent Limit Maximum (mg/L)
Effluent Limit Minimum (mg/L)
CBOD5
25
NH3-N
25
50
Dissolved Oxygen
5
Record: 1 of 1
No Filter
Search
Print
< Back
Next >
Archive
Cancel

rptEffLimits

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
12C	13132	LITTLE AUGHWICK CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Eff. Limit 30-day Ave. (mg/L)	Eff. Limit Maximum (mg/L)	Eff. Limit Minimum (mg/L)
7.030	Dublin Twp	PA0246425	0.045	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			5

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rpt_WLA

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
12C	13132	LITTLE AUGHWICK 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
7.030	Dublin Twp	16.76	50	16.76	50	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
7.030	Dublin Twp	1.89	25	1.89	25	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5 Baseline (mg/L)	CBOD5 Multiple (mg/L)	NH3-N Baseline (mg/L)	NH3-N Multiple (mg/L)	Dissolved Oxygen Baseline (mg/L)	Dissolved Oxygen Multiple (mg/L)	Critical Reach	Percent Reduction
7.03	Dublin Twp	25	25	25	25	5	5	0	0

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rptDOSim

WQM 7.0 D.O. Simulation

SWP Basin	Stream Code	Stream Name
12C	13132	LITTLE AUGHWICK CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
7.030	0.045	20.000	7.000
Reach Width (ft)	Reach Depth (ft)	Reach WDRatio	Reach Velocity (fps)
22.942	0.669	34.281	0.182
Reach CBOD5 (mg/L)	Reach Kc (1/days)	Reach NH3-N (mg/L)	Reach Kn (1/days)
2.57	0.358	0.62	0.700
Reach DO (mg/L)	Reach Kr (1/days)	Kr Equation	Reach DO Goal (mg/L)
8.162	36.636	Tsivoglou	5
Reach Travel Time (days)			
0.027			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.003	2.57	0.62	8.24
0.005	2.57	0.62	8.24
0.008	2.57	0.62	8.24
0.011	2.56	0.62	8.24
0.013	2.56	0.62	8.24
0.016	2.56	0.62	8.24
0.019	2.56	0.61	8.24
0.021	2.55	0.61	8.24
0.024	2.55	0.61	8.24
0.027	2.55	0.61	8.24

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rptModelSpecs

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		

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rptHydro

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
12C	13132	LITTLE AUGHWICK 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												
7.030	2.72	0.00	2.72	.0696	0.02131	.669	22.94	34.26	0.18	0.027	20.00	7.00
Q1-10 Flow												
7.030	1.74	0.00	1.74	.0696	0.02131	NA	NA	NA	0.14	0.034	20.00	7.00
Q30-10 Flow												
7.030	3.70	0.00	3.70	.0696	0.02131	NA	NA	NA	0.22	0.023	20.00	7.00

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rptGeneral

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
12C	13132	LITTLE AUGHWICK CREEK	7.030	775.00	45.40	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	0.060	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
Dublin Twp	PA0246425	0.0450	0.0450	0.0450	0.000	20.00	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	5.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

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rptGeneral

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
12C	13132	LITTLE AUGHWICK CREEK	6.950	766.00	46.10	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	0.060	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
Dublin Twp	PA0246425	0.0000	0.0000	0.0000	0.000	20.00	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	5.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

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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	XXX	XXX	9.0	1/day	Grab
D.O.	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
CBOD5	9.4	15.0	XXX	25.0	40.0	50.0	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS	11.0	17.0	XXX	30.0	45.0	60.0	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Nitrogen	XXX	Report Total Annual	XXX	Report Annl Avg	XXX	XXX	1/year	Calculation
Total Phosphorus	XXX	Report Total Annual	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite

Compliance Sampling Location:

Other Comments:

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: BCW-PMT-033
☐	Other: