Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0223051**
Facility Type	**Municipal**	APS ID	**1141915**
Major / Minor	**Minor**	Authorization ID	**1534790**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Connoquenessing Borough**	Facility Name	**Connoquenessing Borough STP**
Applicant Address	PO Box 471	Facility Address	State Route 68
	Connoquenessing, PA 16027-0471		Connoquenessing, PA 16027
Applicant Contact	Dayna Walko	Facility Contact	Dayna Walko
Applicant Phone	(724) 789-9097	Facility Phone	(724) 789-9097
Client ID	141768	Site ID	531104
Ch 94 Load Status	Not Overloaded	Municipality	Connoquenessing Borough
Connection Status	No Limitations	County	Butler
Date Application Received	July 22, 2025	EPA Waived?	Yes
Date Application Accepted		If No, Reason	---

Purpose of Application: Renewal application for a Minor Sewage Facility – Sewage Treatment Plant (STP)

Summary of Review

On July 22, 2025, the Department received an application for reissuance of Individual Permit No. PA0223051 which is set to expire on January 31, 2026. There is one outfall (Outfall 001) which discharges into Tributary 35099 to Connoquenessing Creek (WWF).

Act 14 notifications were submitted and received.

The facility is currently in the eDMR system.

The facility was last inspected on March 23, 2023, by Bruce Leidy. No violations were noted.

There are no open violations in WMS for the Subject Client ID (141768) as of September 4, 2025.

Proposed Changes from previous permit:

- More Stringent Ammonia-Nitrogen limits (compliance schedule implemented)
- More stringent TRC limits (compliance schedule implemented)
- Addition of E. Coli monitoring limit
- Increased monitoring frequencies from 3/week to 1/day for DO, pH, and TRC

Approve	Deny	Signatures	Date
X		Carlee Wilson Carlee Wilson / Environmental Engineering Trainee	September 23, 2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	September 29, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.08
Latitude	40º 48' 39.69"	Longitude	-80º 0' 41.68"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Connoquenessing Creek (WWF)	Stream Code	35099
NHD Com ID	126218464	RMI	0.78
Drainage Area	0.2	Yield (cfs/mi^2)	0.0058
Q_{7-10} Flow (cfs)	0.00116	Q_{7-10} Basis	USGS - StreamStats
Elevation (ft)	-	Slope (ft/ft)	-
Watershed No.	20-C	Chapter 93 Class.	WWF
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	Beaver River	Flow at Intake (cfs)	561
PWS RMI	3.5	Distance from Outfall (mi)	42.0

Changes Since Last Permit Issuance: Q_{7-10} Flow was updated using USGS StreamStats.

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: Connoquenessing Borough STP

WQM Permit No.	Issuance Date
1018405	8/08/2021
WQG028302	6/13/2006
1000407	10/31/2000

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia and Phosphorus	Activated Sludge	Hypochlorite	0.08

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.08	136	Not Overloaded	Aerobic Digestion	Landfill

Changes Since Last Permit Issuance: None

Other Comments:

WQM Permit No. 1018405

This permit was issued on August 8, 2018, which approved the construction and operation of sewage facilities consisting of an 8-inch gravity sewer to serve Phase 3, a 6-inch force main sewer and a pump station with two 10 HP submersible sewage pumps to serve Phase 4-7.

WQM Permit No. 1000407

The treatment facility covered under WQM Permit No. 1000407 includes a communicator with bypass bar screen, two 44,830-gallon aeration tanks, two 7,187-gallon settling tanks, aluminum sulfate addition for phosphorous control to a 2,107-gallon mixing/flocculation tank, two 7,187-gallon phosphorous settling tanks, liquid sodium hypochlorite disinfection with a 2,505-gallon contact tank, and a 4,989-gallon tank for post aeration. Sludge handling consists of two 19,327-gallon aerobic digesters and a sludge bagging unit. This permit was issued on October 31, 2000.

Compliance History

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

Parameter	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24
Flow (MGD) Average Monthly	0.034	0.033	0.041	0.046	0.041	0.054	0.039	0.039	0.032	0.024	0.022	0.026
Flow (MGD) Weekly Average	0.044	0.036	0.051	0.058	0.053	0.065	0.047	0.044	0.039	0.025	0.023	0.036
pH (S.U.) Daily Minimum	6.1	6.0	6.0	6.3	6.1	6.2	7.1	6.2	7.0	6.6	6.7	6.3
pH (S.U.) Daily Maximum	6.9	6.4	6.4	6.7	6.7	6.7	7.4	7.3	7.5	7.4	7.4	7.0
DO (mg/L) Daily Minimum	6.0	6.0	6.2	6.2	5.5	5.0	6.0	5.0	5.1	5.0	6.0	5.5
TRC (mg/L) Average Monthly	0.020	0.020	0.010	0.010	0.010	0.010	0.010	0.010	0.020	0.020	0.020	0.020
TRC (mg/L) Instantaneous Maximum	0.050	0.050	0.030	0.010	0.010	0.010	0.050	0.050	0.050	0.050	0.050	0.050
CBOD5 (lbs/day) Average Monthly	0.7	0.6	0.8	1.2	1.1	1.2	1.0	1.0	0.8	0.6	0.6	0.07
CBOD5 (lbs/day) Weekly Average	0.9	0.8	1.2	2.0	1.9	1.5	1.2	1.1	1.0	0.6	0.6	0.09
CBOD5 (mg/L) Average Monthly	2.5	2.0	2.2	3.2	3.3	2.6	3.0	3.0	3.0	3.0	3.0	3.0
CBOD5 (mg/L) Weekly Average	2.5	2.5	2.9	4.2	4.3	2.8	3.1	3.0	3.0	3.0	3.0	3.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	54.2	76.0	57.4	108.1	72.5	72.5	69.9	65.3	115.3	55.6	33.0	36.2
BOD5 (mg/L) Raw Sewage Influent Average Monthly	191	276	168	282	212	161	215	201	432	278	180	167
TSS (lbs/day) Average Monthly	0.9	1.7	1.5	1.6	1.2	1.4	1.1	1.0	0.8	0.6	0.6	0.7
TSS (lbs/day) Raw Sewage Influent Average Monthly	50.8	53.9	38.9	42.0	52.3	80.2	91.4	54.0	46.7	34.4	48.3	19.6

Parameter	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24
TSS (lbs/day) Weekly Average	1.1	2.7	2.1	1.7	1.5	1.9	1.6	1.0	1.0	0.7	0.6	0.9
TSS (mg/L) Average Monthly	3.0	6.0	4.5	3.5	3.0	3.0	3.5	3.0	3.0	3.0	3.0	3.0
TSS (mg/L) Raw Sewage Influent Average Monthly	179	196	114	110	153	178	281	166	175	172	263	90.5
TSS (mg/L) Weekly Average	3.0	9.0	5.0	4.0	3.5	3.5	4.0	3.0	3.0	3.5	3.0	3.0
Fecal Coliform (No./100 ml) Geometric Mean	13	214	4	49	235	135	3	3	3	2	1	1
Fecal Coliform (No./100 ml) Instantaneous Maximum	25	2420	9	2420	2420	260	5	5	5	3	1	1
Total Nitrogen (lbs/day) Average Monthly	6.3	0.9	2.1	7.7	2.7	6.6	5.3	7.3	5.5	1.8	1.9	2.9
Total Nitrogen (mg/L) Average Monthly	22.2	3.2	6.2	20.1	7.9	14.6	16.2	22.6	20.7	9.2	10.1	13.3
Ammonia (lbs/day) Average Monthly	0.2	0.2	0.2	0.03	1.4	2.1	1.5	0.5	0.13	0.1	0.2	0.1
Ammonia (mg/L) Average Monthly	0.7	0.9	0.5	0.6	4.1	4.6	4.6	1.4	0.5	0.6	1.3	0.4
Total Phosphorus (lbs/day) Average Monthly	0.4	0.3	0.3	0.8	0.3	0.6	0.5	0.5	0.3	0.4	0.4	0.3
Total Phosphorus (mg/L) Average Monthly	1.3	1.2	0.9	1.0	1.0	1.3	1.5	1.4	1.2	2.0	2.1	1.6
Total Copper (lbs/day) Average Monthly	0.001	0.001	0.001	0.001	< 0.001	0.001	< 0.001	0.001	0.001	0.001	0.001	0.001
Total Copper (lbs/day) Weekly Average	0.001	0.001	0.001	0.001	< 0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Total Copper (ug/L) Average Monthly	0.003	0.004	0.003	0.019	0.003	0.006	0.007	0.008	0.006	0.005	0.007	0.005
Total Copper (ug/L) Weekly Average	0.003	0.004	0.003	0.019	0.003	0.006	0.007	0.008	0.006	0.005	0.007	0.005
Total Lead (lbs/day) Average Monthly	0.001	0.001	0.001	0.001	< 0.001	0.001	< 0.001	< 0.001	0.001	0.001	0.001	0.001
Total Lead (lbs/day) Weekly Average	0.001	0.001	0.001	0.001	< 0.001	0.001	< 0.001	< 0.001	0.001	0.001	0.001	0.001

Parameter	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24
Total Lead (ug/L) Average Monthly	0.10	0.19	0.010	0.3	0.11	0.11	< 1.0	< 1.0	1.0	1.0	1.0	1.0
Total Lead (ug/L) Weekly Average	0.10	0.19	0.010	0.3	0.11	0.11	< 1.0	< 1.0	1.0	1.0	1.0	1.0
Total Zinc (lbs/day) Average Monthly	0.010	0.010	0.010	0.001	0.010	0.010	< 0.020	0.020	0.010	0.010	0.010	0.001
Total Zinc (lbs/day) Weekly Average	0.010	0.010	0.010	0.001	0.010	0.010	< 0.020	0.020	0.010	0.010	0.010	0.001
Total Zinc (ug/L) Average Monthly	30.5	32.5	33.6	10.9	23.9	38.0	56.9	91.5	52.9	35.2	42.6	41.4
Total Zinc (ug/L) Weekly Average	30.5	32.5	33.6	10.9	23.9	38.0	56.9	91.5	52.9	35.2	42.6	41.4

Compliance History

Effluent Violations for Outfall 001, from: September 1, 2024, To: July 31, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	06/30/25	Geo Mean	214	No./100 ml	200	No./100 ml
Fecal Coliform	06/30/25	IMAX	2420	No./100 ml	1000	No./100 ml
Total Phosphorus	09/30/24	Avg Mo	2.1	mg/L	2.0	mg/L
Total Zinc	12/31/24	Avg Mo	91.5	ug/L	82.6	ug/L

Comments: There have been 4 effluent violations in the past year. These violations are not considered to be chronic.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .08
Latitude 40º 48' 40.00" **Longitude** -80º 0' 41.60"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

Table 1. Minimum Technology and BPJ Standards

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)
E. Coli	Monitor	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.

The current permit has sampling frequencies for pH, DO, and TRC as 3/week. However, as stated in Table 6-3 of the Department's "*Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits*" document (362-0400-001) the minimum monitoring frequencies for these parameters should be 1/day. It was acknowledged in the previous permit renewal on the fact sheet addendum that these sampling frequencies would increase with the next renewal - "Based on current DEP policy, the monitoring frequency for Dissolved Oxygen, pH, and Total Residual Chlorine can be set as 3/week, with the understanding that the testing frequency for Dissolved Oxygen, pH, and Total Residual Chlorine are proposed to be collected at a frequency of 1/day in the next NPDES Permit renewal."

Total Residual Chlorine

Using the Department's Total Residual Chlorine (TRC) Spreadsheet, it is proposed to establish more stringent limits of 0.01 mg/l (average monthly) and 0.033 mg/l (IMAX) for TRC in the permit (Attachment 5). 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 (SOP No. BCW-PMT-002).

Total Phosphorus

The previous 2.0 mg/l limit based on Chapter 96.5 due to the discharge flowing to the Connoquenessing Creek, which is impaired for nutrients, will be retained.

Water Quality-Based Limitations

Table 2. Water Quality Modeling Results		
Parameter	**Limit (mg/l)**	**SBC**
CBOD5	25	Average Monthly
	50	IMAX
NH3-N	1.3	Average Monthly
	2.7	IMAX
DO	5.0	Daily Minimum

The above parameters were evaluated using water quality modeling (Attachment 6). This model 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.

Carbonaceous Biological Oxygen Demand (CBOD5)

WQM 7.1 resulted in the limits above, which are the same from the previous NPDES permit, therefore there are no proposed changes to the CBOD5 limits.

Ammonia-Nitrogen (NH3-N)

Water Quality Modeling resulted in the above WQBELs for ammonia-nitrogen. These limits are more stringent than the current permit limits and therefore will be proposed into this permit renewal. According to eDMR data, the limits are achievable, but a compliance schedule has been added to provide time for the new limits to be attained. To calculate the winter limits, a seasonal multiplier of 3 is applied to the summer limits above.

Dissolved Oxygen (DO)

The Dissolved Oxygen daily minimum of 5.0 mg/l will be retained with this renewal. The technology-based minimum of 5.0 mg/l is recommended by the Water Quality Model (Attachment 6) and the SOP based on Chapter 93.7, under the authority of Chapter 92a.61. The DO goal is 5.0 mg/l for WWF so this limit will protect water quality of the receiving stream.

Toxic Pollutants

Table 3. Toxics Management Spreadsheet Results		
Parameter	**Limit (µg/l)**	**SBC**
Total Lead	Report	Average Monthly
	Report	Daily Maximum
	Report	IMAX
Total Zinc	Report	Average Monthly
	Report	Daily Maximum
	Report	IMAX

Since sampling is conducted and limits exist for Total Copper, Total Lead, and Total Zinc, the long-term concentration averages from the permittee's eDMR data were used to run the Toxics Management Spreadsheet (TMS) to determine if more stringent limits are needed to protect water quality. This evaluation provided the above results (Table 3) which are less stringent than the limitations of the current permit. Therefore, the current permit limits will be retained into the next permit.

Anti-Backsliding

Table 3. Effluent Limitations in the Current Permit for Outfall 001							
Parameter	**Mass Units (lbs/day) (1)**		**Concentrations (mg/L)**				**Minimum (2) Measurement Frequency**
	Average Monthly	**Weekly Average**	**Minimum**	**Average Monthly**	**Weekly Average**	**Instant. Maximum**	
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	3/week
DO	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	3/week
TRC	XXX	XXX	XXX	0.020	XXX	0.065	3/week
CBOD5	29.1	46.7	XXX	25.0	40.0	50	2/month
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/month
TSS Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/month
TSS	35.0	52.5	XXX	30.0	45.0	60	2/month
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/month
Ammonia Nov 1 - Apr 30	3.6	XXX	XXX	5.4	XXX	10.8	2/month
Ammonia May 1 - Oct 31	1.2	XXX	XXX	1.8	XXX	3.6	2/month
Total Phosphorus	1.3	XXX	XXX	2.0	XXX	4	2/month
Total Copper (ug/L)	0.006	0.012	XXX	9.6	19.3	24.1	1/month
Total Lead (ug/L)	0.002	0.004	XXX	3.4	6.8	8.5	1/month
Total Zinc (ug/L)	0.055	0.110	XXX	82.6	165.2	206.5	1/month

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 End of Interim Period 1.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.020	XXX	0.065	1/day	Grab
CBOD5	29.1	46.7	XXX	25.0	40.0	50	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS	35.0	52.5	XXX	30.0	45.0	60	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
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	Report	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Ammonia Nov 1 - Apr 30	3.6	XXX	XXX	5.4	XXX	10.8	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	1.2	XXX	XXX	1.8	XXX	3.6	2/month	8-Hr Composite

Outfall 001, Continued (from Permit Effective Date through End of Interim Period 1)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Phosphorus	1.3	XXX	XXX	2.0	XXX	4	2/month	8-Hr Composite
Total Copper (ug/L)	0.006	0.012	XXX	9.6	19.3	24.1	1/month	8-Hr Composite
Total Lead (ug/L)	0.002	0.004	XXX	3.4	6.8	8.5	1/month	8-Hr Composite
Total Zinc (ug/L)	0.055	0.110	XXX	82.6	165.2	206.5	1/month	8-Hr Composite

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: End of Interim Period 1 through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.010	XXX	0.033	1/day	Grab
CBOD5	29.1	46.7	XXX	25.0	40.0	50	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS	35.0	52.5	XXX	30.0	45.0	60	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
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	Report	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Ammonia Nov 1 - Apr 30	2.6	XXX	XXX	3.9	XXX	8.1	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	0.8	XXX	XXX	1.3	XXX	2.7	2/month	8-Hr Composite

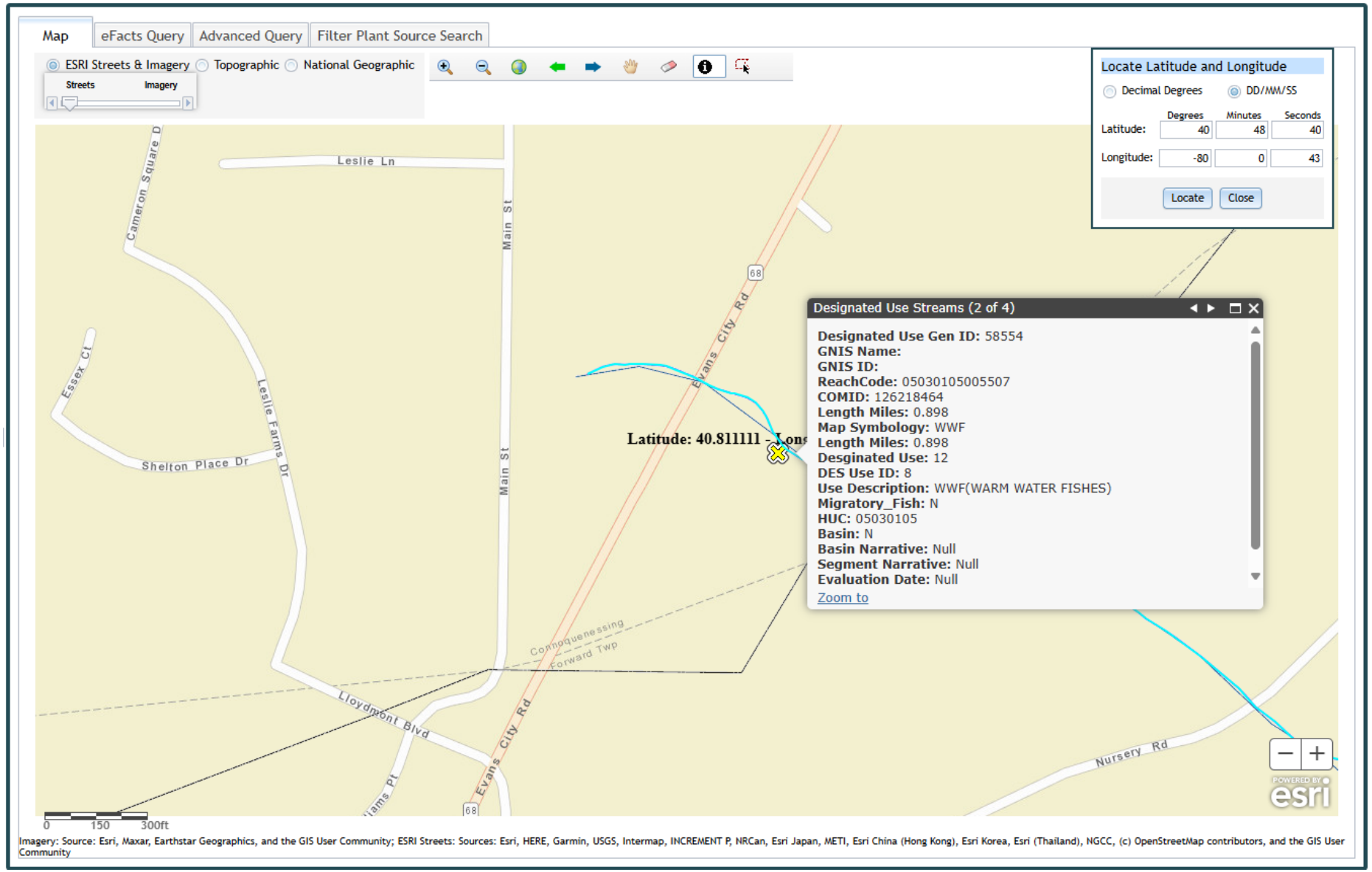
Outfall 001, Continued (from End of Interim Period 1 through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Phosphorus	1.3	XXX	XXX	2.0	XXX	4	2/month	8-Hr Composite
Total Copper (ug/L)	0.006	0.012	XXX	9.6	19.3	24.1	1/month	8-Hr Composite
Total Lead (ug/L)	0.002	0.004	XXX	3.4	6.8	8.5	1/month	8-Hr Composite
Total Zinc (ug/L)	0.055	0.110	XXX	82.6	165.2	206.5	1/month	8-Hr Composite

Compliance Sampling Location: Outfall 001 – after disinfection

Other Comments: Flow is monitor only based on Chapter 92a.61. The limits for pH and Dissolved Oxygen are technology-based on Chapter 93.7. The Total Residual Chlorine (TRC) limits are water quality-based on Chapter 93.7. The limits for $CBOD_5$, Total Suspended Solids, and Fecal Coliforms are technology-based on Chapter 92a.47. Monitoring for influent BOD5 and Total Suspended Solids is based on Chapter 92a.61. The limits for Ammonia-Nitrogen are water quality-based on Chapter 93.7. Monitoring for Total Nitrogen, Total Copper, Total Lead, and Total Zinc is based on Chapter 92a.61. The limits for Total Phosphorus are technology-based on Chapter 96.5

Attachment 1
eMapPA – Receiving Stream Designated Use

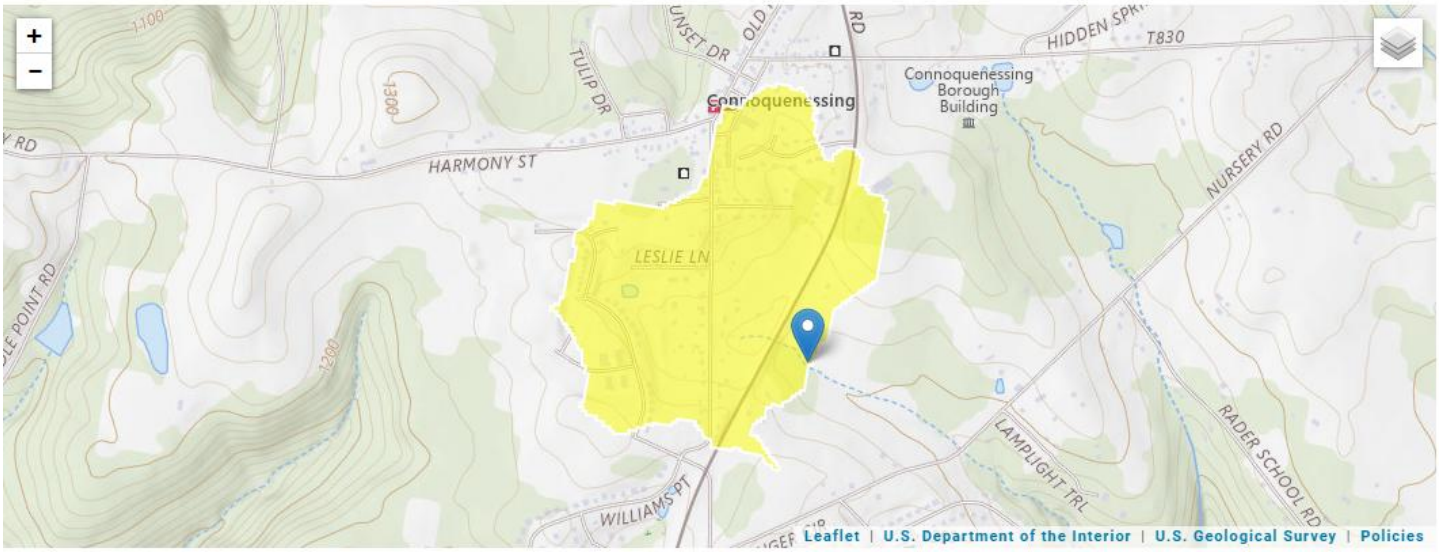


Attachment 2
Google Earth – Aerial Site View

Attachment 3
USGS StreamStats (Outfall 001) – Drainage Area Details

StreamStats Report

Region ID:	PA
Workspace ID:	PA20250911143853245000
Clicked Point (Latitude, Longitude):	40.81118, -80.01184
Time:	2025-09-11 10:39:16 -0400



Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.2	square miles	2.26	1400
ELEV	Mean Basin Elevation	1267	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	0.0047	ft^3/s
30 Day 2 Year Low Flow	0.0098	ft^3/s
7 Day 10 Year Low Flow	0.00116	ft^3/s
30 Day 10 Year Low Flow	0.00283	ft^3/s
90 Day 10 Year Low Flow	0.00633	ft^3/s

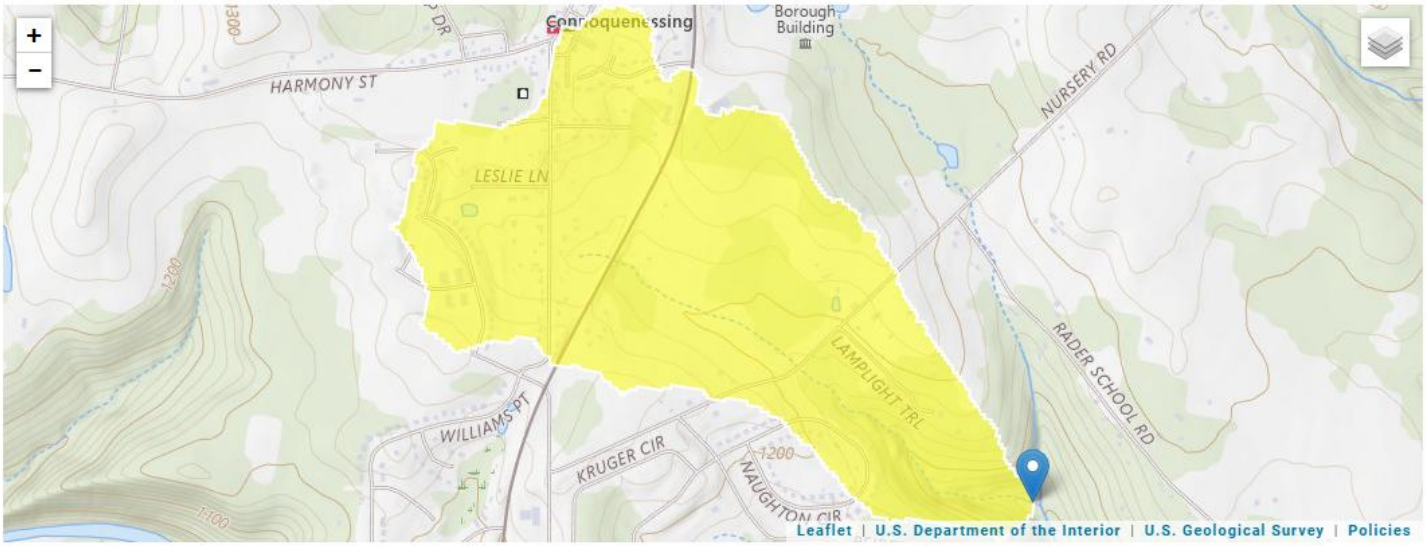
Low-Flow Statistics Citations

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
USGS StreamStats (Endpoint) – Drainage Area Details

StreamStats Report

Region ID:	PA
Workspace ID:	PA20250911144549947000
Clicked Point (Latitude, Longitude):	40.80582, -79.99939
Time:	2025-09-11 10:46:14 -0400



Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.44	square miles	2.26	1400
ELEV	Mean Basin Elevation	1233	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	0.0113	ft^3/s
30 Day 2 Year Low Flow	0.0226	ft^3/s
7 Day 10 Year Low Flow	0.00303	ft^3/s
30 Day 10 Year Low Flow	0.00692	ft^3/s
90 Day 10 Year Low Flow	0.0148	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
Total Residual Chlorine Spreadsheet

TRC EVALUATION

0.00116	= Q stream (cfs)	0.5	= CV Daily
0.08	= 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 = 0.022	**1.3.2.iii**	WLA cfc = 0.014
PENTOXSD TRG	**5.1a**	LTAMULT afc = 0.373	**5.1c**	LTAMULT cfc = 0.581
PENTOXSD TRG	**5.1b**	LTA_afc= 0.008	**5.1d**	LTA_cfc = 0.008

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.010	CFC
		INST MAX LIMIT (mg/l) = 0.033	

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)**

Attachment 6
WQM 7.1 Model Results

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
20C	35099	Trib 35099 of Connoquenessing 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)
0.780	Connoquenessing	PA	0.000	CBOD5	25		
				NH3-N	1.39	2.78	
				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
20C	35099	Trib 35099 of Connoquenessing Cree	**0.780**	1213.00	0.20	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
Connoquenessing	PA0223051	0.0000	0.0000	0.0800	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	5.00	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	35099	Trib 35099 of Connoquenessing 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												
0.780	0.00	0.00	0.00	.1238	0.05059	.397	2.78	7.01	0.11	0.410	24.95	7.00
Q1-10 Flow												
0.780	0.00	0.00	0.00	.1238	0.05059	NA	NA	NA	0.11	0.411	24.97	7.00
Q30-10 Flow												
0.780	0.00	0.00	0.00	.1238	0.05059	NA	NA	NA	0.11	0.410	24.94	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		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
20C	35099	Trib 35099 of Connoquenessing 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
0.780	Connoquenessin	11.1	11.17	11.1	11.17	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
0.780	Connoquenessin	1.37	1.39	1.37	1.39	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)		
0.78	Connoquenessing	25	25	1.39	1.39	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
20C	35099	Trib 35099 of Connoquenessing Creek

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.780	0.080	24.954	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
2.782	0.397	7.012	0.113
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
24.79	1.498	1.38	1.025
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.030	31.347	Owens	5
Reach Travel Time (days)			
0.410			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.041	22.94	1.32	5.77
0.082	21.24	1.27	6.09
0.123	19.66	1.21	6.30
0.164	18.20	1.16	6.46
0.205	16.85	1.12	6.60
0.246	15.60	1.07	6.72
0.287	14.44	1.03	6.84
0.328	13.37	0.98	6.95
0.369	12.37	0.94	7.05
0.410	11.45	0.90	7.15

Attachment 7
Toxics Management Spreadsheet

Instructions | Discharge | Stream

Facility: **Connoquenessing STP** NPDES Permit No.: **PA0223051** Outfall No.: **001**

Evaluation Type: Wastewater Description:

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
0.08	100	7						

					0 if left blank		*0.5 if left blank*		*0 if left blank*			*1 if left blank*	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L											
	Chloride (PWS)	mg/L											
	Bromide	mg/L											
	Sulfate (PWS)	mg/L											
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L											
	Total Antimony	µg/L											
	Total Arsenic	µg/L											
	Total Barium	µg/L											
	Total Beryllium	µg/L											
	Total Boron	µg/L											
	Total Cadmium	µg/L											
	Total Chromium (III)	µg/L											
	Hexavalent Chromium	µg/L											
	Total Cobalt	µg/L											
	Total Copper	µg/L		0.007									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L											
	Dissolved Iron	µg/L											
	Total Iron	µg/L											
	Total Lead	µg/L		0.6325									
	Total Manganese	µg/L											
	Total Mercury	µg/L											
	Total Nickel	µg/L											
	Total Phenols (Phenolics) (PWS)	µg/L											
	Total Selenium	µg/L											
	Total Silver	µg/L											
	Total Thallium	µg/L											
	Total Zinc	µg/L		46.5									
	Total Molybdenum	µg/L											

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Toxics Management Spreadsheet
Version 1.4, May 2025

Stream / Surface Water Information

Connoquenessing STP, NPDES Permit No. PA0223051, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: _____ No. Reaches to Model: 1

- (●) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	035099	0.78	1213	0.2			Yes
End of Reach 1	035099	0.02	1010	0.44			Yes

Q_{7-10}

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	0.78	0.0058										100	7		
End of Reach 1	0.02	0.0069													

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	0.78														
End of Reach 1	0.02														

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Toxics Management Spreadsheet
Version 1.4, May 2025

Model Results

Connoquenessing STP, NPDES Permit No. PA0223051, Outfall 001

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | ◉ All ○ Inputs ○ Results ○ Limits

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 0.000 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Copper	0	0		0	13.439	14.0	14.1	Chem Translator of 0.96 applied
Total Lead	0	0		0	64.581	81.6	82.4	Chem Translator of 0.791 applied
Total Zinc	0	0		0	117.180	120	121	Chem Translator of 0.978 applied

☑ ***CFC*** CCT (min): 0.000 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Copper	0	0		0	8.956	9.33	9.42	Chem Translator of 0.96 applied
Total Lead	0	0		0	2.517	3.18	3.21	Chem Translator of 0.791 applied
Total Zinc	0	0		0	118.139	120	121	Chem Translator of 0.986 applied

☑ ***THH*** CCT (min): 0.000 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Copper	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): 0.003 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Copper	0	0		0	N/A	N/A	N/A	

Total Lead	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Lead	Report	Report	Report	Report	Report	µg/L	3.21	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	120	AFC	Discharge Conc > 10% WQBEL (no RP)

☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Copper	9.42	µg/L	Discharge Conc ≤ 10% WQBEL

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment 6)
☒	Toxics Management Spreadsheet (see Attachment **7**)
☒	TRC Model Spreadsheet (see Attachment 5)
☐	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: