Pennsylvania Department of Environmental Protection

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0248061**
Facility Type	**Municipal**	APS ID	**570465**
Major / Minor	**Minor**	Authorization ID	**1521795**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Jefferson Codorus Joint Sewer Authority York County**	Facility Name	**Jefferson Codorus Joint Sewer Authority STP**
Applicant Address	PO Box 223	Facility Address	5137 Sinsheim Road
	Codorus, PA 17311-0223		Spring Grove, PA 17362-7971
Applicant Contact	Ryan Swope	Facility Contact	Ryan Swope
Applicant Phone	717-880-5738	Facility Phone	(717) 880-5738
Client ID	245211	Site ID	664963
Ch 94 Load Status	Not Overloaded	Municipality	Codorus Township
Connection Status	No Limitations	County	York
Date Application Received	April 2, 2025	EPA Waived?	Yes
Date Application Accepted	April 8, 2025	If No, Reason	
Purpose of Application	NPDES permit renewal.		

Summary of Review

The Jefferson Codorus Joint Sewer Authority has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of a NPDES permit for the Jefferson/Codorus STP. The permit was last reissued on September 21, 2020, and became effective on October 1, 2020. The permit expired on September 30, 2025, but the terms and conditions of the permit have been administratively extended since that time.

Jefferson Codorus Joint Sewer Authority owns and operates the sanitary wastewater treatment facility located in Jefferson Codorus Joint Sewer Authority, York County. The facility serves portions of Jefferson Borough (67%) and Codorus Township (33%), with an annual average design flow and a hydraulic design capacity of 0.272 MGD.

WQM Part II permit No. 6706406 original and amendment were issued on 2/16/2007 & 5/9/2008. WQM No. 6706406 A-2 Amendment was issued on 6/26/2020 and WQM No. 6706406 A-3 was issued dated 11/17/2023.

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

Changes from the previous permit:

- The E. Coli monitoring and report requirements will be added to the proposed permit.
- The Raw Sewage Influent "Daily Max" concentration (mg/L) report of BOD_5 & TSS will be added to the proposed permit which were missing in the previous 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	February 6, 2026, revised 2/26/2026
x		*Maria D. Bebenek* for Daniel W. Martin, P.E. / Environmental Engineer Manager	February 27, 2026

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.272
Latitude	39º 48' 53.00"	Longitude	-76º 51' 28.00"
Quad Name	Seven Valleys	Quad Code	2031
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary of Codorus Creek (TSF)	Stream Code	08261
NHD Com ID	57474175	RMI	0.04
Drainage Area	0.53 mi.^{2}	Yield (cfs/mi^2)	0.0881
Q_{7-10} Flow (cfs)	0.0467	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	562.99	Slope (ft/ft)	
Watershed No.	7-H	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	Wrightsville Water Supply Company		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	Approximate 42.64 miles

Changes Since Last Permit Issuance:

Drainage Area

The discharge is to UNT to Codorus Creek at RMI 0.04. A drainage area upstream of the discharge is determined to be 0.53 sq.mi. according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Stream Flow

According to StreamStats, the watershed has a Q_{7-10} of 0.0467 cfs. This information was used to obtain a LFY, a chronic 30-day (Q_{30-10}) and acute (Q_{1-10}) exposure stream flows for the discharge point as follows (Guidance No. 391-2000-023).

Q_{7-10} = 0.0467 cfs
Q_{30-10} = 1.36 * 0.0467 cfs = 0.0635 cfs
Q_{1-10} = 0.64 * 0.0467 cfs = 0.030 cfs
LFY = 0.0467 cfs/0.53 mi^2 = 0.0881 cfs/mi^2

UNT to Codorus Creek

UNT to Codorus Creek is classified as a TSF waterway. 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. The discharge is in a stream segment listed as attaining uses. No local TMDL has been taken into consideration during this review.

Public Water Supply Intake

The nearest downstream public water supply intake is the Wrightsville Water Supply Company on the Susquehanna River. Considering the distance and nature, the discharge is not expected to affect the water supply.

Class A Wild Trout Streams

The receiving stream is not a Class A Wild Trout stream; therefore, no Class A Wild Trout Fishery is impacted by this discharge.

Treatment Facility Summary

Treatment Facility Name: Jefferson Codorus STP

WQM Permit No.	Issuance Date
6706406	2/16/2007
6706406 A08-1	5/9/2008
6706406 A-2	6/26/2020
6706406 A-3	11/17/2023

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Sequencing Batch Reactor W/Sol Removal	Ultraviolet	0.272

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.272	567	Not Overloaded		

Changes Since Last Permit Issuance:

Other Comments:
The facility consists of:

Influent Pump Station → Comminutor → Sequencing Batch Reactors (2) → Post Equalization Tank (1) → UV Disinfection → Outfall 001

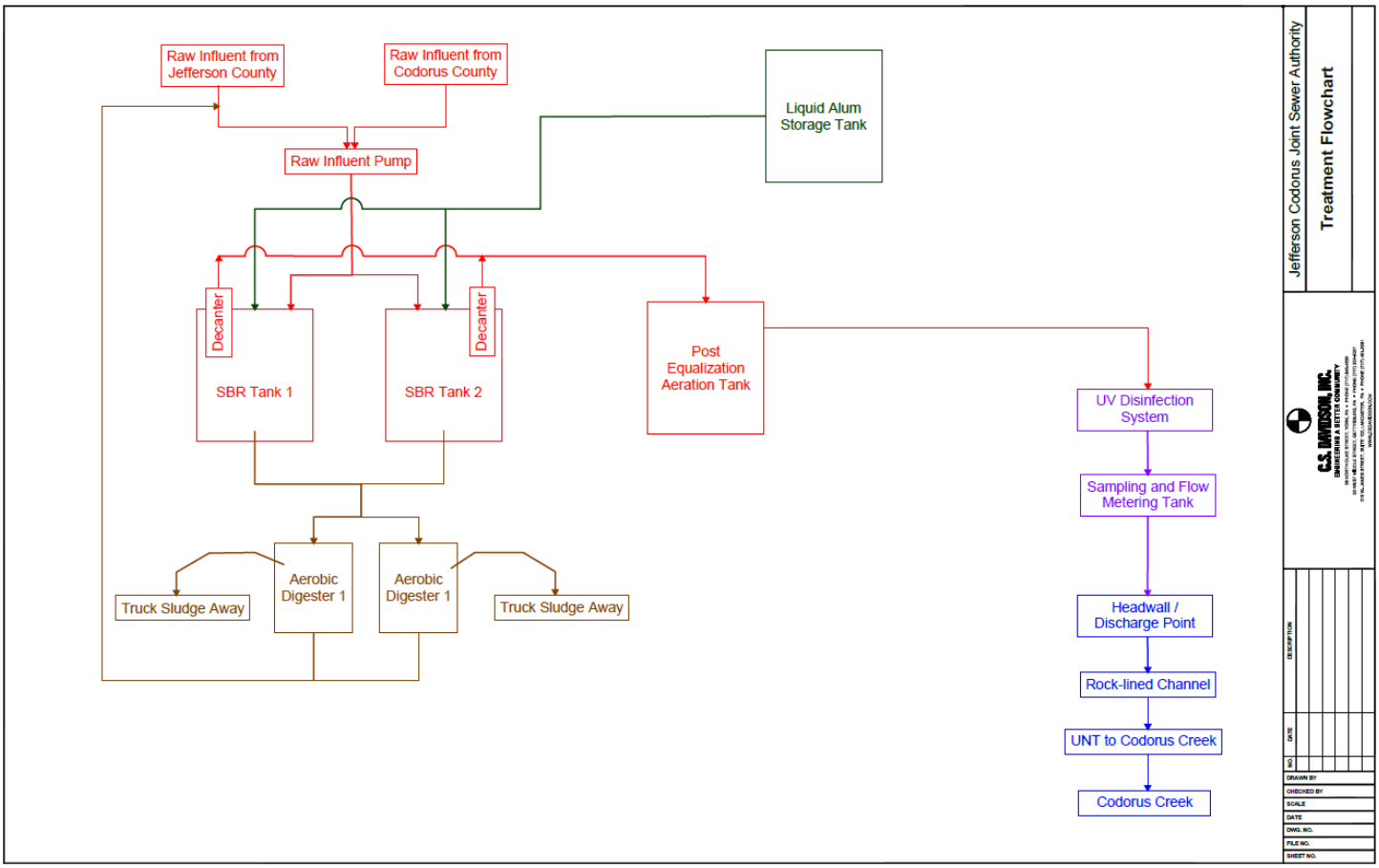
Two (2) aerobic digesters are provided for sludge handling from the sequencing batch reactors.

Chemicals:
MasterCat 4244 is used for Phosphorus removal. MasterMet9001 is used for Copper removal. Soda ash is used for pH adjustment.

Biosolids:
The total sewage sludge/biosolids production within the facility for the previous year was 10.687 dry tons.

Compliance History	
Summary of DMRs:	DMRs reported in the last 12 months are summarized on the next page.
Summary of Inspections:	07/24/2024: Mr. Shawn Lesitsky, DEP Water Quality Specialist, conducted a compliance evaluation inspection. No violations were noted. Effluent appeared clear and well aerated. Recommendations were to report treatment unit failure to the 24-hour DEP Emergency Line at 1-800-541-2050, and the digests decants not be introduced into wet well during sample collection to ensure representative influent sampling.
Other Comments:	There are no open violations associated with the permittee or the facility.

Other Comments:


Raw Influent from Jefferson County
Raw Influent from Codorus County
Raw Influent Pump
Liquid Alum Storage Tank
Decanter
SBR Tank 1
Decanter
SBR Tank 2
Post Equalization Aeration Tank
UV Disinfection System
Sampling and Flow Metering Tank
Headwall / Discharge Point
Rock-lined Channel
UNT to Codorus Creek
Codorus Creek
Truck Sludge Away
Aerobic Digester 1
Aerobic Digester 1
Truck Sludge Away
Jefferson Codorus Joint Sewer Authority
Treatment Flowchart
G.S. DAVIDSON, INC.

Compliance History

DMR Data for Outfall 001 (from January 1, 2025 to December 31, 2025)

Parameter	DEC-25	NOV-25	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25
Flow (MGD) Average Monthly	0.0548	0.0524	0.0528	0.0509	0.053629	0.054	0.0547	0.0584	0.0524	0.0531	0.0518	0.0523
Flow (MGD) Daily Maximum	0.1885	0.0912	0.097	0.0865	0.105828	0.1347	0.0784	0.1339	0.0934	0.0703	0.0933	0.0931
pH (S.U.) Instantaneous Minimum	6.57	6.9	7.14	7.23	7.1	6.83	6.81	6.79	6.78	6.87	6.8	6.88
pH (S.U.) Instantaneous Maximum	7.47	8.23	7.53	7.58	7.57	7.57	7.56	7.39	7.80	7.78	7.76	7.85
DO (mg/L) Instantaneous Minimum	6.54	8.71	8.4	8.14	7.84	6.45	7.23	7.56	8.09	8.59	7.77	8.27
CBOD5 (lbs/day) Average Monthly	< 2	< 1	< 1	2	2	< 2	1	< 1	2	1	1	< 1
CBOD5 (lbs/day) Weekly Average	3	2	2	3	3	5	1	2	2	2	2	2
CBOD5 (mg/L) Average Monthly	< 3	< 3	< 4	5	5	< 4	3	< 4	3.0	3	3	< 2
CBOD5 (mg/L) Weekly Average	5	4	4	6	5	8	5	5	4.0	3	4	3
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	138.80	103.39	97.68	149.97	108.47	94.05	130.07	73.24	119.98	96.90	173.69	147.64
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	185.33	211.90	190.58	212.57	189.02	189.41	191.10	106.29	131.53	131.96	343.14	223.45
BOD5 (mg/L) Raw Sewage Influent Average Monthly	267.6	337.50	226.60	345.75	281.50	248.20	283.75	191.60	208.75	270	396.50	296.20
TSS (lbs/day) Average Monthly	1	0.5	1	0.8	0.5	0.9	0.7	1	1	0.6	0.6	1
TSS (lbs/day) Raw Sewage Influent Average Monthly	135.72	114.85	78.99	154.04	112.91	93.10	119.17	47.75	75.68	63.36	112.89	134.26
TSS (lbs/day) Raw Sewage Influent Daily Maximum	195.09	238.38	205.59	188.95	227.05	216.47	182.55	112.95	128.01	97.24	177.79	238.57

TSS (lbs/day) Weekly Average	2	1	2	1	0.6	2	1	2	3	0.6	0.9	2
TSS (mg/L) Average Monthly	2	2	3	2	1	2	2	3	3	2	2	2
TSS (mg/L) Raw Sewage Influent Average Monthly	262.40	365.0	176.80	375.00	283.00	231.20	250	132.80	135	187	269	268.80
TSS (mg/L) Weekly Average	4	4	5	4	2	4	4	6	5	2	2	3
Fecal Coliform (No./100 ml) Geometric Mean	< 4	< 3	< 2	3	< 1	< 2	< 1	3	< 8	< 1	< 1	< 2
Fecal Coliform (No./100 ml) Instantaneous Maximum	10	7	5	6	2	8	3	10	613	3	1	4
UV Intensity (mW/cm²) Instantaneous Minimum	60.46	72.58	71.76	72.78	72.86	72.68	72.56	72.78	71.96	71.89	72.26	70.02
Nitrate-Nitrite (mg/L) Average Monthly	< 3.2	< 1.8	< 2.3	< 2.6	< 2	< 2.9	< 2	< 0.7	< 1.8	< 1.6	< 1.7	< 2.3
Nitrate-Nitrite (lbs) Total Monthly	< 53	< 18	< 30	< 34	< 23	< 29	< 26	< 21	< 30	< 18	< 21	< 35
Total Nitrogen (mg/L) Average Monthly	< 3.85	< 2.43	< 3.13	< 3.56	< 2.5	< 3.62	< 2.65	< 2.26	< 2.66	< 2.49	< 2.41	< 3.11
Total Nitrogen (lbs) Effluent Net Total Monthly	< 63	< 23	< 42	< 2	< 29	< 36	< 34	< 28	< 2	< 28	< 29	< 48
Total Nitrogen (lbs) Total Monthly	< 63	< 23	< 42	< 48	< 29	< 36	< 34	< 28	< 46	< 28	< 29	< 48
Total Nitrogen (lbs) Effluent Net Total Annual				429								
Total Nitrogen (lbs) Total Annual				429								
Ammonia (lbs/day) Average Monthly	< 0.05	< 0.03	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.06	< 0.04	< 0.05	< 0.05
Ammonia (mg/L) Average Monthly	< 0.10	< 0.10	0.10	< 0.10	< 0.10	< 0.11	< 0.10	< 0.10	< 0.10	< 0.10	< 0.12	< 0.10
Ammonia (lbs) Total Monthly	< 1.64	< 0.9	< 1.30	< 1.31	< 1.17	< 1.35	< 1.33	< 1.21	< 1.77	< 1.15	< 1.43	< 1.51
Ammonia (lbs) Total Annual				15.84								
TKN (mg/L) Average Monthly	< 0.63	< 0.61	< 0.87	< 0.94	< 0.5	< 0.76	< 0.62	< 0.54	0.94	0.86	< 0.68	< 0.85

TKN (lbs) Total Monthly	< 10	< 6	< 12	< 13	< 6	< 7	< 8	< 7	16	9	< 8	< 13
Total Phosphorus (lbs/day) Average Monthly	0.50	0.20	0.50	0.40	0.30	0.40	0.40	0.40	0.50	0.30	0.30	0.40
Total Phosphorus (mg/L) Average Monthly	1.0	0.7	1.1	0.8	0.8	1.0	0.9	1.0	0.9	0.8	0.8	0.7
Total Phosphorus (lbs) Effluent Net Total Monthly	15.19	7.01	14.65	10.77	9.67	11.49	12.11	11.67	0.5	8.80	9.09	11.09
Total Phosphorus (lbs) Total Monthly	15.19	7.01	14.65	10.77	9.67	11.49	12.11	11.67	14.66	8.80	9.09	11.09
Total Phosphorus (lbs) Effluent Net Total Annual				126.94								
Total Phosphorus (lbs) Total Annual				126.94								
Total Copper (lbs/day) Average Monthly	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.003	< 0.002	< 0.002	< 0.002
Total Copper (mg/L) Average Monthly	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

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	Weekly Average	Instantaneous 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	6.0	XXX	XXX	XXX	1/day	Grab
UV Intensity (mW/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Metered
CBOD5	56	90	XXX	25	40	50	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS	68	102	XXX	30	45	60	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
Ammonia Nov 1 - Apr 30	11	XXX	XXX	4.86	XXX	9.72	1/week	8-Hr Composite
Ammonia May 1 - Oct 31	3.67	XXX	XXX	1.62	XXX	3.24	1/week	8-Hr Composite
Total Phosphorus	4.54	XXX	XXX	2.0	XXX	4	1/week	8-Hr Composite
Total Copper	0.022	XXX	XXX	0.01	XXX	0.02	1/week	8-Hr Composite

Outfall 001, Pennsylvania's Chesapeake Bay Tributary Strategy.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	XXX	1/week	8-hr Composite
Kjeldahl--N	Report	Report	XXX	Report	XXX	XXX	1/week	8-hr Composite
Nitrate-Nitrite as N	Report	Report	XXX	Report	XXX	XXX	1/week	8-hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	1/week	8-hr Composite
Net Total Nitrogen	Report	6624 Total Annual	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	828 Total Annual	XXX	XXX	XXX	XXX	1/month	Calculation

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	Instantaneous 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	6.0	XXX	XXX	XXX	1/day	Grab
UV Intensity (mW/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Metered
CBOD5	56.0	90.0	XXX	25.0	40.0	50.0	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	Report Daily Max	XXX	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	Report Daily Max	XXX	1/week	8-Hr Composite
TSS	68.0	102.0	XXX	30.0	45.0	60.0	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	1/week	Grab
E. Coli. (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
Ammonia Nov 1 - Apr 30	11.0	XXX	XXX	4.86	XXX	9.72	1/week	8-Hr Composite
Ammonia May 1 - Oct 31	3.67	XXX	XXX	1.62	XXX	3.24	1/week	8-Hr Composite
Total Phosphorus	4.54	XXX	XXX	2.0	XXX	4.0	1/week	8-Hr Composite
Copper, Total	0.022	XXX	XXX	0.01	XXX	0.02	1/week	8-Hr Composite

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
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	XXX	1/week	8-hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	1/week	8-hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	1/week	8-hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	1/week	8-hr Composite
Net Total Nitrogen	Report	6,624	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	828	XXX	XXX	XXX	XXX	1/month	Calculation

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.272
Latitude 39º 48' 53.00" **Longitude** -76º 51' 28.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

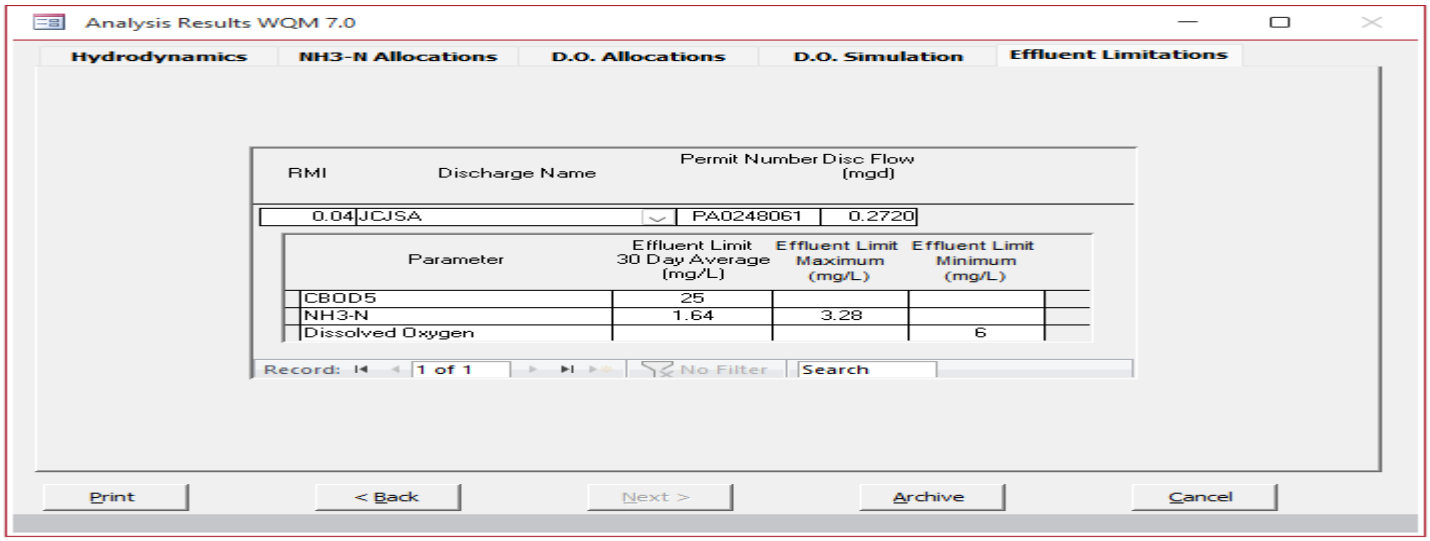
Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	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: UV disinfection is used.

Water Quality-Based Limitations

Ammonia (NH_3-N):
NH_3N calculations are 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 WQM 7.0 computer model of the stream:

*	Discharge pH	=	7.0	(Default)
*	Discharge Temperature	=	25°C	(Default)
*	Stream pH	=	7.0	(Default)
*	Stream Temperature	=	20ºC	(Default)
*	Background NH_3-N	=	0 mg/L	(Default)



The model input data and results are attached. The printout of the WQM 7.0 output indicates that at a discharge of 0.272 MGD, limits (rounded according to the NPDES Technical Guidance 362-0400-001) of 1.64 mg/L as monthly average and 3.28 mg/L as instantaneous maximum limit during summer to protect water quality standards. However, the existing permit limits of 1.62 mg/L as monthly average and 3.24 mg/L as instantaneous maximum NH_3-N are more stringent and will remain in effect due to federal anti-backsliding policy. The winter effluent limit will be set at three-times the summer limits. Recent DMRs and inspection reports indicate that the facility has been consistently achieving these limits. Mass limits are calculated as follows:

Summer average monthly mass limit: 1.62 mg/L x 0.272 MGD x 8.34 = 3.67 lbs/day
Winter average monthly mass limit: 3.67 mg/L x 3 = 11.01 lbs/day

Dissolved Oxygen (D.O.):
A minimum D.O. of 6.0 mg/L is required per 25 Pa. Code § 93.7. This is consistent with the previous permit renewal and current Department criteria.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):
The attached WQM 7.0 modeling results show that secondary treatment is adequate to protect the water quality of the stream. Recent DMRs and inspection reports show that the facility has been consistently achieving concentrations below this existing limit. The WQM 7.0 model suggests a monthly average $CBOD_5$ limit may be 25.0 mg/L, however, the existing limit of 25.0 mg/L as monthly average, 40.0 mg/L as weekly average and 50.0 mg/L as IMAX will remain in place. Mass limits are calculated as follows:

Average monthly mass limit: 25.0 mg/L x 0.272 MGD x 8.34 = 56.71 (56.0) lbs/day
Average weekly mass limit: 40.0 mg/L x 0.272 MGD x 8.34 = 90.74 (90.0) lbs/day

Recent DMRs and inspection reports show that the facility has been consistently achieving these limits.

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 1,000/100ml and 25 Pa. Code § 92a.47.(a)(5) requires a winter limit of 2,000/100ml as a geometric mean and an instantaneous maximum not greater than 10,000/100ml. Therefore, instantaneous maximum limits for summer and winter seasons will be introduced in this renewal to be consistent with regulations. Inspection reports show that the permittee is capable of meeting this requirement.

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/quarter will be included in the permit to be consistent with the recommendation from this SOP.

Total Suspended Solids (TSS):
The existing technology-based limits of 30.0 mg/L average monthly, 45.0 mg/L average weekly, and 60.0 mg/L instantaneous maximum will remain in the permit based on the minimum level of effluent quality attainable by secondary treatment based on 25 Pa. Code § 92a.47 47 and 40CFR 133.102(b). Recent DMRs and inspection reports show that the facility has been consistently achieving these limits. Mass limits are calculated as follows:

Average monthly mass limit: 30.0 mg/L x 0.272 MGD x 8.34 = 68.05 (68.0) lbs/day
Average weekly mass limit: 45.0 mg/L x 0.272 MGD x 8.34 = 102.08 (102.0) lbs/day

Total Phosphorus:
The effluent phosphorus level must be controlled in accordance with 25 Pa Code § 96.5(c). The Department has determined that limits specified in the existing permit are appropriate (i.e., 2.0 mg/L (average monthly), 4.0 mg/L (instantaneous maximum)) as these limits have been assigned to other facilities with similar technology. Accordingly, existing TP limits will remain in the proposed permit. See the EPA guidance, Nutrient Criteria Technical Guidance Manual – Rivers and Streams, 07/2000 EPA-822-B-00-002, for more information about nutrient impacts on streams. Mass limits are calculated as follows:

Average monthly mass limit: 2.0 mg/L x 0.272 MGD x 8.34 = 4.54 lbs/day

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

Temperature:
The facility temperature is not of concern at this time, and no monitoring or limitation is necessary.

UV:
The UV system monitors daily and reports the UV intensity (mW/cm^2) will remain in the proposed permit.

Influent BOD_5 and TSS Monitoring:
The permit will include influent BOD_5 and TSS monitoring at the same frequency as is done for effluent in order to implement 25 Pa. Code § 94.12 and assess percent removal requirements, per DEP policy.

Toxics:

☑ *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

The data was analyzed based on the guidelines found in DEP's Water Quality Toxics Management Strategy (Document No. 361-0100-003) and DEP's SOP No. BPNPSM-PMT-033. Spreadsheet results are attached to this fact sheet (page 32-41). The Toxics Management Spreadsheet uses the following logic:

a. Establish average monthly and IMAX limits in the draft permit where the maximum reported concentration exceeds 50% of the WQBEL.
b. For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
c. For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10%-50% of the WQBEL.

Pollutant testing results on the current (2021) application were reviewed in comparison with DEP's Toxic Management Spreadsheet, version 1.4, May 2023, output no recommends a routine monitoring and/or effluent limit requirements for any pollutants. No monitoring requirements are needed in this proposed permit, however, the limits of Total Copper monitoring requirements in the existing permit will remain in the proposed permit due to anti-backsliding.

Total Dissolved Solids (TDS):
Total Dissolved Solids and its major constituents including Bromide, Chloride, and Sulfate have become statewide pollutants of concern and threats to DEP's mission to prevent violations of water quality standards. The requirement to monitor these pollutants must be considered under the criteria specified in 25 Pa. Code § 95.10 and the following January 23, 2014 DEP Central Office Directive:

For point source discharges and upon issuance or reissuance of an individual NPDES permit:

- Where the concentration of TDS in the discharge exceeds 1,000 mg/L, or the net TDS load from a discharge exceeds 20,000 lbs/day, and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for TDS, sulfate, chloride, and bromide. Discharges of 0.1 MGD or less should monitor and report for TDS, sulfate, chloride, and bromide if the concentration of TDS in the discharge exceeds 5,000 mg/L.

- Where the concentration of bromide in a discharge exceeds 1 mg/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for bromide. Discharges of 0.1 MGD or less should monitor and report for bromide if the concentration of bromide in the discharge exceeds 10 mg/L.

- Where the concentration of 1,4-dioxane (CAS 123-91-1) in a discharge exceeds 10 µg/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for 1,4-dioxane. Discharges of 0.1 MGD or less should monitor and report for 1,4-dioxane if the concentration of 1,4-dioxane in the discharge exceeds 100 µg/L.

Jefferson Codorus Joint Sewage Authority reported the maximum effluent TDS concentration of 452 mg/L, chloride concentration of 98.0 mg/L, sulfate concentration of 39.0 mg/L, and Bromide concentration of <0.5 mg/L. Based upon the data provided in the application, monitor requirements for TDS, Sulfate, Chloride, and Bromide are not needed in the permit.

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

Oil and Grease:
The facility historically had no issues in regard to the presence of Oil and Grease in the effluent (also no visible film on the surface of the receiving water). Therefore, no monitoring of Oil and Grease is necessary.

Chesapeake Bay TMDL:
In the Phase 3 WIP Wastewater Supplement revised on April 2, 202, Attachment C – Non-Significant Discharge with Cap Load in NPDES Permits of this document shows that Jefferson Codorus STP has been allocated 6,624 lbs/year of TN and 828 lbs/year of TP. This approach is consistent with the Chesapeake Bay TMDL based on the actual performance data previously evaluated by the Department. Since the permittee is easily capable of achieving compliance with these loads, the Department determines that no "compliance schedule" for the requirements associated with the Chesapeake Bay Strategy is necessary. Accordingly, the Chesapeake Bay nutrient existing limitations and monitoring requirements will remain in the proposed permit.

Phase 3 WIP Wastewater Supplement
Revised, April 2, 2025

NPDES Permit No.	Facility	Latest Permit Issuance Date	Permit Expiration Date	Cap Load Compliance Start Date	TN Cap Load (lbs/yr)	TP Cap Load (lbs/yr)	TN Delivery Ratio	TP Delivery Ratio
PA0021202	EAST BERLIN JOINT AUTHORITY – STP	5/7/2021	5/31/2026	10/1/2015	7,306	974	0.684	0.189
PA0232513	KELLY CROSSROADS SANI SEW SYS	8/10/2015	8/31/2020	9/1/2015	0	0	0.720	0.408
PA0232751	POTTER MILLS CENTRAL TREATMENT SYSTEM	8/31/2021	8/31/2026	10/1/2016	0	0	0.747	0.517
PA0232971	FRANKLIN TWP LAIRDSVILLE WWTP	7/30/2018	7/31/2023	10/1/2018	60	9.7	0.656	0.517
PA0233692	SOUTH CREEK TOWNSHIP WWTP	6/11/2020	6/30/2025	2/1/2015	0	0	0.732	0.399
PA0234028	WETLAND EXT PROJ	5/22/2019	5/31/2024	10/1/2013	0	0	0.641	0.323
PA0247715	AMBLEBROOK GETTYSBURG	11/19/2020	5/31/2022	01/01/2009	5479	274	0.514	0.720
PA0248029	HUSTONTOWN STP	7/16/2020	7/31/2025	2/1/2013	682	85	0.683	0.298
PA0248061	JEFFERSON CODORUS STP	9/21/2020	9/30/2025	10/1/2013	6,624	828	0.709	0.411
PA0260738	NITTERHOUSE CONCRETE PRECAST PLT	11/22/2017	11/30/2022	10/1/2017	0	0	0.932	0.851
PA0261131	TAMARACK MHP	3/1/2019	2/29/2024	10/1/2008	1,260	0	0.558	0.553
PA0261343	JOSHUA HILL STP	7/21/2015	7/31/2020	8/1/2015	0	0	0.175	0.322
PA0261378	SHEETZ CLARKS FERRY	11/22/2016	11/30/2021	10/1/2013	38	3.8	0.739	0.400
PA0261416	READING TWP LAUCHMANS BOTTOM STP	1/12/2018	1/31/2023	12/1/2011	0	0	0.684	0.189
PA0261572	MT HOPE NAZARENE RETIREMENT COMM	1/23/2020	1/31/2025	10/1/2011	605	0	0.596	0.477
PA0261645	HERITAGE HOUSE WHITE SULPHUR SPRINGS	11/17/2017	11/30/2022	10/1/2011	380	0	0.472	0.216
PA0261661	COMFORT INN WASTEWATER	3/26/2020	3/31/2025	10/1/2012	181	0	0.780	0.477
PA0261718	WINTER GREENES HOMEOWNERS ASSOCIATION	10/26/2018	10/31/2023	7/1/2012	0	0	0.668	0.063
PA0262072	KNOUSE FOODS PEACH GLEN FRUIT PROC FAC	4/20/2016	4/30/2021	5/1/2016	0	0	0.495	0.218
PA0262137	LOG CABIN MHP STP	9/15/2015	9/30/2020	10/1/2015	0	0	0.602	0.563
PA0263711	BENEZETTE WWTP	4/17/2018	4/30/2023	10/1/2012	0	0	0.644	0.241
PA0266086	SPRING GROVE STP	9/23/2015	9/30/2020	10/1/2015	7,306	974	0.796	0.439
PA0266663	GETTYSBURG BATTLEFIELD RESORT STP	6/21/2018	6/30/2023	10/1/2018	0	0	0.631	0.720
PA0276073	LAKE CAREY WWTP	7/19/2018	7/31/2023	10/1/2018	0	0	0.806	0.517
PA0247910	BETHEL TOWNSHIP FRYSTOWN STP	5/24/2021	7/31/2024	6/1/2021	8,045	188	0.735	0.455

Antidegradation Requirements

All effluent limitations and monitoring requirements have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected.

Anti-backsliding Requirement

All effluent limits proposed in this fact sheet are as stringent as effluent limits specified in the existing permit renewal. This approach is in accordance with 40 CFR §122.44(l(1).

WQM 7.0 Data:

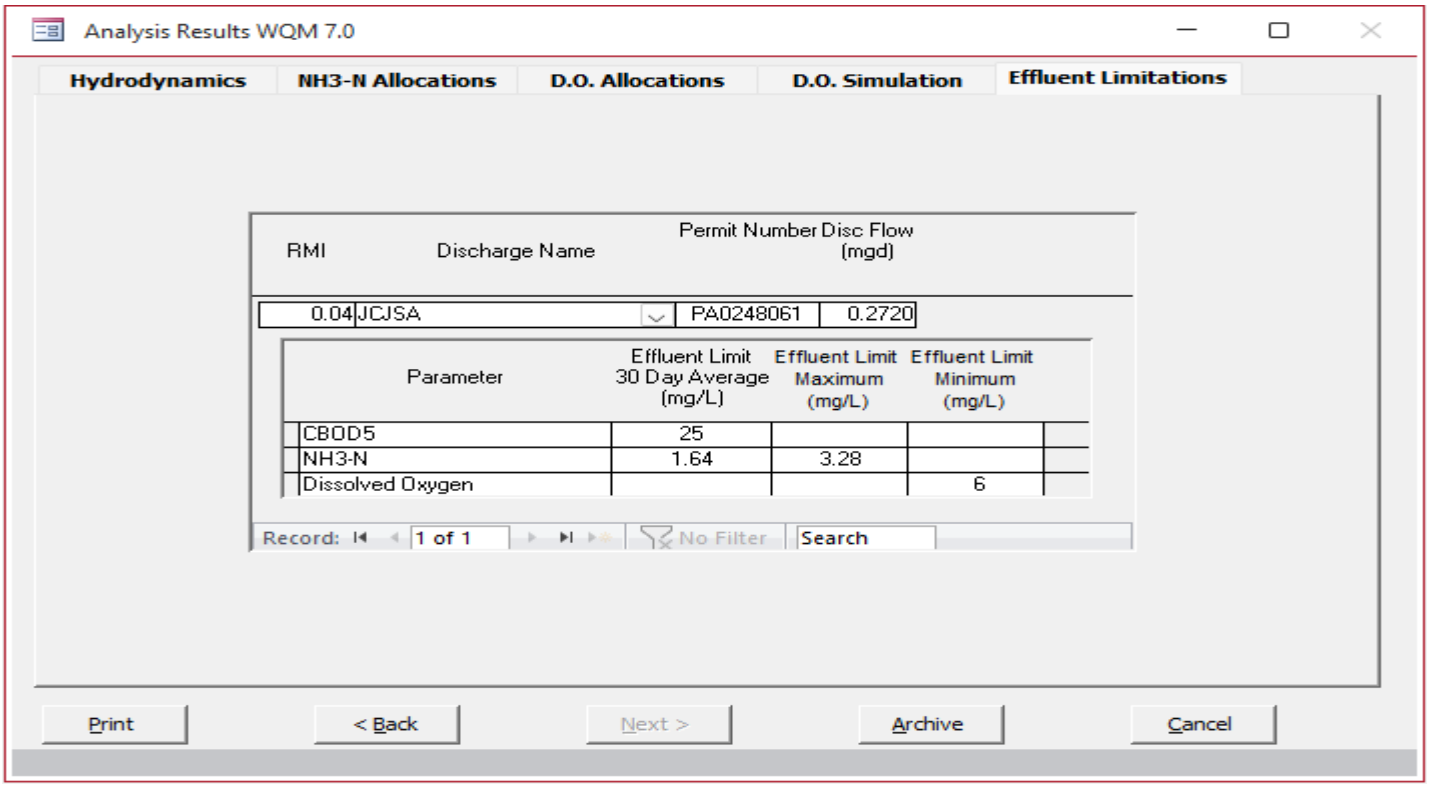
*	Discharge pH	7.0	(Default per 391-2000-007)
*	Discharge Temperature	25°C	(Default per 391-2000-007)
*	Stream pH	7.0	(Default per 391-2000-006)
*	Stream Temperature	20°C	(Default for WWF per 391-2000-003)
*	Background NH_3-N	0 mg/L	(Assumed since no nearby upstream WWTPs)

Node 1: Outfall 001 on UNT of Codorus Creek (08261) to 08260 of Codorus Creek

Elevation:	562.99 ft (USGS National Map Viewer)
Drainage Area:	0.53 $mi.^2$ (USGS PA StreamStats)
River Mile Index:	0.04 (from 08261 to 08260) + 0.88 (from 08260 to Codorus Creek) = 0.92 (PA DEP eMapPA)
Q_{7-10} Low Flow Yield:	0.088 $cfs/mi.^2$
Discharge Flow:	0.272 MGD (NPDES permit)

Node 2: Just before confluence Trib. 08260 to Codorus Creek

Elevation:	521.98 ft (USGS National Map Viewer)
Drainage Area:	1.54 $mi.^2$ (USGS PA StreamStats)
River Mile Index:	0.001 to Codorus Creek (PA DEP eMapPA)
Q_{7-10} Low Flow Yield:	0.088 $cfs/mi.^2$
Discharge Flow:	0.000 MGD



rptEffLimits

WQM 7.0 Effluent Limits

SWP Basin: 07H | Stream Code: 8261 | Stream Name: Trib 08261 of Codorus Creek

RMI	Name	Permit Number	Design Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
0.010	JCJSA	PA0248061	0.272	CBOD5	25		
				NH3-N	1.64	3.28	
				Dissolved Oxygen			6

Wednesday, February 4, 2026 Version 1.1 Page 1 of 1

Page: 1 No Filter

rpt_WLA

WQM 7.0 Wasteload Allocations

SWP Basin: 07H | Stream Code: 8261 | Stream Name: Trib 08261 of Codorus 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
0.010	JCJSA	11.39	3.28	11.39	3.28	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
0.010	JCJSA	1.43	1.64	1.43	1.64	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
0.01	JCJSA	25	25	1.64	1.64	6	6	0	0

Wednesday, February 4, 2026 Version 1.1 Page 1 of 1

Page: 1 No Filter

rptDOSim

WQM 7.0 D.O.Simulation

SWP Basin: 07H | Stream Code: 8261 | Stream Name: Trib 08261 of Codorus Creek

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.010	0.272	26.46	7.000
Reach Width (ft)	Reach Depth (ft)	Reach W/D Ratio	Reach Velocity (fps)
3.240	0.674	4.808	0.214
Reach CBOD5 (mg/L)	Reach Kc (1/days)	Reach NH3-N (mg/L)	Reach Kn (1/days)
22.67	1.656	1.67	0.859
Reach DO (mg/L)	Reach Kr (1/days)	Kr Equation	Reach DO Goal (mg/L)
6.227	17.859	Owens	5
Reach Travel Time (days)			
0.011			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.001	22.62	1.67	6.20
0.002	22.58	1.67	6.16
0.003	22.53	1.67	6.13
0.004	22.49	1.67	6.10
0.005	22.44	1.67	6.07
0.007	22.40	1.46	6.05
0.008	22.35	1.46	6.02
0.009	22.31	1.46	5.99
0.010	22.26	1.46	5.97
0.011	22.22	1.46	5.94

Wednesday, February 4, 2026 Version 1.1 Page 1 of 1

Page: 1 No Filter

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	0.66	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		

Wednesday, February 4, 2026 Version 1.1 Page 1 of 1

Page: 1 No Filter

rptHydro

WQM 7.0 Hydrodynamic Outputs

SWP Basin: 07H Stream Code: 8261 Stream Name: Trib 08261 of Codorus 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												
0.040	0.05	0.00	0.05	.4208	0.19966	.678	3.24	4.81	0.21	0.011	24.49	7.00
Q1-10 Flow												
0.040	0.03	0.00	0.03	.4208	0.19966	NA	NA	NA	0.21	0.011	24.66	7.00
Q30-10 Flow												
0.040	0.06	0.00	0.06	.4208	0.19966	NA	NA	NA	0.22	0.011	24.34	7.00

Wednesday, February 4, 2026 Version 1.1 Page 1 of 1

Page: 1 No Filter

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
07H	8261	Trib 08261 of Codorus Creek	0.040	562.99	0.53	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	0.000	0.00	0.05	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
JCSJA	PA0248061	0.2700	0.2720	0.2700	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	6.00	8.24	0.00	0.00
NH3-N	1.64	0.00	0.00	0.70

Wednesday, February 4, 2026 Version 1.1 Page 1 of 2

Page: 1 No Filter

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
07H	8261	Trib 08261 of Codorus Creek	0.001	521.98	1.54	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	0.000	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
JCSJA	PA0248061	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	6.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Wednesday, February 4, 2026 Version 1.1 Page 2 of 2

Page: 2 No Filter

Toxic:

*	Discharge pH	7.38	(average 2025 renewal application)
*	Discharge Hardness	100 mg/L	(Default)
*	Stream pH	7.0	(Default)
*	Stream Hardness	100 mg/L	(Default)
*	Background NH_3-N	0 mg/L	(Default)

Node 1: Outfall 001 on UNT of Codorus Creek (08261) to 08260 of Codorus Creek
Elevation: 562.99 ft (USGS National Map Viewer)
Drainage Area: 0.53 $mi.^2$ (USGS PA StreamStats)
River Mile Index: (0.04 (from 08261 to 08260) + 0.88 (from 08260 to Codorus Creek)) = 0.92 (PA DEP eMapPA)
Q_{7-10} Low Flow Yield: 0.088 $cfs/mi.^2$
Discharge Flow: 0.272 MGD (NPDES permit)

Node 2: Just before confluence Trib. 08260 to Codorus Creek
Elevation: 521.98 ft (USGS National Map Viewer)
Drainage Area: 1.54 $mi.^2$ (USGS PA StreamStats)
River Mile Index: 0.001 to Codorus Creek (PA DEP eMapPA)
Q_{7-10} Low Flow Yield: 0.088 $cfs/mi.^2$
Discharge Flow: 0.000 MGD

☑ *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

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Jefferson Codorus Sewer Joint Authority** NPDES Permit No.: **PA0248061** Outfall No.: **001**

Evaluation Type: **Custom / Additives** Wastewater Description: **Codorus Creek**

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
0.272	100	7.38						

				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
Total Dissolved Solids (PWS)	mg/L		452									
Chloride (PWS)	mg/L		98									
Bromide	mg/L	<	0.5									
Sulfate (PWS)	mg/L		39									
Total Copper	mg/L		0.01									
Total Lead	mg/L	<	0.001									

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Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Jefferson Codorus Sewer Joint Authority, NPDES Permit No. PA0248061, Outfall 001

Instructions | Discharge | Stream

Receiving Surface Water Name: Codorus Creek

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	008261	920	562.99	0.53			Yes
End of Reach 1	008261	0.001	521.98	1.54			Yes

$Q_{7\text{-}10}$

Location	RMI	LFY (cfs/mi²)*	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	920	0.088										100	7		
End of Reach 1	0.001	0.088										100	7		

Q_h

Location	RMI	LFY (cfs/mi²)	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	920														
End of Reach 1	0.001														

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Jefferson Codorus Sewer Joint Authority, NPDES Permit No. PA0248061, Outfall 001

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | (●) All ( ) Inputs ( ) Results ( ) Limits

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 0.732 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.32

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 Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	13.439	14.0	15.6	Chem Translator of 0.96 applied
Total Lead	0	0		0	64.581	81.6	90.7	Chem Translator of 0.791 applied

☑ ***CFC*** CCT (min): 0.732 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.32

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 Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	8.956	9.33	10.4	Chem Translator of 0.96 applied
Total Lead	0	0		0	2.517	3.18	3.53	Chem Translator of 0.791 applied

☑ ***THH*** CCT (min): 0.732 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 Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	

☑ *CRL* CCT (min): 14.003 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 Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	

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

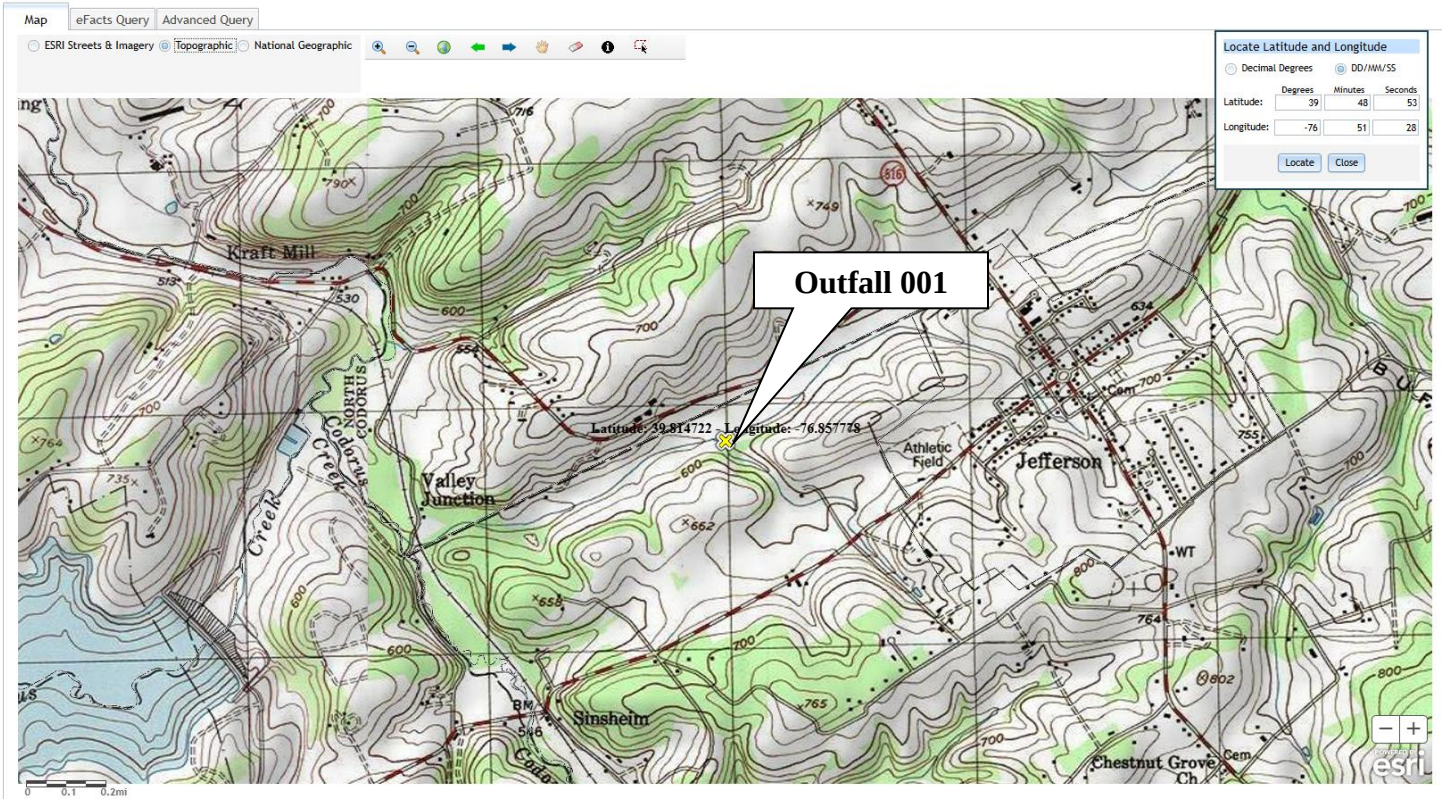
No. Samples/Month: 4

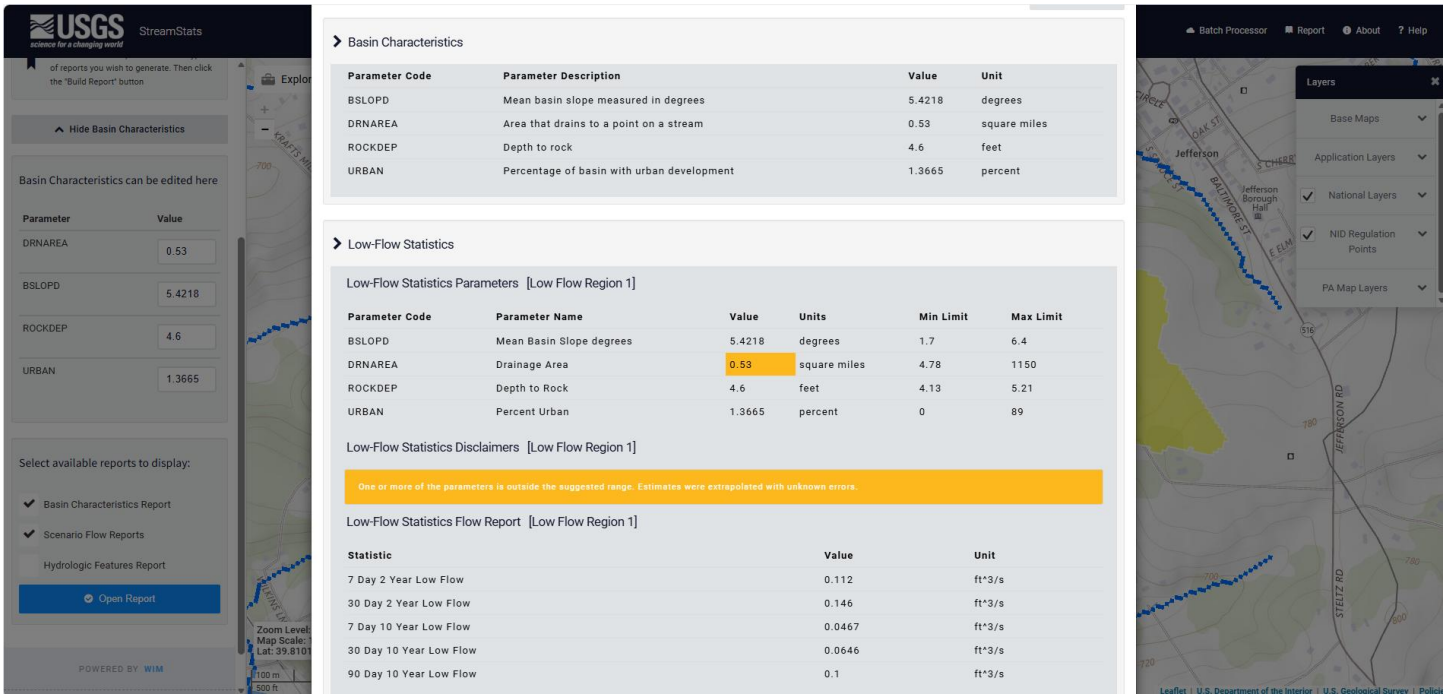
Pollutants	*Mass Limits* AML (lbs/day)	*Mass Limits* MDL (lbs/day)	*Concentration Limits* AML	*Concentration Limits* MDL	*Concentration Limits* IMAX	*Concentration Limits* Units	Governing WQBEL	WQBEL Basis	Comments

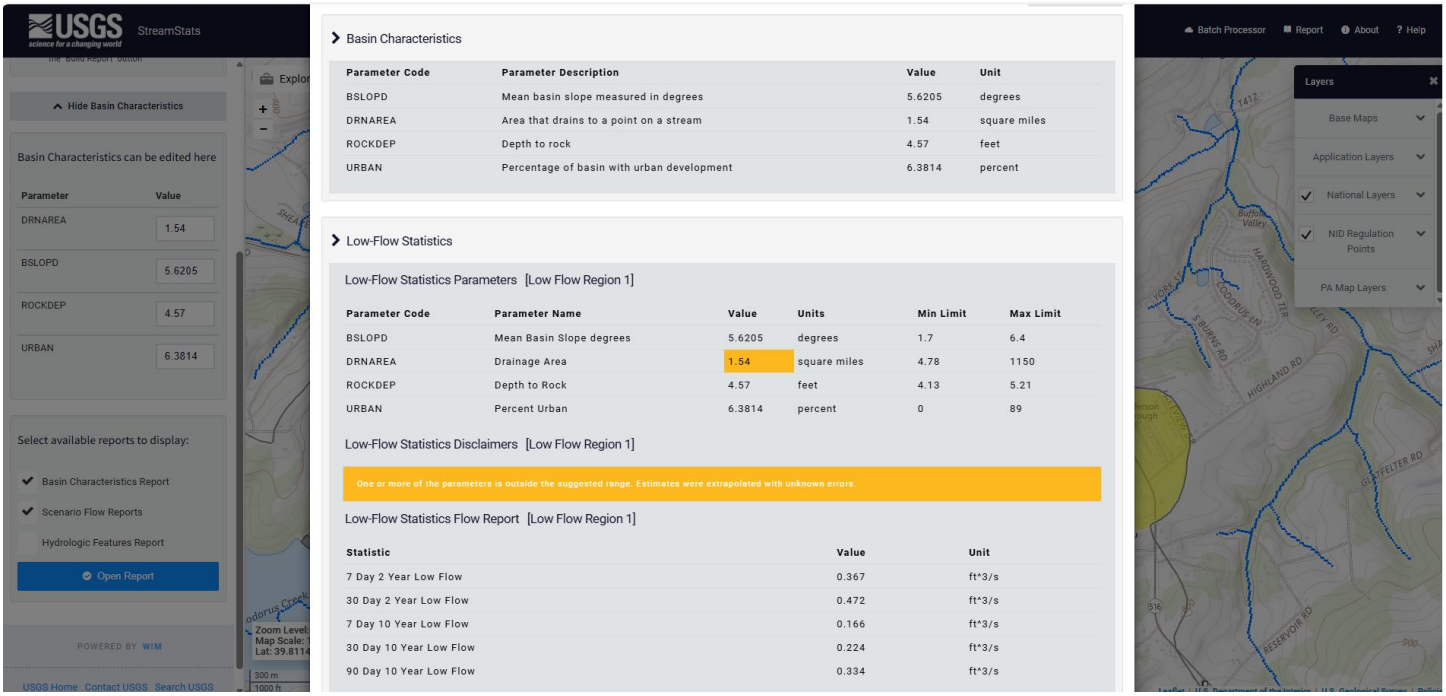
☑ ***Other Pollutants without Limits or Monitoring***

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 Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Copper	10.4	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	N/A	N/A	Discharge Conc < TQL




USGS StreamStats
Hide Basin Characteristics
Basin Characteristics can be edited here
Parameter
Value
DRNAREA
0.53
BSLOPD
5.4218
ROCKDEP
4.6
URBAN
1.3665
Select available reports to display:
Basin Characteristics Report
Scenario Flow Reports
Hydrologic Features Report
Open Report
Basin Characteristics
Parameter Code
Parameter Description
Value
Unit
BSLOPD
Mean basin slope measured in degrees
5.4218
degrees
DRNAREA
Area that drains to a point on a stream
0.53
square miles
ROCKDEP
Depth to rock
4.6
feet
URBAN
Percentage of basin with urban development
1.3665
percent
Low-Flow Statistics
Low-Flow Statistics Parameters [Low Flow Region 1]
Parameter Code
Parameter Name
Value
Units
Min Limit
Max Limit
BSLOPD
Mean Basin Slope degrees
5.4218
degrees
1.7
6.4
DRNAREA
Drainage Area
0.53
square miles
4.78
1150
ROCKDEP
Depth to Rock
4.6
feet
4.13
5.21
URBAN
Percent Urban
1.3665
percent
0
89
Low-Flow Statistics Disclaimers [Low Flow Region 1]
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 1]
Statistic
Value
Unit
7 Day 2 Year Low Flow
0.112
ft^3/s
30 Day 2 Year Low Flow
0.146
ft^3/s
7 Day 10 Year Low Flow
0.0467
ft^3/s
30 Day 10 Year Low Flow
0.0646
ft^3/s
90 Day 10 Year Low Flow
0.1
ft^3/s
Batch Processor
Report
About
Help
Layers
Base Maps
Application Layers
National Layers
NID Regulation Points
PA Map Layers
Jefferson
JEFFERSON RD
STELTZ RD


USGS StreamStats
Hide Basin Characteristics
Basin Characteristics can be edited here
Parameter
Value
DRNAREA
1.54
BSLOPD
5.6205
ROCKDEP
4.57
URBAN
6.3814
Select available reports to display:
Basin Characteristics Report
Scenario Flow Reports
Hydrologic Features Report
Open Report
Basin Characteristics
Parameter Code
Parameter Description
Value
Unit
BSLOPD
Mean basin slope measured in degrees
5.6205
degrees
DRNAREA
Area that drains to a point on a stream
1.54
square miles
ROCKDEP
Depth to rock
4.57
feet
URBAN
Percentage of basin with urban development
6.3814
percent
Low-Flow Statistics
Low-Flow Statistics Parameters [Low Flow Region 1]
Parameter Code
Parameter Name
Value
Units
Min Limit
Max Limit
BSLOPD
Mean Basin Slope degrees
5.6205
degrees
1.7
6.4
DRNAREA
Drainage Area
1.54
square miles
4.78
1150
ROCKDEP
Depth to Rock
4.57
feet
4.13
5.21
URBAN
Percent Urban
6.3814
percent
0
89
Low-Flow Statistics Disclaimers [Low Flow Region 1]
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 1]
Statistic
Value
Unit
7 Day 2 Year Low Flow
0.367
ft^3/s
30 Day 2 Year Low Flow
0.472
ft^3/s
7 Day 10 Year Low Flow
0.166
ft^3/s
30 Day 10 Year Low Flow
0.224
ft^3/s
90 Day 10 Year Low Flow
0.334
ft^3/s
Batch Processor
Report
About
Help
Layers
Base Maps
Application Layers
National Layers
NID Regulation Points
PA Map Layers
HIGHLAND RD
RESERVOIR RD

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: