Pennsylvania Department of Environmental Protection

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0044661**
Facility Type	**Municipal**	APS ID	**1096992**
Major / Minor	**Major**	Authorization ID	**1455155**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Lewisburg Area Joint Sewer Authority Union County**	Facility Name	**Lewisburg Joint Authority Sanitary Sewer STP**
Applicant Address	PO Box 305 Lewisburg, PA 17837-0305	Facility Address	697 River Road Lewisburg, PA 17837
Applicant Contact	Christy Pollom, Lab Supervisor	Facility Contact	Christy Pollom, Lab Supervisor
Applicant Phone	(570) 524-7069	Facility Phone	(570) 524-7069
Client ID	43869	Site ID	261566
Ch 94 Load Status	Not Overloaded	Municipality	East Buffalo Township
Connection Status	No Limitations	County	Union
Date Application Received	September 14, 2023	EPA Waived?	No
Date Application Accepted	September 28, 2023	If No, Reason	Major Facility, Significant CB Discharge

Purpose of Application: Renewal of a Major POTW NPDES Permit

Summary of Review

The subject facility is a major Publicly Owned Treatment Works (POTW) serving Lewisburg Borough and portions of East Buffalo and Buffalo Townships in Union County.

A map of the discharge location is attached (Attachment A).

Sludge use and disposal description and location(s): The facility's digested sludge is disposed by land application under Biosolids Permit No. PAG084820. Per the application 81 dry tons were land applied in the previous year.

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.

Approve	Deny	Signatures	Date
✓		Keith C. Allison Keith C. Allison / Project Manager	April 15, 2025
✓		N. W. H. Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	April 16, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	2.42
Latitude	40º 56' 53.91"	Longitude	-76º 52' 21.28"
Quad Name	Lewisburg, PA	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	West Branch Susquehanna River (WWF, MF)	Stream Code	18668
NHD Com ID	66920683	RMI	6.7
Drainage Area	6855 mi^2	Yield (cfs/mi^2)	0.1224
Q_{7-10} Flow (cfs)	839	Q_{7-10} Basis	Gauge 01553500, West Branch Susquehanna River at Lewisburg (1968-2008)
Elevation (ft)	430.6	Slope (ft/ft)	0.00021
Watershed No.	10-D	Chapter 93 Class.	WWF, MF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN,		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Sunbury Municipal Authority		
PWS Waters	Susquehanna River	Distance from Outfall (mi)	Approx. 10

Changes Since Last Permit Issuance: None. The existing stream and drainage characteristics remain applicable.

Other Comments: The facility is not reasonably expected to be contributing to the impairment to the River by PCBs.

No downstream water supply is expected to be affected by the discharge at this time with the limitations and monitoring proposed.

Treatment Facility Summary

Treatment Facility Name: Lewisburg Joint Authority East Buffalo

WQM Permit No.	Issuance Date	Permit Coverage:
6009401	Original - 4/2/2010 A-1 – 3/26/2025	Nutrient Reduction Upgrades UV Light Disinfection
6004401	10/26/2004	Aeration System Retrofit
6089411	11/17/1989	Sludge Storage Tank
6072403	9/8/1972	Treatment Plant

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Activated Sludge	Gas Chlorine	2.42

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
2.42	5359	Not Overloaded	Anaerobic Digestion	Land Application

Changes Since Last Permit Issuance: WQM Permit No. 6009401-A1 was issued March 26, 2025.

Other Comments: The existing treatment consists of fine screen, two primary clarifiers, Modified Ludzack-Ettinger treatment with integrated fixed film activated sludge process, two final clarifiers, three denitrification filters, chlorination with two chlorine contact tanks, and two anaerobic sludge digestion tanks and sludge storage.

Hauled-In-Waste

Per the application, the facility has not received any hauled-in wastes over the past three years and the Authority does not anticipate receiving any over the next permit term.

Industrial Users

The facility receives no wastewater from industrial users.

Stormwater Management

Outfall No.	002 – SD1	Design Flow (MGD)	N/A
Latitude	40° 56’ 53”	Longitude	76° 52’ 31”
RMI	6.71	Drainage Area (ft^2)	8,700
Outfall No.	003 – SD2	Design Flow (MGD)	N/A
Latitude	40° 56’ 52”	Longitude	76° 52’ 31”
RMI	6.74	Drainage Area (ft^2)	8,700
Outfall No.	004 – SD3	Design Flow (MGD)	N/A
Latitude	40° 56’ 51.7”	Longitude	76° 52’ 43.2”
RMI	6.81	Drainage Area (ft^2)	2,400
Outfall No.	005 – SD4	Design Flow (MGD)	N/A
Latitude	40° 56’ 50.9”	Longitude	76° 52’ 44.6”
RMI	6.79	Drainage Area (ft^2)	25
Outfall No.	006 – SD5	Design Flow (MGD)	N/A
Latitude	40° 56’ 50.2”	Longitude	76° 52’ 44.1”
RMI	6.75	Drainage Area (ft^2)	400
Outfall No.	007 – SD6	Design Flow (MGD)	N/A
Latitude	40° 56’ 51”	Longitude	76° 52’ 35”
RMI	6.75	Drainage Area (ft^2)	8,700

Stormwater from the facility drains to the above-listed points. 002 and 003 directly drain to the river while the other four outfalls discharge to the ground surface.

Stormwater requirements will be included in the NPDES permit because the discharges from the facility meet the definition of a storm water discharges associated with industrial activity in 40 CFR §122.26(b)(14)(ix). Appropriate BMPs for POTWs are included in the Section C special condition for Stormwater discharges.

Biosolids Use/Disposal

The Authority has coverage under approval No. PAG084820 to beneficially use non-exceptional value biosolids by land application. Coverage was last issued on December 2, 2019. All treated biosolids are spread on the Erdley Farm in East Buffalo Township, Union County and the Fairchild Farm in Delaware Township, Northumberland County.

Compliance History

DMR Data for Outfall 001 (from March 1, 2024 to February 28, 2025)

Parameter	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24
Flow (MGD) Average Monthly	1.018	0.767	0.941	0.809	0.818	0.959	1.092	0.726	0.787	1.148	1.674	1.422
Flow (MGD) Daily Maximum	1.999	1.05	2.214	1.069	0.946	1.499	3.684	1.106	0.971	2.179	4.355	2.811
pH (S.U.) Instantaneous Minimum	6.3	6.3	6.5	6.6	6.7	6.8	7.0	7.2	7.0	6.9	7.0	7.0
pH (S.U.) Instantaneous Maximum	6.8	7.0	7.1	7.0	7.2	7.3	7.6	7.4	7.4	7.4	7.3	7.4
DO (mg/L) Instantaneous Minimum	5.5	6.0	5.7	5.5	5.4	5.3	5.1	5.3	5.3	5.5	5.4	4.8
TRC (mg/L) Average Monthly	0.30	0.32	0.31	0.24	0.20	0.20	0.19	0.15	0.18	0.22	0.25	0.28
TRC (mg/L) Instantaneous Maximum	0.52	0.45	0.49	0.52	0.38	0.76	0.35	0.47	0.33	0.41	0.41	0.55
CBOD5 (lbs/day) Average Monthly	< 13	< 10	< 12	< 10	< 10	< 12	< 11	< 9	< 10	< 14	< 66	< 21
CBOD5 (lbs/day) Weekly Average	< 14	< 11	< 14	< 11	< 11	< 17	< 12	< 9	< 11	< 17	239	< 40
CBOD5 (mg/L) Average Monthly	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.6	< 1.5	< 1.5	< 1.6	< 1.5	< 2.9	< 1.9
CBOD5 (mg/L) Weekly Average	< 1.5	< 1.5	< 1.5	< 1.7	< 1.5	< 1.7	< 1.5	< 1.5	< 1.9	< 1.5	7.7	< 3.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	1786	1394	1819	1757	1731	1796	1933	1130	1253	1701	2289	1908
BOD5 (lbs/day) Raw Sewage Influent Weekly Average	1923	1664	2116	1949	1898	1903	2921	1176	1293	2016	2534	2004
BOD5 (mg/L) Raw Sewage Influent Average Monthly	214	217	243	264	250	236	255	187	200	189	187	178
TSS (lbs/day) Average Monthly	< 10	< 7	< 8	< 7	< 7	< 8	< 8	< 6	< 6	< 10	< 226	< 16

TSS (lbs/day) Raw Sewage Influent Average Monthly	1767	1563	1675	1538	1659	1855	1817	1206	1260	1974	2344	1939
TSS (lbs/day) Raw Sewage Influent Weekly Average	1876	1723	2104	1735	1912	2014	2647	1265	1386	2403	3181	2201
TSS (lbs/day) Weekly Average	12	< 8	< 9	< 7	9	< 10	< 8	< 6	< 7	< 12	980	29
TSS (mg/L) Average Monthly	< 1.1	< 1.0	< 1.1	< 1.0	< 1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 7.7	< 1.4
TSS (mg/L) Raw Sewage Influent Average Monthly	208	246	223	231	240	245	241	200	200	215	183	180
TSS (mg/L) Weekly Average	1.3	< 1.2	1.1	< 1.1	1.3	< 1.0	< 1.0	< 1.1	< 1.1	< 1.2	31.0	2.2
Fecal Coliform (No./100 ml) Geometric Mean	7	2	2	5	5	26	22	47	< 4	< 2	4	< 2
Fecal Coliform (No./100 ml) Instantaneous Maximum	73	4	4	93	84	659	579	345	29	3	14	4
Nitrate-Nitrite (mg/L) Average Monthly	14.5	14.7	14.4	15.5	14.7	13.7	9.1	10.6	10.3	9.4	10.1	9.0
Nitrate-Nitrite (lbs) Total Monthly	3324	2852.9	3773.5	3184.6	3161.8	3296.9	2148.4	2190	2055.5	2620.4	3579.7	3077.8
Total Nitrogen (mg/L) Average Monthly	16.3	< 16.2	< 15.6	< 16.6	< 16.5	< 14.8	< 10.6	< 12.0	< 11.9	< 10.5	< 11.5	< 11.1
Total Nitrogen (lbs) Effluent Net Total Monthly	3740.2	< 3147.9	< 4100.4	< 3407.7	< 3554.5	< 3584.5	< 2511.6	< 2493.1	< 2379.8	< 2972.4	< 4159.7	< 3861.3
Ammonia (lbs/day) Average Monthly	< 2	< 1	< 2	< 0.7	< 0.7	< 1	< 0.8	< 0.9	< 0.7	< 0.9	< 1	< 12
Ammonia (lbs/day) Weekly Average	5	2	< 6	< 0.7	< 0.8	< 4	< 0.9	< 2	< 0.7	< 1	< 2	< 43
Ammonia (mg/L) Average Monthly	< 0.27	< 0.17	< 0.20	< 0.10	< 0.10	< 0.14	< 0.10	< 0.13	< 0.10	< 0.10	< 0.10	< 0.95
Ammonia (lbs) Total Monthly	< 63	< 33.9	< 55.6	< 20.5	< 21.5	< 40.1	< 24.2	< 27.9	< 20	< 29	< 40.5	< 363.7
TKN (mg/L) Average Monthly	1.8	< 1.5	< 1.2	< 1.1	< 1.8	< 1.2	< 1.5	< 1.3	< 1.6	< 1.2	< 1.4	< 2.1
TKN (lbs) Total Monthly	416.2	< 295	< 326.9	< 223.1	< 392.7	< 287.6	< 363.2	< 303.1	< 324.3	< 351.9	< 580	< 783.5

Total Phosphorus (mg/L) Average Monthly	1.9	2.1	2.1	1.9	1.9	2.20	0.69	1.09	0.83	1.20	1.36	1.21
Total Phosphorus (lbs) Effluent Net Total Monthly	418.6	403.7	548.4	389.3	415.5	522.1	163.5	232.6	165.1	336.3	461.1	414.8

Compliance History

Effluent Violations for Outfall 001, from: March 1, 2024 To: February 28, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TSS	04/30/24	Wkly Avg	980	lbs/day	908	lbs/day

Compliance History	
Summary of Inspections:	The most recent inspection of the facility by the Department on October 21, 2024 noted an eDMR effluent violation but no operational violations at the time of inspection.
Other Comments:	There are no identified open violations for Lewisburg Area Joint Sewer Authority in eFACTS.

Existing Effluent Limitations and Monitoring Requirements								
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 Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	505	807	XXX	25.0	40.0	50	2/week	24-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Suspended Solids	605	908	XXX	30.0	45.0	60	2/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
Ammonia-Nitrogen	Report	Report	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite

Existing Effluent Limitations and Monitoring Requirements – Chesapeake Bay								
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	2/week	24-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Nitrogen		Report		Report	XXX	XXX	1/month	Calculation
Total Phosphorus		Report		Report	XXX	XXX	2/week	24-Hr Composite
Net Total Nitrogen	Report	44,200	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	5,893	XXX	XXX	XXX	XXX	1/month	Calculation

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Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 2.42
Latitude 40º 56' 52.50" **Longitude** -76º 52' 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: Comments: The above limitations are applicable and are included in the existing permit.

Water Quality-Based Limitations

DO, CBOD5 and NH3-N

The WQM7.0 model allows the Department to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD ($CBOD_5$), and ammonia-nitrogen (NH_3-N) into free-flowing streams and rivers. To accomplish this, the model simulates two basic processes: the mixing and degradation of NH_3-N in the stream and the mixing and consumption of DO in the stream due to the degradation of $CBOD_5$ and NH_3-N. WQM7.0 modeling was performed (see Attachment B) for the discharge to the West Branch Susquehanna River and showed that no limitations are necessary for these parameters beyond the technology-based secondary treatment limits listed above.

Disinfection

The Department uses a modeling spreadsheet to analyze the toxicity of a discharge's TRC in a receiving stream, accounting for available dilution. The attached results of the TRC spreadsheet (see Attachment C) show that the technology-based limit of 0.5 mg/l is adequate to protect the receiving stream.

The permittee recently received WQM Permit No. 6009401 Amendment No. 1 for the replacement of the current chlorine disinfection with an Ultraviolet Light disinfection system. Per the WQM permit the system is capable of monitoring for UV % Transmittance. This monitoring will be included in the draft permit with the existing TRC limit and monitoring to account for the forthcoming transition.

Water Quality Toxics Management

A "Reasonable Potential Analysis" was performed to determine additional parameters with the reasonable potential to violate water quality standards (see the Toxics Management Spreadsheet (TMS), Attachment D). The TMS is a mass-balance water quality analysis model that includes consideration for mixing and other factors to determine recommended water quality-based effluent limits. The model incorporates the water quality criteria of 25 Pa.Code §93 and accounts for available instream dilution.

The parameters listed below were determined by the reasonable potential analysis, based on sampling provided in the application, to be candidates for monitoring or limitations in the draft permit. The Analysis recommends limits

when the highest sampling result is greater than 50% of the WQBEL and recommends monitoring when the result is greater than 10% of the WQBEL for conservative pollutants, consistent with the Department's SOPs. The Department assumes that results for pollutants at detection levels higher than the Department's Target Quantitation Limits (TQLs) are potentially present at concentrations near the higher detection level. The table below shows the permittee's sample results, the WQ-based monthly average limitation, and the Target Quantitation Limit for each parameter.

Recommended Monitoring/Limitations

Pollutant	Sample Results (µg/L)	WQBEL (µg/L)	Target Quantitation Limit (µg/L)	TMS Result
Total Zinc	77.3	460	-	Limit
Hexachlorobutadiene	<1.9	1.63	0.5	Limit
1,2,4-Trichlorobenzene	<1.5	2.52	0.5	Limit

The draft permit will therefore include limitations with twice per month monitoring for Total Zinc, Hexachlorobutadiene, and 1,2,4-Trichlorobenzene.

Should BAJSA conduct an additional round of sampling during the draft comment period that shows that levels of Hexachlorobutadiene and 1,2,4-Trichlorobenzene in the effluent are undetectable at or below the Department's TQL then the Department will evaluate removing the monitoring and limitations for these from the final permit.

The Total Zinc limitation is included in the draft permit due to a detectable result occurring in the application sampling at greater than 10% of the WQBEL.

Per- and Polyfluoroalkyl Substances (PFAS)

The Department has begun increased evaluation of Per- and polyfluoroalkyl substances (PFAS) due to these parameters being pollutants of concern to the Department and EPA. The current version of the NPDES Major Sewage Discharge application (December 2023) requires monitoring in Group 1 for the four PFAS of concern – Perfluorooctanoic Acid (PFOA), Perfluorooctanesulfonic Acid (PFOS), Perfluorobutanesulfonic Acid (PFBS), and Hexafluoropropylene oxide dimer acid (HFPO-DA). Because no information is currently available for PFAS for this discharge quarterly monitoring will be included in the draft permit. Also included is a footnote allowing the permittee to cease monitoring for these compounds if four consecutive events have non-detectable results at the Department's Target Quantitation Limits as listed in the table below.

PFAS Substances Monitored	Target Quantitation Limit (ng/L)
Perfluorooctanoic Acid (PFOA)	4.0
Perfluorooctanesulfonic Acid (PFOS)	3.7
Perfluorobutanesulfonic Acid (PFBS)	3.5
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.4

Chesapeake Bay/Nutrient Requirements

A portion of the Chesapeake Bay and many of its tidal tributaries have been listed as impaired under Section 303(d) of the Water Pollution Control Act, 33 U.S.C. §1313(d). Total Nitrogen and Total Phosphorus cap loads have been established for significant dischargers in Pennsylvania to reduce the total nutrient load to the Bay and meet State of Maryland Water Quality Standards. LAJSA is considered a Phase 1, Significant Chesapeake Bay discharger and Nutrient cap loads have been established for this facility pursuant to the Phase III Watershed Implementation Plan.

The discharge's cap loadings as well as the actual Total Nitrogen and Total Phosphorus loadings for the past two cycle years are listed in the table below.

Nutrient	Total Nitrogen (lbs)	Total Phosphorus (lbs)
Nutrient Cap Loads for PA0020567	44,200	5,893
10/1/22 – 9/30/23 Total Mass Load	<39,324	4,717
10/1/23 – 9/30/24 Total Mass Load	41,537	4,476

Best Professional Judgment (BPJ) Limitations

Comments: No additional BPJ limitations are necessary at this time beyond the technology and water quality-based limitations noted above.

E. Coli Monitoring

Monthly E. Coli monitoring will be included in the draft permit consistent with recent changes to Chapter 93 of the Department's regulations and Departmental policy.

Anti-Backsliding

No proposed limitations have been made less stringent consistent with the Anti-degradation requirements of The Clean Water Act and 40 CFR 122.44(I).

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Whole Effluent Toxicity (WET)

For Outfall 001, ☐ **Acute** ☒ **Chronic** WET Testing was completed:

☐ For the permit renewal application (4 tests).
☐ Quarterly throughout the permit term.
☐ Quarterly throughout the permit term and a TIE/TRE was conducted.
☒ Other: **Annually over the permit term**

The dilution series used for the tests was: 100%, 60%, 30%, 3%, and 1%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 3.

Summary of Four Most Recent Test Results[1]

[1] The permittee has submitted one additional WETT result since application submittal which is included in the table

TST Data Analysis

(NOTE – In lieu of recording information below, the application manager may attach the DEP WET Analysis Spreadsheet).

Test Date	*Ceriodaphnia* Results (Pass/Fail)		*Pimephales* Results (Pass/Fail)	
	Survival	Reproduction	Survival	Growth
8/18/20	Pass	Pass	Pass	Pass
6/21/21	Pass	Pass	Pass	Pass
8/29/22	Pass	Pass	Pass	Pass
6/19/23	Pass	Pass	Pass	Pass
6/25/24	Pass	Pass	Pass	Pass

***** *A "passing" result is that in which the replicate data for the TIWC is not statistically significant from the control condition. This is exhibited when the calculated t value ("T-Test Result") is greater than the critical t value. A "failing" result is exhibited when the calculated t value ("T-Test Result") is less than the critical t value.*

Is there reasonable potential for an excursion above water quality standards based on the results of these tests? (*NOTE – In general, reasonable potential is determined anytime there is at least one test failure in the previous four tests).*

☐ **YES** ☒ **NO**

Comments: Reasonable potential has not been established at this time.

Evaluation of Test Type, IWC and Dilution Series for Renewed Permit

Acute Partial Mix Factor (PMFa): **0.022** Chronic Partial Mix Factor (PMFc): **0.156**

1. Determine IWC – Acute (IWCa):

$(Q_d \times 1.547) / ((Q_{7\text{-}10} \times PMFa) + (Q_d \times 1.547))$

[(2.42 MGD x 1.547) / ((839 cfs x 0.022) + (2.42 MGD x 1.547))] x 100 = **16.86%**

Is IWCa < 1%? ☐ **YES** ☒ **NO, Therefore, chronic testing is required**

Type of Test for Permit Renewal: **Chronic**

2b. Determine Target IWCc (If Chronic Tests Required)

$(Q_d \times 1.547) / (Q_{7\text{-}10} \times PMFc) + (Q_d \times 1.547)$

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[(2.42 MGD x 1.547) / ((839 cfs x 0.156) + (2.42 MGD x 1.547))] x 100 = **2.78%**

3. Determine Dilution Series

(NOTE – check Attachment C of WET SOP for dilution series based on TIWCa or TIWCc, whichever applies).

Dilution Series = 100%, 60%, 30%, 3%, and 1%.

WET Limits

Has reasonable potential been determined? ☐ YES ☒ NO

Will WET limits be established in the permit? ☐ YES ☒ NO

Therefore, no limitations will be included in the permit and annual WET testing will continue through the next permit term at a dilution series of 100%, 60%, 30%, 3%, and 1%.

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" (362-0400-001), 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	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	505	807	XXX	25.0	40.0	50	2/week	24-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Suspended Solids	605	908	XXX	30.0	45.0	60	2/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
Ammonia-Nitrogen	Report	Report	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/month	Grab

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
UV % Transmittance	XXX	XXX	Report Minimum	XXX	XXX	XXX	1/day	Measured
PFOA (ng/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Grab
PFBS (ng/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Grab
Total Zinc	9.37	14.6 Daily Max	XXX	0.46	0.72 Daily Max	1.16	2/month	24-Hr Composite
Hexachlorobutadiene (µg/L)	0.033	0.051 Daily Max	XXX	1.63	2.55 Daily Max	4.08	2/month	24-Hr Composite
1,2,4-Trichlorobenzene (µg/L)	0.051	0.079 Daily Max	XXX	2.52	3.93 Daily Max	6.3	2/month	24-Hr Composite

Compliance Sampling Location: Outfall 001

Other Comments: Monitoring for UV Transmittance, e. Coli, Total Zinc, Hexachlorobutadiene, 1,2,4-Trichlorobenzene, PFOA, PFOS, PFBS, and HFPO-DA are new as noted above.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, to comply with Pennsylvania's Chesapeake Bay Tributary Strategy.

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	2/week	24-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Nitrogen		Report		Report	XXX	XXX	1/month	Calculation
Total Phosphorus		Report		Report	XXX	XXX	2/week	24-Hr Composite
Net Total Nitrogen	Report	44,200	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	5,893	XXX	XXX	XXX	XXX	1/month	Calculation

Compliance Sampling Location: Outfall 001

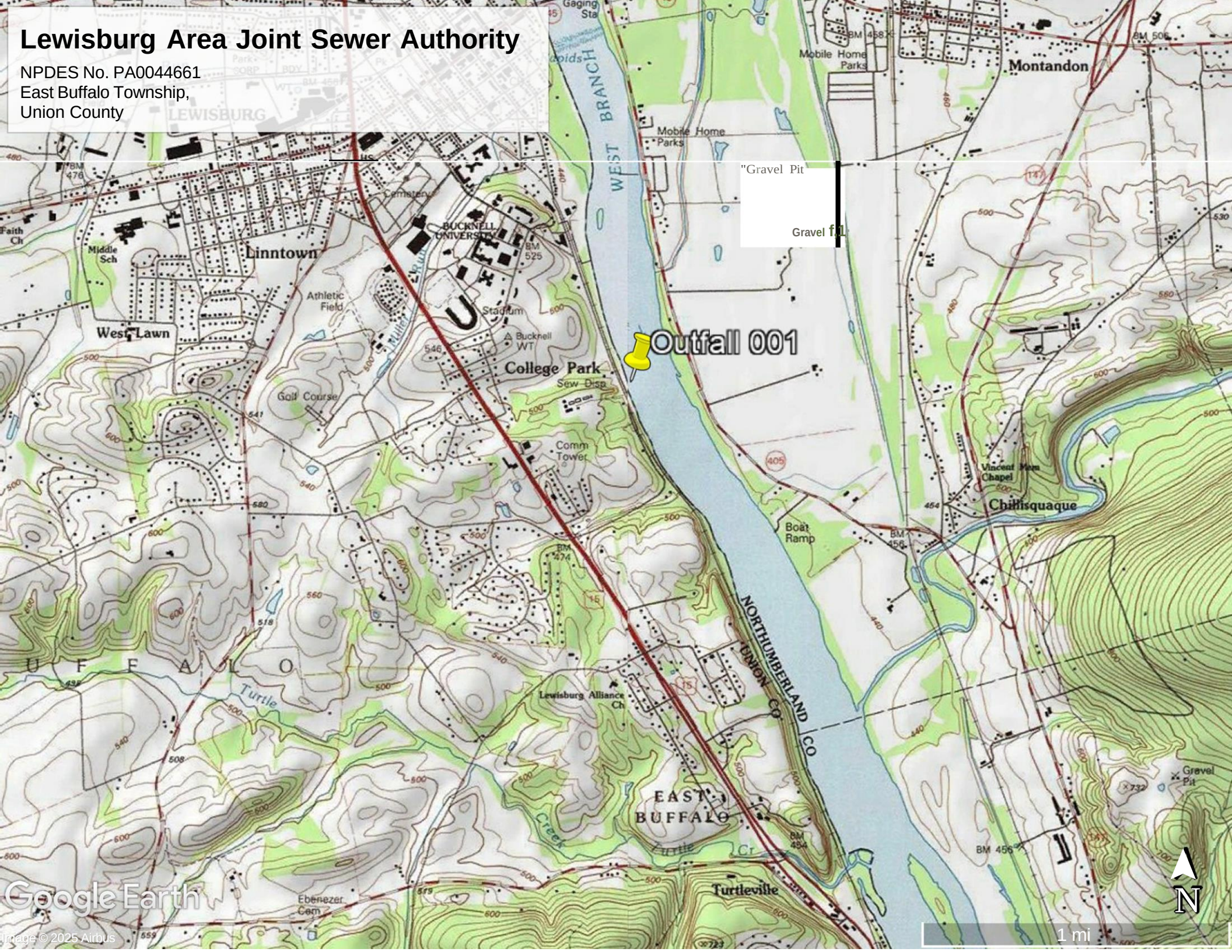
Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment **B**)
☒	Toxics Management Spreadsheet (see Attachment **D**)
☒	TRC Model Spreadsheet (see Attachment **C**)
☐	Temperature Model Spreadsheet (see Attachment)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 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:

Attachments:

A. Discharge Location Map
B. WQM7.0 Model
C. TRC Model
D. Toxics Management Spreadsheet
E. WETT Spreadsheet

Lewisburg Area Joint Sewer Authority

NPDES No. PA0044661
East Buffalo Township,
Union County



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
10D	18668	WEST BRANCH SUSQUEHANNA RI	**6.700**	430.00	6855.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.122	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
LAJSA	PA0044661	2.4000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

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

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
10D	18668	WEST BRANCH SUSQUEHANNA RI	**0.100**	422.70	9655.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.122	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

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

Parameter Data

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

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
10D	18668	WEST BRANCH SUSQUEHANNA RIVER

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 (ºC)	Analysis pH
Q7-10 Flow												
6.700	839.05	0.00	839.05	3.7128	0.00021	1.156	625.69	541.23	1.17	0.346	20.02	7.00
Q1-10 Flow												
6.700	536.99	0.00	536.99	3.7128	0.00021	NA	NA	NA	0.91	0.444	20.03	7.00
Q30-10 Flow												
6.700	1141.11	0.00	1141.11	3.7128	0.00021	NA	NA	NA	1.38	0.292	20.02	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 D.O.Simulation

SWP Basin	Stream Code	Stream Name
10D	18668	WEST BRANCH SUSQUEHANNA RIVER

RMI	Total Discharge Flow (mgd)	Analysis Temperature (ºC)	Analysis pH
6.700	2.400	20.022	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
625.694	1.156	541.234	1.165
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.10	0.062	0.11	0.701
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.220	1.139	Tsivoglou	5
Reach Travel Time (days)			
0.346			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.035	2.10	0.11	8.24
0.069	2.09	0.10	8.24
0.104	2.09	0.10	8.24
0.138	2.08	0.10	8.24
0.173	2.08	0.10	8.24
0.208	2.07	0.10	8.24
0.242	2.07	0.09	8.24
0.277	2.07	0.09	8.24
0.312	2.06	0.09	8.24
0.346	2.06	0.09	8.24

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
10D	18668	WEST BRANCH SUSQUEHANNA RIVER

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
6.700	LAJSA	16.71	50	16.71	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
6.700	LAJSA	1.89	25	1.89	25	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)		
6.70	LAJSA	25	25	25	25	3	3	0	0

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
10D	18668	WEST BRANCH SUSQUEHANNA RIVER

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)
6.700	LAJSA	PA0044661	2.400	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			3

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

839	= Q stream (cfs)	0.5	= CV Daily
2.42	= 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)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 71.509	1.3.2.iii	WLA cfc = 69.708
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 26.646	5.1d	LTA_cfc = 40.525

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.635	

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)

Discharge Information

Instructions | Discharge | Stream

Facility: **Lewisburg Area Joint Sewer Authority** NPDES Permit No.: **PA0044661** Outfall No.: **001**

Evaluation Type **Major Sewage / Industrial Waste** Wastewater Description: **Sewage**

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
2.42	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		368									
	Chloride (PWS)	mg/L		104									
	Bromide	mg/L		0.1									
	Sulfate (PWS)	mg/L		58.4									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		153									
	Total Antimony	µg/L		0.52									
	Total Arsenic	µg/L		0.48									
	Total Barium	µg/L		9.2									
	Total Beryllium	µg/L	<	0.1									
	Total Boron	µg/L		204									
	Total Cadmium	µg/L	<	0.13									
	Total Chromium (III)	µg/L	<	0.5									
	Hexavalent Chromium	µg/L	<	0.1									
	Total Cobalt	µg/L	<	0.81									
	Total Copper	µg/L		3.7									
	Free Cyanide	µg/L		6									
	Total Cyanide	µg/L		13									
	Dissolved Iron	µg/L	<	44.7									
	Total Iron	µg/L		37.5									
	Total Lead	µg/L	<	0.25									
	Total Manganese	µg/L		19.9									
	Total Mercury	µg/L	<	0.16									
	Total Nickel	µg/L		2									
	Total Phenols (Phenolics) (PWS)	µg/L	<	30									
	Total Selenium	µg/L	<	0.84									
	Total Silver	µg/L	<	0.53									
	Total Thallium	µg/L	<	0.081									
	Total Zinc	mg/L		77.3									
	Total Molybdenum	µg/L		16.8									
	Acrolein	µg/L	<	1									
	Acrylamide	µg/L	<	0.5									
	Acrylonitrile	µg/L	<	0.5									
	Benzene	µg/L	<	0.5									
	Bromoform	µg/L	<	0.5									

Group 3	Carbon Tetrachloride	µg/L	<	0.5									
	Chlorobenzene	µg/L	<	0.5									
	Chlorodibromomethane	µg/L		0.7									
	Chloroethane	µg/L	<	0.5									
	2-Chloroethyl Vinyl Ether	µg/L	<	0.5									
	Chloroform	µg/L		6.9									
	Dichlorobromomethane	µg/L		2.4									
	1,1-Dichloroethane	µg/L	<	0.5									
	1,2-Dichloroethane	µg/L	<	0.5									
	1,1-Dichloroethylene	µg/L	<	0.5									
	1,2-Dichloropropane	µg/L	<	0.5									
	1,3-Dichloropropylene	µg/L	<	0.5									
	1,4-Dioxane	µg/L	<	1.4									
	Ethylbenzene	µg/L	<	0.5									
	Methyl Bromide	µg/L	<	0.5									
	Methyl Chloride	µg/L	<	0.5									
	Methylene Chloride	µg/L	<	0.5									
	1,1,2,2-Tetrachloroethane	µg/L	<	0.5									
	Tetrachloroethylene	µg/L	<	0.5									
	Toluene	µg/L	<	0.5									
	1,2-trans-Dichloroethylene	µg/L	<	0.5									
	1,1,1-Trichloroethane	µg/L	<	0.5									
	1,1,2-Trichloroethane	µg/L	<	0.5									
	Trichloroethylene	µg/L	<	0.5									
	Vinyl Chloride	µg/L	<	0.5									
Group 4	2-Chlorophenol	µg/L	<	1.5									
	2,4-Dichlorophenol	µg/L	<	1.7									
	2,4-Dimethylphenol	µg/L	<	1.8									
	4,6-Dinitro-o-Cresol	µg/L	<	4.9									
	2,4-Dinitrophenol	µg/L	<	11.1									
	2-Nitrophenol	µg/L	<	1.5									
	4-Nitrophenol	µg/L	<	5.4									
	p-Chloro-m-Cresol	µg/L	<	1.5									
	Pentachlorophenol	µg/L	<	7									
	Phenol	µg/L	<	1									
	2,4,6-Trichlorophenol	µg/L	<	1.8									
Group 5	Acenaphthene	µg/L	<	1.6									
	Acenaphthylene	µg/L	<	1.5									
	Anthracene	µg/L	<	1.6									
	Benzidine	µg/L	<	9.8									
	Benzo(a)Anthracene	µg/L	<	1.6									
	Benzo(a)Pyrene	µg/L	<	1.4									
	3,4-Benzofluoranthene	µg/L	<	1.6									
	Benzo(ghi)Perylene	µg/L	<	1.6									
	Benzo(k)Fluoranthene	µg/L	<	1.5									
	Bis(2-Chloroethoxy)Methane	µg/L	<	1.7									
	Bis(2-Chloroethyl)Ether	µg/L	<	1.4									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	1.5									
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	3.2									
	4-Bromophenyl Phenyl Ether	µg/L	<	1.8									
	Butyl Benzyl Phthalate	µg/L	<	2.3									
	2-Chloronaphthalene	µg/L	<	1.6									
	4-Chlorophenyl Phenyl Ether	µg/L	<	1.6									
	Chrysene	µg/L	<	1.6									
	Dibenzo(a,h)Anthrancene	µg/L	<	1.7									
	1,2-Dichlorobenzene	µg/L	<	0.5									
	1,3-Dichlorobenzene	µg/L	<	0.5									
	1,4-Dichlorobenzene	µg/L	<	0.5									
	3,3-Dichlorobenzidine	µg/L	<	4.1									
	Diethyl Phthalate	µg/L	<	2.2									
	Dimethyl Phthalate	µg/L	<	1.6									
	Di-n-Butyl Phthalate	µg/L	<	2.2									
	2,4-Dinitrotoluene	µg/L	<	1.8									

	2,6-Dinitrotoluene	µg/L	<	1.6									
	Di-n-Octyl Phthalate	µg/L	<	3.4									
	1,2-Diphenylhydrazine	µg/L	<	1.5									
	Fluoranthene	µg/L	<	1.7									
	Fluorene	µg/L	<	1.5									
	Hexachlorobenzene	µg/L	<	1.7									
	Hexachlorobutadiene	µg/L	<	1.9									
	Hexachlorocyclopentadiene	µg/L	<	2.9									
	Hexachloroethane	µg/L	<	1.4									
	Indeno(1,2,3-cd)Pyrene	µg/L	<	1.6									
	Isophorone	µg/L	<	1.7									
	Naphthalene	µg/L	<	1.6									
	Nitrobenzene	µg/L	<	2									
	n-Nitrosodimethylamine	µg/L	<	4.3									
	n-Nitrosodi-n-Propylamine	µg/L	<	1.6									
	n-Nitrosodiphenylamine	µg/L	<	1.9									
	Phenanthrene	µg/L	<	1.5									
	Pyrene	µg/L	<	1.6									
	1,2,4-Trichlorobenzene	µg/L	<	1.5									
Group 6	Aldrin	µg/L	<										
	alpha-BHC	µg/L	<										
	beta-BHC	µg/L	<										
	gamma-BHC	µg/L	<										
	delta BHC	µg/L	<										
	Chlordane	µg/L	<										
	4,4-DDT	µg/L	<										
	4,4-DDE	µg/L	<										
	4,4-DDD	µg/L	<										
	Dieldrin	µg/L	<										
	alpha-Endosulfan	µg/L	<										
	beta-Endosulfan	µg/L	<										
	Endosulfan Sulfate	µg/L	<										
	Endrin	µg/L	<										
	Endrin Aldehyde	µg/L	<										
	Heptachlor	µg/L	<										
	Heptachlor Epoxide	µg/L	<										
	PCB-1016	µg/L	<										
	PCB-1221	µg/L	<										
	PCB-1232	µg/L	<										
	PCB-1242	µg/L	<										
	PCB-1248	µg/L	<										
	PCB-1254	µg/L	<										
	PCB-1260	µg/L	<										
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<										
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

Stream / Surface Water Information

Lewisburg Area Joint Sewer Authority, NPDES Permit No. PA0044661, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **West Branch Susquehanna River**

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	018668	6.7	430	6855			Yes
End of Reach 1	018668	0.1	422.7	9655			Yes

Q ***7-10***

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	6.7	0.1224										100	7		
End of Reach 1	0.1	0.1224													

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	6.7														
End of Reach 1	0.1														

Model Results

Lewisburg Area Joint Sewer Authority, NPDES Permit No. PA0044661, Outfall 001

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

☑ ***Hydrodynamics***

Q_{7-10}

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
6.7	839.05		839.05	3.744	0.00021	1.156	625.708	541.249	1.165	0.346	29564.434
0.1	1181.77		1181.772								

Q_h

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
6.7	2669.19		2669.19	3.744	0.00021	1.921	625.708	325.716	2.224	0.181	13886.189
0.1	3600.67		3600.67								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.023 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 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 Aluminum	0	0		0	750	750	4,536	
Total Antimony	0	0		0	1,100	1,100	6,653	
Total Arsenic	0	0		0	340	340	2,056	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	127,014	
Total Boron	0	0		0	8,100	8,100	48,991	
Total Cadmium	0	0		0	2.014	2.13	12.9	Chem Translator of 0.944 applied
Total Chromium (III)	0	0		0	569.763	1,803	10,905	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	98.5	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	575	
Total Copper	0	0		0	13.439	14.0	84.7	Chem Translator of 0.96 applied

Free Cyanide	0	0		0	22	22.0	133	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	64.581	81.6	494	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	9.96	Chem Translator of 0.85 applied
Total Nickel	0	0		0	468.236	469	2,838	Chem Translator of 0.998 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0		0	3.217	3.78	22.9	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	393	
Total Zinc	0	0		0	117.180	120	725	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	18.1	
Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	650	650	3,931	
Benzene	0	0		0	640	640	3,871	
Bromoform	0	0		0	1,800	1,800	10,887	
Carbon Tetrachloride	0	0		0	2,800	2,800	16,935	
Chlorobenzene	0	0		0	1,200	1,200	7,258	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	108,869	
Chloroform	0	0		0	1,900	1,900	11,492	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	90,724	
1,1-Dichloroethylene	0	0		0	7,500	7,500	45,362	
1,2-Dichloropropane	0	0		0	11,000	11,000	66,531	
1,3-Dichloropropylene	0	0		0	310	310	1,875	
Ethylbenzene	0	0		0	2,900	2,900	17,540	
Methyl Bromide	0	0		0	550	550	3,327	
Methyl Chloride	0	0		0	28,000	28,000	169,352	
Methylene Chloride	0	0		0	12,000	12,000	72,579	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	6,048	
Tetrachloroethylene	0	0		0	700	700	4,234	
Toluene	0	0		0	1,700	1,700	10,282	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	41,128	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	18,145	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	20,564	
Trichloroethylene	0	0		0	2,300	2,300	13,911	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	3,387	
2,4-Dichlorophenol	0	0		0	1,700	1,700	10,282	
2,4-Dimethylphenol	0	0		0	660	660	3,992	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	484	
2,4-Dinitrophenol	0	0		0	660	660	3,992	
2-Nitrophenol	0	0		0	8,000	8,000	48,386	
4-Nitrophenol	0	0		0	2,300	2,300	13,911	
p-Chloro-m-Cresol	0	0		0	160	160	968	

Pentachlorophenol	0	0		0	8.723	8.72	52.8	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	2,782	
Acenaphthene	0	0		0	83	83.0	502	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	1,814	
Benzo(a)Anthracene	0	0		0	0.5	0.5	3.02	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	30,000	30,000	181,449	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	27,217	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	1,633	
Butyl Benzyl Phthalate	0	0		0	140	140	847	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	820	820	4,960	
1,3-Dichlorobenzene	0	0		0	350	350	2,117	
1,4-Dichlorobenzene	0	0		0	730	730	4,415	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	24,193	
Dimethyl Phthalate	0	0		0	2,500	2,500	15,121	
Di-n-Butyl Phthalate	0	0		0	110	110	665	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	9,677	
2,6-Dinitrotoluene	0	0		0	990	990	5,988	
1,2-Diphenylhydrazine	0	0		0	15	15.0	90.7	
Fluoranthene	0	0		0	200	200	1,210	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	10	10.0	60.5	
Hexachlorocyclopentadiene	0	0		0	5	5.0	30.2	
Hexachloroethane	0	0		0	60	60.0	363	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	60,483	
Naphthalene	0	0		0	140	140	847	
Nitrobenzene	0	0		0	4,000	4,000	24,193	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	102,821	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	1,814	
Phenanthrene	0	0		0	5	5.0	30.2	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	786	

☑ ***CFC*** CCT (min): 720 PMF: 0.156 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 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 Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	7,915	
Total Arsenic	0	0		0	150	150	5,396	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	147,500	
Total Boron	0	0		0	1,600	1,600	57,561	
Total Cadmium	0	0		0	0.246	0.27	9.74	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.115	86.2	3,100	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	374	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	684	
Total Copper	0	0		0	8.956	9.33	336	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	187	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	337,682	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.517	3.18	114	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	32.6	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.007	52.2	1,877	Chem Translator of 0.997 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	4.600	4.99	179	Chem Translator of 0.922 applied
Total Silver	0	0		0	N/A	N/A	N/A	Chem Translator of 1 applied
Total Thallium	0	0		0	13	13.0	468	
Total Zinc	0	0		0	118.139	120	4,310	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	108	
Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	130	130	4,677	
Benzene	0	0		0	130	130	4,677	
Bromoform	0	0		0	370	370	13,311	
Carbon Tetrachloride	0	0		0	560	560	20,146	
Chlorobenzene	0	0		0	240	240	8,634	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	125,914	
Chloroform	0	0		0	390	390	14,030	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	111,524	
1,1-Dichloroethylene	0	0		0	1,500	1,500	53,963	
1,2-Dichloropropane	0	0		0	2,200	2,200	79,146	
1,3-Dichloropropylene	0	0		0	61	61.0	2,195	
Ethylbenzene	0	0		0	580	580	20,866	
Methyl Bromide	0	0		0	110	110	3,957	
Methyl Chloride	0	0		0	5,500	5,500	197,866	

Methylene Chloride	0	0		0	2,400	2,400	86,341	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	7,555	
Tetrachloroethylene	0	0		0	140	140	5,037	
Toluene	0	0		0	330	330	11,872	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	50,366	
1,1,1-Trichloroethane	0	0		0	610	610	21,945	
1,1,2-Trichloroethane	0	0		0	680	680	24,463	
Trichloroethylene	0	0		0	450	450	16,189	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	3,957	
2,4-Dichlorophenol	0	0		0	340	340	12,232	
2,4-Dimethylphenol	0	0		0	130	130	4,677	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	576	
2,4-Dinitrophenol	0	0		0	130	130	4,677	
2-Nitrophenol	0	0		0	1,600	1,600	57,561	
4-Nitrophenol	0	0		0	470	470	16,909	
p-Chloro-m-Cresol	0	0		0	500	500	17,988	
Pentachlorophenol	0	0		0	6.693	6.69	241	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	3,274	
Acenaphthene	0	0		0	17	17.0	612	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	2,123	
Benzo(a)Anthracene	0	0		0	0.1	0.1	3.6	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	6,000	6,000	215,853	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	32,738	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	1,943	
Butyl Benzyl Phthalate	0	0		0	35	35.0	1,259	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	160	160	5,756	
1,3-Dichlorobenzene	0	0		0	69	69.0	2,482	
1,4-Dichlorobenzene	0	0		0	150	150	5,396	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	28,780	
Dimethyl Phthalate	0	0		0	500	500	17,988	
Di-n-Butyl Phthalate	0	0		0	21	21.0	755	
2,4-Dinitrotoluene	0	0		0	320	320	11,512	
2,6-Dinitrotoluene	0	0		0	200	200	7,195	
1,2-Diphenylhydrazine	0	0		0	3	3.0	108	

Fluoranthene	0	0		0	40	40.0	1,439	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	2	2.0	72.0	
Hexachlorocyclopentadiene	0	0		0	1	1.0	36.0	
Hexachloroethane	0	0		0	12	12.0	432	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	75,549	
Naphthalene	0	0		0	43	43.0	1,547	
Nitrobenzene	0	0		0	810	810	29,140	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	122,317	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	2,123	
Phenanthrene	0	0		0	1	1.0	36.0	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	935	

☑ ***THH*** CCT (min): 720 PMF: 0.156 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 Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	201	
Total Arsenic	0	0		0	10	10.0	360	
Total Barium	0	0		0	2,400	2,400	86,341	
Total Boron	0	0		0	3,100	3,100	111,524	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Free Cyanide	0	0		0	4	4.0	144	
Dissolved Iron	0	0		0	300	300	10,793	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	35,976	
Total Mercury	0	0		0	0.050	0.05	1.8	
Total Nickel	0	0		0	610	610	21,945	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	0.24	0.24	8.63	

Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	108	
Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	N/A	N/A	N/A	
Benzene	0	0		0	N/A	N/A	N/A	
Bromoform	0	0		0	N/A	N/A	N/A	
Carbon Tetrachloride	0	0		0	N/A	N/A	N/A	
Chlorobenzene	0	0		0	100	100.0	3,598	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	205	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	N/A	N/A	N/A	
1,1-Dichloroethylene	0	0		0	33	33.0	1,187	
1,2-Dichloropropane	0	0		0	N/A	N/A	N/A	
1,3-Dichloropropylene	0	0		0	N/A	N/A	N/A	
Ethylbenzene	0	0		0	68	68.0	2,446	
Methyl Bromide	0	0		0	100	100.0	3,598	
Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	N/A	N/A	N/A	
1,1,2,2-Tetrachloroethane	0	0		0	N/A	N/A	N/A	
Tetrachloroethylene	0	0		0	N/A	N/A	N/A	
Toluene	0	0		0	57	57.0	2,051	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	3,598	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	359,756	
1,1,2-Trichloroethane	0	0		0	N/A	N/A	N/A	
Trichloroethylene	0	0		0	N/A	N/A	N/A	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	30	30.0	1,079	
2,4-Dichlorophenol	0	0		0	10	10.0	360	
2,4-Dimethylphenol	0	0		0	100	100.0	3,598	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	72.0	
2,4-Dinitrophenol	0	0		0	10	10.0	360	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	N/A	N/A	N/A	
Phenol	0	0		0	4,000	4,000	143,902	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	2,518	
Anthracene	0	0		0	300	300	10,793	
Benzidine	0	0		0	N/A	N/A	N/A	
Benzo(a)Anthracene	0	0		0	N/A	N/A	N/A	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	

Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroisopropyl)Ether	0	0		0	200	200	7,195	
Bis(2-Ethylhexyl)Phthalate	0	0		0	N/A	N/A	N/A	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	0.1	0.1	3.6	
2-Chloronaphthalene	0	0		0	800	800	28,780	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	1,000	1,000	35,976	
1,3-Dichlorobenzene	0	0		0	7	7.0	252	
1,4-Dichlorobenzene	0	0		0	300	300	10,793	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	21,585	
Dimethyl Phthalate	0	0		0	2,000	2,000	71,951	
Di-n-Butyl Phthalate	0	0		0	20	20.0	720	
2,4-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
2,6-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
1,2-Diphenylhydrazine	0	0		0	N/A	N/A	N/A	
Fluoranthene	0	0		0	20	20.0	720	
Fluorene	0	0		0	50	50.0	1,799	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	N/A	N/A	N/A	
Hexachlorocyclopentadiene	0	0		0	4	4.0	144	
Hexachloroethane	0	0		0	N/A	N/A	N/A	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	34	34.0	1,223	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	360	
n-Nitrosodimethylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	N/A	N/A	N/A	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	20	20.0	720	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	2.52	

☑ ***CRL*** CCT (min): 720 PMF: 0.228 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 Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	

Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Free Cyanide	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	N/A	N/A	N/A	
Acrylamide	0	0		0	0.07	0.07	11.4	
Acrylonitrile	0	0		0	0.06	0.06	9.8	
Benzene	0	0		0	0.58	0.58	94.7	
Bromoform	0	0		0	7	7.0	1,143	
Carbon Tetrachloride	0	0		0	0.4	0.4	65.3	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	131	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	N/A	N/A	N/A	
Dichlorobromomethane	0	0		0	0.95	0.95	155	
1,2-Dichloroethane	0	0		0	9.9	9.9	1,617	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	147	
1,3-Dichloropropylene	0	0		0	0.27	0.27	44.1	
Ethylbenzene	0	0		0	N/A	N/A	N/A	
Methyl Bromide	0	0		0	N/A	N/A	N/A	
Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	20	20.0	3,267	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	32.7	
Tetrachloroethylene	0	0		0	10	10.0	1,633	
Toluene	0	0		0	N/A	N/A	N/A	
1,2-trans-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,1,1-Trichloroethane	0	0		0	N/A	N/A	N/A	
1,1,2-Trichloroethane	0	0		0	0.55	0.55	89.8	

Trichloroethylene	0	0		0	0.6	0.6	98.0	
Vinyl Chloride	0	0		0	0.02	0.02	3.27	
2-Chlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dichlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dimethylphenol	0	0		0	N/A	N/A	N/A	
4,6-Dinitro-o-Cresol	0	0		0	N/A	N/A	N/A	
2,4-Dinitrophenol	0	0		0	N/A	N/A	N/A	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	0.030	0.03	4.9	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	245	
Acenaphthene	0	0		0	N/A	N/A	N/A	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	0.0001	0.0001	0.016	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.16	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.016	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.16	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	1.63	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	4.9	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	52.3	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	N/A	N/A	N/A	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	0.12	0.12	19.6	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.016	
1,2-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,3-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,4-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
3,3-Dichlorobenzidine	0	0		0	0.05	0.05	8.17	
Diethyl Phthalate	0	0		0	N/A	N/A	N/A	
Dimethyl Phthalate	0	0		0	N/A	N/A	N/A	
Di-n-Butyl Phthalate	0	0		0	N/A	N/A	N/A	
2,4-Dinitrotoluene	0	0		0	0.05	0.05	8.17	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	8.17	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	4.9	
Fluoranthene	0	0		0	N/A	N/A	N/A	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	0.00008	0.00008	0.013	
Hexachlorobutadiene	0	0		0	0.01	0.01	1.63	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	16.3	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.16	

Isophorone	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	N/A	N/A	N/A	
n-Nitrosodimethylamine	0	0		0	0.0007	0.0007	0.11	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.82	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	539	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	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 Zinc	9.37	14.6	0.46	0.72	1.16	mg/L	0.46	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Hexachlorobutadiene	0.033	0.051	1.63	2.55	4.08	µg/L	1.63	CRL	Discharge Conc ≥ 50% WQBEL (RP)
1,2,4-Trichlorobenzene	0.051	0.079	2.52	3.93	6.3	µg/L	2.52	THH	Discharge Conc ≥ 50% WQBEL (RP)

☐ ***Other Pollutants without Limits or Monitoring***

WET Summary and Evaluation

Facility Name	Lewisburg Area Joint Sewer Authority
Permit No.	PA0044661
Design Flow (MGD)	2.42
Q_{7-10} Flow (cfs)	839
PMF_a	0.022
PMF_c	0.156

		Test Results (Pass/Fail)			
		Test Date	**Test Date**	**Test Date**	**Test Date**
Species	**Endpoint**	6/21/21	8/29/22	6/19/23	6/25/24
Ceriodaphnia	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	**Test Date**	**Test Date**	**Test Date**
Species	**Endpoint**	6/21/21	8/29/22	6/19/23	6/25/24
Ceriodaphnia	Reproduction	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	**Test Date**	**Test Date**	**Test Date**
Species	**Endpoint**	6/22/21	8/29/22	6/20/23	6/25/24
Pimephales	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	**Test Date**	**Test Date**	**Test Date**
Species	**Endpoint**	6/22/21	8/29/22	6/20/23	6/25/24
Pimephales	Growth	PASS	PASS	PASS	PASS

Reasonable Potential? NO

Permit Recommendations

Test Type	**Chronic**	
TIWC	**3**	% Effluent
Dilution Series	**1, 3, 30, 60, 100**	% Effluent
Permit Limit	**None**	
Permit Limit Species		

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Survival
TIWC (decimal)	0.03
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name

Lewisburg Area Joint Sewer Authority

Permit No.

PA0044661

Replicate No.	Test Completion Date: 6/21/2021 Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	10	10
T-Test Result		
Deg. of Freedom		
Critical T Value		
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date: 8/29/2022 Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	10	10
T-Test Result		
Deg. of Freedom		
Critical T Value		
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date: 6/19/2023 Control	TIWC
1	1	1
2	1	1
3	1	1
4	0	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	0.900	1.000
Std Dev.	0.316	0.000
# Replicates	10	10
T-Test Result		
Deg. of Freedom		
Critical T Value		
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date: 6/25/2024 Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	10	10
T-Test Result		
Deg. of Freedom		
Critical T Value		
Pass or Fail	**PASS**	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Reproduction
TIWC (decimal)	0.03
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name: Lewisburg Area Joint Sewer Authority

Permit No.: PA0044661

Test Completion Date: 6/21/2021

Replicate No.	Control	TIWC
1	45	42
2	40	45
3	44	54
4	44	51
5	40	35
6	41	46
7	41	41
8	41	41
9	38	50
10	50	44
11		
12		
13		
14		
15		

	Control	TIWC
Mean	42.400	44.900
Std Dev.	3.438	5.626
# Replicates	10	10

T-Test Result	6.6933
Deg. of Freedom	14
Critical T Value	0.8681
Pass or Fail	**PASS**

Test Completion Date: 8/29/2022

Replicate No.	Control	TIWC
1	32	32
2	31	28
3	33	28
4	33	16
5	16	32
6	31	20
7	20	23
8	20	34
9	31	30
10	29	36
11		
12		
13		
14		
15		

	Control	TIWC
Mean	27.600	27.900
Std Dev.	6.363	6.402
# Replicates	10	10

T-Test Result	2.8513
Deg. of Freedom	16
Critical T Value	0.8647
Pass or Fail	**PASS**

Test Completion Date: 6/19/2023

Replicate No.	Control	TIWC
1	27	39
2	50	48
3	27	43
4	5	43
5	45	46
6	43	34
7	32	27
8	39	8
9	35	31
10	29	37
11		
12		
13		
14		
15		

	Control	TIWC
Mean	33.200	35.600
Std Dev.	12.674	11.759
# Replicates	10	10

T-Test Result	2.2378
Deg. of Freedom	16
Critical T Value	0.8647
Pass or Fail	**PASS**

Test Completion Date: 6/25/2024

Replicate No.	Control	TIWC
1	42	43
2	37	39
3	43	38
4	49	45
5	45	46
6	49	49
7	45	53
8	50	40
9	50	55
10	39	48
11		
12		
13		
14		
15		

	Control	TIWC
Mean	44.900	45.600
Std Dev.	4.654	5.777
# Replicates	10	10

T-Test Result	5.5869
Deg. of Freedom	15
Critical T Value	0.8662
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Survival
TIWC (decimal)	0.03
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name

Lewisburg Area Joint Sewer Authority

Permit No.

PA0044661

Replicate No.	Test Completion Date: 6/22/2021 Control	TIWC
1	10	10
2	9	9
3	10	9
4	9	10
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	9.500	9.500
Std Dev.	0.577	0.577
# Replicates	4	4
T-Test Result	5.6564	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date: 8/29/2022 Control	TIWC
1	10	9
2	9	9
3	9	9
4	8	8
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	9.000	8.750
Std Dev.	0.816	0.500
# Replicates	4	4
T-Test Result	4.6505	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date: 6/20/2023 Control	TIWC
1	10	9
2	10	10
3	10	10
4	9	10
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	9.750	9.750
Std Dev.	0.500	0.500
# Replicates	4	4
T-Test Result	6.7314	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date: 6/25/2024 Control	TIWC
1	10	10
2	10	10
3	10	10
4	10	10
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	10.000	10.000
Std Dev.	0.000	0.000
# Replicates	4	4
T-Test Result		
Deg. of Freedom		
Critical T Value		
Pass or Fail	**PASS**	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Growth
TIWC (decimal)	0.03
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name

Lewisburg Area Joint Sewer Authority

Permit No.

PA0044661

Replicate No.	Test Completion Date 6/22/2021 Control	TIWC
1	0.739	0.929
2	0.665	0.565
3	0.667	0.764
4	0.8	0.768
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6		
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9		
10		
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12		
13		
14		
15		
Mean	0.718	0.757
Std Dev.	0.065	0.149
# Replicates	4	4
T-Test Result	2.7843	
Deg. of Freedom	4	
Critical T Value	0.7407	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date 8/29/2022 Control	TIWC
1	0.49	0.431
2	0.425	0.467
3	0.495	0.49
4	0.316	0.388
5		
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9		
10		
11		
12		
13		
14		
15		
Mean	0.432	0.444
Std Dev.	0.083	0.045
# Replicates	4	4
T-Test Result	3.1369	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date 6/20/2023 Control	TIWC
1	0.551	0.396
2	0.537	0.454
3	0.511	0.49
4	0.442	0.541
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.510	0.470
Std Dev.	0.048	0.061
# Replicates	4	4
T-Test Result	2.4660	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date 6/25/2024 Control	TIWC
1	0.507	0.485
2	0.525	0.514
3	0.483	0.544
4	0.538	0.513
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.513	0.514
Std Dev.	0.024	0.024
# Replicates	4	4
T-Test Result	8.6027	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	**PASS**	