pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0081922**
Facility Type	**Municipal**	APS ID	**742989**
Major / Minor	**Minor**	Authorization ID	**1435880**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Lewisberry Area Joint Authority York County**	Facility Name	**Lewisberry Borough STP**
Applicant Address	PO Box 363	Facility Address	1 S Market Street
	Lewisberry, PA 17339-0363		Lewisberry, PA 17339
Applicant Contact	Eric Carr	Facility Contact	Eric Carr
Applicant Phone	(717) 938-3596	Facility Phone	(717) 938-3596
Client ID	145944	Site ID	270304
Ch 94 Load Status	Not Overloaded	Municipality	Lewisberry Borough
Connection Status		County	York
Date Application Received	April 13, 2023	EPA Waived?	Yes
Date Application Accepted	July 27, 2023	If No, Reason	

Purpose of Application: Renewal of Existing NPDES Permit

Summary of Review

The Lewisberry Area Joint Authority (LAJA) has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of a NPDES permit for the Lewisberry Borough STP. The permit was last reissued on July 20, 2018. The permit expired on July 31, 2023 but the terms and conditions of the permit have been administratively extended since that time.

Based on the review outlined in this fact sheet, it is recommended that the permit be drafted, and a notice of the draft permit be published in the *Pennsylvania Bulletin* for public comments for 30 days. A file review of documents associated with the discharge or permittee may be available at the PA DEP southcentral regional office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file reviews, contact the SCRO file review coordinator at 717.705.4700.

Sludge use and disposal description and location(s): Kline's Services and Manheim WWTP

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
x		*Aaron Baar* Aaron Baar / Project Manager	July 19, 2024
x		*Maria D. Bebenek* for Daniel W. Martin, P.E. / Environmental Engineer Manager	August 19, 2024

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.1
Latitude	40º 7' 56.45"	Longitude	-76º 51' 41.52"
Quad Name	Steelton	Quad Code	1731
Wastewater Description:	Treated Sewage Effluent		
Receiving Waters	Bennett Run (WWF)	Stream Code	08458
NHD Com ID	57463857	RMI	5.5
Drainage Area	5.9 sq. mi.	Yield (cfs/mi^2)	0.0507
Q_{7-10} Flow (cfs)	0.299	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	414.21	Slope (ft/ft)	
Watershed No.	7-F	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	SILTATION		
Source(s) of Impairment	DAM OR IMPOUNDMENT		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Wrightsville Water Company		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	43.54	Distance from Outfall (mi)	27.4

Drainage Area

The discharge is to Bennet Run at RMI 5.5. A drainage area upstream of the discharge is determined to be 5.9 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 0.299 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} = 0.299 cfs
Q_{30-10} = 1.36 * 0.299 cfs = 0.4066 cfs
Q_{1-10} = 0.64 * 0.299 cfs = 0.1914 cfs
LFY = 0.299 cfs/1.36 mi^2 = 0.0507 cfs/mi^2

Bennet Run

25 Pa Code §93.9 classifies the receiving water, Bennet Run, with a WWF Existing Use designation. 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 not attaining use; the cause of the impairments have been identified as siltation and pathogens (see *Local Watershed TMDL* below).

Local Watershed Total Maximum Daily Loads (TMDLs)

According to PA's 2024 integrated water quality monitoring and assessment report, Bennet Run in the vicinity of the proposed point of discharge is impaired for aquatic life due to siltation from a dam/impoundment and impaired for recreation due to an unknown source of pathogens. Both impairments are listed as Category 5 in the 2024 integrated report, indicating that the water is impaired for one or more uses by a pollutant that requires the development of a

TMDL. No TMDL has been developed for Bennet Run to date, so no local watershed TMDL has been taken into consideration during this review.

Public Water Supply Intake

The nearest downstream public water supply intake is the Wrightsville Water Company, locate on the Susquehanna River approximately 27.4 miles from the point of discharge. Considering the nature of the discharge and distance, the discharge is not expected to impact 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.

DEP has evaluated information indicating that the existing use of the receiving waters is different than the designated use under 25 Pa. Code § 93.9. In developing the draft NPDES permit, DEP is proposing to protect the existing use of the receiving waters. Following DEP's notice of the receipt of the application and the draft permit in the Pennsylvania Bulletin, DEP will accept written comments during the public comment period regarding DEP's tentative determination to protect the existing use. DEP will make a final determination on existing use protection for the receiving waters as part of the final permit action.

Treatment Facility Summary

Treatment Facility Name: Lewisberry STP

WQM Permit No.	Issuance Date
6785414 A-1	2000

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	Ultraviolet	0.1

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.1	160	Not Overloaded	Aerobic Digestion	Combination of methods

LAJA operates and owns the wastewater treatment facility located at 1 South Market Street, Lewisberry, PA 17339 (in Lewisberry Borough, York County). The facility was built in 1987 (upgraded in 2000) and currently serves Lewisberry Borough and areas of Fairview and Newberry Townships. With an annual average design flow and hydraulic design capacity of 0.10 MGD, the facility is an extended aeration package treatment facility. The treatment process is as follows:

Comminutor → Bar Screen → Equalization Tanks (4) → Aeration Tanks (12) → Clarifiers (4) → Flow meter tank → Final Settling Tank → UV disinfection → Post-Aeration → Outfall 001 to Bennett Run

MasterMet 9005 is used for settling/phosphorous removal, MasterCat 4244 is used for copper removal, and soda ash is used for pH control. Sludge digesters (4) are provided for solids handling. Solids generated from the facility is sent to either other WWTP or landfill for disposal.

Past applications have documented a number of commercial users connected to the sewer system. However, none of these users contribute industrial wastewater to the wastewater treatment facility.

Compliance History	
Summary of DMRs:	DMR results for the past year are presented below.
Summary of Inspections:	Since the last renewal of the facility's NPDES permit, the following inspections have been logged: August 23, 2019: A routine CEI was conducted by Austen Randecker. No violations were noted. Recommendations were made regarding maintenance of records, removing solids from the clarifiers, covering bagged sludge, updating the emergency response number and notifying the Department when the Bar Screen is replaced (in kind/no permit). June 23, 2020: An administrative inspection was conducted via phone by Austen Randecker. No violations were noted.

Other Comments: As of July 19, 2024, there are no open violations associated with this facility.

Existing Effluent Limitations and Monitoring Requirements

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum 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	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/week	Recorded
CBOD5 (5/1 to 10/31)	17	27	XXX	20	32	40	2/month	8-hr comp
CBOD5 (11/1 to 4/30)	21	33	XXX	25	40	50	2/month	8-hr comp
BOD5 Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-hr comp
Total Suspended Solids	25	38	XXX	30	45	60	2/month	8-hr comp
Total Suspended Solids Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-hr comp
Fecal Coliform (No. /100 ml) (5/1 to 9/30)	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Fecal Coliform (No. /100 ml) (10/1 to 4/30)	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Ammonia-Nitrogen (5/1 to 10/31)	2.5	XXX	XXX	3.0	XXX	6.0	2/month	8-hr comp
Ammonia-Nitrogen (11/1 to 4/30)	7.5	XXX	XXX	9.0	XXX	18	2/month	8-hr comp
Total Phosphorus	1.7	XXX	XXX	2.0	XXX	4.0	2/month	8-hr comp
Total Copper	0.02	0.032 Daily Max	XXX	0.024	0.038 Daily Max	XXX	2/month	24-hr comp
NO3-NO2 as N	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/quarter	8-hr comp
TKN	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/quarter	8-hr comp
Total Nitrogen	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/quarter	Calculation

Compliance History

DMR Data for Outfall 001 (from June 1, 2023 to May 31, 2024)

Parameter	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23
Flow (MGD) Average Monthly	0.039	0.0871	0.0718	0.055	0.1022	0.0548	0.033	0.0306	0.0349	0.0292	0.0378	0.026
Flow (MGD) Daily Maximum	0.071	0.4157	0.341	0.089	0.3806	0.1664	0.095	0.081	0.12	0.0539	0.130	0.0489
pH (S.U.) Daily Minimum	7.1	7.0	7.1	6.8	6.9	7.0	7.0	7.0	6.4	7.1	7.2	6.8
pH (S.U.) Daily Maximum	8.2	7.5	7.9	8.0	7.5	8.4	8.3	8.1	8.1	8.1	8.1	8.0
DO (mg/L) Daily Minimum	5.0	6.3	6.7	6.6	9.0	6.4	7.4	7.1	5.9	6.6	5.0	7.9
CBOD5 (lbs/day) Average Monthly	0.86	8.9	< 1.85	< 1.4	< 3.1	< 1.35	< 0.7	< 0.55	< 0.53	< 0.56	< 0.59	< 0.045
CBOD5 (lbs/day) Weekly Average	1.22	13.9	< 1.96	2.18	5.38	< 2.18	0.77	< 0.65	< 0.56	< 0.61	< 0.7	< 0.49
CBOD5 (mg/L) Average Monthly	4.4	5.3	< 2.5	< 2.8	< 2.9	< 2.7	< 2.6	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4
CBOD5 (mg/L) Weekly Average	5.3	6.6	2.6	3.2	3.3	< 2.4	2.7	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	57	300	143	96.6	127.4	93.6	73	85.8	43.7	91.8	46.09	70
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	59	399	192	126.1	179.2	99.9	78.6	116.69	46.93	124	73.1	85.4
BOD5 (mg/L) Raw Sewage Influent Average Monthly	319	226	200	211.5	166.5	308	269	362	197.5	402.5	239	366.5
TSS (lbs/day) Average Monthly	1.2	8.8	2.43	1.8	8.69	3.81	0.71	1.5	0.88	0.47	0.74	0.46
TSS (lbs/day) Raw Sewage Influent Average Monthly	71	267	153	93.5	86.6	89.4	71.8	91	75.24	188	94.0	59
TSS (lbs/day) Raw Sewage Influent Daily Maximum	92	319	188	117	110.78	90.7	74.4	127	78.80	276.7	119.3	64.57

TSS (lbs/day) Weekly Average	1.27	10.7	4.0	2.25	14.66	7.28	0.96	2.44	1.07	0.51	0.88	0.52
TSS (mg/L) Average Monthly	7.0	10.0	3.5	5.0	8.5	6.7	2.5	6.0	4.0	2.0	3.0	2.5
TSS (mg/L) Raw Sewage Influent Average Monthly	433	226	212	210	126	288	266	384	338	833	374	314
TSS (mg/L) Weekly Average	9.0	18.0	6.0	8.0	9.0	8.0	3.0	9.0	5.0	2.0	3.0	3.0
Fecal Coliform (No./100 ml) Geometric Mean	< 1	90.7	18	1.4	85.2	< 1.7	< 1	< 1	< 1	< 1	< 1	< 1
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 1	411	29	2	> 2420	3.0	< 1	< 1	< 1	< 1	< 1.0	< 1.0
UV Transmittance (%) Daily Minimum	88.2	90.6	86.6	78.8	82.1	78.0	84.1	83.5	83.5	79.7	56.6	79.0
Nitrate-Nitrite (lbs/day) Daily Maximum			6.79			9.77			6.27			9.96
Nitrate-Nitrite (mg/L) Daily Maximum			20			36			31.0			33.0
Total Nitrogen (lbs/day) Daily Maximum			< 6.9			< 36.5			< 6.37			10.11
Total Nitrogen (mg/L) Daily Maximum			< 20.5			< 9.9			< 31.5			33.5
Ammonia (lbs/day) Average Monthly	0.63	1.5	0.16	< 0.05	< 0.13	< 0.05	< 0.03	< 0.02	0.04	< 0.02	< 0.02	< 0.82
Ammonia (mg/L) Average Monthly	2.8	0.77	0.21	< 0.1	< 0.18	< 0.1	< 0.1	< 0.1	< 0.17	< 0.1	< 0.1	4.0
TKN (lbs/day) Daily Maximum			< 0.17			< 0.14			< 0.10			< 0.15
TKN (mg/L) Daily Maximum			< 0.5			< 0.5			< 0.5			< 0.5
Total Phosphorus (lbs/day) Average Monthly	0.38	1.9	0.65	0.38	0.61	0.30	0.18	0.1	0.15	0.19	0.22	0.17
Total Phosphorus (mg/L) Average Monthly	2.0	0.94	0.88	0.75	0.6	0.64	0.64	0.43	0.67	0.8	0.9	0.89
Total Copper (lbs/day) Average Monthly	< 0.001	0.011	< 0.004	0.003	< 0.006	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Total Copper (lbs/day) Daily Maximum	0.001	0.017	< 0.004	0.004	0.010	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total Copper (mg/L) Average Monthly	< 0.005	0.006	< 0.005	0.006	< 0.006	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Total Copper (mg/L) Daily Maximum	0.005	0.007	0.005	0.006	0.006	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005

Compliance History

Effluent Violations for Outfall 001, from: July 1, 2023 To: May 31, 2024

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	01/31/24	IMAX	> 2420	No./100 ml	10000	No./100 ml
Total Phosphorus	04/30/24	Avg Mo	1.9	lbs/day	1.7	lbs/day

Other Comments: Stated cause for the fecal violation and TP violation were both, “Hydraulic flow exceeding plan or unit design.” - Operations will determine if further action is needed or not.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .1
Latitude 40º 7' 58.75" **Longitude** -76º 51' 40.34"
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: These standards apply, subject to water quality analysis and BPJ where applicable.

Water Quality-Based Limitations

CBOD5, NH3-N and Dissolved Oxygen (DO)

WQM 7.0 version 1.0b is a water quality model designed to assist DEP to determine appropriate permit requirements for CBOD5, NH3-N and DO. DEP's guidance no. 391-2000-007 provides the technical methods contained in WQM 7.0 for conducting wasteload allocation and for determining recommended NPDES effluent limits for point source discharges. The model was utilized using data derived by USGS StreamStats and the model output indicated that existing WQBELs for ammonia and CBOD5 are still protective of water quality

The model also determined that the facility's existing DO limits of 5 mg/L are still protective of water quality.

Weekly limits currently exist for BOD5 and TSS. In conformity with SOP No. BCW-PMT-033, which states, "weekly average limits for CBOD5 and TSS will not be imposed where the sampling frequency is less than 1/week," weekly limits have been removed from the renewed permit. No change is proposed to the average monthly or peak instantaneous limits.

Toxics

A reasonable potential (RP) analysis was done for Copper, Lead and Zinc using the sampling results provided with the application. The Department's Toxics Management Spreadsheet (Version 1.3) was used to perform the RP analysis for these parameters at a pH of 7.0 and a discharge hardness of 100 mg/L. The analysis indicates that limits for Total Copper are still needed to be protective of water quality

☑ ***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 Copper	0.022	0.034	0.026	0.041	0.066	mg/L	0.026	AFC	Discharge Conc ≥ 50% WQBEL (RP)

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

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

Pollutants	Governing WQBEL	Units	Comments
Total Lead	9.33	µg/L	Discharge Conc ≤ 10% WQBEL
Total Zinc	225	µg/L	Discharge Conc ≤ 10% WQBEL

The Total Copper limits recommended by TMS V1.3 are slightly more lenient than the existing limits. Anti-backsliding provisions stipulate that the more stringent exiting limits be maintained in these situations.

The reviewer notes that TMS V1.3 recommends an IMAX limit for Total Copper of 0.066 mg/L. Given that the existing permit does not have an IMAX limit for Total Copper, the IMAX limit for Total Copper of 0.066 mg/L is proposed to be introduced in this renewal.

Total Copper is currently required to be evaluated 2/month via 24-hour composite sampling. All other effluent parameters are currently evaluated based on 8-hour composite sampling. In this renewal, it is proposed to revise the Total Copper sample type to 8-hour composite sampling for operational efficiency at the plant. This sampling frequency is in conformity with DEP's Technical Guidance for the Development and Specification of Effluent Limitations (PA Doc. No. 362-0400-001), Table 6-3 (plant design flow = 0.1 mgd,).

E. Coli Monitoring

In conformity with the Department's *Establishing Effluent Limitations for Individual Sewage Permits* (SOP No. BCW-PMT-033) and as authorized by § 92a.61 of the PA Code, quarterly E. Coli monitoring has been proposed in this permit. The collection method will be via grab sample.

Best Professional Judgment (BPJ) Limitations

Dissolved Oxygen

A minimum of 5.0 mg/L for DO is an existing effluent limit and will remain unchanged in the draft permit as recommended by DEP's SOP. This requirement has also been assigned to other sewage facilities in the region. 5.0 mg/L is taken directly from 25 Pa. Code § 93.7(a) and it is also determined to be appropriate according to water quality modeling.

Ultraviolet Disinfection

The existing UV system is equipped with a transmittance sensor; therefore, UV transmittance is proposed to be continued as the monitoring parameter for the UV system.

Total Phosphorus & Total Nitrogen

DEP's SOP no. BPNPSM-PMT-033 (Establishing Effluent Limitations for Individual Sewage Permits) recommends monitoring requirements for Total Phosphorus and Total Nitrogen for all sewage facilities. Therefore, routine monitoring for TKN, Nitrate-Nitrite, and TN are recommended to be continued in this permit. Sampling frequency for TKN, Nitrate-Nitrite, TN, and TP are currently required 1/quarter, which is consistent with Table 6.3 in Guidance Doc. 362-0400-001. No change is proposed.

Historically, an average monthly Total Phosphorus limit of 2.0 mg/L was recommended in NPDES permits, per DEP phosphorus guidance 391-2000-018, to control phosphorus effluent levels for any facilities that are expected to

contribute 0.25% or more of the total phosphorus loading of the entire basin. DEP has previously determined that this facility meets the criteria and the limit has been continuously imposed in the permit. It is recommended to maintain this limit in the draft permit.

Additional Considerations

Flow Monitoring

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

Chesapeake Bay TMDL

The Department formulated a strategy in April 2007, to comply with the EPA's and Chesapeake Bay Foundation's requirements to reduce point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP) to the Bay. In the Strategy, sewage dischargers have been prioritized by Central Office based on their delivered TN loadings to the Bay. The highest priority (Phases 1, 2, and 3) dischargers received annual loading caps based on their design flow on August 29, 2005 and concentrations of 6 mg/l TN and 0.8 mg/l TP. Phase 4 (0.2 -0.4mgd) and Phase 5 (below 0.2mdg) facilities were required to monitor and report TN and TP during permit renewal at a monitoring frequency following Table 6-3 of DEP's Technical Guidance for Development and Specification of effluent Limitations (No. 362-0400-001).

EPA published the Chesapeake Bay Total Maximum Daily Load (TMDL) in December of 2010. Despite extensive restoration efforts during the past 25 years, the TMDL was prompted by insufficient progress and continued poor water quality in the Chesapeake Bay and its tidal tributaries.

In order to address the TMDL, Pennsylvania developed, in addition to the Bay Strategy, a Chesapeake Watershed Implementation Plan (WIP) Phase 1 in January 2011, Phase 2 in March 2012 and Phase 3 in December 2019. In accordance with the Phase 3 WIP, re-issuing permits for significant dischargers follow the same phased approach formulated in the original Bay strategy, whilst Phase 4 and Phase 5 will be required to monitor and report TN and TP during permit renewal.

The Phase 3 WIP categorizes this facility as a phase 5 sewage facility that has a design flow less than 0.2 MGD but greater than 0.002 MGD. The WIP recommends the following:

1. DEP will issue individual permits with monitoring and reporting for TN and TP throughout the permit term at a frequency no less than annually, unless 1) the facility has already conducted at least two years of nutrient monitoring and 2) a summary of the monitoring results are included in the next permit's fact sheet.

2. Renewed or amended permits that include an increase in design flow will contain Cap Loads based on the lesser of a) existing TN/TP concentrations at current design average annual flow or b) 7,306 lbs/yr TN and 974 lbs/yr TP.

Monitoring Frequency and Sample Type

Unless discussed otherwise above, the permit's monitoring frequency and sample type for all parameters will remain unchanged from the last permit renewal.

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 unless noted otherwise above. This approach is in accordance with 40 CFR §122.44(l(1).

Annual Fees

An annual fee clause is continued in the permit in accordance with 25 Pa. Code § 92a.62. The facility covered by the permit is classified in the Minor Sewage Facility >=0.05 and <1 MGD fee category, which has an annual fee of $1,000.

Mass Loading Limitations

Unless stated otherwise in this fact sheet, mass loading effluent limits are calculated based on the formula: design flow (average annual) (MGD) x concentration limit (mg/L) at design flow x conversion factor (8.34).

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	Daily Maximum	Daily Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
CBOD5 Nov 1 - Apr 30	21.0	XXX	XXX	25.0	XXX	50	2/month	8-Hr Composite
CBOD5 May 1 - Aug 31, Oct 1 - 31	17.0	XXX	XXX	20.0	XXX	40	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS	25.0	XXX	XXX	30.0	XXX	60	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/week	Recorded
Nitrate-Nitrite	XXX	Report	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Total Nitrogen	XXX	Report	XXX	XXX	Report Daily Max	XXX	1/quarter	Calculation

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Daily Minimum	Average Monthly	Maximum	Instant. Maximum		
Ammonia Nov 1 - Apr 30	7.5	XXX	XXX	9.0	XXX	18	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	2.5	XXX	XXX	3.0	XXX	6	2/month	8-Hr Composite
Ammonia (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
TKN	XXX	Report	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Total Phosphorus	1.7	XXX	XXX	2.0	XXX	4	2/month	8-Hr Composite
Total Phosphorus (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Copper	0.02	0.032	XXX	0.024	0.038 Daily Max	0.066	2/month	8-Hr Composite

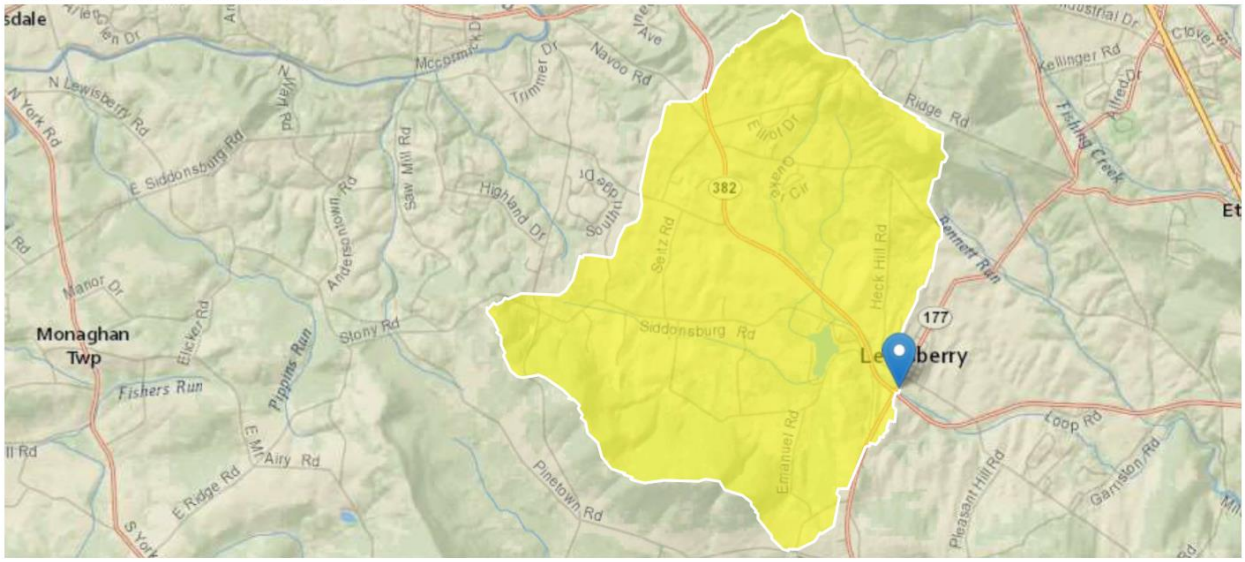
Compliance Sampling Location: Outfall 001

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:


306979 - DISCHARGE POINT
Lewisberry
Lewisberry Borough Park
Silver Lake
Nauvoo Run
Marie Ave
Siddonsburg Rd
East St
West St
Lewisberry Rd
382
Silver Lake Rd
Heck Hill Rd
Newberry Twp
Lewisberry
Nebinger St
Lewisberry Ct
5th St
177
4th St
3rd St
North St
South St
Lewis St
Spruce Ln
Walnut Ln
2nd St
W Front St
Market St
Penn St
Zinn Dr
E Front St
Old Rossville Rd

StreamStats Report

Region ID: PA
Workspace ID: PA20240715115857640000
Clicked Point (Latitude, Longitude): 40.13238, -76.86181
Time: 2024-07-15 07:59:18 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	4.815	degrees
DRNAREA	Area that drains to a point on a stream	5.9	square miles
ROCKDEP	Depth to rock	4.2	feet
URBAN	Percentage of basin with urban development	0.8	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	5.9	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	4.815	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.2	feet	4.13	5.21
URBAN	Percent Urban	0.8	percent	0	89

Low-Flow Statistics Flow Report [Low Flow Region 1]

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

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	0.731	ft^3/s	46	46
30 Day 2 Year Low Flow	1.01	ft^3/s	38	38
7 Day 10 Year Low Flow	0.299	ft^3/s	51	51
30 Day 10 Year Low Flow	0.435	ft^3/s	46	46
90 Day 10 Year Low Flow	0.731	ft^3/s	41	41

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

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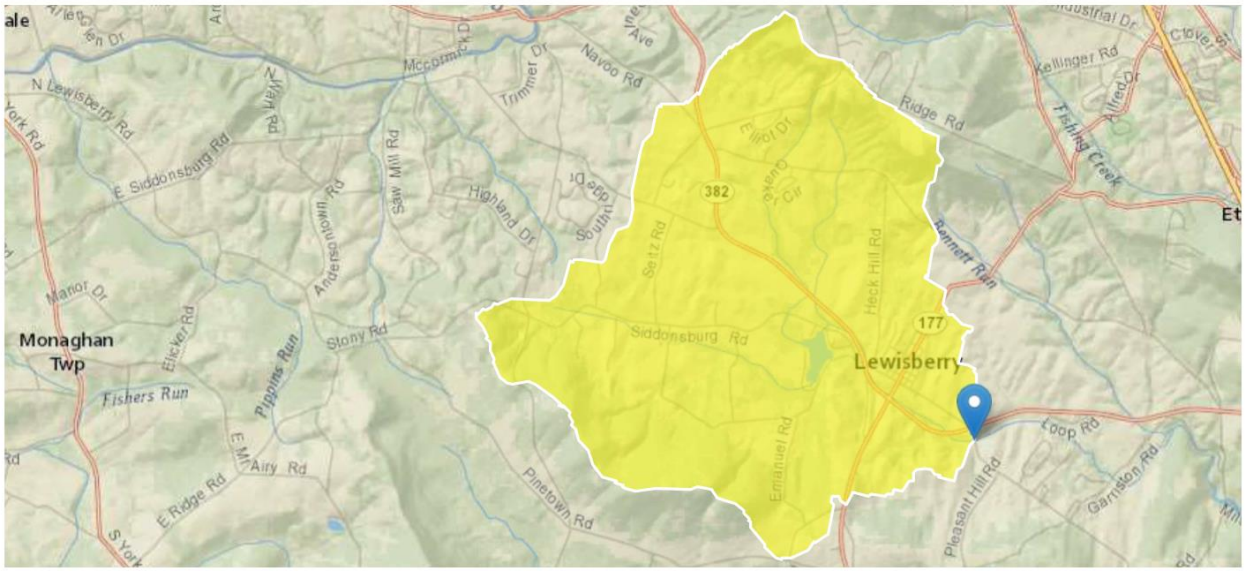
Application Version: 4.21.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

StreamStats Report

Region ID: PA
Workspace ID: PA20240715120033935000
Clicked Point (Latitude, Longitude): 40.12824, -76.85196
Time: 2024-07-15 08:00:54 -0400



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Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	4.764	degrees
DRNAREA	Area that drains to a point on a stream	6.54	square miles
ROCKDEP	Depth to rock	4.2	feet
URBAN	Percentage of basin with urban development	1.584	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	6.54	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	4.764	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.2	feet	4.13	5.21
URBAN	Percent Urban	1.584	percent	0	89

Low-Flow Statistics Flow Report [Low Flow Region 1]

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

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	0.812	ft^3/s	46	46
30 Day 2 Year Low Flow	1.13	ft^3/s	38	38
7 Day 10 Year Low Flow	0.334	ft^3/s	51	51
30 Day 10 Year Low Flow	0.486	ft^3/s	46	46
90 Day 10 Year Low Flow	0.818	ft^3/s	41	41

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

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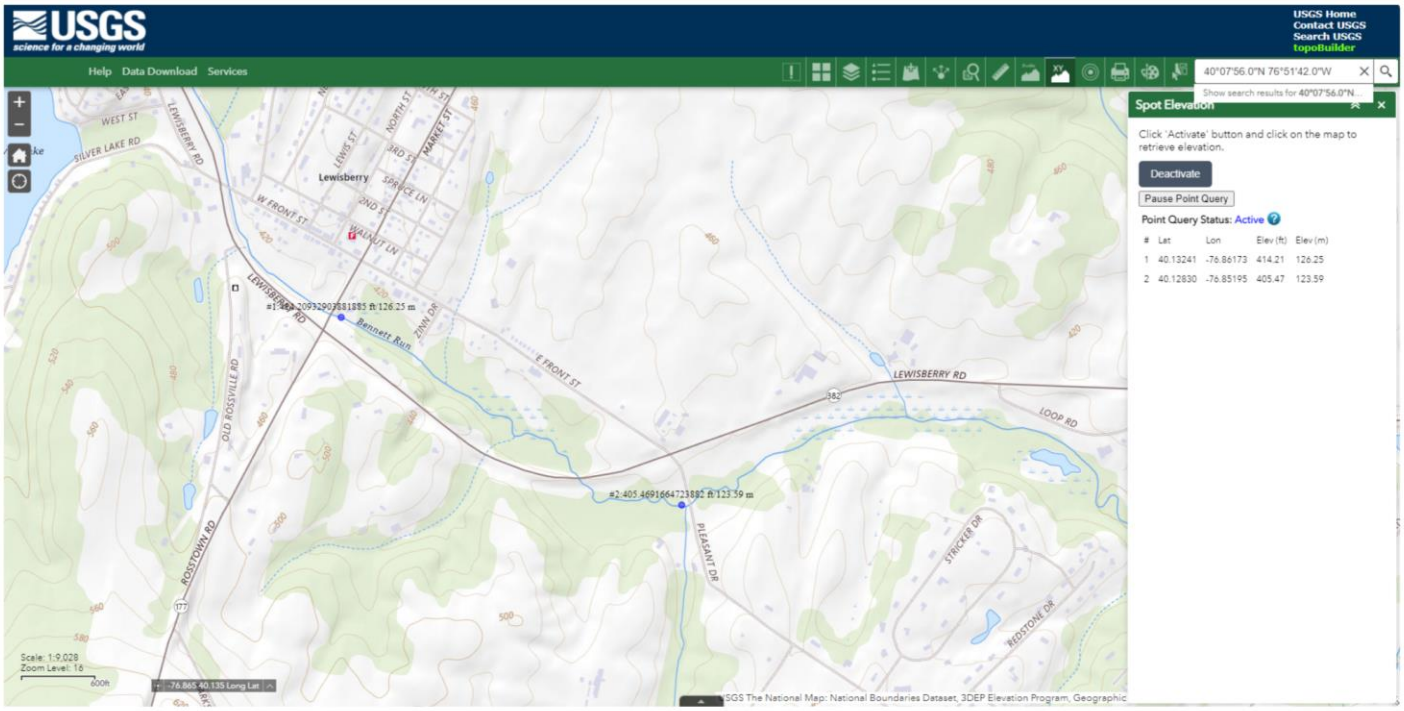
Application Version: 4.21.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1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Data Download
Services
40°07'56.0"N 76°51'42.0"W
Spot Elevation
Click 'Activate' button and click on the map to retrieve elevation.
Deactivate
Pause Point Query
Point Query Status: Active
Lat Lon Elev (ft) Elev (m)
1 40.13241 -76.86173 414.21 126.25
2 40.12830 -76.85195 405.47 123.59
Lewisberry
WEST ST
SILVER LAKE RD
LEWISBERRY RD
LEWIS ST
NORTH ST
MARKET ST
3RD ST
SPRUCE LN
W FRONT ST
2ND ST
WALNUT LN
LYNN DR
Bennett Run
E FRONT ST
LEWISBERRY RD
LOOP RD
OLD ROSSVILLE RD
ROSSTOWN RD
PLEASANT DR
STRICKER DR
REDSTONE DR
Scale: 1:9,028
Zoom Level: 16
600ft
-76.865 40.135 Long Lat
USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
07F	8458	BENNETT RUN

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)
5.500	Lewisberry STP	PA0081922	0.100	CBOD5	25		
				NH3-N	4.96	9.92	
				Dissolved Oxygen			5

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
07F	8458	BENNETT RUN

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
5.500	Lewisberry STP	11.07	24.77	11.07	24.77	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
5.500	Lewisberry STP	1.37	4.96	1.37	4.96	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)		
5.50	Lewisberry STP	25	25	4.96	4.96	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
07F	8458	BENNETT RUN

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
5.500	0.100	25.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
11.386	0.460	24.775	0.087
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
9.84	1.212	1.69	1.029
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.137	19.999	Owens	6
Reach Travel Time (days)			
0.437			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.044	9.21	1.62	7.00
0.087	8.61	1.55	7.00
0.131	8.06	1.48	7.04
0.175	7.54	1.41	7.10
0.219	7.05	1.35	7.17
0.262	6.60	1.29	7.24
0.306	6.17	1.23	7.31
0.350	5.78	1.18	7.37
0.393	5.40	1.13	7.43
0.437	5.05	1.08	7.48

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	6		

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
07F	8458	BENNETT RUN

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												
5.500	0.30	0.00	0.30	.1547	0.00267	.46	11.39	24.77	0.09	0.437	25.00	7.00
Q1-10 Flow												
5.500	0.19	0.00	0.19	.1547	0.00267	NA	NA	NA	0.07	0.509	25.00	7.00
Q30-10 Flow												
5.500	0.41	0.00	0.41	.1547	0.00267	NA	NA	NA	0.10	0.388	25.00	7.00

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
07F	8458	BENNETT RUN	**5.500**	414.21	5.90	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.30	0.000	0.000	0.0	0.00	0.00	25.00	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
Lewisberry STP	PA0081922	0.1000	0.1000	0.1000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

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Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **Lewisberry STP** NPDES Permit No.: **PA0081922** Outfall No.: **001**

Evaluation Type: **Custom / Additives** Wastewater Description: **Treated 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
0.1	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	Strea m CV	Fate Coeff	FOS	Criteri a Mod	Chem Transl
Total Copper	mg/L		0.018									
Total Lead	mg/L		0.001									
Total Zinc	mg/L		0.03									

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Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Lewisberry STP, NPDES Permit No. PA0081922, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Bennet Run**

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	084548	5.5	414.21	5.9			Yes
End of Reach 1	008458	4.88	405.47	6.54			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	5.5	0.1	0.299									100	7		
End of Reach 1	4.88	0.1	0.334												

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	5.5														
End of Reach 1	4.88														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Lewisberry STP, NPDES Permit No. PA0081922, Outfall 001

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 4.794 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Copper	0	0		0	13.439	14.0	41.1	Chem Translator of 0.96 applied
Total Lead	0	0		0	64.581	81.6	239	Chem Translator of 0.791 applied
Total Zinc	0	0		0	117.180	120	351	Chem Translator of 0.978 applied

☑ ***CFC*** CCT (min): 4.794 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Copper	0	0		0	8.956	9.33	27.4	Chem Translator of 0.96 applied
Total Lead	0	0		0	2.517	3.18	9.33	Chem Translator of 0.791 applied
Total Zinc	0	0		0	118.139	120	351	Chem Translator of 0.986 applied

☑ ***THH*** CCT (min): 4.794 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

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

☑ ***CRL*** CCT (min): 2.998 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

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

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

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

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Copper	0.022	0.034	0.026	0.041	0.066	mg/L	0.026	AFC	Discharge Conc ≥ 50% WQBEL (RP)

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

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

Pollutants	Governing WQBEL	Units	Comments
Total Lead	9.33	µg/L	Discharge Conc ≤ 10% WQBEL
Total Zinc	225	µg/L	Discharge Conc ≤ 10% WQBEL