pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0209031**
Facility Type	**Municipal**	APS ID	**1031083**
Major / Minor	**Minor**	Authorization ID	**1340771**

Applicant and Facility Information

Applicant Name	**Loganton Borough Authority, Clinton County**	Facility Name	**Loganton Borough Authority Sewer System STP**
Applicant Address	PO Box 203	Facility Address	298 S. Mill Street
	Loganton, PA 17747-0203		Loganton, PA 17747-9301
Applicant Contact	Earl Weaver, Chairman	Facility Contact	Earl Weaver, Chairman
Applicant Phone	(570) 660-3665	Facility Phone	(570) 660-3665
Client ID	139977	Site ID	252459
Ch 94 Load Status	**Not Overloaded**	Municipality	Loganton Borough
Connection Status	**No Limitations**	County	Clinton
Date Application Received	January 28, 2021	EPA Waived?	Yes
Date Application Accepted	January 28, 2021	If No, Reason	

Purpose of Application: Renewal of a NPDES Permit.

Summary of Review

The subject facility is a Publicly Owned Treatment Works (POTW) serving Loganton Borough, Clinton County. A map of the discharge location is attached.

Sludge use and disposal description and location(s): The facility's sludge is transferred to other WWTPs for further processing. Per the application 6.79 Dry Tons were removed 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
X		Keith C. Allison Keith C. Allison / Project Manager	August 30, 2021
X		Nicholas W. Hartranft Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	August 30, 2021

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.05
Latitude	41º 1' 41.09"	Longitude	-77º 18' 26.85"
Quad Name	Loganton, PA	Quad Code	1027
Wastewater Description:	Sewage Effluent		
Receiving Waters	Fishing Creek (HQ-CWF, MF)	Stream Code	22416
NHD Com ID	67176532	RMI	31.22
Drainage Area	29.03 mi^2	Yield (cfs/mi^2)	0.1128
Q_{7-10} Flow (cfs)	3.27	Q_{7-10} Basis	USGS Gage 01565000, Kichacoquillas Creek @ Reedsville, PA
Elevation (ft)	1204	Slope (ft/ft)	0.00124
Watershed No.	9-C	Chapter 93 Class.	HQ-CWF, 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	NUTRIENTS, SILTATION		
Source(s) of Impairment	CROP PRODUCTION (CROP LAND OR DRY LAND), ON-SITE TREATMENT SYSTEMS (SEPTIC SYSTEMS AND SIMILAR DECENTRALIZED SYSTEMS)		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	PA American Water Company @ Milton, PA		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	752
PWS RMI	10.66	Distance from Outfall (mi)	103

Changes Since Last Permit Issuance: None

Other Comments: Fishing Creek, due to the underlying geology, has gaining and losing sections. Previous reviews indicate that the stream enters a sink hole approximately 0.75 miles downstream.

No TMDL has been performed for the listed impairment to Fishing Creek. A stream assessment was conducted in 2012 to determine whether this discharge specifically was affecting the receiving stream. That assessment concluded that the discharge does not appear to be impacting the biological integrity in Fishing Creek.

Treatment Facility Summary

Treatment Facility Name: Loganton Borough Authority

WQM Permit No.	Issuance Date	Permit For:
1894401	A-1 – 11/5/09	20,000-gallon sludge Tank
	Original 12/27/94	Treatment Plant

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Sequencing Batch Reactor	UV	0.05

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.05	86.0	Overloaded	Aerobic Digestion	Other WWTP

Changes Since Last Permit Issuance: None

Other Comments: The treatment facility, as permitted under WQM Permit No. 1894401 Amendment No.1, consists of pump station, comminutor, bar screen, 10,000-gallon surge tank, two 31,400-gallon SBR tanks, 10,400-gallon decant equalization tank, tertiary filter, UV disinfection, and 20,000-gallon aerated sludge holding tank.

Hauled in Waste

Per the application the applicant has not received any hauled in waste over the past three years and does not anticipate receiving any over the next permit term.

Compliance History

DMR Data for Outfall 001 (from July 1, 2020 to June 30, 2021)

Parameter	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20
Flow (MGD) Average Monthly	0.016	0.018	0.018	0.022	0.021	0.019	0.020	0.017	0.015	0.014	0.014	0.013
Flow (MGD) Weekly Average	0.017	0.020	0.023	0.027	0.024	0.020	0.033	0.017	0.018	0.015	0.014	0.014
pH (S.U.) Minimum	6.96	6.94	6.95	6.96	6.91	6.91	6.94	6.97	6.98	6.88	7.01	6.97
pH (S.U.) Instantaneous Maximum	7.05	7.30	7.12	7.15	7.07	7.07	7.14	7.08	7.09	7.29	7.19	7.14
DO (mg/L) Minimum	1.87	1.41	2.92	4.11	2.61	3.08	2.87	2.15	2.6	2.36	1.8	2.86
CBOD5 (lbs/day) Average Monthly	< 0.40	< 0.4	< 0.5	0.9	1.7	< 0.4	< 0.3	< 0.3	< 0.4	0.4	0.3	< 0.4
CBOD5 (lbs/day) Weekly Average	< 0.40	< 0.5	< 0.6	1.0	2.0	0.6	< 0.4	< 0.4	0.5	0.5	0.3	0.6
CBOD5 (mg/L) Average Monthly	< 3.0	< 3.0	< 3.1	4.8	12.8	< 3.1	< 3.0	< 3.0	< 3.1	3.9	3.4	< 3.5
CBOD5 (mg/L) Weekly Average	< 3.0	3.1	3.3	5.5	18.2	3.3	< 3.0	< 3.0	3.2	4.0	3.4	4.0
CBOD5 (mg/L) Instantaneous Maximum	< 3.0	3.1	3.29	5.5	18.2	3.3	< 3.0	< 3.0	3.23	4.0	3.44	4.01
BOD5 (mg/L) Influent Average Monthly	273	254	222	175	261	199	298	212	152	189	320	236
BOD5 (mg/L) Influent Instantaneous Maximum	310	280	238	231	276	225	310	241	229	228	387	268
TSS (lbs/day) Average Monthly	0.30	2.5	0.8	< 0.9	1.0	0.5	0.4	1.1	< 0.3	< 0.2	0.5	0.3
TSS (lbs/day) Weekly Average	0.40	4.0	1.0	1.0	1.0	0.7	0.4	2.0	0.5	< 0.3	0.6	0.3
TSS (mg/L) Average Monthly	2.60	15.8	5.0	< 4.8	8.4	3.6	3.4	9.2	< 2.6	< 2.2	5.0	2.2
TSS (mg/L) Influent Average Monthly	120	114	96	63	148	194	388	78	115	114	127	91

TSS (mg/L) Weekly Average	3.20	26.0	7.2	8.0	14.0	4.0	4.0	16.0	3.6	2.4	6.4	2.4
TSS (mg/L) Influent Instantaneous Maximum	168	190	118	76	152	286	660	86	126	162	172	98
TSS (mg/L) Instantaneous Maximum	3.20	26.0	7.2	8.0	14.0	4.0	4.0	16.0	3.6	2.4	6.4	2.4
Fecal Coliform (No./100 ml) Geometric Mean	< 1	< 1.0	< 1	< 1.0	5	< 1	< 1	< 31	< 1	< 10.0	< 10	< 3
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 1	< 1.0	< 1	< 1.0	5.2	1	< 1	960	1	< 10.0	< 10	< 10
UV Transmittance (%) Minimum	100	100	100	100	100	100	100	100	100	100	100	100
Total Nitrogen (mg/L) Average Monthly	4.559	4.4	3.89	7.445	5.547	4.864	7.34	4.879	6.176	3.069	3.454	< 1.7
Ammonia (lbs/day) Average Monthly	< 0.20	0.3	0.2	1.1	0.10	0.03	< 0.01	0.1	< 0.07	< 0.01	< 0.01	< 0.01
Ammonia (lbs/day) Weekly Average	< 0.30	0.4	0.3	1.3	0.20	0.05	< 0.01	0.2	0.1	< 0.01	< 0.01	< 0.01
Ammonia (mg/L) Average Monthly	< 1.60	2.0	1.6	5.7	0.90	< 0.3	< 0.1	1.3	< 0.5	< 0.1	< 0.1	< 0.1
Ammonia (mg/L) Weekly Average	2.60	2.8	2.3	7.6	0.90	0.5	< 0.1	1.8	0.9	< 0.1	< 0.1	< 0.1
Ammonia (mg/L) Instantaneous Maximum	2.60	2.8	2.3	7.629	0.901	0.5	< 0.1	1.8	0.937	< 0.1	< 0.1	< 0.1

Compliance History, cont'd	
Summary of Inspections:	The facility has been inspected at least annually by the Department over the past permit term. The most recent inspection on April 15, 2021 identified no violations at the time of inspection.
Other Comments:	A query in WMS found no open violations in eFACTS for Loganton Borough Authority.

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	Average Monthly	Weekly Average	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5) Nov 1 - Apr 30	8.4	13	20.0	30.0	XXX	40.0	2/month	8-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5) May 1 - Oct 31	4.2	6.3	10.0	15.0	XXX	20.0	2/month	8-Hr Composite
Biochemical Oxygen Demand (BOD5) Influent	XXX	XXX	Report	XXX	XXX	Report	2/month	8-Hr Composite
Total Suspended Solids Nov 1 - Apr 30	8.4	13	20.0	30.0	XXX	40.0	2/month	8-Hr Composite
Total Suspended Solids May 1 - Oct 31	4.2	6.3	10.0	15.0	XXX	20.0	2/month	8-Hr Composite
Total Suspended Solids Influent	XXX	XXX	Report	XXX	XXX	Report	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
Ultraviolet light transmittance (%)	XXX	XXX	Report Min	XXX	XXX	XXX	1/day	Metered
Nitrate-Nitrite as N	XXX	XXX	Report	XXX	XXX	Report	1/year	8-Hr Composite
Total Nitrogen	XXX	XXX	10	XXX	XXX	XXX	2/month	8-Hr Composite
Ammonia-Nitrogen Nov 1 - May 31	3.8	5.6	9.0	13.5	XXX	18.0	2/month	8-Hr Composite
Ammonia-Nitrogen Jun 1 - Oct 31	1.3	1.9	3.0	4.5	XXX	6.0	2/month	8-Hr Composite

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Average Monthly	Weekly Average	Maximum	Instant. Maximum		
Total Kjeldahl Nitrogen	XXX	XXX	Report	XXX	XXX	Report	1/year	8-Hr Composite
Total Phosphorus	XXX	XXX	Report	XXX	XXX	Report	1/year	8-Hr Composite
Copper, Total	XXX	XXX	Report	XXX	XXX	Report	1/quarter	8-Hr Composite

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.05
Latitude 41º 1' 39.50" **Longitude** -77º 18' 30.10"
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)

Comments: The above limitations are applicable and included in the existing permit except for more stringent existing limits for TSS and $CBOD_5$ as discussed below. Due to the addition of e. coli bacteria criteria to Chapter 93, monitoring for e. coli will now be included in the permit.

Water Quality-Based Limitations

Antidegradation

Social and economic justification (SEJ) for the discharge to a special protection watershed was approved in June 1993 with the inclusion of the dry stream limitations discussed below. Therefore, the discharge has not received the Antidegradation Best Available Combination of Technologies (ABACT) requirements as listed in the Department's *Water Quality Antidegradation Implementation Guidance*.

Discharge to Dry or Intermittent Stream

The existing limitations for $CBOD_5$, TSS, and Total Nitrogen were based on a prior version of the Department's *Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales and Storm Sewers* guidance document (391-2000-014). The current version of the guidance prescribes additional and more stringent limitations for new or expanded discharges including a TN limit of 5 mg/L, DO maximum of 6 mg/L and TP limit of 0.5 mg/L. These additional limitations will not be required at this time for this existing discharge to a unique stream situation.

CBOD5, NH3-N & DO

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 Fishing Creek and indicated that the existing $CBOD_5$ limit mentioned above and the existing Water Quality-based NH_3-N limits, should be adequate to protect the receiving stream.

Toxics Management

Copper – The existing permit includes quarterly copper monitoring due to an application sample having been greater than 10% of the water quality-based effluent limit (WQBEL).

The Department's Toxics Management Spreadsheet 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 spreadsheet incorporates the water quality criteria of 25 Pa. Code §93. The calculated WQBEL for Total Copper for the discharge is 0.198 mg/L. See the attached Toxics Management Spreadsheet (Attachment C).

Because copper levels since Fall 2017 (the period available in eDMR) have ranged from 0.0091 to 0.0298 mg/L with an average of 0.0173 mg/L, the current quarterly monitoring will be changed to annually because although they have been greater than 10% of the WQBEL the levels seen have been consistently remained under the limit.

No further "Reasonable Potential Analysis" was conducted for this minor sewage treatment facility with no industrial users to determine additional parameters as candidates for limitations or monitoring.

Chesapeake Bay/Nutrient Requirements

According to the Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, this facility is considered a Phase 5 Chesapeake Bay sewage discharger, and as such requires no nutrient loading limits. Per a review of the facility eDMR data over the past two years the Total Nitrogen has averaged 3.26 mg/L and the Total Phosphorus has averaged 1.67 mg/L. Regular Total Nitrogen monitoring will continue due to the existing effluent limitation. The existing annual monitoring for Total Phosphorus, TKN, and Nitrate-Nitrite will also remain due to the unique stream condition.

Best Professional Judgment (BPJ) Limitations

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

Anti-Backsliding

Consistent with the anti-backsliding provisions of the Clean Water Act and 40 CFR 122.44(l), no proposed limits have been made less stringent.

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	Average Monthly	Weekly Average	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5) Nov 1 - Apr 30	8.4	13	20.0	30.0	XXX	40.0	2/month	8-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5) May 1 - Oct 31	4.2	6.3	10.0	15.0	XXX	20.0	2/month	8-Hr Composite
Biochemical Oxygen Demand (BOD5) Influent	XXX	XXX	Report	XXX	XXX	Report	2/month	8-Hr Composite
Total Suspended Solids Nov 1 - Apr 30	8.4	13	20.0	30.0	XXX	40.0	2/month	8-Hr Composite
Total Suspended Solids May 1 - Oct 31	4.2	6.3	10.0	15.0	XXX	20.0	2/month	8-Hr Composite
Total Suspended Solids Influent	XXX	XXX	Report	XXX	XXX	Report	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

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	Average Monthly	Weekly Average	Maximum	Instant. Maximum		
Ultraviolet light transmittance (%)	XXX	XXX	Report Min	XXX	XXX	XXX	1/day	Metered
Nitrate-Nitrite as N	XXX	XXX	Report	XXX	XXX	Report	1/year	8-Hr Composite
Total Nitrogen	XXX	XXX	10	XXX	XXX	XXX	2/month	8-Hr Composite
Ammonia-Nitrogen Nov 1 - May 31	3.8	5.6	9.0	13.5	XXX	18.0	2/month	8-Hr Composite
Ammonia-Nitrogen Jun 1 - Oct 31	1.3	1.9	3.0	4.5	XXX	6.0	2/month	8-Hr Composite
Total Kjeldahl Nitrogen	XXX	XXX	Report	XXX	XXX	Report	1/year	8-Hr Composite
Total Phosphorus	XXX	XXX	Report	XXX	XXX	Report	1/year	8-Hr Composite
Copper, Total	XXX	XXX	XXX	Report Daily Max	XXX	Report	1/year	8-Hr Composite

Compliance Sampling Location: Outfall 001

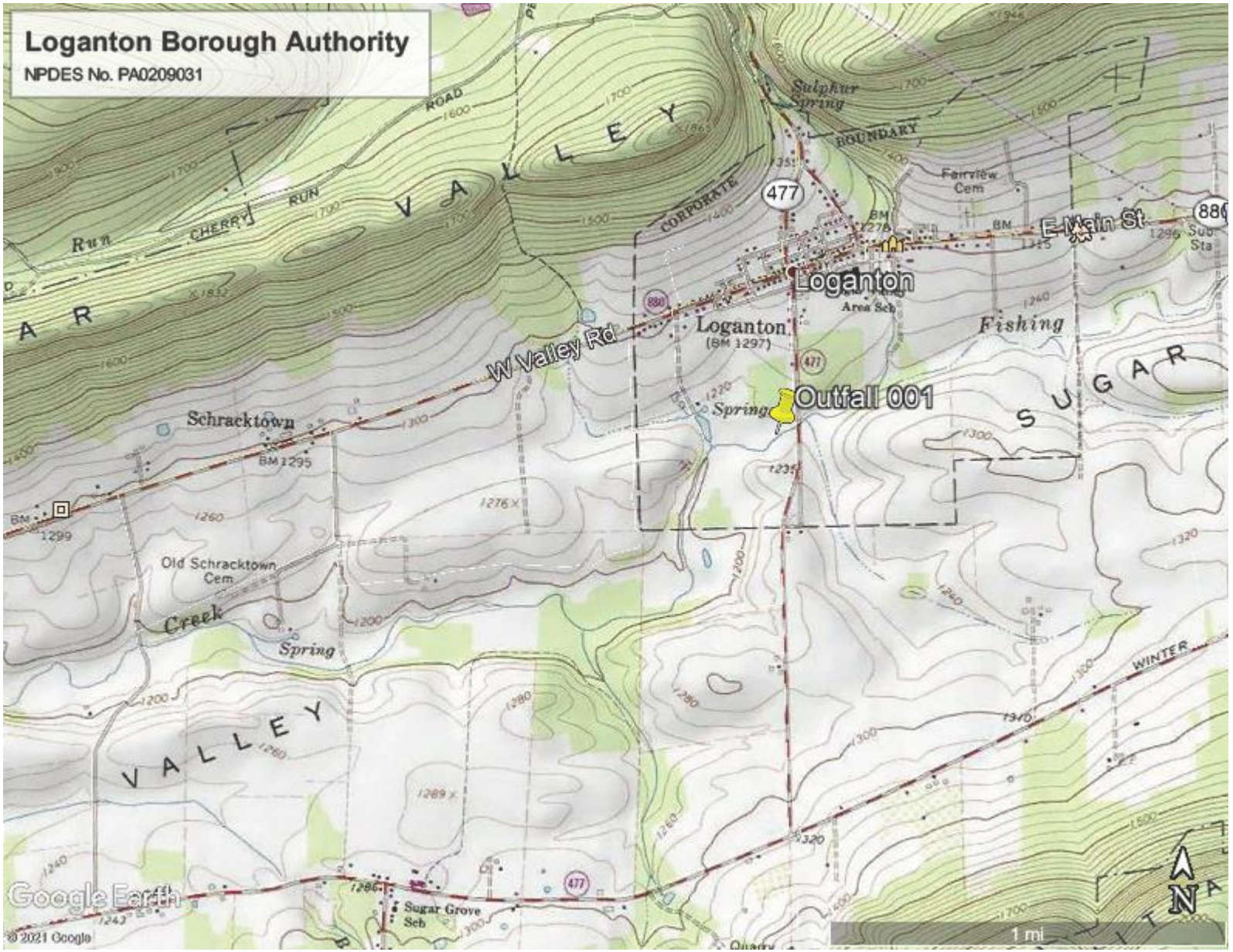
Other Comments: Copper monitoring has been reduced from quarterly to annually as noted above. Quarterly e. Coli monitoring is now included consistent with Department policy and recent changes to Chapter 93 of the Department's regulations.

It is noted that the TRC monitoring data listed on page 5 of this Fact Sheet are consistently at a value of 100. This is not a typically expected value for UV Light Transmittance monitoring and therefore, the permittee will be asked to verify what parameters their UV units can monitor during the draft comment period. The monitoring units will then be altered as necessary in the final permit.

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment B)
☒	Toxics Management Spreadsheet (see Attachment **C**)
☐	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, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☒	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☒	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☒	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☒	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☒	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 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, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 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, 391-2000-022, 3/1999.
☒	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☒	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: Establishing Effluent Limitations for Individual Sewage Permits, rev. 3/24/21
☐	Other:

Attachments:

A. Discharge Location Map
B. WQM7.0 Model
C. Toxics Management Spreadsheet


Loganton Borough Authority
NPDES No. PA0209031
Outfall 001
Loganton
Loganton
(BM 1297)
Schracktown
BM 1295
BM 1299
Old Schracktown Cem
W Valley Rd
E Main St
Fishing
Creek
Spring
Sulphur Spring
Ferrview Cem
Area Sch
Sub Sta
Sugar Grove Sch
Quarry
CORPORATE
BOUNDARY
WINTER
CHERRY RUN
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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
09C	22416	FISHING CREEK	**31.220**	1204.00	29.03	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	0.113	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
Loganton	PA0209031	0.0500	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	10.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	3.00	0.00	0.00	0.70

Permit No. PA0209031

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
09C	22416	FISHING CREEK	**26.790**	1175.00	33.73	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	0.113	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

Permit No. PA0209031

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
09C	22416	FISHING CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
31.220	3.27	0.00	3.27	.0773	0.00124	.651	29.33	45.06	0.18	1.542	20.12	7.00
Q1-10 Flow												
31.220	2.10	0.00	2.10	.0773	0.00124	NA	NA	NA	0.14	1.965	20.18	7.00
Q30-10 Flow												
31.220	4.45	0.00	4.45	.0773	0.00124	NA	NA	NA	0.21	1.302	20.09	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	6		

Permit No. PA0209031

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
09C	22416	FISHING CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
31.220	0.050	20.115	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
29.328	0.651	45.057	0.176
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.18	0.057	0.07	0.706
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.122	2.074	Tsivoglou	6
Reach Travel Time (days)			
1.542			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.154	2.17	0.06	8.23
0.308	2.15	0.06	8.23
0.463	2.13	0.05	8.23
0.617	2.11	0.04	8.23
0.771	2.09	0.04	8.23
0.925	2.07	0.04	8.23
1.079	2.05	0.03	8.23
1.233	2.04	0.03	8.23
1.388	2.02	0.03	8.23
1.542	2.00	0.02	8.23

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
09C	22416	FISHING CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
31.220	Loganton	16.51	6	16.51	6	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
31.220	Loganton	1.88	3	1.88	3	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)		
31.22	Loganton	10	10	3	3	3	3	0	0

Permit No. PA0209031

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
09C	22416	FISHING CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
31.220	Loganton	PA0209031	0.050	CBOD5	10		
				NH3-N	3	6	
				Dissolved Oxygen			3

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Loganton Borough, NPDES Permit No. PA0209031, Outfall 001

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

☑ ***Hydrodynamics***

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

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)
31.22	3.27		3.27	0.077	0.001	0.651	29.328	45.057	0.176	1.542	60.848
26.79	3.80		3.804744								

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)
31.22	20.95		20.95	0.077	0.001	1.46	29.328	20.084	0.491	0.551	18.834
26.79	23.889		23.89								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.497 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	308	Chem Translator of 0.96 applied

☑ ***CFC*** CCT (min): 60.848 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	404	Chem Translator of 0.96 applied

☑ ***THH*** CCT (min): 60.848 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	

☑ ***CRL*** CCT (min): 18.834 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	

☑ ***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	Report	Report	Report	Report	Report	µg/L	198	AFC	Discharge Conc > 10% WQBEL (no RP)