Pennsylvania Department of Environmental Protection

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0024091**
Facility Type	**Municipal**	APS ID	**1128757**
Major / Minor	**Minor**	Authorization ID	**1512125**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Millville Borough**	Facility Name	**Millville Borough Sewer System STP**
Applicant Address	PO Box 30	Facility Address	136 Morehead Avenue
	Millville, PA 17846-0030		Millville, PA 17846
Applicant Contact	Don Keefer	Facility Contact	Michael Woolcock
Applicant Phone	(570) 458-5709	Facility Phone	(570) 458-6208
Client ID	87618	Site ID	246312
Ch 94 Load Status	Not Overloaded	Municipality	Millville Borough
Connection Status	No Limitations	County	Columbia
Date Application Received	January 10, 2025	EPA Waived?	Yes
Date Application Accepted	January 15, 2025	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 Millville Borough and neighboring portions of Greenwood Township and White Pines Landfill in Pine Township all in Columbia County.

Sludge use and disposal description and location(s): The facility's digested sludge is disposed by landfill. Per the application 14.21 dry tons were disposed 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	September 15, 2025
✓		N. W. H. Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	September 15, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.3
Latitude	41º 6' 47.89"	Longitude	-76º 31' 38.34"
Quad Name	Millville, PA	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Little Fishing Creek (CWF)	Stream Code	27657
NHD Com ID	65638943	RMI	8.4
Drainage Area	42.1 mi^2	Yield (cfs/mi^2)	0.0504
Q_{7-10} Flow (cfs)	2.1	Q_{7-10} Basis	USGS Gage 01552500, Muncy Creek near Sonestown (1942-2008)
Elevation (ft)	605	Slope (ft/ft)	0.003
Watershed No.	5-C	Chapter 93 Class.	CWF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	PATHOGENS		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Not Developed	Name	
Nearest Downstream Public Water Supply Intake	Suez Water PA @ Bloomsburg		
PWS Waters	Fishing Creek	Distance from Outfall (mi)	Approx. 9

Comments:

The discharge is not expected to be contributing to the impairment to Little Fishing Creek from Pathogens. The permittee generally meets its fecal coliform limitations which are identical to the prior Fecal Coliform criteria from Chapter 93 of the Department's regulations.

The discharge is not expected to affect any downstream water supply at this time with the limitations and monitoring proposed.

Treatment Facility Summary

Treatment Facility Name: Millville Borough

WQM Permit No.	Issuance Date	Permit For:
1900405	A-2 – 2/6/25	Replacement of Grinder unit with spiral sieve screen
	A-1 – 5/28/19	Addition of step feed system to existing STP
	Original **–** 1/23/01	Construction of new STP
1906401	6/15/06	Hydraulic Rerate from 0.25 to 0.3 MGD
	5/28/19	Incorporation of Step Feed process
1909402	11/16/09	Transfer of Sewer Extensions

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Activated Sludge	Ultraviolet	0.3

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.3	800	Not Overloaded	Anaerobic Digestion	Combination of methods

Changes Since Last Permit Issuance: WQM 1900405 Amendment No. 2 was issued on February 6, 2025.

Other Comments: The existing treatment facility, as permitted under WQM Permit Nos. 1900405 and 1906401 consists of a septage receiving station, bar screen and comminutor, influent pump station, vortex grit removal chamber, primary clarifier, single stage nitrification-denitrification biological treatment, secondary clarifiers, UV disinfection, cascade aeration, aerobic digestion, belt filter press.

Compliance History

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

Parameter	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24
Flow (MGD) Average Monthly	0.177	0.217	0.264	0.162	0.165	0.156	0.135	0.169	0.131	0.136	0.130	0.192
Flow (MGD) Daily Maximum	0.356	0.501	0.514	0.305	0.431	0.282	0.216	0.304	0.285	0.225	0.154	0.385
pH (S.U.) Instantaneous Minimum	6.6	6.5	6.5	6.5	6.5	6.1	6.0	6.1	6.1	6.2	6.2	6.5
pH (S.U.) Instantaneous Maximum	7.1	6.9	7.0	6.9	6.9	7.1	6.7	6.8	6.6	7.2	7.0	7.0
DO (mg/L) Instantaneous Minimum	10.9	10.2	10.9	10.4	10.1	9.7	10.3	10.1	10.2	10.1	10.2	10.6
CBOD5 (lbs/day) Average Monthly	< 5	5	7	7	7	18	< 3	3.6	< 2	3.5	2.4	4
CBOD5 (lbs/day) Weekly Average	7	10	10	11	10	44	4	7.0	< 2	6.5	3.4	6
CBOD5 (mg/L) Average Monthly	< 3	3	< 3	5	6	15	< 3	< 3	< 2	4	2.1	3
CBOD5 (mg/L) Weekly Average	4	5	4	7	9	39	4	7	2	6	2.3	3
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	234	339	332	216	176	323.2	210	229.7	209.6	240	267.3	659
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	366	714	609	364	245.2	381.2	259	271	364.3	451	349	1277
BOD5 (mg/L) Raw Sewage Influent Average Monthly	187	177	199	194	117	236	205	187	189	235	240	346
TSS (lbs/day) Average Monthly	27	15	33	30	15	21	6	15.1	11	22	12	12
TSS (lbs/day) Raw Sewage Influent Average Monthly	275	356	219	153.5	149.5	432.7	346	302.3	315.6	303.3	467	1912
TSS (lbs/day) Raw Sewage Influent Daily Maximum	330	745	290	171	237.2	799.8	610	699.8	348.7	441	1080	5767

TSS (lbs/day) Weekly Average	42	23	51	47	55	34	7	28.3	15	36	16	16
TSS (mg/L) Average Monthly	18	10	13	22	19	17	6	11	12	23	10.3	9
TSS (mg/L) Raw Sewage Influent Average Monthly	201	183	247	126	101	361	379	246	322	308	459	1189
TSS (mg/L) Weekly Average	21	15	22	30	30	30	7	19	16	36	15	12
Total Dissolved Solids (mg/L) Average Quarterly		832			946			1530			2960	
Fecal Coliform (No./100 ml) Average Monthly	2	4	34	< 5	100.3	126	4	4	< 1	62	32	9
Fecal Coliform (No./100 ml) Instantaneous Maximum	4	9	2419	32	248	2419.5	9.6	14.8	2	770.1	235.9	248
UV Intensity (mW/cm^2) Instantaneous Minimum	3.2	4.3	2.7	2.2	1.5	0.86	1.9	2.1	1.2	1.3	1.5	1.7
Total Nitrogen (mg/L) Average Monthly	5.9	4.55	3.06	13.2	18.8	33	21	22	36	66	37	9
Ammonia (lbs/day) Average Monthly	< 0.1	0.4	< 0.1	2	6	9	< 1	1.46	0.1	< 0.6	0.16	2
Ammonia (lbs/day) Weekly Average	0.2	0.9	1	6	9	20	2	4.12	0.2	< 0.9	0.37	5
Ammonia (mg/L) Average Monthly	< 0.1	0.21	< 0.6	< 2	5	11	< 1	1	0.129	< 1	< 0.151	2.0
Ammonia (mg/L) Weekly Average	< 0.1	0.44	1	6	8	23	2	3	0.144	< 1	< 0.256	5.0
Total Phosphorus (mg/L) Average Monthly	0.44	0.031	0.42	0.33	9	12	6	5	4	5.2	2	0.2
Total Copper (mg/L) Average Monthly	0.017	0.023	0.011	0.018	0.014	0.014	0.005	0.025	0.030	0.040	0.018	< 0.010
Total Copper (mg/L) Daily Maximum	0.035	0.031	0.018	0.023	0.021	0.024	0.008	0.033	0.051	0.056	0.022	< 0.020
Sulfate (mg/L) Average Quarterly		146			127			267			439	
Total Zinc (mg/L) Average Monthly	0.051	0.058	0.033	0.047	0.026	0.046	0.049	0.145	0.1	0.1	0.068	0.05
Total Zinc (mg/L) Daily Maximum	0.059	0.096	0.039	0.064	0.027	0.066	0.062	0.269	0.144	0.14	0.075	0.07

1,4-Dioxane (mg/L) Average Quarterly		0.343			< 50			< 50			< 50	
Chloride (mg/L) Average Quarterly		332			355			727			12500	
Bromide (mg/L) Average Quarterly		< 1			1.02			1.74			3.3	

Compliance History

Effluent Violations for Outfall 001, from: August 1, 2024 to July 31, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
CBOD5	02/28/25	Avg Mo	15	mg/L	13	mg/L
CBOD5	02/28/25	Wkly Avg	39	mg/L	20	mg/L
Ammonia	02/28/25	Wkly Avg	23	mg/L	18	mg/L
Fecal Coliform	05/31/25	IMAX	2419	No./100 ml	1000	No./100 ml

Compliance History, Cont'd

Summary of Inspections:	The most recent inspection of the facility by the Department on July 16, 2025 identified eDMR discharge violations but no operational violations at the time of inspection.
Other Comments:	A WMS query found the open violations in eFACTS as listed in the attached table for Millville Borough. See Attachment B.

Existing Effluent Limitations and Monitoring Requirements

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	6.0	XXX	XXX	XXX	1/week	Grab
CBOD5	33	50	XXX	13	20	26	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	75	113	XXX	30	45	60	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200	XXX	1000	1/week	Grab
UV Intensity (mW/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Metered
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Ammonia Nov 1 - May 31	30	45	XXX	12	18	24	1/week	24-Hr Composite
Ammonia Jun 1 - Oct 31	10	15	XXX	4.0	6.0	8	1/week	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite

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	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Copper	XXX	XXX	XXX	0.052	0.081 Daily Max	XXX	1/week	24-Hr Composite
Sulfate	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Total Zinc	XXX	XXX	XXX	0.2	0.3 Daily Max	0.5	1/week	24-Hr Composite
1,4-Dioxane	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Chloride	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Bromide	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.3
Latitude 41º 6' 46.90" **Longitude** -76º 31' 40.10"
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 limits are applicable and are included in the existing permit besides a more stringent exiting water quality-based limit for $CBOD_5$ as noted below.

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. The discharge has existing limits water quality-based limits for $CBOD_5$, NH_3-N, and DO as listed on the previous page. WQM7.0 modeling was performed (see Attachment B) for the discharge to the Little Fishing Creek and showed that no limitations are necessary for these parameters beyond the existing limitations.

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, Attachment D). The Toxics Management Spreadsheet (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.

The TMS recommended that Total Copper and Total Zinc limitations as well as Chloride monitoring continue and thus will remain. The limit for Total Copper is more stringent while the Total Zinc limit is less stringent. Chloride monitoring will now be monthly rather than quarterly.

Pollutant	Long-Term Average (µg/L)	Actual Maximum (µg/L)	Existing Limitation (µg/L)	WQBEL (µg/L)	TMS Recommendation
Total Copper	0.021	0.084	0.052	0.045	Limitation
Total Zinc	0.056	0.30	0.2	0.39	Limitation
Chloride	1667	12,500	Reporting	10,078	Reporting

In addition, due to the receipt of flows from the landfill and the downstream water supply intake the existing monitoring for 1-4-Dioxane, Bromide, Chloride, and Sulfates will continue.

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 in order to reduce the total nutrient load to the Bay and meet State of Maryland Water Quality Standards. Catawissa Borough is considered a Phase 4, Non-Significant Chesapeake Bay discharger and thus has received no nutrient cap loads pursuant to the Phase III Watershed Implementation Plan. Monitoring performed over the past permit term for Total Nitrogen and Total Phosphorus has averaged 23.9 mg/L and 3.2 mg/L, respectively. Monthly monitoring will continue consistent with the Phase III WIP for this Phase 4 discharge.

E. Coli Monitoring

Consistent with recent changes to Chapter 93 of the Department's regulations quarterly E. Coli monitoring will be included in the draft permit.

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.

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) except for a less stringent water-quality based limitation for Total Zinc.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	6.0	XXX	XXX	XXX	1/week	Grab
CBOD5	33	50	XXX	13	20	26	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	75	113	XXX	30	45	60	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200	XXX	1000	1/week	Grab
UV Intensity (mW/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Metered
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Ammonia Nov 1 - May 31	30	45	XXX	12	18	24	1/week	24-Hr Composite
Ammonia Jun 1 - Oct 31	10	15	XXX	4.0	6.0	8	1/week	24-Hr Composite

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	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Total Copper	0.11	0.18 Daily Max	XXX	0.045	0.071 Daily Max	0.11	1/week	24-Hr Composite
Sulfate	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Total Zinc	0.97	1.51 Daily Max	XXX	0.39	0.61 Daily Max	0.97	1/week	24-Hr Composite
1,4-Dioxane	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Chloride	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/month	24-Hr Composite
Bromide	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
E. Coli (No./100 ml)	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	Grab

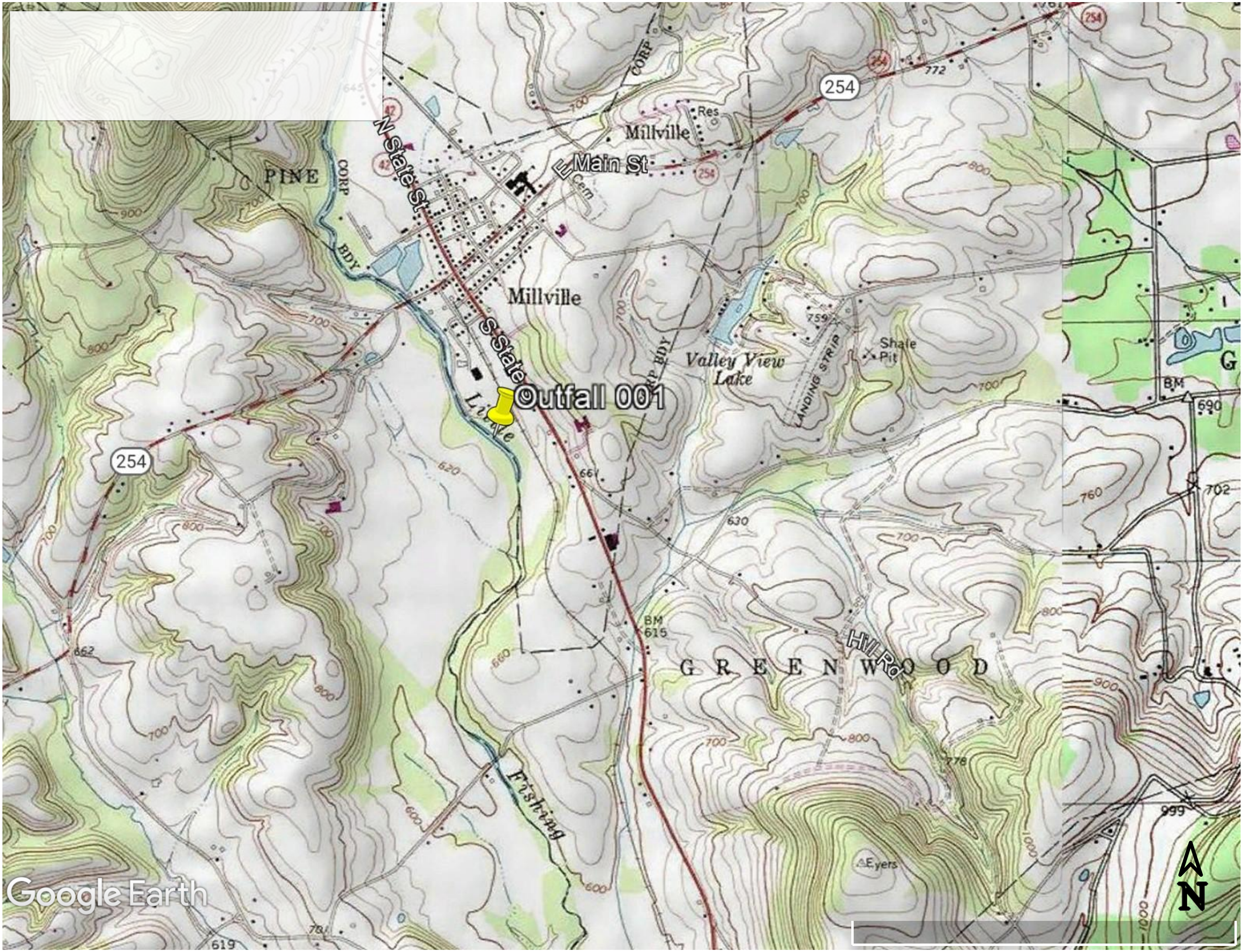
Compliance Sampling Location: Outfall 001

Other Comments: Limitations have been modified for Total Copper and Total Zinc. Chloride monitoring is now monthly rather than quarterly, and E. Coli monitoring is new.

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment **C**)
☒	Toxics Management Spreadsheet (see Attachment **D**)
☐	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:

Attachments:

A. Discharge Location Map
B. Open Violations List
C. WQM7.0 Model
D. Toxics Management Spreadsheet



N State St
S State
E Main St
Millville
Outfall 001
254
42
PINE
GREENWOOD
Valley View Lake
Hil Rd
Shale Pit
LANDING STRIP
Fishing
Eyers
Google Earth
N

Open Violations for Millville Borough

CLIENT	FACILITY	PF KIND	INSP PROGRAM	PROGRAM SPECIFIC ID	VIOLATION DATE	VIOLATION CODE	VIOLATION
MILLVILLE BORO	MILLVILLE MUNI WATER AUTH	Water Purveyor	Water Planning and Conservation	101484-001	11/30/2023	110.301	Reporting for all water withdrawals and usage
MILLVILLE BORO	MILLVILLE MUNI WATER AUTH	Water Purveyor	Water Planning and Conservation	101484-001	11/20/2024	110.301	Reporting for all water withdrawals and usage
MILLVILLE BORO	MILLVILLE MUNICIPAL AUTHORITY	Community	Safe Drinking Water	4190017	3/25/2025	B6A	OTHER VIOLATIONS DEEMED TO BE SIGNIFICANT DEFICIENCIES
MILLVILLE BORO	MILLVILLE MUNICIPAL AUTHORITY	Community	Safe Drinking Water	4190017	3/25/2025	D6E	FAILURE OF A CWS TO DEVELOP AND/OR UPDATE AN EMERGENCY RESPONSE PLAN
MILLVILLE BORO	MILLVILLE MUNICIPAL AUTHORITY	Community	Safe Drinking Water	4190017	3/25/2025	C4A	FAILURE TO OPERATE AND MAINTAIN THE WATER SYSTEM
MILLVILLE BORO	MILLVILLE MUNICIPAL AUTHORITY	Community	Safe Drinking Water	4190017	3/25/2025	D2J	FAILURE TO SUBMIT AN ANNUAL SOURCE WATER PROTECTION PROGRAM UPDATE FORM
MILLVILLE BORO	MILLVILLE MUNICIPAL AUTHORITY	Community	Safe Drinking Water	4190017	3/25/2025	D6D	FAILURE TO PREPARE AND/OR MAINTAIN A SYSTEM MAP
MILLVILLE BORO	MILLVILLE MUNICIPAL AUTHORITY	Community	Safe Drinking Water	4190017	3/25/2025	C8A	FAILURE OF A CWS TO PERFORM A SYSTEM EVALUATION ANNUALLY
MILLVILLE BORO	MILLVILLE MUNICIPAL AUTHORITY	Community	Safe Drinking Water	4190017	3/25/2025	C3E	FAILURE TO IMPLEMENT A FILTER BED EVALUATION PROGRAM
MILLVILLE BORO	MILLVILLE MUNICIPAL AUTHORITY	Community	Safe Drinking Water	4190017	3/25/2025	C7	FAILURE TO COMPLY WITH A PERMIT CONDITION
MILLVILLE BORO	MILLVILLE MUNICIPAL AUTHORITY	Community	Safe Drinking Water	4190017	3/25/2025	D6A	FAILURE OF A COMMUNITY WATER SYSTEM TO DEVELOP AND/OR UPDATE AN OPERATION AND MAINTENANCE PLAN
MILLVILLE BORO	MILLVILLE MUNICIPAL AUTHORITY	Community	Safe Drinking Water	4190017	8/18/2025	D4A	FAILURE OF A COMMUNITY WATER SYSTEM TO PREPARE AND/OR MAINTAIN A MONTHLY OPERATING REPORT
MILLVILLE BORO	MILLVILLE MUNICIPAL AUTHORITY	Community	Safe Drinking Water	4190017	8/18/2025	B6C	CHRONIC FAILURE TO REPORT
MILLVILLE BORO	MILLVILLE MUNICIPAL AUTHORITY	Community	Safe Drinking Water	4190017	8/18/2025	D10	FAILURE TO PROVIDE RECORDS OR DATA REQUESTED BY THE DEPARTMENT OR ALLOW THE DEPARTMENT TO CONDUCT
MILLVILLE BORO	MILLVILLE MUNICIPAL AUTHORITY	Community	Safe Drinking Water	4190017	8/20/2025	B6C	CHRONIC FAILURE TO REPORT

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
05C	27657	LITTLE FISHING CREEK	**8.400**	605.00	42.10	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	0.050	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
Millville Boro	PA0024091	0.3000	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	13.00	2.00	0.00	1.50
Dissolved Oxygen	6.00	8.24	0.00	0.00
NH3-N	4.00	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
05C	27657	LITTLE FISHING CREEK	**6.800**	580.00	50.00	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	0.050	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
05C	27657	LITTLE 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 (ºC)	Analysis pH
Q7-10 Flow												
8.400	2.12	0.00	2.12	.4641	0.00296	.629	27.35	43.52	0.15	0.650	20.90	7.00
Q1-10 Flow												
8.400	1.36	0.00	1.36	.4641	0.00296	NA	NA	NA	0.12	0.791	21.27	7.00
Q30-10 Flow												
8.400	2.89	0.00	2.89	.4641	0.00296	NA	NA	NA	0.17	0.562	20.69	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		

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
05C	27657	LITTLE FISHING CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (ºC)	Analysis pH
8.400	0.300	20.897	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
27.354	0.629	43.516	0.150
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
3.97	0.693	0.72	0.750
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.840	4.320	Tsivoglou	6
Reach Travel Time (days)			
0.650			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.065	3.79	0.68	7.75
0.130	3.62	0.65	7.70
0.195	3.45	0.62	7.68
0.260	3.29	0.59	7.68
0.325	3.14	0.56	7.70
0.390	3.00	0.54	7.72
0.455	2.86	0.51	7.76
0.520	2.73	0.49	7.80
0.585	2.60	0.46	7.84
0.650	2.49	0.44	7.88

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
05C	27657	LITTLE 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
8.400	Millville Boro	15.08	8	15.08	8	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
8.400	Millville Boro	1.8	4	1.8	4	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)		
8.40	Millville Boro	13	13	4	4	6	6	0	0

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
05C	27657	LITTLE 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)
8.400	Millville Boro	PA0024091	0.300	CBOD5	13		
				NH3-N	4	8	
				Dissolved Oxygen			6

Discharge Information

Instructions | Discharge | Stream

Facility: **Millville Borough** NPDES Permit No.: **PA0020491** Outfall No.: **001**

Evaluation Type: **Custom / Additives** Wastewater Description: **Sewage Effluent**

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
0.3	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
Sulfate (PWS)	mg/L		287									
1,4-Dioxane	µg/L	<	3									
Chloride (PWS)	mg/L		1730									
Bromide	mg/L		365									
Total Copper	mg/L		0.06									
Total Zinc	mg/L		0.51									

Stream / Surface Water Information

Millville Borough, NPDES Permit No. PA0020491, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Little Fishing Creek**

No. Reaches to Model: **1**

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	027657	8.4	605	42.1			Yes
End of Reach 1	027657	3	470	362		5	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	8.4	0.0504										100	7		
End of Reach 1	3	0.0504													

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	8.4														
End of Reach 1	3														

Model Results

Millville Borough, NPDES Permit No. PA0020491, 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)
8.4	2.12		2.12	0.464	0.005	0.624	26.491	42.439	0.156	2.11	19.084
3	18.24	7.735	10.5098								

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)
8.4	14.34		14.34	0.464	0.005	1.345	26.491	19.695	0.415	0.794	8.408
3	94.021	7.735	86.29								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.887 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
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	13.439	14.0	70.7	Chem Translator of 0.96 applied
Total Zinc	0	0		0	117.180	120	605	Chem Translator of 0.978 applied

☑ ***CFC*** CCT (min): 19.084 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
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	8.956	9.33	52.0	Chem Translator of 0.96 applied
Total Zinc	0	0		0	118.139	120	668	Chem Translator of 0.986 applied

☑ ***THH*** CCT (min): 19.084 THH PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A PWS PMF: 1

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Sulfate (PWS)	0	0		0	250,000	250,000	10,078,054	WQC applied at RMI 3 with a design stream flow of 18.2448 cfs
Chloride (PWS)	0	0		0	250,000	250,000	10,078,054	WQC applied at RMI 3 with a design stream flow of 18.2448 cfs
Total Copper	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): 8.408 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
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	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
Chloride (PWS)	Report	Report	Report	Report	Report	mg/L	10,078	THH-PWS	Discharge Conc > 10% WQBEL (no RP)
Total Copper	0.11	0.18	0.045	0.071	0.11	mg/L	0.045	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	0.97	1.51	0.39	0.61	0.97	mg/L	0.39	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
Sulfate (PWS)	10,078	mg/L	Discharge Conc ≤ 10% WQBEL
1,4-Dioxane	N/A	N/A	No WQS
Bromide	N/A	N/A	No WQS