pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0027596**
Facility Type	**Industrial**	APS ID	**274755**
Major / Minor	**Minor**	Authorization ID	**1483894**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**New Enterprise Stone & Lime Co. Inc.**	Facility Name	**New Enterprise Stone Roaring Spring Quarry**
Applicant Address	PO Box 77 New Enterprise, PA 16664-0077	Facility Address	Rt 36 8162 Woodbury Pk Roaring Spring, PA 16673
Applicant Contact	Stephanie Stewart	Facility Contact	Robert Homer
Applicant Phone	(814) 766-2211	Facility Phone	(814) 766-2211
Client ID	62856	Site ID	244146
SIC Code	3273	Municipality	Taylor Township
SIC Description	Manufacturing - Ready-Mixed Concrete	County	Blair
Date Application Received	May 3, 2024	EPA Waived?	Yes
Date Application Accepted	August 9, 2024	If No, Reason	

Purpose of Application: This is an application for NPDES renewal.

Approve	Deny	Signatures	Date
X		Nicholas Hong, P.E. / Environmental Engineer Nick Hong (via electronic signature)	September 26, 2024
x		Daniel W. Martin, P.E. / Environmental Engineer Manager Maria D. Bebenek for	October 18, 2024
x		Maria D. Bebenek, P.E. / Environmental Program Manager Maria D. Bebenek	October 18, 2024

Summary of Review

The application submitted by the applicant requests a NPDES renewal permit for the New Enterprise Stone- Roaring Springs located at 8162 Woodbury Pike (Route 36), Roaring Spring, PA 16673 in Blair County, municipality of Taylor Township. The existing permit became effective on November 1, 2019 and expires(d) on October 31, 2024. The application for renewal was received by DEP Southcentral Regional Office (SCRO) on May 3, 2024.

The purpose of this Fact Sheet is to present the basis of information used for establishing the proposed NPDES permit effluent limitations. The Fact Sheet includes a description of the facility, a description of the facility's receiving waters, a description of the facility's receiving waters attainment/non-attainment assessment status, and a description of any changes to the proposed monitoring/sampling frequency. Section 6 provides the justification for the proposed NPDES effluent limits derived from technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), total maximum daily loading (TMDL), antidegradation, anti-backsliding, and/or whole effluent toxicity (WET). A brief summary of the outlined descriptions has been included in the Summary of Review section.

The subject facility is a 0.345 MGD treatment facility. The applicant did not indicate whether or not they anticipate any proposed upgrades to the treatment facility in the next five years. The NPDES application has been processed as an Industrial Waste (Minor facility with ELG) due to the type of wastewater and the design flow rate for the facility. The applicant disclosed the Act 14 requirement to Blair County Commissioners and Taylor Township and the notice was received by the parties on March 22, 2024.

Utilizing the DEP's web-based Emap-PA information system, the receiving waters has been determined to be Halter Creek. The sequence of receiving streams that the Halter Creek discharges into are the Frankstown Branch Juniata River, the Juniata River, and the Susquehanna River which eventually drains into the Chesapeake Bay. The subject site is not subject to the Chesapeake Bay implementation requirements. The receiving water has protected water usage for warm water fishes (WWF) and migratory fishes (MF). No Class A Wild Trout fisheries are impacted by this discharge. The absence of high quality and/or exceptional value surface waters removes the need for an additional evaluation of anti-degradation requirements.

The Halter Creek is a Category 5 stream listed in the 2024 Integrated List of All Waters (formerly 303d Listed Streams). This stream is an impaired stream for aquatic life due to an urban runoff/storm sewers from total suspended solids (TSS). The receiving waters is not subject to a total maximum daily load (TMDL) plan to improve water quality in the subject facility's watershed.

The existing permit and proposed permit differ as follows:

- **TDS, bromide, chloride, and sulfate have been eliminated from monitoring**
- **Cadmium and thallium shall be monitored 2x/yr.**

Sludge use and disposal description and location(s): The facility did not have any reportable solids disposed in 2023 to June 2024.

The proposed permit will expire five (5) years from the effective date.

Based on the review in this report, it is recommended that the permit be drafted. 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.

Any additional information or public review of documents associated with the discharge or facility may be available at PA DEP Southcentral Regional Office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file review, contact the SCRO File Review Coordinator at 717.705.4700.

1.0 Applicant

1.1 General Information

This fact sheet summarizes PA Department of Environmental Protection's review for the NPDES renewal for the following subject facility.

Facility Name:	New Enterprise Stone- Roaring Springs
NPDES Permit #	PA0027596
Physical Address:	8162 Woodbury Pike (Route 36) Roaring Spring, PA 16673
Mailing Address:	PO Box 77 New Enterprise, PA 16664
Contact:	Stephanie Stewart Geo-Environmental Specialist sstewart@nesl.com
Consultant:	There was not a consultant utilized for this NPDES renewal.

1.2 Permit History

Description of Facility

The facility is a redi-mix concrete and concrete manufacturing facility.

Permit submittal included the following information.

- NPDES Application
- Influent Sample Data
- Effluent Sample Data

2.0 Treatment Facility Summary

2.1.1 Site location

The physical address for the facility is 8162 Woodbury Pike (Route 36), Roaring Spring, PA 16673. A topographical and an aerial photograph of the facility are depicted as Figure 1 and Figure 2.

Figure 1: Topographical map of the subject facility

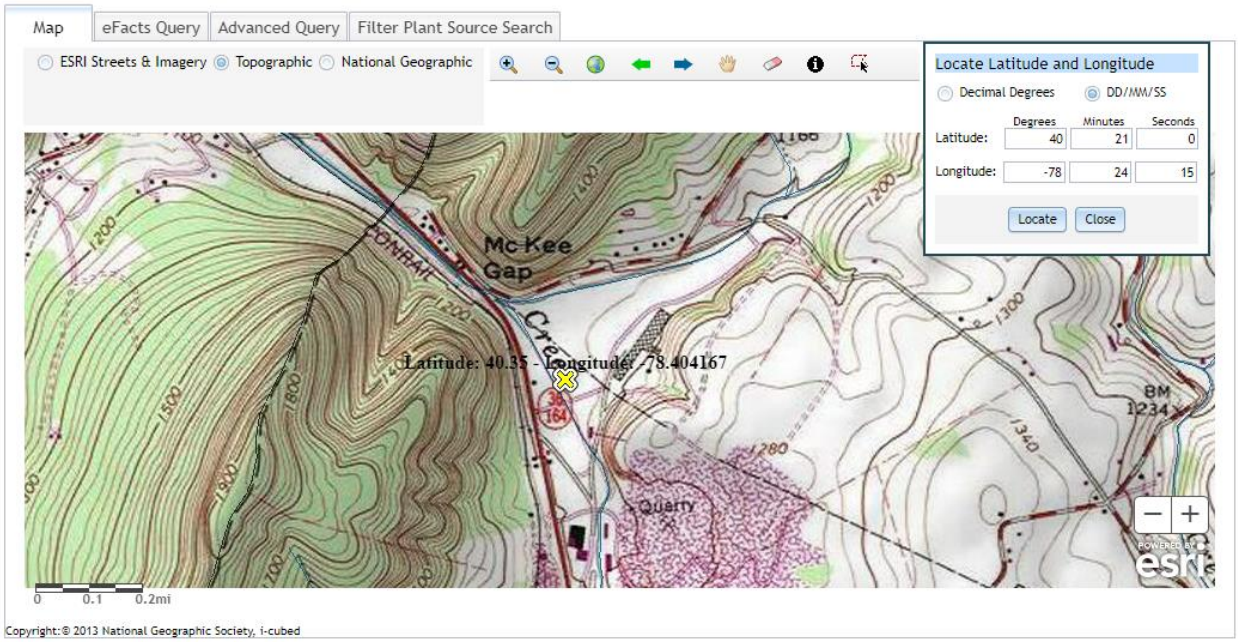
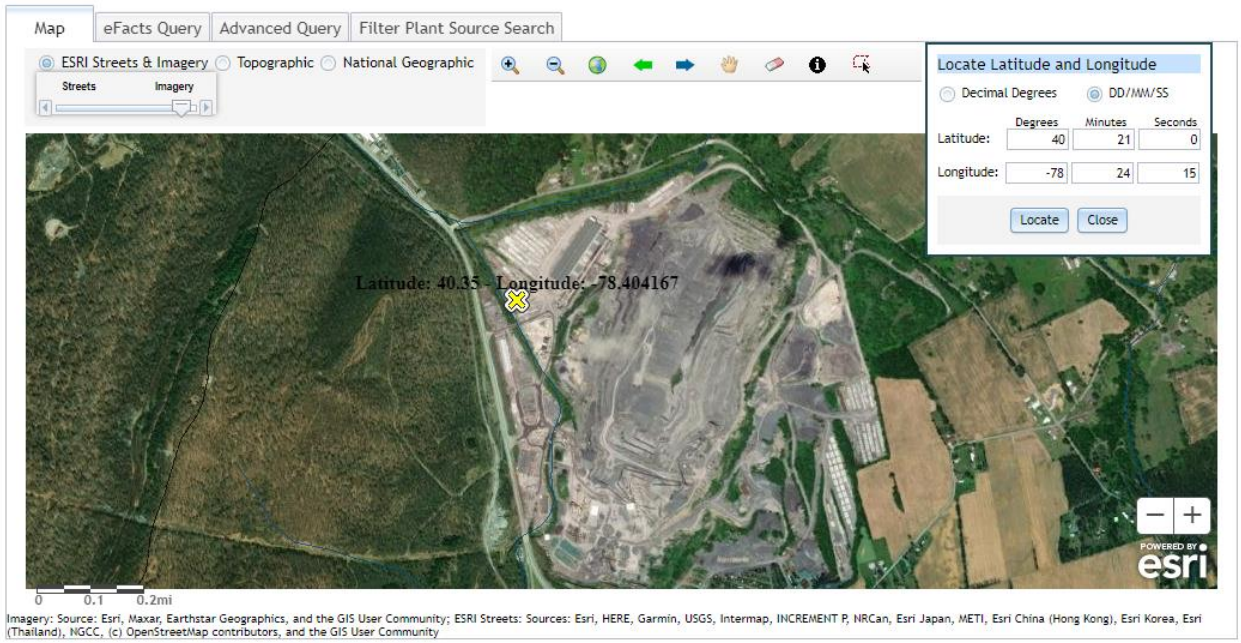


Figure 2: Aerial Photograph of the subject facility



2.2 Description of Wastewater Treatment Process

The subject facility is a 0.345 MGD design flow facility. The subject facility generates washout water (i.e. concrete plant wastewater, truck washout and stormwater) from three sedimentation ponds and a ditchline. The wastewater then enters a mixing basin where sulfuric acid is used to neutralize the pH prior to discharge through the outfall. The facility is being evaluated for flow, pH, TSS, total dissolved solids, total sulfate, chloride, and bromide. The existing permits limits for the facility is summarized in Section 2.4.

2.3 Facility Outfall Information

The facility has the following outfall information for wastewater.

Outfall No.	001	**Design Flow (MGD)**	.345
Latitude	40º 20' 4.24"	**Longitude**	-78º 24' 20.00"
Wastewater Description:	IW Process Effluent with ELG		

2.3.1 Operational Considerations- Chemical Additives

Chemical additives are chemical products introduced into a waste stream that is used for cleaning, disinfecting, or maintenance and which may be detected in effluent discharged to waters of the Commonwealth. Chemicals excluded are those used for neutralization of waste streams, the production of goods, and treatment of wastewater.

The subject facility utilizes the following chemicals as part of their treatment process.

- Sulfuric Acid for pH neutralization

2.4 Existing NPDES Permits Limits

The existing NPDES permit limits are summarized in the table.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001 , **Latitude** 40º 20' 4.24" , **Longitude** 78º 24' 20.00" , **River Mile Index** 2.35 , **Stream Code** 16503

Receiving Waters: Halter Creek (CWF (existing use))

Type of Effluent: IW Process Effluent without ELG

1. The permittee is authorized to discharge during the period from **November 1, 2019** through **October 31, 2024**.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Annual Average	Daily Maximum	Minimum	Annual Average	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report Avg Mo	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Total Suspended Solids	Report Avg Mo	Report	XXX	30 Avg Mo	50	60	1/week	8-Hr Composite
Total Dissolved Solids	Report	XXX	XXX	Report	XXX	XXX	2/year	8-Hr Composite
Sulfate, Total	Report	XXX	XXX	Report	XXX	XXX	2/year	8-Hr Composite
Chloride	Report	XXX	XXX	Report	XXX	XXX	2/year	8-Hr Composite
Bromide	Report	XXX	XXX	Report	XXX	XXX	2/year	8-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

3.0 Facility NPDES Compliance History

3.1 Summary of Inspections

A summary of the most recent inspections during the existing permit review cycle is as follows.

The DEP inspector noted the following during the inspection.

03/13/2024:

- The facility was unable to locate any documentation confirming when it was calibrated and by whom. The meter should be calibrated yearly and calibration information (date, time, technician's initials, adjustments made, etc.) should be recorded on the monthly bench sheet.
- A review of monitoring reports and facility records showed reporting errors for April and May 2023. The NPDES permit requires weekly testing for TSS. Only one sample was taken during those months. The DMRs for April and May 2023 indicate that the TSS was sampled once a week. The reports need to be revised to show the sample frequency at 1/month. A comment should also be added to the DMR explaining the permit violation. Stephanie explained that the testing was overlooked due to personnel changes at the facility last year.
- Effluent Supplemental Report forms needed to be attached to all annual DMRs. The Effluent Supplementals needed to show the results for the required testing and the loading calculations.

3.2 Summary of DMR Data

A review of approximately 1-year of DMR data shows that the monthly average flow data for the facility below the design capacity of the treatment system. The maximum average flow data for the DMR reviewed was 0.0201 MGD in October 2023. The design capacity of the treatment system is 0.345 MGD.

The off-site laboratory used for the analysis of the parameters was Pace Analytical located at 2019 Ninth Avenue, Altoona, PA 16602

DMR Data for Outfall 001 (from July 1, 2023 to June 30, 2024)

Parameter	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23
Flow (MGD) Average Monthly	0.0165	0.0128	0.0159	0.0106248	0.0136	0.0103	0.0115	0.005	0.0201	0.009	0.0112	0.0062
Flow (MGD) Daily Maximum	0.0370	0.0419	0.0859	0.033686	0.0457	0.0439	0.0381	0.0314	0.0446	0.0238	0.053	0.04
pH (S.U.) Instantaneous Minimum	6.34	6.02	6.09	6.55	7.15	7.33	6.3	6.8	6.95	6.1	6.37	7.41
pH (S.U.) Instantaneous Maximum	8.47	7.9	8.38	8.72	8.94	8.24	8.96	8.95	8.74	8.6	8.3	7.89
TSS (lbs/day) Average Monthly	< 3.3	0.5	1	2	< 0.7	3	3	0.4	0.4	0.5	< 0.5	< 0.7
TSS (lbs/day) Daily Maximum	6.0	0.8	2	5	1.0	3	7	0.4	0.7	0.7	0.7	2.0
TSS (mg/L) Average Monthly	< 3.3	3.4	2	11.5	< 7.4	4.5	30.6	3.2	2.8	5.9	< 3.6	4.6
TSS (mg/L) Daily Maximum	6	4.8	16	20	14.8	8	66.4	3.2	5.2	9.2	< 2.0	10.5
Total Dissolved Solids (lbs/day) Annual Average							1290					
Total Dissolved Solids (mg/L) Annual Average							1290					
Sulfate (lbs/day) Annual Average							729					
Sulfate (mg/L) Annual Average							729					
Chloride (lbs/day) Annual Average							9					
Chloride (mg/L) Annual Average							62.2					
Bromide (lbs/day) Annual Average							< 0.3					
Bromide (mg/L) Annual Average							< 2					

3.3 Non-Compliance

3.3.1 Non-Compliance- NPDES Effluent

A summary of the non-compliance to the permit limits for the existing permit cycle is as follows.

From the DMR data beginning in November 1, 2019 to August 12, 2024, the following were observed effluent non-compliances.

Summary of Non-Compliance with NPDES Effluent Limits
Beginning November 1, 2019 and ending August 12, 2024

NON_COMPLIANCE_DATE	NON_COMPL_TYPE_DESC	NON_COMPL_CATEGORY_DESC	PARAMETER	SAMPLE_VALUE	VIOLATION_CONDITION	PERMIT_VALUE	UNIT_OF_MEASURE	STAT_BASE_CODE	FACILITY_COMMENTS
7/6/2020	Late DMR Submission	Other Violations							
11/30/2020	Late DMR Submission	Other Violations							
3/30/2021	Late DMR Submission	Other Violations							
6/30/2021	Late DMR Submission	Other Violations							
9/30/2022	Late DMR Submission	Other Violations							
5/30/2023	Late DMR Submission	Other Violations							
12/11/2023	Late DMR Submission	Other Violations							
1/25/2024	Violation of permit condition	Effluent	Total Suspended Solids	30.6	>	30	mg/L	Average Monthly	High TSS cause is unknown. the water level was lower than normal due to excavation of material in November and low plant production due to winter slow down. Samples from the 2nd half of December were normal low TSS.
1/25/2024	Violation of permit condition	Effluent	Total Suspended Solids	66.4	>	50	mg/L	Daily Maximum	High TSS cause is unknown. the water level was lower than normal due to excavation of material in November and low plant production due to winter slow down. Samples from the 2nd half of December were normal low TSS.

3.3.2 Non-Compliance- Enforcement Actions

A summary of the non-compliance enforcement actions for the current permit cycle is as follows:

Beginning in November 1, 2019 to August 12, 2024, there were no observed enforcement actions.

3.4 Summary of Biosolids Disposal

The facility did not have any reportable solids disposed in 2023 to June 2024.

3.5 Open Violations

As of September 2024, open violations existed. The final executed permit may be withheld until the open violations are addressed. The table summarizes the client's open violations.

CLIENT	PF ID	FACILITY	PF KIND	PF STATUS	INSP PROGRAM	PROGRAM SPECIFIC ID	INSP ID	VIOLATION ID	INSPECTION CATEGORY	VIOLATION DATE	VIOLATION CODE	VIOLATION
NEW ENTERPRISE STONE & LIME CO INC	737137	NEW ENT STONE & LIME LEESPORT	Surface Large	Active	MING Industrial Minerals Regulatory	06100301	3835391	8201787	PF	09/12/2024	77.453	Conducting blasting without or contrary to an approved blast plan
NEW ENTERPRISE STONE & LIME CO INC	544391	NEW ENTERPRISE STONE & LIME/VINTONDALE QUARRY		Active	Air Quality	23-1374051-11	3791956	8194778	PF	06/17/2024	127.444	Construction, Modification, Reactivation and Operation of Sources, Operating Permit Requirements, Compliance requirements. A person may not cause or permit the operation of a source subject to this article unless the source and air cleaning devices identified in the application for the plan approval and operating permit and the plan approval issued to the source are operated and maintained in accordance with specifications in the application and conditions in the plan approval and operating permit issued by the Department. A person may not cause or permit the operation of an air contamination source subject to this chapter in a manner inconsistent with good operating practices.
NEW ENTERPRISE STONE & LIME CO INC	523332	NEW ENTERPRISE STONE & LIME CO INC/WESCOSVILLE PLT		Active	Air Quality	23-1374051-65	3788341	8192436	PF	06/26/2024	135.5	Reporting of Sources, Recordkeeping. Failure to maintain and make records available upon request by the Department.
NEW ENTERPRISE STONE & LIME CO INC	509812	NEW ENTERPRISE STONE & LIME CO INC/EVANSVILLE QUARRY		Active	Air Quality	23-1374051-85	3824665	8199885	PF	09/04/2024	127.444	Construction, Modification, Reactivation and Operation of Sources, Operating Permit Requirements, Compliance requirements. A person may not cause or permit the operation of a source subject to this article unless the source and air cleaning devices identified in the application for the plan approval and operating permit and the plan approval issued to the source are operated and maintained in accordance with specifications in the application and conditions in the plan approval and operating permit issued by the Department. A person may not cause or permit the operation of an air contamination source subject to this chapter in a manner inconsistent with good operating practices.
NEW ENTERPRISE STONE & LIME CO INC	248920	NEW ENTERPRISE S&L/ROARING SPR	Industrial Waste	Active	WPC NPDES	PA0027596	3730611	8179989	PF	03/13/2024	92A.61(C)	NPDES - Failure to monitor pollutants as required by the NPDES permit
NEW ENTERPRISE STONE & LIME CO INC	248920	NEW ENTERPRISE S&L/ROARING SPR	Industrial Waste	Active	WPC NPDES	PA0027596	3730611	8179990	PF	03/13/2024	92A.61(F)1	NPDES - Failure to properly document monitoring activities and results
NEW ENTERPRISE STONE & LIME CO INC	563368	GILBERTSVILLE READY MIX PLT	Stormwater-Industrial	Active	WPC NPDES	PAR210002	3410652	965692	PF	08/09/2022	CSL611	CSL - Failure to comply with terms and conditions of a WQM permit
NEW ENTERPRISE STONE & LIME CO INC	741293	MARTIN LIMESTONE NOTTINGHAM FACILITY	Stormwater-Industrial	Active	WPC NPDES	PAR210037	3211147	921564	PF	07/23/2019	CSL611	CSL - Failure to comply with terms and conditions of a WQM permit
NEW ENTERPRISE STONE & LIME CO INC	820135	NEW ENTERPRISE STONE & LIME CO INC DENVER ASPHALT PLT	Captive	Active	Hazardous Waste	WMGR028SC007H	3738592	8181560	PF	03/15/2024	262A.16	Conditions for exemption for a small quantity generator that accumulates hazardous waste.
NEW ENTERPRISE STONE & LIME CO INC	820135	NEW ENTERPRISE STONE & LIME CO INC	Captive	Active	Hazardous Waste	WMGR028SC007H	3738592	8181561	PF	03/15/2024	265A.179	Containment requirements not followed.

4.0 Receiving Waters and Water Supply Information Detail Summary

4.1 Receiving Waters

The receiving waters has been determined to be Halter Creek. The sequence of receiving streams that the Halter Creek discharges into are the Frankstown Branch Juniata River, the Juniata River, and the Susquehanna River which eventually drains into the Chesapeake Bay.

4.2 Public Water Supply (PWS) Intake

The closest PWS to the subject facility is Mifflintown MA (PWS ID #4340008) located approximately 106 miles downstream of the subject facility on the Juniata River. Based upon the distance and the flow rate of the facility, the PWS should not be impacted.

4.3 Class A Wild Trout Streams

Class A Wild Trout Streams are waters that support a population of naturally produced trout of sufficient size and abundance to support long-term and rewarding sport fishery. DEP classifies these waters as high-quality coldwater fisheries.

The information obtained from EMAP suggests that no Class A Wild Trout Fishery will be impacted by this discharge.

4.4 2024 Integrated List of All Waters (303d Listed Streams)

Section 303(d) of the Clean Water Act requires States to list all impaired surface waters not supporting uses even after appropriate and required water pollution control technologies have been applied. The 303(d) list includes the reason for impairment which may be one or more point sources (i.e. industrial or sewage discharges) or non-point sources (i.e. abandoned mine lands or agricultural runoff and the pollutant causing the impairment such as metals, pH, mercury or siltation).

States or the U.S. Environmental Protection Agency (EPA) must determine the conditions that would return the water to a condition that meets water quality standards. As a follow-up to listing, the state or EPA must develop a Total Maximum Daily Load (TMDL) for each waterbody on the list. A TMDL identifies allowable pollutant loads to a waterbody from both point and non-point sources that will prevent a violation of water quality standards. A TMDL also includes a margin of safety to ensure protection of the water.

The water quality status of Pennsylvania's waters uses a five-part categorization (lists) of waters per their attainment use status. The categories represent varying levels of attainment, ranging from Category 1, where all designated water uses are met to Category 5 where impairment by pollutants requires a TMDL for water quality protection.

The receiving waters is listed in the 2024 Pennsylvania Integrated Water Quality Monitoring and Assessment Report as a Category 5 waterbody. This stream is an impaired stream for aquatic life due to an urban runoff/storm sewers from total suspended solids (TSS). The designated use has been classified as protected waters for warm water fishes (WWF) and migratory fishes (MF).

4.5 Low Flow Stream Conditions

Water quality modeling estimates are based upon conservative data inputs. The data are typically estimated using either a stream gauge or through USGS web based StreamStats program. The NPDES effluent limits are based upon the combined flows from both the stream and the facility discharge.

A conservative approach to estimate the impact of the facility discharge using values which minimize the total combined volume of the stream and the facility discharge. The volumetric flow rate for the stream is based upon the seven-day, 10-year low flow (Q710) which is the lowest estimated flow rate of the stream during a 7 consecutive day period that occurs once in 10 -year time period. The facility discharge is based upon a known design capacity of the subject facility.

The closest WQN station to the subject facility is the Frankstown Branch Juniata station (WQN224). This WQN station is located approximately 24 miles downstream of the subject facility.

The closest gauge station to the subject facility is the Frankstown Branch Juniata River at Williamsburg, PA (USGS station number 1556000). This gauge station is located approximately 22 miles downstream of the subject facility.

For WQM modeling, pH and stream water temperature data from the water quality network station was used. pH was estimated to be 7.84 and the stream water temperature was estimated to be 22.0 C.

The hardness of the stream was estimated from the water quality network to be 135 mg/l $CaCO_3$.

The low flow yield and the Q710 for the subject facility was estimated as shown below.

Gauge Station Data			
USGS Station Number	1556000		
Station Name	Frankstown Branch Juniata River at Williamsburg, PA		
Q710	47.8	ft^3/sec	
Drainage Area (DA)	291	mi^2	
Calculations			
The low flow yield of the gauge station is:			
Low Flow Yield (LFY) = Q710 / DA			
LFY =	(47.8 ft^3/sec / 291 mi^2)		
LFY =	0.1643	$ft^3/sec/mi^2$	
The low flow at the subject site is based upon the DA of		14.6	mi^2
Q710 = (LFY@gauge station)(DA@Subject Site)			
Q710 = (0.1643 $ft^3/sec/mi^2$)(14.6 mi^2)			
Q710 =	2.398	ft^3/sec	

4.6 Summary of Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.345
Latitude	40º 20' 1.83"	Longitude	-78º 24' 26.33"
Quad Name		Quad Code	
Wastewater Description:	IW Process Effluent with ELG		

Receiving Waters	Halter Creek (CWF (existing use))	Stream Code	16503
NHD Com ID	133386839	RMI	2.43
Drainage Area	14.6	Yield (cfs/mi^2)	0.1643
Q_{7-10} Flow (cfs)	2.398	Q_{7-10} Basis	Streamstats/streamgauge
Elevation (ft)	1073	Slope (ft/ft)	
Watershed No.	11-A	Chapter 93 Class.	WWF, MF
Existing Use		Existing Use Qualifier	Use Attainability Analysis
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	CAUSE UNKNOWN, TOTAL SUSPENDED SOLIDS (TSS)		
Source(s) of Impairment	SOURCE UNKNOWN, URBAN RUNOFF/STORM SEWERS		
TMDL Status	Not applicable	Name	

Background/Ambient Data		Data Source
pH (SU)	7.84	WQN224; median July to Oct
Temperature (°C)	22.0	WQN224; median July to Oct
Hardness (mg/L)	135	WQN224; historical median
Other:		

Nearest Downstream Public Water Supply Intake	Mifflintown MA		
PWS Waters	Juniata River	Flow at Intake (cfs)	
PWS RMI	37	Distance from Outfall (mi)	106

5.0: Overview of Presiding Water Quality Standards

5.1 General

There are at least six (6) different policies which determines the effluent performance limits for the NPDES permit. The policies are technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), antidegradation, total maximum daily loading (TMDL), anti-backsliding, and whole effluent toxicity (WET) The effluent performance limitations enforced are the selected permit limits that is most protective to the designated use of the receiving waters. An overview of each of the policies that are applicable to the subject facility has been presented in Section 6.

5.2.1 Technology-Based Limitations

TBEL treatment requirements under section 301(b) of the Act represent the minimum level of control that must be imposed in a permit issued under section 402 of the Act (40 CFR 125.3). Available TBEL requirements for the state of Pennsylvania are itemized in PA Code 25, Chapter 92a.47.

The presiding sources for the basis for the effluent limitations are governed by either federal or state regulation. The reference sources for each of the parameters is itemized in the tables. The following technology-based limitations apply, subject to water quality analysis and best professional judgement (BPJ) where applicable:

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
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)

Industrial facilities are commonly restricted to effluent limitations established by federal effluent limitation guidelines (ELG). The applicable ELG for this type of industrial facility is the Cement Manufacturing Point Source Category (i.e. 40 CFR 411). The effluent performance limits required by 40 CFR 411.32 are summarized in the table below.

Effluent characteristic	Effluent limitations
TSS	Not to exceed 50 mg/l.
pH	Within the range 6.0 to 9.0.

The applicable effluent is the more stringent limit between TBEL or ELG. For TSS, TBEL is more stringent than the ELG. TBEL limits shall apply for the proposed permit.

5.3 Water Quality-Based Limitations

WQBEL are based on the need to attain or maintain the water quality criteria and to assure protection of designated and existing uses (PA Code 25, Chapter 92a.2). The subject facility that is typically enforced is the more stringent limit of either the TBEL or the WQBEL.

Determination of WQBEL is calculated by spreadsheet analysis or by a computer modeling program developed by DEP. DEP permit engineers utilize the following computing programs for WQBEL permit limitations: (1) MS Excel worksheet for Total Residual Chorine (TRC); (2) WQM 7.0 for Windows Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen Version 1.1 (WQM Model) and (3) Toxics using DEP Toxics Management Spreadsheet for Toxics pollutants.

The modeling point nodes utilized for this facility are summarized below.

General Data 1	*(Modeling Point #1)*	*(Modeling Point #2)*	*Units*
Stream Code	16503	16503	
River Mile Index	2.43	0	miles
Elevation	1073	981	feet
Latitude	40.35	40.377337	
Longitude	-78.404167	-78.42251	
Drainage Area	14.6	33.4	sq miles
Low Flow Yield	0.1643	0.1643	cfs/sq mile

5.3.1 Water Quality Modeling 7.0

The WQM Model is a computer model that is used to determine NPDES discharge effluent limitations for Carbonaceous BOD (CBOD5), Ammonia Nitrogen (NH3-N), and Dissolved Oxygen (DO) for single and multiple point source discharges scenarios. WQM Model is a complete-mix model which means that the discharge flow and the stream flow are assumed to instantly and completely mixed at the discharge node.

The facility is not subject to water quality modeling.

5.3.2 Toxics Modeling

The Toxics Management Spreadsheet model is a computer model that is used to determine effluent limitations for toxics (and other substances) for single discharge wasteload allocations. This computer model uses a mass-balance water quality analysis that includes consideration for mixing, first-order decay, and other factors used to determine recommended water quality-based effluent limits. Toxics Management Spreadsheet does not assume that all discharges completely mix with the stream. The point of compliance with water quality criteria are established using criteria compliance times (CCTs). The available CCTs are either acute fish criterion (AFC), chronic fish criterion (CFC), or human health criteria (THH & CRL).

Acute Fish Criterion (AFC) measures the criteria compliance time as either the maximum criteria compliance time (i.e.15 minutes travel time downstream of the current discharge) or the complete mix time whichever comes first. AFC is evaluated at Q710 conditions.

Chronic Fish Criterion (CFC) measures the criteria compliance time as either the maximum criteria compliance time (i.e. 12 hours travel time downstream of the current discharge) or the complete mix time whichever comes first. CFC is evaluated at Q710 conditions.

Threshold Human Health (THH) measures the criteria compliance time as either the maximum criteria compliance time (i.e. 12 hours travel time downstream of the current discharge) or the estimated travel time downstream to the nearest potable water supply intake whichever comes first. THH is evaluated at Q710 conditions.

Cancer Risk Level (CRL) measures the criteria compliance time as either the maximum criteria compliance time (i.e. 12 hours travel time downstream of the current discharge) or the complete mix time whichever comes first. CRL is evaluated at Qh (harmonic mean or normal flow) conditions.

The Toxics Model requires several input values for calculating output values. The source of data originates from either EMAP, the National Map, or Stream Stats. Data for stream gauge information, if any, was abstracted from USGS Low-Flow, Base-Flow, and Mean-Flow Regression Equations for Pennsylvania Streams authored by Marla H. Stuckey (Scientific Investigations Report 2006-5130).

5.3.2.1 Determining if NPDES Permit Will Require Monitoring/Limits in the Proposed Permit for Toxic Pollutants

To determine if Toxics modeling is necessary, DEP has developed a Toxics Management Spreadsheet to identify toxics of concern. Toxic pollutants whose maximum concentrations as reported in the permit application or on DMRs are greater than the most stringent applicable water quality criterion are pollutants of concern. A Reasonable Potential Analysis was utilized to determine (a) if the toxic parameters modeled would require monitoring or (b) if permit limitations would be required for the parameters. The toxics reviewed for reasonable potential were the pollutants in Groups 1 and 2

Based upon the SOP- Establishing Water Quality-Based Effluent Limitations (WQBELs) and Permit Conditions for Toxic Pollutants (Revised January 10, 2019), monitoring and/or limits will be established as follows.

(a) When reasonable potential is demonstrated, establish limits where the maximum reported concentration equals or exceeds 50% of the WQBEL.
(b) For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
(c) For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10% - 50% of the WQBEL.

Applicable monitoring or permit limits for toxics are summarized in Section 6.

The Toxics Management Spreadsheet output has been included in Attachment B.

5.3.3 Whole Effluent Toxicity (WET)

The facility is not subject to WET.

5.4 Total Maximum Daily Loading (TMDL)

5.4.1 TMDL

The goal of the Clean Water Act (CWA), which governs water pollution, is to ensure that all of the Nation's waters are clean and healthy enough to support aquatic life and recreation. To achieve this goal, the CWA created programs designed to regulate and reduce the amount of pollution entering United States waters. Section 303(d) of the CWA requires states to assess their waterbodies to identify those not meeting water quality standards. If a waterbody is not meeting standards, it is listed as impaired and reported to the U.S. Environmental Protection Agency. The state then develops a plan to clean up the impaired waterbody. This plan includes the development of a Total Maximum Daily Load (TMDL) for the pollutant(s) that were found to be the cause of the water quality violations. A Total Maximum Daily Load (TMDL) calculates the maximum amount of a specific pollutant that a waterbody can receive and still meet water quality standards.

A TMDL for a given pollutant and waterbody is composed of the sum of individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background levels. In addition, the TMDL must include an implicit or explicit margin of safety (MOS) to account for the uncertainty in the relationship between pollutant loads and the quality of the receiving waterbody. The TMDL components are illustrated using the following equation:

$$TMDL = \Sigma WLAs + \Sigma LAs + MOS$$

Pennsylvania has committed to restoring all impaired waters by developing TMDLs and TMDL alternatives for all impaired waterbodies. The TMDL serves as the starting point or planning tool for restoring water quality.

5.4.1.1 Local TMDL

The subject facility does not discharge into a local TMDL.

5.4.1.2 Chesapeake Bay TMDL Requirement

The Chesapeake Bay Watershed is a large ecosystem that encompasses approximately 64,000 square miles in Maryland, Delaware, Virginia, West Virginia, Pennsylvania, New York and the District of Columbia. An ecosystem is composed of interrelated parts that interact with each other to form a whole. All of the plants and animals in an ecosystem depend on each other in some way. Every living thing needs a healthy ecosystem to survive. Human activities affect the Chesapeake Bay ecosystem by adding pollution, using resources and changing the character of the land.

Most of the Chesapeake Bay and many of its tidal tributaries have been listed as impaired under Section 303(d) of the federal Water Pollution Control Act ("Clean Water Act"), 33 U.S.C. § 1313(d). While the Chesapeake Bay is outside the boundaries of Pennsylvania, more than half of the State lies within the watershed. Two major rivers in Pennsylvania are part of the Chesapeake Bay Watershed. They are (a) the Susquehanna River and (b) the Potomac River. These two rivers total 40 percent of the entire Chesapeake Bay watershed.

The overall management approach needed for reducing nitrogen, phosphorus and sediment are provided in the Bay TMDL document and the Phase I, II, and III WIPs which is described in the Bay TMDL document and Executive Order 13508.

The Bay TMDL is a comprehensive pollution reduction effort in the Chesapeake Bay watershed identifying the necessary pollution reductions of nitrogen, phosphorus and sediment across the seven Bay watershed jurisdictions of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia to meet applicable water quality standards in the Bay and its tidal waters.

The Watershed Implementation Plans (WIPs) provides objectives for how the jurisdictions in partnership with federal and local governments will achieve the Bay TMDL's nutrient and sediment allocations.

Phase 3 WIP provides an update on Chesapeake Bay TMDL implementation activities for point sources and DEP's current implementation strategy for wastewater. The latest revision of the supplement was September 13, 2021.

The Chesapeake Bay TMDL (Appendix Q) categorizes point sources into four sectors:

- Sector A- significant sewage dischargers;
- Sector B- significant industrial waste (IW) dischargers;
- Sector C- non-significant dischargers (both sewage and IW facilities); and
- Sector D- combined sewer overflows (CSOs).

All sectors contain a listing of individual facilities with NPDES permits that were believed to be discharging at the time the TMDL was published (2010). All sectors with the exception of the non-significant dischargers have individual wasteload allocations (WLAs) for TN and TP assigned to specific facilities. Non-significant dischargers have a bulk or aggregate allocation for TN and TP based on the facilities in that sector that were believed to be discharging at that time and their estimated nutrient loads.

Cap Loads will be established in permits as Net Annual TN and TP loads (lbs/yr) that apply during the period of October 1 – September 30. For facilities that have received Cap Loads in any other form, the Cap Loads will be modified accordingly when the permits are renewed.

Offsets have been incorporated into Cap Loads in several permits issued to date. From this point forward, permits will be issued with the WLAs as Cap Loads and will identify Offsets separately to facilitate nutrient trading activities and compliance with the TMDL.

Based upon the supplement the subject facility has been categorized as a Sector C discharger. The supplement defines Sector C as a non-significant dischargers include sewage facilities (Phase 4 facilities: ≥ 0.2 MGD and < 0.4 MGD and Phase 5 facilities: > 0.002 MGD and < 0.2 MGD), small flow/single residence sewage treatment facilities (≤ 0.002 MGD), and non-significant IW facilities, all of which may be covered by statewide General Permits or may have individual NPDES permits.

At this time, there are approximately 850 Phase 4 and 5 sewage facilities, approximately 715 small flow sewage treatment facilities covered by a statewide General Permit, and approximately 300 non-significant IW facilities.

For non-significant IW facilities, monitoring and reporting of TN and TP will be required throughout the permit term in renewed or amended permits anytime the facility has the potential to introduce a net TN or TP increase to the load contained within the intake water used in processing. In general, facilities that discharge groundwater and cooling water with no addition of chemicals containing N or P do not require monitoring. Monitoring for facilities with other discharges will generally conform to minimum sampling frequencies with the permit writer having final discretion.

Non-significant IW facilities that propose expansion or production increases and as a result will discharge at least 75 lbs/day TN or 25 lbs/day TP (on an annual average basis), will be classified as Significant IW dischargers and receive Cap Loads in their permits based on existing performance (existing TN/TP concentrations at current average annual flow).

In general, for new non-significant IW discharges (including existing facilities discharging without a permit), DEP will issue permits containing Cap Loads of "0" and these facilities will be expected to purchase credits and/or apply offsets to achieve compliance.

Since the facility does not generate nitrogen or phosphorus, this facility is not subject to Sector C monitoring requirements.

5.5 Anti-Degradation Requirement

Chapter 93.4a of the PA regulations requires that surface water of the Commonwealth of Pennsylvania may not be degraded below levels that protect the existing uses. The regulations specifically state that *Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected*. Antidegradation requirements are implemented through DEP's guidance manual entitled Water Quality Antidegradation Implementation Guidance (Document #391-0300-02).

The policy requires DEP to protect the existing uses of all surface waters and the existing quality of High Quality (HQ) and Exceptional Value (EV) Waters. Existing uses are protected when DEP makes a final decision on any permit or approval for an activity that may affect a protected use. Existing uses are protected based upon DEP's evaluation of the best available information (which satisfies DEP protocols and Quality Assurance/Quality Control (QA/QC) procedures) that indicates the protected use of the waterbody.

For a new, additional, or increased point source discharge to an HQ or EV water, the person proposing the discharge is required to utilize a nondischarge alternative that is cost-effective and environmentally sound when compared with the cost of the proposed discharge. If a nondischarge alternative is not cost-effective and environmentally sound, the person must use the best available combination of treatment, pollution prevention, and wastewater reuse technologies and assure that any discharge is nondegrading. In the case of HQ waters, DEP may find that after satisfaction of intergovernmental coordination and public participation requirements lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In addition, DEP will assure that cost-effective and reasonable best management practices for nonpoint source control in HQ and EV waters are achieved.

The subject facility's discharge will be to a non-special protection waters and the permit conditions are imposed to protect existing instream water quality and uses. Neither HQ waters or EV waters is impacted by this discharge.

5.6 Anti-Backsliding

Anti-backsliding is a federal regulation which prohibits a permit from being renewed, reissued, or modified containing effluent limitations which are less stringent than the comparable effluent limitations in the previous permit (40 CFR 122.l.1 and 40 CFR 122.l.2). A review of the existing permit limitations with the proposed permit limitations confirm that the facility is consistent with anti-backsliding requirements. The facility has proposed effluent limitations that are as stringent as the existing permit.

6.0 NPDES Parameter Details

The basis for the proposed sampling and their monitoring frequency that will appear in the permit for each individual parameter are itemized in this Section. The final limits are the more stringent of technology based effluent treatment (TBEL) requirements, water quality based (WQBEL) limits, TMDL, antidegradation, anti-degradation, or WET.

The reader will find in this section:

a) a justification of recommended permit monitoring requirements and limitations for each parameter in the proposed NPDES permit;
b) a summary of changes from the existing NPDES permit to the proposed permit; and
c) a summary of the proposed NPDES effluent limits.

6.1 Recommended Monitoring Requirements and Effluent Limitations

A summary of the recommended monitoring requirements and effluent limitations are itemized in the tables. The tables are categorized by (a) Conventional Pollutants and Disinfection and (b) Toxics.

6.1.1 Conventional Pollutants and Disinfection

Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection New Enterprise- Roaring Springs, PA0027596			
Parameter	**Permit Limitation Required by[1]:**	**Recommendation**	
pH (S.U.)	TBEL	Monitoring:	The monitoring frequency shall be daily as a grab sample (Table 6-4).
		Effluent Limit:	Effluent limits may range from pH = 6.0 to 9.0
		Rationale:	The monitoring frequency has been assigned in accordance with Table 6-4 and the effluent limits assigned by Chapter 95.2(1).
TSS	TBEL	Monitoring:	The monitoring frequency shall be 1/week as an 8-hr composite sample (Table 6-4).
		Effluent Limit:	Effluent limits shall not exceed 30 mg/l.
		Rationale:	The monitoring frequency has been assigned in accordance with Table 6-3 and the effluent limits assigned by Chapter 92a.47(a)(1).
Notes:			
1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other			
2 Monitoring frequency based on flow rate of 0.345 MGD.			
3 Table 6-4 (Self Monitoring Requirements for Industrial Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits) (Document # 362-0400-001) Revised 10/97			
4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)			
5 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement, Revised September 13, 2021			

6.1.2 Toxics

Toxics Management Spreadsheet (TMS) modeling showed that Total copper and Total selenium were no reasonable potential. Monitoring for these parameters will not be required.

Toxics Management Spreadsheet (TMS) modeling identifies Total Cadmium and Total Thallium as reasonable potential. Monitoring has been recommended 2x/yr. Pending favorable results from the sampling, the monitoring can be reduced or eliminated in future renewals.

Summary of Proposed NPDES Parameter Details for Toxics

New Enterprise- Roaring Springs, PA0027596

Parameter	Permit Limitation Required by[1]:	Recommendation	
Total Cadmium	WQBEL	Monitoring:	The monitoring frequency shall be 2x/yr as an 8-hr composite sample
		Effluent Limit:	No effluent limit requirement.
		Rationale:	The NPDES application reported collection of three samples. All three samples were above detection limits. TMS recommends effluent limits. DEP has elected to collect more samples to clearly identify if the pollutant is a problem. Monitoring shall be required 2x/yr. Favorable sampling results may reduce or eliminate monitoring or effluent limits in future renewals
Total Thallium	WQBEL	Monitoring:	The monitoring frequency shall be 2x/yr as an 8-hr composite sample
		Effluent Limit:	No effluent limit requirement.
		Rationale:	The NPDES application reported collection of three samples. All three samples were above detection limits. TMS recommends effluent limits. DEP has elected to collect more samples to clearly identify if the pollutant is a problem. Monitoring shall be required 2x/yr. Favorable sampling results may reduce or eliminate monitoring or effluent limits in future renewals

Notes:

1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other

2 Monitoring frequency based on flow rate of 0.345 MGD.

3 Table 6-4 (Self Monitoring Requirements for Industrial Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits) (Document # 362-0400-001) Revised 10/97

4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)

5 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement, Revised September 13, 2021

6.2 Summary of Changes From Existing Permit to Proposed Permit

A summary of how the proposed NPDES permit differs from the existing NPDES permit is summarized as follows.

Changes in Permit Monitoring or Effluent Quality

Parameter	Existing Permit	Draft Permit
TDS	Monitoring was required 2x/year	This parameter has been eliminated from monitoring. Annual DMR data was collected from 2020 to 2023. No reasonable potential was identifed through TMS modeling. DEP Central Office is no longer requiring monitoring for this parameter under the email correspondence dated for Janaury 23, 2014
Bromide	Monitoring was required 2x/year	This parameter has been eliminated from monitoring. Annual DMR data was collected from 2020 to 2023. No reasonable potential was identifed through TMS modeling. DEP Central Office is no longer requiring monitoring for this parameter under the email correspondence dated for Janaury 23, 2014
Choride	Monitoring was required 2x/year	This parameter has been eliminated from monitoring. Annual DMR data was collected from 2020 to 2023. No reasonable potential was identifed through TMS modeling. DEP Central Office is no longer requiring monitoring for this parameter under the email correspondence dated for Janaury 23, 2014
Sulfate	Monitoring was required 2x/year	This parameter has been eliminated from monitoring. Annual DMR data was collected from 2020 to 2023. No reasonable potential was identifed through TMS modeling. DEP Central Office is no longer requiring monitoring for this parameter under the email correspondence dated for Janaury 23, 2014
Cadmium	No monitoring or effluent limits	The NPDES application reported collection of three samples. All three samples were above detection limits. TMS recommends effluent limits. DEP has elected to collect more samples to clearly identify if the pollutant is a problem. Monitoring shall be required 2x/yr. Favorable sampling results may reduce or eliminate monitoring or effluent limits in future renewals
Thallium	No monitoring or effluent limits	The NPDES application reported collection of three samples. All three samples were above detection limits. TMS recommends effluent limits. DEP has elected to collect more samples to clearly identify if the pollutant is a problem. Monitoring shall be required 2x/yr. Favorable sampling results may reduce or eliminate monitoring or effluent limits in future renewals

6.3.1 Summary of Proposed NPDES Effluent Limits

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.

The proposed NPDES effluent limitations are summarized in the table below.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001 , **Latitude** 40° 20' 4.24" , **Longitude** 78° 24' 20.00" , **River Mile Index** 2.43 , **Stream Code** 16503

Receiving Waters: Halter Creek (CWF (existing use))

Type of Effluent: IW Process Effluent without ELG

1. The permittee is authorized to discharge during the period from **Permit Effective Date** through **Permit Expiration Date**.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Semi-Annual Average	Daily Maximum	Minimum	Semi-Annual Average	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report Avg Mo	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Total Suspended Solids	Report Avg Mo	Report	XXX	30 Avg Mo	50	60	1/week	8-Hr Composite
Cadmium, Total	Report	XXX	XXX	Report	XXX	XXX	1/6 months	8-Hr Composite
Thallium, Total	Report	XXX	XXX	Report	XXX	XXX	1/6 months	8-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

6.3.2 Summary of Proposed Permit Part C Conditions

The subject facility has the following Part C conditions.

- BMP for concrete batch facilities
- BMP to Address Aqueous Film Forming Foam (AFFF)

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:

Attachment A

Stream Stats/Gauge Data

Table 1. List of U.S. Geological Survey streamgage locations in and near Pennsylvania with updated streamflow statistics.—Continued

[Latitude and Longitude in decimal degrees; mi², square miles]

Streamgage number	Streamgage name	Latitude	Longitude	Drainage area (mi²)	Regulated[1]
01541303	West Branch Susquehanna River at Hyde, Pa.	41.005	-78.457	474	Y
01541308	Bradley Run near Ashville, Pa.	40.509	-78.584	6.77	N
01541500	Clearfield Creek at Dimeling, Pa.	40.972	-78.406	371	Y
01542000	Moshannon Creek at Osceola Mills, Pa.	40.850	-78.268	68.8	N
01542500	WB Susquehanna River at Karthaus, Pa.	41.118	-78.109	1,462	Y
01542810	Waldy Run near Emporium, Pa.	41.579	-78.293	5.24	N
01543000	Driftwood Branch Sinnemahoning Creek at Sterling Run, Pa.	41.413	-78.197	272	N
01543500	Sinnemahoning Creek at Sinnemahoning, Pa.	41.317	-78.103	685	N
01544000	First Fork Sinnemahoning Creek near Sinnemahoning, Pa.	41.402	-78.024	245	Y
01544500	Kettle Creek at Cross Fork, Pa.	41.476	-77.826	136	N
01545000	Kettle Creek near Westport, Pa.	41.320	-77.874	233	Y
01545500	West Branch Susquehanna River at Renovo, Pa.	41.325	-77.751	2,975	Y
01545600	Young Womans Creek near Renovo, Pa.	41.390	-77.691	46.2	N
01546000	North Bald Eagle Creek at Milesburg, Pa.	40.942	-77.794	119	N
01546400	Spring Creek at Houserville, Pa.	40.834	-77.828	58.5	N
01546500	Spring Creek near Axemann, Pa.	40.890	-77.794	87.2	N
01547100	Spring Creek at Milesburg, Pa.	40.932	-77.786	142	N
01547200	Bald Eagle Creek below Spring Creek at Milesburg, Pa.	40.943	-77.786	265	N
01547500	Bald Eagle Creek at Blanchard, Pa.	41.052	-77.604	339	Y
01547700	Marsh Creek at Blanchard, Pa.	41.060	-77.606	44.1	N
01547800	South Fork Beech Creek near Snow Shoe, Pa.	41.024	-77.904	12.2	N
01547950	Beech Creek at Monument, Pa.	41.112	-77.702	152	N
01548005	Bald Eagle Creek near Beech Creek Station, Pa.	41.081	-77.549	562	Y
01548500	Pine Creek at Cedar Run, Pa.	41.522	-77.447	604	N
01549000	Pine Creek near Waterville, Pa.	41.313	-77.379	750	N
01549500	Blockhouse Creek near English Center, Pa.	41.474	-77.231	37.7	N
01549700	Pine Creek below Little Pine Creek near Waterville, Pa.	41.274	-77.324	944	Y
01550000	Lycoming Creek near Trout Run, Pa.	41.418	-77.033	173	N
01551500	WB Susquehanna River at Williamsport, Pa.	41.236	-76.997	5,682	Y
01552000	Loyalsock Creek at Loyalsockville, Pa.	41.325	-76.912	435	N
01552500	Muncy Creek near Sonestown, Pa.	41.357	-76.535	23.8	N
01553130	Sand Spring Run near White Deer, Pa.	41.059	-77.077	4.93	N
01553500	West Branch Susquehanna River at Lewisburg, Pa.	40.968	-76.876	6,847	Y
01553700	Chillisquaque Creek at Washingtonville, Pa.	41.062	-76.680	51.3	N
01554000	Susquehanna River at Sunbury, Pa.	40.835	-76.827	18,300	Y
01554500	Shamokin Creek near Shamokin, Pa.	40.810	-76.584	54.2	N
01555000	Penns Creek at Penns Creek, Pa.	40.867	-77.048	301	N
01555500	East Mahantango Creek near Dalmatia, Pa.	40.611	-76.912	162	N
01556000	Frankstown Branch Juniata River at Williamsburg, Pa.	40.463	-78.200	291	N
01557500	Bald Eagle Creek at Tyrone, Pa.	40.684	-78.234	44.1	N
01558000	Little Juniata River at Spruce Creek, Pa.	40.613	-78.141	220	N
01559000	Juniata River at Huntingdon, Pa.	40.485	-78.019	816	LF
01559500	Standing Stone Creek near Huntingdon, Pa.	40.524	-77.971	128	N
01559700	Sulphur Springs Creek near Manns Choice, Pa.	39.978	-78.619	5.28	N
01560000	Dunning Creek at Belden, Pa.	40.072	-78.493	172	N

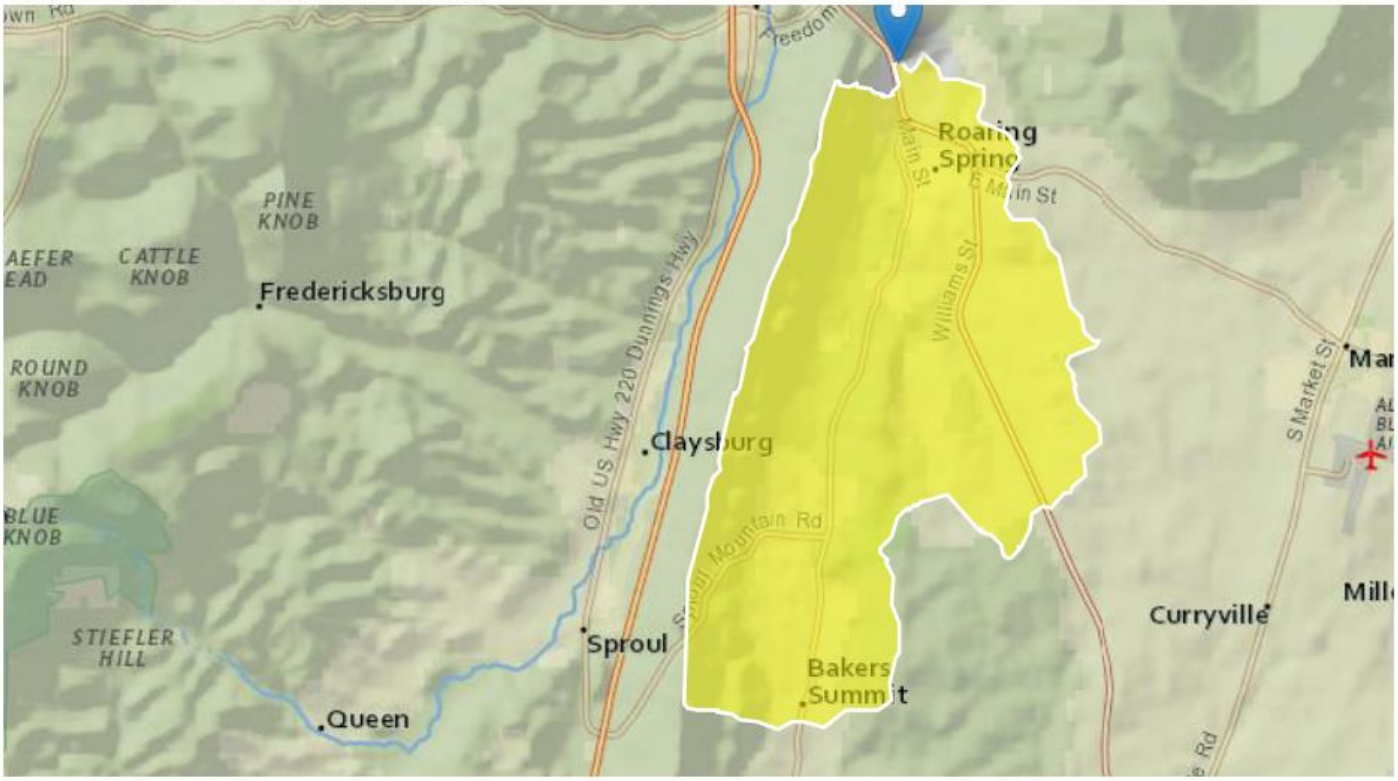
Table 2. Selected low-flow statistics for streamgage locations in and near Pennsylvania.—Continued

[ft³/s; cubic feet per second; —, statistic not computed; <, less than]

Streamgage number	Period of record used in analysis[1]	Number of years used in analysis	1-day, 10-year (ft³/s)	7-day, 10-year (ft³/s)	7-day, 2-year (ft³/s)	30-day, 10-year (ft³/s)	30-day, 2-year (ft³/s)	90-day, 10-year (ft³/s)
01546000	1912–1934	17	1.8	2.2	6.8	3.7	12.1	11.2
01546400	1986–2008	23	13.5	14.0	19.6	15.4	22.3	18.7
01546500	1942–2008	67	26.8	29.0	41.3	31.2	44.2	33.7
01547100	1969–2008	40	102	105	128	111	133	117
01547200	1957–2008	52	99.4	101	132	106	142	115
01547500	[2]1971–2008	38	28.2	109	151	131	172	153
01547500	[3]1956–1969	14	90.0	94.9	123	98.1	131	105
01547700	1957–2008	52	.5	.6	2.7	1.1	3.9	2.2
01547800	1971–1981	11	1.6	1.8	2.4	2.1	2.9	3.5
01547950	1970–2008	39	12.1	13.6	28.2	17.3	36.4	23.8
01548005	[2]1971–2000	25	142	151	206	178	241	223
01548005	[3]1912–1969	58	105	114	147	125	165	140
01548500	1920–2008	89	21.2	24.2	50.1	33.6	68.6	49.3
01549000	1910–1920	11	26.0	32.9	78.0	46.4	106	89.8
01549500	1942–2008	67	.6	.8	2.5	1.4	3.9	2.6
01549700	1959–2008	50	33.3	37.2	83.8	51.2	117	78.4
01550000	1915–2008	94	6.6	7.6	16.8	11.2	24.6	18.6
01551500	[2]1963–2008	46	520	578	1,020	678	1,330	919
01551500	[3]1901–1961	61	400	439	742	523	943	752
01552000	1927–2008	80	20.5	22.2	49.5	29.2	69.8	49.6
01552500	1942–2008	67	.9	1.2	3.1	1.7	4.4	3.3
01553130	1969–1981	13	1.0	1.1	1.5	1.3	1.8	1.7
01553500	[2]1968–2008	41	760	838	1,440	1,000	1,850	1,470
01553500	[3]1941–1966	26	562	619	880	690	1,090	881
01553700	1981–2008	28	9.1	10.9	15.0	12.6	17.1	15.2
01554000	[2]1981–2008	28	1,830	1,990	3,270	2,320	4,210	3,160
01554000	[3]1939–1979	41	1,560	1,630	2,870	1,880	3,620	2,570
01554500	1941–1993	53	16.2	22.0	31.2	25.9	35.7	31.4
01555000	1931–2008	78	33.5	37.6	58.8	43.4	69.6	54.6
01555500	1931–2008	78	4.9	6.5	18.0	9.4	24.3	16.6
01556000	1918–2008	91	43.3	47.8	66.0	55.1	75.0	63.7
01557500	1946–2008	63	2.8	3.2	6.3	4.2	8.1	5.8
01558000	1940–2008	69	56.3	59.0	79.8	65.7	86.2	73.7
01559000	1943–2008	66	104	177	249	198	279	227
01559500	1931–1958	28	9.3	10.5	15.0	12.4	17.8	15.8
01559700	1963–1978	16	.1	.1	.2	.1	.3	.2
01560000	1941–2008	68	8.5	9.4	15.6	12.0	20.2	16.2
01561000	1932–1958	27	.4	.5	1.6	.8	2.5	1.7
01562000	1913–2008	96	64.1	67.1	106	77.4	122	94.5
01562500	1931–1957	27	1.1	1.6	3.8	2.3	5.4	3.7
01563200	[2]1974–2008	35	—	—	—	112	266	129
01563200	[3]1948–1972	25	10.3	28.2	86.1	64.5	113	95.5
01563500	[2]1974–2008	35	384	415	519	441	580	493
01563500	[3]1939–1972	34	153	242	343	278	399	333
01564500	1940–2008	69	3.6	4.2	10.0	6.2	14.4	10.6

StreamStats Report

Region ID: PA
Workspace ID: PA20240813113216503000
Clicked Point (Latitude, Longitude): 40.34975, -78.40464
Time: 2024-08-13 07:32:40 -0400



New Enterprise - Roaring Springs PA0027596 Modeling Point #1 August 2024

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	80.13	percent
DRNAREA	Area that drains to a point on a stream	14.6	square miles
PRECIP	Mean Annual Precipitation	37	inches
ROCKDEP	Depth to rock	5.7	feet

Parameter Code	Parameter Description	Value	Unit
STRDEN	Stream Density -- total length of streams divided by drainage area	1.89	miles per square mile

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	14.6	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	37	inches	35	50.4
STRDEN	Stream Density	1.89	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	5.7	feet	3.32	5.65
CARBON	Percent Carbonate	80.13	percent	0	99

Low-Flow Statistics Disclaimers [Low Flow Region 2]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Low-Flow Statistics Flow Report [Low Flow Region 2]

Statistic	Value	Unit
7 Day 2 Year Low Flow	3.58	ft^3/s
30 Day 2 Year Low Flow	3.92	ft^3/s
7 Day 10 Year Low Flow	2.67	ft^3/s
30 Day 10 Year Low Flow	2.83	ft^3/s
90 Day 10 Year Low Flow	3.05	ft^3/s

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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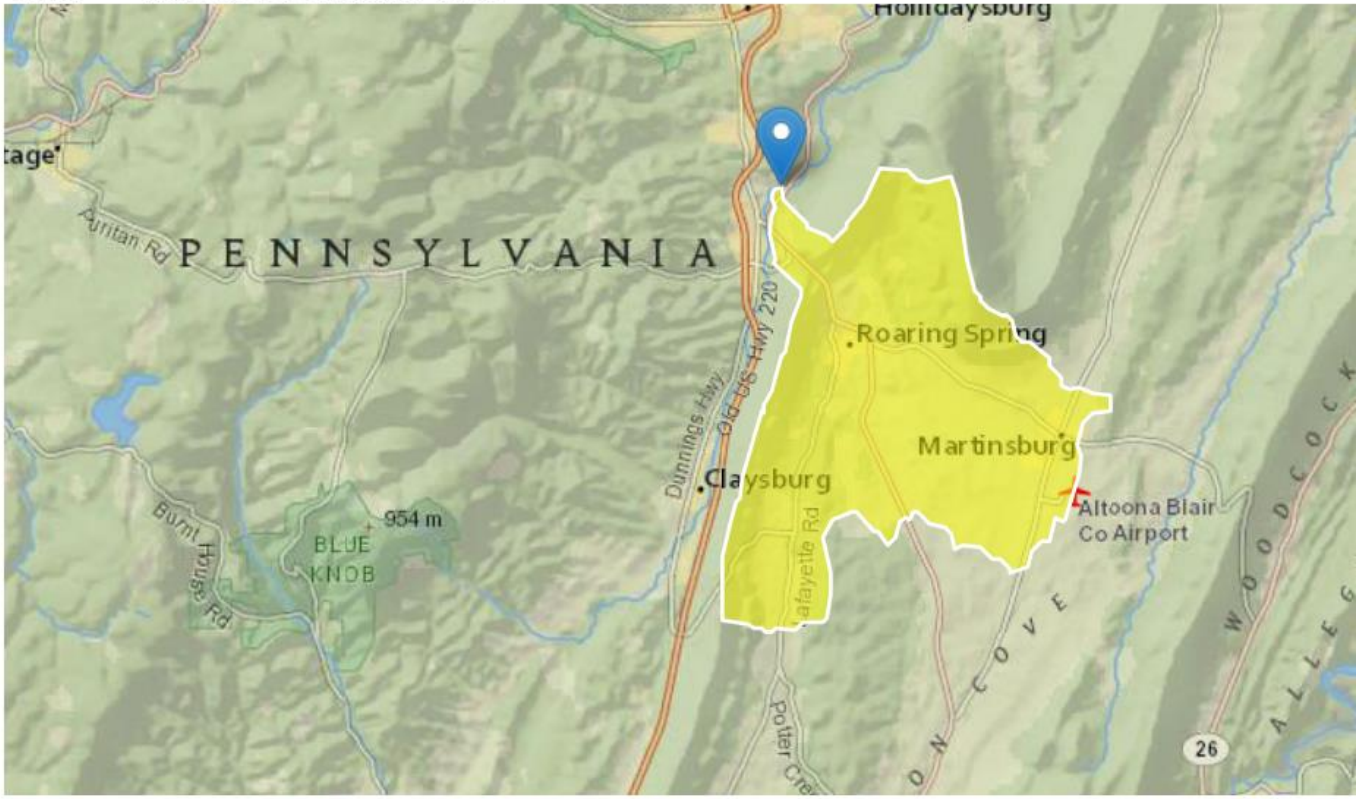
Application Version: 4.23.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

StreamStats Report

Region ID: PA
Workspace ID: PA20240813113851498000
Clicked Point (Latitude, Longitude): 40.37728, -78.42266
Time: 2024-08-13 07:39:13 -0400



New Enterprise - Roaring Springs PA0027596 Modeling Point #2 August 2024

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	65.84	percent
DRNAREA	Area that drains to a point on a stream	33.4	square miles
ELEV	Mean Basin Elevation	1463	feet
FOREST	Percentage of area covered by forest	31.9586	percent

Parameter Code	Parameter Description	Value	Unit
PRECIP	Mean Annual Precipitation	37	inches
ROCKDEP	Depth to rock	5.5	feet
STRDEN	Stream Density -- total length of streams divided by drainage area	1.98	miles per square mile
URBAN	Percentage of basin with urban development	5.6505	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	33.4	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	37	inches	35	50.4
STRDEN	Stream Density	1.98	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	5.5	feet	3.32	5.65
CARBON	Percent Carbonate	65.84	percent	0	99

Low-Flow Statistics Flow Report [Low Flow Region 2]

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	7.1	ft^3/s	38	38
30 Day 2 Year Low Flow	7.96	ft^3/s	33	33
7 Day 10 Year Low Flow	5.16	ft^3/s	51	51
30 Day 10 Year Low Flow	5.62	ft^3/s	46	46
90 Day 10 Year Low Flow	6.29	ft^3/s	36	36

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/)

Application Version: 4.23.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Attachment B

Toxics Management Spreadsheet

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Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **New Enterprise Stone - Roaring Springs** NPDES Permit No.: **PA0027596** Outfall No.: **001**

Evaluation Type **Major Sewage / Industrial Waste** Wastewater Description: **Industrial 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
0.345	725	7.56						

					0 if left blank		0.5 if left blank		0 if left blank			1 if left blank	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		1460									
	Chloride (PWS)	mg/L		62.2									
	Bromide	mg/L		2									
	Sulfate (PWS)	mg/L		918									
	Fluoride (PWS)	mg/L		0.262									
Group 2	Total Aluminum	µg/L		140									
	Total Antimony	µg/L	<	0.348									
	Total Arsenic	µg/L	<	1									
	Total Barium	µg/L		246									
	Total Beryllium	µg/L	<	0.676									
	Total Boron	µg/L	<	0.0565									
	Total Cadmium	µg/L		1.93									
	Total Chromium (III)	µg/L		0.181									
	Hexavalent Chromium	µg/L		0.229									
	Total Cobalt	µg/L		3.44									
	Total Copper	µg/L		20.6									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L		0.043									
	Dissolved Iron	µg/L		130									
	Total Iron	µg/L		136									
	Total Lead	µg/L		0.321									
	Total Manganese	µg/L	<	1.83									
	Total Mercury	µg/L	<	0.00009									
	Total Nickel	µg/L		9.26									
	Total Phenols (Phenolics) (PWS)	µg/L		0.066									
	Total Selenium	µg/L		12.8									
	Total Silver	µg/L	<	0.274									
	Total Thallium	µg/L		2									
	Total Zinc	µg/L	<	3.54									
	Total Molybdenum	µg/L		566									
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										
	Carbon Tetrachloride	µg/L	<										
	Chlorobenzene	µg/L											
	Chlorodibromomethane	µg/L	<										
	Chloroethane	µg/L	<										
	2-Chloroethyl Vinyl Ether	µg/L	<										

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Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

New Enterprise Stone - Roaring Springs, NPDES Permit No. PA0027596, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Halter Creek**

No. Reaches to Model: **1**

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	016503	2.43	1073	14.6			Yes
End of Reach 1	016503	0	981	33.4			Yes

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

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	2.43	0.1643										135	7.84		
End of Reach 1	0	0.1643										135	7.84		

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	2.43														
End of Reach 1	0														

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Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

New Enterprise Stone - Roaring Springs, NPDES Permit No. PA0027596, Outfall 001

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 11.478 PMF: 1 Analysis Hardness (mg/l): 242.38 Analysis pH: 7.77

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	4,121	
Total Antimony	0	0		0	1,100	1,100	6,044	
Total Arsenic	0	0		0	340	340	1,868	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	115,384	
Total Boron	0	0		0	8,100	8,100	44,505	
Total Cadmium	0	0		0	4.759	5.25	28.8	Chem Translator of 0.907 applied
Total Chromium (III)	0	0		0	1176.516	3,723	20,457	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	89.5	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	522	
Total Copper	0	0		0	30.949	32.2	177	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	166.821	252	1,385	Chem Translator of 0.662 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	9.05	Chem Translator of 0.85 applied
Total Nickel	0	0		0	990.260	992	5,452	Chem Translator of 0.998 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0		0	14.749	17.4	95.3	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	357	
Total Zinc	0	0		0	248.107	254	1,394	Chem Translator of 0.978 applied

☑ ***CFC*** CCT (min): 11.478 PMF: 1 Analysis Hardness (mg/l): 242.38 Analysis pH: 7.77

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	1,209	
Total Arsenic	0	0		0	150	150	824	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	22,527	
Total Boron	0	0		0	1,600	1,600	8,791	
Total Cadmium	0	0		0	0.455	0.52	2.87	Chem Translator of 0.872 applied
Total Chromium (III)	0	0		0	153.041	178	978	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	57.1	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	104	
Total Copper	0	0		0	19.083	19.9	109	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	8,242	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	6.501	9.82	54.0	Chem Translator of 0.662 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	4.98	Chem Translator of 0.85 applied
Total Nickel	0	0		0	109.987	110	606	Chem Translator of 0.997 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	4.600	4.99	27.4	Chem Translator of 0.922 applied
Total Silver	0	0		0	N/A	N/A	N/A	Chem Translator of 1 applied
Total Thallium	0	0		0	13	13.0	71.4	
Total Zinc	0	0		0	250.137	254	1,394	Chem Translator of 0.986 applied

☑ ***THH*** CCT (min): 11.478 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Fluoride (PWS)	0	0		0	2,000	2,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	30.8	
Total Arsenic	0	0		0	10	10.0	54.9	
Total Barium	0	0		0	2,400	2,400	13,187	
Total Boron	0	0		0	3,100	3,100	17,033	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	300	300	1,648	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	

Total Manganese	0	0		0	1,000	1,000	5,494	
Total Mercury	0	0		0	0.050	0.05	0.27	
Total Nickel	0	0		0	610	610	3,352	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	0.24	0.24	1.32	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): 5.137 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***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 Cadmium	0.008	0.013	2.87	4.47	7.16	µg/L	2.87	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Copper	Report	Report	Report	Report	Report	µg/L	109	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Selenium	Report	Report	Report	Report	Report	µg/L	27.4	CFC	Discharge Conc > 10% WQBEL (no RP)

Total Thallium	0.004	0.006	1.32	2.06	3.3	µg/L	1.32	THH	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 Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Fluoride (PWS)	N/A	N/A	PWS Not Applicable
Total Aluminum	2,641	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	13,187	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	8,791	µg/L	Discharge Conc < TQL
Total Chromium (III)	978	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	57.1	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	104	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	1,648	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	8,242	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	54.0	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	5,494	µg/L	Discharge Conc < TQL
Total Mercury	0.27	µg/L	Discharge Conc < TQL
Total Nickel	606	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Silver	61.1	µg/L	Discharge Conc < TQL
Total Zinc	893	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS

Attachment C

DMR Data

Summary of Bromide DMR
Beginning January 2020 and Ending January 2023

Monitoring Period Begin Date	Monitoring Period End Date	DMR Value		Permit Limit	Units	Statistical Base Code
01/01/2020	12/31/2020	<	0.4	Monitor and Report	mg/L	Annual Average
01/01/2021	12/31/2021		2.0	Monitor and Report	mg/L	Annual Average
01/01/2022	12/31/2022	<	2	Monitor and Report	mg/L	Annual Average
01/01/2023	12/31/2023	<	2	Monitor and Report	mg/L	Annual Average
	Max		2			

Summary of Chloride DMR
Beginning January 2020 and Ending January 2023

Monitoring Period Begin Date	Monitoring Period End Date	DMR Value		Permit Limit	Units	Statistical Base Code
01/01/2020	12/31/2020		8	Monitor and Report	mg/L	Annual Average
01/01/2021	12/31/2021		32.9	Monitor and Report	mg/L	Annual Average
01/01/2022	12/31/2022	<	10	Monitor and Report	mg/L	Annual Average
01/01/2023	12/31/2023		62.2	Monitor and Report	mg/L	Annual Average
	Max		62.2			

Summary of Sulfate DMR
Beginning January 2020 and Ending January 2023

Monitoring Period Begin Date	Monitoring Period End Date	DMR Value	Permit Limit	Units	Statistical Base Code
01/01/2020	12/31/2020	122	Monitor and Report	mg/L	Annual Average
01/01/2021	12/31/2021	523	Monitor and Report	mg/L	Annual Average
01/01/2022	12/31/2022	478	Monitor and Report	mg/L	Annual Average
01/01/2023	12/31/2023	729	Monitor and Report	mg/L	Annual Average
	Max	729			

Summary of TDS DMR
Beginning January 2020 and Ending January 2023

Monitoring Period Begin Date	Monitoring Period End Date	DMR Value	Permit Limit	Units	Statistical Base Code
01/01/2020	12/31/2020	190	Monitor and Report	mg/L	Annual Average
01/01/2021	12/31/2021	915	Monitor and Report	mg/L	Annual Average
01/01/2022	12/31/2022	777	Monitor and Report	mg/L	Annual Average
01/01/2023	12/31/2023	1290	Monitor and Report	mg/L	Annual Average
	Max	1290			