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	**1172868**

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	Facility Address	Rt 36
	New Enterprise, PA 16664-0077		Roaring Spring, PA 16673
Applicant Contact	Carolyn Speicher	Facility Contact	William Polke
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	January 31, 2017	EPA Waived?	Yes
Date Application Accepted	March 16, 2017	If No, Reason	

Adobe Acrobat Document

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

Summary of Review

Approve	Deny	Signatures	Date
X		Nicholas Hong, P.E. / Environmental Engineering Specialist	June 28, 2019
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria Bebenek, P.E. / Environmental Program Manager	

Summary of Review

The application submitted by the applicant requests a NPDES renewal permit for the New Enterprise Stone and Lime Company, Inc. – Roaring Springs Quarry located at RT 36, Roaring Springs, PA 16673 in Blair County, municipality of Taylor. The NPDES expired on July 31, 2017. The application for renewal was received by DEP Southcentral Regional Office (SCRO) on January 31, 2017.

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 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 design flow treatment facility. The applicant does not anticipate any proposed upgrades to the treatment facility in the next five years. The NPDES application has been processed as a Industrial Wastewater (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 the Taylor Township Supervisors and the notice was received by the parties on approximately January 5, 2017.

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 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 migratory fishes (MF) and cold water fishes (CWF). 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.

Halter Creek is a Category 5 stream listed in the 2016 Integrated List of All Waters (formerly 303d Listed Streams). This stream is impaired for aquatic life due to suspended solids from urban runoff and storm sewers. 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, Chloride, Bromide, and Sulfate has been recommended for monitoring on a 2x/yr basis.

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 and Lime Company, Inc.- Roaring Springs Quarry
NPDES Permit #	PA0027596
Physical Address:	RT 36 Roaring Springs, PA 16673
Mailing Address:	PO Box 77 New Enterprise, PA 16664
Contact:	Carolyn Speicher Geo-Environmental Manager cspeicher@nesl.com
Consultant:	There was not a consultant utilized for the NPDES renewal.

1.2 Description of Facility

New Enterprise is a major construction materials supplier and general contractor in the public and private sectors. The company has many locations in the State of Pennsylvania. New Enterprise- Roaring Springs specializes in prestressed concrete products (SIC Code 3272) and Redi-Mix concrete manufacturing (SIC Code 3273).

The federal industrial effluent guidelines provides effluent limits for potential pollutants discharged from cement manufacturing facilities. Based upon the facility operations for storing and conveyance of stormwater/wastewater runoff, Section 40 CFR §411.30 (materials storage piles runoff subcategory) and 40 CFR §411.32 (Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available) apply to the facility.

The basic ingredients of cement are lime (calcium oxide), silica, alumina, and iron.

The previous fact sheet noted that stormwater outfalls are addressed under a mining permit (January 2012 fact sheet)

1.3 Permit History

The NPDES renewal application submittal included the following:

- NPDES Application
- Module 1- Stormwater

A summary of the production history for years 2014 to 2016 is shown in the table.

Summary of Production Data for ELG

Parameter	*Production Years*		
	2014	***2015***	***2016***
Total Annual Production	62343	61053	53630
Max Monthly Production	7432	7643	7111
Month of Max Production	June	April	October
Avg Annual Production	5195	5088	4469
Avg Production (hrs/day)	10	10	10
Avg Production (Days/Month)	21	21	21
Avg Annual Water Usage (MGD)	0.249	0.248	0.195
Avg Annual Wastewater Flow (MGD)	0.011	0.01	0.008

Notes:

- Units of production measurement for ELG: cubic yards
- Design producton capacity: 1200 cubic yards per hour

2.0 Treatment Facility Summary

2.1 Site location

The physical address for the facility is RT 36, Roaring Springs, 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

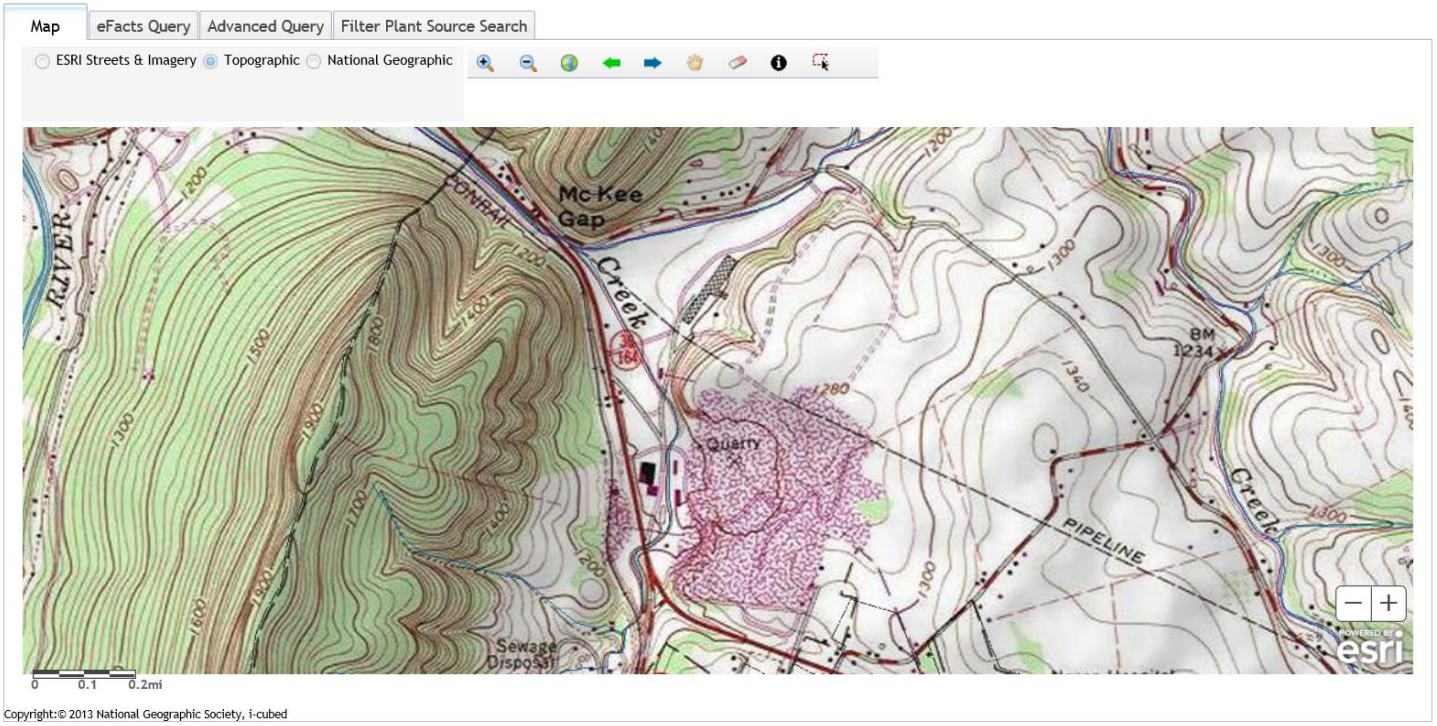
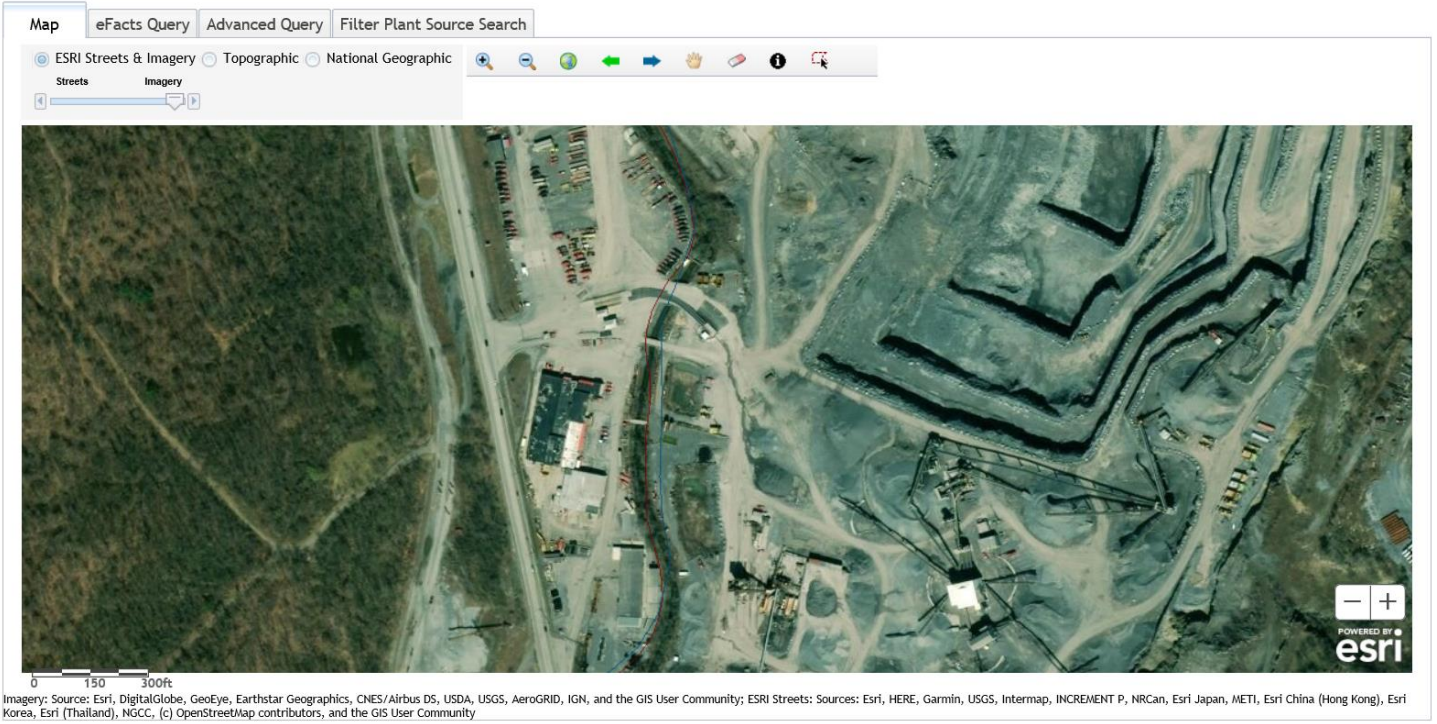


Figure 2: Aerial Photograph of the subject facility



2.2 Description of Wastewater Treatment Process

The subject facility is a 0.345 MGD design flow facility. Stormwater and wastewater are commingled and treated prior to discharge. The subject facility treats wastewater using a settling ditch, a settling tank, and a pH adjustment tank prior to discharge through the outfall. The facility is being evaluated for flow, pH, and suspended solids. The existing permits limits for the facility is summarized in Section 2.4.

An aerial photograph of the treatment facility is shown below.

2.3 Facility Outfall Information

The facility has the following outfall information.

Outfall No.	001	**Design Flow (MGD)**	.345
Latitude	40º 21' 00"	**Longitude**	-78º 24' 15"
Wastewater Description:	IW Process Effluent with ELG		

The subject facility outfall is within the vicinity of another sewage/wastewater outfall. The closest upstream outfall is 0.74 miles and is operated by the Roaring Springs Borough Municipal Authority (PA0020249). There is no downstream outfall within a short vicinity from the subject facility.

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** 40° 20' 4.24" , **Longitude** 78° 24' 20" , **River Mile Index** 2.75 , **Stream Code** 16503

Discharging to Halter Creek.

which receives wastewater from process water and stormwater treatment system.

1. The permittee is authorized to discharge during the period from August 1, 2012 through July 31, 2017
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, Footnotes and Supplemental Information).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Total Suspended Solids	Report	Report	XXX	30	50	60	1/week	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:

12/20/2017:

- The truck wash runoff was collected in a settling pit that overflows to a berm to a second pit. The second pit discharges into a large ditch that allow for further settling and conveys water to a final concrete settling tank. The last treatment unit is a concrete tank used for pH adjustment and flow measurement.
- Effluent pH is lowered using a liquid hydrochloric acid pump feed system. An in-line pH meter turns the pump on and off to prevent overdosing.
- The facility stated that approximately 70% of the long ditch was cleaned out this past fall.

03/25/2019:

- The facility had effluent violations for TSS during the months of January, March, and November 2018. The facility believes the high TSS results are from the sampler drawing up accumulated solids when the collection bucket is nearly empty. The facility stated the collection line has been adjusted.

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 0.015 MGD. The design capacity of the treatment system is 0.345 MGD.

DMR Data for Outfall 001 (from May 1, 2018 to April 30, 2019)

Parameter	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18	MAY-18
Flow (MGD) Average Monthly	0.015	0.0078	0.003	0.003	0.014	0.013	0.0073	0.0077	0.0134	0.011	0.008	0.008
Flow (MGD) Daily Maximum	0.034	0.0297	0.031	0.024	0.044	0.045	0.028	0.045	0.161	0.057	0.026	0.019
pH (S.U.) Minimum	6.81	6.2	7.1	7.1	6.9	6.8	6.9	7.0	6.9	7.0	7.0	7.0
pH (S.U.) Maximum	8.09	7.2	8.8	8.9	8.8	8.6	8.8	8.0	8.4	8.1	8.4	8.3
TSS (lbs/day) Average Monthly	< 0.4	0.3	3.0	2.0	3.0	2.0	0.7	0.4	6.0	2.0	1.0	0.9
TSS (lbs/day) Daily Maximum	0.7	0.5	10.0	5.0	10.0	4.0	2.0	1.0	25.0	4.0	3.0	2.0
TSS (mg/L) Average Monthly	3.0	3.0	17.0	23.0	13.0	26.0	7.0	4.0	8.0	17.0	9.1	7.0
TSS (mg/L) Daily Maximum	4.4	7.6	37.8	29.2	30.8	82.8	14.0	6.0	18.4	25.2	17.0	12.4

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 08/01/2012 to 06/09/2019, the following table summarizes non-compliance effluent violations.

A scan of effluent non-compliances using WMS only populates data available after commencement of eDMR entry.

Summary of Non-Compliance NPDES Effluent
Beginning 08/01/2012 to 06/09/2019

NON COMPLIANCE DATE	NON COMPLIANCE TYPE	NON COMPLIANCE CATEGORY	PARAMETER	SAMPLE VALUE	VIOLATION CONDITION	PERMIT VALUE	UNIT OF MEASURE	STATISTICAL BASE CODE
12/12/2015	Violation of permit condition	Concentration 3 Effluent Violation	Total Suspended Solids	73	>	50	mg/L	Daily Maximum
12/12/2015	Violation of permit condition	Concentration 3 Effluent Violation	Total Suspended Solids	56	>	50	mg/L	Daily Maximum
03/23/2016	Violation of permit condition	Concentration 3 Effluent Violation	Total Suspended Solids	56.0	>	50	mg/L	Daily Maximum
03/23/2016	Violation of permit condition	Concentration 1 Effluent Violation	pH	3.6	<	6.0	S.U.	Minimum
03/23/2016	Violation of permit condition	Concentration 3 Effluent Violation	pH	11.5	>	9.0	S.U.	Maximum
02/26/2018	Violation of permit condition	Concentration 2 Effluent Violation	Total Suspended Solids	40	>	30	mg/L	Average Monthly
02/26/2018	Violation of permit condition	Concentration 3 Effluent Violation	Total Suspended Solids	88	>	50	mg/L	Daily Maximum
04/24/2018	Violation of permit condition	Concentration 3 Effluent Violation	Total Suspended Solids	65.2	>	50	mg/L	Daily Maximum
12/21/2018	Violation of permit condition	Concentration 3 Effluent Violation	Total Suspended Solids	82.8	>	50	mg/L	Daily Maximum

3.3.2 Non-Compliance- Enforcement Actions

A scan of enforcement actions in WMS did not show any enforcement actions for the time beginning 08/01/2012 to 06/09/2019.

3.4 Summary of Biosolids Disposal

A summary of the biosolids disposed of from the facility is as follows.

The facility reported no biosolids disposed.

3.5 Open Violations

Open violations for the client do exist in the following programs at different New Enterprise facilities: mining industrial minerals regulatory, storage tanks, and air quality. None of the violations are in the Clean Water program. Also, none of the open violations are for the Roaring Springs facility.

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 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 Municipal Authority (PWS ID #4340008) located approximately 105 miles downstream of the subject facility on the Juniata River. This PWS is currently inactive. Based upon the distance and the flow rate of the facility, the PWS should not be impacted.

The closest PWS to the subject facility that is active is the Capital Region Water (PWS #7220049) which is approximately 155 miles downstream of the subject facility on the Susquehanna River.

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 2016 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 2016 Pennsylvania Integrated Water Quality Monitoring and Assessment Report as a Category 5 waterbody. The surface waters is an impaired stream that for aquatic life due to suspended solids from urban runoff/storm sewers. The designated use has been classified as protected waters for cold water fishes and migratory fishes.

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 and gauge stations to the subject facility is the Frankstown Branch Juniata River station at Williamsburg, PA (WQN224 or USGS station number 1556000). This WQN station is located approximately 25 miles downstream of the subject facility while the gauge station is located 23 miles downstream of the subject facility.

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

Gauge Station Data		
USGS Station Number	224	
Station Name	Frankstown Branch Juniata River@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 14.7 mi^2

Q710 = (LFY@gauge station)(DA@Subject Site)

Q710 = (0.1643 $ft^3/sec/mi^2$)(14.7 mi^2)

Q710 =	2.415	ft^3/sec

4.6 Summary of Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.345
Latitude	40Âº 20' 1.83"	Longitude	-78Âº 24' 26.33"
Quad Name		Quad Code	
Wastewater Description:	IW Process Effluent without ELG		

Receiving Waters	Halter Creek (CWF (existing use))	Stream Code	16503
NHD Com ID	133386839	RMI	2.35
Drainage Area	14.7	Yield (cfs/mi^2)	0.1643
Q_{7-10} Flow (cfs)	2.415	Q_{7-10} Basis	StreamStats/Stream gauge
Elevation (ft)	1080	Slope (ft/ft)	
Watershed No.	11-A	Chapter 93 Class.	CWF,MF
Existing Use	Same as Chapter 93	Existing Use Qualifier	Use Attainability Analysis
Exceptions to Use		Exceptions to Criteria	None
Assessment Status	Impaired for aquatic life		
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 Sept
Temperature (°C)	22.0	WQN224; median July to Sept
Hardness (mg/L)	135	WQN224; average annual
Other:		

Nearest Downstream Public Water Supply Intake		Mifflintown Municipal Authority	
PWS Waters	Juniata River	Flow at Intake (cfs)	
PWS RMI	37	Distance from Outfall (mi)	105

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 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)
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.

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.

5.3.2 PENTOXSD Modeling

The PENTOXSD 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. PENTOXSD 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 PENTOXSD 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).

To determine if PENTOXSD modeling is necessary, DEP has developed a Toxics Screening Analysis worksheet 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 Screening Analysis- Water Quality Pollutants of Concern worksheet indicated PENTOXSD modeling was required since the concentrations measured in the effluent sample were not within the normal range for safe water quality protection. The pollutants of concern were total dissolved solids, chloride, bromide, and sulfate. Consistent with the Central Office Management email directive dated for January 23, 2017, monitoring will be required for total dissolved solids, chloride, bromide, and sulfate.

For reference, the Toxics Screening analysis worksheet is in Appendix 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.

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 and II 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. The jurisdictions have developed or will develop WIPs over three Phases.

Phase I and Phase II WIPs were developed and submitted to EPA in 2010 and 2012 for objectives to be implemented by 2017 and 2025 to achieve applicable water quality standards. The Phase II WIPs build on the initial Phase I WIPs platform by providing more specific local actions. In 2018, Phase III WIPs will be developed to include further actions for jurisdictions to implement between 2018 and 2025.

Section 7 of the Phase II WIP describes Pennsylvania's strategy for reducing nutrients to the Chesapeake Bay from wastewater facilities. The supplement to Section 7 of the Phase II WIP provides an update on Chesapeake Bay TMDL implementation activities for point sources and DEP's current implementation strategy for wastewater. The supplement is updated periodically to reflect changes due to PA DEP's permit actions as well as changes to strategies in managing the wastewater sector's allocated loads under the TMDL. The latest revision of the supplement was October 14, 2016.

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.

Based upon the supplement the subject facility has been categorized as a Sector C discharger. The supplement defines Sector C as a sewage facility is considered non-significant dischargers if it is a Phase 4 facility or Phase 5 facility having a specified flow rate (i.e. Phase 4 facility ≥ 0.2 MGD and < 0.4 MGD, Phase 5 facility > 0.002 MGD and < 0.2 MGD), a small flow/single residence sewage treatment facilities (≤ 0.002 MGD), or a non-significant IW facilities. These facilities may be covered by statewide general permits or may have individual NPDES permits.

Sewage facility considered non-significant IW dischargers will require monitoring and reporting of TN and TP will be 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.

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).

A list of non-significant sewage and industrial waste dischargers with Cap Loads in NPDES permits is presented in Attachment B of the Phase 2 WIP.

Since the facility is not believed to generate nitrogen and/or phosphorus, the facility will not be subject to Sector C monitoring requirements. The facility is not listed in Attachment B of the Phase 2 WIP.

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 Stone and Lime- Roaring Springs Quarry, 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 40 CFR § 411.32- Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available
TSS	TBEL	Monitoring:	The monitoring frequency shall be 1/week as an 8-hr composite sample (Table 6-4).
		Effluent Limit:	TBEL limitations for average monthly at 30 mg/l and daily max of 50 mg/l.
		Rationale:	The monitoring frequency has been assigned in accordance with Table 6-4 and the effluent limits assigned by (a) secondary treatment limits and (b) daily maximum based on 40 CFR § 411.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available
Notes:			
1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, or (g) WET			
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 Phase 2 Watershed Implementation Plan Wastewater Supplement, Revised September 6, 2017			

6.1.2 Toxics

Summary of Proposed NPDES Parameter Details for Toxics

New Enterprise Stone and Lime- Roaring Springs Quarry, PA0027596

Parameter	Permit Limitation Required by[1]:	Recommendation	
Total Dissolved Solids	Central Office Management Directive	Monitoring:	The monitoring frequency shall be 2x/yr as an 8-hr composite sample.
		Effluent Limit:	No performance effluent limit
		Rationale:	Based upon email correspondence from Central Office on January 23, 2014, several consituents have emerged as pollutants of concern which require monitoring. Where the concentration of TDS in the discharge exceeds 1,000 mg/l or the net TDS load from a discharge exceeds 20,000 lbs/day and the discharge exceeds 0.1 MGD, monitoring and reporting for TDS, sulfate, chloride, and bromide should be required.
Chloride	Central Office Management Directive	Monitoring:	The monitoring frequency shall be 2x/yr as an 8-hr composite sample.
		Effluent Limit:	No performance effluent limit
		Rationale:	Based upon email correspondence from Central Office on January 23, 2014, several consituents have emerged as pollutants of concern which require monitoring. Where the concentration of TDS in the discharge exceeds 1,000 mg/l or the net TDS load from a discharge exceeds 20,000 lbs/day and the discharge exceeds 0.1 MGD, monitoring and reporting for TDS, sulfate, chloride, and bromide should be required.
Bromide	Central Office Management Directive	Monitoring:	The monitoring frequency shall be 2x/yr as an 8-hr composite sample.
		Effluent Limit:	No performance effluent limit
		Rationale:	Based upon email correspondence from Central Office on January 23, 2014, several consituents have emerged as pollutants of concern which require monitoring. Where the concentration of TDS in the discharge exceeds 1,000 mg/l or the net TDS load from a discharge exceeds 20,000 lbs/day and the discharge exceeds 0.1 MGD, monitoring and reporting for TDS, sulfate, chloride, and bromide should be required.
Sulfate	Central Office Management Directive	Monitoring:	The monitoring frequency shall be 2x/yr as an 8-hr composite sample.
		Effluent Limit:	No performance effluent limit
		Rationale:	Based upon email correspondence from Central Office on January 23, 2014, several consituents have emerged as pollutants of concern which require monitoring. Where the concentration of TDS in the discharge exceeds 1,000 mg/l or the net TDS load from a discharge exceeds 20,000 lbs/day and the discharge exceeds 0.1 MGD, monitoring and reporting for TDS, sulfate, chloride, and bromide should be required.

Notes:

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

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 Phase 2 Watershed Implementation Plan Wastewater Supplement, Revised September 6, 2017

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	Proposed Permit
TDS	No monitoring or effluent performance requirements.	The monitoring frequency shall be 2x/yr as an 8-hr composite sample.
		No effluent requirements.
Chloride	No monitoring or effluent performance requirements.	The monitoring frequency shall be 2x/yr as an 8-hr composite sample.
		No effluent requirements.
Bromide	No monitoring or effluent performance requirements.	The monitoring frequency shall be 2x/yr as an 8-hr composite sample.
		No effluent requirements.
Sulfate	No monitoring or effluent performance requirements.	The monitoring frequency shall be 2x/yr as an 8-hr composite sample.
		No effluent requirements.

6.3 Summary of Proposed NPDES Effluent Limits

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** 2.35 , **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 **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
	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

	Tools and References Used to Develop Permit
☐	WQM for Windows Model (see Attachment)
☒	PENTOXSD for Windows Model (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☒	Toxics Screening Analysis Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: *New and Reissuance Industrial Waste and Industrial Stormwater, revised October 11, 2013*
☐	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

Attachment B

Modeling Input Values
Toxics Screening Analysis
PENTOXSD Modeling Output Values