Pennsylvania
Department of
Environmental Protection

Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0260151**
Facility Type	**Municipal**	APS ID	**662670**
Major / Minor	**Minor**	Authorization ID	**1459637**

Applicant and Facility Information

Applicant Name	**Maxatawny Township Municipal Authority - Berks County**	Facility Name	**Maxatawny Township Municipal STP**
Applicant Address	127 Quarry Road, Suite 2 Kutztown, PA 19530-9697	Facility Address	546 Krumsville Road (SR 737) Kutztown, PA 19530
Applicant Contact	Michael Berger, Authority Chairman	Facility Contact	Christopher Falencki, McCarthy Engineering Associates, Inc.
Applicant Phone	(484) 507-4718 Mtma6862@gmail.com	Facility Phone	(610) 373-8001 cfalencki@mccarthy-engineering.com
Client ID	33397	Site ID	714183
Ch 94 Load Status		Municipality	Maxatawny Township
Connection Status		County	Berks
Date Application Received	October 25 & Nov. 30, 2023	EPA Waived?	Yes (no changes to loads subject to TMDL)
Date Application Accepted	Nov. 30, 2023	If No, Reason	
Purpose of Application	Renewal of NPDES permit for STP		

Summary of Review

The existing NPDES permit was issued April 12, 2019 and was administratively extended past the expiration date of April 30, 2024. The renewal application was submitted in DEP's OnBase electronic upload system, Reference #127372, with additional sampling results submitted in OnBase, Reference #131345.

This Sewage Treatment Plant (STP) serves Maxatawny Township.

Design Flow

The existing permit's limits were based on a design flow of 0.14 MGD. The renewal application did not propose any change to the design flow, nor do their Discharge Monitoring Reports (DMRs) indicate a need for a higher design flow. The draft renewal permit includes the same design flow of 0.14 MGD.

DMRs from the last 3 years (1/1/2022-10/31/2024) indicate an average flow of 0.04 MGD and a Maximum Monthly Average flow of 0.05 MGD showing that the treatment plant is operating under capacity.

The facility's 2023 Chapter 94 Municipal Wasteload Report stated:

"The projected 5-year analysis does not have any hydraulic or organic overloading. Projects such as 15132 W. Kutztown Road, Villas of Maxatawny, Hartman Road Townhouses and Sharadin Road Age Restricted Community call for large amount of EDUs in the future. These projects have been proposed but do not have planning approval….Should these projects with larger number of EDU's need sewage planning approval and move forward with construction, the Wastewater Treatment Plant should be upgraded from 0.140 MGD to 0.210 MGD."

Approve	Deny	Signatures	Date
x		*Bonnie Boylan* Bonnie Boylan / Environmental Engineering Specialist	December 17, 2024
x		*Daniel W. Martin* Daniel W. Martin, P.E. / Environmental Engineer Manager	December 26, 2024

Any increase in design flow would require a NPDES permit amendment. Increased loadings of Total Phosphorus and Total Suspended Solids may not be allowable, depending on whether the Total Maximum Daily Loading (TMDL) for Lake Ontelaunee has been revised or if there are waste load allocations to other sources that can be re-allocated.

Combined Sewers

Not Applicable

Hauled-in Wastes

None received in the past three years (at least) and none intended for next five years according to their application.

Industrial Users

According to their application, they have one industrial customer but that customer only discharges domestic wastewater and their flow is not metered. The industrial customer is Process Masters Corporation, a Water Treatment Fabricator. The STP also had 16 commercial customers at the time of the application preparation.

EPA Pretreatment Program

Not applicable.

Variances

There were no variances requested.

Sludge use and disposal

Sludge is disposed at another WWTP. Collected screenings and other solids are disposed at a landfill.

Delaware River Basin Commission (DRBC)

The discharge is within the Delaware River watershed. A copy of the draft permit and Fact Sheet will therefore be sent to the DRBC for their review in accordance with State regulations and an interagency agreement. Any comments from the DRBC will be considered. The most recent DRBC docket #D-2007-001 CP-4 was approved for this facility on March 6, 2024 and expires on April 30, 2029.

Outstanding Violations

According to DEP's Compliance History Summary report, there are open violations for this client. The draft NPDES permit can still be issued while DEP's Safe Drinking Water Program follows up on the facility's violations from June 2024.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is

significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.14
Latitude	40 31’ 58” per application (facility location per permit GIF: 40 31’ 52”)	Longitude	-75 47’ 16” per application (facility location per permit GIF: -75 47’ 12”)
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Sacony Creek (CWF (existing use))	Stream Code	02008 per eMapPA
NHD Com ID	25978380	RMI	6.8 per eMapPA
Drainage Area	23 sq.mi. USGS StreamStats,	Yield (cfs/mi^2)	0.105
Q_{7-10} Flow (cfs)	2.4	Q_{7-10} Basis	Correlation with downstream USGS gage no. 01470756
Elevation (ft)	Approx. 385’	Slope (ft/ft)	
Watershed No.	3-B	Chapter 93 Class.	TSF
Existing Use	CWF(COLD WATER FISHES)	Existing Use Qualifier	Use Attainability Analysis
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Sacony Creek: Attaining Use(s) but downstream: Maiden Creek impaired for recreational use due to pathogens (Assess ID 15369) and further downstream: Lake Ontelaunee, impaired for aquatic life (Assessment ID 3009)		
Cause(s) of Impairment	Nutrients, TSS		
Source(s) of Impairment	Onlot septic systems, municipal pt sources, urban runoff, agriculture		
TMDL Status	**final**	Name	**Lake Ontelaunee TMDL**

Secondary receiving Water: Sacony Creek empties into Maiden Creek, stream code 1985, at 11 RMI (which flows into Lake Ontelaunee at 9 RMI)

Background/Ambient Data – none available

Nearest Downstream Public Water Supply Intake	Reading Area Water Authority		
PWS Waters	Lake Ontelaunee	Flow at Intake (cfs)	
PWS RMI	Approx. 3	Distance from Outfall (mi)	14.6

Other Comments:

Trout Natural Reproduction designation in Sacony Creek from 17.09 RMI to 4.66 RMI

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

Upstream is Kutztown STP, PA0031135, approx. 7.4 RMI per eMapPA, elev 390’, Permit design flow of 1.5 MGD.

Downstream gage 01470756 on **Maiden Creek** at Virginville, RMI 9.9, Low Flow Yield = Q7-10 / Drainage Area = 16.7 cfs / 159 sq.mi. = 0.105 cfs/sq.mi. (There were no active gages upstream of facility.)
Q7-10 of stream at outfall 001 estimated as 0.105 LFY_{gage} x 23 sq.mi. Drainage Area of site = 2.4 cfs

Treatment Facility Summary

Treatment Facility Name: Maxatawny Township Municipal Authority

WQM Permit No.	Issuance Date
0609401 (amendment)	10/27/2015
0609401 (new)	3/12/2010

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Total Nitrogen Reduction	Activated Sludge	Ultraviolet	0.14

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.14	350		Aerobic Digestion	Other WWTP

Purestream BESST System, with start-up in May 2012 (per application)

Mechanical screen; grit removal unit; Equalization tank; Modified Ludzak-Ettinger (MLE) Activated Sludge Treatment system with two trains of anoxic tanks, aeration tanks, and clarifier chambers; aerated sludge holding tank; Ultraviolet (UV) light; cascade aerator to outfall.
Use blowers for air. Using MasterCat 4244 for Phosphorous removal. Magnetic flow meter for influent and effluent.
An aerobic digester is available for sludge treatment. Sludge is hauled off site via a local hauler to another WWTP for ultimate disposal.

The facility's Chapter 94 Municipal Wasteload Report lists three pump stations:

West Kutztown Road - 250 gpm

Koffee Lane - 544 gpm

Influent PS - 544 gpm

EXISTING PERMIT LIMITS:

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	9.0 Daily Max	XXX	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	29	46	XXX	25.0	40.0	50	1/week	8-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Total Suspended Solids	35	52	XXX	30.0	45.0	60	1/week	8-Hr Composite
Total Suspended Solids (Total Load, lbs) (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Suspended Solids (Total Load, lbs) (lbs)	XXX	12785 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Dissolved Solids	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1- Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
Ultraviolet light intensity (mW/cm^2)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Calculation

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Ammonia-Nitrogen	23	XXX	XXX	20.0	XXX	40	1/week	8-Hr Composite
Total Phosphorus	2.3	XXX	XXX	2.0	XXX	XXX	1/week	8-Hr Composite
Total Phosphorus (Total Load, lbs) (lbs)	XXX	426 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus (Total Load, lbs) (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Copper, Total	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Hardness, Total (as CaCO3)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite

Compliance History

DMR Data for Outfall 001 (from November 1, 2023 to October 31, 2024)

Parameter	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23
Flow (MGD) Average Monthly	0.0465	0.046	0.0274	0.0204	0.0308	0.0354	0.0455	0.0404	0.0375	0.0405	0.0427	0.0363
Flow (MGD) Daily Maximum	0.0596	0.0645	0.0524	0.0528	0.0517	0.0525	0.0861	0.0672	0.0537	0.0812	0.0744	0.0515
pH (S.U.) Daily Minimum	7.32	7.34	7.31	7.59	7.52	7.2	7.12	7.2	7.15	7.27	7.24	7.16
pH (S.U.) Daily Maximum	7.51	7.52	8.01	7.93	8.04	7.68	7.53	7.65	7.62	7.91	7.76	7.77
DO (mg/L) Daily Minimum	5.17	5.31	5.02	5.17	5.59	6.06	5.6	7.05	7.25	7.84	5.04	5.24
CBOD5 (lbs/day) Average Monthly	< 0.8	< 0.9	< 0.4	< 0.2	< 0.4	< 0.7	< 0.8	< 0.7	< 0.5	< 0.8	< 3	< 0.7
CBOD5 (lbs/day) Weekly Average	< 1	1	< 0.6	< 0.5	0.7	< 0.8	< 0.9	< 0.9	< 0.8	< 1	11	< 0.8
CBOD5 (mg/L) Average Monthly	< 2.0	< 2.2	< 2.0	< 2.0	< 2.3	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 8.2	< 2.0
CBOD5 (mg/L) Weekly Average	2.1	2.8	< 2.0	< 2.0	3.3	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	26.8	< 2.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	73	71	20	15	24	30	41	40	46	28	31	54
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	85	94	55	26	29	35	57	67	72	58	52	62
BOD5 (mg/L) Raw Sewage Influent Average Monthly	169	164	86	100	96	106	111	117	144	78	84	160
TSS (lbs/day) Average Monthly	< 2	< 2	< 0.9	< 0.6	< 0.8	< 1	< 2	< 1	< 1	< 2	< 1	< 1
TSS (lbs/day) Raw Sewage Influent Average Monthly	31	48	12	12	27	28	38	44	52	30	33	49

TSS (lbs/day) Raw Sewage Influent Daily Maximum	37	104	27	19	32	31	62	81	85	70	71	94
TSS (lbs/day) Weekly Average	3	3	< 1	< 0.9	1	< 2	< 2	< 2	< 2	< 3	< 2	< 2
TSS (mg/L) Average Monthly	< 4.7	< 4.8	< 5.6	< 5.7	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
TSS (mg/L) Raw Sewage Influent Average Monthly	72	109	58	88	106	101	100	129	161	81	86	142
TSS (mg/L) Weekly Average	7.5	7.0	7.5	8.5	5.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Total Suspended Solids (lbs) Total Monthly	< 58	< 61	< 27	< 19	< 24	< 45	< 45	< 41	< 31	< 50	< 38	< 41
Total Suspended Solids (lbs) Total Annual											506	
Total Dissolved Solids (mg/L) Daily Maximum	1480	1530	1370	1460	1500	1290	946	848	1300	1230	1250	1120
Fecal Coliform (No./100 ml) Geometric Mean	3	< 1	< 5	27	8	< 3	< 3	51	< 15	< 2	< 15	< 1
Fecal Coliform (No./100 ml) Instantaneous Maximum	41	2	681	500	89	102	216	1200	446	5	233	3
UV Intensity (mW/cm²) Daily Minimum	144.2	137.4	99.5	78.6	113.3	226.5	245	227	261	287.6	230.2	207
Total Nitrogen (mg/L) Daily Maximum		36.2			18.2			25.2			26.6	
Ammonia (lbs/day) Average Monthly	< 0.07	< 0.3	< 0.02	< 0.01	< 0.02	< 0.04	< 0.04	< 0.03	< 0.03	< 0.04	< 0.03	< 0.03
Ammonia (mg/L) Average Monthly	< 0.16	< 0.77	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Phosphorus (lbs/day) Average Monthly	0.6	0.5	0.07	0.1	0.1	0.3	0.2	0.1	0.1	0.07	0.1	0.3
Total Phosphorus (mg/L) Average Monthly	1.46	1.06	0.42	0.76	0.72	0.88	0.57	0.39	0.35	0.19	0.43	0.81

Total Phosphorus (lbs) Total Monthly	18	14	2	3	4	10	6	4	3	2	4	8
Total Phosphorus (lbs) Total Annual											70	
Total Copper (mg/L) Daily Maximum		0.014			0.004			0.004			0.006	
Total Hardness (mg/L) Daily Maximum		288			316			296			318	

Compliance History

From January 1, 2022 through October 31, 2024:

Primary Facility ID	Primary Facility Other ID	Primary Facility Name	
713391	PA0260151	MAXATAWNY TOWNSHIP MUNICIPAL AUTHORITY	
Primary Facility Status	**Primary Facility Type**	**Primary Facility Kind**	**Primary Facility Fee Category**
ACTIV - Active	WPCF - Water Pollution Control Facility	SP - Sewage Publicly Owned (Muni)	Minor Sewage Facility >=0.05 and <1 MGD

NC ID	Event Start Date	Event End Date	Parameter	Limit Type	Reported Value		Permit Limit	Unit	Sampling Point	Sampling Frequency	Sampling Type	Cause of NC	Corrective Action	External Comments	Internal Comments
175139	09/01/2022	09/30/2022	Fecal Coliform	Instantaneous Maximum	7300	>	1000	No./100 ml	Final Effluent (001)	1/week	Grab				View/Edit

December 9, 2023:

a Sanitary Sewer Overflow occurred due to a low-pressure system air release valve malfunction causing manhole overflow.

DEP Inspections:

July 24, 2024 – No violations.

The Koffee Lane pump station influent meter was not functional. Of the two trains (anoxic tank – aeration tank – clarifier), the northern train was not in use. Only one mixer was installed in the southern train's anoxic tank. All blowers were operable but only 3 of the 7 blowers were online. Observed buildup of solids and algae at outfall. Not accepting hauled-in wastes. Field measurements: 7.6 s.u. pH, 7.74 mg/l DO, 25.9°C Temperature

April 9, 2020 – Administrative File Review - No violations.

February 6, 2019 – No Violations.

Some screenings on the ground, exposed to weather. Clarifier supernatant mostly clear. Sludge holding tank aeration is offline. No apparent solid deposits at outfall. Not accepting hauled-in wastes.
Field measurements: 7.2 s.u. pH, 8.9 mg/l DO, 7.9°C Temperature

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.14
Latitude 40º 31' 58" **Longitude** 75º 47' 16"
Wastewater Description: Sewage Effluent

DEP separately determines applicable Technology-Based Effluent Limitations (TBELs), Best Professional Judgement limitations (BPJ), and, as needed, Water Quality-Based Effluent Limitations (WQBELs), compares these to existing permit limits, and decides which to impose as permit limits for the renewal permit.

Technology-Based Effluent Limitations (TBELs)

The following technology-based limitations apply:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation	DRBC*
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)	
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)	
Total Suspended Solids (TSS)	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)	
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)	
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)	
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)	
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	Instant.Max.	-	92a.47(a)(4)	
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geometric Mean	-	92a.47(a)(5)	
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	Instant.Max.	-	92a.47(a)(5)	
Total Dissolved Solids (TDS)	2000 mg/l if increase TDS load by more than 5000 lbs/day from Aug 2010 TDS baseline load**	Average Monthly		95.10	
Total Dissolved Solids (TDS)	No limit; monitoring required				Docket D-2007-001 CP-4
Total Dissolved Solids (TDS)	1000***	Average Monthly			18 CFR Part 410
Ammonia (NH3)	20	Average Monthly			18 CFR Part 410
Total Phosphorus	2.0 ****	Avg. Monthly		96.5(c)	

*DEP has an interagency agreement with the Delaware River Basin Commission and incorporates their requirements (18 CFR Part 410 Water Quality Regulations and approved dockets) into our permits where appropriate.

*While TDS was not monitored in 2010 at this facility to obtain an accurate TDS Baseline as of August 2010, the oldest TDS data reported in DEP's eDMR system were reviewed as were flows. The facility started reporting TDS in their eDMRs May 2019. The average effluent TDS concentration between 5/1/2019 and 12/31/2019 was 1473 mg/l.

The facility's design flow according to their WQM permit issued in 2010 was 0.14 MGD. 1473 mg/l x 0.14 MGD x 8.34 conversion factor = 1720 lbs/day. The average TDS concentration reported in their eDMRs between 1/1/2022 and 10/31/2024 was 1349 mg/l. 1349 mg/l x 0.14 MGD x 8.34 c.f. = 1575 lbs/day. The results do not indicate an increase in TDS load since August 2010 so the 2000 mg/l monthly average TDS concentration limit is not applicable.

***Or a concentration established by the Commission which is compatible with designated water uses and stream quality objectives and recognizes the need for reserve capacity to serve future dischargers (i.e. a limit based on a TDS Determination submitted to DRBC proving that the discharge will not cause the TDS in the receiving water to exceed the lesser of 500 mg/l or 133% of background. The DRBC docket for this facility, issued recently, does not include a TDS limit or a requirement for a TDS Determination. The draft renewal permit incorporates the docket's requirement to monitor TDS, the same as the existing NPDES permit.

****applicable to discharges to receiving waters known to be impaired for nutrients. The downstream Lake Ontelaunee is known to be impaired for nutrients. Also see the attached letter from DEP to Reading Area Water Authority dated May 7, 2014 in which DEP agrees to impose a Total Phosphorus monthly average concentration limit of 2.0 mg/l for treated sewage dischargers over 2000 gpd to the Maiden Creek watershed. (Maiden Creek feeds Lake Ontelaunee which is a public water supply source.)

The TBELs in the above table have been imposed in the draft renewal permit for **CBOD5, TSS, pH, Fecal Coliform, and Total Phosphorus.** The existing permit included the same limits for these parameters.

The Water Quality-Based Effluent Limits (WQBEL) for Ammonia were more stringent than the TBELs. Ammonia is discussed in the WQBEL section of this Fact Sheet.

Best Professional Judgment (BPJ) Limitations

None.

Water Quality-Based Effluent Limitations (WQBELs)

For determining WQBELs, DEP relies on models (discussed below) and water quality criteria promulgated in Pa Code Chapter 93. The following limitations were determined through water quality modeling (the **input values used and output files are attached**) and have been included in the renewal permit:

Parameter	Limit (mg/l)	Statistical Base Code	Model
Dissolved Oxygen	5.0	Instant. Min.	WQM 7.0, Version 1.1
CBOD5	25 *	Avg. Monthly	WQM 7.0, Version 1.1
Ammonia (NH3-N)	15.7	Avg. Monthly	WQM 7.0, Version 1.1
Ammonia (NH3-N)	31.4	(Instant.) Maximum	WQM 7.0, Version 1.1

*Note: the model defaulted to the TBEL for CBOD5 because the TBELs are considered protective of the receiving water and no WQBELs are needed.

Parameter	units	Average Monthly	Daily Maximum	Instant. Maximum	Model
None	-	-	-	-	Toxics Management Spreadsheet (TMS)

CBOD5, Ammonia (NH3-N) and Dissolved Oxygen (DO):

DEP uses a model known as WQM 7.0 to determine appropriate limits for **CBOD5, Ammonia (NH3-N), and Dissolved Oxygen (DO)**. For more explanation of the WQM 7.0 model, see Technical Reference Guide WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, document #386-2000-016. For discussion of determining Ammonia limits, also see DEP's Implementation Guidance for Section 93.7 Ammonia Criteria, document #386-2000-022.

The source of the River Mile Indices (RMI's) and elevations that were used in the WM 7.0 model was DEP's eMapPA. The source of the Drainage Areas was the USGS PA Stream Stats online tool (see attached). The Low Flow Yield (LFY) and stream design low-flows (Q7-10) used as model inputs were based on correlation with a downstream gage as explained on page 4 of this Fact Sheet. (There were no upstream gages to use.) Where site-specific data is not available, DEP uses default values in the WQM 7.0 model.

Due to its proximity, the upstream Kutztown Sewage Treatment Plant was included in the WQM 7.0 model.

The WQM 7.0 model indicated that the existing permit limits for CBOD5, which are TBELs, are protective of water quality.

The WQM 7.0 model used a minimum limit of 5.0 mg/l for DO. The permit limit of 5.0 mg/l for DO in the draft renewal permit is the same as the DO limit in the existing permit.

The WQM 7.0 model calculated WQBELs for Ammonia: 15.7 mg/l as a monthly average and 31.4 mg/l as a maximum. These concentrations (and corresponding mass loads) are more stringent than the existing permit's Ammonia limits but the eDMR data shows that the facility can meet them without the need for a compliance schedule. The maximum monthly average Ammonia concentration reported in the effluent in DMRs from January 1, 2022 through October 31, 2024 was <3.1 mg/l, well under 15.7 mg/l as a monthly average. The maximum monthly average Ammonia mass load reported in the same DMRs was < 1 lb/day, well under 18.3 lbs/day proposed in the draft renewal permit as a monthly average. (Note: the Ammonia water quality criteria changed with the last revisions to the PA Standards, Title 25 PA Code Chapter 93. The TMS uses the updated Ammonia water quality criteria in its calculations.)

If this were a new facility or an expanding facility discharging to a stream designated as "Trout Natural Reproduction", the WQM 7.0 model would have been re-run to ensure that Dissolved Oxygen levels remained above 8 mg/l during early life stages, which are recognized as occurring October through May. (Conservative estimates of the stream flow during those times would be used rather than the Q7-10 design flow as well as corresponding estimates of the stream temperature.) This facility is an existing discharger, however. The stream has been classified as Trout Natural Reproduction while this discharge has been occurring. No increases in flow and no changes in industrial indirect users are proposed that would interfere with continuing to attain the "Trout Natural Reproduction" designation.

Metals and other parameters:

DEP uses a model called the Toxics Management Spreadsheet (TMS) for toxic parameters.. It is a macro-enabled Excel version of DEP's former PENTOX model. It evaluates the reasonable potential for discharges to cause in-stream exceedances of water quality criteria and recommends Water Quality-Based Effluent Limitations (WQBELs) be imposed in the permit or recommends monitoring requirements to better evaluate 'reasonable potential' in the future for some parameters. For more explanation of the TMS / PENTOX model, see Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, document #386-2000-015.

As with the WQM 7.0 model, the source of the River Mile Indices (RMI's) and elevations that were used in the WM 7.0 model was DEP's eMapPA. The source of the Drainage Areas was the USGS PA Stream Stats online tool (see attached). The Low Flow Yield (LFY) and stream design low-flows (Q7-10) used as model inputs were based on correlation with a downstream gage as explained on page 4 of this Fact Sheet. Where site-specific data is not available, DEP uses default values in the WQM 7.0 model. Only single dischargers to a stream can be modeled by the TMS; therefore Kutztown STP is not shown in the inputs.

The TMS did not recommend any WQBELs or monitoring requirements. See the attached. (Note: the NPDES permit application for minor sewage facilities without industrial users does not require effluent sample results for all toxic parameters: the application provided effluent sample results for Total Copper, Total Lead, and Total Zinc in accordance with the application instructions.)

The existing permit required effluent monitoring for Total Copper and Total Hardness. The average discharge concentration for Hardness from their DMRs for January 1, 2022 through October 31, 2024 was used as an input value in the TMS: 305 mg/l. (Some metals' water quality criteria are dependent on Hardness concentrations. The TMS calculates the WQBELs using discharge concentrations for metals, discharge concentrations for Hardness, and stream Hardness concentrations. A default value of 100 mg/l was used as a model input for stream Hardness given that no data for stream Hardness was available.) The discharge sampling results for Total Copper from the same DMRs, January 1, 2022

through October 31, 2024, were input into DEP's statistical spreadsheet (see attached) in accordance with DEP's Standard Operating Procedure (SOP) 'Establishing Water-Quality Based Effluent Limitations (WQBELs) and Permit Conditions for Toxic Pollutants in NPDES Permits for Existing Dischargers' to determine the discharge concentration with a 99% confidence level and the Coefficient of Variability. These were used as input values in the TMS. With this updated information, the TMS did not recommend WQBELs be imposed and did not recommend a monitoring requirement for Total Copper. Because there are no WQBELs proposed for metals, the monitoring requirement for Total Hardness in the effluent has also been eliminated in the draft renewal permit.

Total Maximum Daily Load (TMDL):

The existing permit's mass load limits of 426 lbs/yr for TP and 12,785 lbs/yr for TSS remain unchanged in the draft renewal permit.

The discharge is to Sacony Creek which is ultimately a tributary of Lake Ontelaunee. A TMDL was developed on August 9, 2004 by US EPA to address nutrient and suspended solids impairments identified for Lake Ontelaunee. When the TMDL was developed, the discharge from this facility was not taken into consideration. It appears this is because the discharge did not occur during the development of this TMDL. EPA subsequently approved a Waste Load Allocation for this facility in a letter dated December 9, 2008. See the attached.

Both the regulatory limits as monthly averages (mg/l) and the TMDL cap loads (lbs/yr) are being imposed to control TSS and TP in the short-term and in the long-term. A request was also made by the downstream water supplier and agreed to by DEP in May 2014 to include the regulatory limit of 2.0 mg/l as a monthly average for TP for designated dischargers upstream of the public water supply intake. The Maxatawny STP is one of the designated dischargers. The letter agreement dated May 7, 2014, is attached to this Fact Sheet.

It is noted that TP at 2 mg/l as a monthly average, would <u>not</u> be sufficient for the facility to achieve their annual load limit:

2 mg/l for TP x 0.14 MGD x 8.34 c.f. = 2.3 lbs/day x 365 days/year = 852 lbs/year > 426 lbs/year permit limit

Imposing a more stringent monthly average limit back-calculated to achieve the cap load, however, would reduce flexibility and has therefore not been implemented at this time. The same approach was used in the existing NPDES permit.

The fact sheet prepared for the original permit contains the following detailed description relevant to the TMDL and included here for documentation purposes:

The Lake Ontelaunee TMDL, originally approved by U.S. EPA in August 2004, has been revised to include a point source discharge that received planning approval in June 2001 in the Maxatawny Township Phase I Act 537 Plan, and again on September 18, 2003 in the Phase II Act 537 Plan. The TMDL for the Lake Ontelaunee Watershed failed to take into account this approved discharge. The proposed revisions reallocate 0.193 metric tons/year of Phosphorus from the LA to the WLA and 5.8 metric tons/year of sediment from the LA to the WLA to account for the discharge. The additional phosphorus load will be re-allocated from the hay pasture portion of the LA. As a result, the phosphorus allocation for the hay/pasture of the LA will be reduced from 1.00 t/yr to 0.811 t/yr. The following table summarizes the proposed revisions to the phosphorus LA and WLA.

Phosphorus	TMDL (t/yr)	WLA (t/yr)	LA (t/yr)	MOS (t/yr)
Current	10.65	2.77	7.36	0.52
Proposed	10.65	2.963	7.167	0.52

The TMDL for sediment is 19,587 tons/year with an LA of 19,444 tons/year and a WLA of 143 ton/year. To account for the additional load from Maxatawny Township's STP, the 5.8 tons/year will be reallocated from the LA to the WLA resulting in a TMDL of 19,587 tons/year, an LA of 19,438 tons/year and a WLA of 149 tons/year. The sediment load will be reallocated from the hay/pasture portion of the LA. As a result sediment allocation for the hay/pasture portion will be reduced from 1629.7 tons/year to 1623.9 tons/year. Because this reallocation is less than 1% change in the existing load allocation it is considered de minimis.

Anti-Backsliding

No limits in the draft renewal permit are less stringent than the existing permit's limits.

Mass Load vs. Concentration Limits

Consistent with the Technical Guidance for the Development and Specification of Effluent Limitations, document #386-0400-001, and the SOP 'Establishing Effluent Limitations for Individual Sewage Permits' average monthly mass loading limits have been established for CBOD5, TSS, and Ammonia and average weekly mass loading limits have additionally been established for CBOD5 and TSS.

Sample Types and Frequencies

Sample Types and Frequencies for the purpose of determining compliance with permit limits are consistent with the Technical Guidance for the Development and Specification of Effluent Limitations, document #386-0400-001, and/or carried forward from the previous permit when deemed appropriate and/or changed to match other sewage facilities' permits and/or sampling equipment. The Sample Type of '8-hour composite' in the existing permit has been changed to '24-hour composite' in the draft renewal permit, consistent with other sewage facilities permits, because it captures more representative samples, because using automatic samplers to collect influent and effluent samples is easier for facility staff, and because DEP inspection reports stated that automatic samplers are already in use at this facility.

Flow Monitoring

The requirement to monitor flow will remain in the draft renewal in accordance with 40 CFR §122.44(i)(1)(ii).

Calculation of Mass Loading Limitations

All effluent mass loading limits are based on the following formula: design flow in MGD x concentration limit in mg/l x conversion factor of 8.34.

Influent Monitoring

DEP requires influent monitoring for TSS and BOD5 at Sewage Treatment Plants consistent with Chapter 94 Municipal Wasteload Reporting. Influent monitoring requirements in the existing permit will remain in the draft renewal permit. The sample type and monitoring frequency reflect the effluent requirements for CBOD5 and TSS monitoring.

UV Monitoring

DEP's SOP 'Establishing Effluent Limitations for Individual Sewage Permits' recommends routine monitoring of UV transmittance, UV intensity, or UV dosage if UV is utilized for disinfection. The existing permit required daily monitoring and reporting as UV Intensity in units of mW/cm^2, based on input previously provided by the permittee and the past years' DMRs. The same monitoring and reporting requirements have been carried forward into the draft renewal permit.

E. Coli Monitoring

Consistent with the SOP 'Establishing Effluent Limitations for Individual Sewage Permits' and due to the regulatory change in the State Water Quality Standards, Pa Code Chapter 93, E. Coli monitoring has been included. The statutory basis for this requirement is found at Pa Code Chapter 92a.61.

Nutrient Monitoring

In an effort to understand nutrient loading on Pennsylvania streams, sewage dischargers with design flows greater than 2000 gpd are required to monitor for Total Nitrogen and Total Phosphorus in new and reissued permits. Total Phosphorus monitoring and limits are already included in the permit due to the Lake Ontalaunee TMDL previously discussed. Total Nitrogen monitoring is included in the renewal permit and was included in the existing permit on a quarterly basis. Total Nitrogen is calculated as the sum of Total Kjeldahl Nitrogen (TKN), Nitrate (NO3), and Nitrite (NO2).

Discharge Monitoring Reports (DMRs) from January 1, 2022 through September 30, 2024 indicate an average Total Nitrogen concentration in the effluent of 23.6 mg/l. The average load for the same period is estimated as:
23.6 mg/l x 0.04 MGD (the average monthly flow according to the DMRs) x 8.34 conversion factor = 7.9 lbs/day.

Discharge Monitoring Reports (DMRs) from January 1, 2022 through October 31, 2024 indicate an average Total Phosphorus concentration in the effluent of 0.78 mg/l and an average load of 0.27 lbs/day.

Antidegradation

The permit limits and conditions are intended to protect the designated and existing uses of the receiving stream. No High Quality or Exceptional Value waters are impacted by this discharge.

Class A Wild Trout Fisheries

No Class A Wild Trout Fisheries are impacted by this discharge.

303(d) Listed Streams – Impaired Waters

DEP's Integrated Water Quality Report is forwarded to the US EPA in compliance with Section 303(d) of the federal Clean Water Act. The downstream Lake Ontelaunee is "listed" as an impaired water for aquatic life due to nutrients and sediment. The Lake Ontelaunee TMDL was completed and approved by EPA in 2004. Implementation of the TMDL has been discussed under the TMDL section of this Fact Sheet. The facility has been consistently meeting its annual load limits for TSS and TP.

Proposed Effluent Limitations and Monitoring Requirements

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

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L) (1)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instant. Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
CBOD5	29	46	XXX	25.0	40.0	50	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	35	52	XXX	30.0	45.0	60	1/week	24-Hr Composite
Total Suspended Solids (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Suspended Solids (lbs)	XXX	12,785 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Dissolved Solids	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/month	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab

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

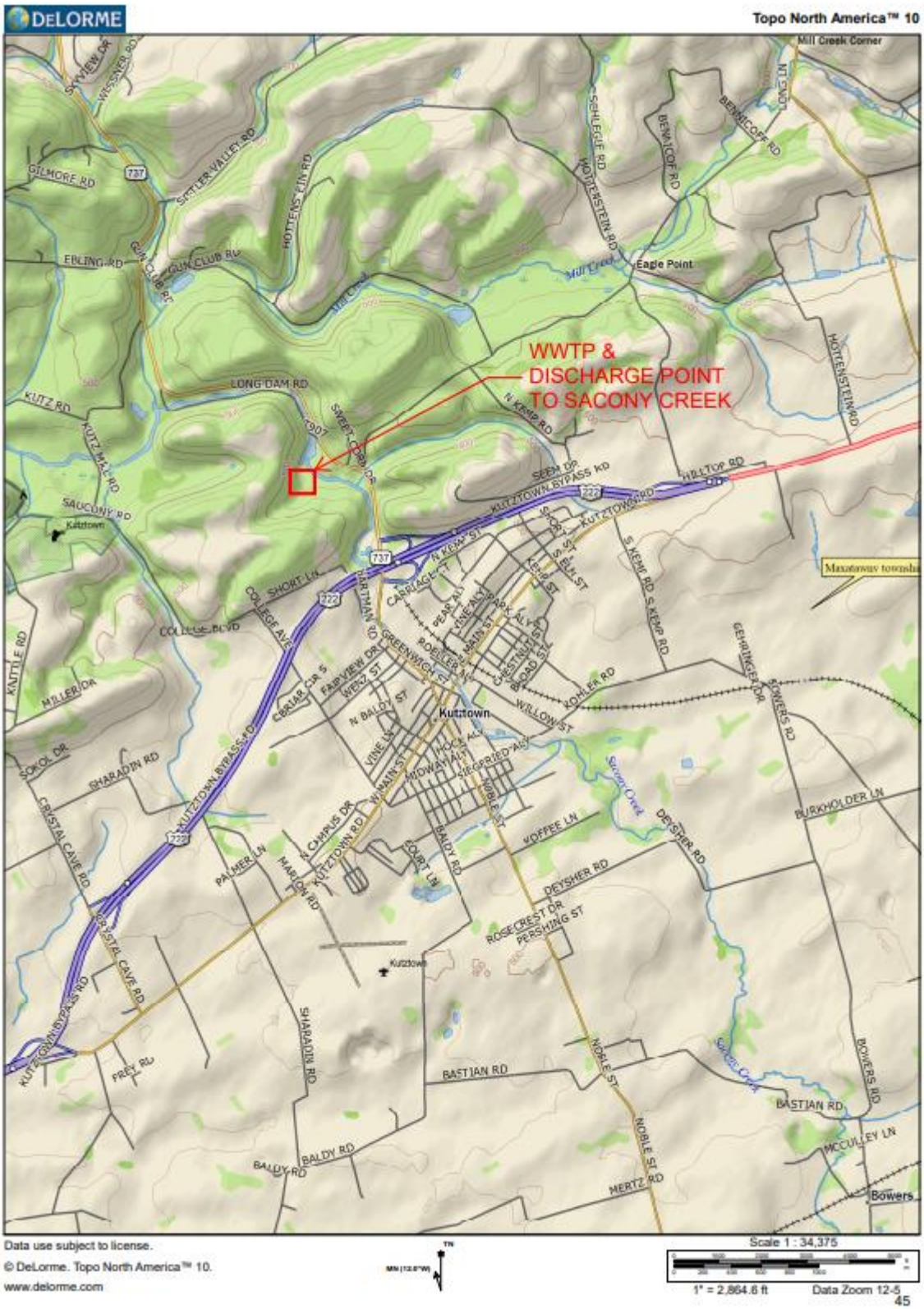
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L) (1)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instant. Minimum	Average Monthly	Weekly Average	Instant. Maximum		
UV Intensity (mW/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
Ammonia	18.3	XXX	XXX	15.7	XXX	31.4	1/week	24-Hr Composite
Total Nitrogen (2)	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/quarter	Calculation
Total Phosphorus	2.3	XXX	XXX	2.0	XXX	XXX	1/week	24-Hr Composite
Total Phosphorus (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus (lbs)	XXX	426 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

(1) except where other units are indicated in the first column of the table in parentheses

(2) Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2+NO_3-N are measured in the same sample.

Compliance Sampling Location: at outfall 001

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☒	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☒	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☒	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☒	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
☒	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: New and Reissuance Sewage Individual NPDES Permit Applications, Version 2.0, February 3, 2022
☒	SOP: Establishing Effluent Limitations in Individual Sewage NPDES Permits, version 2.0, February 5, 2024
☒	SOP: Establishing Water-Quality Based Effluent Limitations (WQBELs) and Permit Conditions for Toxic Pollutants in NPDES Permits for Existing Dischargers. Version 1.5, May 20, 2021.
☒	Other: Delaware River Basin Commission (DRBC) docket D-2007-001 CP-4.


DeLORME
Topo North America™ 10
WWTP &
DISCHARGE POINT
TO SACONY CREEK
Kutztown
Eagle Point
Mill Creek Corner
Maxatawny township
Bowers
Data use subject to license.
© DeLorme. Topo North America™ 10.
www.delorme.com
Scale 1 : 34,375
1" = 2,864.6 ft
Data Zoom 12-5
45

DEP WQM model:

Input Data WQM 7.0

General Data

General | Stream | Discharge and Parameters

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	LFY (cfsm)	Slope (ft/ft)	PWS With (mgd)	Apply FC
2008	7.400	390	21.8	0.11	0	0	☑
2008	6.800	385	23	0.11	0	0	☑
2008	5.700	360	23.3	0.11	0	0	☑

Add Record
Delete Record

Input Data WQM 7.0

Stream Data

General | Stream | Discharge and Parameters

Design Condition ◉ Q7-10 ○ Q1-10 ○ Q30-10

RMI	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (ºC)	Tributary pH	Stream Temp (ºC)	Stream pH
7.400	0.00	0.00	0.000	0.00	0	0.00	0.00	20.00	7.00	0.000	0.00
6.800	0.00	0.00	0.000	0.00	0	0.00	0.00	20.00	7.00	0.000	0.00
5.700	0.00	0.00	0.000	0.00	0	0.00	0.00	20.00	7.00	0.000	0.00

Input Data WQM 7.0

Discharge and Parameter Data

General | Stream | Discharge and Parameters

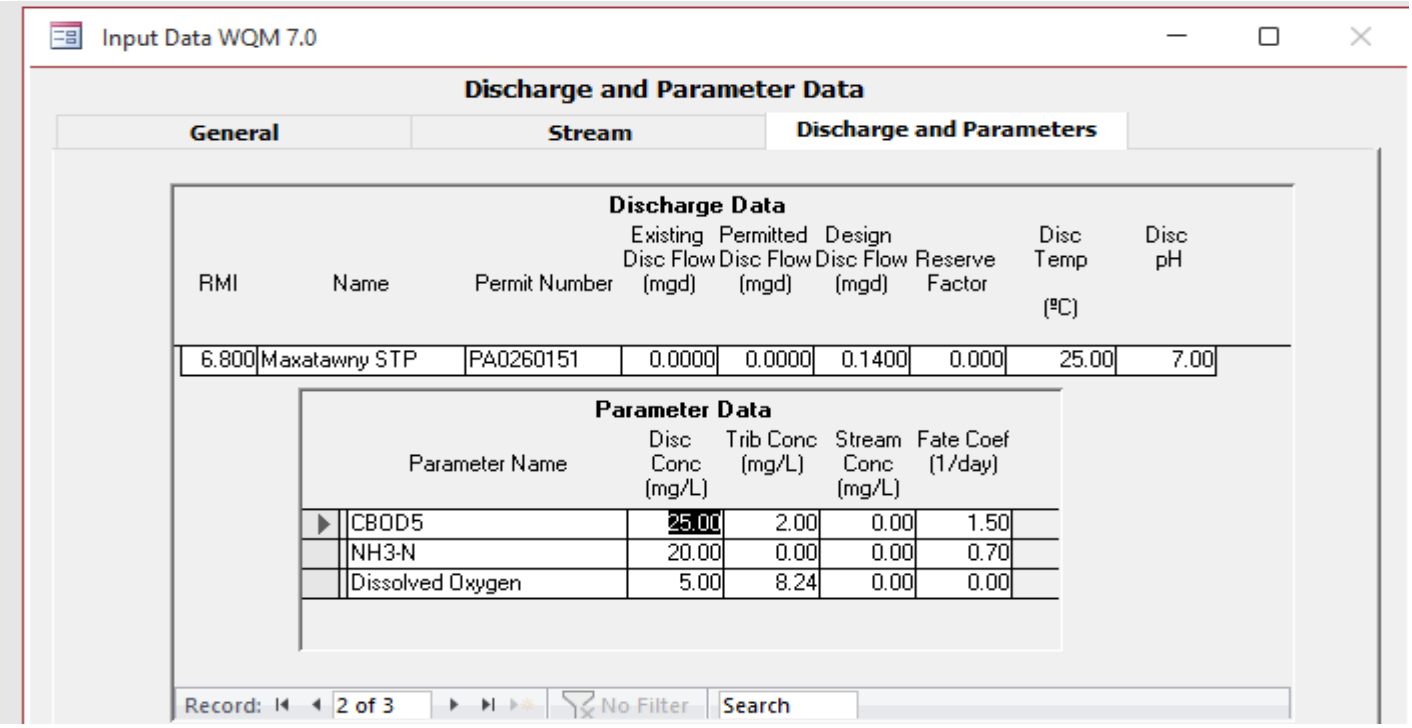
Discharge Data

RMI	Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (ºC)	Disc pH
7.400	Kutztwon STP	PA0031135	0.0000	0.0000	1.5000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/day)
CBOD5	25.00	2.00	0.00	1.50
NH3-N	20.00	0.00	0.00	0.70
Dissolved Oxygen	5.00	8.24	0.00	0.00

Record: 1 of 3 | No Filter | Search



Input Data WQM 7.0

Discharge and Parameter Data

General | Stream | Discharge and Parameters

Discharge Data

RMI	Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (ºC)	Disc pH
6.800	Maxatawny STP	PA0260151	0.0000	0.0000	0.1400	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/day)
CBOD5	25.00	2.00	0.00	1.50
NH3-N	20.00	0.00	0.00	0.70
Dissolved Oxygen	5.00	8.24	0.00	0.00

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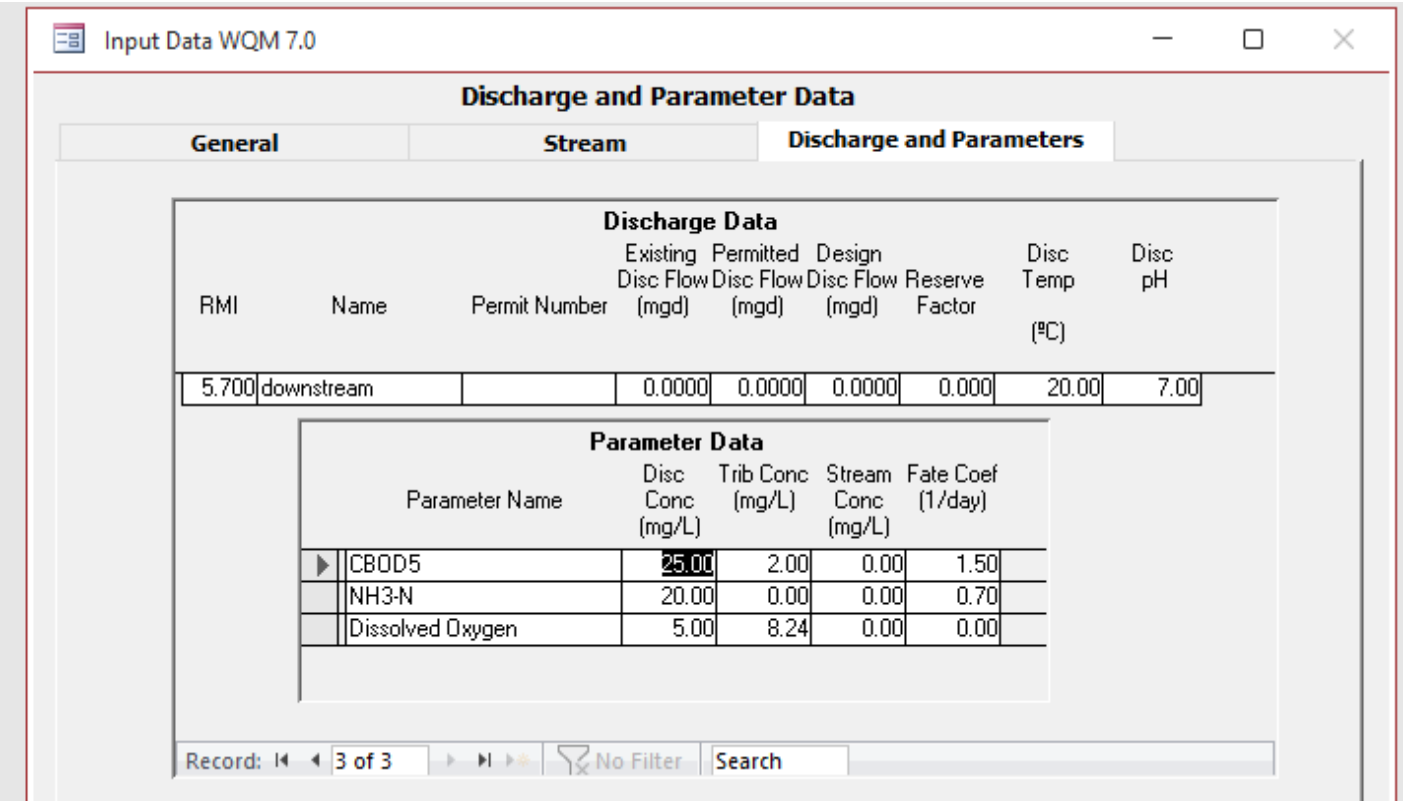


Input Data WQM 7.0

Discharge and Parameter Data

General | Stream | Discharge and Parameters

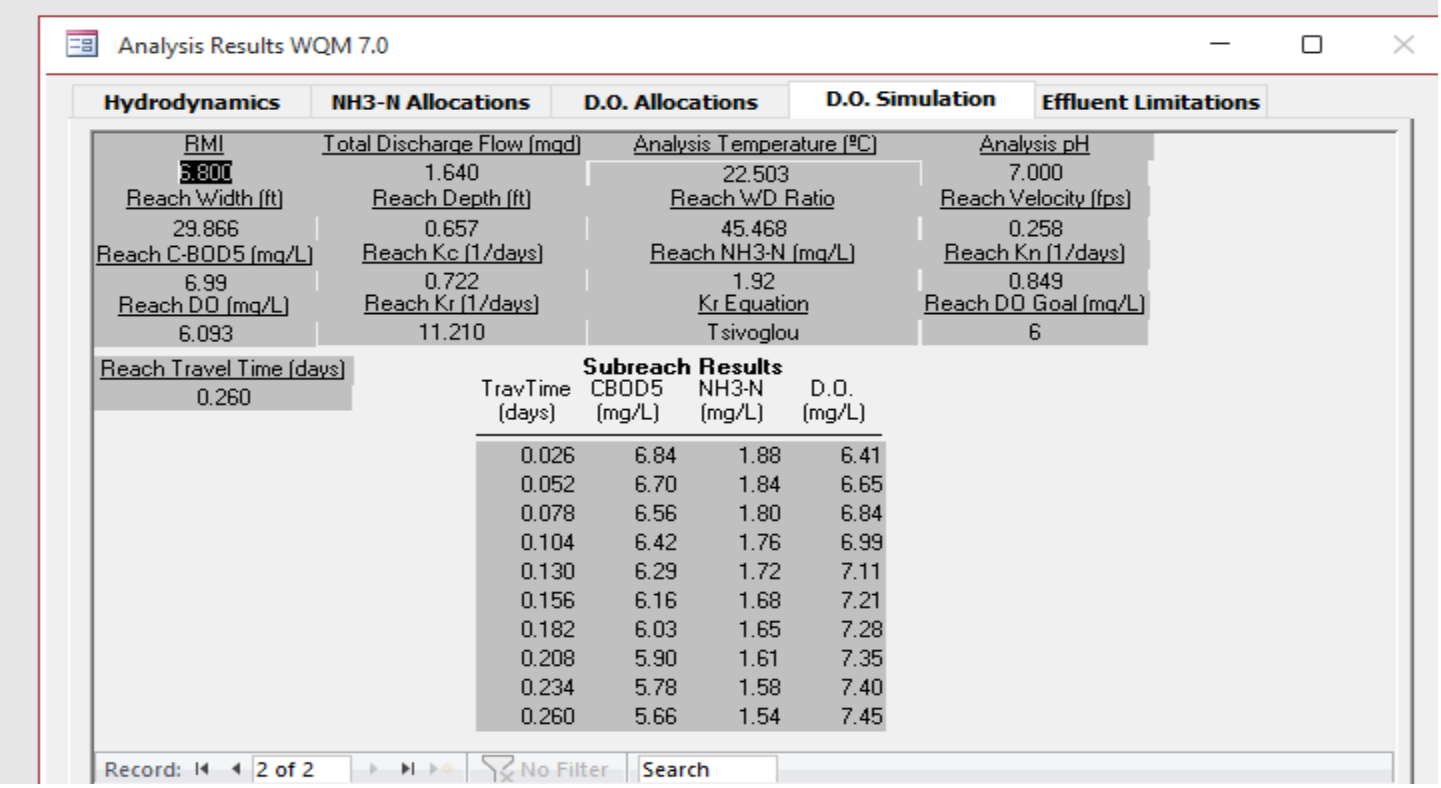
Discharge Data

RMI	Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (ºC)	Disc pH
5.700	downstream		0.0000	0.0000	0.0000	0.000	20.00	7.00

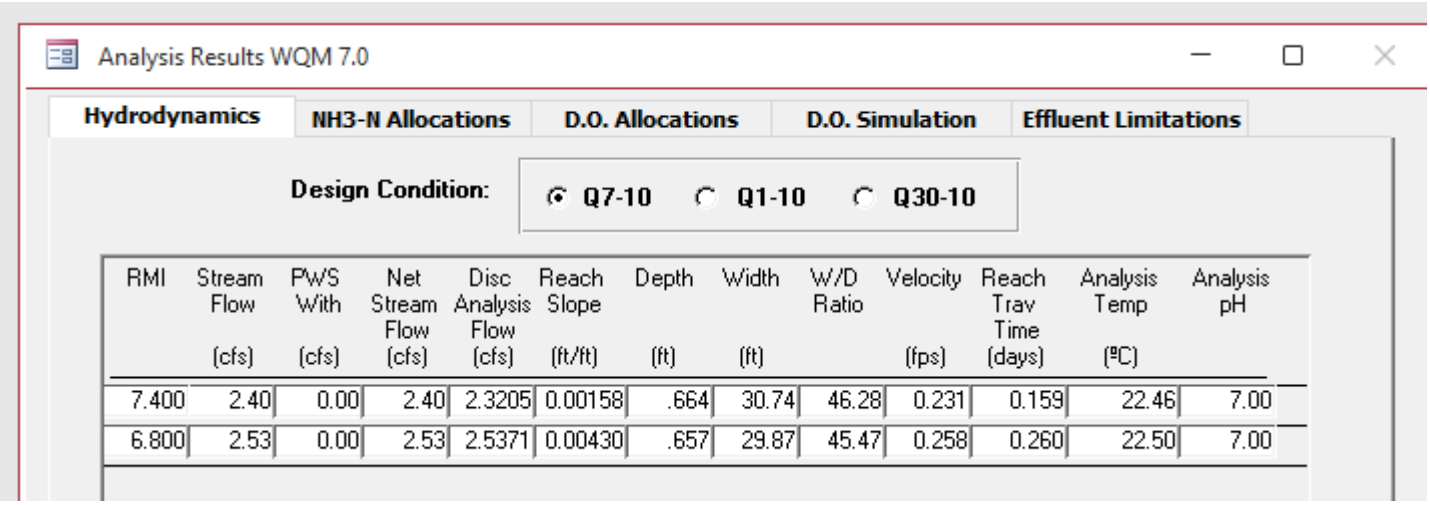
Parameter Data

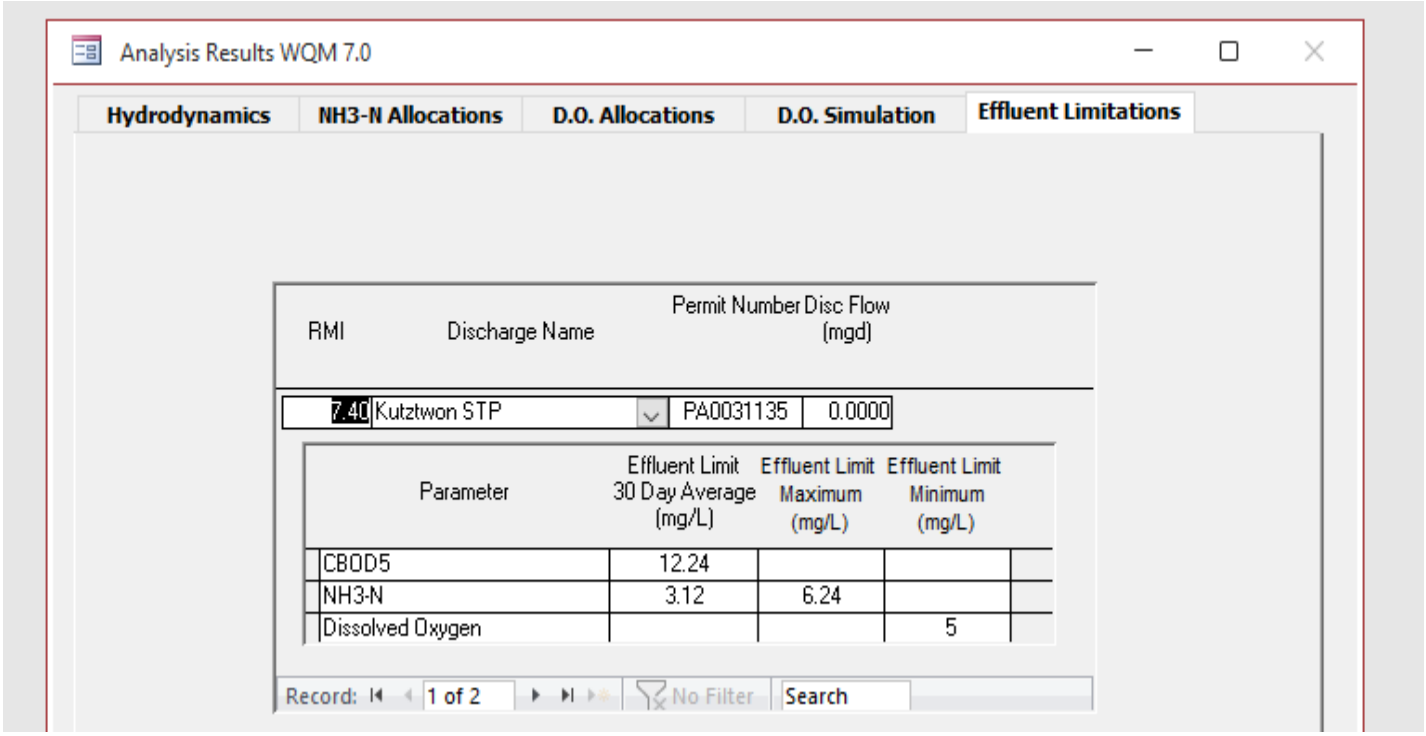
Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/day)
CBOD5	25.00	2.00	0.00	1.50
NH3-N	20.00	0.00	0.00	0.70
Dissolved Oxygen	5.00	8.24	0.00	0.00

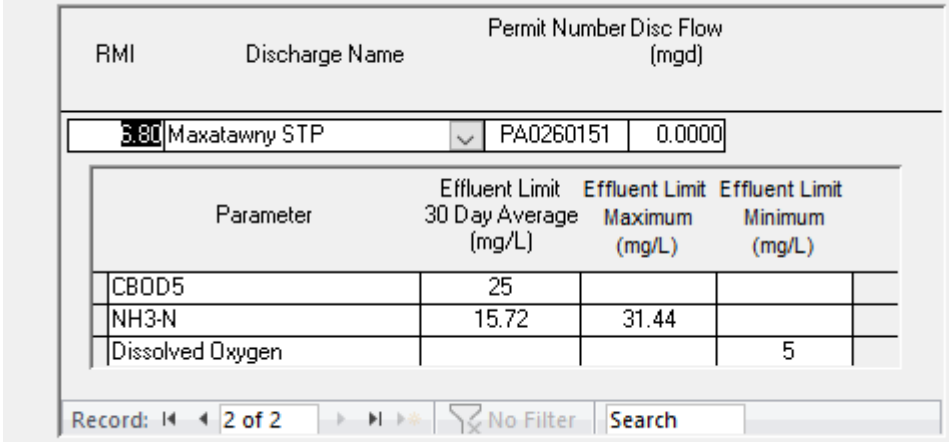
Record: 3 of 3 | No Filter | Search



DO has recovered




Analysis Results WQM 7.0
Hydrodynamics
NH3-N Allocations
D.O. Allocations
D.O. Simulation
Effluent Limitations
RMI
Discharge Name
Permit Number
Disc Flow (mgd)
7.40
Kutztwon STP
PA0031135
0.0000
Parameter
Effluent Limit 30 Day Average (mg/L)
Effluent Limit Maximum (mg/L)
Effluent Limit Minimum (mg/L)
CBOD5
12.24
NH3-N
3.12
6.24
Dissolved Oxygen
5
Record: 1 of 2
No Filter
Search


RMI
Discharge Name
Permit Number
Disc Flow (mgd)
6.80
Maxatawny STP
PA0260151
0.0000
Parameter
Effluent Limit 30 Day Average (mg/L)
Effluent Limit Maximum (mg/L)
Effluent Limit Minimum (mg/L)
CBOD5
25
NH3-N
15.72
31.44
Dissolved Oxygen
5
Record: 2 of 2
No Filter
Search

StreamStats Gage Page

Gage Information | Gage Analysis Plots

Station Name	Maiden Creek at Virginville, Pa.
Station Type	Gaging Station, continuous record
Latitude	40.51426
Longitude	-75.88298
NWIS Latitude	40.5142605
NWIS Longitude	-75.8829816
Is regulated?	false
Agency	United States Geological Survey
NWIS Discharge Period of Record	01/19/1973 - 09/29/1995

Geological Characteristics

Characteristic Name	Value	Units	Citation
Depth to Rock	3.83666666666667	feet	139
Percent Carbonate	10.8	percent	142
Percent of Glaciation	0	percent	139
Percent Carbonate	10.84	percent	169

Basin Dimensional Characteristics

Characteristic Name	Value	Units	Citation
Drainage Area	159	square miles	142

Statistic Name	Value	Units	Preferred?	Years of Record	Standard Error, percent	Citation	Comments
1 Day 10 Year Low Flow	14.8	cubic feet per second	✓	22		49	Statistic Date Range 4/1/1973 - 3/31/1995
7 Day 2 Year Low Flow	30.5	cubic feet per second	✓	22		49	Statistic Date Range 4/1/1973 - 3/31/1995
7 Day 10 Year Low Flow	16.7	cubic feet per second	✓	22		49	Statistic Date Range 4/1/1973 - 3/31/1995
30 Day 2 Year Low Flow	43.9	cubic feet per second	✓	22		49	Statistic Date Range 4/1/1973 - 3/31/1995
30 Day 10 Year Low Flow	23.4	cubic feet per second	✓	22		49	Statistic Date Range 4/1/1973 - 3/31/1995
90 Day 10 Year Low Flow	35.5	cubic feet per second	✓	22		49	Statistic Date Range 4/1/1973 - 3/31/1995

Low Flow Yield gage = Q7-10 / Drainage Area = 16.7 cfs / 159 sq. mi. = 0.105

Q7-10 IN STREAM STATS SEEMS UNRELIABLE. Q7-10 IS MUCH LESS UPSTREAM, THEN HIGH HERE AT MAXATAWNY STP, THEN LOW DOWNSTREAM…..

Used gage correlation instead, same as last permit development (and Kutztown STP's permit development)

StreamStats Output Report-Outfall 001 Maxatawny STP					
State/Region ID	PA				
Workspace ID	PA20241212161604387000				
Latitude	40.53279				
Longitude	-75.78751				
Time	12/12/2024	11:16:52 AM			
Basin Characteristics					
Parameter Code	Parameter Des	Value	Unit		
CARBON	Percentage of a	62.32	percent		
DRNAREA	Area that drain	23	square miles		
PRECIP	Mean Annual P	46	inches		
ROCKDEP	Depth to rock	5.1	feet		
STRDEN	Stream Density	0.87	miles per square mile		
Low-Flow Statistics Para	100.0 Percent Low Flow Region 2				
Parameter Code	Parameter Nam	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	23	square mi	4.93	1280
PRECIP	Mean Annual P	46	inches	35	50.4
STRDEN	Stream Density	0.87	miles per	0.51	3.1
ROCKDEP	Depth to Rock	5.1	feet	3.32	5.65
CARBON	Percent Carbon	62.32	percent	0	99
Low-Flow Statistics Flov	100.0 Percent Low Flow Region 2				
Statistic	Value	Unit	SE	ASEp	
7 Day 2 Year Low Flow	19.2	ft^3/s	38	38	
30 Day 2 Year Low Flow	20.5	ft^3/s	33	33	
7 Day 10 Year Low Flow	13.7	ft^3/s	51	51	
30 Day 10 Year Low Flow	14.6	ft^3/s	46	46	
90 Day 10 Year Low Flow	15.6	ft^3/s	36	36	
USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality st					
USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the sof					
USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply e					
Application Version: 4.24.0					
StreamStats Services Version: 1.2.22					
NSS Services Version: 2.2.1					

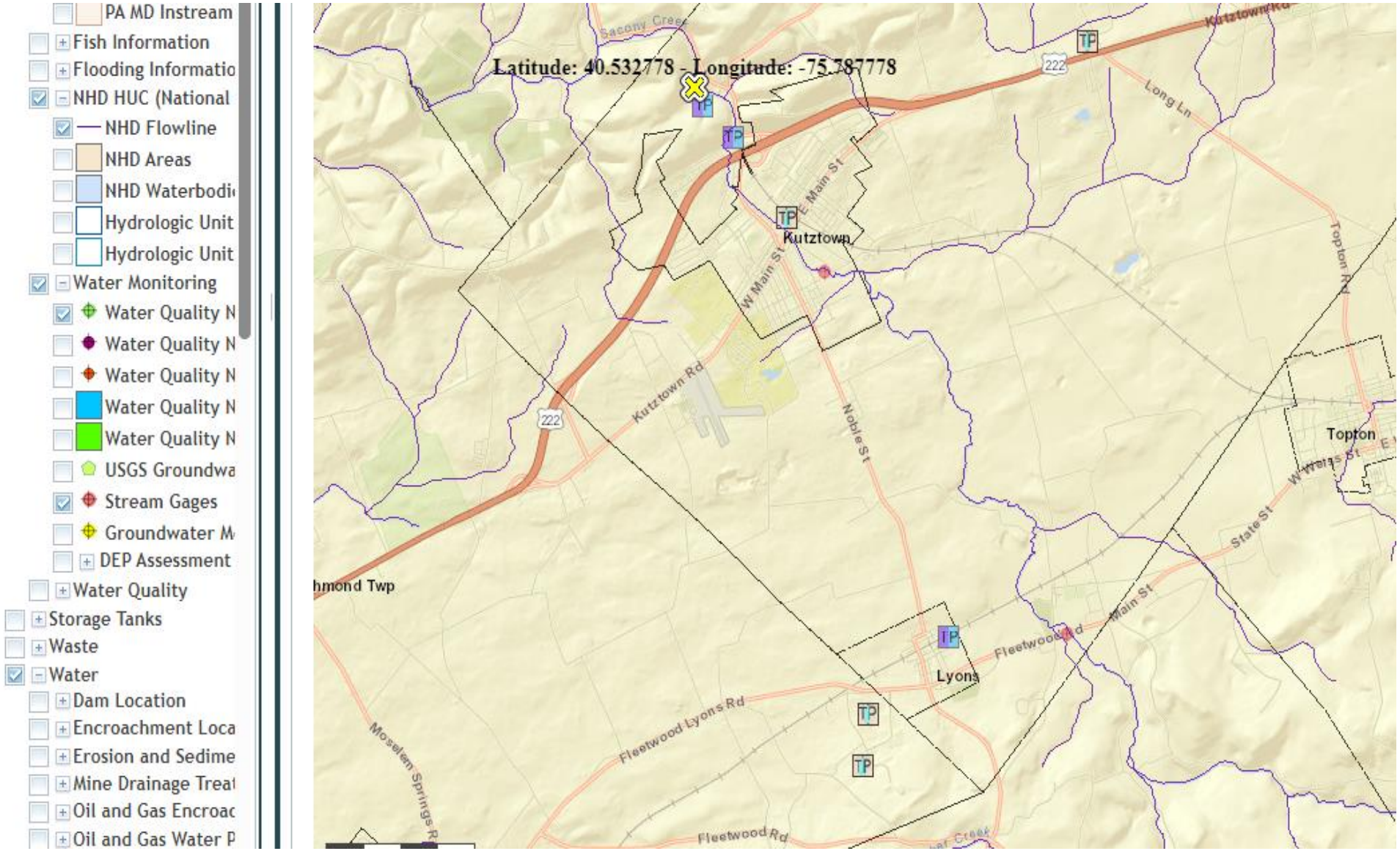
Farther downstream of Maxatawny STP, approx. 5.4 RMI on Sacony Creek:

StreamStats Output Report - conf Sacony and UNT 2017						
State/Region ID	PA					
Workspace ID	PA20241212165345276000					
Latitude	40.53311					
Longitude	-75.8036					
Time	12/12/2024	11:54:10 AM				
Low-Flow Statistics Param	100.0 Percent Low Flow Region 2					
Parameter Code	Parameter Na	Value	Units	Min Limit	Max Limit	
DRNAREA	Drainage Area	46.4	square mi	4.93	1280	
PRECIP	Mean Annual I	46	inches	35	50.4	
STRDEN	Stream Densit	1.51	miles per	0.51	3.1	
ROCKDEP	Depth to Rock	4.2	feet	3.32	5.65	
CARBON	Percent Carbo	34.7	percent	0	99	
Low-Flow Statistics Flow I	100.0 Percent Low Flow Region 2					
Statistic	Value	Unit	SE	ASEp		
7 Day 2 Year Low Flow	13.4	ft^3/s	38	38		
30 Day 2 Year Low Flow	16.6	ft^3/s	33	33		
7 Day 10 Year Low Flow	6.97	ft^3/s	51	51		
30 Day 10 Year Low Flow	8.81	ft^3/s	46	46		
90 Day 10 Year Low Flow	11.6	ft^3/s	36	36		
USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are cons						
USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Su						
USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purp						
Application Version: 4.24.0						
StreamStats Services Version: 1.2.22						
NSS Services Version: 2.2.1						

Upstream, approx. RMI 12.7, (inactive) gage 01470729 on Sacony Creek at Bowers, @Fleetwood Rd / MainSt:

StreamStats Output Report-upstream of Kutztown STP					
State/Region ID	PA				
Workspace ID	PA20241212163250901000				
Latitude	40.48352				
Longitude	-75.73996				
Time	12/12/2024	11:33:30 AM			
Low-Flow Statistics Parar	2.0 Percent Low Flow Region 1				
Parameter Code	Parameter Na	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Are	5.82	square m	4.78	1150
BSLOPD	Mean Basin S	6.664	degrees	1.7	6.4
ROCKDEP	Depth to Rock	5.1	feet	4.13	5.21
URBAN	Percent Urba	0.2706	percent	0	89
Low-Flow Statistics Parar	98.0 Percent Low Flow Region 2				
Parameter Code	Parameter Na	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Are	5.82	square m	4.93	1280
PRECIP	Mean Annual	47	inches	35	50.4
STRDEN	Stream Densi	1.4	miles per	0.51	3.1
ROCKDEP	Depth to Rock	5.1	feet	3.32	5.65
CARBON	Percent Carb	4.76	percent	0	99
Low-Flow Statistics Flow	2.0 Percent Low Flow Region 1				
Statistic	Value	Unit			
7 Day 2 Year Low Flow	2.47	ft^3/s			
30 Day 2 Year Low Flow	2.84	ft^3/s			
7 Day 10 Year Low Flow	1.36	ft^3/s			
30 Day 10 Year Low Flow	1.59	ft^3/s			
90 Day 10 Year Low Flow	1.99	ft^3/s			
Low-Flow Statistics Flow	98.0 Percent Low Flow Region 2				
Statistic	Value	Unit	SE	ASEp	
7 Day 2 Year Low Flow	1.58	ft^3/s	38	38	
30 Day 2 Year Low Flow	1.97	ft^3/s	33	33	
7 Day 10 Year Low Flow	0.87	ft^3/s	51	51	
30 Day 10 Year Low Flow	1.05	ft^3/s	46	46	
90 Day 10 Year Low Flow	1.43	ft^3/s	36	36	
Low-Flow Statistics Flow	Area-Averaged				
Statistic	Value	Unit			
7 Day 2 Year Low Flow	1.6	ft^3/s			
30 Day 2 Year Low Flow	1.99	ft^3/s			
7 Day 10 Year Low Flow	0.88	ft^3/s			
30 Day 10 Year Low Flow	1.06	ft^3/s			
90 Day 10 Year Low Flow	1.44	ft^3/s			

Showing three small tributaries and one larger one to Sacony Creek between former gage at Bowers (on Sacony Creek, not on UNT) and the Kutztown STP….



PA StreamStats (red dot = Kutztown STP location. Black triangles are former gages):

TOXCONC Statistical Evaluation of results reported on DMRs:

	Outfall No:	001
	n (Samples/Month):	4
	Reviewer/Permit Engineer:	B.Boylan

Parameter Name	Total Copper
Units	mg/l
Detection Limit	0.002
Sample Date	***When entering values below the detection limit, enter "ND" or use the < notation (eg. <0.02)***
1 Qtr 2022	0.002
2 Qtr 2022	0.007
3 Qtr 2022	0.01
4 Qtr 2022	0.003
1 Qtr 2023	<0.002
2 Qtr 2023	0.002
3 Qtr 2023	0.003
4 Qtr 2023	0.006
1 Qtr 2024	0.004
2 Qtr 2024	0.004
3 Qtr 2024	0.014

DATA INPUT SHEET | DOCUMENTATION | OUTPUT SHEET | SUMMARY STATISTICS | DETAILED CALCULATIONS | Z-VALUES

		Reviewer/Permit Engineer:	B.Boylan
Facility:	Maxatawny STP		
NPDES #:	PA0260151		
Outfall No:	001		
n (Samples/Month):	4		

Parameter	**Distribution Applied**	**Coefficient of Variation (daily)**	**Avg. Monthly**
Total Copper (mg/l)	Delta-Lognormal	0.7681771	0.0114664

	A	B	C	D	E
2		**Facility:**		Maxatawny STP	
3		**NPDES #:**		PA0260151	
4		**Outfall No:**		001	
5		**n (Samples/Month):**		4	
6					
7	**Parameter Name**	Total Copper			
8					
9	Number of Samples	11			
10	Samples Nondetected	1			
11					
12	**LOGNORMAL**				
13	Log MEAN	NA			
14	Log VAR.				
15	(LTA) [E(x)]				
16	Variance [V(x)]				
17	CV (raw)				
18	CV (n)				
19	Monthly Avg. (99%, n-day)				
20					
21					
22	**DELTA-LOGNORMAL**				
23	Delta-Log MEAN	-5.4042133			
24	Delta-Log VAR.	0.4306148			
25	(LTA) [E(x)]	0.0052528			
26	Variance [V(x)]	0.0000163			
27	CV (raw)	0.7681771			
28	Delta-Log VAR. (n)	0.1375817			
29	*A, Table E-2, TSD*	0.1475317			
30	*B, Table E-2, TSD*	-0.0000039			
31	*C, Table E-2, TSD*	0.0000520			
32	Delta-Log MEAN (n)	-5.3177380			
33	phi (Φ)	0.9890000			
34	Z*	2.2900000			
35	Monthly Avg. (99%, n-day)	0.0114664			
36					
37					
38	**NORMAL**				
39	MEAN	NA			
40	VAR.				
41	(LTA) [E(x)]				
42	Variance [V(x)]				

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Maxatawny STP** NPDES Permit No.: **PA0260151** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **domestic ww**

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
0.14	305	7						

	Discharge Pollutant	Units	Max Discharge Conc		0 if left blank: Trib Conc	0 if left blank: Stream Conc	0.5 if left blank: Daily CV	0.5 if left blank: Hourly CV	0 if left blank: Strea m CV	0 if left blank: Fate Coeff	0 if left blank: FOS	1 if left blank: Criteri a Mod	1 if left blank: Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		1820									
	Chloride (PWS)	mg/L											
	Bromide	mg/L											
	Sulfate (PWS)	mg/L											
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L											
	Total Antimony	µg/L											
	Total Arsenic	µg/L											
	Total Barium	µg/L											
	Total Beryllium	µg/L											
	Total Boron	µg/L											
	Total Cadmium	µg/L											
	Total Chromium (III)	µg/L											
	Hexavalent Chromium	µg/L											
	Total Cobalt	µg/L											
	Total Copper	mg/L		0.0115			0.77						
	Free Cyanide	µg/L											
	Total Cyanide	µg/L											
	Dissolved Iron	µg/L											
	Total Iron	µg/L											
	Total Lead	µg/L	<	0.3									
	Total Manganese	µg/L											
	Total Mercury	µg/L											
	Total Nickel	µg/L											
	Total Phenols (Phenolics) (PWS)	µg/L											
	Total Selenium	µg/L											
	Total Silver	µg/L											
	Total Thallium	µg/L											
	Total Zinc	mg/L		0.015									
	Total Molybdenum	µg/L											
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Maxatawny STP, NPDES Permit No. PA0260151, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Sacony 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	002008	6.8	385	23			Yes
End of Reach 1	002008	5.7	360	23.3			Yes

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

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	6.8	0.11	2.4									100	7		
End of Reach 1	5.7	0.11													

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	6.8														
End of Reach 1	5.7														

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Maxatawny STP, NPDES Permit No. PA0260151, Outfall 001

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | (●) All ( ) Inputs ( ) Results ( ) Limits

☑ ***Hydrodynamics***

Q_{7-10}

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
6.8	2.40		2.40	0.217	0.004	0.606	24.22	39.994	0.178	0.377	21.878
5.7	2.43		2.433								

Q_h

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
6.8	15.97		15.97	0.217	0.004	1.35	24.22	17.938	0.495	0.136	7.604
5.7	16.161		16.16								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.828 Analysis Hardness (mg/l): 120.15 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	15.976	16.6	169	Chem Translator of 0.96 applied
Total Lead	0	0		0	78.821	103	1,049	Chem Translator of 0.764 applied
Total Zinc	0	0		0	136.897	140	1,424	Chem Translator of 0.978 applied

☑ ***CFC*** CCT (min): 21.878 PMF: 1 Analysis Hardness (mg/l): 116.97 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	10.239	10.7	129	Chem Translator of 0.96 applied
Total Lead	0	0		0	2.984	3.88	46.9	Chem Translator of 0.768 applied
Total Zinc	0	0		0	134.917	137	1,653	Chem Translator of 0.986 applied

☑ ***THH*** CCT (min): 21.878 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): 7.604 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

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

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

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments

☑ ***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
Total Copper	0.13	mg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	N/A	N/A	Discharge Conc < TQL
Total Zinc	0.91	mg/L	Discharge Conc ≤ 10% WQBEL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

DEC 0 9 2008

Mr. Lee McDonnell, Program Manager
Water Management Program
PA DEP, South Central Regional Office
909 Elmerton Avenue
Harrisburg, Pennsylvania 17110-8200

Dear Mr. McDonnell:

The U.S. Environmental Protection Agency (EPA) has reviewed your request to amend the wasteload allocations and load allocations for the phosphorus Total Maximum Daily Load (TMDL) in the Lake Ontelaunee Basin. As indicated in your letter, Maxatawney Township has requested permission to construct a 140,000 GPD Wastewater Treatment Plant that will take 313 homes off the on-lot septic systems. To accommodate this new treatment plant, the wasteload allocation will need to be increased by 0.193 t/year, from 2.77 t/year to 2.963 t/year. The 0.193 t/year increase in the wasteload allocation for the new treatment plant will be removed from the load allocation. First, the 0.004 t/year allocated to on-lot septic systems will be reduced when the facility is operational. Further, the Pennsylvania Department of Environmental Protection is reducing the hay/pasture load allocation another 0.189 t/year, from 1.0 t/year in the 2004 TMDL, to 0.811 t/year. This would leave the phosphorus TMDL at 10.65 t/year.

In the original TMDL established by EPA on August 9, 2004, simulation modeling demonstrated that a TMDL of 10.65 t/year would be protective of applicable water quality standards. Based upon this information, and reasonable assurance provided in the TMDL and TMDL amendment, EPA approves the requested modifications to the TMDL.

If you have any questions or comments concerning this letter, please do not hesitate to call me at 215 814-5796.

Sincerely,

Helene Drago

Helene Drago, TMDL Program Manager
Office of Standards, Assessment & TMDLs

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DEP SOUTHCENTRAL REGION

DEC 1 2 2008

WATERSHED MANAGEMENT

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
REGIONAL DIRECTOR

May 7, 2014

Mr. Dean Miller
Reading Area Water Authority
1801 Kutztown Road
Reading, PA 19604

Re: Maiden Creek/Lake Ontelaunee Watershed
Berks County

Dear Mr. Miller:

Thank you for your letter of April 25, 2014, in which you stated your belief that NPDES permits for treated sewage discharges in the Maiden Creek watershed should include an effluent limit of 2.0 mg/l for Total Phosphorus, consistent with the discussion at a June 25, 2012 meeting between DEP and Jesse Goldberg, representing the Reading Area Water Authority (RAWA). DEP concurs for sewage treatment plants with design flows greater than 2000 gallons per day, but we have not issued any such NPDES permits since the June 25, 2012 meeting. We do have six renewal applications in-house for sewage treatment plants (STPs) in the Lake Ontelaunee watershed. DEP intends to institute the discussed concentration limit of 2.0 mg/l as a monthly average, pursuant to Pa. Code Title 25 Chapter 96.5. State regulations allow compliance schedules to be included to give facilities time to achieve the necessary changes to meet new permit limits.

Per our meeting notes, Mr. Goldberg also discussed RAWA's interest in an emergency intake from Willow Creek. Two sewage treatment plants that discharge to Willow Creek, or tributaries, have NPDES permits that will be up for renewal February 28, 2015 and January 31, 2017. They will be evaluated when applications are received.

DEP's eNotice system might be a useful tool for you to stay informed on permits of interest. It is available on the DEP website, www.depweb.state.pa.us. From the home page, select "Tools" in the left-hand column, then "eNotice." After creating an account, you can subscribe to different kinds of notices. One option is based on the county, municipality, and program. The other option (through the "eFACTS Tracked permits" feature) is to track specific permit applications. With this option, you will be alerted by e-mail when specific draft permits are issued for comment. Below is a list of permit numbers and facility names for sewage treatment plant discharges to Lake Ontelaunee (within DEP's Southcentral Regional Office's jurisdiction):

PA0246921	Lenhartsville Borough STP
PA0260151	Maxatawny Township STP

Southcentral Regional Office | 909 Elmerton Avenue | Harrisburg, PA 17110-8200
717.705.4703 | Fax 717.705.4930 www.depweb.state.pa.us

PA0260975	Richmond Township-Virginville STP
PA0031135	Kutztown Borough STP
PA0053708	Gaffney, Hawk Mt. B&B
PA0070122	Highland Estates Mobile Home Park STP
PA0085171	Lyons Borough STP
PA0085430	Robin Hill Campground STP
PA0088021	Christman Lake STP

Below is a list of permit numbers and facility names for sewage treatment plant discharges to Willow Creek:

PA0021636	Fleetwood Borough STP
PA0070271	Maidencreek Township STP

If you have any further questions, please call me at 717.705.4704 or Maria Bebenek at 717.705.4707. Thank you.

Sincerely,

Lynn E. Langer
Regional Director

cc: Jesse Goldberg, Miller Environmental
Brian Trulear, EPA Region III
Mr. Pindar, Delaware River Basin Commission
Shawn Arbaugh, DEP-SCRO
Rod Nesmith, DEP-SCRO
Erick Ammon, DEP-Reading District Office
Cathy Port, DEP-SCRO

3800-PM-WSFR0015 1/2011
Permit

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WATER QUALITY MANAGEMENT PERMIT

PERMIT NO. 0609401
AMENDMENT NO. 1
APS ID. 662670
AUTH. ID. 1091992

A. PERMITTEE (Name and Address): CLIENT ID#: 33397 Maxatawny Township Municipal Authority 127 Quarry Road, Suite 1 Kutztown, PA 19530-9697	B. PROJECT/FACILITY (Name): IPS Pumping Station
C. LOCATION (Municipality, County): Maxatawny Township, Berks County	SITE ID#: 714183

D. This amendment approves the operation of sewage facilities consisting of:

This DEP initiated amendment rerates the IPS Pumping Station such that the actual pumping capacity matches the permitted capacity.

Pump Stations: IPS PS	Manure Storage:	Sewage Treatment Facility:
Design Capacity: 544 GPM	Volume: N/A MG	Annual Average Flow: N/A MGD
	Freeboard: N/A inches	Design Hydraulic Capacity: N/A MGD
		Design Organic Capacity: N/A lb/day

E. APPROVAL GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING:

1. **Amendments:** Except for any herein approved modifications, all terms, conditions, supporting documentation and addendums approved under Water Quality Management Permit No. 0609401 dated March 12, 2010 shall remain in effect.
2. Permit Conditions Relating to Sewerage are attached and made part of this permit.

F. THE AUTHORITY GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING FURTHER QUALIFICATIONS:

1. If there is a conflict between the application or its supporting documents and amendments and the attached conditions, the attached conditions shall apply.
2. Failure to comply with the rules and regulations of DEP or with the terms or conditions of this permit shall void the authority given to the permittee by the issuance of this permit.
3. This permit is issued pursuant to the Clean Streams Law Act of June 22, 1937, P.L. 1987, as amended 35 P.S. §691.1 *et seq.* Issuance of this permit shall not relieve the permittee of any responsibility under any other law.

PERMIT ISSUED: 10/27/2015

BY: /s/
Maria D. Bebenek, P.E.
TITLE: Clean Water Program Manager
Southcentral Regional Office

3800-PM-WSWM0015 Rev. 4/2003

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY AND WASTEWATER MANAGEMENT

WATER QUALITY MANAGEMENT PERMIT

PERMIT NO. 0609401
AMENDMENT NO. _____
APS ID. 662670
AUTH. ID. 803921

A. PERMITTEE (Name and Address): CLIENT ID #: 33397
Maxatawny Township Municipal Authority
127 Quarry Road, Suite 1
Kutztown, PA 19530

B. PROJECT/FACILITY (Name):
Maxatawny Township Municipal Authority WWTP

C. LOCATION (Municipality, County): SITE ID #: 714183
Maxatawny Township, Berks County

D. **This permit approves the construction of sewerage facilities consisting of:**

- **Influent pump station, mechnical screen, aerated grit chamber, equalization tank, anoxic tank, aerobic tanks, final clarifiers, UV disinfection system, cascade aeration tank, effluent flow meter, outfall sewer, sludge holding tank, and control building.**

Pump Stations: IPS	Industrial Wastewater/Sewage Treatment Facility:
Design Capacity: 388 GPM	Annual Average Flow: 0.14 MGD
	Design Hydraulic Capacity: 0.14 MGD
	Design Organic Capacity: 350 lb. BOD_5/day

E. APPROVAL GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING:

1. **New Permits:** All construction, operations, and procedures shall be in accordance with the Water Quality Management Permit application, its supporting documentation, and addendums dated **October 23, 2009**, which are hereby made a part of this permit.
2. **Permit Conditions Relating to Sewerage are attached and made part of this permit.**

F. THE AUTHORITY GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING FURTHER QUALIFICATIONS:

1. If there is a conflict between the application or its supporting documents and amendments and the attached conditions, the attached conditions shall apply.
2. Failure to comply with the rules and regulations of DEP or with the terms or conditions of this permit shall void the authority given to the permittee by the issuance of this permit.
3. This permit is issued pursuant to The Clean Streams Law Act of June 22, 1937, P.L. 1987, as amended 35 P.S. § 691.1 *et seq.*, and/or the Dam Safety and Encroachments Act of November 26, 1978, P.L. 1375, as amended, 32 P.S. § 693.1 *et seq.* Issuance of this permit shall not relieve the permittee of any responsibility under any other law.

PERMIT ISSUED: MAR 12 2010

BY: Lee A. McDonnell, P.E.

TITLE: Water Management Program Manager

Flow diagram in renewal NPDES application: