Pennsylvania Department of Environmental Protection

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0081574**
Facility Type	**Municipal**	APS ID	**69**
Major / Minor	**Minor**	Authorization ID	**1489344**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Salisbury Township**	Facility Name	**Salisbury Township Gap STP**
Applicant Address	5581 Old Philadelphia Pike	Facility Address	5350 Park Avenue
	Gap, PA 17527-9791		Gap, PA 17527
Applicant Contact	Kirsten Peachey	Facility Contact	Brian Norris
Applicant Phone	(717) 768-8059	Facility Phone	(610) 633-8009
Client ID	35929	Site ID	452223
Ch 94 Load Status	Not Overloaded	Municipality	Salisbury Township
Connection Status	No Limitations	County	Lancaster
Date Application Received	June 20, 2024	EPA Waived?	No
Date Application Accepted	June 20, 2024	If No, Reason	Significant CB Discharge

Purpose of Application: NPDES Renewal.

Summary of Review

Salisbury Township has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit. The existing permit was issued December 13, 2019, and became effective on January 1, 2020, authorizing discharge of treated sewage from the facility into UNT to Pequea Creek. The existing permit expiration date was December 31, 2024, and the permit has been administratively extended since that time.

Per the previous fact sheet, Salisbury TWP Gap STP was originally designed for 0.06 million gallons per day (MGD) in the early 1980s to serve the Village of Gap. The facility was expanded several times over the years, with a third expansion to 0.58 MGD in 2007. In 2007, the 0.1 MGD extended aeration plant was demolished, and the 0.24 MGD aboveground extended aeration tank and clarifiers were converted to 0.58 MGD sequencing batch reactors (SBRs). This conversion used the Aqua PASS Phased Activated Sludge System with the addition of two 40' diameter clarifiers (Part II Permit No. 3605414). The existing equalization (EQ) tank was divided into anaerobic/anoxic/oxic stages to promote nutrient removal. Construction was completed around May 15, 2008. The units are followed by ultraviolet (UV) disinfection. The new plant was designed for Total Phosphorus (TP) and Total Nitrogen (TN) nutrient removal in anticipation of the Chesapeake Bay requirements.

Changes in this renewal: Total Copper and Total Zinc monitoring have been added to the permit. E. Coli monitoring has been added to the permit.

Sludge use and disposal description and location(s): Sludge holding tank with offsite disposal.

Supplemental information for this facility is provided at the end of this fact sheet.

Public Participation

Approve	Deny	Signatures	Date
X		Benjamin R. Lockwood Benjamin R. Lockwood / Environmental Engineering Specialist	February 13, 2025
X		Maria D. Bebenek for Daniel W. Martin, P.E. / Environmental Engineer Manager	March 7, 2025

Summary of Review
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)	.58
Latitude	39º 59' 43.5"	Longitude	76º 1' 13.2"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary of Pequea Creek (CWF)	Stream Code	7533
NHD Com ID	57464113	RMI	0.32
Drainage Area	1.01 mi^2	Yield (cfs/mi^2)	0.132
Q_{7-10} Flow (cfs)	0.133	Q_{7-10} Basis	USGS PA StreamStats
Elevation (ft)	442	Slope (ft/ft)	
Watershed No.	7-K	Chapter 93 Class.	CWF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	N/A	Exceptions to Criteria	N/A
Assessment Status	Impaired		
Cause(s) of Impairment	Siltation, Nutrients, Organic Enrichment, Habitat Alterations, Siltation, Pathogens		
Source(s) of Impairment	Habitat Modification – Other Than Hydromodification, Agriculture, Agriculture, Habitat Modification – Other Than Hydromodification, Agriculture, Source Unknown		
TMDL Status	Final	Name	Pequea Creek
Nearest Downstream Public Water Supply Intake	Holtwood Power Plant		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	45

Changes Since Last Permit Issuance: None

Other Comments: USGS PA StreamStats provided a drainage area of 1.01 mi^2 and a Q_{7-10} of 0.133 cfs at the point of discharge.

Treatment Facility Summary				
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary With Total Nitrogen Reduction	Activated Sludge	Ultraviolet	0.58
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.68	1209	Not Overloaded	Aerobic Digestion	Other WWTP

Changes Since Last Permit Issuance: None

Other Comments: The treatment process consists of: Pump Station, Pre-Anoxic Tank, Anoxic Tank, Stage Aeration Tanks, Primary Clarifiers, UV Disinfection, Re-Aeration Tank, Outfall 001 to UNT to Pequea Creek.

Compliance History	
Summary of DMRs:	A summary of past DMR effluent data is presented on the next page of this fact sheet.
Summary of Inspections:	6/23/2020: An administrative inspection was conducted. All treatment units were operable, and there were no outstanding needs at the time of inspection.

Other Comments: There are currently no open violations associated with the Applicant.

Existing Effluent Limitations and Monitoring Requirements

Outfall 001

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
Ultraviolet light transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Carbonaceous Biochemical Oxygen Demand (CBOD5)	67	101	XXX	14	21	28	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	145	218	XXX	30	45	60	1/week	8-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	1/week	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	29	XXX	XXX	6.0	XXX	12	1/week	24-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	9.7	XXX	XXX	2.0	XXX	4.0	1/week	24-Hr Composite
Total Phosphorus	9.7	XXX	XXX	2.0	XXX	4.0	1/week	24-Hr Composite

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

at Outfall 001

Parameter	Effluent Limitations					Monitoring Requirements	
	Mass Units (lbs)		Concentrations (mg/L)			Minimum Measurement Frequency	Required Sample Type
	Monthly	Annual	Minimum	Monthly Average	Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	1/week	24-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	1/week	24-Hr Composite
Net Total Nitrogen	XXX	13,150	XXX	XXX	XXX	1/year	Calculation
Net Total Phosphorus	XXX	1,643	XXX	XXX	XXX	1/year	Calculation

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

at Outfall 001

Compliance History

DMR Data for Outfall 001 (from December 1, 2023 to November 30, 2024)

Parameter	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23
Flow (MGD) Average Monthly	0.23105	0.24189	0.25427	0.25890	0.24875	0.25937	0.30346	0.35015	0.29102	0.26418	0.29029	0.26590
Flow (MGD) Daily Maximum	0.25220	0.30010	0.32700	0.33690	0.32320	0.30320	0.33060	0.49620	0.35620	0.29710	0.40360	0.37480
pH (S.U.) Instantaneous Minimum	7.22	7.26	7.17	7.17	7.17	7.16	7.17	7.16	7.10	7.13	7.15	7.15
pH (S.U.) Instantaneous Maximum	7.42	7.46	7.44	7.45	7.49	7.42	7.42	7.44	7.37	7.42	7.34	7.80
DO (mg/L) Instantaneous Minimum	7.0	7.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0
CBOD5 (lbs/day) Average Monthly	< 4.76	< 4.01	< 4.98	< 4.16	< 4.19	< 5.77	< 4.9	< 6.41	< 5.56	< 5.06	< 5.63	< 4.59
CBOD5 (lbs/day) Weekly Average	7.48	5.28	6.98	< 4.34	< 4.58	9.08	< 5.3	7.72	6.98	6.85	9.36	< 6.25
CBOD5 (mg/L) Average Monthly	< 2.48	< 2.12	< 2.23	< 2.0	< 2.0	< 2.65	< 2.0	< 2.44	< 2.43	< 2.3	< 2.38	< 2.0
CBOD5 (mg/L) Weekly Average	3.9	2.6	2.9	< 2.0	< 2.0	3.8	< 2.0	3.5	2.8	3.2	3.9	< 2.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	449.4	369.6	385.9	403.6	533.4	562.9	665.6	376.2	379.8	509.7	699.9	817.5
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	533.9	427.5	593.5	517.0	638.9	746.1	786.0	449.5	531.5	599.5	797.1	1242.3
BOD5 (mg/L) Raw Sewage Influent Average Monthly	222.5	190.4	173.0	193.8	258.8	266.0	272.5	139.0	164.5	233.3	295.2	372.5
TSS (lbs/day) Average Monthly	< 2.94	3.02	< 5.23	< 3.17	< 6.14	4.46	< 5.94	< 4.12	< 2.91	4.32	< 11.11	< 3.69
TSS (lbs/day) Raw Sewage Influent Average Monthly	382.5	356.0	402.3	386.4	387.1	384.9	609.6	343.0	338.5	454.2	784.6	591.5

TSS (lbs/day) Raw Sewage Influent Daily Maximum	504.8	502.9	748.0	541.9	467.9	525.9	1024.4	520.5	657.2	673.0	1072.1	974.8
TSS (lbs/day) Weekly Average	4.15	5.85	12.03	6.52	11.46	7.17	13.75	6.62	4.99	8.56	19.21	7.47
TSS (mg/L) Average Monthly	< 1.5	1.6	< 2.25	< 1.5	< 2.8	2	< 2.5	< 1.6	< 1.25	2	< 4.6	< 1.75
TSS (mg/L) Raw Sewage Influent Average Monthly	188.8	181.6	182.0	188.5	186.4	179.5	251.3	125.4	145.0	207.8	331.4	277.0
TSS (mg/L) Weekly Average	2	3	5	3	5	3	6	3	2	4	8	4
Fecal Coliform (No./100 ml) Geometric Mean	< 3.6	< 5.7	< 7.8	< 2.4	< 2	< 4.4	< 7.1	< 4.6	< 17.6	< 2	< 6.2	< 2.5
Fecal Coliform (No./100 ml) Instantaneous Maximum	21	257	474	3	< 2	30	52	33	1850	< 2	42	5
UV Transmittance (%) Instantaneous Minimum	3.0	3.0	3.0	2.6	3.0	3.8	3.0	2.5	2.6	3.0	3.3	3.0
Nitrate-Nitrite (mg/L) Average Monthly	3.01	3.94	3.04	2.05	3.80	3.68	2.64	3.27	5.80	6.27	6.93	7.37
Nitrate-Nitrite (lbs) Total Monthly	175.18	225.42	198.33	128.95	249.19	223.9	200.12	269.0	409.82	402.08	509.95	518.62
Total Nitrogen (mg/L) Average Monthly	8.21	< 4.93	< 5.44	< 3.0	< 4.3	< 4.34	< 3.69	< 4.21	< 7.16	7.74	< 7.9	< 7.95
Total Nitrogen (lbs) Total Monthly	470.22	< 284.92	< 368.02	< 191.15	< 281.69	< 265.82	< 279.7	< 340.61	< 503.31	493.31	< 582.11	< 559.24
Total Nitrogen (lbs) Effluent Net Total Annual			< 5154									
Total Nitrogen (lbs) Total Annual			< 5154									
Ammonia (lbs/day) Average Monthly	< 9.344	0.671	4.053	< 0.541	< 0.08	< 0.065	< 0.547	< 0.519	0.119	1.359	1.066	< 0.181
Ammonia (mg/L) Average Monthly	< 4.96	0.336	1.708	< 0.25	< 0.038	< 0.03	< 0.228	< 0.204	0.053	0.643	0.446	< 0.09
Ammonia (lbs) Total Monthly	< 280.32	20.8	121.6	< 16.76	< 2.47	< 1.95	< 16.95	< 15.57	3.7	39.4	33.03	< 5.6
Ammonia (lbs) Total Annual			< 255									

TKN (mg/L) Average Monthly	5.2	< 0.988	< 2.398	< 0.95	< 0.5	< 0.655	< 1.058	< 0.934	< 1.353	1.463	< 0.972	< 0.583
TKN (lbs) Total Monthly	295.04	< 59.5	< 169.69	< 62.2	< 32.5	< 41.92	< 79.57	< 71.61	< 93.5	91.23	< 72.16	< 40.62
Total Phosphorus (lbs/day) Average Monthly	0.266	0.155	0.436	0.198	2.376	0.58	0.243	0.307	0.352	0.282	0.241	0.144
Total Phosphorus (mg/L) Average Monthly	0.138	0.082	0.19	0.093	1.086	0.285	0.1	0.118	0.155	0.13	0.1	0.065
Total Phosphorus (lbs) Total Monthly	7.99	4.8	13.09	6.14	73.67	17.4	7.53	9.2	10.91	8.17	7.48	4.46
Total Phosphorus (lbs) Effluent Net Total Annual			205									
Total Phosphorus (lbs) Total Annual			205									

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .58
Latitude 39º 59' 43.5" **Longitude** 76º 1' 13.2"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Water Quality-Based Limitations

$CBOD_5$, NH_3-N

Pursuant to 40 CFR § 122.44(d)(1)(i), more stringent requirements should be considered when pollutants are discharged at the levels which have the reasonable potential to cause or contribute to excursions above water quality standards.

WQM 7.0 ver. 1.1b is a water quality model designed to assist DEP in determining appropriate water quality based effluent limits (WQBELs) for carbonaceous biochemical oxygen demand ($CBOD_5$), ammonia (NH_3-N) and dissolved oxygen (D.O.). DEP's Technical Guidance No. 391-2000-007 provides the technical methods contained in WQM 7.0 for determining wasteload allocations and for determining recommended NPDES effluent limits for point source discharges. The model was utilized for this permit renewal. The model output indicated a $CBOD_5$ average monthly limit of 14.38 mg/l, an NH_3-N average monthly limit of 2.15 mg/l, and a D.O. minimum limit of 5.0 mg/l were protective of water quality. The flow data used to run the model was acquired from USGS PA StreamStats and is included as an attachment. The existing permit limits for these parameters are more stringent and will remain in the renewal.

Toxics

Effluent sample results for toxic pollutants reported on the renewal application were entered into DEP's Toxics Management Spreadsheet Version 1.4 to develop appropriate permit requirements for toxic pollutants of concern. The Toxics Management Spreadsheet combines the functions of PENTOXSD and DEP's Toxics Screening Analysis. Stream pH and hardness inputs were based on data from WQN Station ID 284 from November 2012 to December 2017. Based on effluent sample results reported on the application, the Toxics Management Spreadsheet recommended monitoring for Total Copper and Total Zinc.

This data was analyzed based on the guidelines found in DEP's Water Quality Toxics Management Strategy (Document No. 361-0100-003) and DEP's SOP No. BPNPSM-PMT-033. The results are attached to this fact sheet. The Toxics Management Spreadsheet uses the following logic:

a. Establish average monthly and instantaneous maximum (IMAX) limits in the draft permit where the maximum reported concentration exceeds 50% of the WQBEL.

b. For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
c. For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10%-50% of the WQBEL.

Since the reported maximum concentrations were between 10%-50% of their respective WQBEL, per DEP's SOP No. BPNPSM-PMT-033, monitoring will be necessary for these parameters. They have been added to the NPDES Permit with a monitoring frequency of 1/week and a sample type of 8-Hr Composite to be consistent with the existing parameters.

Additional Considerations

Chesapeake Bay Total Maximum Daily Load (TMDL)

DEP developed a strategy to comply with the EPA and Chesapeake Bay Foundation requirements by reducing point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP). This strategy can be located in the *Pennsylvania Chesapeake Watershed Implementation Plan* (WIP), dated January 11, 2011. Subsequently, an update to the WIP was published as the Phase 2 WIP. As part of the Phase 2 WIP, a *Phase 2 Watershed Implementation Plan Wastewater Supplement* (Phase 2 Supplement) was developed, providing an update on TMDL implementation for point sources and DEP's current implementation strategy for wastewater. A new update to the WIP was published as the Phase 3 WIP in August 2019. As part of the Phase 3 WIP, a *Phase 3 Watershed Implementation Plan Wastewater Supplement* (Phase 3 Supplement) was developed, and was most recently revised on July 29, 2022, and is the basis for the development of any Chesapeake Bay related permit parameters. Sewage discharges have been prioritized based on their design flow to the Bay. The highest priority (Phases 1, 2, and 3) dischargers will receive annual Cap Loads based on their design flow on August 29, 2005 and concentrations of 6 mg/l TN and 0.8 mg/l TP. These limits may be achieved through a combination of treatment technology, credits, or offsets. For Phase 4 and 5 facilities, Cap Loads are not currently being implemented for renewed or amended permits for facilities that do not increase design flow.

Salisbury Township Gap WWTP is a Phase 2 significant discharger. The facility's waste load allocation (WLA) is tracked under an individual WLA as a significant discharger in the Phase 3 Supplement. The following Cap Loads specified in the current Phase 3 Supplement will be included in the draft permit:

NPDES Permit No.	Phase	Facility	Latest Permit Issuance Date	Permit Expiration Date	Cap Load Compliance Start Date	TN Cap Load (lbs/yr)	TN Offsets Included in Cap Load (lbs/yr)	TP Cap Load (lbs/yr)	TN Delivery Ratio	TP Delivery Ratio
PA0081574	2	Salisbury Township	12/13/2019	12/31/2024	10/1/2012	13,150	-	1,643	0.552	0.553

The previous fact sheet states that as an alternative to the WIP, some facilities were able to use their projected 2010 flow with a TN concentration of 8 mg/l and a TP concentration of 1.0 mg/l to develop Cap Loads. The Cap Loads for Gap WWTP were developed using the projected 2010 flow of 0.54 million gallons per day (MGD). The Cap Loads are unchanged from the previous renewal. DEP's SOP for New and Reissuance Sewage Individual NPDES Permit Applications recommends that Significant Chesapeake Bay sewage discharges should monitor for nutrients at a minimum of 1/week as 24-hour composites. The Phase 2 Supplement states that "the minimum monitoring frequency for TN species and TP in new or renewed NPDES permits for significant sewage dischargers will be 2/week." This is consistent with the existing permit requirements.

Dissolved Oxygen

A minimum D.O. limit of 5.0 mg/L is a D.O. water quality criterion found in 25 Pa. Code § 93.7(a). This limit is included in the existing NPDES permit based BPJ. It is still recommended to include this limit in the draft permit to ensure that the facility continues to achieve compliance with DEP water quality standards.

Total Phosphorus

For Total Phosphorus (TP), the current NPDES permit requires the permittee to comply with average monthly and IMAX limits of 2.0 mg/L and 4.0 mg/L, respectively. These existing limits will remain unchanged in the permit to protect the local watershed.

Fecal Coliform

PA Code § 92a.47.(a)(4) requires a monthly average limit of 200/100 mL as a geometric mean and an instantaneous maximum limit not greater than 1,000/100 mL from May through September for fecal coliform. PA Code § 92a.47.(a)(5) requires a monthly average limit of 2,000/100 mL as a geometric mean and an instantaneous maximum limit not greater than 10,000/100 mL from October through April for fecal coliform. These limits are consistent with the existing permit.

E. Coli

PA Code § 92a.61 requires IMAX reporting of E. Coli. Per DEP's SOP No. BCW-PMT-033, sewage dischargers with a design flow of >= 0.05 mgd and < 1 mgd will include E. Coli monitoring with a frequency of 1/quarter. This parameter has been added to the renewal permit.

UV Monitoring

DEP's SOP No. BPNPSM-PMT-033 recommends at a minimum, routine monitoring of UV transmittance, dosage, or intensity when the facility is utilizing a UV disinfection system. The monitoring should occur at the same frequency as would be used for TRC. This recommendation was implemented as a part of the proper operation and maintenance requirement specified in Part B of the NPDES permit, requesting permittees to demonstrate the effectiveness of UV disinfection system. This is a reasonable approach and has been assigned to other facilities equipped with similar technology. A monitoring requirement for UV Transmittance is included in the existing permit, and will remain in the renewal.

Pequea Creek TMDL

A TMDL exists for Pequea Creek for phosphorus and sediment. The TMDL was completed and approved on April 9, 2001 and was revised in 2006. The TMDL established a permit limit for TP of 1,904 lbs/year for this facility. This TMDL requirement is met by the Chesapeake Bay Cap Load for TP of 1,643 lbs/year, which is an existing limit in the permit.

Influent BOD_5 and Total Suspended Solids (TSS) Monitoring

As a result of negotiation with US EPA, influent monitoring of TSS and BOD_5 are required for any publicly owned treatment works (POTWs); therefore, influent sampling of BOD_5 and TSS will remain in the permit.

Sampling Frequency & Sample Type

The monitoring requirements were established based on BPJ and/or Table 6-3 of DEP's Technical Guidance No. 362-0400-001.

Anti-Degradation

The effluent limits for this discharge have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. No High Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

303(d) Listed Streams

The discharge is located on a stream segment that is designated on the 303(d) list as impaired. There is a recreational impairment due to pathogens from an unknown source.8 There is an aquatic life impairment due to siltation from habitat modification – other than hydromodification, nutrients from agriculture, organic enrichment from agriculture, habitat alterations from habitat modification – other than hydromodification, siltation from agriculture. The proposed effluent limits include limits for fecal coliform, TN, TP, and DO.

Class A Wild Trout Fisheries

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

Anti-Backsliding

Pursuant to 40 CFR § 122.44(l)(1), all proposed permit requirements addressed in this fact sheet are at least as stringent as the requirements implemented in the existing NPDES permit unless any exceptions are addressed by DEP in this fact sheet.

Proposed Effluent Limitations and Monitoring Requirements

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

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	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	67	101	XXX	14.0	21.0	28	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS	145	218	XXX	30	45	60	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	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
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Ammonia Nov 1 - Apr 30	29	XXX	XXX	6.0	XXX	12	1/week	24-Hr Composite
Ammonia May 1 - Oct 31	9.7	XXX	XXX	2.0	XXX	4	1/week	24-Hr Composite
Total Phosphorus	9.7	XXX	XXX	2.0	XXX	4	1/week	24-Hr Composite

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Copper	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/week	8-Hr Composite
Total Zinc	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/week	8-Hr Composite

Compliance Sampling Location: Outfall 001

Other Comments: None

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, to comply with Pennsylvania's Chesapeake Bay Tributary Strategy.

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

Parameter	Effluent Limitations					Monitoring Requirements	
	Mass Units (lbs)		Concentrations (mg/L)			Minimum Measurement Frequency	Required Sample Type
	Monthly	Annual	Minimum	Monthly Average	Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	1/week	24-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Nitrite-Nitrate as N	Report	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	1/week	24-Hr Composite
Net Total Nitrogen	XXX	13,150	XXX	XXX	XXX	1/year	Calculation
Net Total Phosphorus	XXX	1,643	XXX	XXX	XXX	1/year	Calculation

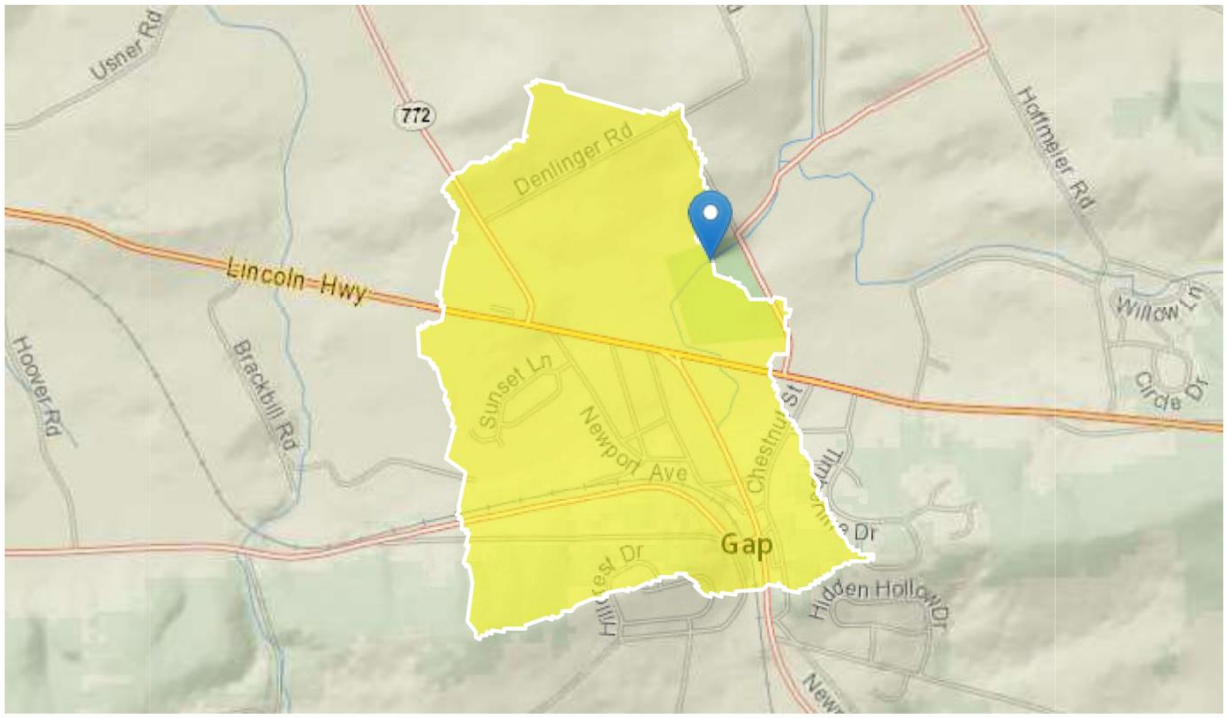
Compliance Sampling Location: Outfall 001

Other Comments: None

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: BCW-PMT-033, BCW-PMT-002
☐	Other:

Salisbury Township Gap STP PA0081574 Outfall 001

Region ID: PA
Workspace ID: PA20250207182022928000
Clicked Point (Latitude, Longitude): 39.99562, -76.02022
Time: 2025-02-07 13:20:45 -0500



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	3.4462	degrees
DRNAREA	Area that drains to a point on a stream	1.01	square miles
ROCKDEP	Depth to rock	5.3	feet
URBAN	Percentage of basin with urban development	17.1097	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLOPD	Mean Basin Slope degrees	3.4462	degrees	1.7	6.4
DRNAREA	Drainage Area	1.01	square miles	4.78	1150
ROCKDEP	Depth to Rock	5.3	feet	4.13	5.21
URBAN	Percent Urban	17.1097	percent	0	89

Low-Flow Statistics Disclaimers [Low Flow Region 1]

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

Low-Flow Statistics Flow Report [Low Flow Region 1]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.295	ft^3/s
30 Day 2 Year Low Flow	0.388	ft^3/s
7 Day 10 Year Low Flow	0.133	ft^3/s
30 Day 10 Year Low Flow	0.181	ft^3/s
90 Day 10 Year Low Flow	0.306	ft^3/s

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

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USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.26.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Salisbury Township Gap STP PA0081574 RMI = 0.0

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Workspace ID: PA20250207182743988000
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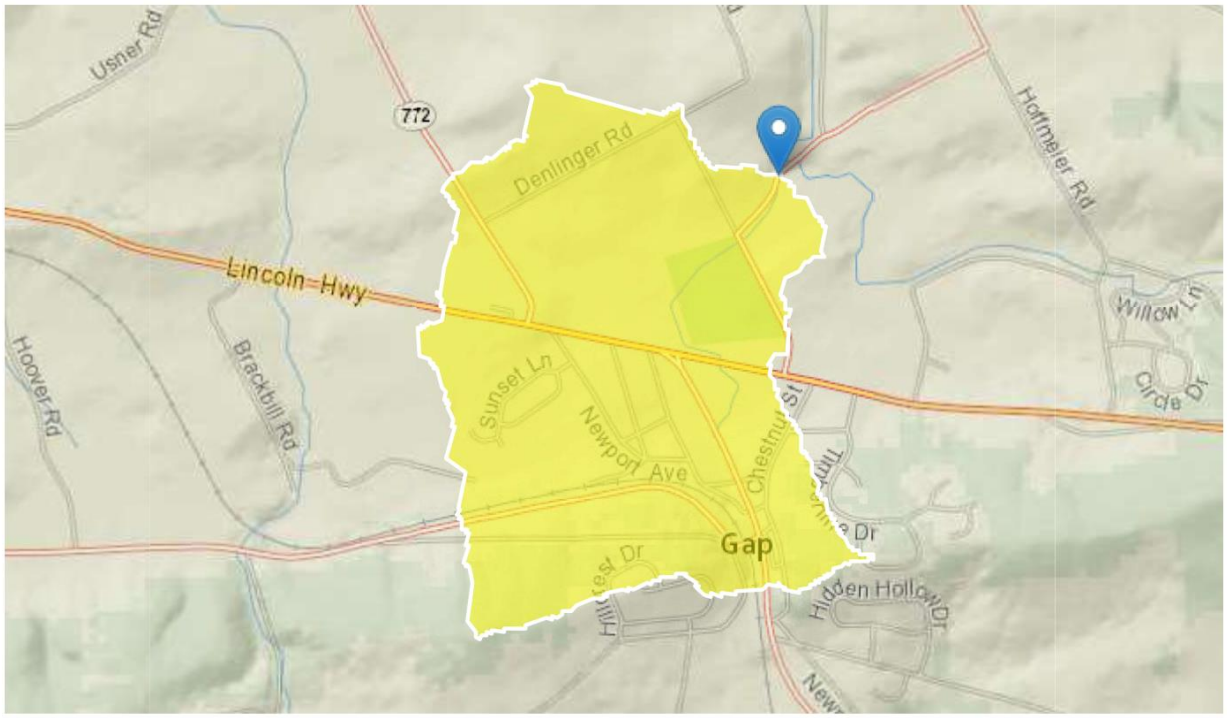
Time: 2025-02-07 13:28:06 -0500



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	3.3544	degrees
DRNAREA	Area that drains to a point on a stream	1.09	square miles
ROCKDEP	Depth to rock	5.3	feet
URBAN	Percentage of basin with urban development	15.8533	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLOPD	Mean Basin Slope degrees	3.3544	degrees	1.7	6.4
DRNAREA	Drainage Area	1.09	square miles	4.78	1150
ROCKDEP	Depth to Rock	5.3	feet	4.13	5.21
URBAN	Percent Urban	15.8533	percent	0	89

Low-Flow Statistics Disclaimers [Low Flow Region 1]

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

Low-Flow Statistics Flow Report [Low Flow Region 1]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.301	ft^3/s
30 Day 2 Year Low Flow	0.399	ft^3/s
7 Day 10 Year Low Flow	0.134	ft^3/s
30 Day 10 Year Low Flow	0.184	ft^3/s
90 Day 10 Year Low Flow	0.315	ft^3/s

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.26.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
07K	7533	Trib 07533 of Pequea Creek	**0.320**	442.00	1.01	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.13	0.000	0.000	0.0	0.00	0.00	20.00	7.00	22.10	8.30
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Gap STP	PA0081574	0.5800	0.5800	0.5800	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/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
07K	7533	Trib 07533 of Pequea Creek	**0.000**	438.00	1.09	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.13	0.000	0.000	0.0	0.00	0.00	20.00	7.00	22.10	8.30
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
07K	7533	Trib 07533 of Pequea Creek

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
0.320	0.13	0.00	0.13	.8973	0.00237	.525	9.8	18.68	0.20	0.098	20.27	7.06
Q1-10 Flow												
0.320	0.09	0.00	0.09	.8973	0.00237	NA	NA	NA	0.20	0.100	20.18	7.04
Q30-10 Flow												
0.320	0.18	0.00	0.18	.8973	0.00237	NA	NA	NA	0.21	0.095	20.35	7.08

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
07K	7533	Trib 07533 of Pequea Creek

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.320	Gap STP	15.97	17.48	15.97	17.48	1	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.320	Gap STP	1.79	2.15	1.79	2.15	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
0.32	Gap STP	14.38	14.38	2.15	2.15	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
07K	7533	Trib 07533 of Pequea Creek

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.320	0.580	20.271	7.057
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
9.801	0.525	18.678	0.200
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
12.78	0.845	1.87	0.715
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.419	4.536	Tsivoglou	5
Reach Travel Time (days)			
0.098			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.010	12.68	1.86	5.36
0.020	12.57	1.85	5.31
0.029	12.47	1.83	5.27
0.039	12.36	1.82	5.23
0.049	12.26	1.81	5.19
0.059	12.16	1.79	5.15
0.068	12.06	1.78	5.12
0.078	11.96	1.77	5.09
0.088	11.86	1.76	5.06
0.098	11.76	1.75	5.04

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
07K	7533	Trib 07533 of Pequea Creek

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
0.320	Gap STP	PA0081574	0.580	CBOD5	14.38		
				NH3-N	2.15	4.3	
				Dissolved Oxygen			5

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Salisbury Township - Gap STP** NPDES Permit No.: **PA0081574** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Sewage Effluent**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
0.58	152	7						

					0 if left blank		*0.5 if left blank*		*0 if left blank*			*1 if left blank*	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		765									
	Chloride (PWS)	mg/L		337									
	Bromide	mg/L	<	1									
	Sulfate (PWS)	mg/L		38.9									
	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		0.007									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L											
	Dissolved Iron	µg/L											
	Total Iron	µg/L											
	Total Lead	µg/L		0.001									
	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		0.084									
	Total Molybdenum	µg/L											
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										

Group 3	Carbon Tetrachloride	µg/L	<										
	Chlorobenzene	µg/L											
	Chlorodibromomethane	µg/L	<										
	Chloroethane	µg/L	<										
	2-Chloroethyl Vinyl Ether	µg/L	<										
	Chloroform	µg/L	<										
	Dichlorobromomethane	µg/L	<										
	1,1-Dichloroethane	µg/L	<										
	1,2-Dichloroethane	µg/L	<										
	1,1-Dichloroethylene	µg/L	<										
	1,2-Dichloropropane	µg/L	<										
	1,3-Dichloropropylene	µg/L	<										
	1,4-Dioxane	µg/L	<										
	Ethylbenzene	µg/L	<										
	Methyl Bromide	µg/L	<										
	Methyl Chloride	µg/L	<										
	Methylene Chloride	µg/L	<										
	1,1,2,2-Tetrachloroethane	µg/L	<										
	Tetrachloroethylene	µg/L	<										
	Toluene	µg/L	<										
	1,2-trans-Dichloroethylene	µg/L	<										
	1,1,1-Trichloroethane	µg/L	<										
	1,1,2-Trichloroethane	µg/L	<										
	Trichloroethylene	µg/L	<										
	Vinyl Chloride	µg/L	<										
Group 4	2-Chlorophenol	µg/L	<										
	2,4-Dichlorophenol	µg/L	<										
	2,4-Dimethylphenol	µg/L	<										
	4,6-Dinitro-o-Cresol	µg/L	<										
	2,4-Dinitrophenol	µg/L	<										
	2-Nitrophenol	µg/L	<										
	4-Nitrophenol	µg/L	<										
	p-Chloro-m-Cresol	µg/L	<										
	Pentachlorophenol	µg/L	<										
	Phenol	µg/L	<										
	2,4,6-Trichlorophenol	µg/L	<										
Group 5	Acenaphthene	µg/L	<										
	Acenaphthylene	µg/L	<										
	Anthracene	µg/L	<										
	Benzidine	µg/L	<										
	Benzo(a)Anthracene	µg/L	<										
	Benzo(a)Pyrene	µg/L	<										
	3,4-Benzofluoranthene	µg/L	<										
	Benzo(ghi)Perylene	µg/L	<										
	Benzo(k)Fluoranthene	µg/L	<										
	Bis(2-Chloroethoxy)Methane	µg/L	<										
	Bis(2-Chloroethyl)Ether	µg/L	<										
	Bis(2-Chloroisopropyl)Ether	µg/L	<										
	Bis(2-Ethylhexyl)Phthalate	µg/L	<										
	4-Bromophenyl Phenyl Ether	µg/L	<										
	Butyl Benzyl Phthalate	µg/L	<										
	2-Chloronaphthalene	µg/L	<										
	4-Chlorophenyl Phenyl Ether	µg/L	<										
	Chrysene	µg/L	<										
	Dibenzo(a,h)Anthrancene	µg/L	<										
	1,2-Dichlorobenzene	µg/L	<										
	1,3-Dichlorobenzene	µg/L	<										
	1,4-Dichlorobenzene	µg/L	<										
	3,3-Dichlorobenzidine	µg/L	<										
	Diethyl Phthalate	µg/L	<										
	Dimethyl Phthalate	µg/L	<										
	Di-n-Butyl Phthalate	µg/L	<										
	2,4-Dinitrotoluene	µg/L	<										

	2,6-Dinitrotoluene	µg/L	<										
	Di-n-Octyl Phthalate	µg/L	<										
	1,2-Diphenylhydrazine	µg/L	<										
	Fluoranthene	µg/L	<										
	Fluorene	µg/L	<										
	Hexachlorobenzene	µg/L	<										
	Hexachlorobutadiene	µg/L	<										
	Hexachlorocyclopentadiene	µg/L	<										
	Hexachloroethane	µg/L	<										
	Indeno(1,2,3-cd)Pyrene	µg/L	<										
	Isophorone	µg/L	<										
	Naphthalene	µg/L	<										
	Nitrobenzene	µg/L	<										
	n-Nitrosodimethylamine	µg/L	<										
	n-Nitrosodi-n-Propylamine	µg/L	<										
	n-Nitrosodiphenylamine	µg/L	<										
	Phenanthrene	µg/L	<										
	Pyrene	µg/L	<										
	1,2,4-Trichlorobenzene	µg/L	<										
Group 6	Aldrin	µg/L	<										
	alpha-BHC	µg/L	<										
	beta-BHC	µg/L	<										
	gamma-BHC	µg/L	<										
	delta BHC	µg/L	<										
	Chlordane	µg/L	<										
	4,4-DDT	µg/L	<										
	4,4-DDE	µg/L	<										
	4,4-DDD	µg/L	<										
	Dieldrin	µg/L	<										
	alpha-Endosulfan	µg/L	<										
	beta-Endosulfan	µg/L	<										
	Endosulfan Sulfate	µg/L	<										
	Endrin	µg/L	<										
	Endrin Aldehyde	µg/L	<										
	Heptachlor	µg/L	<										
	Heptachlor Epoxide	µg/L	<										
	PCB-1016	µg/L	<										
	PCB-1221	µg/L	<										
	PCB-1232	µg/L	<										
	PCB-1242	µg/L	<										
	PCB-1248	µg/L	<										
	PCB-1254	µg/L	<										
	PCB-1260	µg/L	<										
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<										
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

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Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Salisbury Township - Gap STP, NPDES Permit No. PA0081574, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **UNT Pequea Creek**

No. Reaches to Model: **1**

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	007533	0.32	442	1.01			Yes
End of Reach 1	007533	0	438	1.09			Yes

Q $_{7\text{-}10}$

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	0.32	0.1	0.133									220	8.3		
End of Reach 1	0	0.1	0.134									220	8.3		

Q $_{h}$

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	0.32														
End of Reach 1	0														

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Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Salisbury Township - Gap STP, NPDES Permit No. PA0081574, Outfall 001

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 0.119 PMF: 1 Analysis Hardness (mg/l): 160.78 Analysis pH: 7.06

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	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	21.022	21.9	25.1	Chem Translator of 0.96 applied
Total Lead	0	0		0	107.865	149	172	Chem Translator of 0.722 applied
Total Zinc	0	0		0	175.223	179	206	Chem Translator of 0.978 applied

☑ ***CFC*** CCT (min): 0.119 PMF: 1 Analysis Hardness (mg/l): 160.78 Analysis pH: 7.06

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	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	13.438	14.0	16.1	Chem Translator of 0.96 applied
Total Lead	0	0		0	4.203	5.82	6.69	Chem Translator of 0.722 applied
Total Zinc	0	0		0	176.657	179	206	Chem Translator of 0.986 applied

☑ ***THH*** CCT (min): 0.119 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	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	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): 1.499 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	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (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
Total Copper	Report	Report	Report	Report	Report	mg/L	0.016	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	mg/L	0.18	AFC	Discharge Conc > 10% WQBEL (no RP)

☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Lead	6.69	µg/L	Discharge Conc ≤ 10% WQBEL