pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0086894**
Facility Type	**Non-Municipal**	APS ID	**1069560**
Major / Minor	**Minor**	Authorization ID	**1430685**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**The York Water Co.**	Facility Name	**Country View Manor STP**
Applicant Address	130 E Market Street	Facility Address	1 Country View Court 151 Rowland Road
	York, PA 17401-1219		East Berlin, PA 17316-8956
Applicant Contact	Vaughn Wenger	Facility Contact	Vaughn Wenger
Applicant Phone	(717) 894-6475	Facility Phone	(717) 894-6475
Client ID	69800	Site ID	258360
Ch 94 Load Status	Not Overloaded	Municipality	Washington Township
Connection Status	No Limitations	County	York
Date Application Received	March 14, 2023	EPA Waived?	Yes
Date Application Accepted	March 16, 2023	If No, Reason	

Purpose of Application .Renewal of existing sewage discharge permit.

Summary of Review

The York Water Co. (YWC) has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of a NPDES permit for the Country View Manor STP. The permit was last issued to the Country View Manor Community, LLC on December 4, 2020 (Amendment A-1) and transferred to YWC on November 23, 2022. The permit expired on September 30, 2023 but the terms and conditions of the permit have been administratively extended since that time.

Based on the review outlined in this fact sheet, it is recommended that the permit be drafted and a notice of the draft permit be published in the *Pennsylvania Bulletin* for public comments for 30 days. A file review of documents associated with the discharge or permittee may be available at the PA DEP southcentral regional office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file reviews, contact the SCRO file review coordinator at 717.705.4700.

Sludge use and disposal description and location(s): Land application via Smith's Disposal Facility (Adams County).

Public Participation

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

Approve	Deny	Signatures	Date
x		*Aaron Baar* Aaron Baar / Permits Section	February 27, 2024
x		*Maria D. Bebenek* Daniel W. Martin, P.E. / Environmental Engineer Manager	April 11, 2024

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.0125
Latitude	39º 59' 3.24"	Longitude	-76º 59' 12.14"
Quad Name	Abbottstown	Quad Code	1930
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Red Run (WWF)	Stream Code	08600
NHD Com ID	57468875	RMI	0.40
Drainage Area	0.56 mi^2	Yield (cfs/mi^2)	0.043
Q_{7-10} Flow (cfs)	0.0243	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-F	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Wrightsville Water Supply Co.		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	28.51	Distance from Outfall (mi)	44.95

Changes Since Last Permit Issuance: All Clean Water permits issued to the Country View Manor Community, LLC, the previous permitee, were transferred to YWC on November 23, 2022. At the time of transfer, it was noted that there was an open violation associated with this facility for not installing an effluent flow meter at the outfall for the sewage treatment plant. YWC committed to rectifying this omission upon taking possession of the facility; it is unknown at this time if an effluent flow meter has been installed yet.

Drainage Area

The discharge is to an UNT to Red Run at RMI 0.40. A drainage area upstream of the discharge is determined to be 0.56 sq.mi. according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Stream Flow

According to StreamStats, the watershed has a Q_{7-10} of 0.0243 cfs. This information was used to obtain a LFY, a chronic 30-day (Q_{30-10}) and acute (Q_{1-10}) exposure stream flows for the discharge point as follows (Guidance No. 391-2000-023).

Q_{7-10} = 0.0243 cfs
Q_{30-10} = 1.36 * 0.0243 cfs = 0.033 cfs
Q_{1-10} = 0.64 * 0.0243 cfs = 0.0156 cfs
LFY = 0.243 cfs/0.56 mi^2 = 0.043 cfs/mi^2

UNT to Red Run

25 Pa Code §93.9 classifies the receiving water, UNT to Red Run, with a WWF Existing Use designation. Effluent limits for this discharge have been developed to ensure that existing in-stream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. The discharge is in a stream segment listed as attaining use(s).

Local Watershed Total Maximum Daily Loads (TMDLs)

According to PA's 2024 integrated water quality monitoring and assessment report, UNT to Red Run in the vicinity of the point of discharge is impaired for recreational activities as a result of an unknown source of pathogens. The impairment is listed as Category 5 in the report, indicating that the UNT to Red Run is impaired for one or more uses by a pollutant that require the development of a TMDL. A TMDL for this waterway has not been developed to date.

Public Water Supply Intake

The nearest downstream public water supply intake is the The Wrightsville Water Supply Company intake located on the Susquehanna River approximately 45 miles from the discharge. Considering the distance and nature, the discharge is not expected to significantly affect the water supply.

Class A Wild Trout Streams

The receiving stream is not a Class A Wild Trout stream; therefore, no Class A Wild Trout Fishery is impacted by this discharge.

Treatment Facility Summary				
Treatment Facility Name: Country View Mobile Home Park				
WQM Permit No.	**Issuance Date**			
6796405 T-2	12/4/2020			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Extended Aeration	Chlorine With Dechlorination	0.0125
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.0125		Not Overloaded	Aerobic Digestion	Other WWTP

YWC owns and operates the sanitary wastewater treatment facility located in Washington Township, York County. This NPDES permit covers discharges of sewage treated by the Country View Manor STP. The facility serves the Country View Manor MHP; all sewer systems are 100% separated. With an annual average design flow 0.0125 MGD, this facility utilizes an extended aeration system consisting of:

Grease Trap (1) ⇒ Comminutor / Bar Screen (1) ⇒ EQ Tank (1) ⇒ Aeration Tank (3) ⇒ Clarifier (1) ⇒ Tablet Chlorinator / Chlorine Contact Tank (1) ⇒ Post Aeration Tank (1) ⇒ Discharge

The system incorporates the chemical additions of sodium hypochlorite (for disinfection) and soda ash (for pH control). A sludge holding tank is used for solids storage. There are no industrial/commercial user contributing industrial wastewater to the sewer system.

Compliance History	
Summary of DMRs:	DMR results for the past year are presented below.
Summary of Inspections:	Since the last renewal of the facility's NPDES permit, the following inspections have been logged: April 21, 2022: A routine annual inspection was conducted by Brandon Bettinger. A violation was issued for failure to monitor flow as required by the NPDES permit (no flow measurement device). It was also recommended that NIST traceable thermometers are used for temperature verification within the sample storage refrigerator and the facility was told to include aeration pH readings on daily plant log.

Other Comments: As of February 27, 2024, there are 10 open violations associated with this facility. The violations include 5 safe drinking water violations at the Country View Manor MHP, 3 safe drinking water violations at other YWC facilities and two unidentified clean water violations at the Country View Manor MHP. The SCRO CW Operations Chief has stated that the facility is on a path to compliance in regards to the 2 clean water violations, and the SCRO CW Program Manager has directed that this permit be drafted without requiring closure of the open drinking water violations. We will re-visit the open violations with SDW and consult with legal before issuance of the final permit to determine if there is a path to compliance at this facility.

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

WATER MANAGEMENT SYSTEM
OPEN VIOLATIONS BY CLIENT

2/27/2024 9:20:22 AM

Permit: PA0086894
Client: All

Open Violations: 10

CLIENT ID	CLIENT	PF ID	FACILITY	PF KIND	PF STATUS	INSP PROGRAM	PROGRAM SPECIFIC ID	INSP ID	VIOLATION ID	INSPECTION CATEGORY	VIOLATION DATE	VIOLATION CODE	VIOLATION	PF INSPECTOR	INSP REGION	INSPECTED SITE ID	INSPECTED SITE
69800	THE YORK WATER CO					WPC State Water Pollution Control	69800	3418993	967146	Clnt	08/20/2022	91.33(A)	CSL - Failure to immediately report to DEP a pollution incident		SCRO		
69800	THE YORK WATER CO					WPC State Water Pollution Control	69800	3418993	967147	Clnt	08/20/2022	CSL401	CSL - Unauthorized, unpermitted discharge of polluting substances to waters of the Commonwealth resulting in pollution		SCRO		
69800	THE YORK WATER CO	272896	COUNTRY VIEW MANOR YWC	Community	Active	Safe Drinking Water	7670129	3539563	991729	PF	04/17/2023	B6A	OTHER VIOLATIONS DEEMED TO BE SIGNIFICANT DEFICIENCIES	HOFFMAN,DREW	SCRO		
69800	THE YORK WATER CO	272896	COUNTRY VIEW MANOR YWC	Community	Active	Safe Drinking Water	SM2312731	3502361	984739	PF	02/10/2023	02	EXCEEDED THE CHEMICAL AVERAGE MAXIMUM CONTAMINANT LEVEL	HOFFMAN,DREW	SCRO		
69800	THE YORK WATER CO	272896	COUNTRY VIEW MANOR YWC	Community	Active	Safe Drinking Water	SM2321406	3542426	992289	PF	04/24/2023	02	EXCEEDED THE CHEMICAL AVERAGE MAXIMUM CONTAMINANT LEVEL	HOFFMAN,DREW	SCRO		
69800	THE YORK WATER CO	272896	COUNTRY VIEW MANOR YWC	Community	Active	Safe Drinking Water	SM2327936	3604333	8156356	PF	08/23/2023	02	EXCEEDED THE CHEMICAL AVERAGE MAXIMUM CONTAMINANT LEVEL	HOFFMAN,DREW	SCRO		
69800	THE YORK WATER CO	256634	FRANKLIN SYSTEM YORK WATER	Community	Active	Safe Drinking Water	SM2339837	3646212	8165460	PF	11/16/2023	27	DISINFECTION/DISINFECTION BYPRODUCTS MONITORING/REPORTING VIOLATION	METZGER,KRISTINE	SCRO		
69800	THE YORK WATER CO	256634	FRANKLIN SYSTEM YORK WATER	Community	Active	Safe Drinking Water	SM2339838	3646226	8165462	PF	11/16/2023	27	DISINFECTION/DISINFECTION BYPRODUCTS MONITORING/REPORTING VIOLATION	METZGER,KRISTINE	SCRO		
69800	THE YORK WATER CO	256634	FRANKLIN SYSTEM YORK WATER	Community	Active	Safe Drinking Water	SM2339839	3646228	8165463	PF	11/16/2023	27	DISINFECTION/DISINFECTION BYPRODUCTS MONITORING/REPORTING VIOLATION	METZGER,KRISTINE	SCRO		
69800	THE YORK WATER CO	272896	COUNTRY VIEW MANOR YWC	Community	Active	Safe Drinking Water	SM2409132	3701453	8173191	PF	01/29/2024	02	EXCEEDED THE CHEMICAL AVERAGE MAXIMUM CONTAMINANT LEVEL	HOFFMAN,DREW	SCRO		

Existing Effluent Limitations and Monitoring Requirements

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.06	XXX	0.20	1/day	Grab
CBOD5 Nov 1 - Apr 30	XXX	XXX	XXX	12.0	XXX	24.0	2/month	8-Hr Composite
CBOD5 May 1 - Oct 31	XXX	XXX	XXX	5.5	XXX	11.0	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Nitrate-Nitrite (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Nitrogen (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Ammonia Nov 1 - Apr 30	Report	XXX	XXX	3.5	XXX	7.0	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	Report	XXX	XXX	1.5	XXX	3.0	2/month	8-Hr Composite
Ammonia (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
TKN	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Maximum	Instant. Maximum		
TKN (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Phosphorus (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation

Compliance Sampling Location: Outfall 001

Compliance History

DMR Data for Outfall 001 (from December 1, 2022 to November 30, 2023)

Parameter	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23	FEB-23	JAN-23	DEC-22
Flow (MGD) Average Monthly	0.006	0.005	0.004	0.004	0.004	0.005	0.004	0.004	0.006	0.007	0.006	0.007
Flow (MGD) Daily Maximum	0.012	0.008	0.008	0.006	0.007	0.007	0.013	0.010	0.017	0.010	0.011	0.021
pH (S.U.) Instantaneous Minimum	7.42	7.62	7.65	7.6	7.77	7.63	7.57	7.5	7.47	7.66	7.67	6.74
pH (S.U.) Instantaneous Maximum	8.34	8.32	8.26	8.25	8.37	8.45	8.36	8.35	8.32	8.37	8.31	7.98
DO (mg/L) Instantaneous Minimum	9.46	8.87	8.34	8.01	7.83	8.13	8.74	9.04	9.84	10.05	9.71	7.7
TRC (mg/L) Average Monthly	0.02	0.02	0.03	0.03	< 0.03	< 0.02	< 0.02	< 0.04	< 0.04	< 0.03	< 0.04	< 0.02
TRC (mg/L) Instantaneous Maximum	0.05	0.05	0.10	0.06	0.05	0.04	0.05	0.09	0.16	0.06	0.07	0.08
CBOD5 (mg/L) Average Monthly	< 2.4	< 2.4	< 2.5	< 2.4	3.0	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4	< 2.6

CBOD5 (mg/L) Instantaneous Maximum	< 2.4	2.4	2.6	< 2.4	3.2	3.0	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4	2.8
TSS (mg/L) Average Monthly	2.0	3.5	2.0	7.0	5.0	3.0	3.0	6.0	1.0	5.0	3.0	8.0
TSS (mg/L) Instantaneous Maximum	3.0	4.0	2.0	7.0	6.0	3.0	3.0	5.0	1.0	5.0	3.0	9.0
Fecal Coliform (No./100 ml) Geometric Mean	4	9	184	44.0	101	60	10	44	167	34	11.14	207
Fecal Coliform (No./100 ml) Instantaneous Maximum	5	30	1203	75.0	135	326	12	214	411	49	71	387
Nitrate-Nitrite (mg/L) Average Monthly	71	64.0	61.0	64.0	63.0	62.5	52	53	43	36	37.0	44.0
Nitrate-Nitrite (lbs) Total Monthly	80	50	69.0	58.0	73.0	71.0	57	46.0	73	50	57.4	< 64
Total Nitrogen (mg/L) Average Monthly	< 71.5	64.5	< 61.0	< 64.5	< 63.5	< 63.0	< 52	< 53	< 43.5	< 36	< 75.00	< 44.0
Total Nitrogen (lbs) Total Monthly	< 80.4	< 50.2	< 69.0	< 59.0	< 74.0	< 71.0	< 58	< 47	< 74	< 50	< 58.2	< 64
Total Nitrogen (lbs) Total Annual			765									
Ammonia (lbs/day) Average Monthly	< 0.004	< 0.003	< 2.0	< 0.003	< 0.004	< 0.004	< 0.004	< 0.003	< 0.005	< 0.005	< 0.005	< 0.007
Ammonia (mg/L) Average Monthly	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.12	< 0.1	< 0.1	< 0.1	< 0.1	< 0.11	< 0.14
Ammonia (mg/L) Instantaneous Maximum	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.14	< 0.1	< 0.1	< 0.1	< 0.1	0.11	0.18
Ammonia (lbs) Total Monthly	< 0.1	< 0.1	< 0.1	< 0.003	< 0.1	< 0.1	< 0.1	< 0.09	< 0.2	< 0.1	< 0.2	< 0.2
Ammonia (lbs) Total Annual			1									
TKN (mg/L) Average Monthly	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
TKN (lbs) Total Monthly	< 1	< 1	< 0.6	< 0.5	< 0.6	< 0.6	< 0.6	< 0.4	< 0.8	< 0.7	< 0.03	< 0.7
Total Phosphorus (lbs/day) Average Monthly	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.1	0.3	0.2	0.2	0.2

Total Phosphorus (mg/L) Average Monthly	7.5	7.5	7.5	8.3	9.0	9.3	6	4.27	5.5	4.5	4.0	4.6
Total Phosphorus (lbs) Total Monthly	8	6	9.0	7.0	10.0	10.0	7	3.0	9	6.0	6.0	7.0
Total Phosphorus (lbs) Total Annual			89									

Compliance History

Effluent Violations for Outfall 001, from: January 1, 2023 To: November 30, 2023

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	09/30/23	IMAX	1203	No./100 ml	1000	No./100 ml

Other Comments: Permittee stated in response to the Fecal Coliform violations that the facility will begin testing and recording TRC on pre-dechlorination tank to establish a minimum TRC reading to ensure adequate disinfection before discharging.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .0125
Latitude 39º 59' 2.60" **Longitude** -76º 59' 12.49"
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)

Comments: These standards apply, subject to water quality analysis and BPJ where applicable.

Water Quality-Based Limitations

CBOD5, NH3-N and Dissolved Oxygen (DO)

WQM 7.0 version 1.0b is a water quality model designed to assist DEP to determine appropriate permit requirements for CBOD5, NH3-N and DO. DEP's guidance no. 391-2000-007 provides the technical methods contained in WQM 7.0 for conducting wasteload allocation and for determining recommended NPDES effluent limits for point source discharges. The model was utilized, and the model output indicated that existing limits for ammonia are lower than those specified in the model. Due to anti-backsliding provisions, however, the existing limits are deemed to be still appropriate.

The existing D.O. limit of 5 mg/L is considered still appropriate.

The monitoring frequency and sample type for CBOD5, DO and ammonia are proposed to remain unchanged.

Toxics

There are no industrial or commercial contributions to this facility. DEP's NPDES permit application for minor sewages (less than 0.1 MGD) does not require sampling for heavy metals including Total Copper, Total Lead, and Total Zinc.

Total Residual Chlorine

Since chlorine is used for disinfection, Total Residual Chlorine (TRC) effluent levels must be regulated in accordance with 25 Pa Code §92a.48(b). DEP's TRC_CALC worksheet was utilized to determine if the existing BAT TBEL is still appropriate. The worksheet indicated that existing limits for TRC are lower than those specified in the worksheet. Due to anti-backsliding provisions, however, the existing limits are deemed to be still appropriate.

E. Coli Monitoring

In conformity with the Department's *Establishing Effluent Limitations for Individual Sewage Permits* (SOP No. BCW-PMT-033) and as authorized by § 92a.61 of the PA Code, annual E. Coli monitoring has been proposed in this permit. The collection method will be via grab sample.

Best Professional Judgment (BPJ) Limitations

Dissolved Oxygen

A minimum of 5.0 mg/L for DO is an existing effluent limit and will remain unchanged in the draft permit as recommended by DEP's SOP. This requirement has also been assigned to other sewage facilities in the region. 5.0 mg/L is taken directly from 25 Pa. Code § 93.7(a) and it is also determined to be appropriate according to water quality modeling.

Total Phosphorus & Total Nitrogen

DEP's SOP no. BPNPSM-PMT-033 recommends monitoring requirements for Total Phosphorus and Total Nitrogen for all sewage facilities. Therefore, a routine monitoring for TKN, Nitrate-Nitrite, and TN are recommended to be continued in this permit as previously permitted.

Additional Considerations

Flow Monitoring

The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR § 122.44(i)(1)(ii).

Chesapeake Bay TMDL

The Department formulated a strategy in April 2007, to comply with the EPA's and Chesapeake Bay Foundation's requirements to reduce point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP) to the Bay. In the Strategy, sewage dischargers have been prioritized by Central Office based on their delivered TN loadings to the Bay. The highest priority (Phases 1, 2, and 3) dischargers received annual loading caps based on their design flow on August 29, 2005 and concentrations of 6 mg/l TN and 0.8 mg/l TP. Phase 4 (0.2 -0.4mgd) and Phase 5 (below 0.2mdg) facilities were required to monitor and report TN and TP during permit renewal at a monitoring frequency following Table 6-3 of DEP's Technical Guidance for Development and Specification of effluent Limitations (No. 362-0400-001).

EPA published the Chesapeake Bay Total Maximum Daily Load (TMDL) in December of 2010. Despite extensive restoration efforts during the past 25 years, the TMDL was prompted by insufficient progress and continued poor water quality in the Chesapeake Bay and its tidal tributaries.

In order to address the TMDL, Pennsylvania developed, in addition to the Bay Strategy, a Chesapeake Watershed Implementation Plan (WIP) Phase 1 in January 2011, Phase 2 in March 2012 and Phase 3 in December 2019. In accordance with the Phase 3 WIP, re-issuing permits for significant dischargers follow the same phased approach formulated in the original Bay strategy, whilst Phase 4 and Phase 5 will be required to monitor and report TN and TP during permit renewal.

The Phase 3 WIP categorizes this facility as a Phase 5, non-significant sewage facility As such, the facility will be required to monitor and report TN and TP.

Monitoring Frequency and Sample Type

Unless discussed otherwise above, the permit's monitoring frequency and sample type for all parameters will remain unchanged from the last permit renewal.

Antidegradation Requirements

All effluent limitations and monitoring requirements 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.

Anti-backsliding Requirement

All effluent limits proposed in this fact sheet are as stringent as effluent limits specified in the existing permit renewal. This approach is in accordance with 40 CFR §122.44(l(1).

Annual Fees

An annual fee clause was added to the permit in accordance with 25 Pa. Code § 92a.62. The facility covered by the permit is classified in the Minor Sewage Facility < 0.05 fee category, which has an annual fee of $500.

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	Daily Maximum	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.06	XXX	0.20	1/day	Grab
CBOD5 Nov 1 - Apr 30	XXX	XXX	XXX	12.0	XXX	24.0	2/month	8-Hr Composite
CBOD5 May 1 - Oct 31	XXX	XXX	XXX	5.5	XXX	11.0	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Nitrate-Nitrite (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Nitrogen (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation

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	Daily Maximum	Minimum	Average Monthly	Maximum	Instant. Maximum		
Ammonia Nov 1 - Apr 30	Report	XXX	XXX	3.5	XXX	7.0	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	Report	XXX	XXX	1.5	XXX	3.0	2/month	8-Hr Composite
Ammonia (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
TKN	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TKN (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Phosphorus (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation

Compliance Sampling Location: Outfall 001

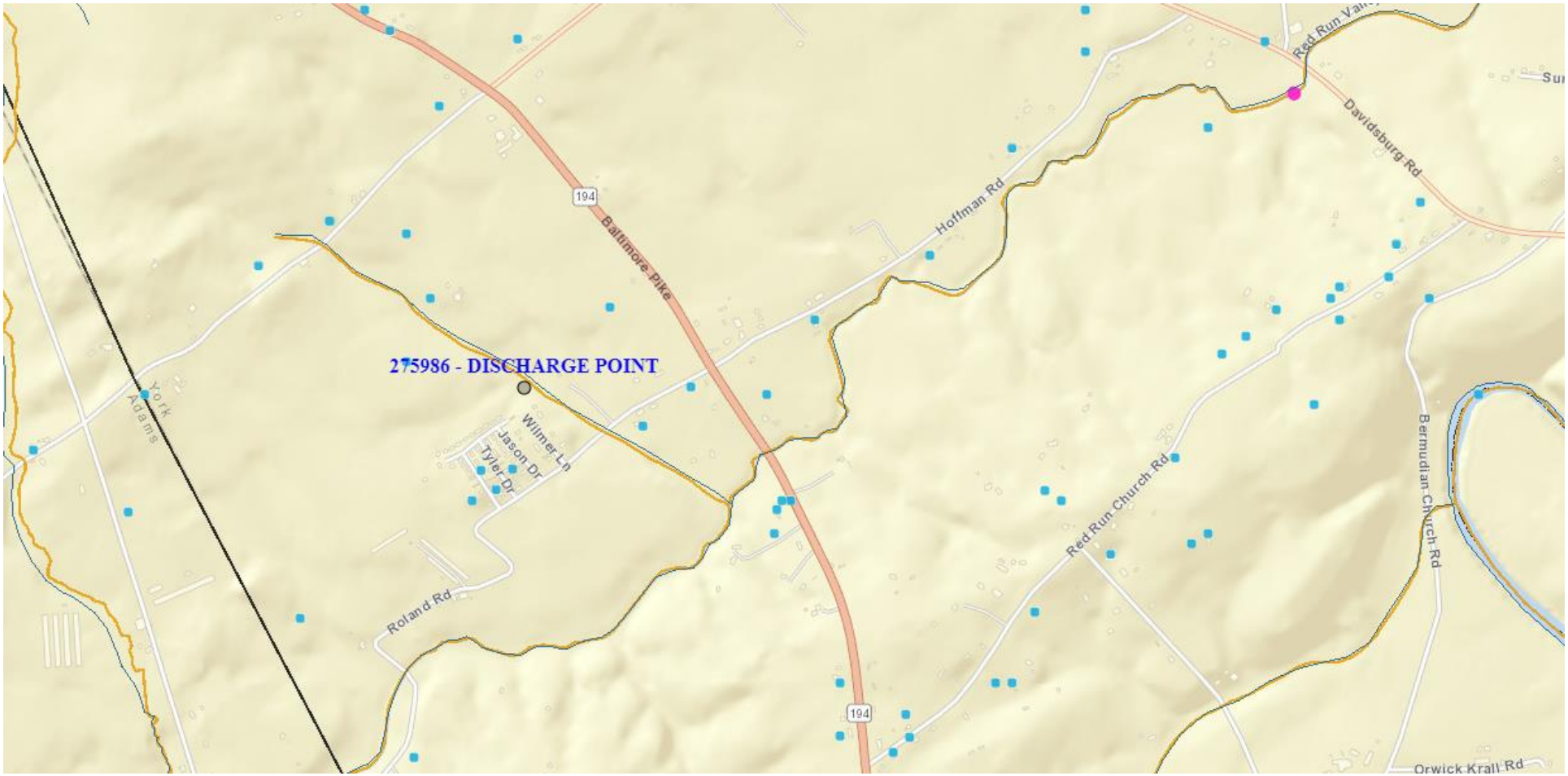
Proposed Effluent Limitations and Monitoring Requirements

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
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Total Nitrogen (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Ammonia (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

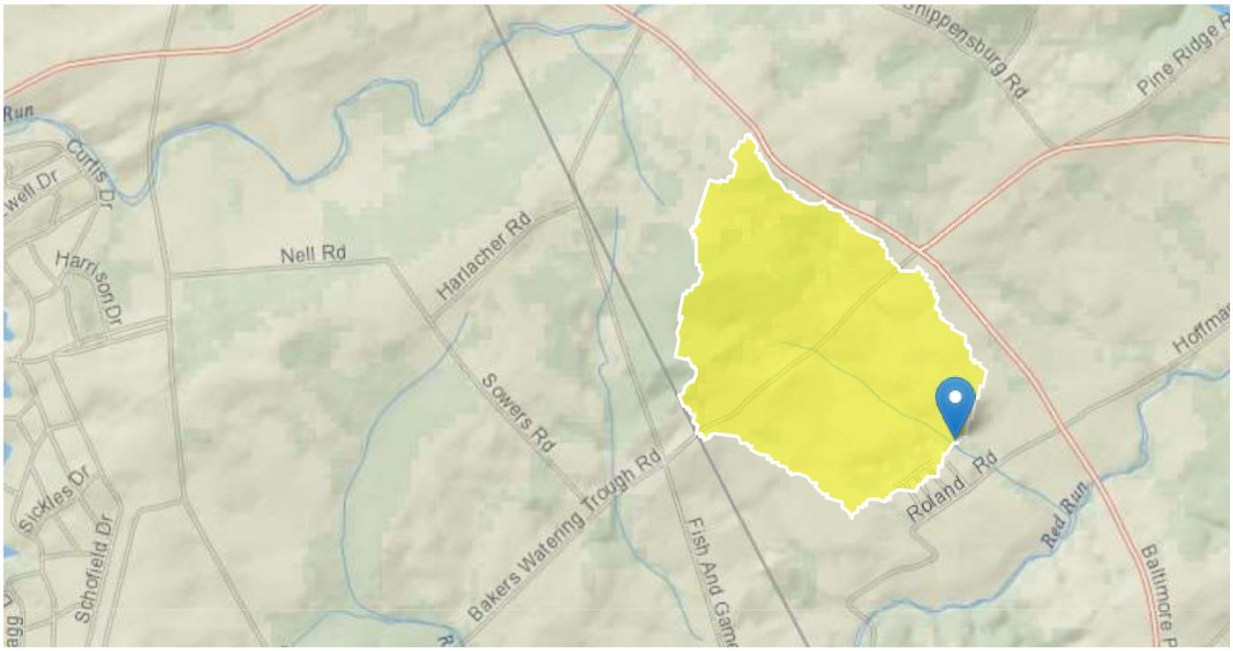
Compliance Sampling Location: Outfall 001


275986 - DISCHARGE POINT
Baltimore Pike
194
Hoffman Rd
Davidsburg Rd
Red Run Church Rd
Bermudian Church Rd
Wilmer Ln
Jason Dr
Tyler Dr
Roland Rd
York
Adams
Orwick Krall Rd

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

StreamStats Report

Region ID: PA
Workspace ID: PA20240110132540984000
Clicked Point (Latitude, Longitude): 39.98399, -76.98627
Time: 2024-01-10 08:26:02 -0500



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	2.9106	degrees
DRNAREA	Area that drains to a point on a stream	0.56	square miles
ROCKDEP	Depth to rock	4.9	feet
URBAN	Percentage of basin with urban development	0.1244	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.56	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	2.9106	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.9	feet	4.13	5.21
URBAN	Percent Urban	0.1244	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]

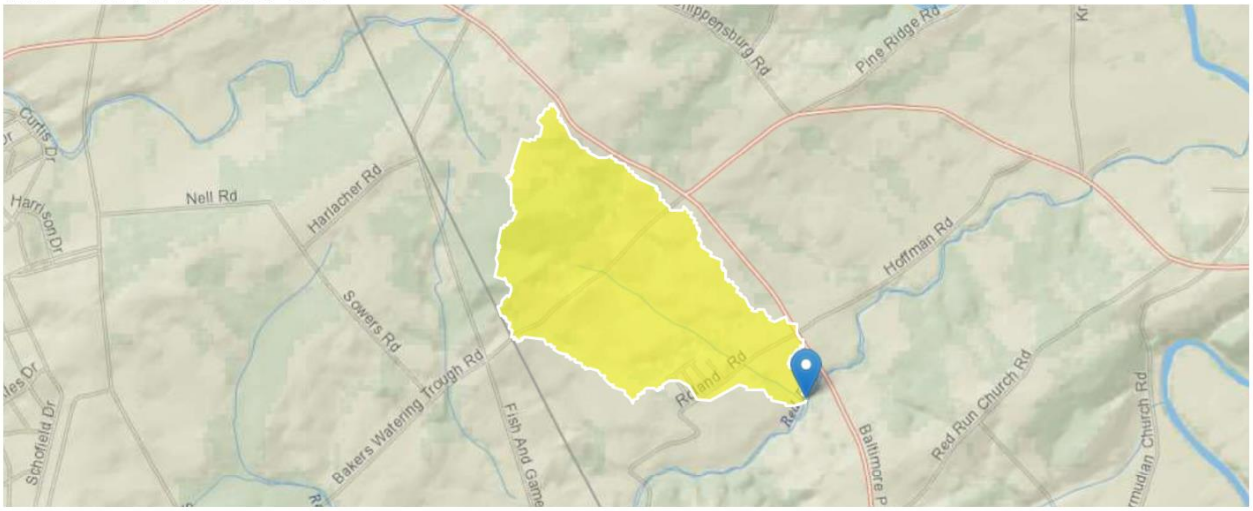
Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0688	ft^3/s
30 Day 2 Year Low Flow	0.0992	ft^3/s
7 Day 10 Year Low Flow	0.0243	ft^3/s
30 Day 10 Year Low Flow	0.0372	ft^3/s
90 Day 10 Year Low Flow	0.0747	ft^3/s

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/)

StreamStats Report

Region ID: PA
Workspace ID: PA20240110132748717000
Clicked Point (Latitude, Longitude): 39.98105, -76.97998
Time: 2024-01-10 08:28:09 -0500



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Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	2.783	degrees
DRNAREA	Area that drains to a point on a stream	0.66	square miles
ROCKDEP	Depth to rock	4.9	feet
URBAN	Percentage of basin with urban development	0.1523	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.66	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	2.783	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.9	feet	4.13	5.21
URBAN	Percent Urban	0.1523	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	0.0767	ft^3/s
30 Day 2 Year Low Flow	0.112	ft^3/s
7 Day 10 Year Low Flow	0.0269	ft^3/s
30 Day 10 Year Low Flow	0.0415	ft^3/s
90 Day 10 Year Low Flow	0.0848	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/)

Application Version: 4.19.3
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
07F	8600	Trib 08600 to Red Run

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)
0.400	Country View Ma	PA0086894	0.013	CBOD5	25		
				NH3-N	4.54	9.08	
				Dissolved Oxygen			5

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
07F	8600	Trib 08600 to Red Run

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
0.400	Country View Ma	13.32	24.03	13.32	24.03	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.400	Country View Ma	1.68	4.54	1.68	4.54	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)		
0.40	Country View Ma	25	25	4.54	4.54	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
07F	8600	Trib 08600 to Red Run

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.400	0.012	22.216	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
3.254	0.306	10.628	0.044
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
12.19	1.289	2.01	0.830
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.806	25.117	Owens	6
Reach Travel Time (days)			
0.557			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.056	11.26	1.92	7.34
0.111	10.40	1.83	7.53
0.167	9.61	1.75	7.64
0.223	8.87	1.67	7.73
0.278	8.20	1.60	7.80
0.334	7.57	1.52	7.87
0.390	6.99	1.46	7.92
0.445	6.46	1.39	7.92
0.501	5.96	1.33	7.92
0.557	5.51	1.27	7.92

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	6		

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
07F	8600	Trib 08600 to Red Run

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												
0.400	0.02	0.00	0.02	.0193	0.01009	.306	3.25	10.63	0.04	0.557	22.22	7.00
Q1-10 Flow												
0.400	0.02	0.00	0.02	.0193	0.01009	NA	NA	NA	0.04	0.631	22.77	7.00
Q30-10 Flow												
0.400	0.03	0.00	0.03	.0193	0.01009	NA	NA	NA	0.05	0.503	21.85	7.00

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
07F	8600	Trib 08600 to Red Run	**0.400**	415.93	0.56	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	0.02	0.000	0.000	0.0	0.00	0.00	20.00	7.00	20.00	7.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Country View Ma	PA0086894	0.0125	0.0125	0.0125	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	5.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

TRC EVALUATION

Input appropriate values in B4:B8 and E4:E7

0.0243	= Q stream (cfs)	0.5	= CV Daily
0.0125	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discha	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 0.420	1.3.2.iii	WLA cfc = 0.402
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.156	5.1d	LTA_cfc = 0.234

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.193	AFC
		INST MAX LIMIT (mg/l) = 0.630	

WLA afc	**(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...** **...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)**
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	**(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...** **...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)**
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	**1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)**