Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0033294**
Facility Type	**Municipal**	APS ID	**1127214**
Major / Minor	**Minor**	Authorization ID	**1509179**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**South Franklin Township**	Facility Name	**Franklin Manor STP**
Applicant Address	100 Municipal Road	Facility Address	70 Security Drive
	Washington, PA 15301-9000		Washington, PA 15301
Applicant Contact	Tyler Linick	Facility Contact	Same as Applicant
Applicant Phone	724.225.4828	Facility Phone	Same as Applicant
Client ID	92076	Site ID	252733
Ch 94 Load Status		Municipality	South Franklin Township
Connection Status		County	Washington
Date Application Received	November 26, 2024	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Application for a renewal of an NPDES permit for discharge of treated Sewage

Summary of Review

Introduction

The Authority has applied for the renewal of NPDES Permit No. PA0033294, which was previously issued on May 20, 2020, and expired on May 31, 2025.

Facility Overview

WQM Permit No. 6384416 authorized construction of a STP and has an annual average design flow of 0.06 MGD. The design organic capacity of the STP is 145 lbs/day.

Secondary treatment is provided by an existing facility consisting of a bar screen, flow equalization, two aeration tanks, two final clarifiers, and aerated sludge holding tanks. UV is used for disinfection prior to discharge (Outfall 001) to UNT to Chartiers Creek, which is designated as a Warm Water Fishery (WWF) per 25 Pa. Chapter 93 Designated Use, located in State Watershed 20-F.

The renewal application does not list any industrial contributors to the sewer system.

Summary of Changes Since Last Permit Issuance

- Flow monitoring changed from 2/month to 1/week
- Effluent TRC limits removed
- UV monitoring added
- *E. Coli* monitoring added

Approve	Deny	Signatures	Date
X		William C. Mitchell, E.I.T. / Project Manager	October 30, 2025
X		Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	October 31, 2025

Summary of Review

- Total Aluminum, Total Iron, and Total Manganese monitoring added

Sludge use and disposal description and location(s): All sludge is hauled to Hapchuk Incorporated. Application data indicates that the STP does not receive any hauled in waste.

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)	0.06
Latitude	40º 6' 18.00"	Longitude	-80º 17' 36.00"
Quad Name	Prosperity	Quad Code	1803
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Chartiers Creek (WWF)	Stream Code	37159
NHD Com ID	99694836	RMI	0.05
Drainage Area	0.3	Yield (cfs/mi^2)	0.006
Q_{7-10} Flow (cfs)	0.0019	Q_{7-10} Basis	USGS StreamStats Report
Elevation (ft)	1106	Slope (ft/ft)	0.03479
Watershed No.	20-F	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use	NONE	Exceptions to Criteria	NONE
Assessment Status	Not Assessed		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	Final, Final	Name	Chartiers Creek, & Chartiers Creek Watershed

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake	West View Water Authority – Neville Island		
PWS Waters	Ohio River	Flow at Intake (cfs)	4,730
PWS RMI	976.1	Distance from Outfall (mi)	Over 25 Miles

Changes Since Last Permit Issuance: UV replaces TRC for disinfection purposes.

Other Comments:

The discharge is to an UNT to Chartiers Creek, which flows into the Chartiers Creek Watershed that has an EPA Approved TMDL and is impaired by PCBs and Chlordane. No WLAs have been developed for this sewage discharge, as neither PCB nor Chlordane is typically found in sewage but instead found in legacy sediments. Monitoring for these pollutants will not be required at this time.

The discharge is to an UNT to Chartiers Creek, which flows into the Chartiers Creek Watershed that has a Final TMDL and is impaired by metals and pH. This sewage discharge is not expected to contribute to the stream impairment for which abandoned mine drainage is source of such impairment. No WLAs have been developed for this sewage discharge, and they are not expected to contribute to the stream impairment for these pollutants. 1/year Monitoring for total aluminum, total iron, and total manganese will be imposed on this sewage discharge and the results will be evaluated during the next renewal cycle to ensure that the discharge is not contributing to stream impairment.

Treatment Facility Summary

Treatment Facility Name: Franklin Manor STP

WQM Permit No.	Issuance Date
6384416	05/23/1986
6384416 A-1	6/5/1990
6384416 A-2	3/8/2007
6384416 A-3	9/23/2021

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Activated Sludge	Ultraviolet	0.06

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.06	145		Aerated Holding Tank	Pumped and hauled to an approved disposal site

Changes Since Last Permit Issuance: UV replaces TRC for disinfection purposes.

Other Comments: N/A

Compliance History

DMR Data for Outfall 001 (from September 1, 2024 to August 31, 2025)

Parameter	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24
Flow (MGD) Average Monthly	0.018	0.022	0.024	0.039	0.038	0.023	0.018	0.018	0.016	0.017	0.013	0.013
pH (S.U.) Instantaneous Minimum	7.0	7.0	6.9	6.9	6.9	7.0	6.9	6.9	6.9	7.0	6.9	6.9
pH (S.U.) Daily Maximum	7.0	7.0	7.0	7.0	7.0	7.1	7.0	7.0	7.0	7.0	7.0	7.0
DO (mg/L) Instantaneous Minimum	6.2	6.3	6.2	6.6	6.5	6.2	5.8	5.6	5.4	5.9	5.6	6.0
TRC (mg/L) Average Monthly	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
TRC (mg/L) Instantaneous Maximum	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CBOD5 (mg/L) Average Monthly	3.6	< 2.0	3.5	5.05	2.2	4.8	< 2.0	2.3	2.0	< 2.0	3.35	7.3
CBOD5 (mg/L) Instantaneous Maximum	4.1	< 2.0	5.0	6.0	2.4	6.4	2.0	2.3	2.0	< 2.0	4.4	10.0
TSS (mg/L) Average Monthly	6.0	5.5	6.0	5.5	5.5	17.0	14.5	13.5	9.0	< 5.0	7.5	< 5.0
TSS (mg/L) Instantaneous Maximum	7.0	6.0	7.0	6.0	6.0	22.0	21.0	22.0	9.0	< 5.0	9.0	< 5.0
Fecal Coliform (No./100 ml) Geometric Mean	11	3	2	12	92	2	11	13	2	2	2	2
Fecal Coliform (No./100 ml) Instantaneous Maximum	121	8	2	151	186	2	124	173	2	2	2	2
Total Nitrogen (mg/L) Daily Maximum									29.98			
Ammonia (mg/L) Average Monthly	0.55	0.55	0.2	0.85	0.2	0.5	0.25	0.6	1.65	0.6	0.95	1.6

Ammonia (mg/L) Instantaneous Maximum	0.7	0.6	0.3	0.9	0.3	0.9	0.3	1.1	3.2	0.6	1.2	2.2
Total Phosphorus (mg/L) Daily Maximum									5.2			

Compliance History

Operations Compliance Check Summary Report

Facility: Franklin Manor STP

NPDES Permit No.: PA0033294

Compliance Review Period: 10/1/20-10/1/25

Inspection Summary:

INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC
07/18/2025	Chapter 94 Inspection	PA Dept of Environmental Protection	Administratively Closed
07/15/2021	Administrative/File Review	PA Dept of Environmental Protection	No Violations Noted
07/15/2021	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted

Violation Summary:

No violations noted during review period

Open Violations by Client ID:

No open violations for Client ID 92076

Enforcement Summary:

No enforcements executed during review period

Effluent Violation Summary:

MON PD	PARAMETER	REPORTED VALUE	PERMIT LIMIT	UNIT	STAT_BASE_CODE
Sep-24	Ammonia-Nitrogen	1.6	1.4	mg/L	Average Monthly
Jun-23	Fecal Coliform	207	200	No./100 ml	Geometric Mean
Jan-22	Ammonia-Nitrogen	5.1	2.8	mg/L	Average Monthly

Unauthorized Discharges:

No unauthorized discharges reported in eDMR during review period

Compliance Status: Facility is in general compliance with no open violations or pending enforcements.

Completed by: Amanda Illar **Completed date:** 10/1/25

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .06
Latitude 40º 6' 18.00" **Longitude** -80º 17' 36.00"
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: The discharge was evaluated using WQM 7.0 Version 1.1 (Attachments 2 & 3) to evaluate $CBOD_5$, Ammonia-Nitrogen, and Dissolved Oxygen. The modeling results show the above technology based effluent limitations are appropriate for $CBOD_5$, TSS, pH, and Fecal Coliform. Due to anti-backsliding, the previously permitted limit for CBOD5 of 10 mg/L will be re-imposed, which was based upon regulations, guidance, and models that were valid at the time of permit issuance.

To determine applicability of standards associated with dry streams, application managers will generally consider the following:

1. If the stream flow (Q7-10) to wastewater flow (design flow) ratio is less than 3:1, proceed to paragraph 2, otherwise skip to the next section.

2. For new or expanding discharges, apply the more stringent treatment requirements in DEP's Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers (391-2000-014).

3. For existing discharges, if the more stringent treatment requirements cannot be achieved, do not apply the standards in DEP guidance (391-2000-014) unless the receiving stream is impaired, and the point source discharge contributes to the impairment. If this is the case, apply the more stringent treatment requirements and provide a schedule to meet final limitations not exceeding three years in the draft permit. Do not approve design flow increases without applying the more stringent treatment requirements where the discharge meets the criteria in the guidance for a dry stream.

DMR data confirms the existing facility cannot meet the more stringent treatment requirements discussed in DEP guidance (391-2000-014) and the receiving stream is not impaired. Do not approve design flow increases without applying the more stringent treatment requirements where the discharge meets the criteria in the guidance for a dry stream (Section I.C, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits).

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
Ammonia-Nitrogen Nov 1 - Apr 30	2.84	Average Monthly	WQM 7.0 Version 1.1
Ammonia-Nitrogen May 1 - Oct 31	1.92	Average Monthly	WQM 7.0 Version 1.1
Dissolved Oxygen	5.0	Inst Min	WQM 7.0 Version 1.1

Due to anti-backsliding, the previously permitted limits for ammonia-nitrogen (Nov 1 to Apr 30) of 2.8 mg/L and ammonia-nitrogen (May 1 to Oct 31) of 1.4 mg/L will be re-imposed. These limits were based upon regulations, guidance, and models that were valid at the time of permit issuance.

Best Professional Judgment (BPJ) Limitations

N/A

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard of water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 (l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.

The facility is not seeking to revise the previously permitted effluent limits.

Additional Considerations

Monitoring frequency for the proposed effluent limits are based upon Table 6-3, Self-Monitoring Requirements for Sewage Dischargers, from the Departments Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document No. 386-0400-001).

Ultraviolet (UV) disinfection will replace the existing chlorine system and UV monitoring is required. Part A will contain, at a minimum, routine monitoring of UV transmittance (%) at the same monitoring frequency that would be used for TRC per Section I.A, Note 4, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits.

Sewage dischargers will include monitoring, at a minimum, for E. Coli, in new and reissued permits, with a monitoring frequency of 1/quarter for design flows >= 0.05 and < 1.0 MGD per 25 Pa. Code § 92a.061, and Section I.A, Note 12, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits.

Nutrient monitoring is required to establish the nutrient load from the wastewater treatment facility and the impacts that load may have on the quality of the receiving stream(s). The discharge is to waters not impaired for nutrients. A 1/year monitoring requirement for Total N & Total P has been added to the permit per 25 Pa. Code § 92a.061, and Section I.A, Note 7 & 8, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits.

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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	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
CBOD5	XXX	XXX	XXX	10	XXX	20	2/month	Grab
TSS	XXX	XXX	XXX	25	XXX	50	2/month	Grab
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/quarter	Grab
UV light transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	2.8	XXX	5.6	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	1.4	XXX	2.8	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	Grab

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

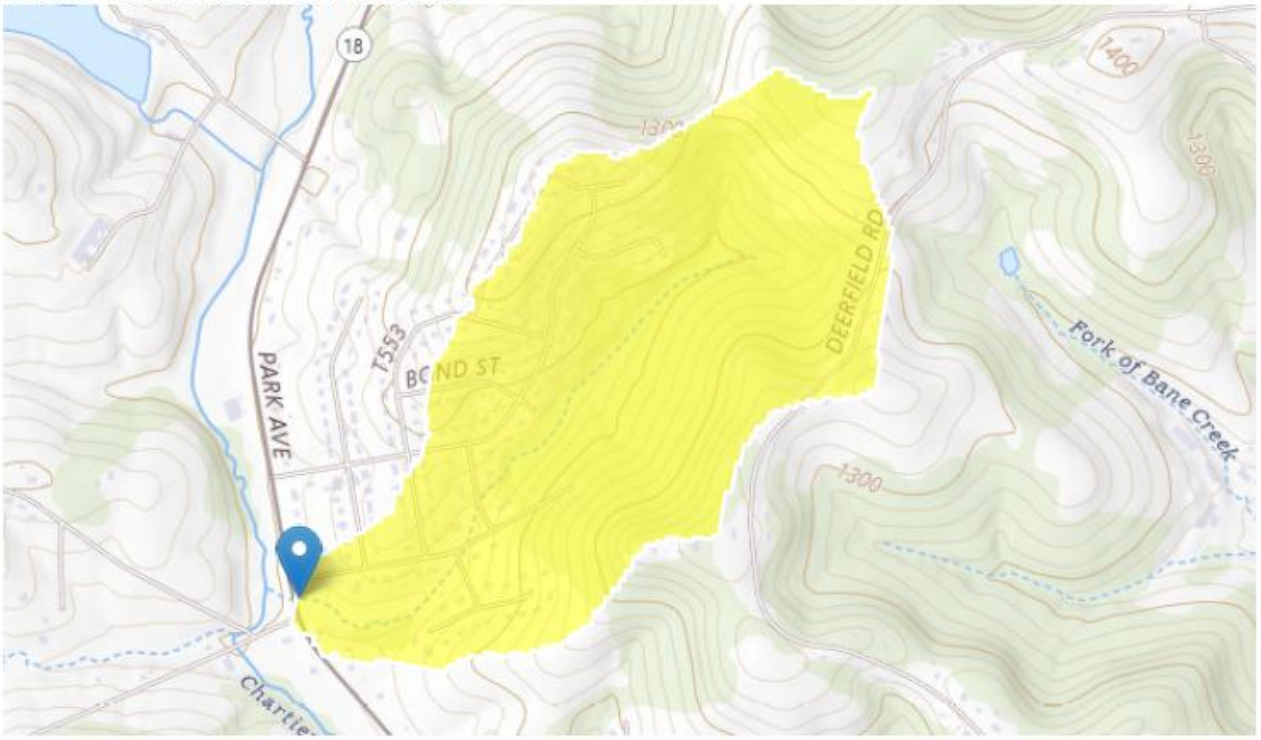
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Aluminum, Total	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Iron, Total	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Manganese, Total	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001

Attachment 1 – USGS StreamStats

PA0033294 - StreamStats Report

Region ID: PA
Workspace ID: PA20251002182711662000
Clicked Point (Latitude, Longitude): 40.10517, -80.29291
Time: 2025-10-02 14:27:32 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.3	square miles
ELEV	Mean Basin Elevation	1247	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.3	square miles	2.26	1400
ELEV	Mean Basin Elevation	1247	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

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 4]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.00736	ft^3/s
30 Day 2 Year Low Flow	0.015	ft^3/s
7 Day 10 Year Low Flow	0.0019	ft^3/s
30 Day 10 Year Low Flow	0.00448	ft^3/s
90 Day 10 Year Low Flow	0.00979	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/)

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: 4.29.3
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Attachment 2 – WQM 7.0 v.1.1 Summer Period

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
20F	37159	Trib 37159 to Chartiers Creek	**0.050**	1106.00	0.30	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	0.006	0.00	0.00	0.000	0.000	10.0	0.00	0.00	25.00	7.00	0.00	0.00
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
Franklin Manor	PA0033294	0.0600	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/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.38	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
20F	37159	Trib 37159 to Chartiers Creek	**0.001**	1097.00	0.31	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	0.006	0.00	0.00	0.000	0.000	10.0	0.00	0.00	25.00	7.00	0.00	0.00
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
		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
20F	37159	Trib 37159 to Chartiers 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												
0.050	0.00	0.00	0.00	.0928	0.03479	.362	3.04	8.39	0.09	0.035	20.10	7.00
Q1-10 Flow												
0.050	0.00	0.00	0.00	.0928	0.03479	NA	NA	NA	0.09	0.035	20.06	7.00
Q30-10 Flow												
0.050	0.00	0.00	0.00	.0928	0.03479	NA	NA	NA	0.09	0.035	20.13	7.00

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
20F	37159	Trib 37159 to Chartiers 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
0.050	Franklin Manor	16.67	16.89	16.67	16.89	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
0.050	Franklin Manor	1.87	1.92	1.87	1.92	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)		
0.05	Franklin Manor	25	25	1.92	1.92	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
20F	37159	Trib 37159 to Chartiers Creek

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.050	0.060	20.100	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
3.041	0.362	8.389	0.086
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
24.54	1.497	1.88	0.705
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.067	27.461	Owens	5
Reach Travel Time (days)			
0.035			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.003	24.41	1.88	5.24
0.007	24.29	1.87	5.39
0.010	24.16	1.87	5.53
0.014	24.03	1.87	5.66
0.017	23.91	1.86	5.78
0.021	23.78	1.86	5.89
0.024	23.66	1.85	5.98
0.028	23.53	1.85	6.08
0.031	23.41	1.84	6.16
0.035	23.29	1.84	6.24

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
20F	37159	Trib 37159 to Chartiers 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)
0.050	Franklin Manor	PA0033294	0.060	CBOD5	25		
				NH3-N	1.92	3.84	
				Dissolved Oxygen			5

Attachment 3 – WQM 7.0 v.1.1 Winter Period

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
20F	37159	Trib 37159 to Chartiers Creek	**0.050**	1106.00	0.30	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	0.013	0.00	0.00	0.000	0.000	10.0	0.00	0.00	5.00	7.00	0.00	0.00
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
Franklin Manor	PA0033294	0.0600	0.0000	0.0000	0.000	15.00	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	12.80	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
20F	37159	Trib 37159 to Chartiers Creek	**0.001**	1097.00	0.31	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	0.013	0.00	0.00	0.000	0.000	10.0	0.00	0.00	5.00	7.00	0.00	0.00
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
		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
20F	37159	Trib 37159 to Chartiers 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												
0.050	0.00	0.00	0.00	.0928	0.03479	.364	3.06	8.4	0.09	0.034	14.61	7.00
Q1-10 Flow												
0.050	0.00	0.00	0.00	.0928	0.03479	NA	NA	NA	0.09	0.035	14.75	7.00
Q30-10 Flow												
0.050	0.01	0.00	0.01	.0928	0.03479	NA	NA	NA	0.09	0.034	14.48	7.00

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
20F	37159	Trib 37159 to Chartiers 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
0.050	Franklin Manor	24.1	24.73	24.1	24.73	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
0.050	Franklin Manor	2.69	2.84	2.69	2.84	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)		
0.05	Franklin Manor	25	25	2.84	2.84	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
20F	37159	Trib 37159 to Chartiers Creek

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.050	0.060	14.609	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
3.056	0.364	8.402	0.087
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
24.10	1.495	2.73	0.462
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.305	24.129	Owens	5
Reach Travel Time (days)			
0.034			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.003	24.00	2.73	5.54
0.007	23.91	2.72	5.75
0.010	23.81	2.72	5.95
0.014	23.72	2.72	6.13
0.017	23.62	2.71	6.30
0.021	23.53	2.71	6.45
0.024	23.43	2.70	6.59
0.028	23.34	2.70	6.73
0.031	23.24	2.69	6.85
0.034	23.15	2.69	6.96

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
20F	37159	Trib 37159 to Chartiers 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)
0.050	Franklin Manor	PA0033294	0.060	CBOD5	25		
				NH3-N	2.84	5.68	
				Dissolved Oxygen			5