pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0217565**
Facility Type	**Non-Municipal**	APS ID	**1102173**
Major / Minor	**Minor**	Authorization ID	**1464096**

Applicant and Facility Information

Applicant Name	**John & Lynae Williams**	Facility Name	**Maple Valley Personal Care Home**
Applicant Address	2212 Anthony Run Road	Facility Address	2212 Anthony Run Road
	Indiana, PA 15701-4413		Indiana, PA 15701-4413
Applicant Contact	John Williams	Facility Contact	
Applicant Phone	(724) 465-4343	Facility Phone	
Applicant Email	jwilliams70@verizon.net		
Client ID	349984	Site ID	485285
Ch 94 Load Status	Not Overloaded	Municipality	Armstrong Township
Connection Status	No Limitations	County	Indiana
Date Application Received	November 17, 2023	EPA Waived?	Yes
Date Application Accepted	April 1, 2024	If No, Reason	

Purpose of Application: Renewal of a NPDES Permit for an Existing Discharge of 0.006

Summary of Review

This is a renewal Sewage Individual NPDES Permit for an Existing Discharge of 0.006 MGD from a non-municipal minor sewage facility. The existing treatment process consists of extended aeration, final clarification and chlorination. Extended aeration plant has 1 digestor, 2 aeration tanks, 1 settling tank and 1 clearwell.

Act 14 – Proof of Notification was submitted and received.

This facility is currently using eDMR system.

SPECTIAL CONDITIONS: NONE

The EPA waiver is in effect.

There are NO open violations in WMS for the subject Client ID (349984) as of April 5, 2024.

Public Participation

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

Approve	Deny	Signatures	Date
X		Aeshah Shameseldin Aeshah Shameseldin / Civil Engineer	April 5, 2024
		Vacant / Environmental Engineer Manager	Okay to Draft JCD 4/23/2024

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.006
Latitude	40º 37' 48"	Longitude	-79º 16' 26"
Quad Name	Elderton	Quad Code	40079F3
Wastewater Description:	Sewage Effluent		
Receiving Waters	Anthony Run (CWF)	Stream Code	46692
NHD Com ID	123858097	RMI	2.38
Drainage Area	2.89 square miles	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.289	Q_{7-10} Basis	Stream Gage # 03038000, Crooked Creek at Idaho, Pa
Elevation (ft)	1060	Slope (ft/ft)	---
Watershed No.	17-E	Chapter 93 Class.	CWF
Existing Use	---	Existing Use Qualifier	---
Exceptions to Use	---	Exceptions to Criteria	---
Assessment Status	Impaired		
Cause(s) of Impairment	Siltation		
Source(s) of Impairment	Removal of Riparian Vegetation		
TMDL Status	Final	Name	Crooked Creek Watershed

Background/Ambient Data		Data Source
pH (SU)	7.0	Default
Temperature (°F)	68	Default
Hardness (mg/L)	100	Default
Other:		

Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Water Authority - Freeport		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2576
PWS RMI	30	Distance from Outfall (mi)	---

Changes Since Last Permit Issuance: None.

Other Comments: None.

Treatment Facility Summary

Treatment Facility Name: Maple Valley Personal Care Home

WQM Permit No.	Issuance Date
3298401 A-1	October 9, 2019
3298401	July 24, 1998

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	Chlorine with Dechlorination	0.006

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.006		Not Overloaded		Off site

Changes Since Last Permit Issuance: Treatment facilities under WQM 3298401 have been amended to house a sodium bisulfite tablet feeder for dechlorination and a 12” air diffuser inside a new 48” manhole.

Other Comments:

Compliance History

DMR Data for Outfall 001 (from March 1, 2023 to February 29, 2024)

Parameter	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23
Flow (MGD) Average Monthly	0.004	0.004	0.004	0.004	0.0043	0.004	0.004	0.004	0.004	0.004	0.0045	0.004
Flow (MGD) Daily Maximum	0.005	0.005	0.005	0.005	0.0043	0.005	0.005	0.004	0.005	0.004	0.005	0.005
pH (S.U.) Instantaneous Minimum	6.8	6.8	6.8	6.8	6.8	7.0	6.8	6.8	6.8	6.8	6.8	6.8
pH (S.U.) Instantaneous Maximum	7.4	7.2	7.5	7.7	7.6	7.7	7.4	7.5	7.4	7.1	7.7	7.2
DO (mg/L) Instantaneous Minimum	5.0	5.6	5.0	5.0	5.5	5.0	5.0	5.0	5.0	6.0	5.6	5.0
TRC (mg/L) Average Monthly	0.07	0.08	0.08	0.09	0.08	0.08	0.07	0.07	0.10	0.07	0.07	0.08
TRC (mg/L) Instantaneous Maximum	0.15	0.15	0.19	0.20	0.20	0.20	0.20	0.19	0.19	0.22	0.20	0.19
CBOD5 (mg/L) Average Monthly	3	3	3	3	3	3	3	5.085	4.765	3	3.02	3
CBOD5 (mg/L) Instantaneous Maximum	3	3	3	3	3	3	3	7.17	5.53	3	3.04	3
TSS (mg/L) Average Monthly	1.60	1.0	2.40	17.6	13.8	4.8	10.8	2.8	6	19.6	18.6	9.2
TSS (mg/L) Instantaneous Maximum	1.60	1.0	3.20	19.6	18.8	8.0	14.8	3.20	10.4	22	29.6	16.8
Fecal Coliform (No./100 ml) Geometric Mean	2.05	6.3	48.8	42	259	13.8	49.5	101	4	2	11.4	4.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	3.1	6.3	104.8	579.4	488.4	191.8	77.1	1046	4	4	16.4	4.0
Total Nitrogen (mg/L) Daily Maximum			0.5000									

Ammonia (mg/L) Average Monthly					0.1000	0.5296	0.691	1.9712	0.1812	0.1000		
Ammonia (mg/L) Instantaneous Maximum					0.1000	0.9593	1.282	3.687	0.2620	0.1000		
Total Phosphorus (mg/L) Daily Maximum			4.01									

Compliance History

Effluent Violations for Outfall 001, from: April 1, 2023 to: February 29, 2024

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	07/31/23	IMAX	1046	No./100 ml	1000	No./100 ml

Summary of Inspections: Site inspection has been conducted on May 13, 2022. The inspection report did not cite any violations.

Other Comments: None.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .006
Latitude 40º 37' 48.00" **Longitude** -79º 16' 26.00"
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)
E. Coli	Report (No./100 ml)	IMAX	-	§ 92a.61

Comments: Monitoring for E. Coli is placed in the permit in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits."

Water Quality-Based Limitations

CBOD5, Ammonia, and DO are evaluated using WQM 7.0 (See Attachment 1). TRC is evaluated using the department's TRC evaluation spreadsheet (See Attachment 2).

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

Parameter	Limit (mg/l)	SBC	Model
Dissolved Oxygen	4.0	Daily Min.	WQM 7.0
CBOD5	25	Avg. Monthly	WQM 7.0
	50	IMAX	
Ammonia Nitrogen (May 1 – Oct 31)	21.0	Average Monthly	WQM 7.0
Ammonia Nitrogen (Nov 1 - Apr 30)	Report	IMAX	
TRC	0.5	Average Monthly	TRC evaluation spreadsheet

Comments: WQM 7.0 didn't calculate more stringent average monthly limits for Ammonia-Nitrogen. The current limits established in previous permits are attainable and will be retained.

The TRC evaluation spreadsheet didn't calculate more stringent average monthly TRC limit at perennial conditions using the plant design flow, the current limits established in previous permits are attainable and will be retained.

Best Professional Judgment (BPJ) Limitations

Comments: A dissolved oxygen effluent limit of a minimum of 4.0 mg/L, and monitoring for total nitrogen, total phosphorus and raw sewage influent monitoring for $CBOD_5$ and TSS are placed in the permit in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits."

Winter monitoring has been established for Ammonia-Nitrogen as part of this renewal. In accordance with the department's SOP "*Establishing Effluent Limitations for Individual Sewage Permits***"** a seasonal multiplier of 3 times the summertime average monthly limit should be established for the winter period**.** In accordance with Table 6-3 in the "*Technical Guidance for the Development and Specification of Effluent Limitations*", the frequency supposed to be 2/month sampling, however, since the discharge has consistently achieved effluent concentrations well below the required ammonia nitrogen limits and there are currently no known threatened or endangered mussels in the vicinity of the discharge, the monitoring requirement has been established as "Report" and the sampling frequency has been relaxed to 1/month.

Anti-Backsliding

No backsliding of limits is being proposed.

Proposed Effluent Limitations and Monitoring Requirements

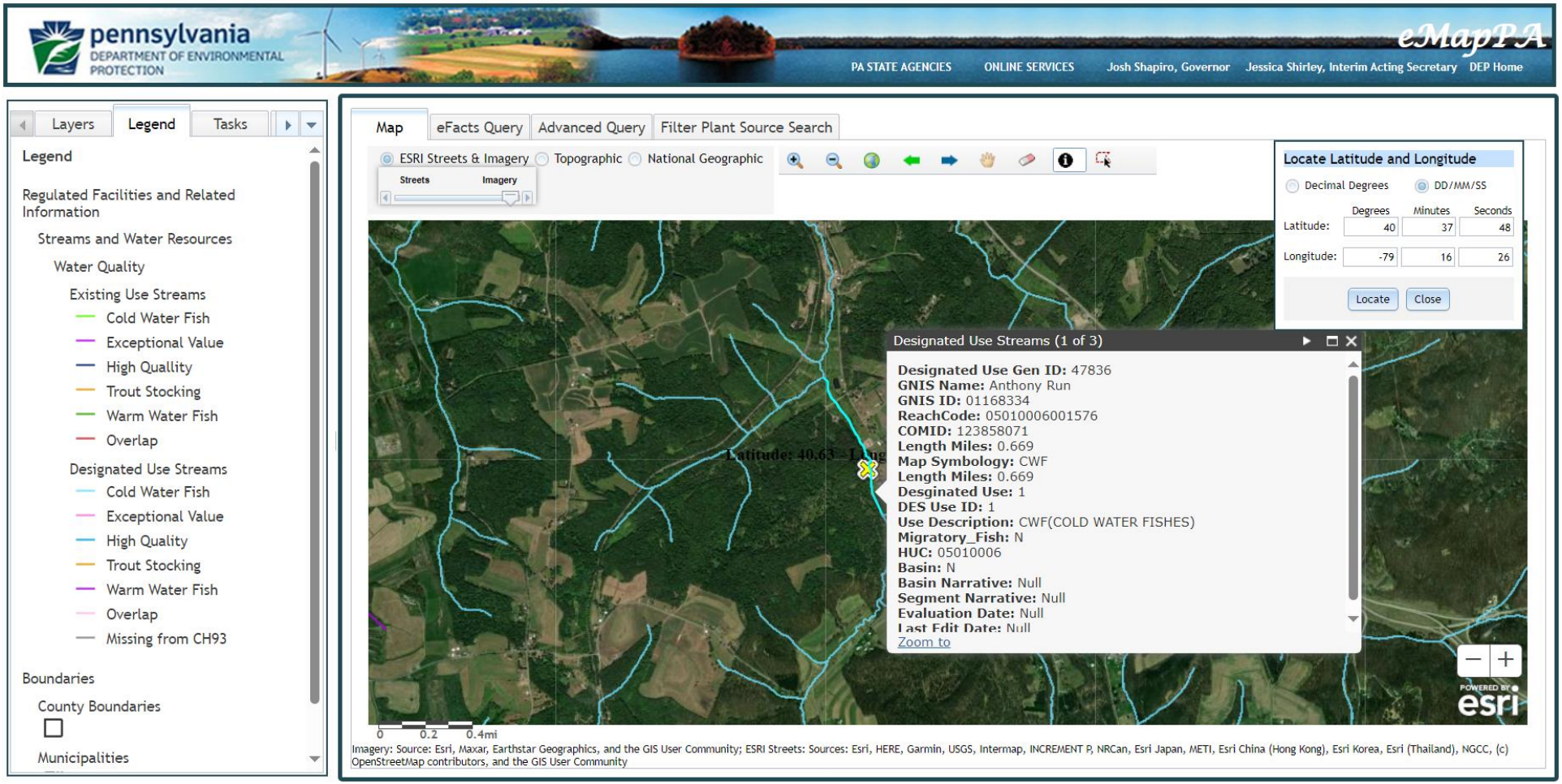
The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). 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)	0.006	Report Daily Max	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	Grab
TSS	XXX	XXX	XXX	30	XXX	60	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/year	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	XXX	XXX	Report	1/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	21.0	XXX	42.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001, after disinfection.

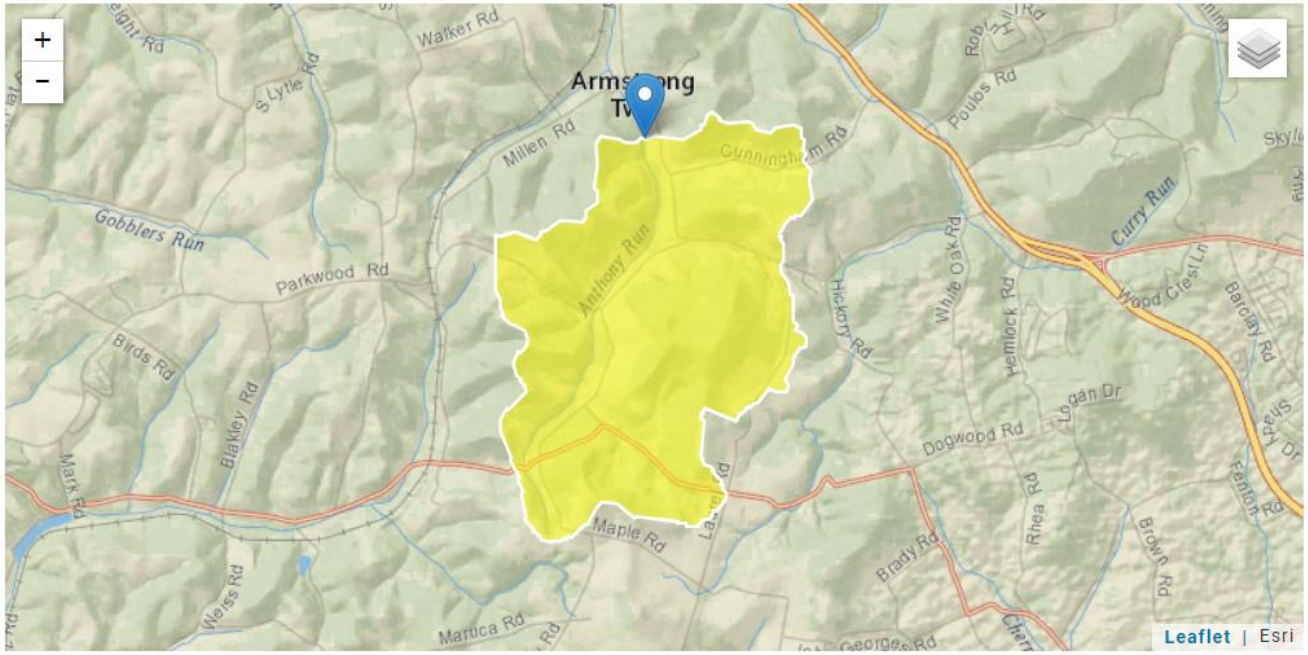
Outfall Location - eMap with Aerial Imagery



Drainage Area Location at Outfall 001 – StreamStats with Aerial Imagery

StreamStats Report

Region ID:	PA
Workspace ID:	PA20240401155617928000
Clicked Point (Latitude, Longitude):	40.63007, -79.27374
Time:	2024-04-01 11:56:43 -0400



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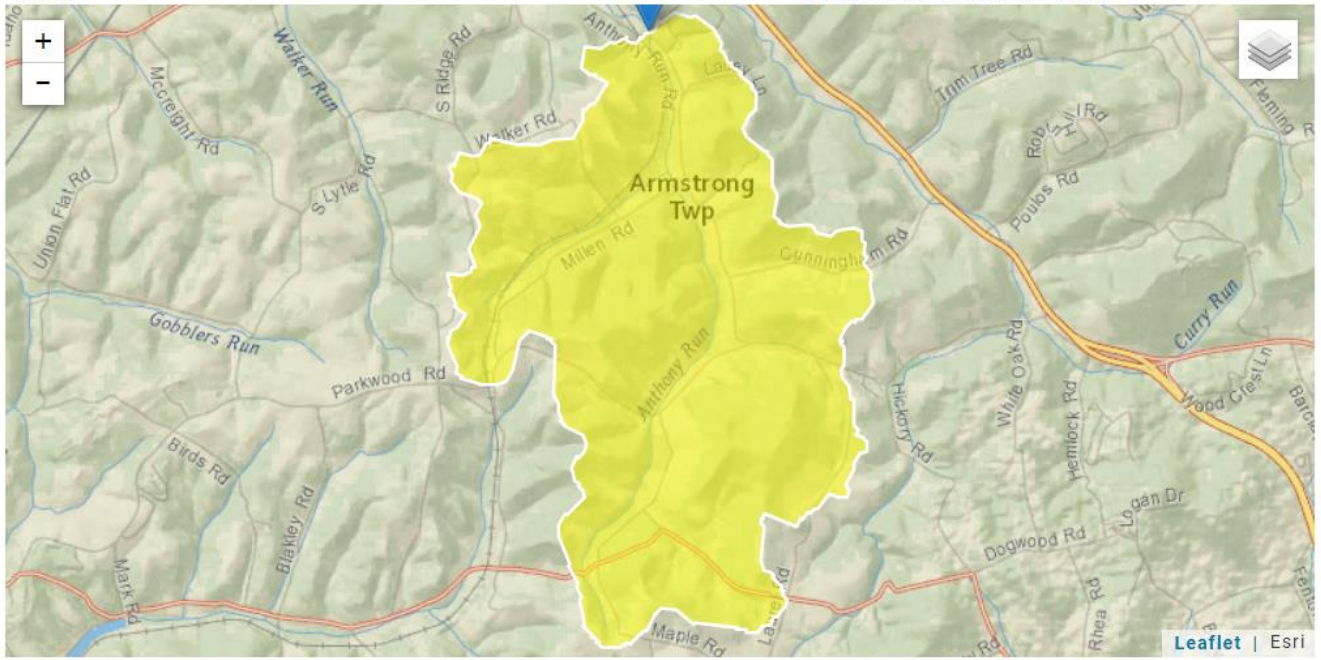
Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	2.89	square miles

Downstream Drainage Area Location – StreamStats with Aerial Imagery

StreamStats Report

Region ID:	PA
Workspace ID:	PA20240401155912088000
Clicked Point (Latitude, Longitude):	40.64682, -79.27955
Time:	2024-04-01 11:59:34 -0400



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Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	4.95	square miles

Attachment 1

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
17E	46692	ANTHONY 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)
2.380	Maple Valley	PA02175565	0.006	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			4

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
17E	46692	ANTHONY RUN

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
2.380	0.006	20.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
8.284	0.417	19.841	0.086
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.72	0.259	0.78	0.700
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.111	21.145	Owens	6
Reach Travel Time (days)			
0.942			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.094	2.65	0.73	8.24
0.188	2.59	0.68	8.24
0.283	2.52	0.64	8.24
0.377	2.46	0.60	8.24
0.471	2.40	0.56	8.24
0.565	2.35	0.52	8.24
0.660	2.29	0.49	8.24
0.754	2.23	0.46	8.24
0.848	2.18	0.43	8.24
0.942	2.13	0.40	8.24

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		

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
17E	46692	ANTHONY RUN	**2.380**	1060.00	2.89	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	0.00	0.000	0.000	0.0	0.00	0.00	20.00	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
Maple Valley	PA02175565	0.0060	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	4.00	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
17E	46692	ANTHONY RUN	**1.050**	1015.00	4.95	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	0.00	0.000	0.000	0.0	0.00	0.00	20.00	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
17E	46692	ANTHONY 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												
2.380	0.29	0.00	0.29	.0093	0.00641	.417	8.28	19.84	0.09	0.942	20.00	7.00
Q1-10 Flow												
2.380	0.18	0.00	0.18	.0093	0.00641	NA	NA	NA	0.07	1.198	20.00	7.00
Q30-10 Flow												
2.380	0.39	0.00	0.39	.0093	0.00641	NA	NA	NA	0.10	0.797	20.00	7.00

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
17E	46692	ANTHONY 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
2.380	Maple Valley	16.76	50	16.76	50	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
2.380	Maple Valley	1.89	25	1.89	25	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)		
2.38	Maple Valley	25	25	25	25	4	4	0	0

Attachment 2

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.289	= Q stream (cfs)	0.5	= CV Daily
0.006	= 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 Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)	0	=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 9.951	1.3.2.iii	WLA cfc = 9.694
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 3.708	5.1d	LTA_cfc = 5.636

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.635	

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)**