Pennsylvania Department of Environmental Protection

Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0080616**
Facility Type	**Non-Municipal**	APS ID	**1005223**
Major / Minor	**Minor**	Authorization ID	**1497192**

Applicant and Facility Information

Applicant Name	**Mountain View MHP Management LLC**	Facility Name	**Mountain View MHP**
Applicant Address	2846 Main Street, Box 12A	Facility Address	203 Rife Road
	Morgantown, PA 19543-9490		East Berlin, PA 17316
Applicant Contact	James Perano	Facility Contact	James Perano
Applicant Phone	(610) 286-0490	Facility Phone	(610) 286-0490
Client ID	353440	Site ID	249933
Ch 94 Load Status	Not Overloaded	Municipality	Reading Township
Connection Status		County	Adams
Date Application Received	August 27, 2024	EPA Waived?	Yes
Date Application Accepted	August 30, 2024	If No, Reason	
Purpose of Application	NPDES permit renewal.		

Summary of Review

Mountain View MHP Management, LLC (Authority/Permittee), applied to the Pennsylvania Department of Environmental Protection (DEP) for issuance of the NPDES permit. The permit was reissued on February 24, 2020, and became effective on March 1, 2020. The permit expires on February 28, 2025.

The design discharge flow from the facility is 0.011 MGD. The permit authorized discharge of treated sewage from the existing wastewater treatment plant (WWTP) located in Reading Township, Adams County to Conewago Creek.

WQM No. 0185402 was issued on 2/7/1986. 0185402 T-1 ownership transfer was issued on 2/24/2020.

Sludge use and disposal description and location(s): N/A because sludge is hauling by Smith's Septic contractor.

Changes from the previous permit: The E. Coli. monitoring and report requirements will add to the proposed permit.

Based on the review outlined in this fact sheet, it is recommended that the permit be drafted. A public notice of the draft permit will be published in the *Pennsylvania Bulletin* for public comments for 30 days.

Approve	Deny	Signatures	Date
X		*Hilaryle* Hilary H. Le / Environmental Engineering Specialist	January 10, 2025
X		*Maria D. Bebenek for* Daniel W. Martin, P.E. / Environmental Engineer Manager	January 27, 2025

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.011
Latitude	39º 56' 39.14"	Longitude	-76º 59' 3.37"
Quad Name	Abbottstown	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Conewago Creek (WWF)	Stream Code	08303
NHD Com ID	57470175	RMI	38.82 miles
Drainage Area	219 mi.^{2}	Yield (cfs/mi^2)	0.067
Q_{7-10} Flow (cfs)	14.7	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	386	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 Borough Municipal Authority, York County		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	28.51 miles	Distance from Outfall (mi)	Approximate 51.5 miles

Changes Since Last Permit Issuance:

Drainage Area
The discharge is to Conewago Creek at RMI 38.82 miles. A drainage area upstream of the discharge is estimated to be 219 sq.mi, according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Streamflow
According to StreamStats, the discharge point on Conewago Creek has a Q_{7-10} of 14.7 cfs and a drainage area of 219 mi^2, which results in a Q_{7-10} low flow yield of 0.067 cfs/mi^2. This information is used to obtain a chronic or 30-day (Q_{30-10}), and an acute or 1-day (Q_{1-10}) exposure stream flow for the discharge point as follows (Guidance No. 391-2000-023):

Q_{7-10} = 14.7 cfs
Low Flow Yield = 14.7 cfs / 219 mi^2 ≈ 0.067 cfs/mi^2
Q_{30-10} = 1.36 * 14.7 cfs ≈ 19.99 cfs
Q_{1-10} = 0.64 * 14.7 cfs ≈ 9.4 cfs

Public Water Supply
The nearest downstream public water supply intake is the Wrightsville Borough Municipal Authority on the Susquehanna River in York County, approximately 51.5 miles downstream of this discharge. Considering distance and dilution, the discharge is not expected to impact the water supply.

Treatment Facility Summary				
Treatment Facility Name: Mountainview MHP				
WQM Permit No.	**Issuance Date**			
0185402	2/7/1986			
0185402 T-1	2/24/2020			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Tertiary	Extended Aeration With Solids Removal	Hypochlorite	0.011
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.011		Not Overloaded	Aerobic Digestion	Other WWTP

Changes Since Last Permit Issuance:

Other Comments:

The WWTP train is as follows:

Bar Screen (1) ⇒ Aeration Tanks (2) ⇒ Settling Tanks (2) ⇒ Dosing Tank (1) ⇒ Sand Filters (2) ⇒ Chlorine Contact Tank (1) ⇒ Discharge (outfall)

The system incorporates chemical additions of alum & soda ash to control pH, and sodium hypochlorite for disinfection.

A sludge holding tank is used for solids storage.

Compliance History	
Summary of DMRs:	A summary of past 12-month DMR data is presented on the next page.
Summary of Inspections:	**1/10/2023**: Mr. Hoy, DEP WQS, conducted a compliance evaluation inspection. Field results tested within permit limits. There were no violations identified during inspection. Recommendations were 1. Repairing or replacing the effluent troughs to ensure the plant operates property. 2. Keeping daily logs available to review on site. 3. Conducting an evaluation of the structural integrity of the metering pit walls.
Other Comments:	There are no violations against or associated to the facility or permittee.

Other Comments:

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	0.0063	0.0069	0.0072	0.0056	0.0056	0.0055	0.0051	0.00515	0.0054	0.0054	0.0087	0.0054
Flow (MGD) Daily Maximum	0.0083	0.0112	0.0135	0.008	0.0101	0.0098	0.0078	0.008	0.009	0.0087	0.0355	0.0092
pH (S.U.) Daily Minimum	6.8	7.2	7.1	6.7	6.9	6.7	6.7	6.6	6.7	6.7	6.7	6.6
pH (S.U.) Instantaneous Maximum	7.3	7.8	8.0	7.8	7.5	7.3	7.4	7.3	7.3	7.3	7.5	7.3
DO (mg/L) Daily Minimum	9.4	6.2	8.0	7.2	7.7	8.0	8.1	8.2	8.9	9.6	7.8	7.3
TRC (mg/L) Average Monthly	0.33	0.32	0.33	0.32	0.31	0.3	0.31	0.27	0.28	0.31	0.26	0.24
TRC (mg/L) Instantaneous Maximum	0.56	0.52	0.52	0.48	0.57	0.53	0.51	0.42	0.43	0.57	0.49	0.38
CBOD5 (mg/L) Average Monthly	< 2.6	< 2.4	6.0	2.4	< 2.4	< 2.6	< 2.5	< 2.4	< 2.4	< 2.4	3.3	< 2.4
TSS (mg/L) Average Monthly	2	2	2	2	1	1	2	1	2	1	1	1
Fecal Coliform (No./100 ml) Geometric Mean	< 1	< 1	< 1	< 1	< 1	< 1	< 2	< 1	< 2	< 1	< 14	< 8
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 1	1	< 1	1	< 1	< 1	3	1	5	1	185	69
Ammonia (mg/L) Average Monthly	< 0.1	< 0.1	< 0.1	< 0.1	0.58	0.42	0.82	< 0.52	< 0.1	< 0.1	0.53	< 0.14
Total Phosphorus (mg/L) Average Monthly	0.29	0.32	0.75	0.59	1.11	0.7	0.63	0.18	0.18	0.29	0.31	0.4

Existing Effluent Limitations and Monitoring Requirements

Outfall 001,

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	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
D.O.	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.63	1/day	Grab
$CBOD_5$	XXX	XXX	XXX	25	XXX	50	2/month	24-Hr Composite
TSS	XXX	XXX	XXX	30	XXX	60	2/month	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	10	XXX	20	2/month	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4.0	2/month	24-Hr Composite

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.011
Latitude 39º 56' 39.14" **Longitude** -76º 59' 3.37"
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)

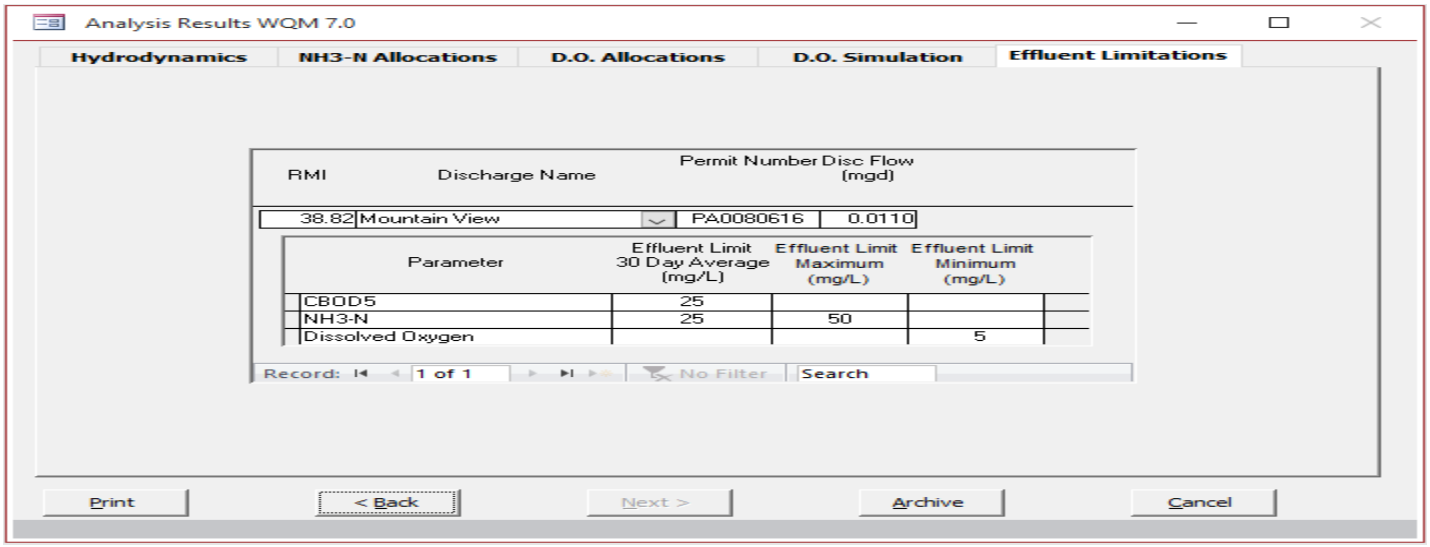
Comments:

Water Quality-Based Limitations

Ammonia (NH_3-N):

NH_3N calculations are based on the Department's Implementation Guidance of Section 93.7 Ammonia Criteria, dated 11/4/97 (ID No. 391-2000-013). The following data is necessary to determine the in-stream NH_3-N criteria used in the attached WQM 7.0 computer model of the stream:

*	Discharge pH	=	7.0	(Default)
*	Discharge Temperature	=	25°C	(Default)
*	Stream pH	=	7.0	(Default)
*	Stream Temperature	=	20ºC	(Default)
*	Background NH_3-N	=	0 mg/L	(Default)



Regarding NH_3-N limits, the attached computer printout of the WQM 7.0 stream model (version 1.1) indicates that a limit of 25.0 mg/L as a monthly average and 50.0 mg/L instantaneous maximum (IMAX) are necessary to protect the aquatic life from toxicity effects at the point of discharge. However, the existing summer limits of 10.0 mg/L monthly average & 20.0 mg/L IMAX are more stringent and will remain in the proposed permit. The existing winter monitoring and reporting will remain in place. Recent DMRs and inspection reports show that the facility has been consistently achieving these limits. Minimum monitoring frequency will be 2/month and sampling type will be 8-hr composite.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):
The attached computer printout of the WQM 7.0 stream model (ver. 1.1) indicates that a monthly average limit of 25.0 mg/L, or secondary treatment, is adequate to protect the water quality of the stream. However, the existing permit 25.0 mg/L as AML will remain in the proposed permit. Recent DMRs and inspection reports show that the facility has typically been achieving concentrations below this limit. The minimum monitoring frequency will remain the same as 2/month.

Dissolved Oxygen (D.O.):
The minimum D.O. of 5.0 mg/L is required per 25 Pa. Code § 93.7. It is recommended that this limit be maintained in the proposed permit to ensure the protection of water quality standards. This approach is consistent with DEP's current Standard Operating Procedure (SOP) No. BCW-PMT-033, version 2.0 revised February 5, 2024, and has been applied to other point source dischargers throughout the state.

pH:
The effluent discharge pH should remain above 6.0 and below 9.0 standard units according to 25 Pa. Code § 95.2(1).

Total Suspended Solids (TSS):
The existing technology-based limits of 30.0 mg/L average monthly, and 60.0 mg/L IMAX will remain in the proposed permit based on the minimum level of effluent quality attainable by secondary treatment based on 25 Pa. Code § 92a.47. Recent DMRs and inspection reports show that the facility has been consistently achieving these limits.

Fecal Coliform:
The recent coliform guidance in 25 Pa. Code § 92a.47.(a)(4) requires a summer technology limit of 200/100 ml as a geometric mean and an instantaneous maximum not greater than 1,000/100ml and § 92a.47.(a)(5) requires a winter limit of 2,000/100ml as a geometric mean and an instantaneous maximum not greater than 10,000/100ml.

E. Coli:
As recommended by DEP's SOP No. BCW-PMT-033, version 2.0 revised February 5, 2024, a routine monitoring for E. Coli will be included in the proposed permit under 25 Pa. Code § 92a.61. This requirement applies to all sewage dischargers greater than 0.002 MGD in their new and reissued permits. A monitoring frequency of 1/year will be included in the permit to be consistent with the recommendation from this SOP.

Chesapeake Bay Strategy:
According to DEP's Chesapeake Bay Phase II Watershed Implementation Plan (WIP) Wastewater Supplement, this facility is considered a phase 5 non-significant sewage discharger with design flow less than 0.2 MGD but greater than 0.002 MGD. In general, DEP will issue permits for all phase 5 facilities with monitoring and reporting for Total Nitrogen (TN) and Total Phosphorus (TP) throughout the permit term at a frequency no less than annually. Furthermore, DEP's SOP No. BPNPSM-PMT-033 states that in general, at a minimum, monitoring for TN and TP should be included in new and reissued permits for sewage discharges with design flows > 2,000 gpd. At this time, the Department is not requiring a total maximum annual nitrogen or phosphorus loading cap. TN and TP monitoring is already included in the existing permit and will remain in the renewal.

Total Residual Chlorine (TRC):
Based on the attached TRC Excel spreadsheet calculator, which uses the equations and calculations from the Department's May 1, 2003 Implementation Guidance for Total Residual Chlorine (ID No. 391-2000-015), the facility's discharge must meet a monthly average limit of 0.5 mg/L and an instantaneous maximum limit of 1.63 mg/L. These limits are the same as in existing permit and will be carried over. The minimum monitoring frequency is 1/day.

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

14.7	= Q stream (cfs)	0.5	= CV Daily
0.011	= 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)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 275.585	1.3.2.iii	WLA cfc = 268.666
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 102.689	5.1d	LTA_cfc = 156.190

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)**

Best Professional Judgment (BPJ) Limitations

Total Phosphorus
This approach is consistent with DEP's SOP No. BPNPSM-PMT-033 as well as the State regulation found in 25 Pa. Code § 96.5(c) which states the following: *"When it is determined that the discharge of phosphorus, alone or in combination with the discharge of other pollutants, contributes or threatens to impair existing or designated uses in a free-flowing surface water, phosphorus discharges from point source discharges shall be limited to an average monthly concentration of 2 mg/l. More stringent controls on point source discharges may be imposed, or may be otherwise adjusted as a result of a TMDL which has been developed*."

Phosphorus limits are included in the existing permit and phosphorus removal equipment is in place. Therefore, the existing limits of 2.0 mg/L average monthly and 4.0 mg/L instantaneous maximum will remain in place in accordance with 40 CFR §122.44(l)(1).

Additional Consideration

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

Monitoring Frequency and Sample Type
The facility currently is required to collect daily effluent grab samples for DO, TRC, and pH; bi-monthly effluent 24-hr composite samples of $CBOD_5$, TSS, ammonia-nitrogen, and TP; bi-monthly effluent grab samples of fecal coliform. Based on the best professional judgement of the author, the existing monitoring frequencies are sufficient and necessary. Therefore, the renewal permit monitoring frequencies will remain the same as those specified in the existing permit.

303d Listed Streams

This discharge is not located on a 303d listed stream segment.

Antidegradation (93.4)

The 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. No High-Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

Class A Wild Trout Fisheries

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

Anti-Backsliding

Unless stated otherwise in this fact sheet, all permit requirements proposed in this fact sheet are at least as stringent as existing permit requirements in accordance with 40 CFR §122.44(l)(1).

WQM 7.0:

MODEL INPUTS

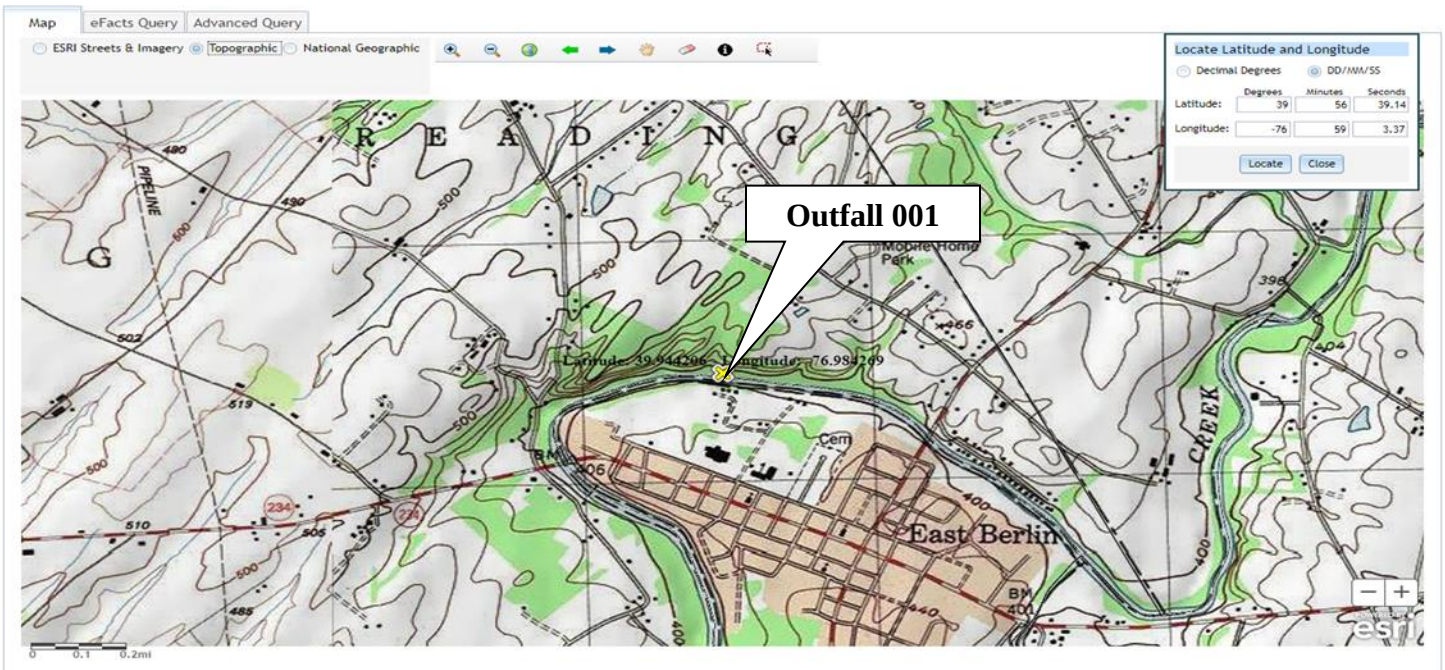
• Discharge pH	=	7.0	(Default)
• Discharge Temperature	=	25°C	(Default)
• Stream pH	=	7.0	(Default)
• Stream Temperature	=	20°C	(Default)
• Background NH_3-N	=	0	(Default)

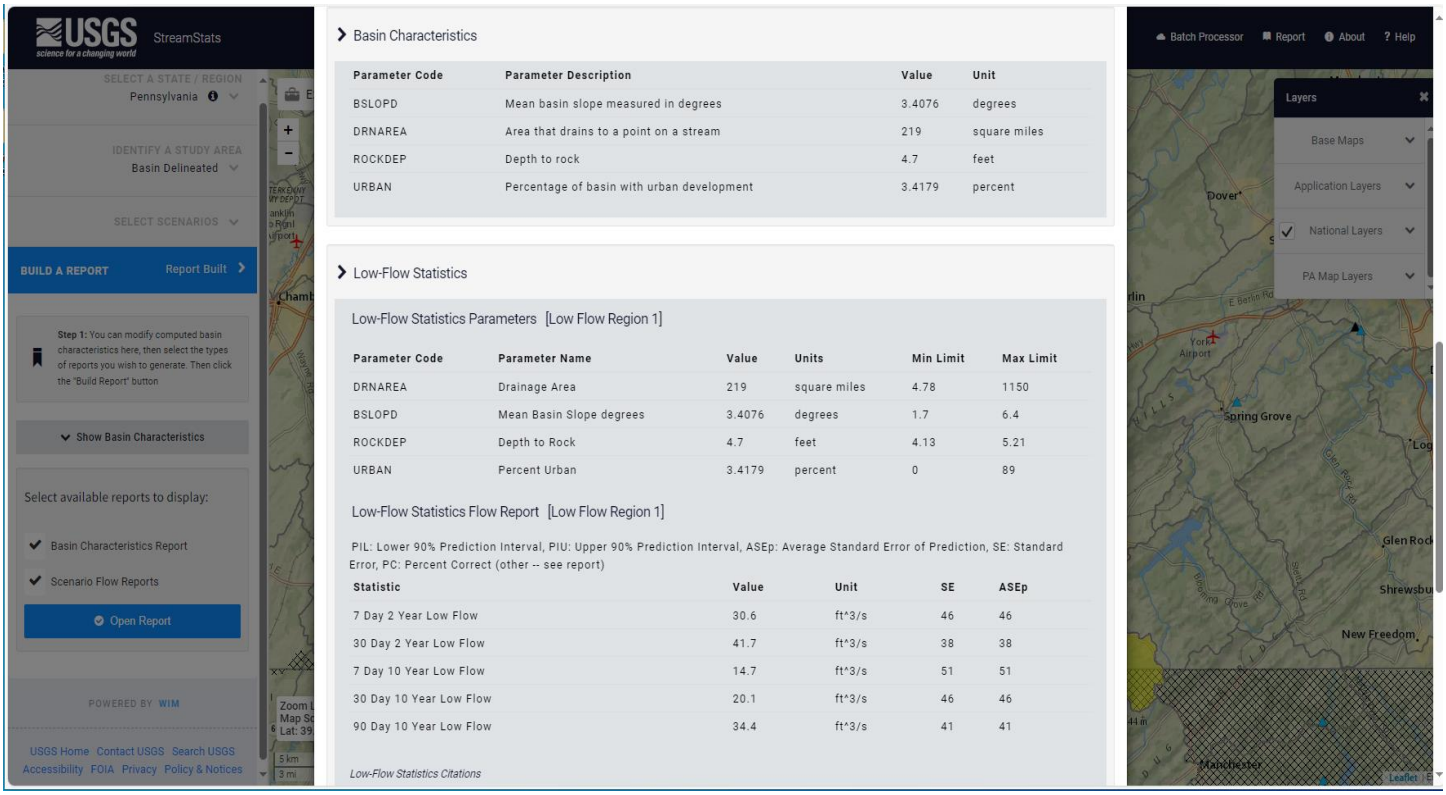
Node 1: Outfall 001 (08303)

Elevation:	386 ft (USGS National Map Viewer)
Drainage Area:	219 mi^2 (USGS PA StreamStats)
River Mile Index:	38.82 (PA DEP eMapPA)
Low Flow Yield:	0.067 cfs/mi^2
Discharge Flow:	0.011 mgd (NPDES PA0080616 Application)

Node 2: Just before confluence of Conewago Creek with Beaver Creek

Elevation:	384.7 ft (USGS National Map Viewer)
Drainage Area:	237 mi^2 (USGS PA StreamStats)
River Mile Index:	37.97 (PA DEP eMapPA)
Low Flow Yield:	0.067 cfs/mi^2
Discharge Flow:	0.000 mgd




USGS StreamStats
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SELECT A STATE / REGION
Pennsylvania
IDENTIFY A STUDY AREA
Basin Delineated
SELECT SCENARIOS
BUILD A REPORT
Report Built
Step 1: You can modify computed basin characteristics here, then select the types of reports you wish to generate. Then click the "Build Report" button
Show Basin Characteristics
Select available reports to display:
Basin Characteristics Report
Scenario Flow Reports
Open Report
POWERED BY WIM
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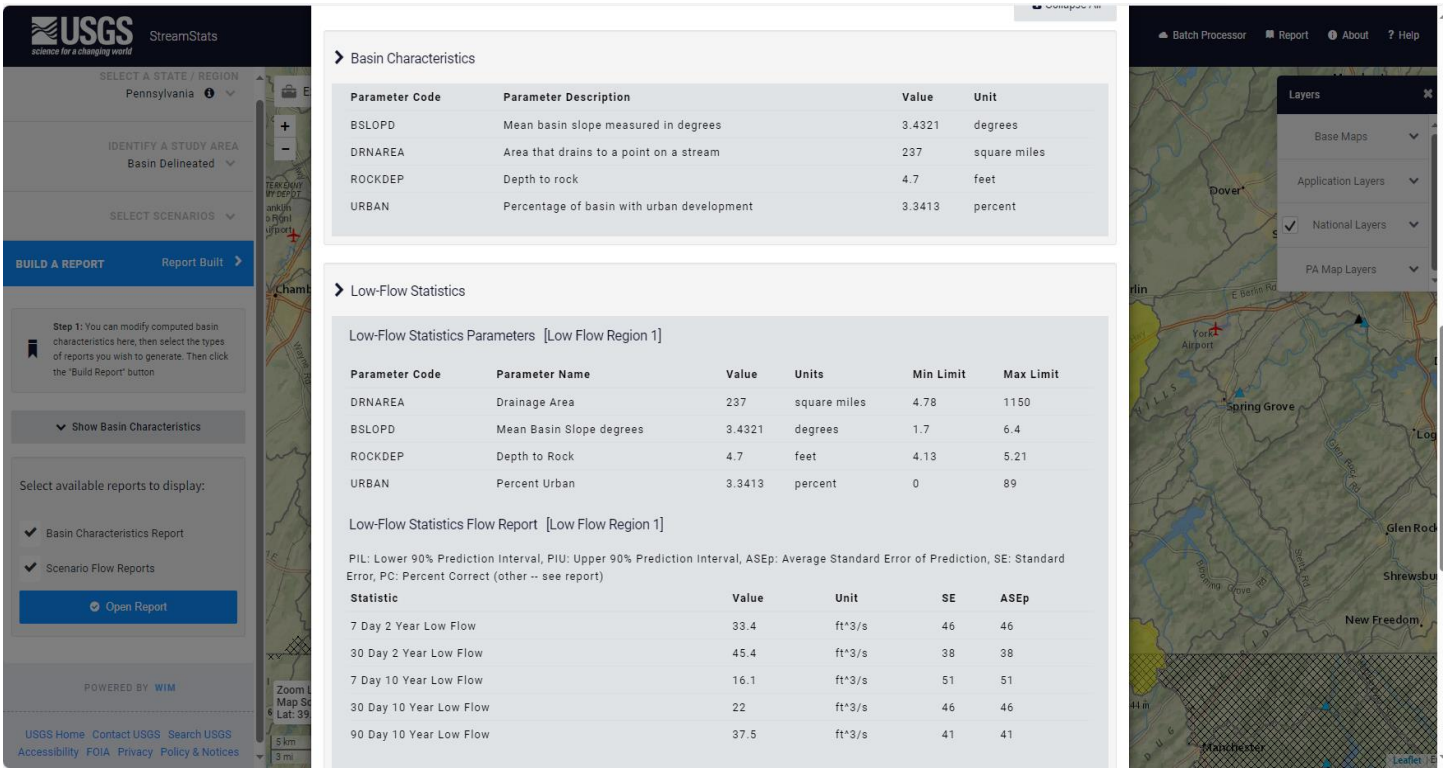
Basin Characteristics
Parameter Code | Parameter Description | Value | Unit
BSLOPD | Mean basin slope measured in degrees | 3.4076 | degrees
DRNAREA | Area that drains to a point on a stream | 219 | square miles
ROCKDEP | Depth to rock | 4.7 | feet
URBAN | Percentage of basin with urban development | 3.4179 | 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 | 219 | square miles | 4.78 | 1150
BSLOPD | Mean Basin Slope degrees | 3.4076 | degrees | 1.7 | 6.4
ROCKDEP | Depth to Rock | 4.7 | feet | 4.13 | 5.21
URBAN | Percent Urban | 3.4179 | percent | 0 | 89
Low-Flow Statistics Flow Report [Low Flow Region 1]
PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct (other -- see report)
Statistic | Value | Unit | SE | ASEp
7 Day 2 Year Low Flow | 30.6 | ft^3/s | 46 | 46
30 Day 2 Year Low Flow | 41.7 | ft^3/s | 38 | 38
7 Day 10 Year Low Flow | 14.7 | ft^3/s | 51 | 51
30 Day 10 Year Low Flow | 20.1 | ft^3/s | 46 | 46
90 Day 10 Year Low Flow | 34.4 | ft^3/s | 41 | 41
Low-Flow Statistics Citations
Batch Processor
Report
About
Help
Layers
Base Maps
Application Layers
National Layers
PA Map Layers
Dover
York Airport
Spring Grove
Glen Rock
Shrewsbury
New Freedom
Manchester
Leaflet


USGS StreamStats
science for a changing world
SELECT A STATE / REGION
Pennsylvania
IDENTIFY A STUDY AREA
Basin Delineated
SELECT SCENARIOS
BUILD A REPORT
Report Built
Step 1: You can modify computed basin characteristics here, then select the types of reports you wish to generate. Then click the "Build Report" button
Show Basin Characteristics
Select available reports to display:
Basin Characteristics Report
Scenario Flow Reports
Open Report
POWERED BY WIM
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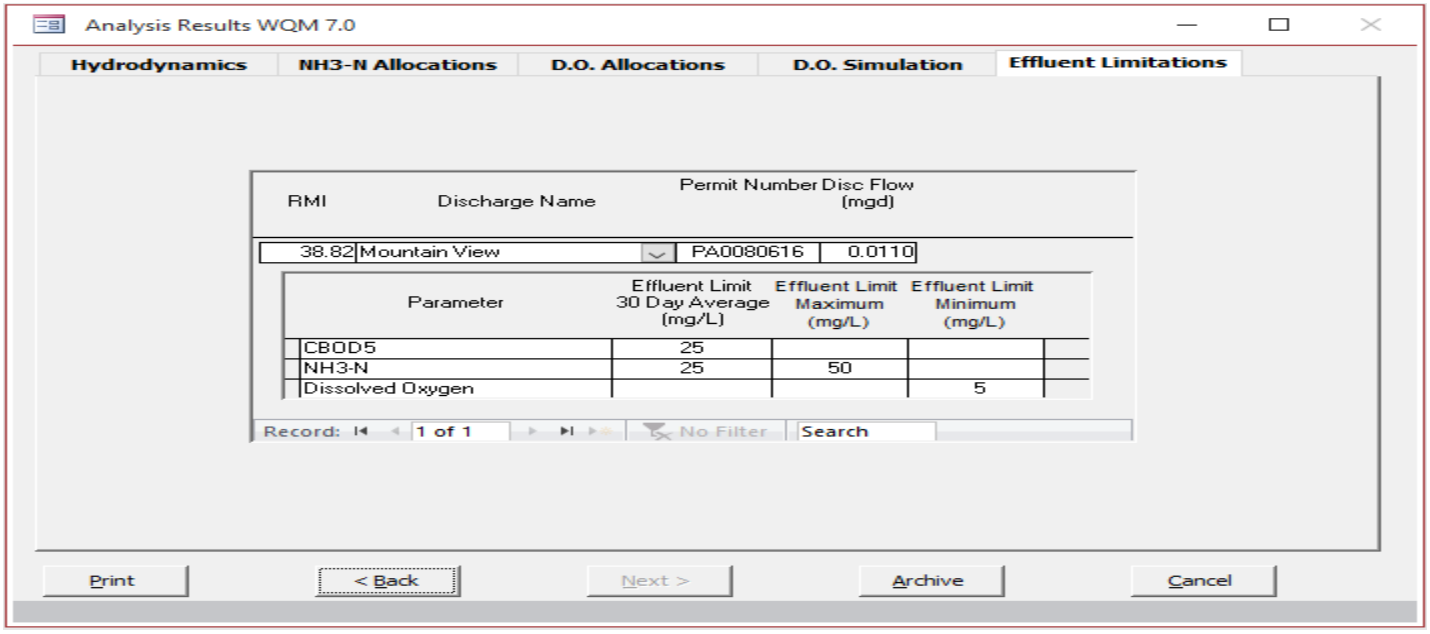
Basin Characteristics
Parameter Code | Parameter Description | Value | Unit
BSLOPD | Mean basin slope measured in degrees | 3.4321 | degrees
DRNAREA | Area that drains to a point on a stream | 237 | square miles
ROCKDEP | Depth to rock | 4.7 | feet
URBAN | Percentage of basin with urban development | 3.3413 | 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 | 237 | square miles | 4.78 | 1150
BSLOPD | Mean Basin Slope degrees | 3.4321 | degrees | 1.7 | 6.4
ROCKDEP | Depth to Rock | 4.7 | feet | 4.13 | 5.21
URBAN | Percent Urban | 3.3413 | percent | 0 | 89
Low-Flow Statistics Flow Report [Low Flow Region 1]
PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct (other -- see report)
Statistic | Value | Unit | SE | ASEp
7 Day 2 Year Low Flow | 33.4 | ft^3/s | 46 | 46
30 Day 2 Year Low Flow | 45.4 | ft^3/s | 38 | 38
7 Day 10 Year Low Flow | 16.1 | ft^3/s | 51 | 51
30 Day 10 Year Low Flow | 22 | ft^3/s | 46 | 46
90 Day 10 Year Low Flow | 37.5 | ft^3/s | 41 | 41
Batch Processor
Report
About
Help
Layers
Base Maps
Application Layers
National Layers
PA Map Layers
Dover
York Airport
Spring Grove
Glen Rock
Shrewsbury
New Freedom
Manchester
Leaflet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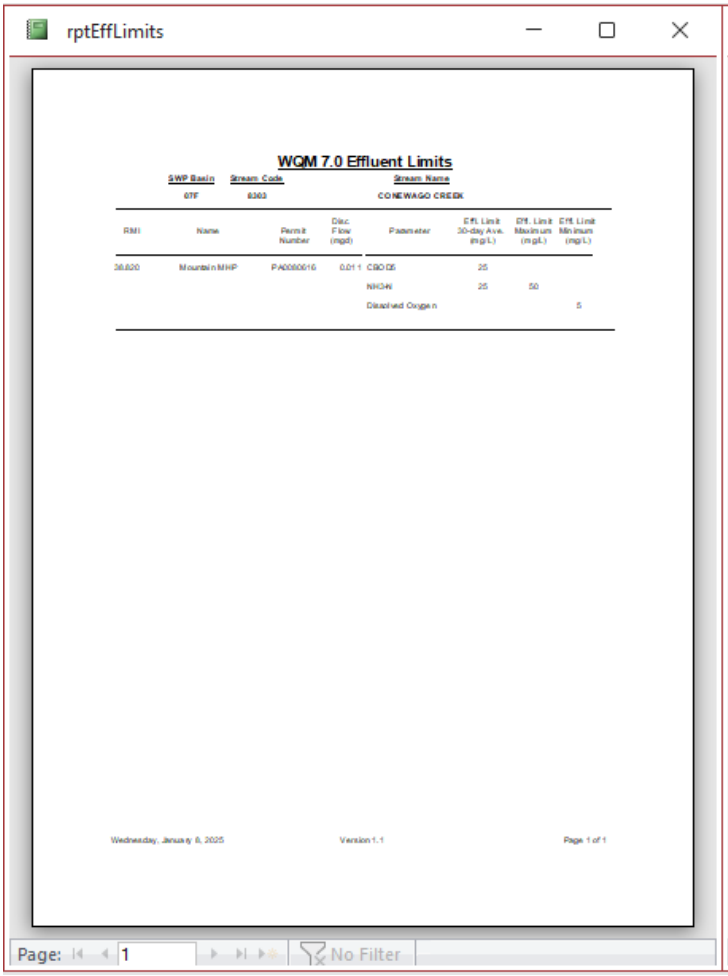
Hydrodynamics
NH3-N Allocations
D.O. Allocations
D.O. Simulation
Effluent Limitations
RMI
Discharge Name
Permit Number
Disc Flow (mgd)
38.82
Mountain View
PA0080616
0.0110
Parameter
Effluent Limit 30 Day Average (mg/L)
Effluent Limit Maximum (mg/L)
Effluent Limit Minimum (mg/L)
CBOD5
25
NH3-N
25
50
Dissolved Oxygen
5
Record: 1 of 1
No Filter
Search
Print
< Back
Next >
Archive
Cancel


rptEffLimits
WQM 7.0 Effluent Limits
SWP Basin
Stream Code
Stream Name
07F
8303
CONEWAGO 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)
38.820
Mountain MHP
PA0080616
0.011
CBOD5
25
NH3-N
25
50
Dissolved Oxygen
5
Wednesday, January 8, 2025
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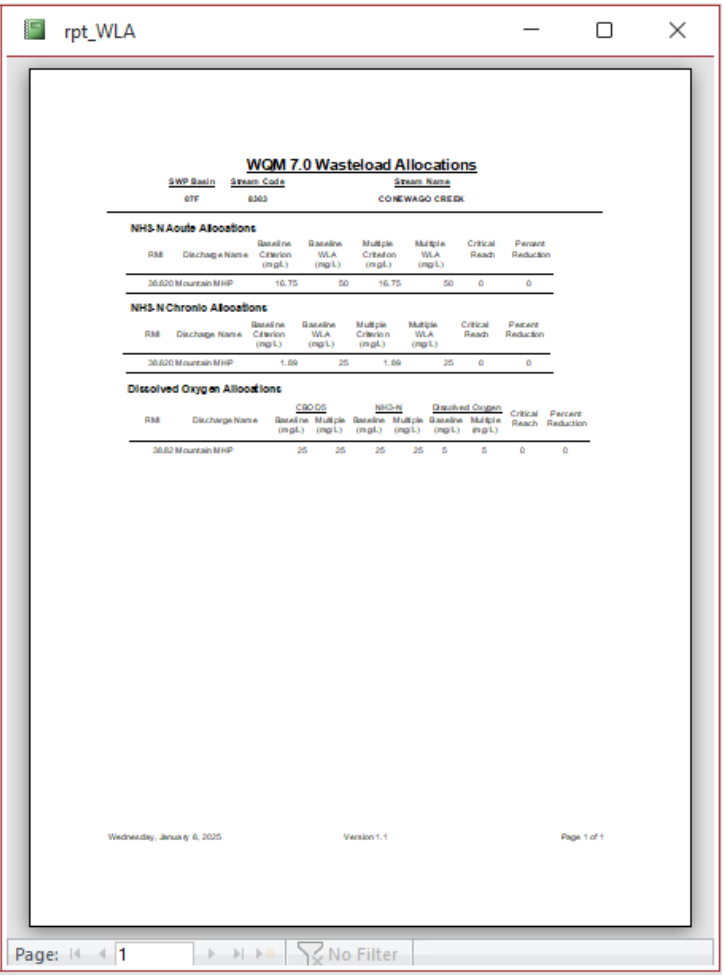
No Filter


rpt_WLA
WQM 7.0 Wasteload Allocations
SWP Basin
Stream Code
Stream Name
07F
8303
CONEWAGO 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
38.820 Mountain MHP
16.75
50
16.75
50
0
0
NH3-N Chronic Allocations
38.820 Mountain MHP
1.89
25
1.89
25
0
0
Dissolved Oxygen Allocations
CBOD5
NH3-N
Dissolved Oxygen
Baseline (mg/L)
Multiple (mg/L)
38.82 Mountain MHP
25
25
25
25
5
5
0
0
Wednesday, January 8, 2025
Version 1.1
Page 1 of 1
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No Filter

rptDOSim

WQM 7.0 D.O. Simulation

SWP Basin	Stream Code	Stream Name
07F	8303	CONEWAGO CREEK

RMI 38.820	Total Discharge Flow (mgd) 0.011	Analysis Temperature (°C) 20.000	Analysis pH 7.000
Reach Width (ft) 71.026	Reach Depth (ft) 0.906	Reach W/D Ratio 78.377	Reach Velocity (fps) 0.226
Reach CBOD5 (mg/L) 2.03	Reach Kc (1/days) 0.018	Reach NH3-N (mg/L) 0.03	Reach Kn (1/days) 0.700
Reach DO (mg/L) 8.238	Reach Kr (1/days) 0.451	Kr Equation Tsivoglou	Reach DO Goal (mg/L) 5
Reach Travel Time (days) 0.226			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.023	2.03	0.03	8.24
0.045	2.02	0.03	8.24
0.068	2.02	0.03	8.24
0.091	2.02	0.03	8.24
0.114	2.02	0.03	8.24
0.137	2.02	0.03	8.24
0.159	2.02	0.03	8.24
0.182	2.02	0.03	8.24
0.205	2.02	0.03	8.24
0.226	2.02	0.02	8.24

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rptModelSpecs

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		

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rptHydro

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
07F	8303	CONEWAGO 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												
38.820	14.67	0.00	14.67	.017	0.00029	.906	71.03	78.38	0.23	0.226	20.01	7.00
Q1-10 Flow												
38.820	9.39	0.00	9.39	.017	0.00029	NA	NA	NA	0.18	0.292	20.01	7.00
Q30-10 Flow												
38.820	19.86	0.00	19.86	.017	0.00029	NA	NA	NA	0.27	0.192	20.00	7.00

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rptGeneral

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	8303	CONEWAGO CREEK	38.820	386.00	219.00	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	0.067	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
Mountain MHP	PA0080616	0.0110	0.0110	0.0110	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

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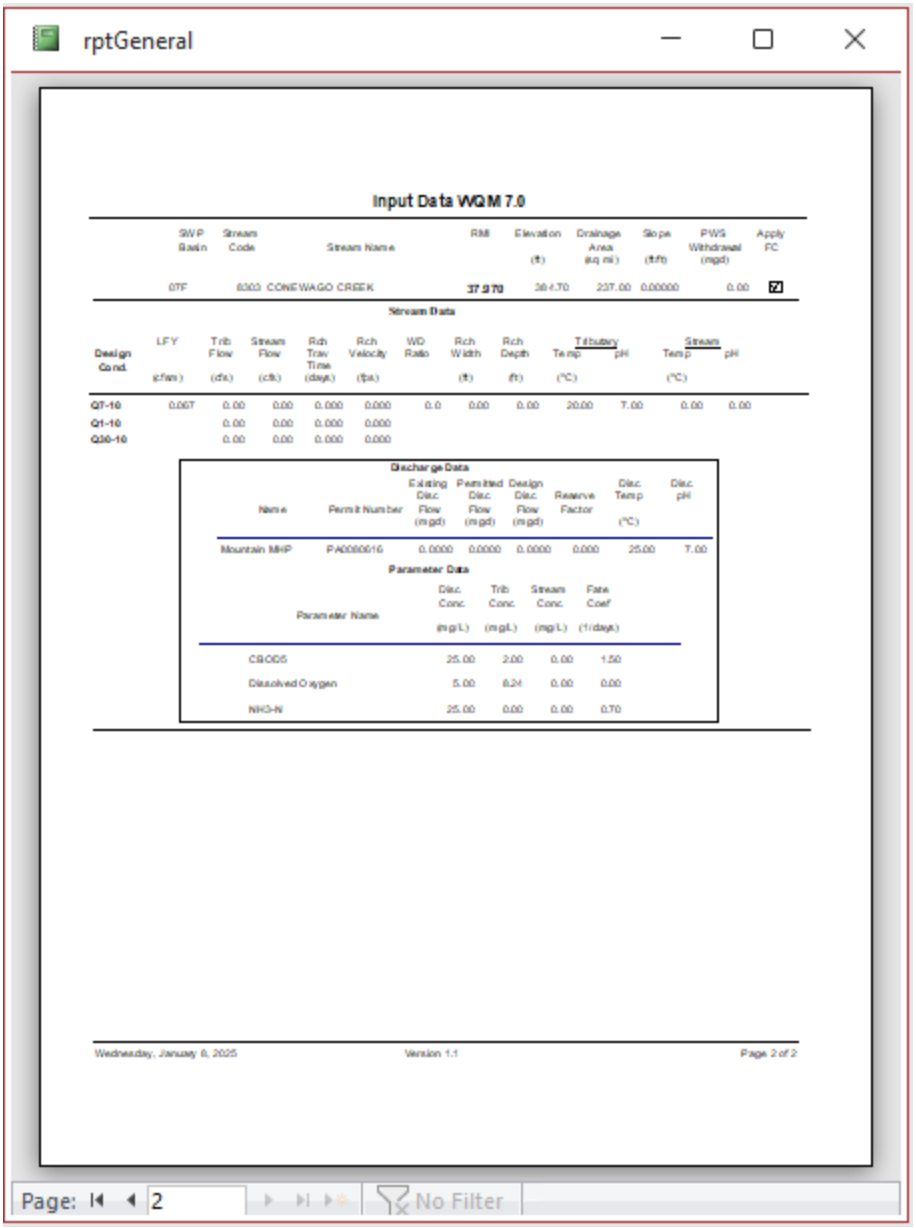
rptGeneral
Input Data WQM 7.0
SWP Basin
Stream Code
Stream Name
RMI
Elevation (ft)
Drainage Area (sq mi)
Slope (ft/ft)
PWS Withdrawal (mgd)
Apply FC
07F
8303
CONEWAGO CREEK
37.970
384.70
237.00
0.00000
0.00
Stream Data
Design Cond.
LFY (cfsm)
Trib Flow (cfs)
Stream Flow (cfs)
Rch Trav Time (days)
Rch Velocity (fps)
WD Ratio
Rch Width (ft)
Rch Depth (ft)
Tributary Temp (°C)
Tributary pH
Stream Temp (°C)
Stream pH
Q7-10
0.067
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
Mountain MHP
PA0080616
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
5.00
8.24
0.00
0.00
NH3-N
25.00
0.00
0.00
0.70
Wednesday, January 8, 2025
Version 1.1
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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	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
TRC	XXX	XXX	XXX	0.5	XXX	1.63	1/day	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	24-Hr Composite
TSS	XXX	XXX	XXX	30	XXX	60	2/month	24-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
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	10	XXX	20	2/month	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4	2/month	24-Hr Composite

Compliance Sampling Location:

Other Comments:

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
☐	Other: