Pennsylvania Department of Environmental Protection

Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0246484**
Facility Type	**Non-Municipal**	APS ID	**542007**
Major / Minor	**Minor**	Authorization ID	**1498178**

Applicant and Facility Information

Applicant Name	**AQUA PA Wastewater Inc.**	Facility Name	**Links At Gettysburg**
Applicant Address	762 W Lancaster Avenue	Facility Address	601 Mason Dixon Road
	Bryn Mawr, PA 19010		Gettysburg, PA 17325-8642
Applicant Contact	Mike Fili	Facility Contact	Stephen Draus
Applicant Phone	(570) 648-5783	Facility Phone	(570) 648-5783
Client ID	62614	Site ID	615172
Ch 94 Load Status	Not Overloaded	Municipality	Mount Joy Township
Connection Status	No Limitations	County	Adams
Date Application Received	August 28, 2024	EPA Waived?	Yes
Date Application Accepted	September 4, 2024	If No, Reason	

Purpose of Application: NPDES permit renewal.

Summary of Review

Entech Engineers, Inc., on behalf of AQUA PA Wastewater, Inc., has applied to the Pennsylvania Department of Environmental Protection (DEP) for issuance of the NPDES permit. The permit was issued on February 26, 2020, became effective on March 1, 2020, and expires on February 28, 2025. The NPDES PA0246484 A-1 minor amendment was issued on 4/8/2022 to correct a typographical error of the annual average design flow from 0.060 MGD to 0.11 MGD as per planning approval.

This facility receives 100% of its flow from Links at Gettysburg Golf Course Community. There are no industrial contributors. The average annual design flow and hydraulic design capacity is 0.11 MGD, and the organic loading capacity is 250 lbs BOD_5/day.

The original WQM Part II 0102404 was issued on October 31, 2002, #0102404 05-1 was amended on January 28, 2005 to change the ownership from the Links at Gettysburg Utility Company LLC to Little Washington Wastewater Company and to change the disinfection system from chlorine to ultraviolet, and #0102404 T-1 was amended on December 19, 2013 to change from Little Washington Wastewater Company, Inc. to AQUA PA Wastewater, Inc.

The WQM No. 0102404 A-2 amendment was issued on 11/3/2022 to expand existing wastewater treatment plant to increase hydraulic capacity and annual design flow from 0.060 MGD to 0.11 MGD as per planning approval.

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

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	February 7, 2025
X		/s/ Daniel W. Martin, P.E. / Environmental Engineer Manager	February 14, 2025

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.11
Latitude	39º 43' 24.40"	Longitude	-77º 13' 43.16"
Quad Name	Taneytown	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Rock Creek (WWF)	Stream Code	59041
NHD Com ID	53321770	RMI	0.71 mile
Drainage Area	63.1 mi.^{2}	Yield (cfs/mi^2)	0.04
Q_{7-10} Flow (cfs)	2.45	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	370.73	Slope (ft/ft)	
Watershed No.	13-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Nutrients		
Source(s) of Impairment	Agriculture, Municipal Point Source Discharges		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	PA-MA State Border		
PWS Waters	Monocacy River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	Approximate 0.72 mile

Changes Since Last Permit Issuance:

Drainage Area
The discharge is to Rock Creek at RMI 0.71 miles. A drainage area upstream of the discharge is estimated to be 63.1 mi.^{2}, according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Streamflow
According to StreamStats, the discharge point on Rock Creek has a Q_{7-10} of 2.45 cfs and a drainage area of 63.1 mi.^{2}, which results in a Q_{7-10} low flow yield of 0.04 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} = 2.45 cfs
Low Flow Yield = 2.45 cfs / 63.1 mi.^{2} ≈ 0.04 cfs/mi.^{2}
Q_{30-10} = 1.36 * 2.45 cfs ≈ 3.3 cfs
Q_{1-10} = 0.64 * 2.45 cfs ≈ 1.56 cfs

Rock Creek
25 Pa Code § 93.9z classifies Rock Creek as warm water fishes and migratory fishes surface water. Based on the 2024 Integrated Water Quality Report, Rock Creek is impaired due to nutrients caused by agriculture and municipal point source (see Table 1). A TMDL does not currently exist for this stream segment.

2024 PA Integrated Water Quality Monitoring and Assessment Report Category 5 – Pollutants Requiring a TMDL			
Rock Creek (02070009)			
Aquatic Life (15114) – 20.94 miles			
Source	Cause	Date Listed	TMDL
Agriculture	Nutrients	2002	Medium
Municipal Point Source	Nutrients	2002	Medium

Table 1 Impaired for one or more designated used by any pollutant and requiring a TMDL

Public Water Supply

The nearest downstream public water supply is the PA-MD State Border located on the Rock Creek, approximately 0.72 miles downstream of the discharge point. Based on the nature of discharge, the discharge is not expected to impact the public water supply standards.

Treatment Facility Summary

Treatment Facility Name: Links At Gettysburg Golf Course

WQM Permit No.	Issuance Date
0102404	10/31/2002
0102404 05-1	1/28/2005
0102404 A-1	12/19/2013
0102404 A-2	11/3/2022

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	Ultraviolet	0.11

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.11	250	Not Overloaded	Anaerobic Digestion	Other WWTP

Changes Since Last Permit Issuance:

Other Comments:
The facility process consist of:
Auger Monster Influent Screen / Aluminum Bar Screen (1) ⇒ EQ Tank (1) ⇒ Aeration Tanks (2) ⇒ Clarifiers (2) ⇒ Sludge Holding Tank (1) ⇒ new UV disinfection (1) ⇒ Discharge to Rock Creek

Chemical used:
The system incorporates chemical addition in the form of poly aluminum chloride (DEL PAC 2020) (for coagulation), and soda ash (for pH control).

Biosolids:
The total sewage sludge/biosolids production within the facility for the previous year was 8.632 dry tons.

Industrial/Commercial Users:
The permit application indicated there is no industrial/commercial contributor to the treatment plant.

Compliance History

Summary of DMRs:	DMRs reported last 12 months are summarized in the next page.
Summary of Inspections:	1/4/2024: Mr. Hoy, DEP WQS, conducted a compliance evaluation inspection. The discharge was clear. The field test results indicated in permit limits. There were no violations indicate during inspection. DEP's recommendations: 1. Keeping physical copies of discharge monitoring reports, sample results, and supplemental reports on-site. 2. Clearing the leaves so the outfall is easily identified.
Other Comments:	There are currently no open violations associated with the permittee or the facility.

Other Comments:

Compliance History

DMR Data for Outfall 001 (from January 1, 2024 to December 31, 2024)

Parameter	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24
Flow (MGD) Average Monthly	0.0352	0.0232	0.0330	0.0390	0.0486	0.0411	0.0332	0.0491	0.0461	0.0491	0.0392	0.0531
Flow (MGD) Daily Maximum	0.1022	0.0402	0.1159	0.0891	0.1686	0.0926	0.0611	0.1324	0.1834	0.1324	0.0991	0.1420
pH (S.U.) Daily Minimum	7.96	7.96	7.92	7.89	8.07	8.0	8.13	7.77	7.97	7.77	7.35	7.93
pH (S.U.) Instantaneous Maximum	8.27	8.35	8.39	8.48	8.54	8.51	8.48	8.32	8.36	8.32	8.48	8.41
DO (mg/L) Daily Minimum	6.48	5.79	5.4	5.29	5.15	5.37	5.03	6.57	6.03	6.57	6.12	5.64
CBOD5 (mg/L) Average Monthly	9.86	< 2	< 2.97	< 2.5	8.91	8.85	5.58	4.2	3.09	4.2	3.74	6.88
CBOD5 (mg/L) Instantaneous Maximum	12.8	< 2	3.93	< 3	10.10	13.7	8.52	4.36	3.9	4.36	4.79	10.6
TSS (mg/L) Average Monthly	14.5	8.3	3	5	2.8	7.5	6	10.5	2.8	10.5	4.8	11.3
TSS (mg/L) Instantaneous Maximum	18	10.5	4.5	6	3	11	8.5	14	3	14	5	13.5
Fecal Coliform (No./100 ml) Geometric Mean	26.8	< 3.2	10.5	< 2.8	< 7.2	< 1	30.7	< 5.5	< 1	< 5.5	7	23.5
Fecal Coliform (No./100 ml) Instantaneous Maximum	45	10	22	8	52	< 1	111	30	< 1	30	9	24
UV Transmittance (%) Daily Minimum	79.7	72	71.3	72.5	70.4	73.1	75	74.8	73.5	74.8	69.6	72.1
Total Phosphorus (mg/L) Average Monthly	1.062	0.340	0.585	0.429	0.661	0.648	0.802	< 0.181	0.313	< 0.181	0.441	0.410
Total Phosphorus (mg/L) Instantaneous Maximum	1.45	0.0588	0.736	0.541	0.691	0.712	0.889	0.311	0.343	0.311	0.566	0.454

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	Daily 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
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/week	Measured
$CBOD_5$	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
Total Nitrogen	Report Annl Avg	Report Total Annual	XXX	Report Annl Avg	XXX	XXX	1/year	Calculation
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4.0	2/month	8-Hr Composite

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .11
Latitude 39º 43' 24.40" **Longitude** -77º 13' 43.16"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

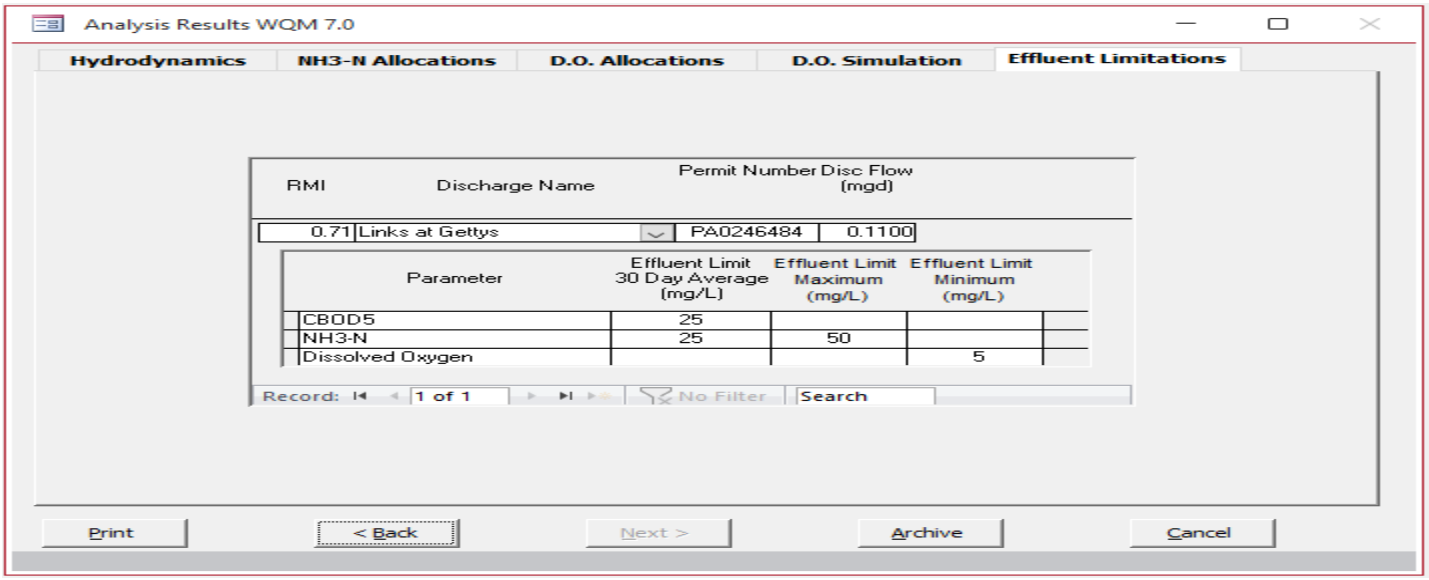
Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	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 Total Residual Chlorine is not applied to this facility. Because the facility utilizes UV for disinfection.

Water Quality-Based Limitations

Ammonia (NH_3-N):
NH_3-N 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)



The printout of the WQM 7.0 (ver. 1.1) output indicates that at a discharge of 0.11 MGD, limits (rounded according to the NPDES Technical Guidance 362-0400-001) of 25.0 mg/L NH_3-N as a monthly average and 50.0 mg/L NH_3-N instantaneous maximum are necessary to protect the aquatic life from toxicity effects.

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. This limit is consistent with the before upgrade permit. Therefore, the limits of 25.0 mg/L monthly average (AML), and 50.0 mg/L instantaneous maximum will remain in the amendment permit.

Total Suspended Solids (TSS):
The existing technology-based limits of 30.0 mg/L average monthly, and 60.0 mg/L instantaneous maximum will remain in the amendment permit based on the minimum level of effluent quality attainable by secondary treatment based on 25 Pa. Code § 92a.47.

Dissolved Oxygen (D.O.):
A minimum D.O. of 5.0 mg/L is required per 25 Pa. Code § 93.7. This is consistent with the previous permit and current Department criteria.

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

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 1,000/100 ml and 25 Pa Code § 92a.47.(a)(5) requires a winter limit of 2,000/100 ml as a geometric mean and an instantaneous maximum not greater than 10,000/100 ml.

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/quarter will be included in the permit to be consistent with the recommendation from this SOP.

UV:
The UV system daily monitor and report the UV light transmittance (%) after update to replace chlorine disinfection to UV disinfection system will be in the amendment permit.

Toxic:
DEP's current permit renewal application for minor sewage facilities greater than 0.1 MGD requires sampling of Total Copper, Total Lead, and Total Zinc. The application reported non-detect sample results for Total Lead. Total Copper and Total Zinc were detected in effluent, but the reported levels are below the current water quality criteria. No reasonable potential analysis is needed for this permit term based on the review of these sample results.

Chesapeake Bay Strategy

The Department formulated a strategy to comply with the EPA and Chesapeake Bay Foundation requirements by reducing point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP). Sewage discharges have been prioritized by Central Office based on their delivered TN loadings to the Bay. The highest priority (Phases 1, 2, and 3) dischargers will receive 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. These limits may be achieved through a combination of treatment technology, credits, or offsets. Phase 4 (0.2 -0.4 MGD) will be required to monitor and report TN and TP during permit renewal monthly and Phase 5 (below 0.2 MGD) will monitor during current permit renewal once a year. However, any facility in Phases 4 and 5 that undergoes expansion is subjected to cap load right away. This plant is classified as a phase 5, will be required to monitor and report TN once a year, and the 2.0 mg/L TP average monthly and 4.0 mg/L IMAX limits will remain in the proposed permit.

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, and pH; bi-monthly effluent grab samples of $CBOD_5$, and TSS; bi-monthly effluent grab samples of fecal coliform; weekly record UV light transmittance (%); bi-monthly effluent 8-hour composite samples of TP; and annual effluent calculate samples of TN. 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.

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.

303d Listed Streams

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

Class A Wild Trout Fisheries

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

Anti-Backsliding

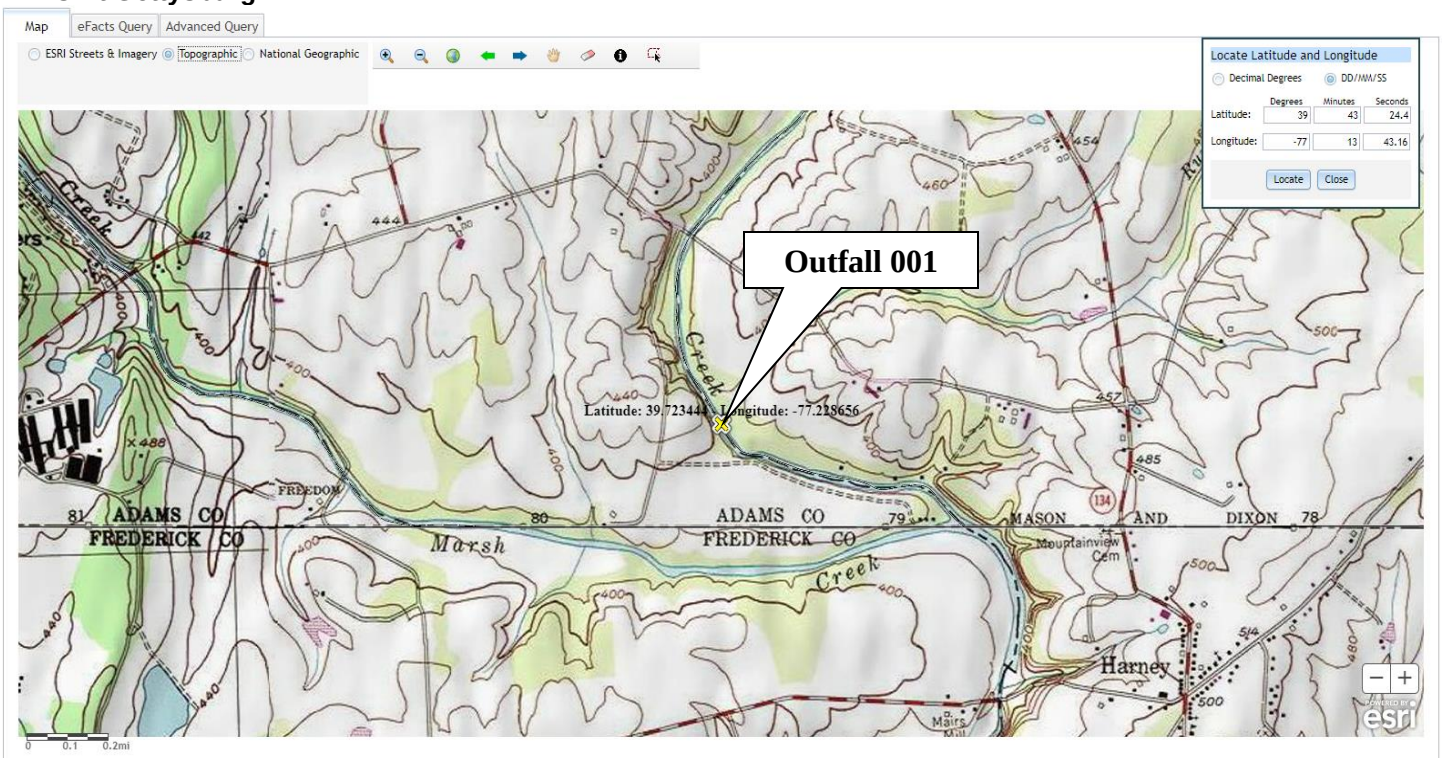
Unless stated otherwise in this fact sheet, all permit requirements proposed in this fact sheet are at least as stringent as existing permit requirements in accordance with 40 CFR §122.44(l)(1).

WQM 7.0

• 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 mg/L	(Default)

1. Outfall 001 on Rock Creek (59041)
    a. Elevation: 370.73 ft
    b. RMI: 0.71 miles to PA & MD boundaries
    c. Drainage Area: 63.1 $mi.^2$
    d. Low Flow Yield: 0.04 $cfs/mi.^2$
    e. Discharge Flow: 0.11 MGD

2. Just before Rock Creek to PA-MD border
    a. Elevation: 363.74 ft
    b. RMI: 0.001 miles to PA & MD boundaries
    c. Drainage Area: 63.5 $mi.^2$
    d. Low Flow Yield: 0.04 $cfs/mi.^2$
    e. Discharge Flow: 0.000 MGD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Topographic
National Geographic
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Decimal Degrees
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Degrees
Minutes
Seconds
Latitude: 39 43 24.4
Longitude: -77 13 43.16
Locate
Close
Outfall 001
Latitude: 39.723444 Longitude: -77.228656
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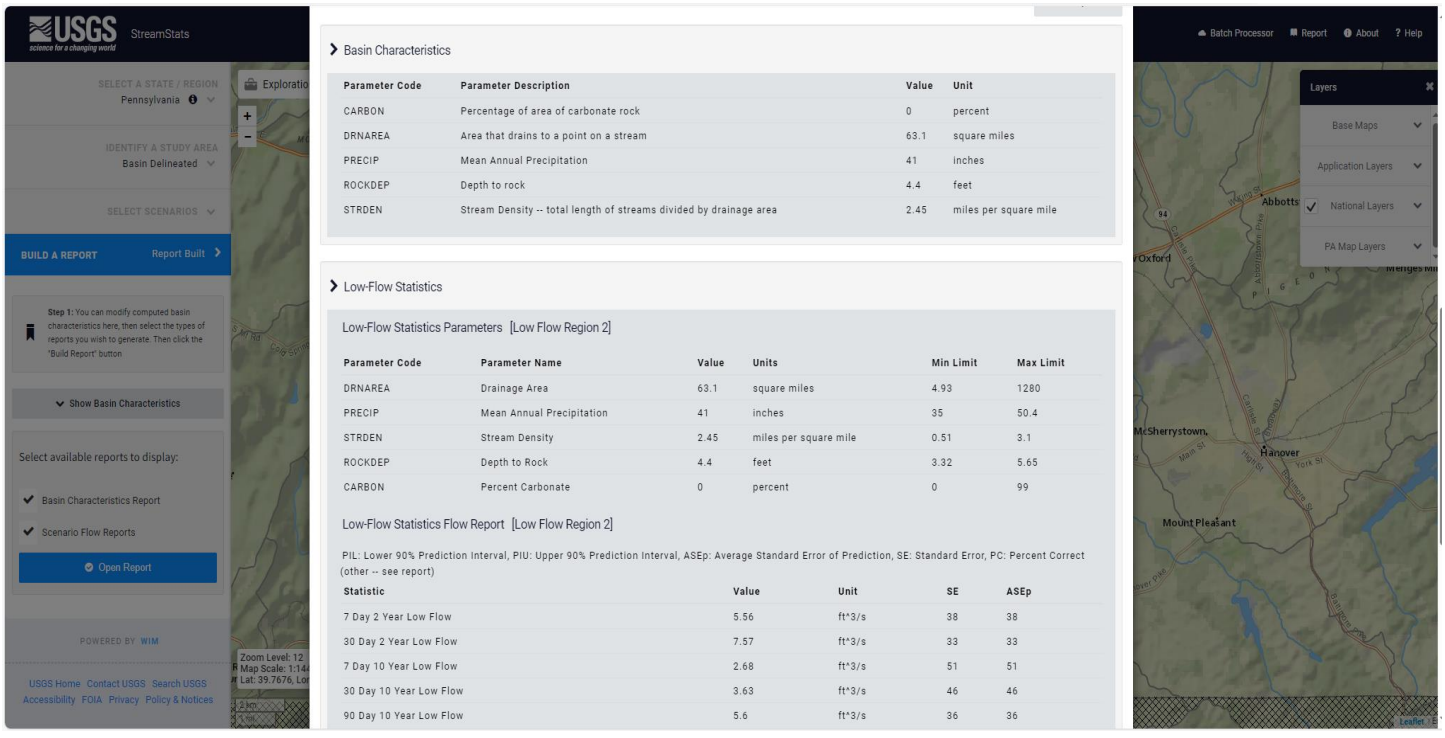
FREDERICK CO
Marsh
Creek
MASON AND DIXON
Mountainview Cem
Harney
FREEDOM
esri


USGS StreamStats
Basin Characteristics
Parameter Code | Parameter Description | Value | Unit
CARBON | Percentage of area of carbonate rock | 0 | percent
DRNAREA | Area that drains to a point on a stream | 63.1 | square miles
PRECIP | Mean Annual Precipitation | 41 | inches
ROCKDEP | Depth to rock | 4.4 | feet
STRDEN | Stream Density -- total length of streams divided by drainage area | 2.45 | miles per square mile
Low-Flow Statistics
Low-Flow Statistics Parameters [Low Flow Region 2]
Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit
DRNAREA | Drainage Area | 63.1 | square miles | 4.93 | 1280
PRECIP | Mean Annual Precipitation | 41 | inches | 35 | 50.4
STRDEN | Stream Density | 2.45 | miles per square mile | 0.51 | 3.1
ROCKDEP | Depth to Rock | 4.4 | feet | 3.32 | 5.65
CARBON | Percent Carbonate | 0 | percent | 0 | 99
Low-Flow Statistics Flow Report [Low Flow Region 2]
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 | 5.56 | ft^3/s | 38 | 38
30 Day 2 Year Low Flow | 7.57 | ft^3/s | 33 | 33
7 Day 10 Year Low Flow | 2.68 | ft^3/s | 51 | 51
30 Day 10 Year Low Flow | 3.63 | ft^3/s | 46 | 46
90 Day 10 Year Low Flow | 5.6 | ft^3/s | 36 | 36
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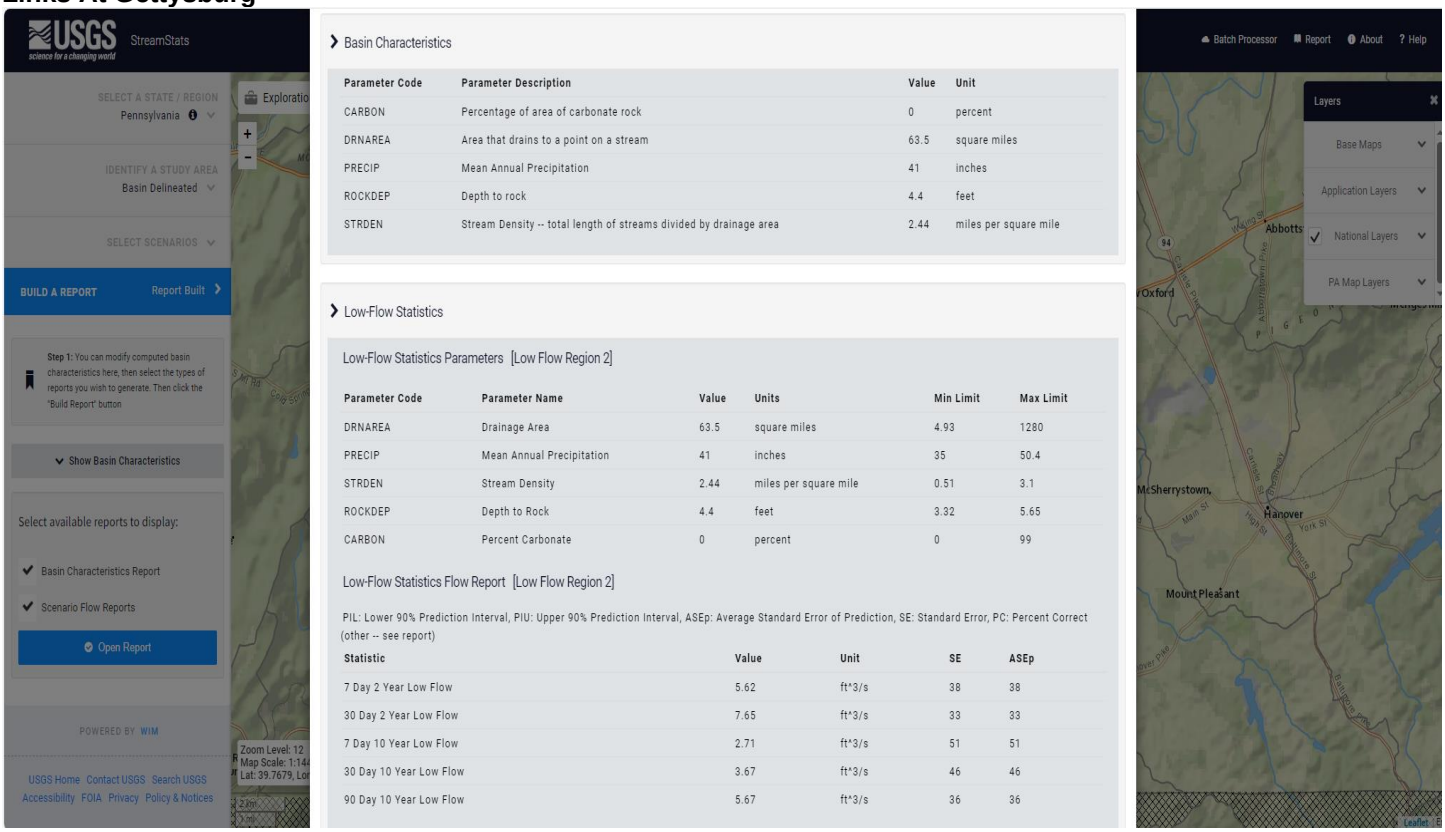
Mount Pleasant


USGS StreamStats
Basin Characteristics
Parameter Code | Parameter Description | Value | Unit
CARBON | Percentage of area of carbonate rock | 0 | percent
DRNAREA | Area that drains to a point on a stream | 63.5 | square miles
PRECIP | Mean Annual Precipitation | 41 | inches
ROCKDEP | Depth to rock | 4.4 | feet
STRDEN | Stream Density -- total length of streams divided by drainage area | 2.44 | miles per square mile
Low-Flow Statistics
Low-Flow Statistics Parameters [Low Flow Region 2]
Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit
DRNAREA | Drainage Area | 63.5 | square miles | 4.93 | 1280
PRECIP | Mean Annual Precipitation | 41 | inches | 35 | 50.4
STRDEN | Stream Density | 2.44 | miles per square mile | 0.51 | 3.1
ROCKDEP | Depth to Rock | 4.4 | feet | 3.32 | 5.65
CARBON | Percent Carbonate | 0 | percent | 0 | 99
Low-Flow Statistics Flow Report [Low Flow Region 2]
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 | 5.62 | ft^3/s | 38 | 38
30 Day 2 Year Low Flow | 7.65 | ft^3/s | 33 | 33
7 Day 10 Year Low Flow | 2.71 | ft^3/s | 51 | 51
30 Day 10 Year Low Flow | 3.67 | ft^3/s | 46 | 46
90 Day 10 Year Low Flow | 5.67 | ft^3/s | 36 | 36
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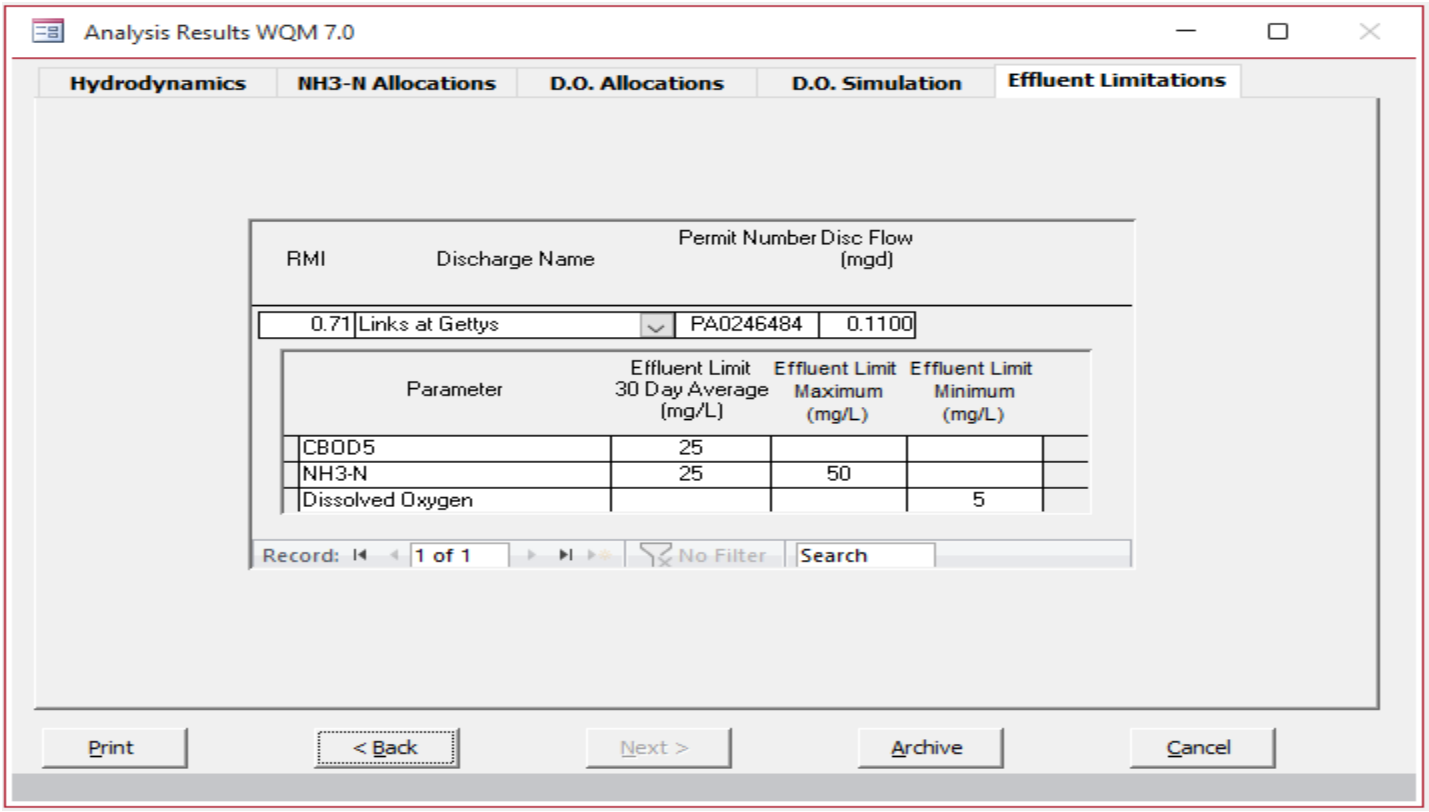
National Layers
PA Map Layers
Abbotts
Oxford
McSherrystown
Hanover
Mount Pleasant


Analysis Results WQM 7.0
Hydrodynamics
NH3-N Allocations
D.O. Allocations
D.O. Simulation
Effluent Limitations
RMI
Discharge Name
Permit Number
Disc Flow (mgd)
0.71
Links at Gettys
PA0246484
0.1100
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
13D	59041	ROCK 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)
0.710	Links at Gettys	PA0246484	0.110	CBODS	25		
				NH3-N	25	50	
				Dissolved Oxygen			5

Wednesday, February 5, 2025 Version 1.1 Page 1 of 1

Page: 1 No Filter

rpt_WLA

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
13D	59041	ROCK 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
0.710	Links at Gettys	16.11	50	16.11	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
0.710	Links at Gettys	1.66	25	1.66	25	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5 Baseline (mg/L)	CBOD5 Multiple (mg/L)	NH3-N Baseline (mg/L)	NH3-N Multiple (mg/L)	Dissolved Oxygen Baseline (mg/L)	Dissolved Oxygen Multiple (mg/L)	Critical Reach	Percent Reduction
0.71	Links at Gettys	25	25	25	25	5	5	0	0

Wednesday, February 5, 2025 Version 1.1 Page 1 of 1

Page: 1 No Filter

rptDOSim

WQM 7.0 D.O. Simulation

SWP Basin	Stream Code	Stream Name
13D	59041	ROCK CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.710	0.110	20.316	7.000
Reach Width (ft)	Reach Depth (ft)	Reach W/D Ratio	Reach Velocity (fps)
30.343	0.655	46.306	0.136
Reach CBOD5 (mg/L)	Reach Kc (1/days)	Reach NH3-N (mg/L)	Reach Kn (1/days)
3.45	0.598	1.56	0.717
Reach DO (mg/L)	Reach Kr (1/days)	Kr Equation	Reach DO Goal (mg/L)
8.038	2.422	Tsivoglou	5
Reach Travel Time (days)			
0.320			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.032	3.39	1.54	7.66
0.064	3.32	1.51	7.71
0.096	3.26	1.47	7.57
0.128	3.20	1.44	7.45
0.160	3.13	1.41	7.34
0.192	3.07	1.38	7.24
0.224	3.01	1.34	7.16
0.256	2.96	1.31	7.09
0.288	2.90	1.28	7.03
0.320	2.84	1.26	6.97

Wednesday, February 5, 2025 Version 1.1 Page 1 of 1

Page: 1 No Filter

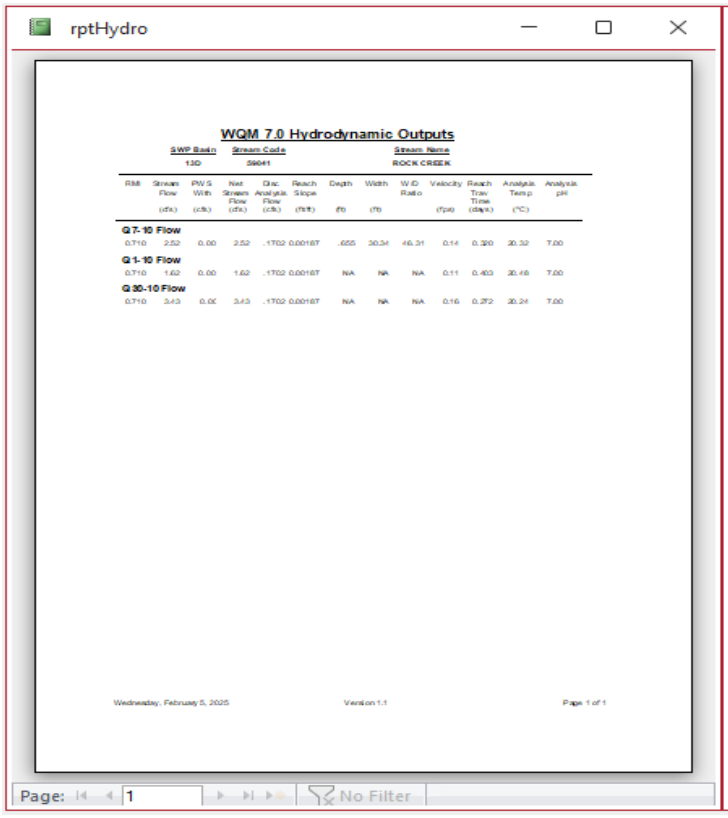
rptModelSpecs

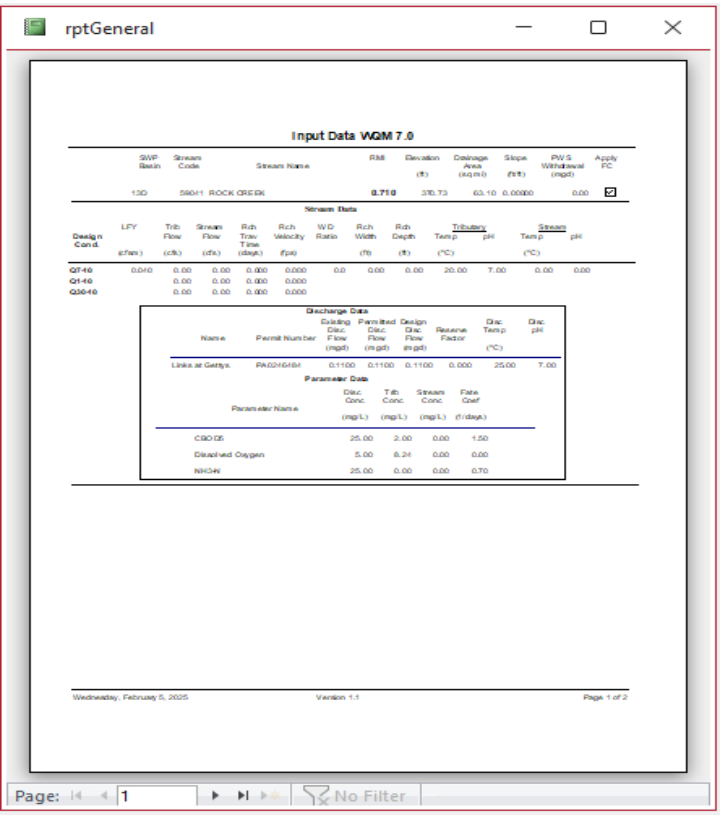
WQM 7.0 Modeling Specifications

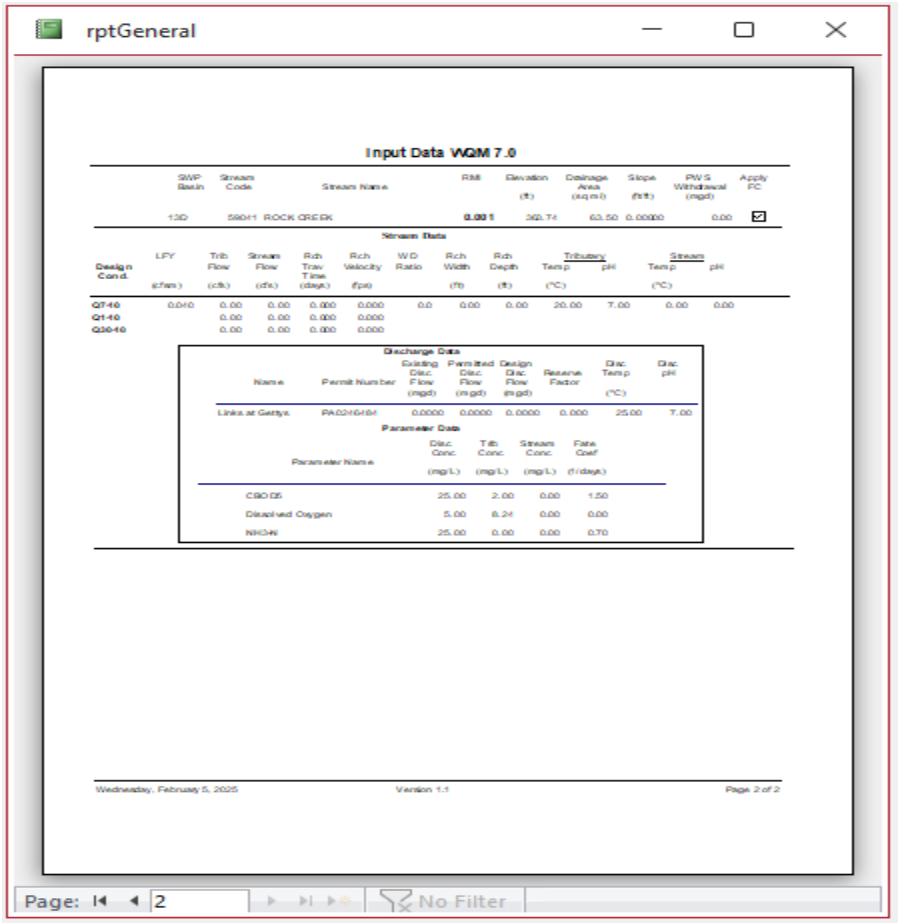
Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

Wednesday, February 5, 2025 Version 1.1 Page 1 of 1

Page: 1 No Filter


rptHydro
WQM 7.0 Hydrodynamic Outputs
SWP Basin
13D
Stream Code
59041
Stream Name
ROCK 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
0.710 2.52 0.00 2.52 .1702 0.00187 .655 30.34 46.31 0.14 0.320 20.32 7.00
Q1-10 Flow
0.710 1.62 0.00 1.62 .1702 0.00187 NA NA NA 0.11 0.403 20.48 7.00
Q30-10 Flow
0.710 3.43 0.00 3.43 .1702 0.00187 NA NA NA 0.16 0.272 20.24 7.00
Wednesday, February 5, 2025
Version 1.1
Page 1 of 1
Page: 1
No Filter


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
13D 59041 ROCK CREEK 0.710 370.73 63.10 0.00000 0.00
Stream Data
Design Cond.
LFY (cfm)
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 0.040 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
Links at Gettys PA0246484 0.1100 0.1100 0.1100 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, February 5, 2025
Version 1.1
Page 1 of 2
Page: 1
No Filter


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
13D 59041 ROCK CREEK 0.001 362.74 63.50 0.00000 0.00
Stream Data
Design Cond.
LFY (cfm)
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 0.040 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
Links at Gettys PA0246484 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, February 5, 2025
Version 1.1
Page 2 of 2
Page: 2
No Filter

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	Daily 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
CBOD5	XXX	XXX	XXX	25.0	XXX	50.0	2/month	Grab
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	Grab
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
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/week	Measured
Total Nitrogen	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	Calculation
Total Nitrogen (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4.0	2/month	8-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: