Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0218782**
Facility Type	**Municipal**	APS ID	**1126990**
Major / Minor	**Minor**	Authorization ID	**1508754**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Menallen Township Fayette County**	Facility Name	**Rock Works STP**
Applicant Address	427 Searights Herbert Road Suite 1	Facility Address	Unknown
	Uniontown, PA 15401-5137		Uniontown, PA 15401
Applicant Contact	Randy Brown	Facility Contact	Ricky Ditmore
Applicant Phone	(724) 245-7108	Facility Phone	724-245-7108
Client ID	43759	Site ID	544076
Ch 94 Load Status	Existing Organic Overload	Municipality	Menallen Township
Connection Status	Dept. Imposed Connection Prohibitions	County	Fayette
Date Application Received	December 6, 2024	EPA Waived?	Yes
Date Application Accepted		If No, Reason	
Purpose of Application	Renewal of a NPDES permit		

Summary of Review

The permittee has applied for a renewal of NPDES Permit No. PA0218782 on December 6, 2024. NPDES Permit No. PA0218782 was previously issued by the PA Department of Environmental Protection (DEP) on July 1, 2020 and expired on June 30, 2025.

Sewage from this facility is treated through SBRs, aerobic digestion, and UV disinfection.

The applicant is currently enrolled in and will continue to use eDMR.

The applicant has complied with Act 14 Notifications and no comments were received.

Draft Permit issuance is recommended.

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		Jordan T Coldsmith Jordan Coldsmith / Environmental Engineering Specialist	August 11, 2025
X		Mahbuba Iasmin Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	October 8, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.175
Latitude	39º 56' 33"	Longitude	-79º 50' 2"
Quad Name	New Salem	Quad Code	39079H7
Wastewater Description:	Sewage Effluent		
Receiving Waters	Saltlick Run (WWF)	Stream Code	40203
NHD Com ID	99414576	RMI	1.01
Drainage Area	3.95	Yield (cfs/mi^2)	0.01
Q_{7-10} Flow (cfs)	0.0434	Q_{7-10} Basis	USGS StreamStat
Elevation (ft)	1137	Slope (ft/ft)	
Watershed No.	19-C	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	SILTATION, SILTATION, SILTATION		
Source(s) of Impairment	AGRICULTURE, EROSION FROM DERELICT LAND (BARREN LAND), HIGHWAY/ROAD/BRIDGE RUNOFF (NON-CONSTRUCTION RELATED)		
TMDL Status		Name	

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

Nearest Downstream Public Water Supply Intake	NEWELL MUNI AUTH		
PWS Waters	Monongahela River (WWF)	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	21.3

Changes Since Last Permit Issuance: none

Other Comments:

The discharge is to Saltlick Run which flows into the Saltlick Run Watershed that has a Final TMDL and is impaired by metals and pH. Abandoned mine drainage is source of such impairment. No WLAs have been developed for this sewage discharge. There is currently no application data to show the concentration values for total aluminum, total iron, and total manganese. Monitoring requirements for these pollutants will be placed on this facility for this permit cycle and these pollutants will be re-evaluated during the next permit renewal cycle.

Treatment Facility Summary

Treatment Facility Name: Menallen Township Sewer Authority - Rock Works STP

WQM Permit No.	Issuance Date
2602403	January 15, 2003

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Sequencing Batch Reactor	Ultraviolet	0.086

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.175	149	Existing Organic Overload	Aerobic Digestion	Combination of methods

Changes Since Last Permit Issuance: None

Other Comments: the current treatment process consists of:

- SBRs
- aerobic digestion
- UV disinfection.

Compliance History

Operations Compliance Check Summary Report

Facility: MENALLEN TWP SEW AUTH - ROCK WORKS STP

NPDES Permit No.: PA0218782

Compliance Review Period: 8/1/20-8/19/25

Inspection Summary:

INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC
07/03/2025	Chapter 94 Inspection	PA Dept of Environmental Protection	Administratively Closed
11/10/2021	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 43759

Enforcement Summary:

No enforcements executed during review period

Effluent Violation Summary:

MON PD	PARAMETER	REPORTED VALUE	PERMIT LIMIT	UNIT	STAT_BASE_CODE	FACILITY COMMENTS
Sep-24	Final Effluent	Fecal Coliform	1355	1000	No./100 ml	Instantaneous Maximum
Sep-24	Final Effluent	Fecal Coliform	238	200	No./100 ml	Geometric Mean
Apr-24	Final Effluent	Ammonia-Nitrogen	13.8	7.2	mg/L	Average Monthly
Mar-24	Final Effluent	Ammonia-Nitrogen	16	10	lbs/day	Average Monthly
Mar-24	Final Effluent	Ammonia-Nitrogen	19.3	7.2	mg/L	Average Monthly
Feb-24	Final Effluent	Ammonia-Nitrogen	10.6	7.2	mg/L	Average Monthly
Sep-23	Final Effluent	Fecal Coliform	233	200	No./100 ml	Geometric Mean
Jul-23	Final Effluent	Fecal Coliform	1360	1000	No./100 ml	Instantaneous Maximum
Jun-23	Final Effluent	Dissolved Oxygen	3.9	5	mg/L	Instantaneous Minimum
May-23	Final Effluent	Ammonia-Nitrogen	7	3.5	lbs/day	Average Monthly
May-23	Final Effluent	Ammonia-Nitrogen	7.9	2.4	mg/L	Average Monthly
Oct-21	Final Effluent	Ammonia-Nitrogen	4.1	2.4	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 at this time. Recent effluent exceedances will be addressed at the time of the next Compliance Evaluation Inspection

Completed by: Amanda Illar **Completed date:** 8/19/25

Compliance History

DMR Data for Outfall 001 (from July 1, 2024 to June 30, 2025)

Parameter	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24
Flow (MGD) Average Monthly	0.087	0.115	0.11	0.0572	0.111	0.076	0.07	0.063	0.053	0.056	0.057	0.056
Flow (MGD) Daily Maximum	0.100	0.16	0.395	0.0898	0.286	0.182	0.131	0.109	0.066	0.072	0.113	0.091
pH (S.U.) Instantaneous Minimum	6.6	6.5	6.5	6.5	6.4	6.6	6.3	6.5	6.5	6.7	6.8	6.8
pH (S.U.) Daily Maximum	7.3	7.3	7.25	7.2	7.3	7.3	7.6	8.3	7.2	7.2	7.4	7.5
DO (mg/L) Instantaneous Minimum	5.9	5.6	5.9	6.0	6.0	5.6	7.0	6.7	5.8	5.1	5.5	5.4
CBOD5 (lbs/day) Average Monthly	< 1.0	2.0	< 2.0	2.0	< 1.3	< 1.8	< 1.5	< 1.0	< 1.0	< 0.9	< 0.9	< 0.9
CBOD5 (lbs/day) Weekly Average	2.0	4.0	3.0	4.0	< 1.6	< 2.3	< 1.9	< 1.3	1.3	< 1.0	1.1	< 1.0
CBOD5 (mg/L) Average Monthly	< 2.5	3.1	< 3.5	4.2	< 2.0	3.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
CBOD5 (mg/L) Weekly Average	3.0	3.7	6.0	7.2	2.0	4.0	< 2.0	< 2.0	3.0	2.0	3.0	< 5.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	70	67	55	85	67	93	92	51	81.0	44	43	46
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	137	96	70	114	103	212	166	72	171	63	58	52
BOD5 (mg/L) Raw Sewage Influent Average Monthly	98	98	99	210	111	142	134	108	186	100	98	103
TSS (lbs/day) Average Monthly	< 3.0	< 4.0	< 3.0	2.0	< 3.2	< 3.2	< 3.5	< 3.2	< 2.2	< 2.8	< 2.3	< 2.2
TSS (lbs/day) Raw Sewage Influent Average Monthly	90	47	77	85	65	112	65	31	87.0	16	32	23

TSS (lbs/day) Raw Sewage Influent Daily Maximum	152	91	198	162	90	212	132	64	238	25	60	38
TSS (lbs/day) Weekly Average	< 4.0	< 8.0	< 5.0	3.0	< 5.0	< 3.6	< 4.8	5.1	< 2.4	4.8	2.5	< 2.4
TSS (mg/L) Average Monthly	< 5.0	< 5.0	< 5.0	5.0	< 5.0	< 5.0	< 5.0	< 7.0	< 5.0	< 6.0	< 5.0	< 5.0
TSS (mg/L) Raw Sewage Influent Average Monthly	136	93	131	218	108	167	96	65	204	36	74	52
TSS (mg/L) Weekly Average	< 5.0	6.0	< 5.0	5.0	< 5.0	< 5.0	< 5.0	11.0	5.0	10.0	6.0	< 5.0
Fecal Coliform (No./100 ml) Geometric Mean	< 2.0	< 17	463	207	140	46	< 2.0	< 1	< 3.0	238	21	< 2
Fecal Coliform (No./100 ml) Instantaneous Maximum	10.0	113	5200	1670	259	1340	6.0	< 1	28.0	1355	158	9
UV Transmittance (%) Instantaneous Minimum	61.2	69.3	55.0	58.6	51.0	44.0	54	50	46.0	57.0	62	63
Total Nitrogen (mg/L) Daily Maximum							4.114					
Ammonia (lbs/day) Average Monthly	< 0.3	0.9	< 0.3	1.0	0.6	0.2	< 0.3	< 0.08	0.5	0.6	0.6	0.3
Ammonia (mg/L) Average Monthly	< 0.6	1.3	< 0.4	2.4	0.9	0.3	< 0.4	< 0.2	1.0	1.3	1.4	0.8
Total Phosphorus (mg/L) Daily Maximum							5.9					

Compliance History

Effluent Violations for Outfall 001, from: August 1, 2024 To: June 30, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	09/30/24	Geo Mean	238	No./100 ml	200	No./100 ml
Fecal Coliform	09/30/24	IMAX	1355	No./100 ml	1000	No./100 ml

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .175
Latitude 39º 56' 33" **Longitude** -79º 50' 2"
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)

Water Quality-Based Limitations

The discharge was evaluated using WQM7.0 to determine the $CBOD_5$, ammonia nitrogen, and dissolved oxygen parameters. The model results showed no change in CBOD5 and DO and more restrictive limits for ammonia-nitrogen.

Parameter	Limit (mg/l)	SBC	Model
DO	5	Inst Min.	WQM 7
Ammonia-Nitrogen (May 1 – Oct 31)	2.17 4.34	Average Monthly IMAX	WQM 7
Ammonia-Nitrogen (Nov 1 – Apr 30)	3.56 7.12	Average Monthly IMAX	WQM 7
$CBOD_5$	25.0 50.0	Average Monthly IMAX	WQM 7

Submitted eDMR data shows that the facility is capable of meeting these new, more restrictive limits for ammonia-nitrogen, therefore, no compliance schedule will be given.

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.

No permit limits and/or monitoring requirements have been relaxed in this permit cycle.

Mass Loading Limitations

Per Department SOP "Establishing Effluent Limitations for Individual Sewage Permits" (BCW-PMT-033), mass loading limits will be established for POTWs for $CBOD_5$, TSS, ammonia nitrogen. For non-municipal sewage facilities, and for toxic pollutants with effluent concentration limits, mass loading limits may be established at the application manager's discretion. Average monthly mass loading limits will be established for $CBOD_5$, TSS, and ammonia nitrogen. Average weekly mass loading limits will be established for $CBOD_5$ and TSS. Mass loading limits will be calculated according to the formula below:

$$average\ annual\ design\ flow\ (MGD) \times concentration\ limit\ \left(\frac{mg}{L}\right) \times 8.34\ (converstion\ factor) = mass\ loading\ limit\ (\frac{lbs}{day})$$

The following mass loading limitations were calculated:

Parameter	Average Monthly (lbs/day)	Average Weekly (lbs/day)
$CBOD_5$	36.0	54.0
TSS	43.0	65.0
Ammonia-Nitrogen Nov 1 - Apr 30	5.19	N/A
Ammonia-Nitrogen May 1 - Oct 31	3.16	N/A

Additional Considerations

Monitoring frequency for the proposed effluent limits are based upon Table 6-3, Self-Monitoring Requirements for Sewage Dischargers, from the Department's "Technical Guidance for the Development and Specification of Effluent Limitations".

Sewage discharges will include monitoring, at a minimum, for *E. Coli*, in new and reissued permits, with a monitoring frequency of 1/quarter for facilities with design flows of >= 0.05 and <1 MGD.

An annual sampling frequency for total phosphorus and total nitrogen will again be imposed per 25 PA Code §92a.61.

Per DEP SOP New and Reissuance Sewage Individual NPDES Permit Applications SOP No. BCW-PMT-002, that for POTWs with design flows greater than 2,000 GPD, non-municipal sewage facilities, and other non-municipal sewage facilities where justified influent BOD5 and TSS monitoring in the permit using the same frequency and sample type as is used for effluent will be established. The department finds it appropriate to again impose influent BOD5 and TSS monitoring for this facility,

The discharge is to Saltlick Run which flows into the Saltlick Run Watershed that has a Final TMDL and is impaired by metals and pH. Abandoned mine drainage is source of such impairment. No WLAs have been developed for this sewage discharge. There is currently no application data to show the concentration values for total aluminum, total iron, and total manganese. Monitoring requirements for these pollutants will be placed on this facility for this permit cycle and these pollutants will be re-evaluated during the next permit renewal cycle.

Monitoring is not required for Bromide, Chloride, Sulfate, and TDS, because the effluent concentration of TDS, as reported in the NPDES Permit application, does not exceed 1,000 mg/l.

Total Dissolved Solids (TDS) and its major constituents including sulfate, chloride, and bromide have emerged as pollutants of concern in several major watersheds in the Commonwealth. The conservative nature of these solids allows them to accumulate in surface waters and they may remain a concern even if the immediate downstream public water supply is not directly impacted. Bromide has been linked to formation of disinfection byproducts at increased levels in public water systems. As a consequence of actions associated with Triennial Review 13, the Environmental Quality

Board has directed DEP to collect additional data. Facilities with design flows greater than or equal to 0.1 mgd are required to report at least one sample analyzed for these parameters with the NPDES Permit renewal application.

Per Department SOP “New and Reissuance Sewage Individual NPDES Permit Applications” (BCW-PMT-002) Where ultraviolet (UV) disinfection is used, TRC limits are not applicable, but the limits table(s) in Part A will generally contain, at a minimum, routine monitoring of UV transmittance (%), UV dosage (µWs/cm2 or mWs/cm2 or mjoules/cm2) or UV intensity (µW/cm2 or mW/cm2) at the same monitoring frequency that would be used for TRC.

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	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
CBOD5	36.0	54.0	XXX	25.0	37.5	50	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS	43.0	65.0	XXX	30.0	45.0	60	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	8-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	5.19	XXX	XXX	3.56	XXX	7.12	1/week	8-Hr Composite

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	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Ammonia-Nitrogen May 1 - Oct 31	3.16	XXX	XXX	2.17	XXX	4.34	1/week	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	8-Hr Composite
Aluminum, Total	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Iron, Total	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Manganese, Total	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite

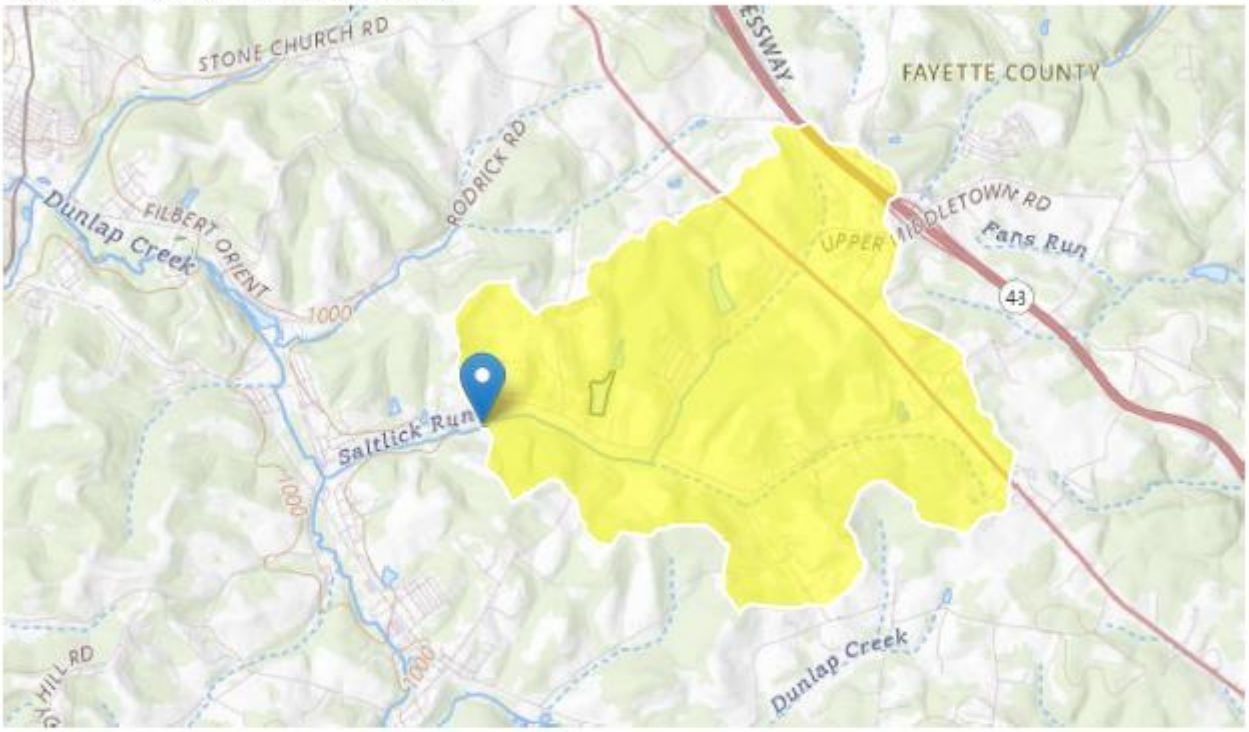
Compliance Sampling Location: Outfall 001

Other Comments: N/A

Attachment 1
Upstream StreamStat

StreamStats Report

Region ID: PA
Workspace ID: PA20250829174635234000
Clicked Point (Latitude, Longitude): 39.94240, -79.83387
Time: 2025-08-29 13:46:57 -0400



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Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	3.95	square miles
ELEV	Mean Basin Elevation	1137	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	3.95	square miles	2.26	1400
ELEV	Mean Basin Elevation	1137	feet	1050	2580

Low-Flow Statistics Flow Report [Low Flow Region 4]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	0.128	ft^3/s	43	43
30 Day 2 Year Low Flow	0.232	ft^3/s	38	38
7 Day 10 Year Low Flow	0.0434	ft^3/s	66	66
30 Day 10 Year Low Flow	0.0834	ft^3/s	54	54
90 Day 10 Year Low Flow	0.158	ft^3/s	41	41

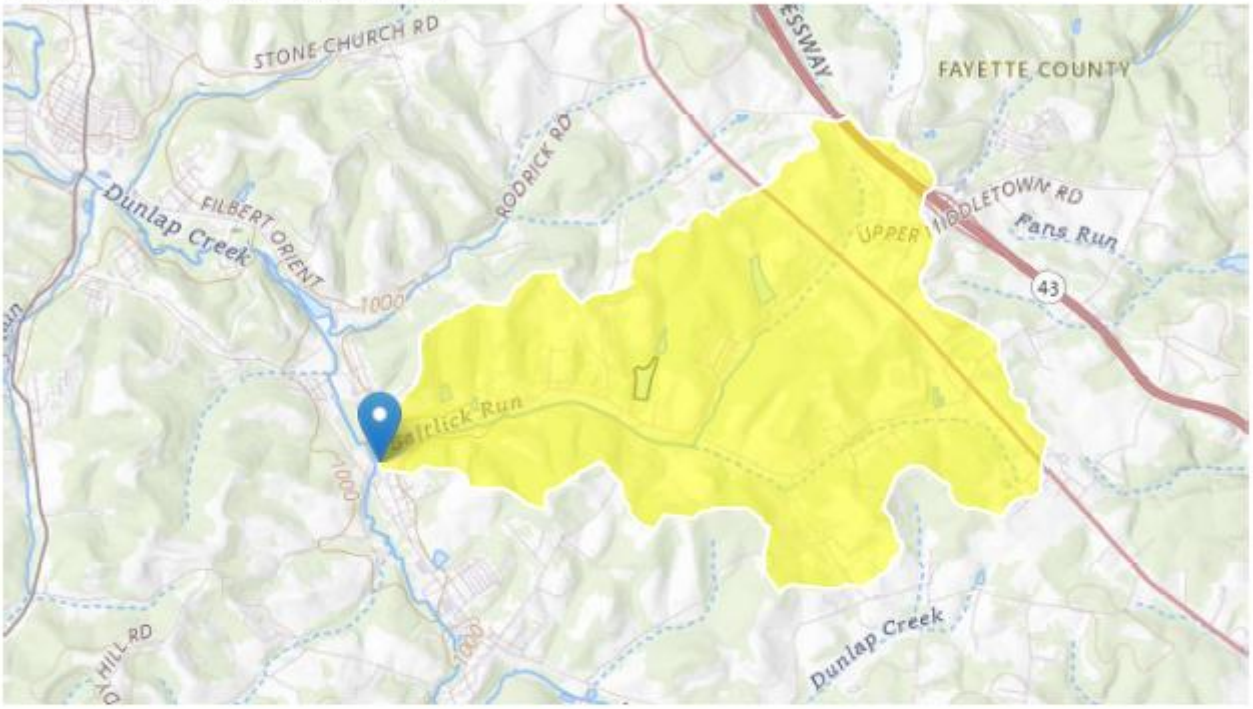
Low-Flow Statistics Citations

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/)

Attachment 2
Downstream StreamStat

StreamStats Report

Region ID: PA
Workspace ID: PA20250829175446575000
Clicked Point (Latitude, Longitude): 39.93860, -79.84861
Time: 2025-08-29 13:55:11 -0400



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Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	4.51	square miles
ELEV	Mean Basin Elevation	1129	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	4.51	square miles	2.26	1400
ELEV	Mean Basin Elevation	1129	feet	1050	2580

Low-Flow Statistics Flow Report [Low Flow Region 4]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	0.148	ft^3/s	43	43
30 Day 2 Year Low Flow	0.266	ft^3/s	38	38
7 Day 10 Year Low Flow	0.0509	ft^3/s	66	66
30 Day 10 Year Low Flow	0.0967	ft^3/s	54	54
90 Day 10 Year Low Flow	0.181	ft^3/s	41	41

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/)

Attachment 3
Summer WQM7 Results

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
19C	40203	SALTLICK RUN	**1.010**	1137.00	3.95	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	0.010	0.04	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
Rock Works STP	PA0218782	0.1750	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

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19C	40203	SALTLICK 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												
1.010	0.04	0.00	0.04	.2707	0.00152	.44	9.71	22.09	0.07	0.831	20.69	7.00
Q1-10 Flow												
1.010	0.03	0.00	0.03	.2707	0.00152	NA	NA	NA	0.07	0.855	20.47	7.00
Q30-10 Flow												
1.010	0.06	0.00	0.06	.2707	0.00152	NA	NA	NA	0.08	0.809	20.89	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
19C	40203	SALTLICK 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
1.010	Rock Works STP	16.13	17.78	16.13	17.78	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
1.010	Rock Works STP	1.78	2.17	1.78	2.17	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)		
1.01	Rock Works STP	25	25	2.17	2.17	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19C	40203	SALTLICK RUN

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
1.010	0.175	20.691	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
9.714	0.440	22.090	0.074
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
21.82	1.462	1.87	0.738
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.448	17.547	Owens	5
Reach Travel Time (days)			
0.831			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.083	19.25	1.76	5.94
0.166	16.98	1.65	6.31
0.249	14.98	1.56	6.61
0.332	13.21	1.46	6.88
0.416	11.66	1.38	7.12
0.499	10.28	1.29	7.33
0.582	9.07	1.22	7.52
0.665	8.00	1.14	7.68
0.748	7.06	1.08	7.83
0.831	6.23	1.01	7.96

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19C	40203	SALTLICK 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)
1.010	Rock Works STP	PA0218782	0.175	CBOD5	25		
				NH3-N	2.17	4.34	
				Dissolved Oxygen			5

Attachment 4
Winter WQM7 Results

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
19C	40203	SALTLICK RUN	**1.010**	1137.00	3.95	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	0.020	0.04	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
Rock Works STP	PA0218782	0.1750	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	4.00	12.51	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
19C	40203	SALTLICK 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												
1.010	0.04	0.00	0.04	.2707	0.00152	.44	9.71	22.09	0.07	0.831	13.62	7.00
Q1-10 Flow												
1.010	0.03	0.00	0.03	.2707	0.00152	NA	NA	NA	0.07	0.855	14.07	7.00
Q30-10 Flow												
1.010	0.06	0.00	0.06	.2707	0.00152	NA	NA	NA	0.08	0.809	13.21	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
19C	40203	SALTLICK 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
1.010	Rock Works STP	24.1	26.58	24.1	26.58	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
1.010	Rock Works STP	2.92	3.56	2.92	3.56	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)		
1.01	Rock Works STP	25	25	3.56	3.56	4	4	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19C	40203	SALTLICK RUN

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
1.010	0.175	13.618	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
9.714	0.440	22.090	0.074
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
21.82	1.469	3.07	0.428
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.176	14.838	Owens	5
Reach Travel Time (days)			
0.831			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.083	19.92	2.96	6.97
0.166	18.19	2.86	7.65
0.249	16.61	2.76	7.98
0.332	15.16	2.66	8.21
0.416	13.84	2.57	8.39
0.499	12.64	2.48	8.55
0.582	11.54	2.39	8.69
0.665	10.53	2.31	8.83
0.748	9.62	2.23	8.95
0.831	8.78	2.15	9.06

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19C	40203	SALTLICK 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)
1.010	Rock Works STP	PA0218782	0.175	CBOD5	25		
				NH3-N	3.56	7.12	
				Dissolved Oxygen			4