Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0098957**
Facility Type	**Municipal**	APS ID	**1121465**
Major / Minor	**Minor**	Authorization ID	**1499200**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Fayette County Housing Authority**	Facility Name	**Outcrop Village STP**
Applicant Address	624 Pittsburgh Road	Facility Address	1600 Outcrop Road
	Uniontown, PA 15401-2214		Smithfield, PA 15478
Applicant Contact	Andre Walters	Facility Contact	Andre Walters
Applicant Phone	724-434-2129	Facility Phone	724-434-2129
Client ID	45099	Site ID	240001
Ch 94 Load Status	Not Overloaded	Municipality	Springhill Township
Connection Status	No Limitations	County	Fayette
Date Application Received	August 29, 2024	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: NPDES permit renewal.

Summary of Review

The Pa Department of Environmental Protection (PADEP/Department) received an NPDES permit renewal application from H&H Water Controls, Inc (consultant) on August 29, 2024 on behalf of Fayette County Housing Authority (FCHA/permittee) for Permittee's Outcrop Village STP (facility). This is a minor sewage facility with a design flow of 0.0263 MGD that discharges into an UNT to Georges Park Creek (WWF) in state watershed 19-G. The current permit will expire on November 30, 2024. The terms and conditions of the current permit is automatically extended since the renewal application was received at least 180 days prior to expiration date. Renewal NPDES permit application under Clean Water Program are not covered by PADEP's PDG per 021-2100-001. This fact sheet is developed in accordance with 40 CFR §124.56.

Changes to existing permit: Added: E. Coli. More stringent: NH3-N, facility converted to POTW.

Sludge use and disposal description and location(s): Sludge hauled-off to other WWTP.

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
√		Reza H. Chowdhury, E.I.T. / Project Manager 	October 29, 2024
√		Pravin C. Patel, P.E. / Environmental Engineer Manager /s/	11/18/2024

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.0263
Latitude	39º 46' 6"	Longitude	-79º 49' 44"
Quad Name	Smithfield	Quad Code	2007
Wastewater Description:	Sewage Effluent		
Receiving Waters	UNT Georges Creek (WWF)-Georges Crk (POFU)	Stream Code	41381-41340 (POFU)
NHD Com ID	99418236	RMI	8.48 (POFU)
Drainage Area	0.62 mi^2	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	Please see below
Elevation (ft)	925.66	Slope (ft/ft)	
Watershed No.	19-G	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	METALS		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final	Name	Unnamed Tributary to Georges Creek

Background/Ambient Data		Data Source
pH (SU)	7.0	Default
Temperature (°C)	25	Default
Hardness (mg/L)	100	
Other:		

Nearest Downstream Public Water Supply Intake		Dunkard Valley Joint Municipal Authority	
PWS Waters	Monongahela River	Flow at Intake (cfs)	
PWS RMI	83.72	Distance from Outfall (mi)	10.82

Changes Since Last Permit Issuance: None

Other Comments: The facility discharges into an UNT to Georges Creek, which has Ch. 93 designation of Warm Water Fishes (WWF). A Point of First Use (POFU) survey was conducted on September 15, 1994 by the regional Aquatic Biologist which verified that the receiving stream contains no life due to Acid Mine Drainage (AMD). The regional Aquatic Biologist further investigated the condition of the Georges Creek at the bridge approximately 1,500 feet upstream of its confluence with the discharge tributary and concluded that it had a definite aquatic use. It was determined that the POFU for modeling will be that point at Georges Creek, existing use of which must be protected. The nearby stream gauge 03072590 is in Georges Creek at Smithfield, PA. There's no stream data available at this gauge. There's another gauge approximately 11 miles downstream of the discharge point, at Monongahela River, which isn't representative. Streamflow data at POFU were collected from USGS's web based watershed delineation tool StreamStats (accessible at https://streamstats.usgs.gov/ss/, accessed on September 26, 2024) was utilized to determine the drainage area at the POFU. The drainage area at POFU was found to be 0.62 mi^2. Using a default yield of 0.1 cfs/mi^2, the calculated Q_{7-10} is 0.062 cfs. The default Q_{1-10}:Q_{7-10} and Q_{30-10}:Q_{7-10} is 0.64 and 1.36, respectively.

Background data:
In absence of any site-specific data, default stream pH of 7.0 S.U., water temperature of 25°C, and hardness of 100 mg/l will be used for modeling, as appropriate.

PWS Intake:
The nearest downstream public water supply is Dunkard Valley Joint Municipal Authority on Monongahela River at RMI 83.72. Its approximately 10.82 miles downstream of Outfall 001. Discharge from this facility is expected not to impact the PWS intake.

Wastewater Characteristics:
The 90th percentile pH of 8.0 was calculated from daily DMR during dry months July through September for the years 2023-2024. Default discharge temperature of 25°C, and hardness of 100 mg/l will be used for modeling, as appropriate.

UNT to Georges Creek TMDL:
The receiving stream is impaired from AMD and has an EPA approved TMDL. Current permit has monitoring requirements for Total Aluminum, Total Iron, and Total Manganese. These three pollutants will be modeled through TMS to determine if numeric limits will be applicable for this permit term.

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. The receiving streams are designated as Warm Water Fishes (WWF). No High-Quality stream or Exceptional Value water is impacted by this discharge; therefore, no Antidegradation Analysis is performed for the discharge.

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

Biosolids Management:
Biosolids are hauled-off from the site to other facilities for further processing and ultimate disposal.

Treatment Facility Summary

Treatment Facility Name: Outcrop Village STP

WQM Permit No.	Issuance Date
2689404	10/31/1989
2689404 A-1	7/14/2005
2689404 A-2	10/5/2012

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Activated Sludge	Ultraviolet	0.0263

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0263	280	Not Overloaded	Combination	Combination of methods

Changes Since Last Permit Issuance: None

Treatment Plant Description

Fayette County Housing Authority (FCHA/permittee) owns a Sewage Treatment Plant (STP) named Outcrop Village STP (facility). It's a minor STP with a design flow of 0.0263 MGD. The facility serves low income housing plan. The facility was completely replaced in 2012 due to the treatment units reaching their useful life and to meet the NPDES permit limits. The new treatment plant consists of the following treatment units:

- Grit removal/comminuting with a backup manual bar screen.
- A 9,800 gallon flow equalization Tank.
- 3 aeration tanks, which will provide a total volume of 26,420 gallons
- 2 final clarifiers with Geyser pumps to return settled sludge to the aeration basins/digester.

- A 4,830 gallon digester tank.
- A new ultraviolet disinfection system to replace the existing chlorine contact system.

The operation and/or maintenance is contracted to H&H Water Controls, Inc.

Primary Facility Type change:
The facility was permitted as non-POTW and was renewed since then as non-POTW. However, the facility should be considered as POTW since it is owned by a county authority. EPA's definition of POTW is in 40 CFR 403.3:

The term Publicly Owned Treatment Works or POTW means a treatment works as defined by section 212 of the Act, which is owned by a State or municipality (as defined by section 502(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

Section 502 of the CWA defines municipality as follows:

The term "municipality" means a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 1288 of this title.

The permit reviewer spoke with the managing company H&H Water Controls, Inc. over the phone to discuss this change. The managing company didn't have any comment on this. An email to the permittee was sent on November 7, 2024 that detailed this change and provided an option for a conference call if the permittee had any questions. No response was received for that email which indicates that the permittee understood this change and didn't have any comments. The facility is now converted to a POTW from this permit term.

Compliance History

09/29/2022: CEI conducted. No violation noted. All units appear operable with a well maintained appearance, no malodors noted.

Compliance History

DMR Data for Outfall 001 (from August 1, 2023 to July 31, 2024)

Parameter	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23
Flow (MGD) Average Monthly	0.00380	0.00365	0.00415	0.00615	0.00619	0.00598	0.00533	0.00353	0.00442	0.00452	0.00501	0.00555
pH (S.U.) IMIN	7.2	7.1	7.0	7.1	7.3	7.1	7.0	7.3	7.0	6.0	6.4	6.6
pH (S.U.) IMAX	8.3	7.9	8.6	8.3	8.0	8.0	8.7	8.4	8.3	7.1	7.9	8.0
DO (mg/L) IMIN	4.3	4.3	4.4	4.2	4.5	4.8	4.4	4.4	4.6	4.4	4.2	4.4
CBOD5 (mg/L) Average Monthly	2.0	2.8	2.7	3.6	2.2	2.0	2.1	2.2	2.4	2.3	2.0	2.0
CBOD5 (mg/L) IMAX	2.0	3.5	3.4	4.2	2.3	2.0	2.1	2.3	2.8	2.5	2.0	2.0
TSS (mg/L) Average Monthly	5.0	5.0	5.0	5.5	5.0	5.0	5.0	5.0	5.0	5.0	5.5	5.0
TSS (mg/L) IMAX	5.0	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0	6.0	5.0
Fecal Coliform (No./100 ml) Geo Mean	1	1	1	1	2	1	1	1	1	1	1	1
Fecal Coliform (No./100 ml) IMAX	1	1	1	1	2	1	1	1	1	1	1	2
Total Nitrogen (mg/L) Daily Maximum								21.7				
Ammonia (mg/L) Average Monthly	0.7	4.6	0.3	0.9	0.3	0.3	0.5	1.1	0.9	1.6	0.4	2.2
Ammonia (mg/L) IMAX	1.2	7.7	0.4	1.6	0.3	0.4	0.5	2.0	1.5	2.4	0.4	3.7
Total Phosphorus (mg/L) Daily Max								8.1				
Total Aluminum (mg/L) Daily Maximum								0.09				
Total Iron (mg/L) Daily Maximum								0.06				
Total Manganese (mg/L) Daily Max								0.01				
UV Dosage (mjoules/cm²) Average Monthly	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14
UV Dosage (mjoules/cm²) IMAX	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14

Existing limits

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.0263	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	5/week	Grab
Dissolved Oxygen	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	5/week	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	25	XXX	50	2/month	Grab
Total Suspended Solids	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	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	Report	XXX	Report	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	15	XXX	30	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Aluminum, Total	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Iron, Total	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Manganese, Total	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Ultraviolet light dosage (mjoules/cm^2)	XXX	XXX	XXX	Report	XXX	Report	5/week	Measured

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.0263
Latitude 39º 46' 6.00" **Longitude** -79º 49' 44.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Model input data

The following data will be used for modeling, as needed:

- Discharge pH 8.0 (90^{th} percentile, July-Sep 2023-2024, daily eDMR data)
- Discharge Temperature 25°C (Default)
- Discharge Hardness 100 mg/l (Default)
- Stream pH 7.0 (Default)
- Stream Temperature 25°C (Default)
- Stream Hardness 100 mg/l (Default)

The following two nodes were used in modeling:

Node 1: At the outfall 001 on Georges Creek (POFU) (41340)
Elevation: 925.66 ft (National Map-Advanced Viewer, 09/26/2024)
Drainage Area: 0.62 mi^2 (StreamStat Version 3.0, 09/26/2024)
River Mile Index: 8.48 (PA DEP eMapPA)
Low Flow Yield: 0.1 cfs/mi^2
Q_{7-10}: 0.062 cfs
Discharge Flow: 0.0263 MGD

Node 2: At confluence with York Run at Georges Creek RMI 6.56
Elevation: 885.38 ft (National Map-Advanced Viewer, 09/26/2024)
Drainage Area: 36.3 mi^2 (StreamStat Version 3.0, 09/26/2024)
River Mile Index: 6.56 (PA DEP eMapPA)
Low Flow Yield: 0.1 cfs/mi^2
Discharge Flow: 0.0 MGD

WQM 7.0 Model

WQM 7.0 version 1.11 is a water quality model designed to assist DEP to determine appropriate effluent limits for $CBOD_5$, NH_3-N and DO. The model simulates two basic processes. In the NH_3-N module, the model simulates the

mixing and degradation of NH_3-N in the stream and compares calculated instream NH_3-N concentrations to NH_3-N water quality criteria. In the D.O. module, the model simulates the mixing and consumption of D.O. in the stream due to the degradation of $CBOD_5$ and NH_3N and compares calculated instream D.O. concentrations to D.O. water quality criteria. The model was utilized for this permit renewal by using Q_{7-10} and current background water quality levels of the stream.

NH_3-N

WQM 7.0 suggested NH_3-N limit of 4.66 mg/l as monthly average (AML) and 9.32 mg/l as IMAX limit during summer to protect water quality standards. The winter limits are calculated by multiplying the summer limits with a factor of 3. The AML for winter season is 13.98 mg/l and IMAX is 27.96 mg/l (report). The current permit has summer AML of 15 mg/l and IMAX of 30 mg/l and reporting for winter season. The previous permit's fact sheet stated that the last WQM modeling was conducted in 1994 utilizing WQM63 modeling. Since there are changes in the assumptions of the model and/or applicable criteria, a new model must be run to determine applicable WQBELs. A review of the past 12 months eDMR data indicated that the facility is meeting the proposed limit 100% of the time. Therefore, the new limits will be applicable from the effective date of the permit without providing a compliance schedule. For the same reason, ammonia will not be included in the pre-draft survey.

CBOD5

WQM 7.0 suggests CBOD5 limit of 25.0 mg/l as AML which is the same as existing limit. Existing limits will be carried over.

DO

WQM 7.0 suggests minimum DO of 4.0 mg/l which is the model input and same as existing limit. Existing limit will be carried over.

General Discussion on Toxics Management Spreadsheet (TMS)

Based on the available data, PADEP utilizes Toxics Management Spreadsheet (TMS) to (1) evaluate reasonable potential for toxic pollutants to cause or contribute to an excursion above the water quality standards and (2) develop WQBELs for those such toxic pollutants (i.e., 40 CFR § 122.44(d)(1)(i)). It is noteworthy that some of these pollutants that may be reported as "non-detect", but still exceeded the criteria, were determined to be candidates for modeling because the method detection levels used to analyze those pollutants were higher than target QLs and/or the most stringent Chapter 93 criteria. The model then recommended the appropriate action for the Pollutants of Concerns based on the following logic as stated in PADEP's SOP titled *"Establishing Water Quality-Based Effluent Limitations (WQBELs) and Permit Conditions for Toxic Pollutants in NPDES Permits for Existing Dischargers (DEP SOP No.: BCW-PMT-037, Revised May 20, 2021)"*:

1. In general, establish limits in the draft permit where the effluent concentration determined in B.1 or B.2 equals or exceeds 50% of the WQBEL (i.e., RP is demonstrated). Use the average monthly, maximum daily and instantaneous maximum (IMAX) limits for the permit as recommended by the TMS (or, if appropriate, use a multiplier of 2 times the average monthly limit for the maximum daily limit and 2.5 times the average monthly limit for IMAX).

2. For non-conservative pollutants, in general, establish monitoring requirements where the effluent concentration determined in B.1 or B.2 is between 25% - 50% of the WQBEL.

3. For conservative pollutants, in general, establish monitoring requirements where the effluent concentration determined in B.1 or B.2 is between 10% - 50% of the WQBEL.

NOTE 4 – If the effluent concentration determined in B.1 or B.2 is "non-detect" at or below the target quantitation limit (TQL) for the pollutant as specified in the TMS and permit application, the pollutant may be eliminated as a candidate for WQBELs or monitoring requirements unless 1) a more sensitive analytical method is available for the pollutant under 40 CFR Part 136 where the quantitation limit for the method is less than the applicable water quality criterion and 2) a detection at the more sensitive method may lead to a determination that an effluent limitation is necessary, considering available dilution at design conditions.

NOTE 5 – If the effluent concentration determined in B.1 or B.2 is a detection below the TQL but above or equal to the applicable water quality criterion, WQBELs or monitoring may be established for the pollutant.

4. Application managers may, on a site- and pollutant-specific basis, deviate from these guidelines where there is specific rationale that is documented in the fact sheet.

Minor facilities with a design flow of <0.1 MGD aren't required to sample for metals. Due to the AMD TMDL, the facility was sampling for Total Iron, Total Manganese, and Total Aluminum. These three metals are modeled through TMS and the model suggests The pollutants are modeled through TMS and output from the TMS is provided below:

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Aluminum	Report	Report	Report	Report	Report	µg/L	1,261	AFC	Discharge Conc > 10% WQBEL (no RP)

Total Aluminum:
TMS model suggests monitoring requirements for Total Aluminum from a model input value of 200 ug/l. Existing annual monitoring will be continued.

Total Iron:
TMS model suggests no limits or monitoring is needed for Total Iron. Since it's a TMDL parameter, existing annual monitoring is recommended to be continued.

Total Manganese:
TMS model suggests no limits or monitoring is needed for Total Manganese. Since it's a TMDL parameter, existing annual monitoring is recommended to be continued.

Nutrients Monitoring:
PADEP's SOP BCW-PMT-033 recommends monitoring for Total Nitrogen and Total Phosphorus for facilities with design flow more than 2000-GPD, which is also supported by Pa Code 25 Ch. 92a.61. Current monitoring requirement will be continued.

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. These are the existing limits and will be continued.

E. Coli:
Pa Code 25 § 92a. 61 requires monitoring of E. Coli. DEP's SOP titled "Establishing Effluent Limitations for Individual Sewage Permits (BCW-PMT-033, revised March 24, 2021) recommends annual E. Coli monitoring for sewage dischargers with a design flow between 0.002-0.05 MGD. This requirement will be applied from this permit term.

pH:
The TBEL for pH is above 6.0 and below 9.0 S.U. (40 CFR §133.102(c) and Pa Code 25 §§ 95.2(1), 92a.47) which are existing limits and will be carried over.

Total Suspended Solids (TSS):
There is no water quality criterion for TSS. The existing limits of 30 mg/L average monthly and 60 mg/L instantaneous maximum will remain in the permit based on the minimum level of effluent quality attainable by secondary treatment, 25 Pa. Code § 92a.47 and 40CFR 133.102(b).

UV Disinfection:
PADEP's SOP BCW-PMT-033 recommends UV parameter monitoring where UV is used as a method of disinfection, with the same frequency as would be if Chlorine is used for disinfection. The current permit has average monthly and IMAX reporting requirements for UV Dosage in mJoules/cm^2. These will be replaced by daily minimum UV dosage reporting requirement.

Monitoring Frequency and Sample Types:
Otherwise specified above, the monitoring frequency and sample type of compliance monitoring for existing parameters are recommended by DEP's SOP and Permit Writers Manual and/or on a case-by-case basis using best professional judgment (BPJ).

Flow Monitoring Requirement:
The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR § 122.44(i)(1)(ii). Current permit has 0.0263 MGD limit which will be replaced by reporting requirement.

Anti-Backsliding
Anti-backsliding prohibition is justified in sections where an exception is justified for the affected pollutant(s). For remaining pollutants, this prohibition isn't applicable since the proposed limits are at least as stringent as were in current permit.

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	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	5/week	Grab
DO	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	5/week	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	Grab
TSS	XXX	XXX	XXX	30	XXX	60	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	13.98	XXX	Report	2/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	4.66	XXX	9.32	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Total Aluminum	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab

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

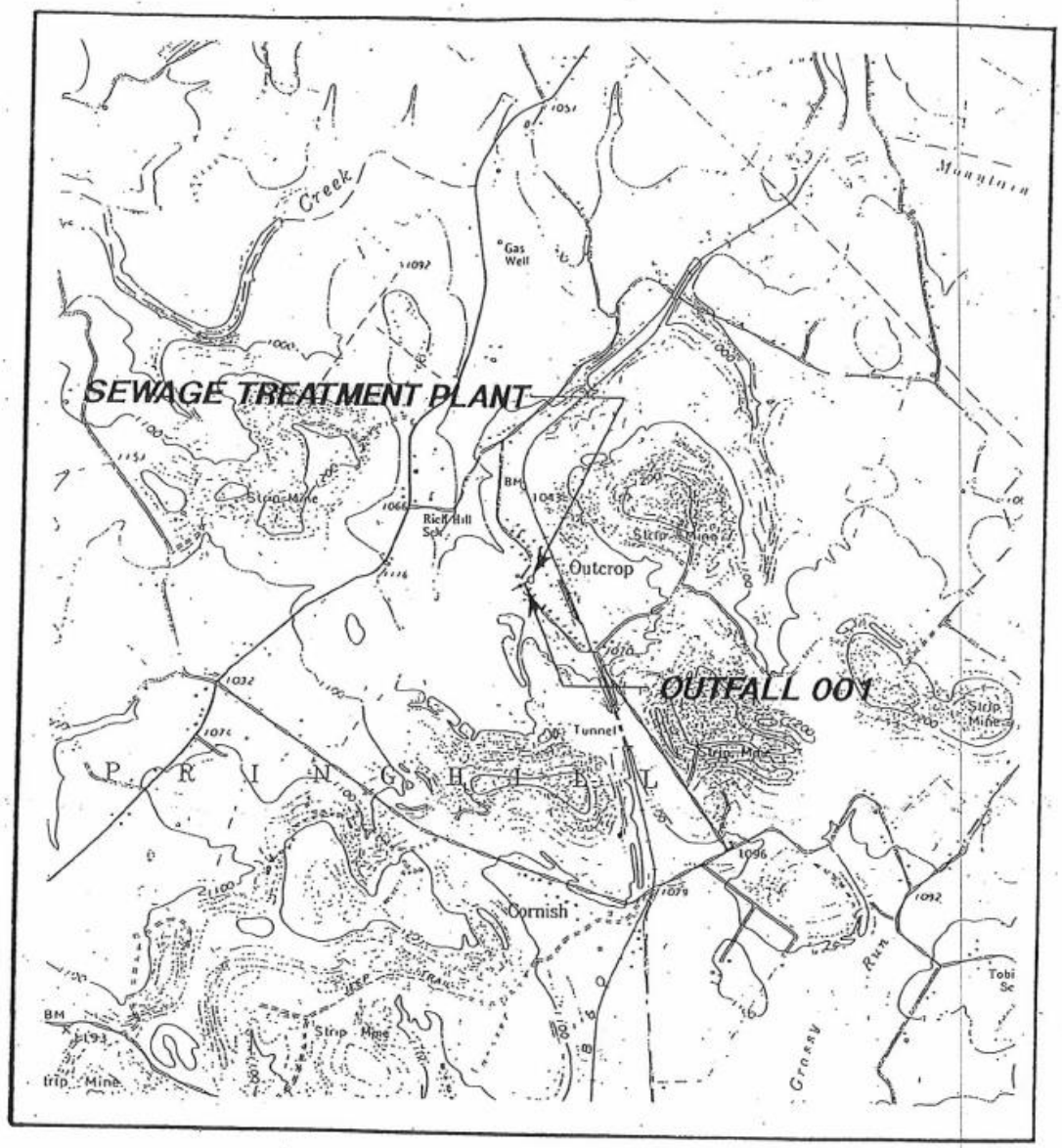
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Total Iron	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Total Manganese	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
UV Dosage (mjoules/cm^2)	XXX	XXX	Report	XXX	XXX	XXX	5/week	Measured

Compliance Sampling Location: At Outfall 001

Other Comments: None

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: BPNPSM-PMT-033
☐	Other:

Locational Map



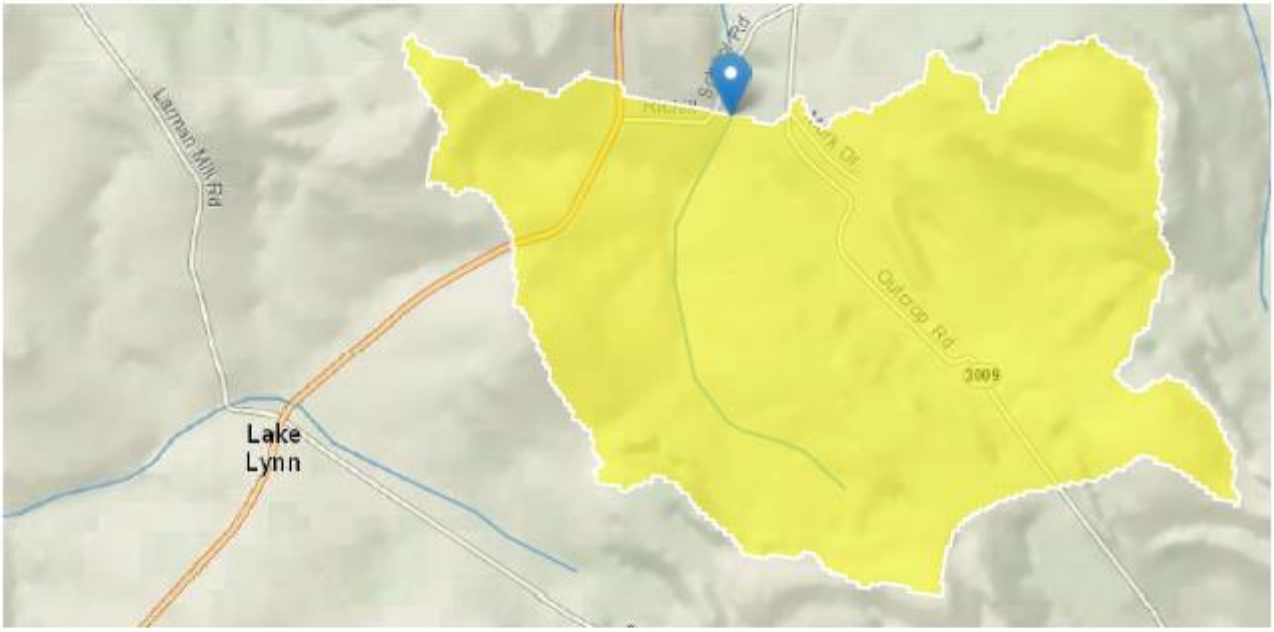
LOCATION MAP

OUTCROP SEWAGE TREATMENT PLANT
SPRINGHILL TOWNSHIP, FAYETTE COUNTY, PA
SMITHFIELD QUADRANGLE
SCALE: 1" = 2000'

StreamStats at POFU

PA0098957 at POFU

Region ID: PA
Workspace ID: PA20240927010220193000
Clicked Point (Latitude, Longitude): 39.77137, -79.83130
Time: 2024-09-26 21:02:40 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.62	square miles
ELEV	Mean Basin Elevation	1104	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.62	square miles	2.26	1400
ELEV	Mean Basin Elevation	1104	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

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

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0152	ft^3/s
30 Day 2 Year Low Flow	0.0298	ft^3/s
7 Day 10 Year Low Flow	0.00435	ft^3/s
30 Day 10 Year Low Flow	0.00958	ft^3/s
90 Day 10 Year Low Flow	0.0197	ft^3/s

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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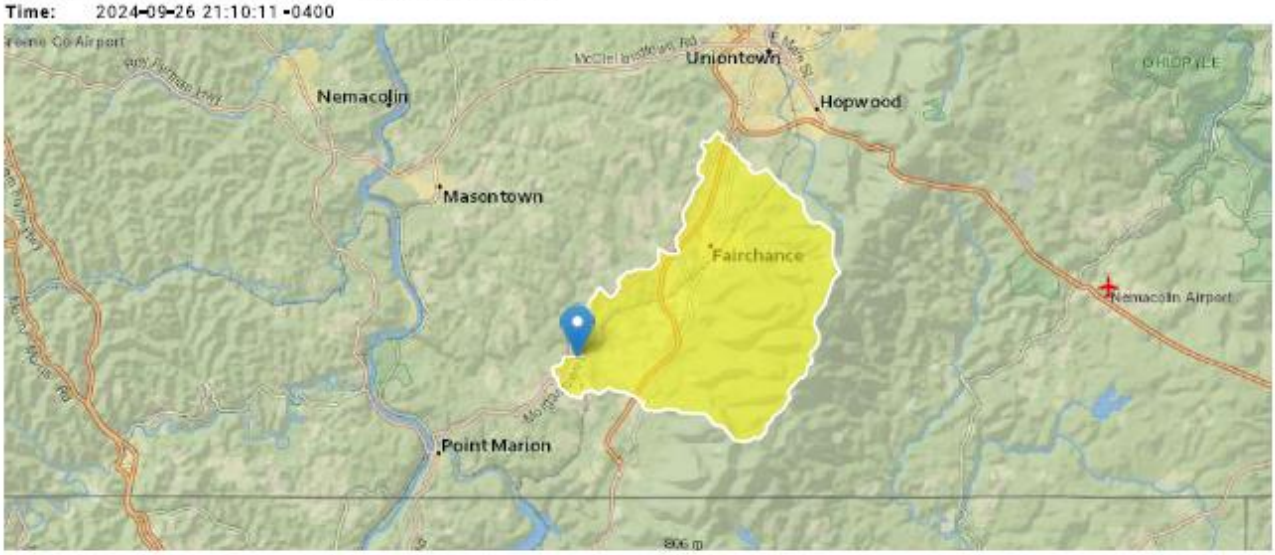
USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.24.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

StreamStats at node 2

PA0098957 at node 2

Region ID: PA
Workspace ID: PA20240927010951208000
Clicked Point (Latitude, Longitude): 39.77762, -79.82737
Time: 2024-09-26 21:10:11 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	36.3	square miles
ELEV	Mean Basin Elevation	1507	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	36.3	square miles	2.26	1400
ELEV	Mean Basin Elevation	1507	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	2.03	ft^3/s	43	43
30 Day 2 Year Low Flow	3.36	ft^3/s	38	38
7 Day 10 Year Low Flow	0.784	ft^3/s	66	66
30 Day 10 Year Low Flow	1.31	ft^3/s	54	54

Statistic	Value	Unit	SE	ASEp
90 Day 10 Year Low Flow	2.37	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/)

Application Version: 4.24.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

WQM 7.0

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
19G	41340	GEORGES CREEK	8.480	925.66	0.62	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.00	0.000	0.000	0.0	0.00	0.00	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
Outcrop Vlg STP	PA0098957	0.0263	0.0263	0.0263	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	15.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19G	41340	GEORGES CREEK	6.560	885.38	36.30	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	0.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19G	41340	GEORGES 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												
8.480	0.06	0.00	0.06	.0407	0.00397	.36	4.46	12.39	0.06	1.833	23.02	7.00
Q1-10 Flow												
8.480	0.04	0.00	0.04	.0407	0.00397	NA	NA	NA	0.06	2.103	22.47	7.00
Q30-10 Flow												
8.480	0.08	0.00	0.08	.0407	0.00397	NA	NA	NA	0.07	1.642	23.37	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	4		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19G	41340	GEORGES 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
8.480	Outcrop Vlg STP	13.66	26.98	13.66	26.98	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
8.480	Outcrop Vlg STP	1.52	4.66	1.52	4.66	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)		
8.48	Outcrop Vlg STP	25	25	4.66	4.66	4	4	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19G	41340	GEORGES CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
8.480	0.026	23.019	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
4.457	0.360	12.385	0.064
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
11.11	0.814	1.85	0.883
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.562	24.480	Owens	4
Reach Travel Time (days)			
1.833			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.183	9.36	1.57	7.80
0.367	7.89	1.34	7.80
0.550	6.64	1.14	7.80
0.733	5.60	0.97	7.80
0.917	4.71	0.82	7.80
1.100	3.97	0.70	7.80
1.283	3.35	0.60	7.80
1.466	2.82	0.51	7.80
1.650	2.37	0.43	7.80
1.833	2.00	0.37	7.80

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19G	41340	GEORGES 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)
8.480	Outcrop Vlg STP	PA0098957	0.026	CBOD5	25		
				NH3-N	4.66	9.32	
				Dissolved Oxygen			4

TMS

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: Outcrop Village STP NPDES Permit No.: PA0098957 Outfall No.: 001

Evaluation Type: Major Sewage / Industrial Waste Wastewater Description: Treated sewage effluent

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
0.0263	100	8						

					0 if left blank		0.5 if left blank		0 if left blank			1 if left blank	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Strea m CV	Fate Coeff	FOS	Criteri a Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L											
	Chloride (PWS)	mg/L											
	Bromide	mg/L											
	Sulfate (PWS)	mg/L											
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		200									
	Total Antimony	µg/L											
	Total Arsenic	µg/L											
	Total Barium	µg/L											
	Total Beryllium	µg/L											
	Total Boron	µg/L											
	Total Cadmium	µg/L											
	Total Chromium (III)	µg/L											
	Hexavalent Chromium	µg/L											
	Total Cobalt	µg/L											
	Total Copper	mg/L											
	Free Cyanide	µg/L											
	Total Cyanide	µg/L											
	Dissolved Iron	µg/L											
	Total Iron	µg/L		200									
	Total Lead	µg/L											
	Total Manganese	µg/L		30									
	Total Mercury	µg/L											
	Total Nickel	µg/L											
	Total Phenols (Phenolics) (PWS)	µg/L											
	Total Selenium	µg/L											
	Total Silver	µg/L											
	Total Thallium	µg/L											
	Total Zinc	mg/L											
	Total Molybdenum	µg/L											
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										
	Carbon Tetrachloride	µg/L	<										

Group 3	Chlorobenzene	µg/L												
	Chlorodibromomethane	µg/L	<											
	Chloroethane	µg/L	<											
	2-Chloroethyl Vinyl Ether	µg/L	<											
	Chloroform	µg/L	<											
	Dichlorobromomethane	µg/L	<											
	1,1-Dichloroethane	µg/L	<											
	1,2-Dichloroethane	µg/L	<											
	1,1-Dichloroethylene	µg/L	<											
	1,2-Dichloropropane	µg/L	<											
	1,3-Dichloropropylene	µg/L	<											
	1,4-Dioxane	µg/L	<											
	Ethylbenzene	µg/L	<											
	Methyl Bromide	µg/L	<											
	Methyl Chloride	µg/L	<											
	Methylene Chloride	µg/L	<											
	1,1,2,2-Tetrachloroethane	µg/L	<											
	Tetrachloroethylene	µg/L	<											
	Toluene	µg/L	<											
	1,2-trans-Dichloroethylene	µg/L	<											
	1,1,1-Trichloroethane	µg/L	<											
	1,1,2-Trichloroethane	µg/L	<											
	Trichloroethylene	µg/L	<											
	Vinyl Chloride	µg/L	<											
Group 4	2-Chlorophenol	µg/L	<											
	2,4-Dichlorophenol	µg/L	<											
	2,4-Dimethylphenol	µg/L	<											
	4,6-Dinitro-o-Cresol	µg/L	<											
	2,4-Dinitrophenol	µg/L	<											
	2-Nitrophenol	µg/L	<											
	4-Nitrophenol	µg/L	<											
	p-Chloro-m-Cresol	µg/L	<											
	Pentachlorophenol	µg/L	<											
	Phenol	µg/L	<											
	2,4,6-Trichlorophenol	µg/L	<											
Group 5	Acenaphthene	µg/L	<											
	Acenaphthylene	µg/L	<											
	Anthracene	µg/L	<											
	Benzidine	µg/L	<											
	Benzo(a)Anthracene	µg/L	<											
	Benzo(a)Pyrene	µg/L	<											
	3,4-Benzofluoranthene	µg/L	<											
	Benzo(ghi)Perylene	µg/L	<											
	Benzo(k)Fluoranthene	µg/L	<											
	Bis(2-Chloroethoxy)Methane	µg/L	<											
	Bis(2-Chloroethyl)Ether	µg/L	<											
	Bis(2-Chloroisopropyl)Ether	µg/L	<											
	Bis(2-Ethylhexyl)Phthalate	µg/L	<											
	4-Bromophenyl Phenyl Ether	µg/L	<											
	Butyl Benzyl Phthalate	µg/L	<											
	2-Chloronaphthalene	µg/L	<											
	4-Chlorophenyl Phenyl Ether	µg/L	<											
	Chrysene	µg/L	<											
	Dibenzo(a,h)Anthrancene	µg/L	<											
	1,2-Dichlorobenzene	µg/L	<											
	1,3-Dichlorobenzene	µg/L	<											
	1,4-Dichlorobenzene	µg/L	<											
	3,3-Dichlorobenzidine	µg/L	<											
	Diethyl Phthalate	µg/L	<											
	Dimethyl Phthalate	µg/L	<											
	Di-n-Butyl Phthalate	µg/L	<											
	2,4-Dinitrotoluene	µg/L	<											
	2,6-Dinitrotoluene	µg/L	<											
	Di-n-Octyl Phthalate	µg/L	<											

	1,2-Diphenylhydrazine	µg/L	<										
	Fluoranthene	µg/L	<										
	Fluorene	µg/L	<										
	Hexachlorobenzene	µg/L	<										
	Hexachlorobutadiene	µg/L	<										
	Hexachlorocyclopentadiene	µg/L	<										
	Hexachloroethane	µg/L	<										
	Indeno(1,2,3-od)Pyrene	µg/L	<										
	Isophorone	µg/L	<										
	Naphthalene	µg/L	<										
	Nitrobenzene	µg/L	<										
	n-Nitrosodimethylamine	µg/L	<										
	n-Nitrosodi-n-Propylamine	µg/L	<										
	n-Nitrosodiphenylamine	µg/L	<										
	Phenanthrene	µg/L	<										
	Pyrene	µg/L	<										
	1,2,4-Trichlorobenzene	µg/L	<										
Group 6	Aldrin	µg/L	<										
	alpha-BHC	µg/L	<										
	beta-BHC	µg/L	<										
	gamma-BHC	µg/L	<										
	delta BHC	µg/L	<										
	Chlordane	µg/L	<										
	4,4-DDT	µg/L	<										
	4,4-DDE	µg/L	<										
	4,4-DDD	µg/L	<										
	Dieldrin	µg/L	<										
	alpha-Endosulfan	µg/L	<										
	beta-Endosulfan	µg/L	<										
	Endosulfan Sulfate	µg/L	<										
	Endrin	µg/L	<										
	Endrin Aldehyde	µg/L	<										
	Heptachlor	µg/L	<										
	Heptachlor Epoxide	µg/L	<										
	PCB-1016	µg/L	<										
	PCB-1221	µg/L	<										
	PCB-1232	µg/L	<										
	PCB-1242	µg/L	<										
	PCB-1248	µg/L	<										
	PCB-1254	µg/L	<										
	PCB-1260	µg/L	<										
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<										
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

Stream / Surface Water Information

Outcrop Village STP, NPDES Permit No. PA0098957, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: Georges Creek

No. Reaches to Model: 1

- (•) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	041340	8.48	925.66	0.66			Yes
End of Reach 1	041340	6.56	885.38	36.3			Yes

$Q_{7\text{-}10}$

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	8.48	0.1										100	7		
End of Reach 1	6.56	0.1										100	7		

Q_h

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	8.48														
End of Reach 1	6.56														

Model Results

Outcrop Village STP, NPDES Permit No. PA0098957, Outfall 001

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☐ *Hydrodynamics*

☑ *Wasteload Allocations*

☑ *AFC* CCT (min): 0.801 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.18

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Aluminum	0	0		0	750	750	1,967	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	

☑ *CFC* CCT (min): 0.801 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.18

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	3,933	WQC = 30 day average; PMF = 1
Total Manganese	0	0		0	N/A	N/A	N/A	

☑ *THH* CCT (min): 0.801 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	2,622	

☐ *CRL* CCT (min): 0.524 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	

Total Manganese	0	0		0	N/A	N/A	N/A	

☐ *Recommended WQBELs & Monitoring Requirements*

No. Samples/Month: 4

Pollutants	*Mass Limits* AML (lbs/day)	*Mass Limits* MDL (lbs/day)	*Concentration Limits* AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Aluminum	Report	Report	Report	Report	Report	µg/L	1,261	AFC	Discharge Conc > 10% WQBEL (no RP)

☐ *Other Pollutants without Limits or Monitoring*

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Iron	3,933	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	2,622	µg/L	Discharge Conc ≤ 10% WQBEL