Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0096164**
Facility Type	**Non-Municipal**	APS ID	**1126945**
Major / Minor	**Minor**	Authorization ID	**1508674**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Thomas Guiher**	Facility Name	**Living Treasures II**
Applicant Address	PO Box 346	Facility Address	Route 711
	Donegal, PA 15628-0346		Donegal, PA 15628
Applicant Contact	Frank Krizner	Facility Contact	Mattew Dumbauld
Applicant Phone	724-454-6994	Facility Phone	724-464-6994
Client ID	95764	Site ID	251030
Ch 94 Load Status	Not Overloaded	Municipality	Donegal Township
Connection Status		County	Westmoreland
Date Application Received	December 2, 2024	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Application for renewal of an existing NPDES Permit for the discharge of treated sewage effluent.

Summary of Review

The permittee has applied for a renewal of NPDES Permit No. PA0096164. PA0096164 was previously issued by the PA Department of Environmental Protection (DEP) on May 18, 2020. The permit expired on May 31, 2025 and has been administratively extended.

Sewage at the plant is treated by a comminutor, extended aeration and secondary clarification. The supernatant then enters a dosing tank and through a sand filter. It is disinfected with tablet chlorination prior to discharging to Indian Creek, which is classified as a High-Quality Cold-Water Fishery (HQ-CWF).

Sludge generated onsite is held in a holding lagoon until it is pumped by Zelmore Brothers and hauled to Unity Township Municipal Authority's STP.

Thomas Guiher complied with Act 14 Notification through letters dated October 29, 2024 and sent to Donegal Township and Westmoreland County.

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

This permit cycle, annual *E. coli* monitoring was added in accordance with the SOPs.

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*,

Approve	Deny	Signatures	Date
X		Stephanie Conrad / Project Manager	February 24, 2026
X		Mahbuba Iasmin, Ph.D. P.E. / Environmental Engineering Manager	March 3, 2026

Summary of Review

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.

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 limits have been relaxed in this renewed Draft Permit.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.014
Latitude	40º 5' 14"	Longitude	-79º 20' 50.00"
Quad Name	SEVEN SPRINGS	Quad Code	1811
Wastewater Description:	Sewage Effluent		

Receiving Waters	Indian Creek (HQ-CWF)	Stream Code	38235
NHD Com ID	69914993	RMI	21.78
Drainage Area	19.1	Yield (cfs/mi^2)	0.02225
Q_{7-10} Flow (cfs)	0.425	Q_{7-10} Basis	USGS Stream Stats
Elevation (ft)	1491	Slope (ft/ft)	
Watershed No.	19-E	Chapter 93 Class.	HQ-CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	

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

Nearest Downstream Public Water Supply Intake		Indian Creek Valley Water Authority	
PWS Waters	Mill Run Reservoir	Flow at Intake (mgd)	0.4
PWS RMI	4.87	Distance from Outfall (mi)	16.92

Changes Since Last Permit Issuance: None

Other Comments: None

Treatment Facility Summary				
Treatment Facility Name: Living Treasures II STP				
WQM Permit No.	**Issuance Date**			
6574416	Oct 11, 1974			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Extended Aeration	Tablet Chlorine	0.014
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.014	40.85	Not Overloaded	Sludge Lagoon	Other WWTP

Changes Since Last Permit Issuance: None

Other Comments:

Compliance History

Operations Compliance Check Summary Report

Facility: Living Treasures II

NPDES Permit No.: PA0096164

Compliance Review Period: 3/09/2021/3/09/2026

Inspection Summary:

INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC	INSPECTOR ID	INSPECTOR	INSPECTION COMMENT	CREATION DATE	UPDATE DATE	# OF VIOLATIONS
07/17/2024	Routine/Partial Inspection	PA Dept of Environmental Protection	No Violations Noted	00377635	MILSOP, LISA		08/13/2024		0
07/25/2024	Routine/Partial Inspection	PA Dept of Environmental Protection	No Violations Noted	00377635	MILSOP, LISA		08/13/2024		0
07/14/2023	Routine/Partial Inspection	PA Dept of Environmental Protection	No Violations Noted	00377635	MILSOP, LISA		07/28/2023		0
03/16/2021	Routine/Partial Inspection	PA Dept of Environmental Protection	No Violations Noted	00377635	MILSOP, LISA		03/19/2021	03/19/2021	0
11/08/2023	Administrative/File Review	PA Dept of Environmental Protection	No Violations Noted	00377635	MILSOP, LISA	Administrative file review of eDMRs for CEI IR	12/07/2023		0
12/20/2021	Routine/Partial Inspection	PA Dept of Environmental Protection	No Violations Noted	00377635	MILSOP, LISA		01/10/2022		0
08/08/2024	Routine/Partial Inspection	PA Dept of Environmental Protection	No Violations Noted	00377635	MILSOP, LISA		08/13/2024		0
11/08/2023	Compliance Evaluation	PA Dept of Environmental Protection	Violation(s) Noted	00377635	MILSOP, LISA		12/07/2023	06/23/2025	1

Violation Summary:

VIOLATION DATE	VIOLATION TYPE	VIOLATION TYPE DESC	VIOL CODE ID	VIOL PROGRAM	RESOLVED DATE	INSP ID	INSP CATEGORY	INSPECTED DATE	INSP TYPE	INSPECTOR
11/08/2023	92A.44	NPDES - Violation of effluent limits in Part A of permit	17291	WPCNP	06/23/2025	3655804	PF	11/08/2023	Compliance Evaluation	MILSOP, LISA

Open Violations by Client ID: 95764

No open violations for Client ID **95764**

Enforcement Summary:

ENF ID	ENF TYPE	ENF TYPE DESC	ENF CREATION DATE	EXECUTED DATE	INITIATED DATE	VIOL CODE ID	VIOL PROGRAM NAME	VIOLATIONS	# OF VIOLATIONS
422657	NOV	Notice of Violation	12/07/2023	12/07/2023	12/07/2023	17291	WPCNP	92A.44	1

Effluent Violation Summary:

STAGE_DESC	NON_COMPLIANCE_DATE	NON_COMPL_TYPE_DESC	NON_COMPL_CATEGORY_DESC	PARAMETER	SAMPLE_VALUE	VIOLATION_CONDITION	PERMIT_VALUE	UNIT_OF_MEASURE	STAT_BASE_CODE	DISC
Final Effluent	6/17/2021	Violation of permit condition	Effluent	Dissolved Oxygen	4.04	<	5.0	mg/L	Instantaneous Minimum	
Final Effluent	8/17/2022	Violation of permit condition	Effluent	Fecal Coliform	1971.0	>	1000	No./100 ml	Instantaneous Maximum	
Final Effluent	6/7/2023	Violation of permit condition	Effluent	Ammonia-Nitrogen	8.59	>	3.0	mg/L	Average Monthly	
Final Effluent	6/7/2023	Violation of permit condition	Effluent	Ammonia-Nitrogen	9.0	>	6.0	mg/L	Instantaneous Maximum	
Final Effluent	7/19/2023	Violation of permit condition	Effluent	Ammonia-Nitrogen	10.6	>	6.0	mg/L	Instantaneous Maximum	
Final Effluent	7/19/2023	Violation of permit condition	Effluent	Ammonia-Nitrogen	6.81	>	3.0	mg/L	Average Monthly	
Final Effluent	9/21/2023	Violation of permit condition	Effluent	Fecal Coliform	1048.1	>	1000	No./100 ml	Instantaneous Maximum	
Final Effluent	2/2/2024	Violation of permit condition	Effluent	Carbonaceous Biochemical Oxygen Demand (CBOD5)	11.3	>	10.0	mg/L	Average Monthly	
Final Effluent	3/1/2024	Violation of permit condition	Effluent	Carbonaceous Biochemical Oxygen Demand (CBOD5)	16.0	>	10.0	mg/L	Average Monthly	
Final Effluent	4/10/2024	Violation of permit condition	Effluent	Carbonaceous Biochemical Oxygen Demand (CBOD5)	< 19.8	>	10.0	mg/L	Average Monthly	
Final Effluent	4/10/2024	Violation of permit condition	Effluent	Carbonaceous Biochemical Oxygen Demand (CBOD5)	38.0	>	25.0	mg/L	Instantaneous Maximum	
Final Effluent	4/10/2024	Violation of permit condition	Effluent	Carbonaceous Biochemical Oxygen Demand (CBOD5)	38.0	>	25.0	mg/L	Instantaneous Maximum	
Final Effluent	5/15/2024	Violation of permit condition	Effluent	Flow	0.0193	>	.014	MGD	Average Monthly	
Final Effluent	8/1/2024	Violation of permit condition	Effluent	Total Residual Chlorine (TRC)	0.61	>	.5	mg/L	Average Monthly	
Final Effluent	9/11/2024	Violation of permit condition	Effluent	Fecal Coliform	2909	>	1000	No./100 ml	Instantaneous Maximum	
Final Effluent	9/11/2024	Violation of permit condition	Effluent	Fecal Coliform	332	>	200	No./100 ml	Geometric Mean	

Unauthorized Discharges:

No unauthorized discharges reported in eDMR during review period

Compliance Status: Facility is in general compliance

Completed by: Howard Dunn **Completed date:** 3/9/2026

Compliance History

DMR Data for Outfall 001 (from January 1, 2025 to December 31, 2025)

Parameter	DEC-25	NOV-25	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25
Flow (MGD) Average Monthly	0.0092	0.0009	0.003566	0.008603	0.006171	0.0077	0.0082	0.007	0.0001	0.0001	0.0001	0.00008
pH (S.U.) Instantaneous Minimum	7.2	7.1	6.9	7.0	7.1	6.9	6.8	6.2	6.86	6.62	6.58	6.71
pH (S.U.) Instantaneous Maximum	8.0	7.7	7.6	7.5	7.4	7.3	7.2	7.4	7.82	7.89	7.89	7.82
DO (mg/L) Instantaneous Minimum	8.7	5.5	5.2	7.7	5.4	5.4	5.3	6.1	7.03	6.92	6.98	6.85
TRC (mg/L) Average Monthly	0.08	0.14	0.09	0.08	0.09	0.09	0.2	0.49	0.4	0.43	0.37	0.39
TRC (mg/L) Instantaneous Maximum	0.36	0.9	0.27	0.41	0.84	0.85	0.7	0.93	0.72	0.69	0.59	0.87
$CBOD_5$ (mg/L) Average Monthly	< 3.0	< 4.2	< 4.0	< 3.0	< 3.0	< 3.0	< 3.0	< 1.5	< 1.5	< 1.6	< 1.5	< 3.8
$CBOD_5$ (mg/L) Instantaneous Maximum	< 3.0	5.48	4.95	< 3.0	< 3.0	< 3.0	< 3.0	< 1.5	< 1.5	< 1.6	< 1.5	6.0
TSS (mg/L) Average Monthly	< 1.6	4.2	1.6	1.6	2.4	< 1.6	< 2.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.00
TSS (mg/L) Instantaneous Maximum	< 1.6	6.0	1.6	1.6	3.2	< 1.6	1.6	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0
Fecal Coliform (No./100 ml) Geometric Mean	< 1	8	< 3	< 1	2	< 1	< 1	< 1	< 1.0	2.0	4.0	4.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 1	67	12.2	< 1	2	< 1	< 1	< 1	1.0	5.2	9.3	4.1
Ammonia (mg/L) Average Monthly	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.13	1.92	< 0.93
Ammonia (mg/L) Instantaneous Maximum	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.15	2.38	1.75

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.014
Latitude 40º 5' 14.00" **Longitude** -79º 20' 50.00"
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
Flow	Report	Average Monthly	-	92a.27, 92a.61
$CBOD_5$	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)
Total Residual Chlorine	0.5	Average Monthly	-	92a.47.(8) and 92a.48(b)(2)
Ammonia-Nitrogen	25	Average Monthly	-	BPJ
Dissolved Oxygen	4.0	Min	-	BPJ
pH	6.0 – 9.0 S.U.	Min – Max	-	95.2(1)
Total Nitrogen	Report	Average Monthly	-	92a.61
Total Phosphorus	Report	Average Monthly	-	92a.61
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)

Antidegradation Considerations:

Outfall 001 discharges to Indian Creek (Stream 38235), which is classified as a HQ-WWF.

DEP's 1992 *Special Protection Waters Implementation Handbook* imposed the following Antidegradation Best Available Technologies (BAT) effluent limits.

Parameter	Best Available Technology Effluent Limits
	Average Monthly (mg/L)
$CBOD_5$	10.0
DO (instantaneous minimum)	5.0 to 6.0
Suspended Solids	10
NH_3-N (May 1 – Oct. 31)	1.5
NH_3-N (Nov. 1 – Apr. 30)	4.5

DEP's *Water Quality Antidegradation Implementation Guidance* [Doc. No. 391-0300-002] amended the BAT limits to the following Antidegradation Best Available Combination of Technologies (ABACT) effluent limits:

Parameter	Treatment Process Performance Expectations (mg/L)		
	<2,000 gpd	2,000-50,000 gpd	>50,000 gpd
$CBOD_5$ (May 1 – Oct. 31)	10	10	10
$CBOD_5$ (Nov. 1 – Apr. 30)	20	20	10

Suspended Solids	20	10	10
NH_3-N (May 1 – Oct. 31)	5.0	3.0	1.5
NH_3-N (Nov. 1 – Apr. 30)	15.0	9.0	4.5
Effective disinfection	Disinfection should be accomplished using a method that leaves no detectable residual. Disinfection using ultra-violet light or other non-chlorine-based systems is encourage and must be considered.		
Other parameters, as needed	*Determined by the size and characteristics of the proposed discharge, may include – NO_2/NO_3-N, Total Phosphorus, Copper, Lead, Zinc*		

Previously, this facility was assigned a $CBOD_5$ limit of 10 mg/L, a summer ammonia-nitrogen limit of 3.0 mg/L, a winter ammonia-nitrogen limit of 9.0 mg/L, a dissolved oxygen limit of 5.0 mg/L, and a TSS limit of 25 mg/L based on "applicable regulations, policies, procedures, and guidelines."

Chapter 7 Section 3 of DEP's *Water Quality Antidegradation Implementation Guidance* [Doc. No. 391-0300-002] states that discharges in existence prior to HQ or EV designation are "grandfathered" from the current antidegradation policy. Indian Creek was classified as a high-quality stream in 1979. WQM Permit No. 6574416 was approved October 11, 1974. Living Treasures II is therefore grandfathered per the current antidegradation policy. Additional BAT and ABACT limits will not be imposed on this facility at this time. Previously imposed BAT and ABACT limits will not be removed due to anti-backsliding regulations.

Water Quality-Based Limitations (WQBELs)

Pursuant to EPA's approval of Pennsylvania's 2017 Triennial Review of Water Quality Standards and corresponding regulatory changes published in the *Pennsylvania Bulletin* on July 11, 2020, new water quality criteria for ammonia-nitrogen apply to waters of the commonwealth.

Indian Creek has a four-mile segment that receives effluent flow from four individual sewage treatment plants. This segment encompasses Living Treasures II (PA0096164) at RMI 20.70, Mountain Pines Resort STP (PA0034614) at RMI 18.50, Cnp Mountain Plaza LLC (PA0098345) at RMI 17.960, and Pleasant View MHP STP (PA0096733) at 17.160. All of the discharges were previously modeled together. As part of the modeling effort for Mountain Pines Resort STP, effluent limits were evaluated for all four of the discharges. That modeling confirmed that TBELs are adequate to protect water quality. Modeling output files are provided in Attachment A. This means that the cumulative effect of the four discharges is negligible. The effluent limits from this facility will be modeled independently moving forward.

WQM 7.0 Water Quality Modeling

DEP's WQM 7.0 version 1.1 model is a Microsoft Access Program used for sewage dischargers to determine whether TBELs are sufficient to meet in-stream water quality criteria for ammonia-nitrogen, carbonaceous biochemical oxygen demand ($CBOD_5$), and dissolved oxygen (DO).To accomplish this, the model simultaneously simulates mixing and degradation of ammonia-nitrogen and mixing and consumption of DO through $CBOD_5$ and ammonia-nitrogen degradation. WQM 7.0 determines the highest pollutant loadings that the stream can assimilate while still meeting water quality criteria under design conditions. More information regarding the model can be found in the Department's *Technical Reference Guide (TRG) WQM 7.0 for Windows Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen Version 1.0* [Doc. No. 391-2000-007].

The model is a two-step process. The discharge is first remodeled for the summer period (May through October) because warm temperatures are more likely to result in critical loading conditions in the receiving water. Reduced DO levels likely also play a role in ammonia-toxicity and solubility of DO decreases at increased water temperature. If summer modeling determines that WQBELs are appropriate for the summer period, then modeling is completed for the winter period (November through April). This is in accordance with DEP's *Implementation Guidance of Section 93.7 Ammonia Criteria* [Doc. No. 391-2000-013] (Ammonia Guidance).

River Mile Index (RMI) was measured in eMAP PA as the distance between the facility's outfall and the mouth of Indian Creek. Discharge point and downstream drainage area as well as low flow yield at the point of discharge were generated using USGS Stream Stats. USGS Stream Stats output files are provided in Attachment B. Discharge and downstream instream elevations were measured in Google Earth Pro. In the absence of site-specific data, discharge temperature, stream temperature, and stream pH are assumed to be 20 °C, 20 °C, and 7 in accordance with the Ammonia Guidance.

Stream width/depth was assumed to be 10 in accordance with DEP's *Technical Reference Guide (TRG) WQM 7.0 for Windows Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen Version 1* [Doc. No. 391-2000-007]. Effluent concentration was set equal to the applicable TBEL or PBJ limits defined above.

WQM 7.0 summer inputs are documented in the table below:

Discharge Characteristics		Basin/Stream Characteristics	
Parameter	**Value**	**Parameter**	**Value**
River Mile Index (RMI)	21.79	Drainage Area	19.1
Discharge Flow (MGD)	0.014	Q_{7-10} (cfs)	0.425
Discharge Temp (°C)	20	Low-flow yield (cfs/mi^2)	0.02225
Ammonia-Nitrogen (mg/L)	25	Elevation (ft)	1491
$CBOD_5$ (mg/L)	25	Stream Width/Depth	10
Dissolved Oxygen (mg/L)	4.0	Stream Temp (°C)	20
DO Goal	5.0	Stream pH (s.u.)	7

The discharge was modeled using WQM 7.0 to evaluate water quality-based limits for ammonia-nitrogen, $CBOD_5$, and DO. Modeling confirmed that technology based effluent limitations are appropriate for $CBOD_5$ while BPJ based effluent limits are appropriate for ammonia-nitrogen and DO. WQM 7.0 output files are included in Attachment C.

Parameter	Limit (mg/l)	SBC	Basis
Ammonia-Nitrogen Summer (mg/L)	25	Average Monthly	BPJ
Ammonia-Nitrogen Winter (mg/L)	25	Average Monthly	BPJ
$CBOD_5$ (mg/L)	25	Average Monthly	TBEL
Dissolved Oxygen	4.0	Average Monthly	BPJ

The Department's *Technical Guidance for the Development and Specification of Effluent Limitations* [Doc No.362-0400-001] stipulates that for sewage related pollutants instantaneous maximum limits be calculated by multiplying the average monthly limit by a conversion factor of 2.0.

Total Residual Chlorine

Total Residual Chlorine was re-modeled with the TRC Spreadsheet and it was confirmed that technology based effluent limits are appropriate for Total Residual Chlorine. TRC Spreadsheet output files are provided in Attachment D.

Parameter	Limit (mg/l)	SBC	Basis
Total Residual Chlorine (mg/L)	0.5	Average Monthly	TBEL

Permit Effluent Limitations

In accordance with Section III of DEP's SOP for *Establishing Effluent limitations for Individual Sewage Permits*, the limits to be imposed, which are provided below, represent the most stringent limitations between the TBELs, WQBELs, BAT, and BPJs.

Parameter	Limit (mg/l)	SBC	Basis
Total Suspended Solids	25	Average Monthly	Previous Antidegradation Related Limit
Fecal Coliform (Recreation Season)	200 CFU/mL	Geo Mean	TBEL

Fecal Coliform (Non-Recreation Season)	2,000 CFU/mL	Geo Mean	TBEL
pH	6.0	Instantaneous Minimum	TBEL
pH	9.0	Instantaneous Maximum	TBEL
Ammonia-Nitrogen Summer (mg/L)	3.0	Average Monthly	Previous Antidegradation Related Limit
Ammonia-Nitrogen Winter (mg/L)	9.0	Average Monthly	Previous Antidegradation Related Limit
$CBOD_5$ Summer (mg/L)	10	Average Monthly	Previous Antidegradation Related Limit
$CBOD_5$ Winter (mg/L)	20	Average Monthly	Previous Antidegradation Related Limit
Dissolved Oxygen	6.0	Average Monthly	Previous Antidegradation Related Limit
Total Residual Chlorine (mg/L)	0.5	Average Monthly	TBEL

Additional Considerations

In accordance with Section I.A. of DEP's SOP for *Establishing Effluent Limitations for Individual Sewage Permits* [SOP No. BCW-PMT-033 Version 1.9], pursuant to EPA's approval of Pennsylvania's 2017 Triennial Review of Water Quality Standards and corresponding regulatory changes published in the Pennsylvania Bulletin on July 11, 2020 and under the authority of 25 Pa. Code § 93.7(a) and § 92.a.61, sewage dischargers will include monitoring for *E. coli*. For new and reissued permit, a monitoring frequency of 1/year will be imposed for design flows ≥ 0.002 MGD and < 0.05 MGD.

In accordance with Section I.A of the DEP's SOP for *Establishing Effluent Limitations for Individual Sewage Permits* [SOP No. BCW-PMT-033 Version 1.9], and under the authority of 25 Pa. Code § 92a.61(b), nutrient monitoring for total nitrogen and total phosphorus will be imposed for sewage facilities with a design flow greater than 2,000 GPD. The intent of this monitoring is to establish the nutrient load of the wastewater and evaluate the impact that load may have on the quality of the receiving stream. The SOP states that if the receiving stream is not impaired for nutrients, then discretion may be used in setting the monitoring frequency Indian Creek is not impaired for nutrients; therefore, a monitoring frequency of 1/year will again be imposed. During the last permit cycle, total phosphorus sample results ranged from 1.39 mg/L to 3.72 mg/L. Total nitrogen sampling resulted in three non-detects with quantitation limits of 31.0 mg/L or greater and two detections ranging from 9.1 mg/L to 14.0 mg/L.

Conventional limits are rounded in accordance with the guidelines in Chapter 5 Section C.2. of DEP's *Technical Guidance for the Development and Specification of Effluent Limitations* [Doc. No. 362-0400-001]. No limits are being changed this permit cycle.

Monitoring frequency for the proposed effluent limits are based on Table 6-3, Self -Monitoring Requirements for Sewage Dischargers, from DEP's *Technical Guidance for the Development and Specification of Effluent Limitations* [Doc. No. 362-0400-001]. Monitoring frequencies are not changing this permit cycle.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.014	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	0.5 Avg Mo	XXX	XXX	1.6	1/day	Grab
$CBOD_5$	XXX	XXX	XXX	10.0	XXX	25.0	2/month	Grab
TSS	XXX	XXX	XXX	25.0	XXX	50.0	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	Report Daily Max	XXX	XXX	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	9.0	XXX	18.0	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	3.0	XXX	6.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001
Other Comments: None

ATTACHMENT A

Integrated Modeling

WQM 7.0 Output Files

WQM 7.0 Output Files

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
19.120	0.073	20.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
10.013	1.001	10.000	0.092
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
3.75	0.736	2.32	0.700
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.581	4.379	Owens	5
Reach Travel Time (days)			
0.153			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.015	3.71	2.29	7.51
0.031	3.67	2.27	7.45
0.046	3.62	2.24	7.40
0.061	3.58	2.22	7.35
0.076	3.54	2.20	7.30
0.092	3.50	2.17	7.26
0.107	3.47	2.15	7.22
0.122	3.43	2.13	7.19
0.137	3.39	2.11	7.16
0.153	3.35	2.08	7.14

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
18.890	0.081	20.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
10.334	1.033	10.000	0.090
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
3.58	0.657	2.30	0.700
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.163	4.079	Owens	5
Reach Travel Time (days)			
0.338			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.034	3.50	2.25	7.08
0.068	3.42	2.20	7.01
0.101	3.35	2.15	6.97
0.135	3.27	2.10	6.93
0.169	3.20	2.05	6.91
0.203	3.13	2.00	6.90
0.237	3.06	1.95	6.89
0.271	3.00	1.91	6.89
0.304	2.93	1.86	6.90
0.338	2.87	1.82	6.92

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
21.790	0.014	20.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
8.078	0.808	10.000	0.069
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
3.10	0.223	1.20	0.700
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.922	5.380	Owens	5
Reach Travel Time (days)			
1.969			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.197	2.97	1.04	8.24
0.394	2.84	0.91	8.24
0.591	2.72	0.79	8.24
0.788	2.60	0.69	8.24
0.985	2.49	0.60	8.24
1.181	2.38	0.52	8.24
1.378	2.28	0.46	8.24
1.575	2.18	0.40	8.24
1.772	2.09	0.35	8.24
1.969	2.00	0.30	8.24

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
19.560	0.049	20.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
9.818	0.982	10.000	0.091
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
3.42	0.597	1.70	0.700
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.372	4.501	Owens	5
Reach Travel Time (days)			
0.296			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.030	3.36	1.67	8.24
0.059	3.30	1.63	8.12
0.089	3.25	1.60	8.03
0.118	3.19	1.57	7.95
0.148	3.13	1.53	7.88
0.178	3.08	1.50	7.83
0.207	3.02	1.47	7.79
0.237	2.97	1.44	7.76
0.266	2.92	1.41	7.73
0.296	2.87	1.38	7.71

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN 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
21.790	Lvg Treasur STP	9.67	50	9.67	50	0	0
19.560	MTN Pines STP	9.67	50	9.67	50	0	0
19.120	Pleasant Vw STP	9.67	50	9.67	50	0	0
18.890	CNP MTN STP	9.67	50	9.67	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
21.790	Lvg Treasur STP	1.92	25	1.92	25	0	0
19.560	MTN Pines STP	1.92	25	1.92	25	0	0
19.120	Pleasant Vw STP	1.92	25	1.92	25	0	0
18.890	CNP MTN STP	1.92	25	1.92	25	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
21.79	Lvg Treasur STP	25	25	25	25	4	4	0	0
19.56	MTN Pines STP	25	25	25	25	4	4	0	0
19.12	Pleasant Vw STP	25	25	25	25	4	4	0	0
18.89	CNP MTN STP	25	25	25	25	4	4	0	0

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN 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												
21.790	0.43	0.00	0.43	.0217	0.00410	.808	8.08	10	0.07	1.969	20.00	7.00
19.560	0.80	0.00	0.80	.0758	0.00475	.982	9.82	10	0.09	0.296	20.00	7.00
19.120	0.81	0.00	0.81	.1129	0.00397	1.001	10.01	10	0.09	0.153	20.00	7.00
18.890	0.84	0.00	0.84	.125	0.00257	1.033	10.33	10	0.09	0.338	20.00	7.00
Q1-10 Flow												
21.790	0.28	0.00	0.28	.0217	0.00410	NA	NA	NA	0.05	2.491	20.00	7.00
19.560	0.51	0.00	0.51	.0758	0.00475	NA	NA	NA	0.07	0.370	20.00	7.00
19.120	0.52	0.00	0.52	.1129	0.00397	NA	NA	NA	0.07	0.189	20.00	7.00
18.890	0.54	0.00	0.54	.125	0.00257	NA	NA	NA	0.07	0.417	20.00	7.00
Q30-10 Flow												
21.790	0.58	0.00	0.58	.0217	0.00410	NA	NA	NA	0.08	1.670	20.00	7.00
19.560	1.09	0.00	1.09	.0758	0.00475	NA	NA	NA	0.11	0.252	20.00	7.00
19.120	1.10	0.00	1.10	.1129	0.00397	NA	NA	NA	0.11	0.131	20.00	7.00
18.890	1.14	0.00	1.14	.125	0.00257	NA	NA	NA	0.11	0.290	20.00	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		

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
19E	38235	INDIAN CREEK	**18.390**	1419.37	33.40	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	0.85	0.000	0.000	10.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	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	9.17	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19E	38235	INDIAN CREEK	**18.890**	1426.16	32.90	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	0.84	0.000	0.000	10.0	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
CNP MTN STP	PA0O98345	0.0078	0.0078	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	9.17	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19E	38235	INDIAN CREEK	**19.120**	1430.98	31.80	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	0.81	0.000	0.000	10.0	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
Pleasant Vw STP	PA0O96733	0.0240	0.0240	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	9.17	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19E	38235	INDIAN CREEK	**19.560**	1442.01	31.60	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	0.80	0.000	0.000	10.0	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
MTN Pines STP	PA0O34614	0.0350	0.0350	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	9.17	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19E	38235	INDIAN CREEK	**21.790**	1490.33	19.10	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	0.43	0.000	0.000	10.0	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
Lvg Treasur STP	PA0O96164	0.0140	0.0140	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	9.17	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN 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)
21.790	Lvg Treasur STP	PA0O96164	0.014	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			4

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)
19.560	MTN Pines STP	PA0O34614	0.035	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			4

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)
19.120	Pleasant Vw STP	PA0O96733	0.024	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			4

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)
18.890	CNP MTN STP	PA0O98345	0.008	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			4

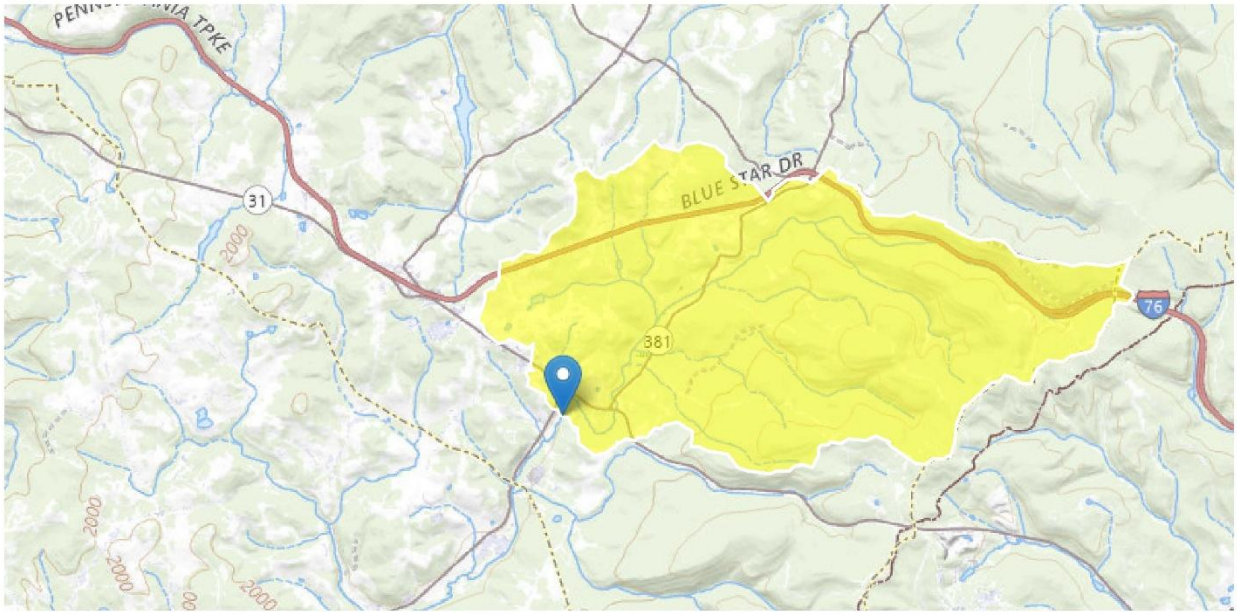
ATTACHMENT B

USGS Stream Stats Output Files

Discharge Point

StreamStats Report

Region ID: PA
Clicked Point (Latitude, Longitude): 40.08682, -79.34695
Time: 2026-02-10 13:02:53 -0500



StreamStats Update

Starting with version 4.30.0, the StreamStats application uses services that were redeveloped with open-source software components. Users may observe minor variations in computed results when compared to those from previous versions. These differences are expected and do not reflect errors in the underlying data or analytical methods. Users are advised to consider these potential variations when interpreting or comparing results generated across different versions of StreamStats. Please email streamstats@usgs.gov with any questions or concerns. A full list of changes can be found at **https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release (https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release)** .

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	19.1	square miles
ELEV	Mean Basin Elevation	2076.9	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	19.1	square miles	2.26	1400
ELEV	Mean Basin Elevation	2076.9	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	1.28	ft^3/s	43	43
30 Day 2 Year Low Flow	2.22	ft^3/s	38	38
7 Day 10 Year Low Flow	0.425	ft^3/s	66	66
30 Day 10 Year Low Flow	0.767	ft^3/s	54	54
90 Day 10 Year Low Flow	1.54	ft^3/s	41	41

Low-Flow Statistics Citations

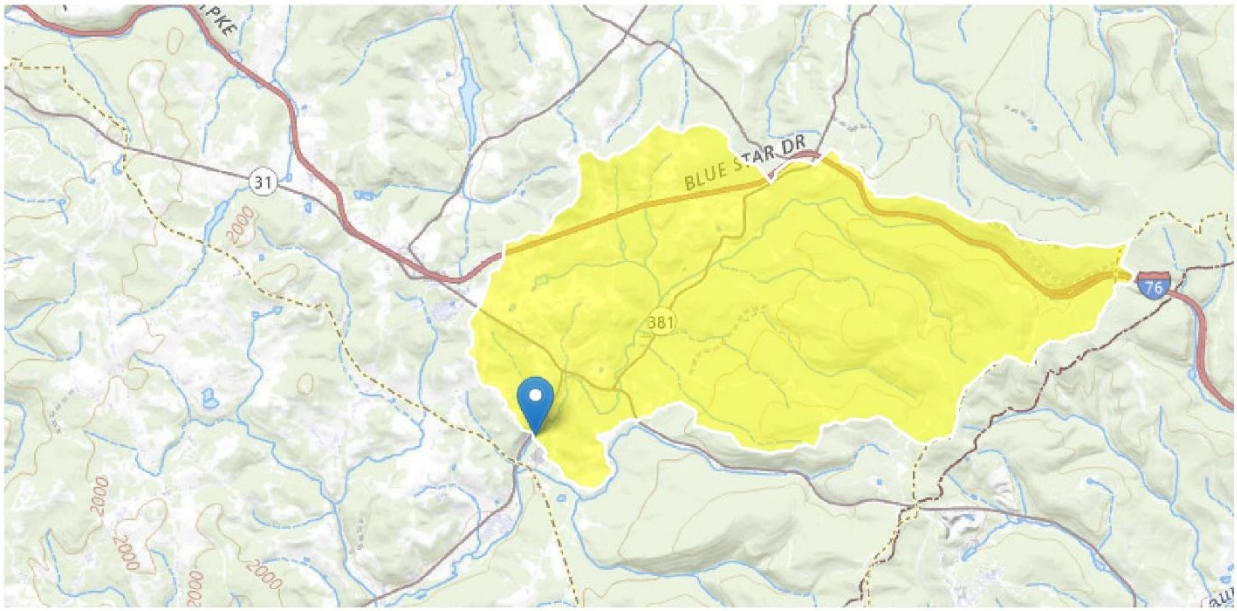
Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.31.0
SSHydro Services Version: 1.1.0
SSDelineate Services Version: 1.0.1
NSS Services Version: 2.2.1
GageStats Services Version: 1.2.1
Pourpoint Services Version: 1.2.0
Batch Processor Version: 1.6.1

End of Reach

StreamStats Report

Region ID: PA
Clicked Point (Latitude, Longitude): 40.07975, -79.35438
Time: 2026-02-10 13:26:05 -0500



StreamStats Update

Starting with version 4.30.0, the StreamStats application uses services that were redeveloped with open-source software components. Users may observe minor variations in computed results when compared to those from previous versions. These differences are expected and do not reflect errors in the underlying data or analytical methods. Users are advised to consider these potential variations when interpreting or comparing results generated across different versions of StreamStats. Please email streamstats@usgs.gov with any questions or concerns. A full list of changes can be found at **https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release (https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release)** .

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	20.6	square miles
ELEV	Mean Basin Elevation	2046.7	feet

ATTACHMENT C

WQM 7.0 Modeling 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
19E	38235	INDIAN CREEK	**21.790**	1491.00	19.10	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	0.022	0.00	0.00	0.000	0.000	10.0	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
Living Treasure	PA0096164	0.0000	0.0140	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	9.01	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19E	38235	INDIAN CREEK	**20.990**	1480.00	20.60	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	0.022	0.00	0.00	0.000	0.000	10.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

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

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN 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												
21.790	0.42	0.00	0.42	.0217	0.00260	.483	13.98	28.96	0.07	0.738	20.00	7.00
Q1-10 Flow												
21.790	0.27	0.00	0.27	.0217	0.00260	NA	NA	NA	0.05	0.934	20.00	7.00
Q30-10 Flow												
21.790	0.58	0.00	0.58	.0217	0.00260	NA	NA	NA	0.08	0.626	20.00	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 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
21.790	0.014	20.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
13.975	0.483	28.961	0.066
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
3.12	0.409	1.21	0.700
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.767	13.552	Owens	5
Reach Travel Time (days)			
0.738			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.074	3.02	1.15	8.24
0.148	2.93	1.09	8.24
0.221	2.85	1.04	8.24
0.295	2.76	0.99	8.24
0.369	2.68	0.94	8.24
0.443	2.60	0.89	8.24
0.517	2.52	0.84	8.24
0.591	2.45	0.80	8.24
0.664	2.37	0.76	8.24
0.738	2.30	0.72	8.24

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN 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
21.790	Living Treasure	16.76	50	16.76	50	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
21.790	Living Treasure	1.89	25	1.89	25	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
21.79	Living Treasure	25	25	25	25	4	4	0	0

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN 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)
21.790	Living Treasure	PA0096164	0.000	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			4

ATTACHMENT D

TRC Modeling Results

TRC_CALC_Living Treasures

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.425	= Q stream (cfs)	0.5	= CV Daily
0.014	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 6.279	1.3.2.iii	WLA cfc = 6.114
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 2.340	5.1d	LTA_cfc = 3.554

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

WLA afc	**(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...** **...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)**
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	**(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...** **...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)**
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	**1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)**