Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0271403**
Facility Type	**Non-Municipal**	APS ID	**1115549**
Major / Minor	**Minor**	Authorization ID	**1488387**

Applicant and Facility Information

Applicant Name	**Living Treasures I Inc.**	Facility Name	**Living Treasures STP**
Applicant Address	268 Fox Road	Facility Address	268 Fox Road
	New Castle, PA 16101-8026		New Castle, PA 16101-8026
Applicant Contact	Adam Guiher	Facility Contact	
Applicant Phone	(724) 454-6992	Facility Phone	
Client ID	341786	Site ID	817438
Ch 94 Load Status		Municipality	Slippery Rock Township
Connection Status		County	Lawrence
Date Application Received	May 20, 2024	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Renewal Application for a Minor Sewage Facility

Summary of Review

The permittee is applying for reissuance of Individual Permit No. **PA0271403** which expired on December 31, 2023.

The treatment plant consists of activated sludge with equalization and clarification. The application specifies the use of UV-type disinfection. The permittee proposed a UV unit, and UV transmittance (%) is included as part of the monitoring requirements for the facility.

This is a discharge into a stream channel - Trib 34077 Of Slippery Rock Creek.

It appears that no copies of DMRs have been submitted for the past five years. The only inspections conducted were on 09/29/2021 and 03/04/2025, which were for compliance evaluation and administrative/file review, respectively. The only related documentation uploaded by the inspector consists of emails stating: “The engineer inquired about the status of the sewage treatment plant to fulfill the routine inspection requirements. The email indicates that since the sewage treatment plant has not yet been constructed, there is no need for an onsite inspection or meeting at this time. Your status update will satisfy the current inspection requirements of the issued NPDES Permit. No further action is required at this time.”

Part C condition C.29 is included in this permit to require the permittee to obtain a WQM permit for the construction of the treatment facility. Construction must be completed in accordance with the approved WQM permit prior to commencing discharges.

A compliance schedule will not be included in this permit because the permittee is not currently discharging and does not have an existing treatment system. The system will need to be designed and constructed to meet the new effluent limitations, which are effective upon permit issuance.

Act 14 – Notifications were submitted and received.

Approve	Deny	Signatures	Date
x		Adebayo Olude Adebayo Olude / Civil Engineer Trainee	August 14, 2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	August 29, 2025

Summary of Review
There is only 1 open violation in WMS for the subject Client ID (**341786**) as of 8/15/25. Violation –"NPDES - Failure to pay annual fee". Sludge use and disposal description and location(s): None 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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.009
Latitude	40º 58' 7.82"	Longitude	-80º 12' 46.63"
Quad Name	Portersville	Quad Code	40080H2
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary of Slippery Rock Creek (CWF)	Stream Code	34077
NHD Com ID	126216633	RMI	0.1200
Drainage Area	0.55	Yield (cfs/mi^2)	0.0075
Q_{7-10} Flow (cfs)	0.0041	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1203	Slope (ft/ft)	-
Watershed No.	20-C	Chapter 93 Class.	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)	7	Default
Temperature (°F)	20	Default
Hardness (mg/L)	100	Default
Other:		

Nearest Downstream Public Water Supply Intake	PA American Water Company - Ellwood City District Intake		
PWS Waters	Slippery Rock Creek	Flow at Intake (cfs)	0.1
PWS RMI	53.1	Distance from Outfall (mi)	9.78

Changes Since Last Permit Issuance: Elevation was revised using Google Earth. Drainage Area and Q_{7-10} Flow were revised using USGS StreamStats.

Other Comments: The streamflow value used for the receiving stream in this renewal is different from the previous permit. According to USGS Stream Stats, the anticipated low-flow (Q7-10) for the stream is 0.0041 cfs, whereas the previous model assumed a low-flow of 0.08568 cfs. The basis for the earlier flow value is unclear, but this difference in streamflow inputs likely accounts for the change in modeled results under attachment 4.

Treatment Facility Summary				
Treatment Facility Name: Living Treasures STP				
WQM Permit No.	**Issuance Date**			
N/A	N/A			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage				
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**

Changes Since Last Permit Issuance: None

Other Comments: N/A

Compliance History	
Summary of DMRs:	No discharge reported
Summary of Inspections:	There is only 1 open violation in WMS for the subject Client ID (**341786**) as of 8/15/25. Violation – "NPDES - Failure to pay annual fee".

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .009
Latitude 40º 58' 8.00" **Longitude** -80º 12' 47.00"
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)
Total Nitrogen	Report	Average Monthly		92a.61
Total Phosphorus	Report	Average Monthly		92a.61
E. Coli	Report	IMAX		92a.61

Comments: The limits for pH are technology-based on Chapter 93.7. The limits for Total Suspended Solids, and Fecal Coliforms are technology-based on Chapter 92a.47. The limits for TRC are applicable under chapter 92a.48. Monitoring for E. Coli is placed in the permit in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits." With a design flow of 0.002 – 0.05 MGD, a sample frequency of 1/year is being proposed. A total residual chlorine limit is not necessary because UV disinfection is being proposed.

Water Quality-Based Limitations

CBOD5, Ammonia, and Dissolved oxygen are evaluated using WQM 7.0 (Attachment 4).
The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
CBOD5	25	Average Monthly	WQM 7.0
	50	IMAX	
NH3-N May 1 – Oct 31	2.0	Average Monthly	WQM 7.0
	4.0	IMAX	
NH3-N Nov 1 – Apr 30	6.0	Average Monthly	WQM 7.0
	12.0	IMAX	
Dissolved Oxygen	5.0	Daily minimum	WQM 7.0

Comments: This discharge was evaluated using the WQM 7.0 model to determine appropriate effluent limitations for $CBOD_5$, Ammonia-Nitrogen, and Dissolved Oxygen. The modeling results confirmed that the current $CBOD_5$ limitations remain appropriate. However, the existing Dissolved Oxygen limit is more stringent than what is currently imposed in the previous permit for the facility. The model calculated WQBELs for NH3-N that are more stringent than what is currently imposed in the previous permit. The model recommended summertime average monthly limitations of 2.1 and an IMAX of 4.2. Respectively these will round down to 2.0 mg/l Average Monthly Average and 4.0 Instantaneous Maximum based on the rounding guidelines in the Permit Writers Manual. A seasonal multiplier of 3 times the summertime average monthly

limit is established for the winter period. The default pH value of 7.0 S.U. was used in this most recent WQM 7.0 model run, instead of a site-specific pH value similar to what was done in the previous permit renewal. This may explain why different WQBELs were calculated in the previous permit. The previous NH3-N limits have been updated in this renewal

Based on the discharge data, A compliance schedule will not be included because the permittee is not currently discharging and does not have an existing treatment system. The system will be designed and constructed to meet the new effluent limitations, which are effective upon permit issuance.

Best Professional Judgment (BPJ) Limitations

Comments: None

Anti-Backsliding

The previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l). The previous permit limitations, monitoring requirements, and conditions will be retained. New or more stringent limitations are being proposed for E. Coli and Ammonia-Nitrogen.

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		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	4.0 Daily Min	XXX	XXX	XXX	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50.0	2/month	Grab
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	1000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	10000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	11.5	XXX	23.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

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

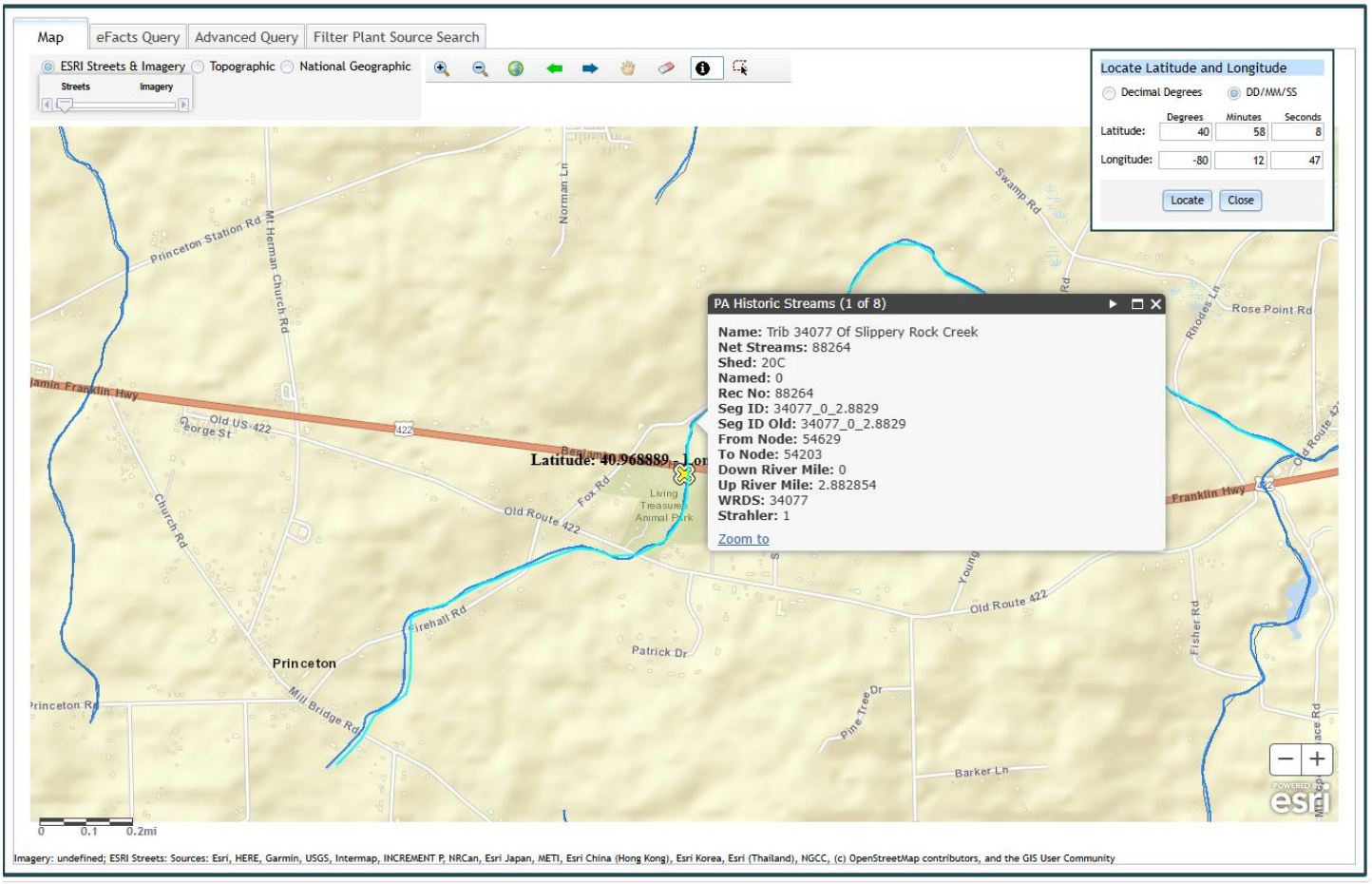
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50.0	2/month	Grab
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	1000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	10000	2/month	Grab
Ultraviolet light transmittance (%)	XXX	XXX	XXX	Report	XXX	Report	1/day	Recorded
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	2.0	XXX	4.0	2/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	6.0	XXX	12.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001 after disinfection.

Other Comments: The model calculated WQBELs for NH3-N that are more stringent than what is currently imposed in the previous permit and have therefore been updated based on the rounding guidelines in the Permit Writers Manual. Also, a UV disinfection has been included in this permit for monitoring. This permit establishes final effluent limitations that are effective upon permit issuance. No compliance schedule is necessary because the permittee is not currently discharging and has no existing treatment system. The new treatment system should be designed to meet the applicable effluent limits.

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:
☐	Other:

Attachment 1
eMAP – Receiving stream location and Designation

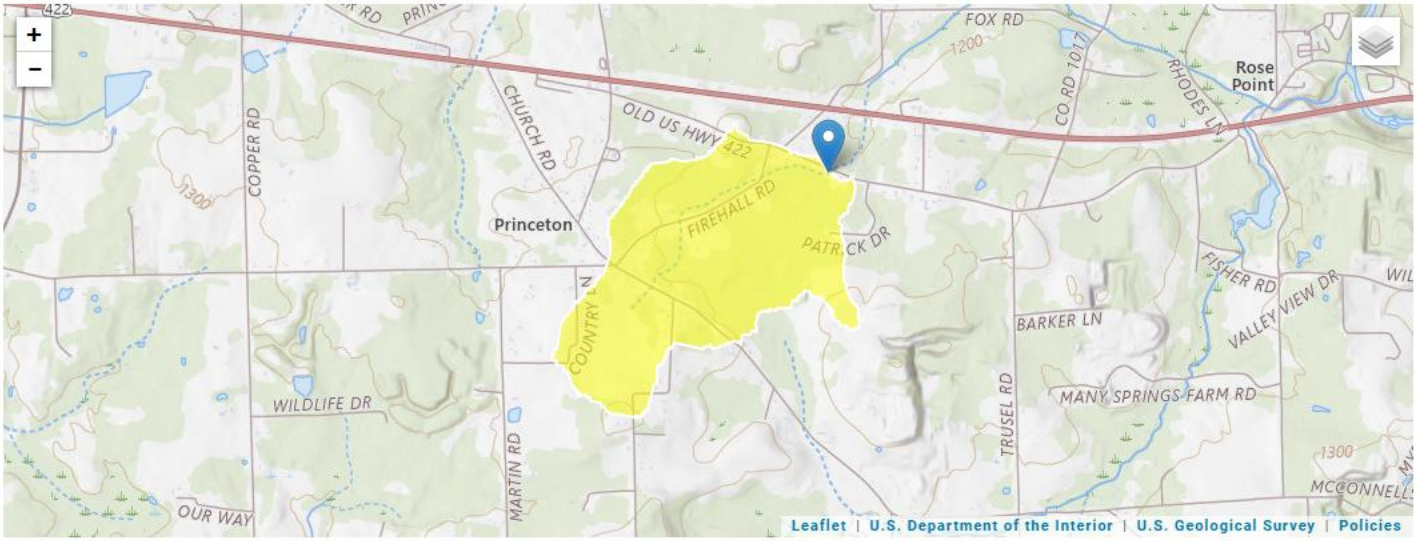


Attachment 2
Google Earth Aerial Site View

Attachment 3
StreamStats Report

StreamStats Report

Region ID:	PA
Workspace ID:	PA20250815214319745000
Clicked Point (Latitude, Longitude):	40.96622, -80.21543
Time:	2025-08-15 17:43:40 -0400



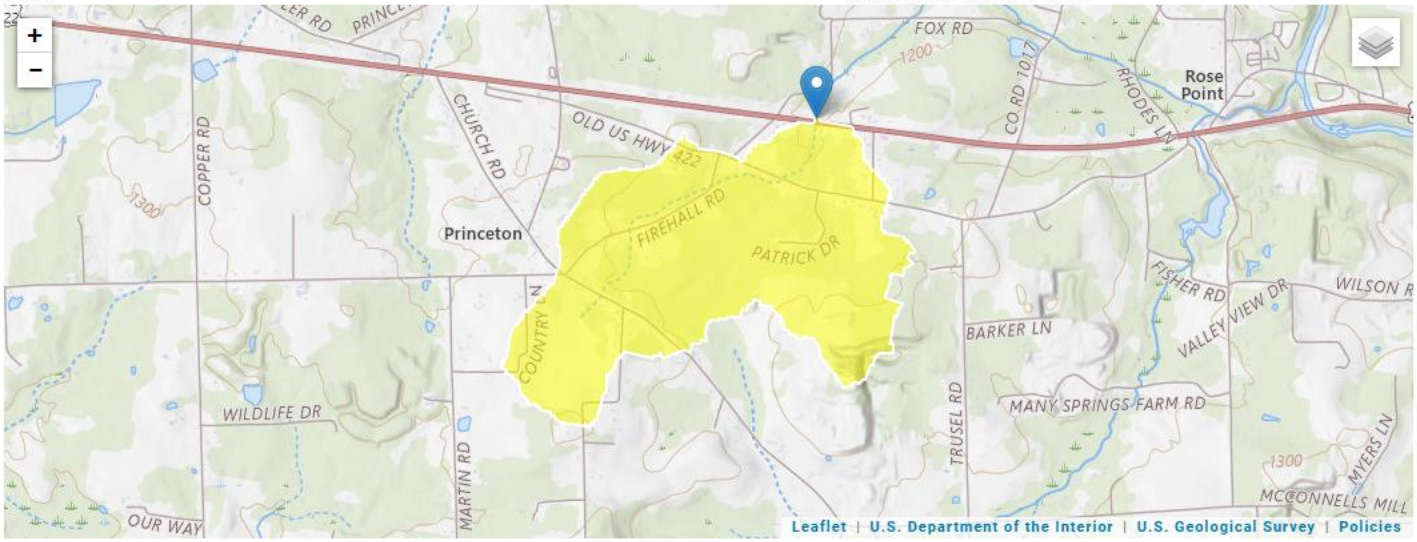
Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.55	square miles
ELEV	Mean Basin Elevation	1293	feet

StreamStats Report

Region ID:	PA
Workspace ID:	PA20250815215020684000
Clicked Point (Latitude, Longitude):	40.96930, -80.21294
Time:	2025-08-15 17:50:40 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.82	square miles
ELEV	Mean Basin Elevation	1287	feet

Attachment 4
WQM 7.0 Modeling Output files

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
	20C	34077	Trib 34077 of Slippery Rock Creek	2.880	1216.00	0.55	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	0.007	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
LivingTreasures	PA0271403	0.0090	0.0090	0.0090	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	4.00	8.24	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
20C	34077	Trib 34077 of Slippery Rock Creek	2.650	1202.00	0.82	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	0.008	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
LivingTreasures	PA0271403	0.0090	0.0090	0.0090	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	4.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
20C	34077	Trib 34077 of Slippery Rock Creek

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
2.880	0.00	0.00	0.00	.0139	0.01153	.264	2.53	9.58	0.03	0.518	23.86	7.00
Q1-10 Flow												
2.880	0.00	0.00	0.00	.0139	0.01153	NA	NA	NA	0.03	0.544	24.20	7.00
Q30-10 Flow												
2.880	0.01	0.00	0.01	.0139	0.01153	NA	NA	NA	0.03	0.496	23.56	7.00

WQM 7.0 Modeling Specifications

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

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
20C	34077	Trib 34077 of Slippery Rock Creek

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
2.880	LivingTreasures	11.83	14.07	11.83	14.07	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
2.880	LivingTreasures	1.5	2.1	1.5	2.1	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)		
2.88	LivingTreasures	25	25	2.1	2.1	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
20C	34077	Trib 34077 of Slippery Rock Creek

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
2.880	0.009	23.857	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
2.526	0.264	9.584	0.027
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
19.74	1.444	1.62	0.942
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.741	25.001	Owens	5
Reach Travel Time (days)			
0.518			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.052	18.06	1.55	6.17
0.104	16.51	1.47	6.42
0.155	15.10	1.40	6.61
0.207	13.81	1.34	6.77
0.259	12.63	1.27	6.91
0.311	11.55	1.21	7.04
0.363	10.56	1.15	7.16
0.415	9.66	1.10	7.27
0.466	8.84	1.05	7.37
0.518	8.08	1.00	7.47

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
20C	34077	Trib 34077 of Slippery Rock Creek

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
2.880	LivingTreasures	PA0271403	0.009	CBOD5	25		
				NH3-N	2.1	4.2	
				Dissolved Oxygen			5