Pennsylvania Department of Environmental Protection

Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0039730**
Facility Type	**Non-Municipal**	APS ID	**810232**
Major / Minor	**Minor**	Authorization ID	**1515091**

Applicant and Facility Information

Applicant Name	**Pure Events LP**	Facility Name	**Lake Raystown Resort**
Applicant Address	3101 Chipmunk Crossing	Facility Address	3101 Chipmunk Crossing
	Entriken, PA 16638-8623		Entriken, PA 16638-8623
Applicant Contact	Joshua Patt	Facility Contact	Joshua Patt
Applicant Phone	(814) 658-3500	Facility Phone	(814) 658-3500
Client ID	303993	Site ID	453148
Ch 94 Load Status	Not Overloaded	Municipality	Lincoln Township
Connection Status	No Limitations	County	Huntingdon
Date Application Received	February 4, 2025	EPA Waived?	Yes
Date Application Accepted	February 7, 2025	If No, Reason	

Purpose of Application: NPDES permit renewal

Summary of Review

Keller Engineers Inc. on behalf of the Pure Events, LP applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its NPDES permit. The permit was last reissued on August 17, 2020, and became effective on September 1, 2020. The permit expires on August 31, 2025.

Pure Events, LP owns, operates, and maintains the Lake Raystown Resort wastewater treatment plant located in Lincoln Township, Huntingdon County. The treatment plant discharges treated municipal wastewater to Tatman Run to Lake Raystown, which is classified for High Quality-Cold Water Fishes (HQ-CWF). The facility has a design average annual flow of 0.1 MGD.

The WQM No. 3185402 was issued on 7/22/1995. The 3185402 T-3 were issued on 9/22/2014.

Sludge use and disposal description and location(s): N/A because sludge is hauled by the facility's contractor.

Changes from the previous permit: The E. Coli. monitoring and report requirements will be added to the permit.

Based on the review outlined in this fact sheet, it is recommended that the permit be drafted and published in the Pennsylvania Bulletin for public comments for 30 days.

Approve	Deny	Signatures	Date
X		*Hilaryle* Hilary H Le / Environmental Engineering Specialist	August 1, 2025
x		Maria D. Bebenek for Daniel W. Martin, P.E. / Environmental Engineer Manager	September 17, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.1
Latitude	40º 18' 26.97"	Longitude	-78º 10' 30.10"
Quad Name	Entriken	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Tatman Run to Raystown Branch Juniata River (HQ-CWF, MF)	Stream Code	13653
NHD Com ID	65841033	RMI	0.4
Drainage Area	7.81 mi.^{2}	Yield (cfs/mi^2)	See comments below
Q_{7-10} Flow (cfs)	See comments below	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	786.5	Slope (ft/ft)	
Watershed No.	11-D	Chapter 93 Class.	HQ-CWF, MF
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	
Nearest Downstream Public Water Supply Intake	Newport Borough Water Authority		
PWS Waters	Juniata River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	Approximate 112 miles

Changes Since Last Permit Issuance:

Drainage Area
The discharge is to Tatman Run at RMI 0.4 mile. A drainage area upstream of the discharge is estimated to be 7.81 mi.^{2}, according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Slow Flow
According to StreamStats, the gage station No. 1562000 on Raystown Branch Juniata River at Saxton, PA has a Q_{7-10} of 44.8 cfs and a drainage area of 754 mi.^{2}, which is near Manchester, PA. The Q_{7-10} of discharge was calculated as follows:

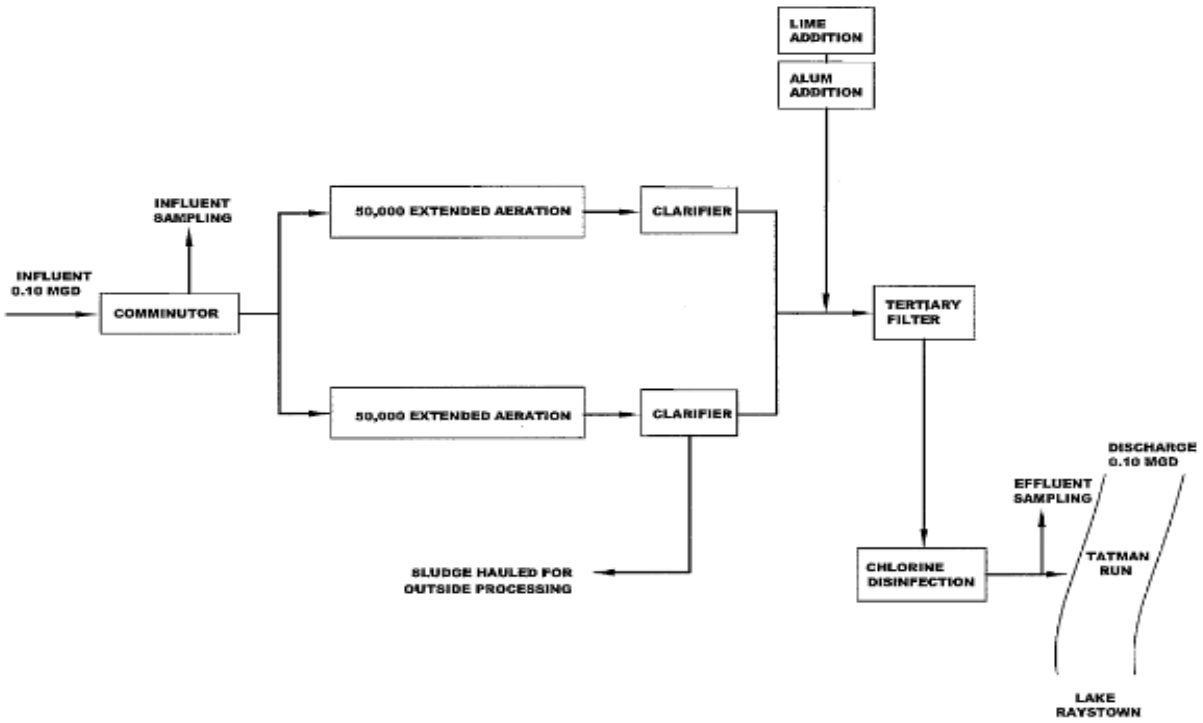
Low Flow Yield = $Q_{7-10gage}$ / Drainage Area$_{gage}$ = 44.8 cfs / 754 mi.^{2} = 0.06 cfs/mi.^{2}
$Q_{7-10discharge}$ = 0.14 cfs/mi.^{2} * Drainage Area$_{discharge}$ = 0.06 cfs/mi.^{2} * 7.81 mi.^{2} = 0.5 cfs
Q_{30-10} = 1.36 * $Q_{7-10discharge}$ = 1.36 * 0.5 cfs = 0.68 cfs
Q_{1-10} = 0.64 * $Q_{7-10discharge}$ = 0.64 * 0.5 cfs = 0.35 cfs

Tatman Run
25 Pa Code § 93.9n classifies Tatman Run as High-Quality Cold-Water Fishes (HQ-CWF) and Migratory Fishes (MF) surface water. Based on the 2024 Integrated Report, Tatman Run, assessment unit ID 6983, is not impaired. A TMDL currently does not exist for this stream segment, therefore, no TMDL has been taken into consideration during this review.

Public Water Supply
The nearest downstream public water supply intake is the Newport Borough Water Authority on the Juniata River, approximately 112 miles downstream of this discharge. Given the nature and dilution, the discharge is not expected to significantly impact the water supply.

Treatment Facility Summary				
Treatment Facility Name: Lake Raystown Resort				
WQM Permit No.	**Issuance Date**			
3185402	11/4/1995			
3185402 T-3	9/22/2014			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Extended Aeration	Hypochlorite	0.1
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.1		Not Overloaded	Aerobic Digestion	Combination of methods

Changes Since Last Permit Issuance: none



Other Comments:
The WWTP train is as follows:

Comminutor (1) ⇒ Extended Aeration (2) ⇒ Clarification (2) ⇒ Tertiary Filter (1) ⇒ Chlorine Contact Tank (1) ⇒ Discharge (outfall)

The system incorporates chemical addition in the form of chlorine for disinfection, lime for pH adjustment, and Alum for coagulation.

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

Compliance History	
Summary of DMRs:	DMRs reported last 12 months are summarized in the next page.
Summary of Inspections:	8/15/2024: Mr. Clark, DEP WQS, conducted a compliance evaluation inspection. The discharge was clear. The field test results indicated in permit limits. There were no violations indicate during inspection.
Other Comments:	There are currently no open violations associated with the permittee or the facility.

Compliance History

DMR Data for Outfall 001 (from June 1, 2024 to May 31, 2025)

Parameter	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24
Flow (MGD) Average Monthly	0.057	0.049	0.020	0.022	0.014	0.014	0.013	0.026	0.028	0.046	0.043	0.039
Flow (MGD) Daily Maximum	0.099	0.086	0.043	0.051	0.037	0.032	0.024	0.054	0.057	0.078	0.064	0.07
pH (S.U.) Instantaneous Minimum	7.64	7.85	8.1	8.09	8.13	7.67	7.11	6.96	7.44	7.48	7.45	7.47
pH (S.U.) Instantaneous Maximum	8.11	8.4	8.42	8.32	8.53	8.44	8.04	7.72	7.93	7.84	7.8	7.98
DO (mg/L) Instantaneous Minimum	8.16	8.58	10.27	11.97	11.91	10.82	8.48	8.27	7.5	6.31	6.49	6.93
TRC (mg/L) Average Monthly	0.24	0.25	0.26	0.25	0.35	0.29	0.38	0.28	0.32	0.27	0.33	0.29
TRC (mg/L) IMAX	0.43	0.54	0.73	0.45	0.88	0.47	0.63	0.42	0.7	0.67	0.61	0.72
CBOD5 (mg/L) Average Monthly	< 3	22.5	< 3	< 3.01	< 3.9	< 3	< 3	< 3.0	< 3	< 3	< 3	< 3
TSS (mg/L) Average Monthly	2.4	8.8	< 3.6	< 2.4	< 5.2	3.6	< 2.8	< 2	< 2.4	2.8	< 1.6	< 1.6
Fecal Coliform (No./100 ml) Geometric Mean	4	2	< 1	3	26	2	5	2	15	7	< 2	< 11
Fecal Coliform (No./100 ml) Instantaneous Maximum	4.1	3.1	2	7.5	93.3	3.1	6.2	5.2	25.9	13.1	4.1	131
Nitrate-Nitrite (mg/L) Annual Average						< 1.257						
Total Nitrogen (mg/L) Annual Average						< 1.757						
Ammonia (mg/L) Annual Average						< 0.1						
TKN (mg/L) Annual Average						< 0.5						
Total Phosphorus (mg/L) Average Monthly	0.085	0.194	0.209	0.191	0.526	0.375	0.97	1.046	0.57	0.444	0.125	0.208

Existing Effluent Limitations and Monitoring Requirements

Outfall 001,

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
D.O.	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
$CBOD_5$	XXX	XXX	XXX	25.0	XXX	50.0	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4.0	2/month	8-Hr Composite
Ammonia-Nitrogen	XXX	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Total Kjeldahl Nitrogen	XXX	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Nitrate-Nitrite as N	XXX	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Total Nitrogen	XXX	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	Calculation

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.1
Latitude 40º 18' 26.97" **Longitude** -78º 10' 31.10"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

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

Comments:

Water Quality-Based Limitations

Ammonia (NH_3-N):
Since the facility discharges to Lake Raystown embayment where there is sufficient dilution, the WQM 7.0 was not conducted for this facility.

And the Lake Raystown is so large to compare the discharge from the facility, therefore, no Ammonia-Nitrogen limitations are needed to protect the aquatic life from toxicity effects. Secondary treatment is adequate treatment to protect the receiving stream. Due to the Chesapeake Bay Implementation Plan, the facility is required to be monitored on a frequency at least 1/year.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):
Since the facility discharges into Lake Raystown where there is sufficient dilution, the facility will be subject to TBEL Limits. No water quality-based modeling was implemented.

The existing limit of 25.0 mg/L AML & 50.0 mg/L IMAX will remain in the proposed permit. Recent DMRs and inspection reports show that the facility has been consistently achieving concentrations well below this existing limit.

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

Fecal Coliform:
The recent coliform guidance in 25 Pa. Code § 92a.47.(a)(4) requires a summer technology limit of 200/100 ml as a geometric mean and an instantaneous maximum not greater than 1,000/100 ml and 25 Pa. Code § 92a.47.(a)(5) requires a winter limit of 2,000/100 ml as a geometric mean and an instantaneous maximum not greater than 10,000/100 ml.

E. Coli:
As recommended by DEP's SOP No. BCW-PMT-033, version 2.0 revised February 5, 2024, a routine monitoring for E. Coli will be included in the proposed permit under 25 Pa. Code § 92a.61. This requirement applies to all sewage dischargers greater than 0.002 MGD in their new and reissued permits. A monitoring frequency of 1/quarter will be included in the permit to be consistent with the recommendation from this SOP.

Total Suspended Solids (TSS):
The existing limits of 30.0 mg/L average monthly and 60.0 mg/L instantaneous maximum will remain in the permit based on the minimum level of effluent quality attainable by secondary treatment based on 25 Pa. Code § 92a.47. Recent DMRs and inspection reports show that the facility has been consistently achieving concentrations well below these limits.

Phosphorus:
Technology-based phosphorus limits of 2.0 mg/L average monthly and 4.0 mg/L instantaneous maximum were applied by the original 1998 protection report. The limits will remain in the proposed permit. Recent DMR data and inspection reports indicate consistent achievement.

Toxics:
Review of the permit application revealed no toxic parameters of concern. The application states that there are no industrial wastewater contributions.

Total Residual Chlorine (TRC):
Based on the attached TRC Excel Spreadsheet calculator, which uses the equations and calculations from the Department's May 1, 2003 Implementation Guidance for Total Residual Chlorine (ID No. 391-2000-015), the facility's discharge must meet a monthly average limit of 0.48 (0.5) mg/L and an instantaneous maximum limit of 1.575 (1.6) mg/L. The existing limits of 0.5 mg/L monthly average and 1.6 mg/L instantaneous maximum will remain in the proposed permit. Recent DMRs and inspection reports show that the facility has been consistently achieving these limits.

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.5	= Q stream (cfs)	0.5	= CV Daily
0.1	= 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 = 1.050	1.3.2.iii	WLA cfc = 1.016
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.391	5.1d	LTA_cfc = 0.591

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.482	AFC
		INST MAX LIMIT (mg/l) = 1.575	

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)

Chesapeake Bay Strategy:
The Department formulated a strategy to comply with the EPA and Chesapeake Bay Foundation requirements by reducing point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP). Sewage discharges have been prioritized by Central Office based on their delivered TN loadings to the Bay. The highest priority (Phases I, II, and III) dischargers will receive annual loading caps based on their design flow on August 29, 2005 and concentrations of 6 mg/L TN and 0.8 mg/L TP. These limits may be achieved through a combination of treatment technology, credits, or offsets. Phase IV (0.2 - 0.4 MGD) will be required to monitor and report TN and TP during permit renewal monthly and Phase V (below 0.2 MGD) will monitor during current permit renewal once a year. However, any facility in Phases IV and V that undergoes expansion is subjected to cap load right away. This plant is classified as phase V, it will be required to monitor and report Ammonia-Nitrogen, Total Kjeldahl Nitrogen, Nitrate-Nitrite as N, and TN 1/year. These "Monitor & Report" requirements will remain in the proposed permit.

Additional Considerations

Flow Monitoring
The requirement to monitor the volume of effluent will remain in the proposed permit per 40 CFR § 122.44(i)(1)(ii).

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

Anti-Degradation Requirements
The subject facility's discharge will be to a special protection water.

The STP discharges to Tatmum Run embayment of the lake. Tatmum Run itself has been reclassified as a HQ-CWF, MF stream because of spawning smelt runs in the spring. The embayment is still protected as a WWF stream (Fact Sheet from December 2007).

The permit conditions are imposed to protect existing instream water quality and uses.

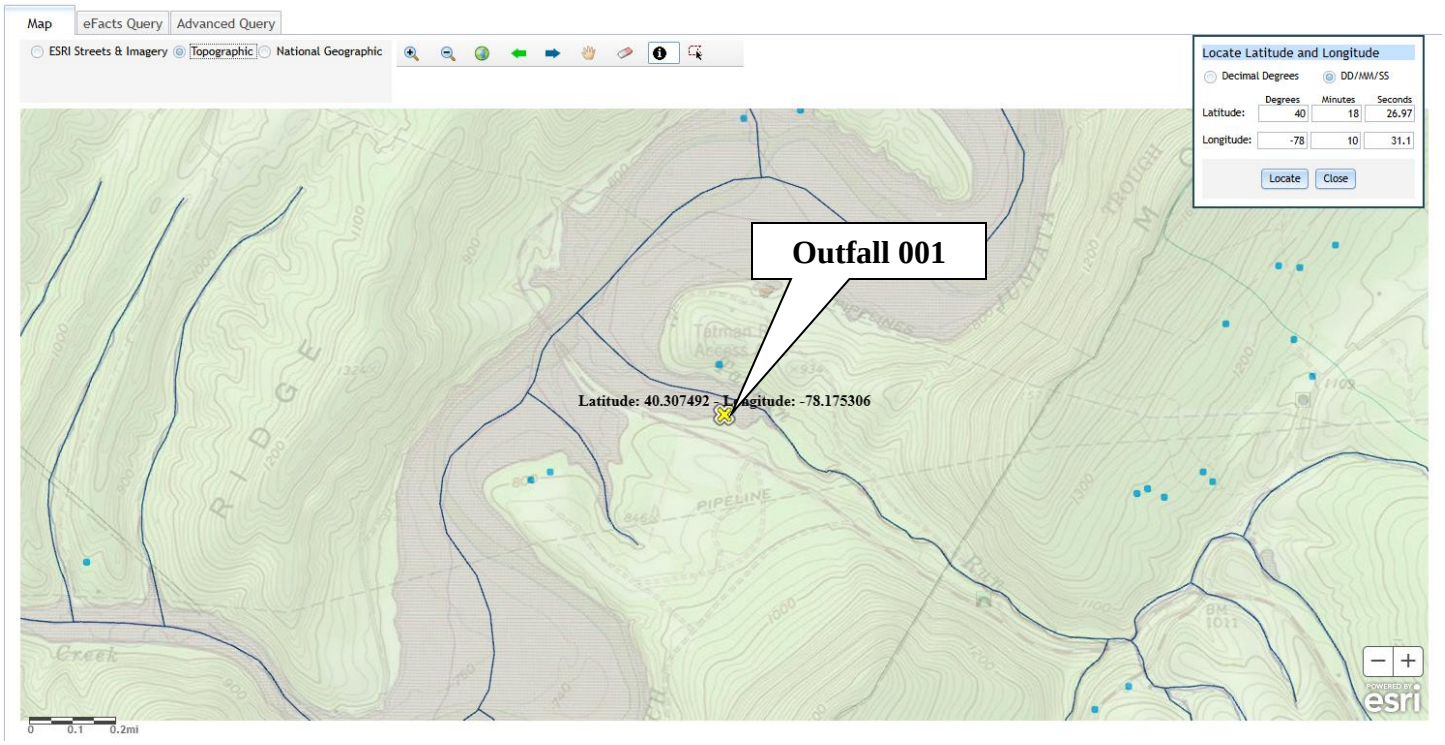
Proposed Effluent Limitations and Monitoring Requirements

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	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
D.O.	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
$CBOD_5$	XXX	XXX	XXX	25.0	XXX	50.0	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
Nitrate-Nitrite	XXX	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Total Nitrogen	XXX	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	Calculation
Ammonia	XXX	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
TKN	XXX	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4.0	2/month	8-Hr Composite

Compliance Sampling Location: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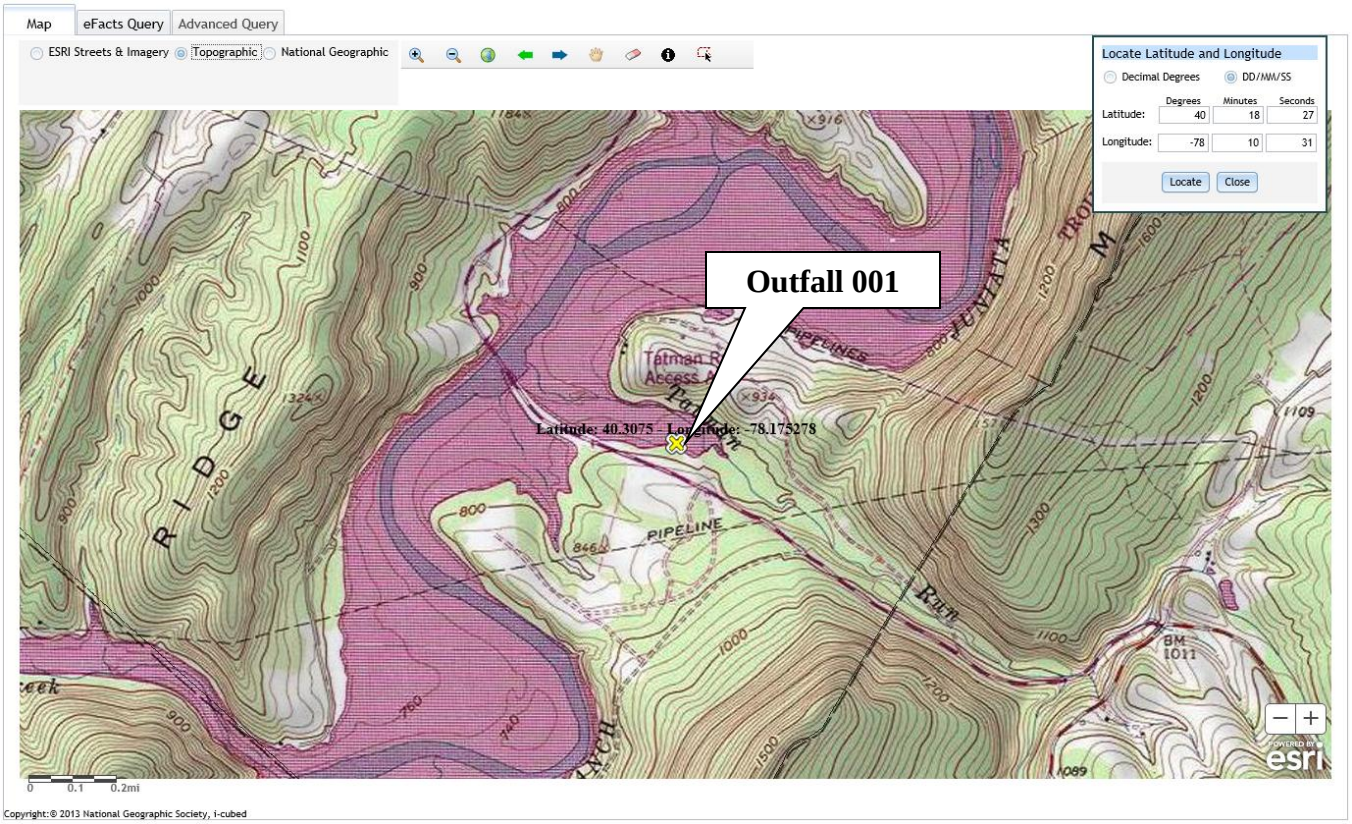
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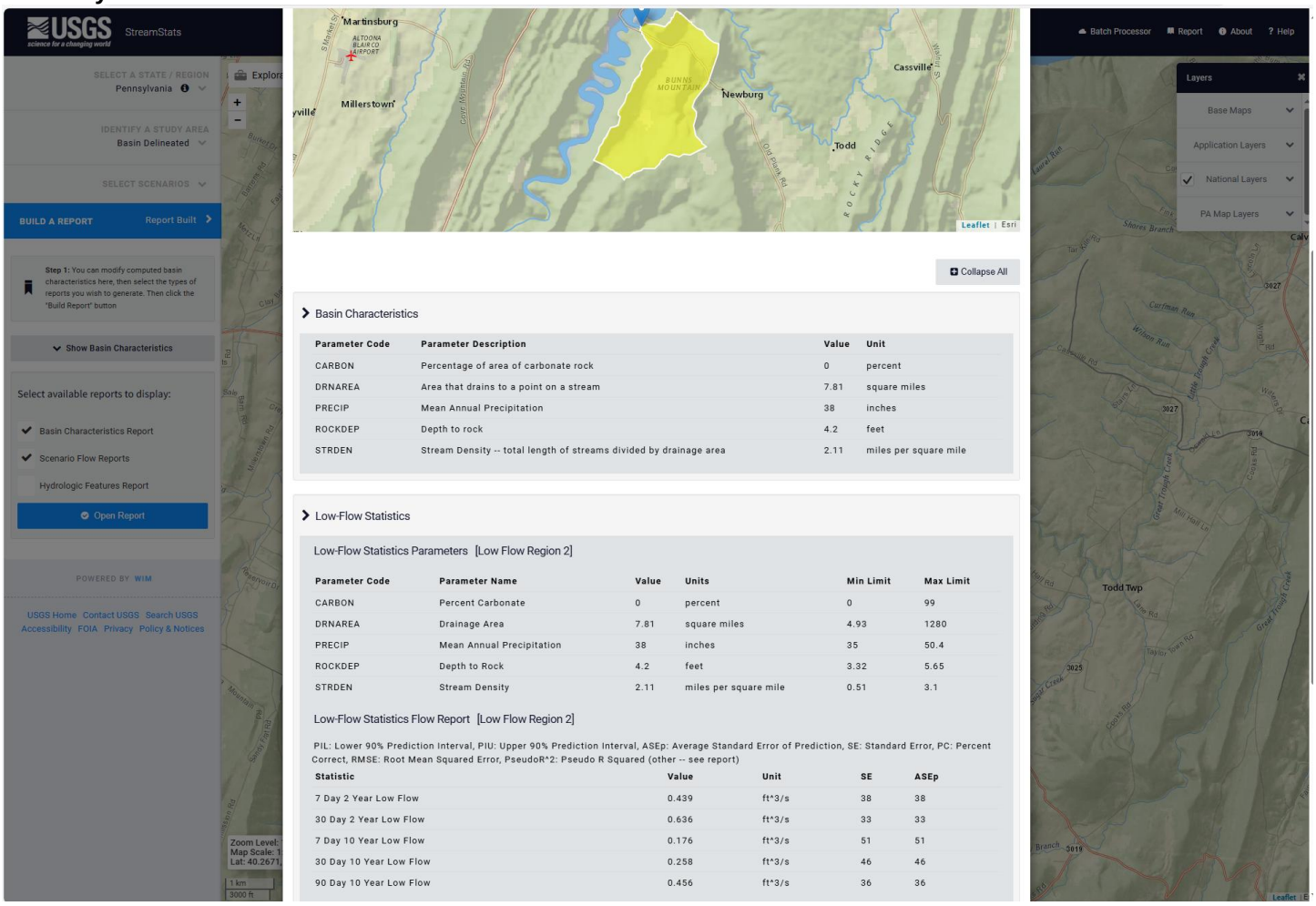
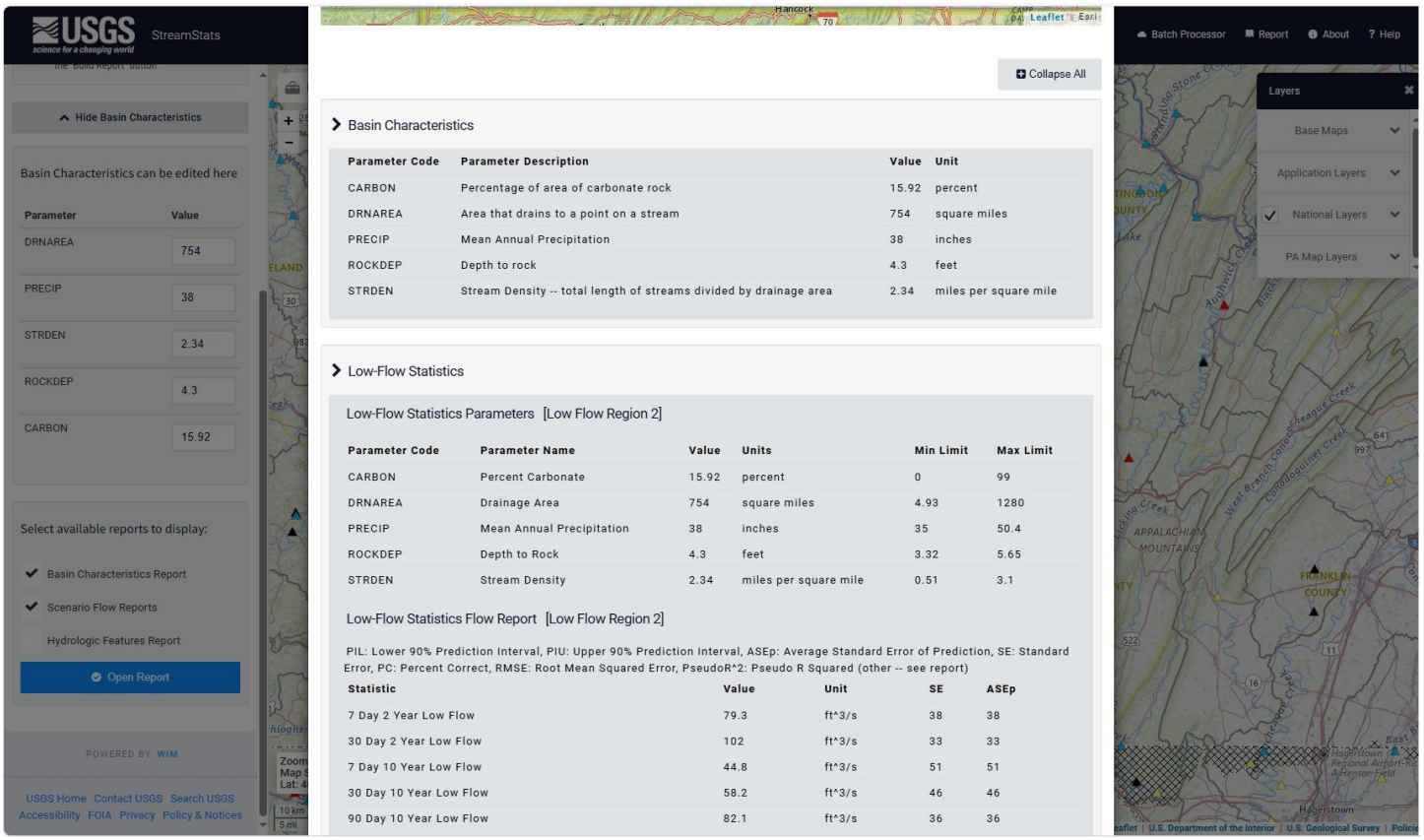


Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	0	percent
DRNAREA	Area that drains to a point on a stream	7.81	square miles
PRECIP	Mean Annual Precipitation	38	inches
ROCKDEP	Depth to rock	4.2	feet
STRDEN	Stream Density -- total length of streams divided by drainage area	2.11	miles per square mile

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CARBON	Percent Carbonate	0	percent	0	99
DRNAREA	Drainage Area	7.81	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	38	inches	35	50.4
ROCKDEP	Depth to Rock	4.2	feet	3.32	5.65
STRDEN	Stream Density	2.11	miles per square mile	0.51	3.1

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	0.439	ft^3/s	38	38
30 Day 2 Year Low Flow	0.636	ft^3/s	33	33
7 Day 10 Year Low Flow	0.176	ft^3/s	51	51
30 Day 10 Year Low Flow	0.258	ft^3/s	46	46
90 Day 10 Year Low Flow	0.456	ft^3/s	36	36



Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	15.92	percent
DRNAREA	Area that drains to a point on a stream	754	square miles
PRECIP	Mean Annual Precipitation	38	inches
ROCKDEP	Depth to rock	4.3	feet
STRDEN	Stream Density -- total length of streams divided by drainage area	2.34	miles per square mile

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CARBON	Percent Carbonate	15.92	percent	0	99
DRNAREA	Drainage Area	754	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	38	inches	35	50.4
ROCKDEP	Depth to Rock	4.3	feet	3.32	5.65
STRDEN	Stream Density	2.34	miles per square mile	0.51	3.1

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	79.3	ft^3/s	38	38
30 Day 2 Year Low Flow	102	ft^3/s	33	33
7 Day 10 Year Low Flow	44.8	ft^3/s	51	51
30 Day 10 Year Low Flow	58.2	ft^3/s	46	46
90 Day 10 Year Low Flow	82.1	ft^3/s	36	36

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☒	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☒	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☒	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: BCW-PMT-033
☐	Other: