

Application Type Renewal  
 Facility Type Non-Municipal  
 Major / Minor Minor

**NPDES PERMIT FACT SHEET  
INDIVIDUAL SEWAGE**

Application No. PA0063428  
 APS ID 724953  
 Authorization ID 1322757

**Applicant and Facility Information**

Applicant Name	<u>Tuthill Corp Blue Mountain Ski Area</u>	Facility Name	<u>Blue Mountain Ski Area</u>
Applicant Address	<u>PO Box 216</u> <u>Palmerton, PA 18071-0216</u>	Facility Address	<u>1660 Blue Mountain Drive</u> <u>Palmerton, PA 18071</u>
Applicant Contact	<u>Barbara Green, President. CEO</u>	Facility Contact	<u>Michael Bixler, WWTP Operator</u>
Applicant Phone	<u>(610) 826-7700</u>	Facility Phone	<u>(610) 653-9927</u>
Client ID	<u>25307</u>	Site ID	<u>546316</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Lower Towamensing Township</u>
Connection Status	<u>-</u>	County	<u>Carbon</u>
Date Application Received	<u>August 7, 2020</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>August 10, 2020</u>	If No, Reason	<u>-</u>
Purpose of Application	<u>Application for renewal of an NPDES permit for discharge of treated sewage.</u>		

**Summary of Review**

The applicant is requesting the renewal of an NPDES permit to discharge up to 0.28 MGD of treated sewage into Aquashicola Creek, a Trout Stocking, Migratory Fish (TSF, MF) receiving stream in State Water Plan Basin 2-B (Middle Lehigh River). As per the Department's current existing use list, the receiving stream does not have an existing use classification that is more protective than its designated use. This discharge is not expected to affect public water supplies.

The existing plant is rated and designed for 0.06 MGD. Expansion of the existing treatment plant to 0.28 MGD is permitted by WQM Permit 1311401, which was issued on July 31, 2013. The township is working on permitting/ constructing a sewer collection system which will discharge to the expanded plant; however, that project has been delayed and construction has not yet been completed.

The existing NPDES Permit was issued on January 25, 2016 and included tiered limits for the existing design flow of 0.060 MGD and the proposed increased flow up to 0.28 MGD. The two-tier limits will be continued in this permit renewal, as the expansion has not yet been completed.

Tier one will begin at the effective date of the permit and end at completion of the treatment plant expansion. Tier two will come into effect at completion of the treatment plant expansion.

**Applicable limits for Tier One – 0.06 MGD**

Limitations for pH, CBOD<sub>5</sub>, Total Suspended Solids (TSS), and Fecal Coliform are technology-based and carried over from tier one of the previous permit. Monitoring and reporting for Ammonia-Nitrogen has also been carried over. A BPJ-based limitation for Dissolved Oxygen (DO) has been added to the permit.

Approve	Deny	Signatures	Date
X		/s/ Allison Seyfried / Environmental Engineering Specialist	July 1, 2021
X		/s/ Amy M. Bellanca, P.E. / Environmental Engineer Manager	7-2-21

### Summary of Review

#### Applicable limits Tier Two – 0.28 MGD

Limitations for pH, CBOD<sub>5</sub>, and Fecal Coliform are technology-based and carried over from tier two of the previous permit. Limitations for DO, Ammonia-Nitrogen, Total Nitrogen, and Nitrate as N are water-quality based and carried over from tier two of the previous permit.

24-hour composite sampling will be required for every pollutant except pH, DO, TRC, and Fecal Coliform.

#### Applicable limits for Tier One and Tier Two

As per PA Code 92a.47(a)(8) (which refers to PA Code 92a.48(b)(2)), a monthly average TRC facility-specific BAT effluent limit of 0.5 mg/L and an IMAX limit of 1.6 mg/L has been applied to this permit renewal. The TRC Calculation Spreadsheet did not recommend more stringent water quality-based limitations. Since these new limitations are technology-based and are being applied to all sewage permits across the state, the permittee will be required to meet the limits for TRC starting one year after the effective date of the permit.

Sewage discharges now require monitoring and reporting for E. Coli. A monitoring frequency of 1/month for design flows  $\geq$  1 MGD, 1/quarter for design flows  $\geq$  0.05 and  $<$  1 MGD, 1/year for design flows of 0.002 – 0.05 MGD will be utilized.

1/month monitoring/reporting has been added for Total Kjeldahl Nitrogen (TKN) since it is a component of the calculation for Total Nitrogen.

The Delaware River Basin Commission (DRBC) granted approval for the project on July 10, 2013 (Docket No. D-2008-023-3). The latest DRBC Docket No. D-2008-023-4 requires the addition of monitoring/reporting for 85% minimum CBOD<sub>5</sub> Percent Removal at the same monitoring frequency as CBOD<sub>5</sub>. Therefore, 2/month influent monitoring for CBOD<sub>5</sub> has been added to the permit for tier one and 1/week influent monitoring for CBOD<sub>5</sub> has been added for tier two. These frequencies are consistent with the frequencies for the effluent CBOD<sub>5</sub> monitoring requirements. Quarterly monitoring/ reporting for Total Dissolved Solids with a 1,000 mg/L limit has been added for tier one and maintained for tier two.

The TSS average monthly limitations have been adjusted to 29.8 mg/L and 69.6 lbs/day to be consistent with the DRBC Docket requirements. Total Phosphorous average monthly limitations have been adjusted 2.0 mg/L and 4.6 lbs/day to be consistent with the DRBC Docket requirements.

Monitoring frequencies for all parameters with limitations have been updated to the recommended frequencies found in Table 6-3 of DEP's Technical Guidance for the Development and Specification of Effluent Limitations (Document No. 362-0400-001).

Stream gage 1450500 (Aquashicola Creek at Palmerton, PA) was used as a reference gage to develop the low flow yield (LFY) of 0.222 cfs/mi<sup>2</sup>, which was used to model the discharge. The Q<sub>7-10</sub> and drainage area at gage 1450500 was obtained from USGS's Open File Report 2011-1070. RMI values were obtained using the Department's eMapPA, drainage areas were delineated using USGS's StreamStats interactive map, and elevations were obtained using the elevation profile tool on StreamStats. WQM 7.0 modeling was also ran using the USGS StreamStats calculated LFY and Q<sub>7-10</sub>. Stricter limitations were not suggested using either inputs.

The previous Part C condition will continue this Permit Cycle: *"The permittee shall notify the Department 120 days prior to completion of expansion of the treatment facilities capacity above 0.06 MGD."*

The existing permit expired on January 31, 2021. The application for renewal was received on August 7, 2020.

A Water Management System Inspection query indicated that on March 2, 2020 a Compliance Evaluation was performed.

There are currently two open violations for this client in the Storage Tanks Program and three open violations in the Clean Water Program that may need to be resolved before issuance of the final permit:

1. 02/26/2021 - Violation ID 920718 – Violation Code 245.438(A) – Failure to comply with UST system monthly operation and maintenance walkthrough inspections (Storage Tanks - Program Specific ID: 13-51148).
2. 02/26/2021 - Violation ID 920719 – Violation Code 6021.701 – Failure to meet financial responsibility requirements (Storage Tanks - Program Specific ID: 13-51148).

**Summary of Review**

3. 03/02/2020 - Violation ID 878622 – Violation Code 92A.41(A)10B – NPDES – Failure to utilize approved analytical methods (WPC NPDES - Program Specific ID: PA0063428).
4. 03/02/2020 - Violation ID 878623 – Violation Code 92A.41(A)10B – NPDES – Failure to utilize approved analytical methods (WPC NPDES - Program Specific ID: PA0063428).
5. 03/02/2020 - Violation ID 878624 – Violation Code 92A.41(A)12B – NPDES – Failure to submit monitoring report(s) or properly complete monitoring reports (WPC NPDES - Program Specific ID: PA0063428).

Sludge use and disposal description and location(s): As per the permit renewal application, sludge is hauled to Borger Farms located in Monroe County, PA and the Lehigh Valley Waste Authority located in Fogelsville, PA by JR Borger, Inc.

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.	<u>002</u>	Design Flow (MGD)	<u>0.06 (Tier One)</u> <u>0.28 (Tier Two)</u>
Latitude	<u>40° 48' 59.02"</u>	Longitude	<u>-75° 31' 46.85"</u>
Quad Name	<u>Palmerton</u>	Quad Code	<u>1241</u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>Aquashicola Creek (TSF, MF)</u>	Stream Code	<u>3776</u>
NHD Com ID	<u>26290063</u>	RMI	<u>5.59</u>
Drainage Area	<u>65.3 mi<sup>2</sup></u>	Yield (cfs/mi <sup>2</sup> )	<u>0.222</u>
Q <sub>7-10</sub> Flow (cfs)	<u>14.50</u>	Q <sub>7-10</sub> Basis	<u>USGS Stream Gage</u> <u>1450500</u>
Elevation (ft)	<u>431.5</u>	Slope (ft/ft)	<u>-</u>
Watershed No.	<u>2-B</u>	Chapter 93 Class.	<u>TSF, MF</u>
Existing Use	<u>-</u>	Existing Use Qualifier	<u>-</u>
Exceptions to Use	<u>-</u>	Exceptions to Criteria	<u>-</u>
Assessment Status	<u>Attaining Use(s)</u>		
Cause(s) of Impairment	<u>-</u>		
Source(s) of Impairment	<u>-</u>		
TMDL Status	<u>-</u>	Name	<u>-</u>
Nearest Downstream Public Water Supply Intake	<u>Northampton Borough Municipal Authority</u>		
PWS Waters	<u>Lehigh River</u>	Flow at Intake (cfs)	<u>-</u>
PWS RMI	<u>24.8</u>	Distance from Outfall (mi)	<u>~ 16.9</u>

Treatment Facility Summary				
Treatment Facility Name: Blue Mountain Ski Area				
<b>WQM Permit No.</b>	<b>Issuance Date</b>			
1311401	7/31/2013			
<b>Waste Type</b>	<b>Degree of Treatment</b>	<b>Process Type</b>	<b>Disinfection</b>	<b>Avg Annual Flow (MGD)</b>
Sewage	Secondary	Extended Aeration	Chlorination	0.0118 (2018-2020)
<b>Hydraulic Capacity (MGD)</b>	<b>Organic Capacity (lbs/day)</b>	<b>Load Status</b>	<b>Biosolids Treatment</b>	<b>Biosolids Use/Disposal</b>
0.06 (current conditions) 0.28 (permitted, but not yet constructed)	718	Not Overloaded	Holding Tanks	Hauled

Compliance History

DMR Data for Outfall 002 (from May 1, 2020 to April 30, 2021)

Parameter	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20
Flow (MGD) Average Monthly	0.0063	0.01398	0.0176	0.01823	0.0088	0.00424	0.00435	0.0038	0.00519	0.0042	0.00286	0.00256
Flow (MGD) Daily Maximum	0.0118	0.02366	0.0254	0.02729	0.027	0.00664	0.00095	0.0092	0.0129	0.0134	0.01001	0.00900
pH (S.U.) Instantaneous Minimum	6.69	6.12	6.24									
pH (S.U.) Minimum				6.15	6.38	6.3	6.2	6.26	6.35	6.51	6.53	6.28
pH (S.U.) IMAX	7.56	7.4	7.07									
pH (S.U.) Maximum				7.6	7.81	7.29	7.03	6.91	7.36	7.24	7.45	7.25
DO (mg/L) Instantaneous Minimum	9.00	8.3	8.3									
DO (mg/L) Minimum				7.6								
DO (mg/L) Average Monthly					11.506	10.56	9.46	8.65	7.877	7.83	8.74	9.9355
TRC (mg/L) Average Monthly	0.708	0.73	0.5668	0.4889	0.689	0.676	0.5987	0.57	0.58	0.536	0.533	0.4971
TRC (mg/L) IMAX	1.05	1.12	1.15	0.69	1.26	1.4	0.82	1.28	1.08	0.78	0.82	0.78
CBOD5 (lbs/day) Average Monthly	0.3862	2.006	2.6816	2.023	0.146	0.0707	0.0726	0.2021	0.5496	0.4504	0.3816	0.1537
CBOD5 (mg/L) Average Monthly	7.3	17.2	18.5	13.3	< 2	< 2	2	6.3	12.7	12.8	16.0	7.2
TSS (lbs/day) Average Monthly		2.332	4.204	4.258	0.293	0.1413	0.617	0.0321	0.04327	0.1407	0.0477	0.2562
TSS (mg/L) Average Monthly	9.0	19.75	29.0	28	4	4	17	1	< 1	4	2	12
Total Dissolved Solids (mg/L) Average Quarterly		570			410			471			474	
Fecal Coliform (CFU/100 ml) Geometric Mean		258	3	25	< 2	< 2	< 2	< 2	109	45	< 2	< 2

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Blue Mountain Ski Area**

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Fecal Coliform (No./100 ml) Geometric Mean		258	3	25	< 2	< 2	< 2	< 2	109	45	< 2	< 2
Fecal Coliform (CFU/100 ml) IMAX		258	3	25	< 2	< 2	< 2	< 2	109	45	< 2	< 2
Fecal Coliform (No./100 ml) IMAX		258	3	25	< 2	< 2	< 2	< 2	109	45	< 2	< 2
Total Nitrogen (lbs/day) Average Monthly	0.2720	7.662	14.234	20.3								
Total Nitrogen (mg/L) Average Monthly	< 5.14	65.7	98.2	133.49	< 13.9	< 32.89	< 47.47	< 47.35	< 40.22	< 43.79	< 61.33	< 36.85
Ammonia (lbs/day) Average Monthly	0.0053	2.041	6.436	13.398								
Ammonia (mg/L) Average Monthly	0.10	17.5	44.4	88.1	< 0.10	< 0.1	< 0.1	< 0.10	< 0.10	< 0.310	0.27	< 0.10
Nitrate (lbs/day) Average Monthly	0.1302	3.604	5.624	4.714								
Nitrate (mg/L) Average Monthly	2.46	30.9	38.8	31	13.3	32.1	45.7	46.2	38.3	42.1	59.4	35.3
Total Phosphorus (lbs/day) Average Monthly	0.0688	0.9609	1.390	1.426								
Total Phosphorus (mg/L) Average Monthly	1.3	8.24	9.59	9.38	2.67	4.77	6.81	5.76	5.22	6.39	8.12	4.69

**Development of Effluent Limitations**

Outfall No. 002 Design Flow (MGD) 0.06 (Tier One)  
 Latitude 40° 49' 0.00" Longitude -75° 31' 47.00"  
 Wastewater Description: Sewage Effluent – Existing Plant

**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 (MGD)	Report	Maximum Daily	-	92a.27, 92a.61
CBOD <sub>5</sub>	25.0	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	50.0	IMAX	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30.0	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	60.0	IMAX	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)
	1.6	IMAX		
E. Coli (No./100 ml)	Report	IMAX	-	92a.61
Ammonia-Nitrogen	Report	Monthly Average	-	BPJ
Dissolved Oxygen	5.0	Minimum	-	BPJ

**Water Quality-Based Limitations**

The following limitations were determined through water quality modeling:

Parameter	Limit (mg/l)	SBC	Model
Total Nitrogen	Report	Monthly Average	DRBC Docket Requirements
Total Kjeldahl Nitrogen	Report	Monthly Average	
Total Phosphorus	Report	Monthly Average	
Nitrate-Nitrite as N	Report	Monthly Average	
CBOD <sub>5</sub> Minimum % Removal (%)	85	Minimum Monthly Average	
CBOD <sub>5</sub> – Raw Sewage Influent	Report	Monthly Average	
Total Dissolved Solids	1,000	Average Quarterly	

**Anti-Backsliding**

No limitations were made less stringent.

**Development of Effluent Limitations**

Outfall No. 002 Design Flow (MGD) 0.28 (Tier Two)  
 Latitude 40° 49' 0.00" Longitude -75° 31' 47.00"  
 Wastewater Description: Sewage Effluent – After Construction of Plant Expansion

**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 (MGD)	Report	Maximum Daily	-	92a.27, 92a.61
CBOD <sub>5</sub>	25.0	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	50.0	IMAX	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30.0	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	60.0	IMAX	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)
	1.6	IMAX	-	
E. Coli (No./100 ml)	Report	IMAX	-	92a.61

**Water Quality-Based Limitations**

The following limitations were determined through water quality modeling:

Parameter	Limit (mg/l)	SBC	Model
Dissolved Oxygen	6.0	Minimum	DRBC Docket Requirements
Total Suspended Solids	69.6 lbs/day	Monthly Average	
CBOD <sub>5</sub>	63.0 lbs/day	Monthly Average	
Ammonia-Nitrogen May 1 - Oct 31	1.2	Monthly Average	
	2.8 lbs/day		
Ammonia-Nitrogen Nov 1 - Apr 30	Report	Monthly Average	
Total Nitrogen Oct 1 - Apr 30	Report	Monthly Average	
Total Nitrogen May 1 - Sep 30	20.6	Monthly Average	
	48.1 lbs/day		
Total Phosphorus Oct 1 - Apr 30	Report	Monthly Average	
Total Phosphorus May 1 - Sep 30	2.0	Monthly Average	
	4.6 lbs/ day		
Nitrate as N Oct 1 - Apr 30	Report	Monthly Average	
Nitrate as N May 1 - Sep 30	17.9	Monthly Average	
	41.8 lbs/day		
Total Kjeldahl Nitrogen	Report	Monthly Average	
CBOD <sub>5</sub> Minimum % Removal (%)	85	Minimum Monthly Average	
CBOD <sub>5</sub> – Raw Sewage Influent	Report	Monthly Average	
Total Dissolved Solids	1,000	Average Quarterly	

**Anti-Backsliding**

No limitations were made less stringent.

### Modeling Using Stream Gage:

**Stream Gage:** USGS Stream Gage 1450500 – Aquashicola Creek at Palmerton, PA

- Drainage Area = 76.7 mi<sup>2</sup>
- Q<sub>7-10</sub> = 17.0 ft<sup>3</sup>/sec

$$\text{Low Flow Yield using Stream Gage} = \frac{17.0 \text{ ft}^3/\text{sec}}{76.7 \text{ mi}^2} = 0.222 \frac{\text{ft}^3/\text{sec}}{\text{mi}^2}$$

$$\text{Stream Flow at Outfall 001 using Stream Gage} = 0.222 \frac{\text{ft}^3/\text{sec}}{\text{mi}^2} \times 65.3 \text{ mi}^2 = 14.5 \frac{\text{ft}^3}{\text{sec}}$$

### Modeling Using USGS StreamStats:

**At Outfall 001 on Tunkhannock Creek:**

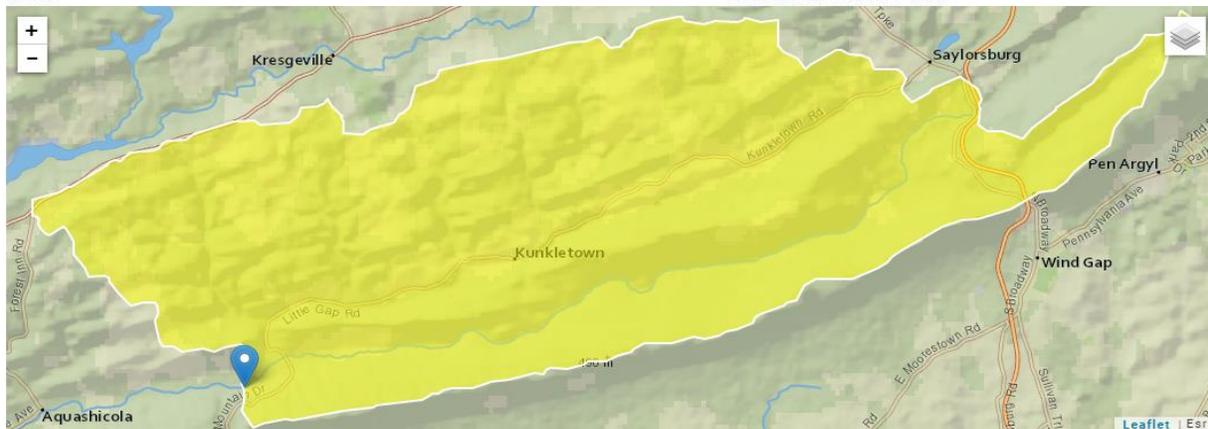
RMI	Elevation (ft)	Drainage Area (mi <sup>2</sup> )	Q <sub>7-10</sub> Flow (cfs)
5.59	431.5	65.3	8.59

$$\text{Low Flow Yield using StreamStats} = \frac{8.59 \text{ ft}^3/\text{sec}}{65.3 \text{ mi}^2} = 0.132 \frac{\text{ft}^3/\text{sec}}{\text{mi}^2}$$

### StreamStats Report

Region ID:  
Workspace ID:  
Clicked Point (Latitude, Longitude):  
Time:

PA  
PA20210622153406962000  
40.81642, -75.52974  
2021-06-22 11:34:24 -0400



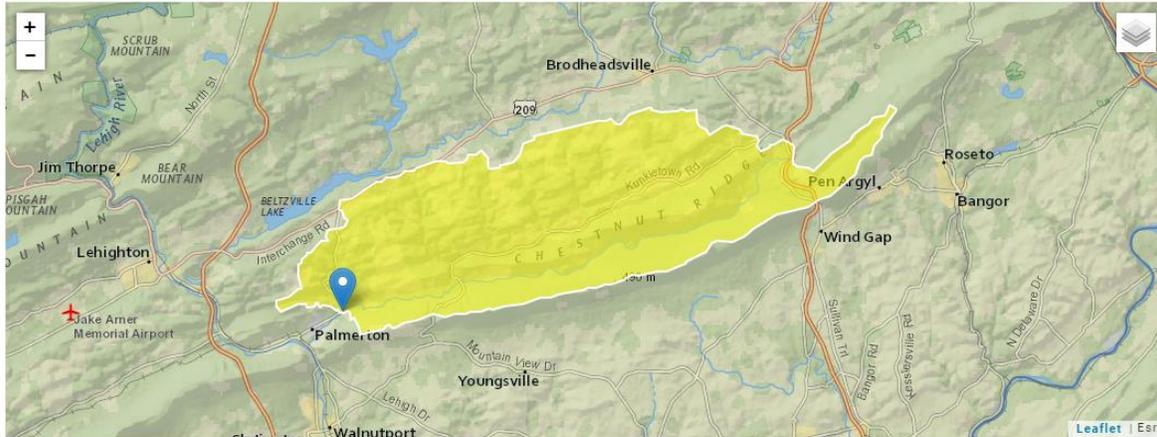
Parameter Code	Parameter Description	Value	Unit	SE	SEp
DRNAREA	Area that drains to a point on a stream	65.3	square miles		
Statistic	Value	Unit	SE	SEp	
7 Day 2 Year Low Flow	15.6	ft <sup>3</sup> /s	38	38	
30 Day 2 Year Low Flow	19.7	ft <sup>3</sup> /s	33	33	
7 Day 10 Year Low Flow	8.59	ft <sup>3</sup> /s	51	51	

At confluence with Mill Creek (3777):

RMI	Elevation (ft)	Drainage Area (mi <sup>2</sup> )
1.879	398.8	75.9

### StreamStats Report

Region ID: PA  
 Workspace ID: PA20210622154314102000  
 Clicked Point (Latitude, Longitude): 40.80956, -75.59122  
 Time: 2021-06-22 11:43:30 -0400



Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	75.9	square miles

### WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
02B	3776	AQUASHICOLA 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)
5.590	Blue Mountain	PA0063428	0.280	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			3

TRC EVALUATION					
Input appropriate values in A3:A9 and D3:D9					
14.5	= Q stream (cfs)	0.5	= CV Daily		
0.28	= 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/BJ 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 = 10.698		1.3.2.iii	WLA_cfc = 10.422
PENTOXSD TRG	5.1a	LTAMULT_afc = 0.373		5.1c	LTAMULT_cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc = 3.986		5.1d	LTA_cfc = 6.059
Source	Effluent Limit Calculations				
PENTOXSD TRG	5.1f	AML_MULT = 1.231			
PENTOXSD TRG	5.1g	AVG_MON_LIMIT (mg/l) = 0.500		BAT/BJ	
		INST_MAX_LIMIT (mg/l) = 1.635			

### DRBC Docket Requirements

**EFFLUENT TABLE A-1: DRBC Parameters Included in NPDES Permit**

OUTFALL 002 (0.06 mgd & 0.28 mgd WWTP)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES Permit
Total Suspended Solids	30 mg/l	As required by NPDES Permit
CBOD <sub>5</sub> (at 20° C)	25 mg/l, 85% Minimum Removal	As required by NPDES Permit
Fecal Coliform (5-1 to 9-30)	200 colonies per 100 ml as a geo. avg.	As required by NPDES Permit
(10-1 to 4-30)	2000 colonies per 100 ml as a geo. avg.	

The requirements in EFFLUENT TABLE A-2 are not listed in the NPDES Permit for the 0.06 mgd WWTP, but are Commission basin-wide and/or SPW specific parameters that were included in Docket No. D-2008-023-3 and must continue to be met as a condition of this docket approval (See DECISION Condition II.d.). Commission staff have requested PADEP include these parameters in their next Permit.

**EFFLUENT TABLE A-2: DRBC Parameters Not Included in NPDES Permit**

OUTFALL 002 (0.06 mgd WWTP)		
PARAMETER	LIMIT	MONITORING
Total Dissolved Solids*	1,000 mg/l	Quarterly
CBOD <sub>5</sub> (at 20° C) Influent	Monitor & Report	Monthly
Dissolved Oxygen	Monitor & Report	Monthly
Ammonia Nitrogen	Monitor & Report	Monthly
Nitrate as N	Monitor & Report	Monthly
Total Nitrogen	Monitor & Report	Monthly
Phosphorous	Monitor & Report	Monthly

\* See DECISION Condition II.w.

The requirements in EFFLUENT TABLE A-3 are not listed in the NPDES Permit for the 0.28 mgd WWTP, but are Commission basin-wide and/or SPW specific parameters that were included in Docket No. D-2008-023-3 and must continue to be met as a condition of this docket approval once the expansion is complete (See DECISION Condition II.d.). Commission staff have requested PADEP include these parameters in their next Permit.

**EFFLUENT TABLE A-3: DRBC Parameters Not Included in NPDES Permit**

OUTFALL 002 (0.28 mgd WWTP)		
PARAMETER	LIMIT	MONITORING
Total Suspended Solids*	69.6 lbs/day	Monthly
Ammonia Nitrogen (5-1 to 9-30)	2.8 lbs/day	Monthly
(10-1 to 4-30)	Monitor & Report	
Nitrate as N (5-1 to 9-30)	41.8 lbs/day	Monthly
(10-1 to 4-30)	Monitor & Report	
Total Nitrogen (5-1 to 9-30)	48.1 lbs/day	Monthly
(10-1 to 4-30)	Monitor & Report	
Phosphorus (5-1 to 9-30)	4.6 lbs/day	Monthly
(10-1 to 4-30)	Monitor & Report	
Dissolved Oxygen	6.0 mg/l (Minimum)	Monthly
Total Dissolved Solids*	1,000 mg/l	Quarterly

\* See DECISION Condition II.w.

To protect water quality in SPW, the DRBC has based effluent limits for SPW parameters on loadings of pollutants to the receiving stream rather than concentrations. For the docket holder's information, the corresponding May through September concentration associated with the SPW loading for the parameters listed in EFFLUENT TABLE A-3 at the full permitted discharge flow of 0.28 mgd are as follows:

PARAMETER	CONCENTRATION
Total Suspended Solids	29.8 mg/l
Ammonia Nitrogen	1.2 mg/l
Nitrate as N	17.9 mg/l
Total Nitrogen	20.6 mg/l
Phosphorus	2.0 mg/l