Pennsylvania Department of Environmental Protection

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0060712**
Facility Type	**Non-Municipal**	APS ID	**477544**
Major / Minor	**Minor**	Authorization ID	**1466372**

Applicant and Facility Information

Applicant Name	**Grace & Truth Evangelistic Association DBA Rock Mountain Bible Camp**	Facility Name	**Rock Mountain Bible Camp STP**
Applicant Address	1156 Rock Mountain Drive Susquehanna, PA 18847-8243	Facility Address	Stone House Road Susquehanna, PA 18847
Applicant Contact	Eric Reid Anderson, Camp Director	Facility Contact	Michael Hester, Operator
Applicant Phone	(570) 756-2200	Facility Phone	(570) 663-2625
Client ID	63839	Site ID	481334
Ch 94 Load Status	Not Overloaded	Municipality	Gibson Township
Connection Status	-	County	Susquehanna
Date Application Received	November 30, 2023	EPA Waived?	Yes
Date Application Accepted	May 21, 2024	If No, Reason	-

Purpose of Application: Renewal of NPDES permit for discharge of treated sewage.

Summary of Review

The applicant is requesting the renewal of an NPDES permit to discharge up to 0.0233 MGD of treated sewage into an Unnamed Tributary to Tunkhannock Creek, a Cold-Water Fishery, Migratory Fish (CWF, MF) receiving stream in State Water Plan Basin 4-F (Tunkhannock Creek). 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 stream segment is not designated as a naturally reproducing trout stream as per PA Fish & Boat Commission. There are no TMDLs or impairments for the stream. This discharge is not expected to affect public water supplies.

Limitations for pH, $CBOD_5$, Total Suspended Solids (TSS), Dissolved Oxygen (DO), and Fecal Coliform are technology-based and carried over from the previous permit.

Limitations for Ammonia-Nitrogen are water quality-based and carried over from the previous permit.

WQM 7.0 modeling did not recommend stricter limits.

The annual monitoring and reporting for Total Nitrogen, Total Phosphorous, Total Kjeldahl Nitrogen, and Nitrate-Nitrite as N has been maintained in this permit.

The Total Residual Chlorine (TRC) Calculation Spreadsheet recommends slightly stricter limitations than the previous permit. The permittee will be required to meet the new water quality-based limits for TRC starting two years after the effective date of the permit (see Part C.III.). TRC limitations from the previously issued permit are in effect for the two years after the permit effective date.

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

Approve	Deny	Signatures	Date
X		/s/ Allison Seyfried Zukosky / Project Manager	March 19, 2025
X		/s/ Edward Dudick, P.E. / Engineer Manager	March 19, 2025

Summary of Review

For this permit renewal, all monitoring frequencies for parameters with limitations are consistent with the Department's *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits* (document no. 362-0400-001).

There are no representative stream gages in the vicinity of the outfall and the drainage area at Outfall 001 is too small for USGS StreamStats to estimate accurate low flow values. Therefore, the default Low Flow Yield (LFY) of 0.1 cfs/mi^2 was used to model the discharge. For modeling inputs, RMI values were obtained using the "PA Historic Streams" feature of eMapPA, drainage areas were delineated using USGS's StreamStats Interactive Map, and elevations were obtained using the elevation profile feature of StreamStats.

The "Discharge Reporting" section in Part C of the permit has been removed. According to eDMR Data, it appears the camp discharges all year.

The existing permit expired on May 31, 2024 and the application for renewal was received on time.

A Water Management System Inspection query indicated that on March 18, 2024 a Routine/Partial Inspection was performed.

There are currently no open violations for this client that warrant withholding issuance of this permit.

Sludge use and disposal description and location(s): As per the permittee's NPDES Renewal Application, sludge is hauled to WVSA by Hallstead Sanitary Service.

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)	0.0233
Latitude	41º 46' 43.72"	Longitude	-75º 35' 49.79"
Quad Name	Ulster	Quad Code	0433
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Tunkhannock Creek (CWF, MF)	Stream Code	29191
NHD Com ID	66393861	RMI	1.21
Drainage Area	0.81 mi^2	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.081	Q_{7-10} Basis	State-wide default
Elevation (ft)	1,282.92	Slope (ft/ft)	-
Watershed No.	4-F	Chapter 93 Class.	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	Danville Borough Water Authority		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	-
PWS RMI	122.58	Distance from Outfall (mi)	~ 114.4

Treatment Facility Summary

Treatment Facility Name: Rock Mountain Bible Camp STP

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Aeration	Chlorine	0.0034 (2020-2022)

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0233	-	Not Overloaded	Holding Tank	Hauled

Compliance History

DMR Data for Outfall 001 (from February 1, 2024 to January 31, 2025)

Parameter	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24
Flow (MGD) Average Monthly	0.00347	0.0032	0.000503	0.0007	0.00104	0.0033	0.00326	0.00075	0.0031	0.0077	0.0089	0.000957
Flow (MGD) Daily Maximum	0.008	0.0063	0.0011	0.0011	0.0017	0.0048	0.00489	0.0011	0.0046	0.0146	0.0148	0.001152
pH (S.U.) Instantaneous Minimum	7.0	6.5	6.2	6.5	6.3	6.8	7.0	6.5	6.4	6.8	6.6	6.8
pH (S.U.) Instantaneous Maximum	7.9	7.7	7.3	7.7	7.3	7.7	7.8	7.9	7.9	7.8	8.1	7.9
DO (mg/L) Instantaneous Minimum	9.57	10.02	7.81	7.15	6.21	6.09	5.88	5.37	6.08	7.02	8.65	8.75
TRC (mg/L) Average Monthly	0.20	0.20	0.20	0.30	0.30	0.30	0.20	0.30	0.20	0.20	0.20	0.20
TRC (mg/L) Instantaneous Maximum	0.43	0.42	0.48	0.62	0.67	0.73	0.55	0.72	0.36	0.45	0.38	0.51
CBOD5 (mg/L) Average Monthly	< 6.7	< 4.6	< 3.0	< 3.4	3.6	< 3.0	< 7.8	< 10.2	6.2	< 3.7	< 3.4	< 3.0
TSS (mg/L) Average Monthly	< 3.1	< 4.2	2.7	8.5	9.1	< 3.9	7.2	< 10.4	< 7.9	9.1	16.6	< 3.1
Fecal Coliform (No./100 ml) Geometric Mean	< 1.0	< 5.0	2.0	< 1.0	< 1.0	< 3.0	64.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 1.0	23.3	4.1	< 1.0	< 1.0	6.3	1011.2	< 1.0	2.0	< 1.0	5.2	< 1.0
Nitrate-Nitrite (mg/L) Annual Average		9.13										
Total Nitrogen (mg/L) Annual Average		14.1										
Ammonia (mg/L) Average Monthly	15.0	5.7	0.4	5.6	2.0	0.7	3.6	< 0.2	2.4	1.3	3.4	5.5
TKN (mg/L) Annual Average		5.01										
Total Phosphorus (mg/L) Annual Average		8.75										

Compliance History

Effluent Violations for Outfall 001, from: March 1, 2024 To: January 31, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	07/31/24	IMAX	1011.2	No./100 ml	1000	No./100 ml
Ammonia	10/31/24	Avg Mo	5.6	mg/L	5.5	mg/L

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.0233
Latitude 41º 46' 46.91" **Longitude** -75º 35' 56.25"
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)
E. Coli	Report	IMAX	-	92a.61
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 Residual Chlorine	0.34	Average Monthly	TRC Spreadsheet
	1.10	IMAX	
Ammonia-Nitrogen Nov 1 - Apr 30	16.5	Average Monthly	Previous WQM Modeling
	33.0	IMAX	
Ammonia-Nitrogen May 1 - Oct 31	5.5	Average Monthly	
	11.0	IMAX	
Nitrate-Nitrite as N	Report	Annual Average	Previous Permit – Chesapeake Bay
Total Nitrogen	Report	Annual Average	
Total Kjeldahl Nitrogen	Report	Annual Average	
Total Phosphorus	Report	Annual Average	

Anti-Backsliding

No limitations were made less stringent.

Modeling using the state-wide Low-Flow Yield (LFY) of 0.1 cfs/mi²:

$$\frac{0.1\ ft^3/sec}{mi^2} \times 0.81\ mi^2 = \frac{\mathbf{0.081\ ft^3}}{\mathbf{sec}}$$

Modeling Using USGS StreamStats:

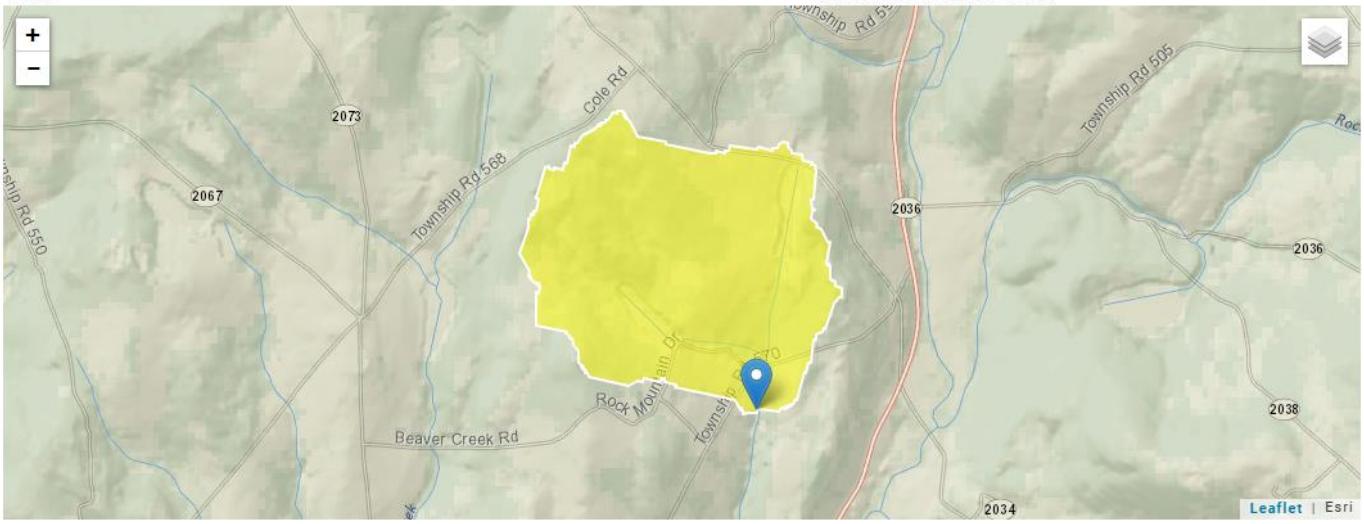
At Outfall 001 on Unnamed Tributary to Tunkhannock Creek:

RMI	Elevation (ft)	Drainage Area (mi²)	$Q_{7\text{-}10}$ Flow (cfs)
1.21	1,282.92	0.81	0.0086

$$Low\ Flow\ Yield\ using\ StreamStats = \frac{0.0086\ ft^3/sec}{0.81\ mi^2} = \mathbf{0.0106}\ \frac{\mathbf{ft^3/sec}}{\mathbf{mi^2}}$$

StreamStats Report

Region ID:	PA
Workspace ID:	PA20250319114907786000
Clicked Point (Latitude, Longitude):	41.77950, -75.59705
Time:	2025-03-19 07:49:33 -0400



Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	0.81	square miles

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

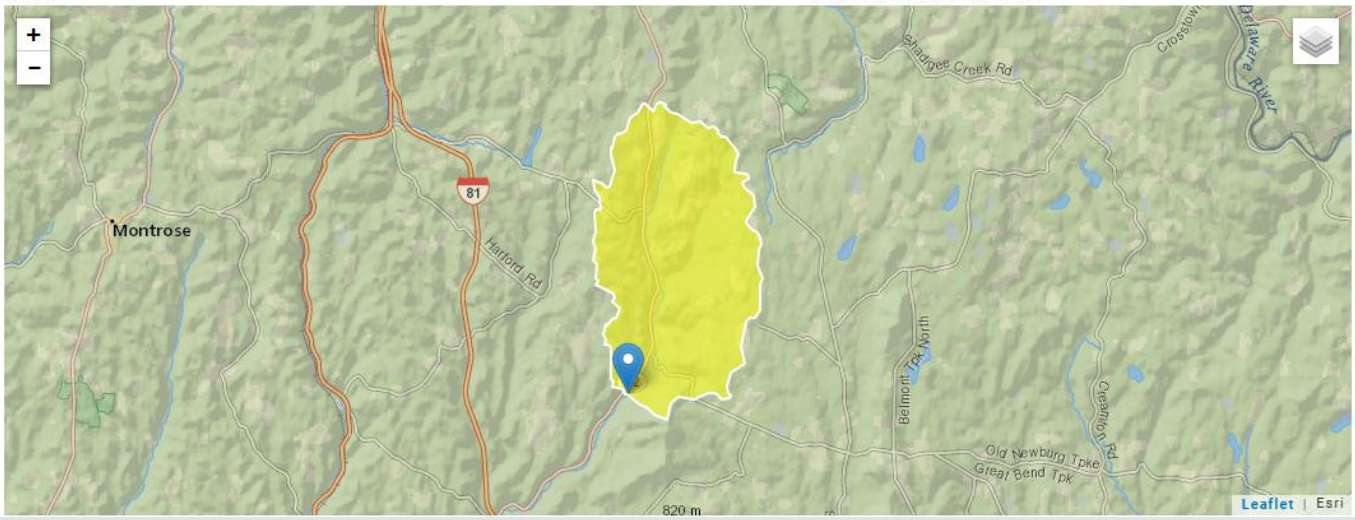
Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0347	ft^3/s
30 Day 2 Year Low Flow	0.0552	ft^3/s
7 Day 10 Year Low Flow	0.0086	ft^3/s

At confluence with Shohola Creek (5334):

RMI	Elevation (ft)	Drainage Area (mi^2)
0.00	1,008.67	30.4

StreamStats Report

Region ID:	PA
Workspace ID:	PA20250319115329199000
Clicked Point (Latitude, Longitude):	41.76349, -75.59965
Time:	2025-03-19 07:53:54 -0400



Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	30.4	square miles

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
04F	29181	Trib 29181 to Tunkhannock 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)
1.210	Rock Mtn Bible	PA0060712	0.023	CBOD5	25		
				NH3-N	7.11	14.22	
				Dissolved Oxygen			3

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.081	= Q stream (cfs)	0.5	= CV Daily
0.0233	= 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 = 0.736	1.3.2.iii	WLA cfc = 0.710
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.274	5.1d	LTA_cfc = 0.413

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.338	AFC
		INST MAX LIMIT (mg/l) = 1.104	

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)

WQM 7.0.pdf