pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0062103**
Facility Type	**Municipal**	APS ID	**617611**
Major / Minor	**Minor**	Authorization ID	**1255613**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Springbrook Township Sewer Authority**	Facility Name	**Springbrook Township Sewer Authority WWTP**
Applicant Address	P.O. Box 1100	Facility Address	Green Run Road
	Moscow, PA 18444		Roaring Brook Twp, PA 18444
Applicant Contact	James Powell	Facility Contact	James Powell
Applicant Phone	(570) 842-1485	Facility Phone	(570) 842-1485
Client ID	44196	Site ID	257241
Ch 94 Load Status	Not Overloaded	Municipality	Roaring Brook Township
Connection Status	No Limitations	County	Lackawanna
Date Application Received	November 5, 2018	EPA Waived?	Yes
Date Application Accepted	December 18, 2018	If No, Reason	-

Purpose of Application: Renewal of existing NPDES permit.

Summary of Review

The applicant is requesting renewal of their NPDES permit to discharge up to 0.16 MGD of treated sewage to Green Run (stream code is 28400), a HQ-CWF/MF designated receiving water in state water plan basin 05-A (Lackawanna 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. Green Run is listed as impaired for aquatic life from unknown causes as per the 2016 integrated water quality report.

A Total Maximum Daily Load (TMDL) for the Lackawanna River Watershed was prepared for PA DEP on March 9, 2005. The TMDL addresses metals (Iron, Manganese, and Aluminum) and depressed pH associated with acid mine drainage (AMD). The TMDL load allocations apply to nonpoint sources of pollution; there are no Waste Load Allocations (WLAs). Quarterly monitoring requirements for Total Iron, Total Manganese, and Total Aluminum are added to the permit to monitor these pollutants of concern.

Since there are no nearby representative gages to obtain flow data from and the drainage area at Outfall 001 is too small for USGS StreamStats to estimate accurate low flow values (see StreamStats Low Flow attachment), the default LFY of 0.1 cfs/mi^2 was chosen to model the discharge. For modeling inputs, RMI values were obtained using the "PA Historic Streams" feature of eMapPA as well as the "measure" tool. Drainage areas were delineated using USGS's StreamStats Interactive Map and elevations were obtained using the elevation profile feature of StreamStats (see Watershed Information attachment).

TRC limitations were not included in the previously issued permit since the facility utilizes ultraviolet light as its primary method of disinfection. In the event the facility utilizes chlorine for backup disinfection, cleaning or other purposes, an IMAX limitation has been included in this renewal. The TRC IMAX limitation is water quality-based (see TRC Calculation attachment) and is to be sampled for "daily when discharging" (see Part C.I.D). Partial mixing factors were obtained using PENTOX for TRC modeling.

Approve	Deny	Signatures	Date
X		/s/ Brian Burden, E.I.T. / Project Manager	September 5, 2019
X		/s/ Amy M. Bellanca, P.E. / Environmental Engineer Manager	September 5, 2019

Summary of Review

Limitations for $CBOD_5$, TSS, pH and Fecal Coliform are technology-based and carried over from the previous permit. The Dissolved Oxygen minimum is water quality-based and carried over from the previous permit. Water quality modeling (see WQM Modeling attachment) indicated that more stringent summertime limitations are required for Ammonia-Nitrogen (1.8 mg/L average monthly; 3.6 mg/L IMAX). The standard 3x multiplier was used to develop the wintertime limitations (5.4 mg/L average monthly, 10.8 mg/L IMAX). The new limitations for Ammonia-Nitrogen will come into effect 4 years after the permit effective date.

This facility is considered a non-significant Phase 5 Chesapeake Bay discharger (flow between 0.002 MGD and 0.2 MGD) as per the latest Watershed Implementation Plan (WIP) supplement. Monitoring/reporting requirements for Total Phosphorus, Total Nitrogen, TKN and Nitrate-Nitrite as N are continued in this permit renewal. The monitoring frequency for these parameters has been updated to quarterly.

Pollutant sampling results submitted with the permit application were modeled with PENTOX (see attached). The highest reported Total Copper concentration was 26 µg/L. The most stringent average monthly WQBEL recommended through modeling is 10.8 µg/L (rounded to 0.01 mg/L), therefore limitations are established during this renewal. Total Copper limitations will come into effect 4 years after the permit effective date. Monitoring/reporting requirements are included in the permit until the limitations come into effect. The Part C.IV condition regarding Toxics Reduction Evaluations (TREs) is added to the permit and applies to the Total Copper limitations. The permittee will have the option to accept the implementation of the limitations or to perform site-specific studies to verify or refine the WQBELs.

Weekly influent monitoring requirements for $CBOD_5$ and TSS are carried over from the previous permit to determine if the removal percentages meet secondary treatment standards. Note: the previous permit included influent monitoring/reporting for BOD_5. This requirement has been changed to $CBOD_5$ for a more accurate determination of removal percentages.

DMR review of the past 2 years reveals numerous limitation exceedances (note that mass limitation exceedances were not included in the list below):

July 2019: Ammonia-Nitrogen: 6.9 mg/L monthly average (limitation was 3.0 mg/L)
Dissolved Oxygen: 5.79 mg/L (minimum was 7.0 mg/L)
June 2019: Ammonia-Nitrogen: 16.6 mg/L monthly average (limitation was 3.0 mg/L)
Fecal Coliform: 1164 No./100mL IMAX (limitation was 1000 No./100mL)
May 2019: Ammonia-Nitrogen: 20.4 mg/L monthly average (limitation was 3.0 mg/L)
April 2019: Ammonia-Nitrogen: 22.6 mg/L monthly average (limitation was 9.0 mg/L)
March 2019: Ammonia-Nitrogen: 24.5 mg/L monthly average (limitation was 9.0 mg/L)
February 2019: Ammonia-Nitrogen: 25.3 mg/L monthly average (limitation was 9.0 mg/L)
January 2019: Ammonia-Nitrogen: 19.0 mg/L monthly average (limitation was 9.0 mg/L)
December 2018: Ammonia-Nitrogen: 14.0 mg/L monthly average (limitation was 9.0 mg/L)
October 2018: Ammonia-Nitrogen: 3.1 mg/L monthly average (limitation was 3.0 mg/L)
July 2018: Ammonia-Nitrogen: 11.1 mg/L monthly average (limitation was 3.0 mg/L)
Dissolved Oxygen: 6.46 mg/L (minimum was 7.0 mg/L)
June 2018: Ammonia-Nitrogen: 23.0 mg/L monthly average (limitation was 3.0 mg/L)
Dissolved Oxygen: 6.68 mg/L (minimum was 7.0 mg/L)
May 2018: Ammonia-Nitrogen: 23.5 mg/L monthly average (limitation was 3.0 mg/L)
Dissolved Oxygen: 6.67 mg/L (minimum was 7.0 mg/L)
April 2018: Ammonia-Nitrogen: 25.1 mg/L monthly average (limitation was 9.0 mg/L)
March 2018: Ammonia-Nitrogen: 24.6 mg/L monthly average (limitation was 9.0 mg/L)
February 2018: Ammonia-Nitrogen: 26.2 mg/L monthly average (limitation was 9.0 mg/L)
January 2018: Ammonia-Nitrogen: 21.8 mg/L monthly average (limitation was 9.0 mg/L)
December 2017: Ammonia-Nitrogen: 24.0 mg/L monthly average (limitation was 9.0 mg/L)
November 2017: Ammonia-Nitrogen: 20.8 mg/L monthly average (limitation was 9.0 mg/L)
October 2017: Ammonia-Nitrogen: 8.3 mg/L monthly average (limitation was 3.0 mg/L)

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 (doc. no. 362-0400-001).

24-hour composite sampling is now required for every pollutant except pH, DO and Fecal Coliform.

Summary of Review

The facility's 2018 Chapter 94 report (received by DEP on 3/18/2019) shows no current or projected hydraulic/organic overloads at the WWTP.

The last completed Sewage Sludge / Biosolids Production and Disposal supplemental report from May 2016 states that liquid sludge was hauled to Wyoming Valley Sanitary Authority's WWTP via Koberlein.

The previously issued permit expired on March 31, 2019 and the application for permit renewal was not submitted on time.

There are 4 open WPC NPDES violations for the client that would warrant withholding the issuance of the final permit:

- Inspection ID 2926417 – Illegal discharge to waters of the Commonwealth from a sanitary sewer overflow (SSO)
- Inspection ID 2926419 – Illegal discharge to waters of the Commonwealth from a sanitary sewer overflow (SSO)
- Inspection ID 2926483 – Illegal discharge to waters of the Commonwealth from a sanitary sewer overflow (SSO)
- Inspection ID 2926485 – Illegal discharge to waters of the Commonwealth from a sanitary sewer overflow (SSO)

Antibacksliding requirements have been met since no effluent limitations were made less stringent or removed from the permit. EPA waiver is in effect.


WQM Modeling.pdf


PENTOX.pdf


TRC Calculation.pdf


Watershed Information.pdf


StreamStats Low Flow.pdf

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)	0.16
Latitude	41º 20' 44"	Longitude	-75º 35' 33"
Quad Name	Moscow	Quad Code	0841
Wastewater Description:	Sewage Effluent		

Receiving Waters	Green Run (HQ-CWF/MF)	Stream Code	28400
NHD Com ID	65631049	RMI	4.13
Drainage Area	0.53	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.053	Q_{7-10} Basis	Default LFY
Elevation (ft)	1540	Slope (ft/ft)	0.018
Watershed No.	5-A	Chapter 93 Class.	HQ-CWF/MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	Cause Unknown		
Source(s) of Impairment	Unknown		
TMDL Status	Final	Name	Lackawanna River Watershed

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

Nearest Downstream Public Water Supply Intake	Pennsylvania American Water Company - Nesbitt		
PWS Waters	Spring Brook	Flow at Intake (cfs)	4.24
PWS RMI	4.27	Distance from Outfall (mi)	~6.3

Treatment Facility Summary

Treatment Facility Name: Springbrook Township Sewer Authority

WQM Permit No.	Issuance Date
3592403	May 26, 1992

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Lagoons	Ultraviolet Light	0.108 (2017)

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.16	363	Not Overloaded	Settled	Hauled

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.16
Latitude 41º 20' 44" **Longitude** -75º 35' 33"
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
$CBOD_5$	25.0	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40.0	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
	50.0	IMAX	-	-
Total Suspended Solids	30.0	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45.0	Average Weekly	133.102(b)(2)	92a.47(a)(2)
	60.0	IMAX	-	-
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)
	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)
	10,000 / 100 ml	IMAX	-	92a.47(a)(5)

Water Quality-Based Limitations

A “Reasonable Potential Analysis” (found in PENTOX attachment) determined the following parameters were candidates for limitations: Total Copper

The following limitations were determined through water quality modeling:

Parameter	Limit (mg/l)	SBC	Model
Total Residual Chlorine	0.13	IMAX	2019 TRC Calculation Spreadsheet
Ammonia-Nitrogen (5/1 – 10/31)	1.8	Average Monthly	2019 WQM 7.0 Modeling
	3.6	IMAX	
Ammonia-Nitrogen (11/1 – 4/30)	5.4	Average Monthly	
	10.8	IMAX	
Total Copper	0.01	Average Monthly	2019 PENTOX Modeling
	0.02	IMAX	
Dissolved Oxygen	7.0	Minimum	Previous Modeling

Comments: The Ammonia-Nitrogen and Total Copper limitations come into effect 4 years after the permit effective date.