

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

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0050598
 APS ID 1078980
 Authorization ID 1423492

Applicant and Facility Information

Applicant Name	<u>Bethel Baptist Church</u>	Facility Name	<u>Bethel Baptist Church STP</u>
Applicant Address	<u>754 East Rockhill Road</u> <u>Sellersville, PA 18960</u>	Facility Address	<u>754 E Rockhill Road</u> <u>Sellersville, PA 18960</u>
Applicant Contact	<u>Tim Dunfee</u>	Facility Contact	<u>Michael Sullivan</u>
Applicant Phone	<u>(215) 536-9200</u>	Facility Phone	<u>(215) 766-2626</u>
Client ID	<u>62695</u>	Site ID	<u>252536</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>East Rockhill Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Bucks</u>
Date Application Received	<u>January 17, 2023</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u></u>	If No, Reason	<u></u>
Purpose of Application	<u>Permit Renewal.</u>		

Summary of Review

The applicant requests renewal of an NPDES permit to discharge 7,500 gallons per day (GPD) of treated sewage into UNT to Tohickon Creek from a sewage treatment plant serving Bethel Baptist Church.

The sewage treatment plant is an in ground extended aeration system with sand filter. The treatment plant consists of a surge tank, an aeration tank, a settling tank, chemical feeders, a sand filter, a chlorination tank, and a sludge holding tank. The treatment plant was old and in bad shape. The applicant had submitted WQM part II application to upgrade the treatment plant. The applicant had requested preliminary effluent limitations for the proposed new treatment plant to replace the existing sewage treatment plant on February 10, 2009. The Department sent out letter on March 24, 2009 with effluent limits based on BAT, Dry Swale Guidelines, and Lake Nockamixon TMDL. This permit renewal includes effluent limits contained in that letter.

The Department initiated amendment of an NPDES permit to include Ultraviolet (UV) monitoring in the NPDES permit in June 2014. The NPDES permit was issued on April 2, 2013. Permittee notified us that they installed new the treatment plant (Hoot System) with UV system. The new treatment plant includes Hoot (CMBR) Ceramic Membrane Bio-Reactor system with UV disinfection as back-up and chlorine will be used for membrane cleaning. Therefore, we amended the NPDES permit to include UV monitoring when UV is used for disinfection on June 18, 2014.

Technology based effluent limits are applied for all the parameters as the discharge is into dry swale. Total Maximum Daily Load (TMDL) for Lake Nockamixon was completed in March 2003 for nutrients. The TMDL requires a phosphorus limit of 0.5 mg/l (Average Monthly) for all the dischargers to Tohickon Creek located upstream to Lake Nockamixon. We will continue the same phosphorus limit of 0.5 mg/l in the permit renewal. Discharge is generally in compliance with current permit limits. The effluent limits for all the parameters will remain same for this permit renewal. Quarterly monitoring for E. Coli is included in this permit renewal and is consistent with SOP.

Approve	Deny	Signatures	Date
X		<i>Ketan Thaker</i> Ketan Thaker / Project Manager	6/6/2023
X		<i>Pravin Patel</i> Pravin C. Patel, P.E. / Environmental Engineer Manager	06/06/2023

Summary of Review

The Act-14 Notification to East Rockhill Township on December 1, 2022.
The Act-14 Notification to Bucks County Commissioner Office on December 1, 2022.

Sludge use and disposal description and location(s): Sludge is sent to Landfill for disposal.

PARAMETER	EFFLUENT LIMIT (av. mo. in mg/l)	BASIS
CBOD5	10	BAT Dry Swale Guidelines
Total Suspended Solids	10	BAT. Dry Swale Guidelines
Dissolved Oxygen	6.0	BPJ
Fecal Coliform (#/100ml)	200 Geo. Mean	92a.47
Total Residual Chlorine	0.5	92a.47-48
Total Phosphorus	0.5	Lake Nockamixon TMDL
Ammonia Nitrogen	1.5	BAT. Dry Swale Guidelines
Total Nitrogen	10	BAT. Dry Swale Guidelines
UV Intensity (mW/cm ²)	Report	SOP for Sewage
pH (SU)	6.0 to 9.0 SU	92a.47, 95.2
E. Coli (#/ 100 ml)	Report	92a.47

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>001</u>	Design Flow (MGD)	<u>0.0075</u>
Latitude	<u>40° 24' 19.58"</u>	Longitude	<u>-75° 19' 32.03"</u>
Quad Name	_____	Quad Code	_____
Wastewater Description: <u>Sewage Effluent</u>			

Receiving Waters	<u>Unnamed Tributary to Tohickon Creek (TSF, MF)</u>	Stream Code	<u>03181</u>
NHD Com ID	<u>26053522</u>	RMI	<u>3.1</u>
Drainage Area	_____	Yield (cfs/mi ²)	_____
Q ₇₋₁₀ Flow (cfs)	_____	Q ₇₋₁₀ Basis	_____
Elevation (ft)	_____	Slope (ft/ft)	_____
Watershed No.	<u>2-D</u>	Chapter 93 Class.	<u>TSF, MF</u>
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) _____	_____
Temperature (°F) _____	_____
Hardness (mg/L) _____	_____
Other: _____	_____

Nearest Downstream Public Water Supply Intake _____

PWS Waters _____	Flow at Intake (cfs) _____
PWS RMI _____	Distance from Outfall (mi) _____

Treatment Facility Summary				
Treatment Facility Name: Bethel Baptist Church STP				
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Extended Aeration With Solids Removal	Ultraviolet	0.0075
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0075	16	Not Overloaded		Landfill

Compliance History

DMR Data for Outfall 001 (from April 1, 2022 to March 31, 2023)

Parameter	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22	OCT-22	SEP-22	AUG-22	JUL-22	JUN-22	MAY-22	APR-22
Flow (GPD) Average Monthly	0.00134 2	0.00115 1	0.00128 5	0.00131 1	0.00117 2	0.00137	0.00123 4	0.00073 1	0.00053 7	0.00080 7	0.00161 2	0.00138 9
pH (S.U.) Instantaneous Minimum	7.7	7.6	7.21	7.67	7.35	7.7	7.45	7.47	7.5	7.16	7.91	7.93
pH (S.U.) Instantaneous Maximum	8.57	8.58	8.64	8.73	8.56	8.39	8.35	8.5	8.39	8.65	8.72	8.71
DO (mg/L) Instantaneous Minimum	9.38	8.32	7.53	8.92	7.28	8.08	6.87	7.56	6.63	6.92	7.92	9.28
TRC (mg/L) Average Monthly	0.03	0.03	0.03	0.02	0.01	0.02	0.01	0.02	0.02	0.03	0.04	0.04
TRC (mg/L) Instantaneous Maximum	0.04	0.04	0.05	0.03	0.03	0.03	0.04	0.03	0.04	0.04	0.04	0.043
CBOD5 (mg/L) Average Monthly	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
TSS (mg/L) Average Monthly	< 1.0	2.5	< 1.0	< 1.0	< 1.5	< 1.0	< 1.0	< 1.0	< 1.5	2	7.0	< 1.0
Fecal Coliform (No./100 ml) Geometric Mean	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
UV Intensity (mW/cm ²) Instantaneous Minimum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
Total Nitrogen (mg/L) Average Monthly	< 2	< 9	< 3	< 2	< 2	< 2	< 5	< 2	< 2	< 3	< 4	< 3
Ammonia (mg/L) Average Monthly	0.4	0.8	0.8	< 0.1	0.3	< 0.02	< 0.02	< 0.03	< 0.02	0.4	0.4	0.5

**NPDES Permit Fact Sheet
Bethel Baptist Church STP**

NPDES Permit No. PA0050598

Total Phosphorus (mg/L) Average Monthly	0.1	0.5	< 0.04	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.05
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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" (362-0400-001), 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	Instantaneous Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (GPD)	Report	XXX	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	6.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.2	See Permit	Grab
CBOD5 Nov 1 - Apr 30	XXX	XXX	XXX	20	XXX	40	2/month	8-Hr Composite
CBOD5 May 1 - Oct 31	XXX	XXX	XXX	10	XXX	20	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	10	XXX	20	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
UV Intensity (mW/cm ²)	XXX	XXX	Report	XXX	XXX	XXX	See Permit	Metered
Total Nitrogen	XXX	XXX	XXX	10	XXX	20	2/month	8-Hr Composite
Ammonia	XXX	XXX	XXX	1.5	XXX	3	2/month	8-Hr Composite

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	Instantaneous Minimum	Average Monthly	Maximum	Instant. Maximum		
Total Phosphorus	XXX	XXX	XXX	0.5	XXX	1	2/month	8-Hr Composite