

Application Type New
Wastewater Type Sewage
Facility Type SRSTP

**NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP**

Application No. PA0294365
APS ID 1108951
Authorization ID 1475875

Applicant, Facility and Project Information

Applicant Name	<u>St Johns Evangelical Lutheran Church</u>	Facility Name	<u>St Johns Evangelical Lutheran Church</u>
Applicant Address	<u>PO Box 222</u> <u>Tyrone, PA 16686-0222</u>	Facility Address	<u>3877 Kettle Road</u> <u>Altoona, PA 16601-8402</u>
Applicant Contact	<u>Marty Williams</u>	Facility Contact	<u>Marty Williams</u>
Applicant Phone	<u>(814) 515-0546</u>	Facility Phone	<u>(814) 515-0546</u>
Client ID	<u>384326</u>	Site ID	<u>871145</u>
SIC Code	<u>8811</u>	Municipality	<u>Tyrone Township</u>
SIC Description	<u>Services - Private Households</u>	County	<u>Blair</u>
Date Application Received	<u>March 3, 2024</u>	WQM Required	<u></u>
Date Application Accepted	<u>March 26, 2024</u>	WQM App. No.	<u>0724402</u>
Project Description	<u>This is an application request for a new NPDES/WQM permit(s)</u>		

Approve	Deny	Signatures	Date
X		Nicholas Hong, P.E. / Environmental Engineer Nick Hong (via electronic signature)	April 9, 2024
X		Daniel W. Martin, P.E. / Environmental Engineer Manager Maria D. Bebenek for	April 17, 2024
X		Maria D. Bebenek, P.E. / Environmental Program Manager Maria D. Bebenek	April 17, 2024

Summary of Review

The application submitted by the applicant requests a new NPDES/WQM permit(s) for the St. Johns Evangelical Lutheran Church located at 3877 Kettle Road, Altoona, PA 16601 in Blair County, municipality of Tyrone. The application was received by DEP Southcentral Regional Office (SCRO) on March 3, 2024.

The purpose of this Fact Sheet is to present the basis of information used for establishing the proposed NPDES permit effluent limitations. The Fact Sheet includes a description of the facility, a description of the facility's receiving waters, and a description of the facility's receiving waters attainment/non-attainment assessment status. Section 5 provides the justification for the proposed NPDES effluent limits derived from technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), total maximum daily loading (TMDL), antidegradation, anti-backsliding, and/or whole effluent toxicity (WET). A brief summary of the outlined descriptions has been included in the Summary of Review section.

The subject facility is a 0.0004 MGD (400 gpd) treatment facility. The NPDES application has been processed as a Small Flow Treatment Facility due to the type of sewage and the design flow rate for the facility. The applicant disclosed the Act 14 requirement to Blair County and Tyrone Township and the notice was received by the parties on November 20, 2023 and November 7, 2023. A planning approval letter was issued by DEP on January 16, 2024 (DEP Code No. A3-07922-181-3S).

Utilizing the DEP's web-based Emap-PA information system, the receiving waters has been determined to be Trib 15794 To Sinking Run. The sequence of receiving streams that the Trib 15794 To Sinking Run discharges into are Sinking Run, Little Juniata River, Juniata River, and the Susquehanna River which eventually drains into the Chesapeake Bay. Due to the low flow rate generated by the facility, the subject site is not subject to the Chesapeake Bay implementation requirements. The receiving water has protected water usage for cold water fishes (CWF) and migratory fishes (MF). No Class A Wild Trout fisheries are impacted by this discharge. The absence of high quality and/or exceptional value surface waters removes the need for an additional evaluation of anti-degradation requirements.

The Trib 15794 To Sinking Run is a Category 2 stream listed in the 2024 Integrated List of All Waters (formerly 303d Listed Streams). This stream is an attaining stream that supports aquatic life. The receiving waters is not subject to a total maximum daily load (TMDL) plan to improve water quality in the subject facility's watershed.

Sludge use and disposal description and location(s): Since this is a new discharger this is not applicable. Future renewals will detail sludge use and disposal information.

The proposed permit will expire five (5) years from the effective date.

Based on the review in this report, it is recommended that the permit be drafted. 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.

Any additional information or public review of documents associated with the discharge or facility may be available at PA DEP Southcentral Regional Office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file review, contact the SCRO File Review Coordinator at 717.705.4700.

1.0 Applicant

1.1 General Information

This fact sheet summarizes PA Department of Environmental Protection's review for the NPDES renewal for the following subject facility.

Facility Name: St. John's Evangelical Lutheran Church

NPDES Permit # PA0294365

Physical Address: PO Box 222
Tyrone, PA 16686

Mailing Address: 3877 Kettle Road
Tyrone, PA 16686

Contact: Marty Williams
Council President
(814) 515-0546
Mjw7@psu.edu

Consultant: John DeLacio
Advanced Treatment
Delacio.john@gmail.com

1.2 Permit History

Permit submittal included the following information.

- NPDES Application

2.0 Treatment Facility Summary

2.1.1 Site location

The physical address for the facility is 3877 Kettle Road, Tyrone, PA 16686. A topographical and an aerial photograph of the facility are depicted as Figure 1 and Figure 2.

Figure 1: Topographical map of the subject facility

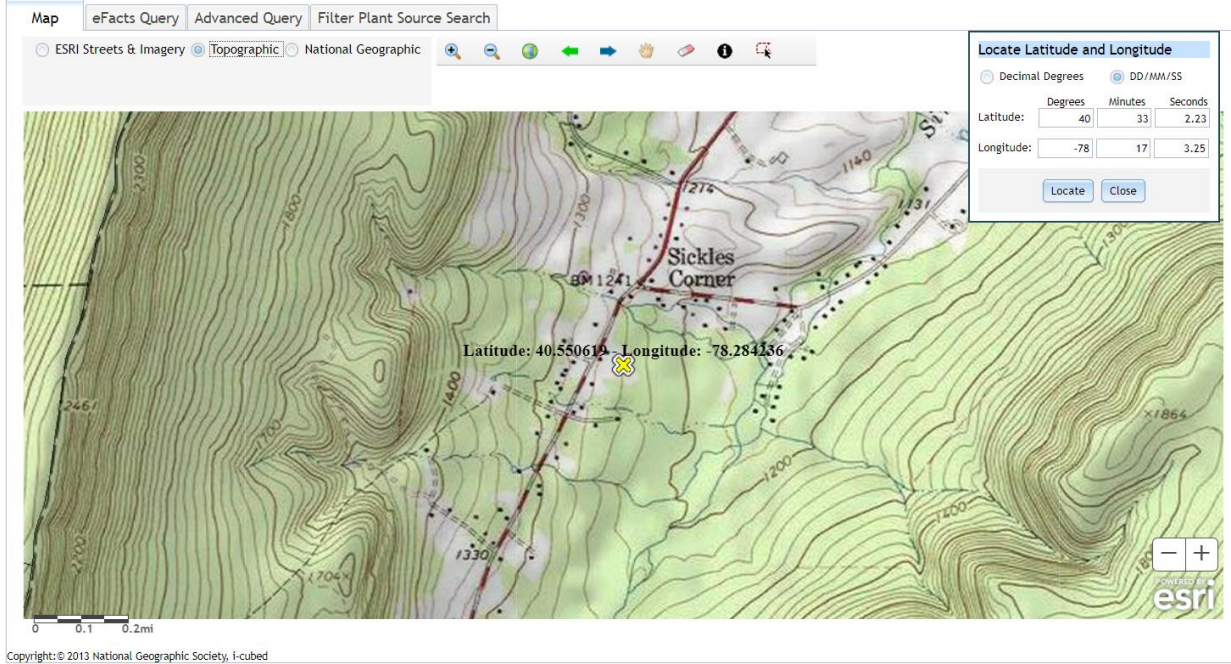
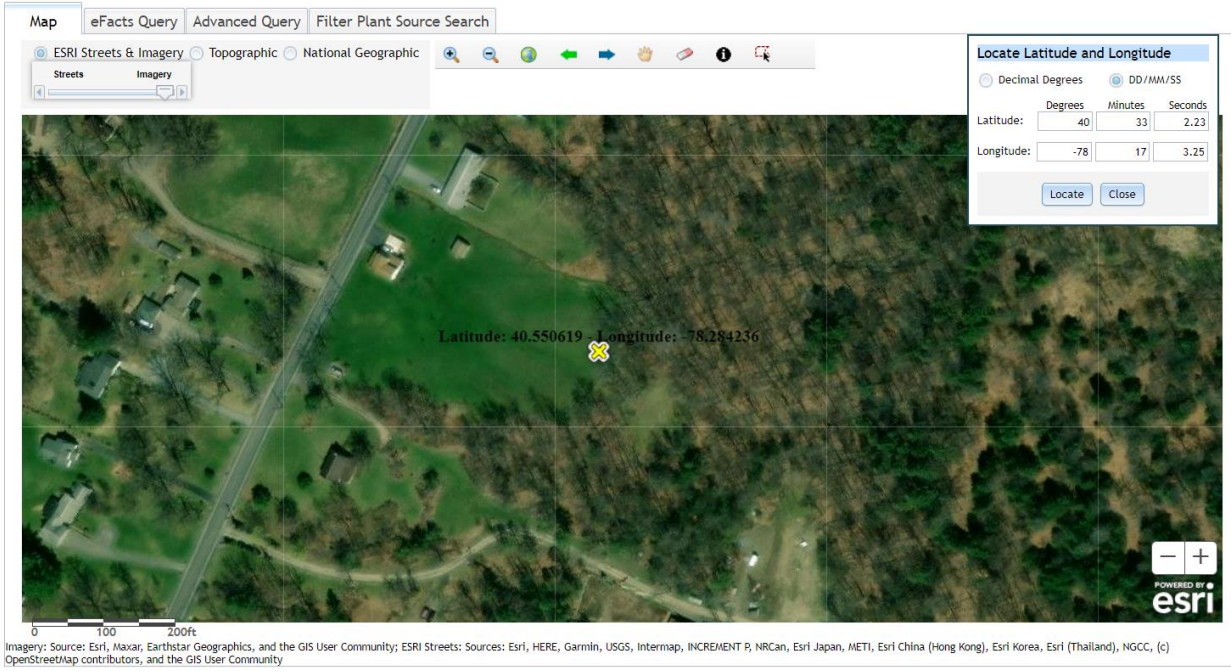


Figure 2: Aerial Photograph of the subject facility



Imagery: Sources: Esri, Maxar, Earthstar Geographics, and the GIS User Community; ESRI Streets: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

2.2 Description of Wastewater Treatment Process

The subject facility is a 0.0004 MGD design flow facility. The subject facility treats wastewater using an existing 1,000-gal septic tank, an effluent filter, and a Premier Tech EC7-500-C-P-UV prior to discharge through the outfall. The facility shall be evaluated for flow, BOD5, TSS, and fecal coliform.

The treatment process is summarized in the table.

Treatment Facility Summary				
Treatment Facility Name: SRSTP 3877 Kettle Road Tyrone PA - Marty Williams				
WQM Permit No.	Issuance Date			
0724402	TBD			
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	ECOFLO Coco Filter	Ultraviolet	0.0004
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0004		Not Overloaded		

2.3 Facility Outfall Information

The facility has the following outfall information for wastewater.

Outfall No.	001	Design Flow (MGD)	.0004
Latitude	40° 33' 2.00"	Longitude	-78° 17' 3.00"
Wastewater Description: Sewage Effluent			

3.0 Receiving Waters and Water Supply Information Detail Summary

3.1 Receiving Waters

The receiving waters has been determined to be Trib 15794 To Sinking Run. The sequence of receiving streams that the Trib 15794 To Sinking Run discharges into are Sinking Run, Little Juniata River, Juniata River, and Susquehanna River which eventually drains into the Chesapeake Bay.

3.2 Public Water Supply (PWS) Intake

The closest PWS to the subject facility is Mifflintown MA (PWS ID #4340008) located approximately 83 miles downstream of the subject facility on the Juniata River. Based upon the distance and the flow rate of the facility, the PWS should not be impacted.

3.3 Class A Wild Trout Streams

Class A Wild Trout Streams are waters that support a population of naturally produced trout of sufficient size and abundance to support long-term and rewarding sport fishery. DEP classifies these waters as high-quality coldwater fisheries.

The information obtained from EMAP suggests that no Class A Wild Trout Fishery will be impacted by this discharge.

3.4 2024 Integrated List of All Waters (303d Listed Streams)

Section 303(d) of the Clean Water Act requires States to list all impaired surface waters not supporting uses even after appropriate and required water pollution control technologies have been applied. The 303(d) list includes the reason for impairment which may be one or more point sources (i.e. industrial or sewage discharges) or non-point sources (i.e. abandoned mine lands or agricultural runoff and the pollutant causing the impairment such as metals, pH, mercury or siltation).

States or the U.S. Environmental Protection Agency (EPA) must determine the conditions that would return the water to a condition that meets water quality standards. As a follow-up to listing, the state or EPA must develop a Total Maximum Daily Load (TMDL) for each waterbody on the list. A TMDL identifies allowable pollutant loads to a waterbody from both point and non-point sources that will prevent a violation of water quality standards. A TMDL also includes a margin of safety to ensure protection of the water.

The water quality status of Pennsylvania's waters uses a five-part categorization (lists) of waters per their attainment use status. The categories represent varying levels of attainment, ranging from Category 1, where all designated water uses are met to Category 5 where impairment by pollutants requires a TMDL for water quality protection.

The receiving waters is listed in the 2024 Pennsylvania Integrated Water Quality Monitoring and Assessment Report as a Category 2 waterbody. The surface waters is an attaining stream that supports aquatic life. The designated use has been classified as protected waters for cold water fishes (CWF) and migratory fishes (MF).

3.5 Low Flow Stream Conditions

Water quality modeling estimates are based upon conservative data inputs. The data are typically estimated using either a stream gauge or through USGS web based StreamStats program. The NPDES effluent limits are based upon the combined flows from both the stream and the facility discharge.

A conservative approach to estimate the impact of the facility discharge using values which minimize the total combined volume of the stream and the facility discharge. The volumetric flow rate for the stream is based upon the seven-day, 10-year low flow (Q710) which is the lowest estimated flow rate of the stream during a 7 consecutive day period that occurs once in 10 -year time period. The facility discharge is based upon a known design capacity of the subject facility.

The low flow yield and the Q710 for the subject facility was estimated as shown below.

The low flow yield is 0.0403 ft³/s/mi² and the Q710 is 0.00403 ft³/s.

3.6 Summary of Discharge, Receiving Waters and Water Supply Information

Outfall No.	<u>001</u>	Design Flow (MGD)	<u>.0004</u>
Latitude	<u>40° 32' 57.69"</u>	Longitude	<u>-78° 17' 3.59"</u>
Quad Name	<u></u>	Quad Code	<u></u>
Wastewater Description: <u>Sewage Effluent</u>			

Receiving Waters	<u>Unnamed Tributary to Sinking Run (CWF, MF)</u>	Stream Code	<u>15794</u>
NHD Com ID	<u>65606728</u>	RMI	<u>0.31</u>
Drainage Area	<u>0.1</u>	Yield (cfs/mi ²)	<u>0.0403</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.00403</u>	Q ₇₋₁₀ Basis	<u>StreamStats</u>
Elevation (ft)	<u>1240</u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>11-A</u>	Chapter 93 Class.	<u>CWF, 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) supports aquatic life</u>		
Cause(s) of Impairment	<u>Not appl.</u>		
Source(s) of Impairment	<u>Not appl.</u>		
TMDL Status	<u>Not appl.</u>	Name	<u></u>

Background/Ambient Data		Data Source
pH (SU)	<u>Not appl.</u>	<u></u>
Temperature (°C)	<u>Not appl.</u>	<u></u>
Hardness (mg/L)	<u>Not appl.</u>	<u></u>
Other:	<u></u>	<u></u>

Nearest Downstream Public Water Supply Intake	<u>Mifflintown MA</u>		
PWS Waters	<u>Juniata River</u>	Flow at Intake (cfs)	<u></u>
PWS RMI	<u>37</u>	Distance from Outfall (mi)	<u>83</u>

4.0: Overview of Presiding Water Quality Standards

4.1 General

There are at least six (6) different policies which determines the effluent performance limits for the NPDES permit. The policies are technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), antidegradation, total maximum daily loading (TMDL), anti-backsliding, and whole effluent toxicity (WET) The effluent performance limitations enforced are the selected permit limits that is most protective to the designated use of the receiving waters. An overview of each of the policies that are applicable to the subject facility has been presented in Section 6.

4.2.1 Technology-Based Limitations

TBEL treatment requirements under section 301(b) of the Act represent the minimum level of control that must be imposed in a permit issued under section 402 of the Act (40 CFR 125.3). Small flow treatment facilities are confined to permit limitations promulgated by the Small Flow Treatment Facilities Manual (Document # 36-0300-002) and the SOP- New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Application (Revised May 17, 2019).

Parameter	Avg Mo	IMAX	Sample Type	Frequency: SRSTPs
Flow (GPD)	Report	XXX	Estimate	1/year
BOD5 (mg/l)	10	20	Grab	1/year
TSS (mg/l)	10	20	Grab	1/year
TRC (mg/l)	Report for SRSTPs		Grab	1/month
Fecal Coliform (No/100 ml)	200 Geometric Mean		Grab	1/year

4.3 Water Quality-Based Limitations

WQBEL are based on the need to attain or maintain the water quality criteria and to assure protection of designated and existing uses (PA Code 25, Chapter 92a.2). The subject facility that is typically enforced is the more stringent limit of either the TBEL or the WQBEL.

Determination of WQBEL is calculated by spreadsheet analysis or by a computer modeling program developed by DEP. DEP permit engineers utilize the following computing programs for WQBEL permit limitations: (1) MS Excel worksheet for Total Residual Chlorine (TRC); (2) WQM 7.0 for Windows Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen Version 1.1 (WQM Model) and (3) Toxics using DEP Toxics Management Spreadsheet for Toxics pollutants.

The modeling point nodes utilized for this facility are summarized below.

General Data 1	(Modeling Point #1)	Units
Stream Code	15794	
River Mile Index	0.31	miles
Elevation	1240	feet
Latitude	40.550619	
Longitude	-78.284236	
Drainage Area	0.1	sq miles
Low Flow Yield	0.0403	cfs/sq mile

4.3.1 Water Quality Modeling 7.0

The subject facility is not subject to water quality modeling.

4.3.2 Toxics Modeling

The subject facility is not subject toxics modeling.

4.3.3 Whole Effluent Toxicity (WET)

The subject facility is not subject to WET.

4.4 Total Maximum Daily Loading (TMDL)

4.4.1 TMDL

The goal of the Clean Water Act (CWA), which governs water pollution, is to ensure that all of the Nation's waters are clean and healthy enough to support aquatic life and recreation. To achieve this goal, the CWA created programs designed to regulate and reduce the amount of pollution entering United States waters. Section 303(d) of the CWA requires states to assess their waterbodies to identify those not meeting water quality standards. If a waterbody is not meeting standards, it is listed as impaired and reported to the U.S. Environmental Protection Agency. The state then develops a plan to clean up the impaired waterbody. This plan includes the development of a Total Maximum Daily Load (TMDL) for the pollutant(s) that were found to be the cause of the water quality violations. A Total Maximum Daily Load (TMDL) calculates the maximum amount of a specific pollutant that a waterbody can receive and still meet water quality standards.

A TMDL for a given pollutant and waterbody is composed of the sum of individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background levels. In addition, the TMDL must include an implicit or explicit margin of safety (MOS) to account for the uncertainty in the relationship between pollutant loads and the quality of the receiving waterbody. The TMDL components are illustrated using the following equation:

$$TMDL = \sum WLAs + \sum LAs + MOS$$

Pennsylvania has committed to restoring all impaired waters by developing TMDLs and TMDL alternatives for all impaired waterbodies. The TMDL serves as the starting point or planning tool for restoring water quality.

4.4.1.1 Local TMDL

The subject facility does not discharge into a local TMDL.

4.4.1.2 Chesapeake Bay TMDL Requirement

The Chesapeake Bay Watershed is a large ecosystem that encompasses approximately 64,000 square miles in Maryland, Delaware, Virginia, West Virginia, Pennsylvania, New York and the District of Columbia. An ecosystem is composed of interrelated parts that interact with each other to form a whole. All of the plants and animals in an ecosystem depend on each other in some way. Every living thing needs a healthy ecosystem to survive. Human activities affect the Chesapeake Bay ecosystem by adding pollution, using resources and changing the character of the land.

Most of the Chesapeake Bay and many of its tidal tributaries have been listed as impaired under Section 303(d) of the federal Water Pollution Control Act ("Clean Water Act"), 33 U.S.C. § 1313(d). While the Chesapeake Bay is outside the boundaries of Pennsylvania, more than half of the State lies within the watershed. Two major rivers in Pennsylvania are part of the Chesapeake Bay Watershed. They are (a) the Susquehanna River and (b) the Potomac River. These two rivers total 40 percent of the entire Chesapeake Bay watershed.

The overall management approach needed for reducing nitrogen, phosphorus and sediment are provided in the Bay TMDL document and the Phase I, II, and III WIPs which is described in the Bay TMDL document and Executive Order 13508.

The Bay TMDL is a comprehensive pollution reduction effort in the Chesapeake Bay watershed identifying the necessary pollution reductions of nitrogen, phosphorus and sediment across the seven Bay watershed jurisdictions of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia to meet applicable water quality standards in the Bay and its tidal waters.

The Watershed Implementation Plans (WIPs) provides objectives for how the jurisdictions in partnership with federal and local governments will achieve the Bay TMDL's nutrient and sediment allocations.

Phase 3 WIP provides an update on Chesapeake Bay TMDL implementation activities for point sources and DEP's current implementation strategy for wastewater. The latest revision of the supplement was September 13, 2021.

The Chesapeake Bay TMDL (Appendix Q) categorizes point sources into four sectors:

- Sector A- significant sewage dischargers;
- Sector B- significant industrial waste (IW) dischargers;
- Sector C- non-significant dischargers (both sewage and IW facilities); and
- Sector D- combined sewer overflows (CSOs).

All sectors contain a listing of individual facilities with NPDES permits that were believed to be discharging at the time the TMDL was published (2010). All sectors with the exception of the non-significant dischargers have individual wasteload allocations (WLAs) for TN and TP assigned to specific facilities. Non-significant dischargers have a bulk or aggregate allocation for TN and TP based on the facilities in that sector that were believed to be discharging at that time and their estimated nutrient loads.

Cap Loads will be established in permits as Net Annual TN and TP loads (lbs/yr) that apply during the period of October 1 – September 30. For facilities that have received Cap Loads in any other form, the Cap Loads will be modified accordingly when the permits are renewed.

Offsets have been incorporated into Cap Loads in several permits issued to date. From this point forward, permits will be issued with the WLAs as Cap Loads and will identify Offsets separately to facilitate nutrient trading activities and compliance with the TMDL.

Based upon the supplement the subject facility has been categorized as a Sector C discharger. The supplement defines Sector C as a non-significant dischargers that includes sewage facilities (Phase 4 facilities: ≥ 0.2 MGD and < 0.4 MGD and Phase 5 facilities: > 0.002 MGD and < 0.2 MGD), small flow/single residence sewage treatment facilities (≤ 0.002 MGD), and non-significant IW facilities, all of which may be covered by statewide General Permits or may have individual NPDES permits.

At this time, there are approximately 850 Phase 4 and 5 sewage facilities, approximately 715 small flow sewage treatment facilities covered by a statewide General Permit, and approximately 300 non-significant IW facilities.

Due to the low flow rate generated by the facility, this facility is not subject to Sector C monitoring requirements.

4.5 Anti-Degradation Requirement

Chapter 93.4a of the PA regulations requires that surface water of the Commonwealth of Pennsylvania may not be degraded below levels that protect the existing uses. The regulations specifically state that *Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected*. Antidegradation requirements are implemented through DEP's guidance manual entitled Water Quality Antidegradation Implementation Guidance (Document #391-0300-02).

The policy requires DEP to protect the existing uses of all surface waters and the existing quality of High Quality (HQ) and Exceptional Value (EV) Waters. Existing uses are protected when DEP makes a final decision on any permit or approval for an activity that may affect a protected use. Existing uses are protected based upon DEP's evaluation of the best available information (which satisfies DEP protocols and Quality Assurance/Quality Control (QA/QC) procedures) that indicates the protected use of the waterbody.

For a new, additional, or increased point source discharge to an HQ or EV water, the person proposing the discharge is required to utilize a nondischarge alternative that is cost-effective and environmentally sound when compared with the cost of the proposed discharge. If a nondischarge alternative is not cost-effective and environmentally sound, the person must use the best available combination of treatment, pollution prevention, and wastewater reuse technologies and assure that any discharge is nondegrading. In the case of HQ waters, DEP may find that after satisfaction of intergovernmental coordination and public participation requirements lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In addition, DEP will assure that cost-effective and reasonable best management practices for nonpoint source control in HQ and EV waters are achieved.

The subject facility's discharge will be to a non-special protection waters and the permit conditions are imposed to protect existing instream water quality and uses. Neither HQ waters or EV waters is impacted by this discharge.

4.6 Anti-Backsliding

Anti-backsliding is a federal regulation which prohibits a permit from being renewed, reissued, or modified containing effluent limitations which are less stringent than the comparable effluent limitations in the previous permit (40 CFR 122.1.1 and 40 CFR 122.1.2).

Since this is a new discharger, anti-backsliding does not apply. However, future renewals may be subject to anti-backsliding.

5.0 NPDES Parameter Details

The basis for the proposed sampling and their monitoring frequency that will appear in the permit for each individual parameter are itemized in this Section. The final limits are the more stringent of technology based effluent treatment (TBEL) requirements, water quality based (WQBEL) limits, TMDL, antidegradation, anti-degradation, or WET.

The reader will find in this section:

- a) a justification of recommended permit monitoring requirements and limitations for each parameter in the proposed NPDES permit; and
- b) a summary of the proposed NPDES effluent limits.

5.1 Recommended Monitoring Requirements and Effluent Limitations

A summary of the recommended monitoring requirements and effluent limitations are itemized in the tables. The table is categorized by Conventional Pollutants and Disinfection.

5.1.1 Conventional Pollutants and Disinfection

Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection			
St. Johns Evangelical Lutheran Church, PA0294365			
Parameter	Permit Limitation Required by¹:	Recommendation	
BOD	TBEL	Monitoring:	The monitoring frequency shall be 1x/yr as a grab sample (SOP)
		Effluent Limit:	Effluent limits shall not exceed 10 mg/l as an average monthly (SOP)
		Rationale:	The monitoring frequency and the effluent limits assigned by the SOP.
TSS	TBEL	Monitoring:	The monitoring frequency shall be 1x/yr as a grab sample (SOP)
		Effluent Limit:	Effluent limits shall not exceed 10 mg/l as an average monthly (SOP)
		Rationale:	The monitoring frequency and the effluent limits assigned by the SOP.
Fecal Coliform	TBEL	Monitoring:	The monitoring frequency shall be 1x/yr as a grab sample (SOP)
		Effluent Limit:	Effluent limits shall not exceed 200 MPN as a geometric mean (SOP).
		Rationale:	The monitoring frequency and the effluent limits assigned by the SOP.
Notes:			
1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, or (g) WET			
2 Monitoring frequency based on flow rate of 0.0004 MGD.			
3 SOP, New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications, Revised November 9, 2023			
4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)			
5 Phase 2 Watershed Implementation Plan Wastewater Supplement, Revised September 6, 2017			

5.2.1 Summary of Proposed NPDES Effluent Limits

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.

The proposed NPDES effluent limitations are summarized in the table below.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001, Latitude 40° 33' 2.00", Longitude 78° 17' 3.00", River Mile Index 0.31, Stream Code 15794

Receiving Waters: Unnamed Tributary to Sinking Run (CWF, MF)

Type of Effluent: Sewage Effluent

1. The permittee is authorized to discharge during the period from **Permit Effective Date** through **Permit Expiration Date**.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

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	Annual Average	Maximum	Instant. Maximum		
Flow (MGD)	Report Annl Avg	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
BOD5	XXX	XXX	XXX	10.0	XXX	20.0	1/year	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20.0	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	XXX	1/year	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

5.3.2 Summary of Proposed Permit Part C Conditions

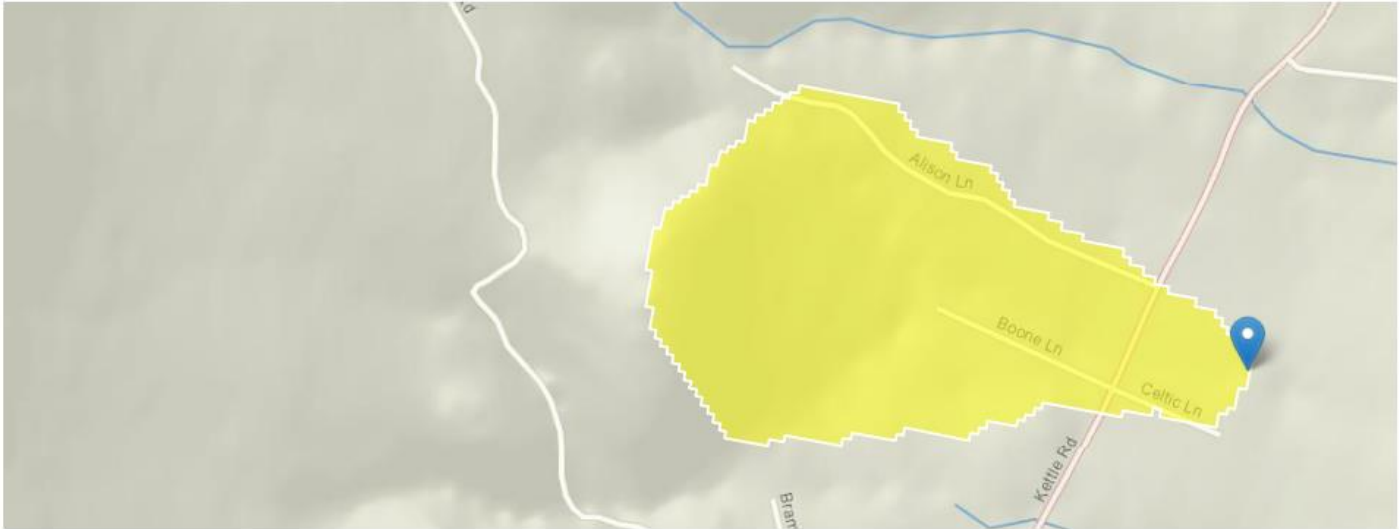
The subject facility has the following Part C conditions.

- SFTF Maintenance

Tools and References Used to Develop Permit	
<input type="checkbox"/>	WQM for Windows Model (see Attachment [redacted])
<input type="checkbox"/>	Toxics Management Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	TRC Model Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	Temperature Model Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
<input type="checkbox"/>	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
<input type="checkbox"/>	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
<input type="checkbox"/>	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
<input type="checkbox"/>	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
<input type="checkbox"/>	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
<input type="checkbox"/>	Pennsylvania CSO Policy, 386-2000-002, 9/08.
<input type="checkbox"/>	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
<input type="checkbox"/>	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
<input type="checkbox"/>	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
<input type="checkbox"/>	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
<input type="checkbox"/>	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
<input type="checkbox"/>	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
<input type="checkbox"/>	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
<input type="checkbox"/>	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
<input type="checkbox"/>	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
<input type="checkbox"/>	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
<input type="checkbox"/>	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Design Stream Flows, 386-2000-003, 9/98.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
<input type="checkbox"/>	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
<input checked="" type="checkbox"/>	SOP: New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications, rev 11/9/2023
<input type="checkbox"/>	Other: [redacted]

StreamStats Report

Region ID: PA
 Workspace ID: PA20240327124311405000
 Clicked Point (Latitude, Longitude): 40.54937, -78.28437
 Time: 2024-03-27 08:43:33 -0400



St. Johns Evangelical Lutheran Church PA0294365 Modeling Point #1 March 2024

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	26.43	percent
DRNAREA	Area that drains to a point on a stream	0.1	square miles
PRECIP	Mean Annual Precipitation	41	inches
ROCKDEP	Depth to rock	5.7	feet
STRDEN	Stream Density -- total length of streams divided by drainage area	3.06	miles per square mile

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.1	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	41	inches	35	50.4
STRDEN	Stream Density	3.06	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	5.7	feet	3.32	5.65
CARBON	Percent Carbonate	26.43	percent	0	99

Low-Flow Statistics Disclaimers [Low Flow Region 2]

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

Low-Flow Statistics Flow Report [Low Flow Region 2]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.00841	ft ³ /s
30 Day 2 Year Low Flow	0.011	ft ³ /s
7 Day 10 Year Low Flow	0.00403	ft ³ /s
30 Day 10 Year Low Flow	0.005	ft ³ /s
90 Day 10 Year Low Flow	0.00703	ft ³ /s

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (<http://pubs.usgs.gov/sir/2006/5130/>)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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Application Version: 4.19.4

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

Correspondence

Hong, Nicholas

From: John Delacio <delacio.john@gmail.com>
Sent: Monday, April 8, 2024 3:48 PM
To: Hong, Nicholas
Subject: Re: [External] Re: St Johns Church / PA0294365 / 0724402 / questions/comments
Attachments: St Johns Church drawing 1 of 2- sealed.pdf; St Johns Church drawing 2 of 2- sealed.pdf; St. Johns Church Corrections.pdf

- 1)We understand that the WQM will not be accepted if the date of the owners signature does not match the date of the notary.
- 2)A note was added to the drawing stating the isolation distance of the tanks must be 10 feet from dwellings and 50 feet from wells.
- 3)4" existing sewer was added to drawing 1 of 2
- 4)Modue 19 was revised to 400 GPD as the design flow.
- 5)The design calculations were revised to reflect the 400 GPD design flow.
- 6)The manufacturer states that the Model Number is EC7-500-C- DiUV. This was added through the affected WQM and NPDES applications.
- 7)Drawings 1 and 2 of were revised to show a 3"outfall sewer pipe.

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Thank You
John Delacio
(724) 312-8619
delacio.john@gmail.com

On Mon, Apr 8, 2024 at 2:28 PM Hong, Nicholas <nhong@pa.gov> wrote:

John.

Please answer all the questions.

Nick Hong, PE | Environmental Engineer
PA Department of Environmental Protection

Clean Water Programs
Southcentral Regional Office
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