pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

**Northcentral Regional Office**
**CLEAN WATER PROGRAM**

| | | | |
|---|---|---|---|
| Application Type | **Renewal** | Application No. | **PA0228281** |
| Wastewater Type | **Sewage** | APS ID | **990705** |
| Facility Type | **SFTF** | Authorization ID | **1268814** |

# NPDES PERMIT FACT SHEET
# INDIVIDUAL SFTF/SRSTP

## Applicant, Facility and Project Information

| | | | |
|---|---|---|---|
| Applicant Name | **Tabernacle of The Living God** | Facility Name | **Tabernacle of The Living God Properties** |
| Applicant Address | PO Box 409 | Facility Address | Tracydale Road |
| | Milesburg, PA 16853-0409 | | Milesburg, PA 16853 |
| Applicant Contact | Jerry Coakley | Facility Contact | Jerry Coakley |
| Applicant Phone | (814) 355-8438 | Facility Phone | (814) 355-8438 |
| Client ID | 145233 | Site ID | 522371 |
| SIC Code | 8661 | Municipality | Boggs Township |
| SIC Description | Services - Religious Organizations | County | Centre |
| Date Application Received | April 2, 2019 | WQM Required | No. |
| Date Application Accepted | April 12, 2019 | WQM App. No. | N/A. |

Project Description: Application for the renewal of the existing individual NPDES SFTF permit.

## Summary of Review

Tabernacle of The Living God has submitted an application for the transfer and renewal of the existing NPDES Permit PA0228281 for the Department's review. 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.

| Approve | Deny | Signatures | Date |
|---|---|---|---|
| X | | Jonathan P. Peterman / Project Manager | January 27, 2020 |
| | | Nicholas W. Hartranft, P.E. / Environmental Engineer Manager | |

**Discharge, Receiving Waters and Water Supply Information**

| | | | |
|---|---|---|---|
| Outfall No. | 001 | Design Flow (MGD) | 0.0015 |
| Latitude | 40º 57' 2.99" | Longitude | -77º 47' 10.90"" |
| Quad Name | Bellefonte | Quad Code | 1123 |
| Wastewater Description: | Sewage Effluent | | |
| Receiving Waters | Unnamed Tributary to Bald Eagle Creek (CWF) | Stream Code | 22965 |
| NHD Com ID | 67178780 | RMI | 0.5 |
| Drainage Area | 0.16 @ Discharge<br>101 @ Bald Eagle Creek (POFU) | Yield (cfs/mi$^2$) | N/A |
| $Q_{7-10}$ Flow (cfs) | 0 @ Discharge<br>265 @ Bald Eagle Creek (POFU) | $Q_{7-10}$ Basis | Gage No. 1547200 |
| Elevation (ft) | 700 | Slope (ft/ft) | N/A |
| Watershed No. | 09C | Chapter 93 Class. | Cold Water Fishes |
| Existing Use | CWF | Existing Use Qualifier | N/A |
| Exceptions to Use | None. | Exceptions to Criteria | None. |
| Assessment Status | Attaining Use(s) | | |
| Cause(s) of Impairment | N/A | | |
| Source(s) of Impairment | N/A | | |
| TMDL Status | N/A | Name | N/A |
| Nearest Downstream Public Water Supply Intake | PA American Water Company | | |
| PWS Waters | West Branch Susquehanna River | Flow at Intake (cfs) | 682 |
| PWS RMI | 10.5 | Distance from Outfall (mi) | 85 |

Changes Since Last Permit Issuance: None.
Other Comments: None.

**Treatment Facility Summary**

**Treatment Facility Name:** Tabernacle of The Living God

| WQM Permit No. | Issuance Date | Notes: |
|---|---|---|
| 1400404 | 11/14/200. | Initial construction. |

| Waste Type | Degree of Treatment | Process Type | Disinfection | Design Flow (MGD) |
|---|---|---|---|---|
| Sewage | Secondary With Ammonia And Phosphorus | Septic Tank Sand Filter | Hypochlorite | 0.0015 |
| **Hydraulic Capacity (MGD)** | **Organic Capacity (lbs/day)** | **Load Status** | **Biosolids Treatment** | **Biosolids Use/Disposal** |
| 0.0015 | | Not Overloaded | Anaerobic Digestion | Other WWTP |

**Treatment System Components:**
- Three (3) 1,000-Gallon septic tanks in series.
- One (1) 500-Gallon dosing tank.
- Three (3) Peat biofilters.
- One (1) Tablet erosion chlorinator.
- One (1) Chorine contact tank.
- One (1) Outfall 001 to Unnamed Tributary to Bald Eagle Creek.

Changes Since Last Permit Issuance: None.

**TMDL Impairment**

The Department's Geographic Information System (GIS) shows that the Unnamed Tributary to Bald Eagle Creek is not impaired and a TMDL does not exist for the stream segment. No TMDL has been taken into consideration during this review.

**Chesapeake Bay Requirements**

Facilities that are designed based on a flow of less than 2,000 GPD (1,000 GPD design flow for this facility) are not a part of Pennsylvania's Chesapeake Bay Tributary Strategy. Accordingly, it is not practicable to require the permittee to perform nutrient monitoring.

**Anti-Backsliding**

In accordance with 40 CFR 122.44(l)(1) and (2), this permit does not contain effluent limitations, standards, or conditions that are less stringent than the previous permit.

## Existing Effluent Limitations and Monitoring Requirements

### Existing Limits – Outfall 001

| Discharge Parameter | Limitations | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Mass (lb/day) | | Concentration (mg/L) | | | | Monitoring Requirements | |
| | Monthly Average | Daily Maximum | Minimum | Average Monthly | Average Weekly | Instantaneous Maximum | Minimum Frequency | Sample Type |
| Flow (MGD) | Report | | | | | | 1/ Week | Measured |
| $BOD_5$ | | | | 10 | | 20 | 1/ Month | Grab |
| TSS | | | | 10 | | 20 | 1/ Month | Grab |
| TRC | | | | 1.0 | | 2.3 | 1/ Week | Grab |
| pH (Std. Units) | | | 6.0 | | | 9.0 | 1/ Week | Grab |
| Fecal Coliforms (5/1 – 9/30) | | | | 200 Geo Mean | | | 1/ Month | Grab |
| Fecal Coliforms (10/1 – 4/30) | | | | 2,000 Geo Mean | | | | |

*The proposed effluent limits for Outfall 001 were based on a design flow of 0.0015 MGD.

## Development of Effluent Limitations and Monitoring Frequencies

**Outfall No.** 001 **Design Flow (MGD)** 0.0015
**Latitude** 40º 57' 7.18" **Longitude** -77º 47' 10.13"
**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 |
|---|---|---|---|---|
| $BOD_5$ | 10 | Average Monthly | 125.3(a)(2)(i) | DEP SFTF Design Manual (Document 362-0300-002) |
| | 20 | IMAX | | |
| Total Suspended Solids | 10 | Average Monthly | 125.3(a)(2)(i) | DEP SFTF Design Manual (Document 362-0300-002) |
| | 20 | IMAX | | |
| pH | 6.0 – 9.0 S.U. | Min – Max | 133.102(c) | 95.2(1) |
| Fecal Coliform | 200 / 100 ml | Geo Mean | - | 92a.47(a)(4) |

### Water Quality-Based Limitations

The Department utilizes the WQM 7.0 v1.0b and PENTOXSD v2.0d models to establish water quality based effluent limitations. This modeling is not utilized for facilities that discharge less than 2,000 gpd. Additionally, the "TRC Spreadsheet" is not utilized for SRSTP facilities.

### Best Professional Judgement (BPJ) Limitations

None.
Comments: None.

### Additional Considerations

None

## 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 the abovementioned 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) and/or BPJ.

**Proposed Limits - Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date**

**Proposed Limits – Outfall 001**

| Discharge Parameter | Limitations | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Mass (lb/day) | | Concentration (mg/L) | | | | Monitoring Requirements | |
| | Monthly Average | Daily Maximum | Minimum | Average Monthly | Average Weekly | Instantaneous Maximum | Minimum Frequency | Sample Type |
| Flow (MGD) | Report | | | | | | 1/ Week | Measured |
| $BOD_5$ | | | | 10 | | 20 | 1/ Month | Grab |
| TSS | | | | 10 | | 20 | 1/ Month | Grab |
| TRC | | | | 0.5 | | 1.6 | 1/ Week | Grab |
| pH (Std. Units) | | | 6.0 | | | 9.0 | 1/ Week | Grab |
| Fecal Coliforms (5/1 – 9/30) | | | | 200 Geo Mean | | | 1/ Month | Grab |
| Fecal Coliforms (10/1 – 4/30) | | | | 2,000 Geo Mean | | | | |

*The proposed effluent limits for Outfall 001 were based on a design flow of 0.0015 MGD.

**Flow**
There are no proposed changes for flow monitoring which is required by §92a.61(d)(1).

**Five-Day Biochemical Oxygen Demand ($BOD_5$)**
The limits for $BOD_5$ are existing technology-based effluent limits. Facilities that have been designed and built utilizing the technologies established in the *Small Flow Treatment Facilities Design Manual* (Document 362-0300-002) have been proven to continuously produce effluent with less than 10 mg/l ($BOD_5$) and is considered best practicable control technology currently available (BPT). In accordance with current policies and procedures for facilities of this type, an effluent limit for $BOD_5$ will be utilized in lieu of $CBOD_5$.

**Total Suspended Solids (TSS)**
The limits for TSS are existing technology-based effluent limits. Facilities that have been designed and built utilizing the technologies established in the *Small Flow Treatment Facilities Design Manual* (Document 362-0300-002) have been proven to continuously produce effluent with less than 10 mg/l (TSS) and is considered best practicable control technology currently available (BPT).

**pH**
40 CFR §133.102(c) and 25 PA Code §95.2(1) provide the basis of effluent limitations for pH. No changes are proposed for pH limitations.

**Fecal Coliforms**
The existing fecal coliform limits were updated from the previous Chapter 92 code to correspond with what is specified in the updated 25 PA Code § 92a.47 (a)(4)&(5).

**Total Residual Chlorine (TRC)**
In accordance with 25 Pa. Code 92a.48(b)(2), a best available technology (BAT) value of 0.5 mg/l was used in lieu of the existing effluent limit (1.0 mg/L) in the TRC Spreadsheet. The attached TRC model indicates that the technology based effluent limit of 0.5 mg/L (Average Monthly) and 1.6 mg/L (Instantaneous Maximum) are protective of water quality. The

facility currently utilizes tablet chlorination as a disinfection method. It has been proven that this method, if operated properly and maintained, can effectively and consistently meet these effluent requirements.

As stated above, 25 PA Code § 92a.48(b)(2) provides a BAT limit of 0.5 mg/L unless a site-specific study has been conducted. Given that a site-specific TRC study has not been provided for this facility, the BAT limit will be established. Historical DMR data provided from the previous two years was reviewed to determine if the facility will require a compliance schedule to comply with the proposed effluent limits.

| Tabernacle of the Living God TRC Data | | | | | |
|---|---|---|---|---|---|
| Date | AVG. MO. (mg/L) | IMAX (mg/L) | Date | AVG. MO. (mg/L) | IMAX (mg/L) |
| Nov-19 | 0.18 | 0.3 | Nov-18 | 0.23 | 0.3 |
| Oct-19 | 0.2 | 0.3 | Oct-18 | 0.22 | 0.3 |
| Sep-19 | 0.24 | 0.3 | Sep-18 | 0.26 | 0.4 |
| Aug-19 | 0.2 | 0.3 | Aug-18 | 0.2 | 0.3 |
| Jul-19 | 0.2 | 0.3 | Jul-18 | 0.18 | 0.3 |
| Jun-19 | 0.16 | 0.2 | Jun-18 | 0.17 | 0.2 |
| May-19 | 0.25 | 0.3 | May-18 | 0.24 | 0.3 |
| Apr-19 | 0.32 | 0.5 | Apr-18 | 0.32 | 0.5 |
| Mar-19 | 0.22 | 0.3 | Mar-18 | 0.23 | 0.3 |
| Feb-19 | 0.24 | 0.3 | Feb-18 | 0.2 | 0.3 |
| Jan-19 | 0.2 | 0.3 | Jan-18 | 0.22 | 0.3 |
| Dec-18 | 0.2 | 0.2 | Dec-17 | 0.25 | 0.3 |

Based on the data shown above, it appears that the facility can currently meet the proposed TRC effluent limits (0.50 mg/L and 1.6 mg/l) on a majority basis. Therefore, the permit will not require a 2-year compliance schedule in order for the facility to comply with the decreased limits.

**Sample Types**
The sample types (grab and measured) for all of the parameters correspond with the *Technical Guidance for the Development and Specification of Effluent Limitations* (362-0400-001) Table 6-3 and will remain.

**Monitoring Frequencies**
Previous reviews established a monitoring frequency of 1/ Week for pH and TRC and 1/ Month for $CBOD_5$, TSS, and Fecal Coliforms. These monitoring frequencies generally correspond with the *Technical Guidance for the Development and Specification of Effluent Limitations* (362-0400-001) Table 6-3. A monitoring frequency of at least 1/Month is typically assigned to SFTFs for all parameters.

Other Comments: None.

## Compliance History

**WMS Query Summary** - A WMS Query was run at *Reports - Violations & Enforcements – Open Violations for Client Report* to determine whether there are any unresolved violations associated with the client that will affect issuance of the permit (per CSL Section 609). This query revealed that there were no unresolved violations for the existing or proposed client.

**File Review / DMR's / AMR's**– The last facility inspection was conducted by the Department on 10/29/18. No issues were noted in this inspection and DMR's have been submitted as required. The previous two AMR's are complete and on file.

## Attachments

Appendices

| Tools and References Used to Develop Permit | |
|---|---|
| | |
| ☐ | WQM for Windows Model (see Attachment ) |
| ☐ | PENTOXSD for Windows Model (see Attachment ) |
| ☒ | TRC Model Spreadsheet (see Attachment **A**) |
| ☐ | Temperature Model Spreadsheet (see Attachment ) |
| ☐ | Toxics Screening Analysis Spreadsheet (see Attachment ) |
| ☐ | Water Quality Toxics Management Strategy, 361-0100-003, 4/06. |
| ☒ | Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97. |
| ☐ | Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98. |
| ☐ | Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96. |
| ☐ | Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97. |
| ☐ | Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97. |
| ☐ | Pennsylvania CSO Policy, 385-2000-011, 9/08. |
| ☐ | Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03. |
| ☐ | Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97. |
| ☒ | Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97. |
| ☐ | Implementation Guidance Design Conditions, 391-2000-006, 9/97. |
| ☐ | Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004. |
| ☐ | Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997. |
| ☐ | Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99. |
| ☐ | Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004. |
| ☐ | Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97. |
| ☐ | Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008. |
| ☐ | Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994. |
| ☐ | Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09. |
| ☐ | Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97. |
| ☐ | 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, 391-2000-019, 10/97. |
| ☐ | Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99. |
| ☐ | 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, 391-2000-022, 3/1999. |
| ☒ | Design Stream Flows, 391-2000-023, 9/98. |
| ☐ | Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98. |
| ☐ | Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97. |
| ☒ | Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07. |
| ☒ | SOP: New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications |
| ☒ | Other: Small Flow Treatment Facilities Manual (362-0300-002) |