Pennsylvania Department of Environmental Protection

NPDESSouthwest Regional Office
CLEAN WATER PROGRAM

| | | | |
|---|---|---|---|
| Application Type | **Renewal** | Application No. | **PA0252590** |
| Facility Type | **Municipal** | APS ID | **1120291** |
| Major / Minor | **Minor** | Authorization ID | **1496644** |

# NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

## Applicant and Facility Information

| | | | |
|---|---|---|---|
| Applicant Name | **Center Township** | Facility Name | **Rogersville STP** |
| Applicant Address | 100 Municipal Drive | Facility Address | 100 Municipal Drive |
| | Rogersville, PA 15359-0435 | | Rogersville, PA 15359-0435 |
| Applicant Contact | Dawn Horr | Facility Contact | Same as Applicant |
| Applicant Phone | (724) 499-5487 | Facility Phone | Same as Applicant |
| Client ID | 110687 | Site ID | 624440 |
| Ch 94 Load Status | Not Overloaded | Municipality | Center Township |
| Connection Status | No Limitations | County | Greene |
| Date Application Received | August 20, 2024 | EPA Waived? | Yes |
| Date Application Accepted | | If No, Reason | |

Purpose of Application: Application for renewal of a NPDES Permit for treated sewage

## Summary of Review

Center Township has applied for a renewal of NPDES Permit No. PA0252590. PA0252590 was previously issued by the Pennsylvania Department of Environmental Protection (DEP) on April 25, 2020 and expired April 30, 2025. The renewal application was submitted in a timely manner, so the permit was granted an administrative extension.

Sewage from this facility is treated by anoxic treatment, extended aeration, clarification, and ultraviolet disinfection before discharging to South Fork Tenmile Creek (Stream Code 40293), which is classified as a high-quality warm-water fishery (HQ-WWF) in State Watershed No. 19-B

Biosolids generated at this facility are aerobically digested and disposed of at Franklin TWP WWTP (NPDES Permit No. PA0218944).

Center Township is currently enrolled in and will continue to use eDMR.

The applicant has complied with Act 14 notifications as documented in letters dated July 29, 2024 and sent to Center Township and Green County.

The following permit changes are being made during this permit cycle:

- Annual *E. coli* monitoring was added in accordance 25 Pa. Code 93.7(a).
- The average monthly mass loading ammonia-nitrogen limit was reduced in accordance with DEP's rounding guidelines.
- The reporting base code for UV Transmittance (%) has been changed from average monthly to instantaneous minimum.

| Approve | Deny | Signatures | Date |
|---|---|---|---|
| X | | Stephanie Conrad / Environmental Engineering Specialist | June 3, 2025 |
| X | | Mahbuba Iasmin<br>Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager | June 10, 2025 |

**Summary of Review**

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard of water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 ***(l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.***

The facility is not requesting the backsliding of any limits.

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) | .03 |
| Latitude | 39º 52' 59" | Longitude | -80º 16' 24" |
| Quad Name | ROGERSVILLE | Quad Code | 1903 |
| Wastewater Description: | Sewage Effluent | | |
| Receiving Waters | South Fork Tenmile Creek (HQ-WWF) | Stream Code | 40293 |
| NHD Com ID | 99416982 | RMI | 27.43 |
| Drainage Area | 47 | Yield (cfs/mi$^2$) | 0.0206 |
| $Q_{7-10}$ Flow (cfs) | 0.969 | $Q_{7-10}$ Basis | USGS Stream Stats |
| Elevation (ft) | 960 | Slope (ft/ft) | |
| Watershed No. | 19-B | Chapter 93 Class. | HQ-WWF |
| 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 | | Southwester PA Water Authority | |
| PWS Waters | South Fork Tenmile Creek | Flow at Intake (MGD) | 1.5 |
| PWS RMI | 0.04 | Distance from Outfall (mi) | 27.39 |

Changes Since Last Permit Issuance: None

Other Comments: None

**Treatment Facility Summary**

**Treatment Facility Name:** Rogersville STP

| WQM Permit No. | Issuance Date | Purpose |
|---|---|---|
| 3004402 | April 28, 2005 | Permit issued to Center Township from PADEP approving construction of:<br>• 4,900 LF of 8-inch gravity sewer<br>• 1,600 LF of 15-inch gravity sewer<br>• One 80 gpm pump station<br>  ○ Two (2) 80 gpm pump submersible constant speed pumps<br>  ○ 120 LF od 4” ductile iron forcemain<br>• One 0.03 MGD extended aeration treatment plant consisting of<br>  ○ One (1) 1” Bar screen<br>  ○ One (1) 164 gpm comminutor<br>  ○ One (1) 6,126-gallon surge tank<br>  ○ Two (2) 90 gpm submersible surge tank pumps<br>  ○ One (1) 8,626-gallon anoxic zone<br>  ○ Two (2) 2,699-gallon clarifiers<br>  ○ Two (2) 5558-gallon aeration zones<br>  ○ One (1) 4,177-gallon aerobic digestion tank<br>  ○ One (1) 625-gallon post aeration tank<br>  ○ Two (2) UV disinfection modules<br>  ○ 8” pvc gravity effluent discharge pipe<br>  ○ One (1) precast concrete outfall |

| Waste Type | Degree of Treatment | Process Type | Disinfection | Avg Annual Flow (MGD) |
|---|---|---|---|---|
| Sewage | Secondary With Ammonia Reduction | Activated Sludge | Ultraviolet | 0.03 |

| Hydraulic Capacity (MGD) | Organic Capacity (lbs/day) | Load Status | Biosolids Treatment | Biosolids Use/Disposal |
|---|---|---|---|---|
| 0.03 | 54 | Not Overloaded | Aerobic Digestion | Other WWTP |

Changes Since Last Permit Issuance: None

Other Comments: None

**Compliance History**

# Operations Compliance Check Summary Report

**Facility:** ROGERSVILLE STP

**NPDES Permit No.:** PA0252590

**Compliance Review Period:** 1/1/20-6/2/25

**Inspection Summary:**

| INSPECTED DATE | INSP TYPE | AGENCY | INSPECTION RESULT DESC |
|---|---|---|---|
| 03/10/2020 | Compliance Evaluation | PA Dept of Environmental Protection | No Violations Noted |

**Violation Summary:**

No violations noted during review period

**Open Violations by Client ID:**

No open violations for Client ID 110687

**Enforcement Summary:**

No enforcements executed during review period

**Effluent Violation Summary:**

No effluent exceedances reported during review period

**Unauthorized Discharges:**

No unauthorized discharges reported in eDMR during review period

**Compliance Status:** Facility is in general compliance with no open violations or pending enforcements

**Completed by:** Amanda Illar **Completed date:** 6/2/25

## Compliance History

**DMR Data for Outfall 001 (from April 1, 2024 to March 31, 2025)**

| Parameter | MAR-25 | FEB-25 | JAN-25 | DEC-24 | NOV-24 | OCT-24 | SEP-24 | AUG-24 | JUL-24 | JUN-24 | MAY-24 | APR-24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow (MGD) Average Monthly | 0.0016 | 0.0043 | 0.0019 | 0.0015 | 0.0014 | 0.0012 | 0.0012 | 0.0011 | 0.0012 | 0.0012 | 0.0014 | 0.0075 |
| pH (S.U.) Instantaneous Minimum | 7.3 | 6.7 | 6.3 | 6.2 | 7.4 | 7.3 | 7.3 | 7.4 | 7.3 | 7.4 | 7.2 | 6.7 |
| pH (S.U.) Instantaneous Maximum | 7.8 | 7.7 | 7.1 | 7.3 | 7.5 | 7.7 | 8.0 | 7.9 | 7.6 | 7.7 | 7.8 | 7.6 |
| DO (mg/L) Instantaneous Minimum | 8.6 | 8.8 | 9.0 | 8.3 | 8.3 | 8.6 | 7.1 | 7.2 | 8.8 | 7.5 | 7.3 | 8.5 |
| $CBOD_5$ (lbs/day) Average Monthly | 0.11 | 0.35 | 0.11 | 0.1 | 0.04 | 0.02 | < 0.02 | 0.02 | 0.03 | 0.05 | 0.03 | 0.32 |
| $CBOD_5$ (mg/L) Average Monthly | 8.6 | 9.8 | 6.9 | 8.2 | 3 | 2.2 | < 2.0 | 2.0 | 2.9 | 4.8 | 2.9 | 5.1 |
| $BOD_5$ (lbs/day) Raw Sewage Influent <br/> Average Monthly | 3 | 4 | 2 | 4 | 4 | 2 | 3 | 2 | 3 | 5 | 4 | 6 |
| $BOD_5$ (mg/L) Raw Sewage Influent <br/> Average Monthly | 236 | 203 | 110 | 247 | 326 | 239 | 342 | 290 | 252 | 380 | 480 | 511 |
| TSS (lbs/day) Average Monthly | 0.12 | 0.3 | 0.15 | 0.12 | 0.11 | 0.08 | 0.05 | 0.07 | 0.01 | 0.09 | 0.04 | 0.44 |
| TSS (lbs/day) Raw Sewage Influent <br/> Average Monthly | 1 | 2.0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| TSS (mg/L) Average Monthly | 9.0 | 8.3 | 9.5 | 9.9 | 9.3 | 8.0 | 4.5 | 8.0 | 4.3 | 8.5 | 3.5 | 7.0 |
| TSS (mg/L) Raw Sewage Influent <br/> Average Monthly | 88 | 90 | 69 | 87 | 183 | 110 | 145 | 104 | 76 | 67 | 222 | 142 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fecal Coliform (No./100 ml) Geometric Mean | 125.0 | 68.0 | 132.0 | 100.0 | < 420.0 | 487.0 | 3 | 39 | 168 | 148 | 139 | 285.0 |
| Fecal Coliform (No./100 ml) Instantaneous Maximum | 146.0 | 308.0 | 172.0 | 435.0 | 420.0 | 613.0 | 7 | 125 | 178 | 233 | 196 | 435.0 |
| UV Transmittance (%) Average Monthly | 51.38 | 58.8 | 58.0 | 54.25 | 62.9 | 62.23 | 63.5 | 61.3 | 63.7 | 58 | 61 | 64.4 |
| Total Nitrogen (mg/L) Daily Maximum | | | | 9.0 | | | | | | | | |
| Ammonia (lbs/day) Average Monthly | 0.01 | 0.09 | 0.04 | 0.04 | 0.02 | 0.002 | 0.006 | 0.08 | 0.01 | 0.003 | 0.01 | 0.17 |
| Ammonia (mg/L) Average Monthly | 0.8 | 2.5 | 2.5 | 2.9 | 1.9 | < 0.2 | < 0.6 | 1.0 | 0.6 | 0.3 | 0.9 | 2.7 |
| Total Phosphorus (mg/L) Daily Maximum | | | | 5.2 | | | | | | | | |

## Development of Effluent Limitations

**Outfall No.** 001 **Design Flow (MGD)** 0.03
**Latitude** 39º 52' 59.00" **Longitude** -80º 16' 24.00"
**Wastewater Description:** Sewage Effluent

**Technology-Based Limitations (TBELs)**

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

| Pollutant | Limit (mg/l) | SBC | Federal Regulation | State Regulation |
|---|---|---|---|---|
| **Flow (MGD)** | **Report** | **Average Monthly** | **-** | **92a.27, 92a.61** |
| **$CBOD_5$** | **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)** |
| **Total Residual Chlorine** | **0.5** | **Average Monthly** | **-** | **92a.48(b)(2)** |
| **Ammonia-Nitrogen** | **25** | **Average Monthly** | **-** | **BPJ** |
| **Dissolved Oxygen** | **4.0** | **Min** | **-** | **BPJ** |
| **pH** | **6.0 – 9.0 S.U.** | **Min – Max** | **133.102(c)** | **95.2(1)** |
| **Total Nitrogen** | **Report** | **Average Monthly** | **-** | **92a.61** |
| **Total Phosphorus** | **Report** | **Average Monthly** | **-** | **92a.61** |
| **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)** |

**Antidegradation Considerations:**

Outfall 001 discharges to South Fork Tenmile Creek, which is a HQ-WWF.

The following Antidegradation Best Available Technologies (BAT) effluent limits at a minimum, will be established based on the requirements of DEP's 1992 *Special Protection Waters Implementation Handbook*:

| Parameter | Best Available Technology Effluent Limits |
|---|---|
| | Average Monthly (mg/L) |
| $CBOD_5$ | 10.0 |
| DO (instantaneous minimum) | 5.0 to 6.0 |
| Suspended Solids | 10 |
| $NH_3$-N (May 1 – Oct. 31) | 1.5 |
| $NH_3$-N (Nov. 1 – Apr. 30) | 4.5 |

The following Antidegradation Best Available Combination of Technologies (ABACT) effluent limits, at a minimum, will be established based on the requirements of DEP's *Water Quality Antidegradation Implementation Guidance* [Doc. No. 391-0300-002].

| Parameter | Treatment Process Performance Expectations (mg/L) | | |
|---|---|---|---|
| | <2,000 gpd | 2,000-50,000 gpd | >50,000 gpd |
| $CBOD_5$ (May 1 – Oct. 31) | 10 | 10 | 10 |
| $CBOD_5$ (Nov. 1 – Apr. 30) | 20 | 20 | 10 |

| | | | |
|---|---|---|---|
| Suspended Solids | 20 | 10 | 10 |
| $NH_3$-N (May 1 – Oct. 31) | 5.0 | 3.0 | 1.5 |
| $NH_3$-N (Nov. 1 – Apr. 30) | 15.0 | 9.0 | 4.5 |
| Effective disinfection | Disinfection should be accomplished using a method that leaves no detectable residual. Disinfection using ultra-violet light or other non-chlorine based systems is encourage and must be considered. | | |
| Other parameters, as needed | *Determined by the size and characteristics of the proposed discharge, may include – $NO_2$/$NO_3$-N, Total Phosphorus, Copper, Lead, Zinc* | | |

**Water Quality-Based Limitations (WQBELs)**

Pursuant to EPA's approval of Pennsylvania's 2017 Triennial Review of Water Quality Standards and corresponding regulatory changes published in the *Pennsylvania Bulletin* on July 11, 2020, new water quality criteria for ammonia-nitrogen apply to waters of the commonwealth. Therefore, WQBELs for Outfall 001 are being re-evaluated even though there have been no changes to the treatment plant.

**WQM 7.0 Water Quality Modeling**

DEP's WQM 7.0 version 1.1 model is a Microsoft Access Program used for sewage dischargers to determine whether TBELs are sufficient to meet in-stream water quality criteria for ammonia-nitrogen, carbonaceous biochemical oxygen demand ($CBOD_5$), and dissolved oxygen (DO). To accomplish this, the model simultaneously simulates mixing and degradation of ammonia-nitrogen and mixing and consumption of DO through $CBOD_5$ and ammonia-nitrogen degradation. WQM 7.0 determines the highest pollutant loadings that the stream can assimilate while still meeting water quality criteria under design conditions.

The model is a two-step process. The discharge is first modeled for the summer period (May through October) because warm temperatures are more likely to result in critical loading conditions. Reduced DO levels likely also play a role in ammonia toxicity and solubility of DO decreases at increased water temperature. If summer modeling determines that WQBELs are appropriate for the summer period, then modeling is completed for the winter period (November through April). This is in accordance with DEP's *Implementation Guidance of Section 93.7 Ammonia Criteria* [Do. No. 391-2000-013] (Ammonia Guidance).

River Mile Index (RMI) was measured in eMAP PA as the distance from the facility's outfall to the mouth of Southfork Tenmile Creek. Elevations was measured in Google Earth Pro. Discharge point and downstream drainage area as well as Q7-10 flow were generated by USGS Stream Stats. USGS Stream Stats output files are included in Attachment A. In the absence of site-specific data, discharge temperature, stream temperature, and stream pH are assumed to be 20, 25, and 7 in accordance with the Amonia Guidance. Stream width to depth was assumed to be 10 in accordance with DEP's *Technical Reference Guide (TRG) WQM 7.0 for Windows Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen Version 1* [Doc. No. 391-2000-007]. The effluent $CBOD_5$ concentration was set equal to average monthly TBEL of 25 mg/L while effluent ammonia-nitrogen and DO concentrations were set equal to the best professional judgement (BPJ) concentrations of 25 mg/L and 4.0 mg/L respectively. The DO goal was set equal to the 7-day average instream DO criteria defined for WWF in 25 Pa Code Section 93.7.

WQM 7.0 summer inputs are documented in the table below:

| **Discharge Characteristics** | | **Basin/Stream Characteristics** | |
|---|---|---|---|
| **Parameter** | **Value** | **Parameter** | **Value** |
| River Mile Index (RMI) | 27.43 | Drainage Area | 47 |
| Discharge Flow (MGD) | 0.03 | $Q_{7-10}$ (cfs) | 0.969 |
| Discharge Temp ($^oC$) | 20 | Low-flow yield (cfs/$mi^2$) | 0.020617 |
| Ammonia-Nitrogen (mg/L) | 25 | Elevation (ft) | 974 |
| $CBOD_5$ (mg/L) | 25 | Stream Width/Depth | 10 |
| Dissolved Oxygen (mg/L) | 4.0 | Stream Temp ($^oC$) | 25 |
| DO Goal | 5.5 | Stream pH (s.u.) | 7 |

The discharge was modeled using WQM 7.0 to evaluate water quality-based limits for ammonia-nitrogen, $CBOD_5$, and DO. Modeling confirmed that a TBEL is appropriate for $CBOD_5$ and that BPJ based limits are appropriate for ammonia-nitrogen and DO. WQM 7.0 output files are provided in Attachment B.

DEP's SOP for *Establishing Effluent limitations for Individual Sewage Permits*, if WQM modeling results for summer indicates that an average monthly limit of 25 mg/L is acceptable, a year-round monitoring requirement for ammonia-nitrogen will generally be imposed.

**Permit Limits**

In accordance with Section III of DEP's SOP for *Establishing Effluent limitations for Individual Sewage Permits*, the limits to be imposed, which are provided below, represent the most stringent limitations between the TBELs, WQBELs, BAT, and ABACT limits.

| Parameter | Limit (mg/l) | SBC | Model | Basis |
|---|---|---|---|---|
| Fecal Coliform | 200 | Average | N/A | TBEL |
| $CBOD_5$ | 10 | Average | N/A | BAT |
| Dissolved Oxygen | 5.0 | Instantaneous Minimum | N/A | BAT |
| TSS | 10 | Average | N/A | BAT |
| Ammonia-Nitrogen May 1 - Oct 31 | 1.5 | Average Monthly | N/A | BAT |
| Ammonia-Nitrogen Nov 1 - Apr 30 | 4.5 | Average Monthly | N/A | BAT |

**Additional Considerations**

In accordance with Section I.A. of DEP's SOP for *Establishing Effluent Limitations for Individual Sewage Permits* [SOP No. BCW-PMT-033 Version 1.9], pursuant to EPA's approval of Pennsylvania's 2017 Triennial Review of Water Quality Standards and corresponding regulatory changes published in the Pennsylvania Bulletin on July 11, 2020 and under the authority of 25 Pa. Code § 93.7(a) and § 92.a.61, sewage dischargers will include monitoring for *E. coli*. For new and reissued permit, a monitoring frequency of 1/year will be imposed for design flows ≥ 0.002 MGD and < 0.05 MGD.

In accordance with Section I.A of the DEP's SOP for *Establishing Effluent Limitations for Individual Sewage Permits* [SOP No. BCW-PMT-033 Version 1.9], and under the authority of 25 Pa. Code § 92a.61(b), nutrient monitoring for total nitrogen and total phosphorus will be imposed for sewage facilities with a design flow greater than 2,000 GPD. The intent of this monitoring is to establish the nutrient load of the wastewater and evaluate the impact that load may have on the quality of the receiving stream. During the last permit cycle, total nitrogen monitoring resulted in four samples ranging from 9.0 to 41 mg/L. Total phosphorus was also sampled four times with results ranging from 4.7 to 17 mg/L. The SOP states that if the receiving stream is not impaired for nutrients, then discretion may be used in setting the monitoring frequency. South Fork Tenmile Creek is not impaired for nitrogen or phosphorus; therefore, a monitoring frequency of 1/year will again be imposed.

Monitoring frequency for the proposed effluent limits are based on Table 6-3, Self -Monitoring Requirements for Sewage Dischargers, from DEP's *Technical Guidance for the Development and Specification of Effluent Limitations* [Doc. No. 362-0400-001].

Conventional concentration and mass loading limits are rounded in accordance with the guidelines in Chapter 5 Section C.2. of DEP's *Technical Guidance for the Development and Specification of Effluent Limitations* [Doc. No. 362-0400-001]. Please note that the average monthly mass loading limitation for ammonia-nitrogen has been rounded down to 0.37 in accordance with these guidelines.

Table 5.3 DEP's *Technical Guidance for the Development and Specification of Effluent Limitations* [Doc. No. 362-0400-001] documents that for Publicly Owned Treatment Works (POTWs), conventional pollutants should receive average monthly, weekly average, and instantaneous maximum concentration limits. DEP's SOP for *Establishing Effluent Limitations for Individual Sewage Permits* [SOP No. BCW-PMT-033 Version 1.9] clarifies that weekly average limits are not necessary when sampling frequency is less than 1/week. Average monthly and instantaneous maximum concentration limits will again be imposed for $CBOD_5$ and TSS.

In accordance with Section I.A. DEP's SOP for *Establishing Effluent Limitations for Individual Sewage Permits* [SOP No. BCW-PMT-033 Version 1.9], when UV disinfection is used, TRC limits are not applicable. Routine UV transmittance (%) monitoring is being imposed at the same monitoring frequency that would be used for TRC.

**Mass Loading Limits**

Section IV.C of DEP's SOP for Establishing Effluent Limitations for Individual Sewage Permits [SOP No. BCW-PMT-033 Version 1.9] establishes mass loading limits for POTWs at the discretion of the application manager. Mass loading limitations are imposed for POTWs in accordance with the SOP cited above and Table 5.3 of DEP's *Technical Guidance for the Development and Specification of Effluent Limitations* [Doc. No. 362-0400-001]. For the purposes of permitting limits, mass loading limits for ammonia-nitrogen, $CBOD_5$, and TSS will continue to be imposed based on the following equation:

$$mass\ loading\ limit\ \left(\frac{lbs}{day}\right) = average\ annual\ flow\ (MGD) * concentration\ limit\ \left(\frac{mg}{L}\right) * 8.34\ (conversion\ factor)$$

The following mass loading limits are being imposed:

| Parameter | Average Monthly (lbs/day) |
|---|---|
| Ammonia-Nitrogen<br>May 1 - Oct 31 (mg/L)_ | 0.37 |
| Ammonia-Nitrogen<br>Nov 1 - Apr 30 (mg/L) | 1.1 |
| $CBOD_5$ (mg/L) | 2.5 |
| TSS (mg/L) | 2.5 |

Mass loading limits for total nitrogen and total phosphorus are not being imposed at this time because no concentration limits exist for either parameter.

**Influent Monitoring**

Section IV.F.2 of DEP's SOP for *New and Reissuance Sewage Individual NPDES Permit Applications* [SOP No. BCW-PMT-002 Version 2.0] establishes influent $BOD_5$ and TSS for POTWs. The intent of influent $BOD_5$ and TSS monitoring is to verify compliance with the secondary treatment requirement of 85% removal defined in 40 CFR §133.102.

## 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" (386-0400-001), 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 | Minimum | Average Monthly | Maximum | Instant. Maximum | | |
| Flow (MGD) | Report | XXX | XXX | XXX | XXX | XXX | 2/month | Measured |
| pH (S.U.) | XXX | XXX | 6.0 Inst Min | XXX | XXX | 9.0 | 1/day | Grab |
| DO | XXX | XXX | 5.0 Inst Min | XXX | XXX | XXX | 1/day | Grab |
| $CBOD_5$ | 2.5 | XXX | XXX | 10 | XXX | 20 | 2/month | Grab |
| $BOD_5$ Raw Sewage Influent | Report | XXX | XXX | Report | XXX | XXX | 2/month | Grab |
| TSS Raw Sewage Influent | Report | XXX | XXX | Report | XXX | XXX | 2/month | Grab |
| TSS | 2.5 | XXX | XXX | 10 | XXX | 20 | 2/month | Grab |
| Fecal Coliform (No./100 ml) Oct 1 - Apr 30 | XXX | XXX | XXX | 2000 Geo Mean | XXX | 10000 | 2/month | Grab |
| Fecal Coliform (No./100 ml) May 1 - Sep 30 | XXX | XXX | XXX | 200 Geo Mean | XXX | 1000 | 2/month | Grab |
| UV Transmittance (%) | XXX | XXX | Report | XXX | XXX | XXX | 1/day | Grab |
| E. Coli (No./100 ml) | XXX | XXX | XXX | XXX | XXX | Report | 1/year | Grab |
| Total Nitrogen | XXX | XXX | XXX | XXX | Report Daily Max | XXX | 1/year | Grab |
| Ammonia-Nitrogen Nov 1 - Apr 30 | 1.1 | XXX | XXX | 4.5 | XXX | 9.0 | 2/month | Grab |

**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 | Minimum | Average Monthly | Maximum | Instant. Maximum | | |
| Ammonia-Nitrogen<br>May 1 - Oct 31 | 0.37 | XXX | XXX | 1.5 | XXX | 3.0 | 2/month | Grab |
| Total Phosphorus | XXX | XXX | XXX | XXX | Report<br>Daily Max | XXX | 1/year | Grab |

Compliance Sampling Location: Outfall 001

Other Comments: None