pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

**Northeast Regional Office**
**CLEAN WATER PROGRAM**

# NPDES PERMIT FACT SHEET
# INDIVIDUAL SEWAGE

| | | | |
|---|---|---|---|
| Application Type | **Renewal** | Application No. | **PA0061000** |
| Facility Type | **Non-Municipal** | APS ID | **523242** |
| Major / Minor | **Minor** | Authorization ID | **1335491** |

## Applicant and Facility Information

| | | | |
|---|---|---|---|
| Applicant Name | **Village Of Four Seasons Association** | Facility Name | **Four Seasons Village** |
| Applicant Address | 199 Ralph Lomma Way | Facility Address | R R Box 3350 Lr 57044 And T-470 |
| | Union Dale, PA 18470-7521 | | Union Dale, PA 18470 |
| Applicant Contact | Lori Allen | Facility Contact | |
| Applicant Phone | (570) 679-2105 | Facility Phone | |
| Client ID | 7985 | Site ID | 251971 |
| Ch 94 Load Status | Not Overloaded | Municipality | Herrick Township |
| Connection Status | | County | Susquehanna |
| Date Application Received | December 1, 2020 | EPA Waived? | Yes |
| Date Application Accepted | January 4, 2021 | If No, Reason | |

Purpose of Application: RENEWAL OF EXISTING NPDES PERMIT.

## Summary of Review

The applicant is requesting the renewal of a NPDES permit to discharge up to 0.060 MGD of treated sewage into the East Branch Tunkhannock Creek at RMI 16.57. This East Branch Tunkhannock Creek (HQ-CWF (existing use)), is located in State Water Plan watershed 4-F and is classified for Cold Water Fishes, aquatic life, water supply and recreation. Per the Department's current existing use list, this receiving stream segment does have an HQ existing use classification that is more protective than the former CWF designated use. The discharge is not expected to affect public water supplies.

The Fecal Coliform, CBOD5, TSS and pH limits are Technology based. The DO, TRC and ammonia limits are Water Quality based. These limits will remain the same as the previous permit except TRC. The facility utilizes ultraviolet disinfection as its primary disinfection method, the TRC limits will remain "when utilized" to allow for emergency backup or any other use as required.

A TMDL for the Chesapeake Bay was finalized by EPA on December 29, 2010 and this is a Phase 5 sewage facility (average annual design flow > 0.002 MGD and < 0.2 MGD). Nutrient monitoring remains in this renewal at the Phase 5 facility frequency of 1/year. Monitoring is also included for TKN and Nitrate-Nitrite as N since they are components of the calculation for TN. E-coli monitoring is introduced for the first time.

The WMS Report query "Water Management System Inspections" was run. On 10/05/2020 an Administrative/File Review was done with Violation(s) Noted.

The WMS "Open Violations by Client Report" was run and there are the following Open Violations:

| Approve | Deny | Signatures | Date |
|---|---|---|---|
| X | | Bernard Feist (signed)<br>Bernard Feist, P.E. / Environmental Engineer | October 22, 2021 |
| X | | Amy M. Bellanca (signed)<br>Amy M. Bellanca, P.E. / Environmental Engineer Manager | 10-28-21 |

**Summary of Review**

| INSP ID | VIOLATION ID | VIOLATION DATE | VIOLATION CODE | VIOLATION | PF INSPECTOR |
|---|---|---|---|---|---|
| 3080789 | 894296 | 09/16/2020 | 92A.47(C) | NPDES - Illegal discharge to waters of the Commonwealth from a sanitary sewer overflow (SSO) | LACZI,CHRIS |
| 3101739 | 898558 | 10/05/2020 | 92A.75(A) | NPDES - Failure to submit NPDES renewal application at least 180 days prior to expiration or later approved date | LACZI,CHRIS |
| 3101739 | 898559 | 10/05/2020 | 92A.41(A)12B | NPDES - Failure to submit monitoring report(s) or properly complete monitoring reports | LACZI,CHRIS |
| 3101739 | 898560 | 10/05/2020 | 92A.44 | NPDES - Violation of effluent limits in Part A of permit | LACZI,CHRIS |

The Existing Permit expired on 8/31/20 and the renewal was submitted 12/31/20.

Sludge use and disposal description and location(s): Beneficial use under PAG-09-2213 and to WVSA

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) | .06 |
| Latitude | 41º 43' 43.13" | Longitude | -75º 32' 53.88" |
| Quad Name | Clifford | Quad Code | 0541 |
| Wastewater Description: | Sewage Effluent | | |
| Receiving Waters | East Branch Tunkhannock Creek (HQ-CWF (existing use)) | Stream Code | 29019 |
| NHD Com ID | 66395805 | RMI | 16.57 |
| Drainage Area | 2.80 | Yield (cfs/mi$^2$) | 0.053 |
| $Q_{7-10}$ Flow (cfs) | 0.1484 | $Q_{7-10}$ Basis | USGS Gage 0153400 |
| Elevation (ft) | 1594 | Slope (ft/ft) | 0.031 |
| Watershed No. | 4-F | Chapter 93 Class. | CWF |
| Existing Use | HQ-CWF(HIGH QUALITY-COLD WATER FISHES) | Existing Use Qualifier | Designated Class A Wild Trout |
| Nearest Downstream Public Water Supply Intake | | | Danville Muni |
| PWS RMI | | Distance from Outfall (mi) | ➢ 80 |

Other Comments: *This segment of the EAST BRANCH TUNKHANNOCK CREEK is HQ-CWF(HIGH QUALITY-COLD WATER FISHES). This is a BASIN delineation. It includes ALL tributaries - Basin, Source to SR 2027 Bridge Crossing (at RMI 14.0) upstream from Confluence with Little Creek

DEP has evaluated information indicating that the existing use of the receiving waters is different than the designated use under 25 Pa. Code § 93.9. In developing the draft NPDES permit, DEP is proposing to protect the existing use of the receiving waters. Following DEP's notice of the receipt of the application and the draft permit in the Pennsylvania Bulletin, DEP will accept written comments during the public comment period regarding DEP's tentative determination to protect the existing use. DEP will make a final determination on existing use protection for the receiving waters as part of the final permit action.

**Hydrologic Unit Code:** 2050106

DFLOW Results

File Edit View Help

All available data from Apr 1, 1993 through Mar 31, 2018 are included in analysis.

Climatic year defined as Apr 1 - Mar 31.

| Gage | Period | Days in + | 7Q10 | Pe |
|---|---|---|---|---|
| 01534000 - Tunkhannock Creek near Tunkhannock, PA | 1992/04/01 - 2018/04/01 | 9,496 | 20.6 | |

| | | |
|---|---|---|
| **STREAM NAME:** Tunkhannock Creek<br>**GAGE OR BRIDGE SITE:** gage<br>**REFERENCE GAGE:**[1]<br>01534000 | **COUNTY:** Wyoming<br>**USGS QUAD:** Tunkhannock<br>**STATION NAME:** Tunkhannock Creek near Tunkhannock, PA | **LATITUDE:** 413330<br>**LONGITUDE:** 755342<br>**DRAINAGE AREA (sq. mi.):**<br>383 |

$Q_{7-10}$ Yield (cfs/mi$^2$) is 20.6/383 = 0.053

**Treatment Facility Summary**

**Treatment Facility Name:** Village Of Four Seasons

| WQM Permit No. | Issuance Date |
|---|---|
| 5805401 | 09/23/05 |

| Waste Type | Degree of Treatment | Process Type | Disinfection | Avg Annual Flow (MGD) |
|---|---|---|---|---|
| Sewage | Secondary With Ammonia Reduction | Sequencing Batch Reactor | Ultraviolet | 0.055 |

| Hydraulic Capacity (MGD) | Organic Capacity (lbs/day) | Load Status | Biosolids Treatment | Biosolids Use/Disposal |
|---|---|---|---|---|
| 0.06 | 100 | Not Overloaded | | Beneficial & WVSA |

Other Comments: For this renewal the permittee is not proposing to increase the design discharge therefore for this HQ watershed the discharge is grandfathered..

## Development of Effluent Limitations

**Outfall No.** 001 **Design Flow (MGD)** .06
**Latitude** 41º 43' 43.00" **Longitude** -75º 32' 54.00"
**Wastewater Description:** Sewage Effluent

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.

### Technology-Based Limitations

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

| Parameter | Minimum | Average Monthly | Average Weekly | IMAX | Basis |
|---|---|---|---|---|---|
| Flow (MGD) | XXX | Report | Report Max Daily | XXX | §§ 92a.27, 92a.61 |
| CBOD5 (mg/L) | XXX | 25 | 40 | 50 | § 92a.47 |
| TSS (mg/L) | XXX | 30 | 45 | 60 | § 92a.47 |
| TRC (mg/L) | XXX | 0.5 | XXX | 1.6 | §§ 92a.47-48 |
| NH3-N (mg/L) | XXX | 25 | XXX | 50 | BPJ |
| D.O. (mg/L) | 4 | XXX | XXX | XXX | BPJ |
| pH (SU) | 6 | XXX | XXX | 9 | § 92a.47, § 95.2 |
| Total N (mg/L) | XXX | Report | XXX | XXX | § 92a.61 |
| Total P (mg/L) | XXX | Report | XXX | XXX | § 92a.61 |
| Fecal Coliform (No./100 ml) (May-Sept) | XXX | 200 Geo Mean | XXX | 1,000 | § 92a.47 |
| Fecal Coliform (No./100 ml) (Oct-April) | XXX | 2,000 Geo Mean | XXX | 10,000 | § 92a.47 |
| E. Coli (No./100 ml)* | XXX | XXX | XXX | Report | § 92a.61 |

*Sewage discharges now require monitoring and reporting for E. Coli. A monitoring frequency of 1/month for design flows >= 1 MGD, 1/quarter for design flows >= 0.05 and < 1 MGD, 1/year for design flows of 0.002 – 0.05 MGD will be utilized.

### Water Quality-Based Limitations

The following limitations were determined through water quality modeling:

Analysis Results WQM 7.0

Hydrodynamics | NH3-N Allocations | D.O. Allocations | D.O. Simulation | Effluent Limitations

| RMI | Discharge Name | Permit Number | Disc Flow (mgd) |
|---|---|---|---|
| 16.57 | Four Seasons | PA0061000 | 0.0600 |

| Parameter | Effluent Limit 30 Day Average (mg/L) | Effluent Limit Maximum (mg/L) | Effluent Limit Minimum (mg/L) |
|---|---|---|---|
| CBOD5 | 25 | | |
| NH3-N | 4.05 | 8.1 | |
| Dissolved Oxygen | | | 6 |

Record: 1 of 1 | No Filter | Search

| | | | | | | |
|---|---|---|---|---|---|---|
| TRC EVALUATION | | | Enter Facility Name in E3 | | | |
| Input appropriate values in B4:B8 and E4:E7 | | | Village of Four Seasons Assoc.,Inc. | | | |
| 0.15 | = Q stream (cfs) | | 0.15 | = CV Daily | | |
| 0.06 | = Q discharge (MGD) | | 0.5 | = CV Hourly | | |
| 4 | = no. samples | | 1 | = AFC_Partial Mix Factor | | |
| 0.3 | = Chlorine Demand of Strea | | 1 | = CFC_Partial Mix Factor | | |
| 0 | = Chlorine Demand of Disch | | 15 | = AFC_Criteria Compliance Time (min) | | |
| 0.5 | = BAT/BPJ Value | | 720 | = CFC_Criteria Compliance Time (min) | | |
| 0 | = % Factor of Safety (FOS) | | | =Decay Coefficient (K) | | |
| Source | Reference | AFC Calculations | | Reference | CFC Calculations | |
| TRC | 1.3.2.iii | WLA afc = | 0.535 | 1.3.2.iii | WLA cfc = | 0.514 |
| PENTOXSD TRC | 5.1a | LTAMULT afc = | 0.373 | 5.1c | LTAMULT cfc = | 0.842 |
| PENTOXSD TRC | 5.1b | LTA_afc= | 0.199 | 5.1d | LTA_cfc = | 0.433 |
| Source | | Effluent Limit Calculations | | | | |
| PENTOXSD TRC | 5.1f | AML MULT = | 1.187 | | | |
| PENTOXSD TRC | 5.1g | AVG MON LIMIT (mg/l) = | 0.236 | AFC | | |
| | | INST MAX LIMIT (mg/l) = | 0.802 | | | |

**Anti-Backsliding**

Retain any more restrictive existing Limits

## Compliance History

### DMR Data for Outfall 001 (from September 1, 2020 to August 31, 2021)

| Parameter | AUG-21 | JUL-21 | JUN-21 | MAY-21 | APR-21 | MAR-21 | FEB-21 | JAN-21 | DEC-20 | NOV-20 | OCT-20 | SEP-20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow (MGD) Average Monthly | 0.0349 | 0.0397 | 0.0242 | 0.0553 | 0.0426 | 0.0696 | 0.0271 | 0.0271 | 0.0349 | 0.0181 | 0.0102 | 0.0083 |
| Flow (MGD) Daily Maximum | 0.2131 | 0.150 | 0.0757 | 0.2066 | 0.18520 | 0.207600 | 0.0477 | 0.0582 | 0.2064 | 0.0411 | 0.0697 | 0.0219 |
| pH (S.U.) Minimum | 6.45 | 6.85 | 7.18 | 6.65 | 6.80 | 6.76 | 5.86 | 6.86 | 6.65 | 7.15 | 7.42 | 6.54 |
| pH (S.U.) Maximum | 8.25 | 8.14 | 8.15 | 8.11 | 8.12 | 8.08 | 8.05 | 8.11 | 8.23 | 8.31 | 8.00 | 8.13 |
| DO (mg/L) Instantaneous Minimum | 6.07 | 6.09 | 6.91 | 5.43 | 7.75 | 7.26 | 9.26 | 8.69 | 6.82 | 7.62 | 6.48 | 6.21 |
| TRC (mg/L) Average Monthly | 0.01 | 0.001 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.001 | 0.001 |
| TRC (mg/L) Instantaneous Maximum | 0.01 | 0.001 | 0.001 | 0.01 | 0.01 | 0.01 | 0.01 | 0.001 | 0.01 | 0.01 | 0.001 | 0.001 |
| CBOD5 (mg/L) Average Monthly | < 3.00 | < 4.0 | < 4.0 | < 4.0 | < 4.0 | < 4.0 | < 3.1 | < 4.0 | < 4.0 | < 4.0 | < 3.0 | < 4.0 |
| TSS (mg/L) Average Monthly | 2.50 | 3.7 | < 2.0 | < 5.0 | 1.0 | 4.4 | 1.5 | 5.75 | < 5.0 | 5.0 | < 4.5 | < 5.0 |
| Fecal Coliform (CFU/100 ml) Geometric Mean | 11.9 | 2.97 | 1 | < 1 | < 1 | 1 | < 1 | < 1 | < 1 | 1.31 | 1 | 4.71 |
| Fecal Coliform (CFU/100 ml) Instantaneous Maximum | 224.7 | 4.1 | 1 | < 1 | < 1 | 1 | 9.7 | < 1 | < 1 | 3.1 | 1 | 29.2 |
| Nitrate-Nitrite (lbs/day) Annual Average | | | | | | | | | 0.8862 | | | |
| Nitrate-Nitrite (mg/L) Annual Average | | | | | | | | | 16.1 | | | |
| Total Nitrogen (lbs/day) Annual Average | | | | | | | | | 0.0688 | | | |
| Total Nitrogen (mg/L) Annual Average | | | | | | | | | < 1.25 | | | |
| Ammonia (mg/L) Average Monthly | < 0.200 | 0.77 | < 0.30 | < 0.30 | 0.18 | < 0.30 | < 0.30 | < 0.30 | < 0.30 | < 0.30 | 0.207 | < 0.30 |
| TKN (lbs/day) Annual Average | | | | | | | | | 0.0688 | | | |
| TKN (mg/L) Annual Average | | | | | | | | | < 1.25 | | | |
| Total Phosphorus (lbs/day) Annual Average | | | | | | | | | 0.2521 | | | |
| Total Phosphorus (mg/L) Annual Average | | | | | | | | | 4.58 | | | |