pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

| | | | |
|---|---|---|---|
| Application Type | **Renewal** | Application No. | **PA0113069** |
| Facility Type | **Municipal** | APS ID | **1062786** |
| Major / Minor | **Minor** | Authorization ID | **1395296** |

# NPDES PERMIT FACT SHEET
# INDIVIDUAL SEWAGE

## Applicant and Facility Information

| | | | |
|---|---|---|---|
| Applicant Name | **Greenwood Township Municipal Authority Columbia County** | Facility Name | **Greenwood Township Municipal Authority Sewer System** |
| Applicant Address | 90 Shed Road<br>Millville, PA 17846-9148 | Facility Address | Rohrsburg Road<br>Rohrsburg, PA 17859 |
| Applicant Contact | Joe Farr, Secretary | Facility Contact | Joe Farr, Secretary |
| Applicant Phone | (570) 458-0212 | Facility Phone | (570) 458-0212 |
| Client ID | 43854 | Site ID | 254151 |
| Ch 94 Load Status | Not Overloaded | Municipality | Greenwood Township |
| Connection Status | No Limitations | County | Columbia |
| Date Application Received | May 3, 2022 | EPA Waived? | Yes |
| Date Application Accepted | May 12, 2022 | If No, Reason | |

Purpose of Application: Renewal of a NPDES Permit

## Summary of Review

The subject facility is a municipal sewage treatment plant serving the area of the Village of Rohrsburg in Greenwood Township, Columbia County. A map indicating the discharge location is attached (See Attachment A).

Sludge use and disposal description and location(s): The facility's sludge is trucked to other treatment facilities for further processing. Per the application 6.206 dry tons were removed in the previous year.

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.

| Approve | Deny | Signatures | Date |
|---|---|---|---|
| X | | *Keith C. Allison*<br>Keith C. Allison / Project Manager | September 13, 2022 |
| X | | *Nicholas W. Hartranft*<br>Nicholas W. Hartranft, P.E. / Environmental Engineer Manager | September XX, 2022 |

| **Discharge, Receiving Waters and Water Supply Information** | | | |
|---|---|---|---|
| Outfall No. | 001 | Design Flow (MGD) | 0.0075 |
| Latitude | 41º 7' 48.95" | Longitude | -76º 25' 21.58" |
| Quad Name | Benton, PA | Quad Code | |
| Wastewater Description: | Sewage Effluent | | |
| Receiving Waters | Unnamed Tributary to Green Creek (TSF) | Stream Code | 27783 |
| NHD Com ID | 65638251 | RMI | 0.4 |
| Drainage Area | 2.11 $mi^2$ | Yield ($cfs/mi^2$) | 0.0613 |
| $Q_{7-10}$ Flow (cfs) | 0.129 | $Q_{7-10}$ Basis | Gage 01539000 - Fishing Creek @ Bloomsburg, PA (1940-2008) |
| Elevation (ft) | 625 | Slope (ft/ft) | 0.0095 |
| Watershed No. | 5-C | Chapter 93 Class. | TSF |
| Existing Use | N/A | Existing Use Qualifier | N/A |
| Exceptions to Use | None | Exceptions to Criteria | None |
| Assessment Status | Attaining Use(s) | | |
| Nearest Downstream Public Water Supply Intake | Suez Water Pennsylvania - Bloomsburg | | |
| PWS Waters | Fishing Creek | Distance from Outfall (mi) | Approx. 12 |

Changes Since Last Permit Issuance: None. The existing stream and discharge characteristics were determined for the previous review and remain adequate.

Other Comments: The receiving stream is an unnamed according to Chapter 93 but is known locally and listed on USGS topographic maps as “Rickard Hollow”.

The discharge is not expected to affect any downstream water supply at this time with the limitations and monitoring proposed.

**Treatment Facility Summary**

**Treatment Facility Name:** Greenwood Township Municipal Authority Sewer System STP

| WQM Permit No. | Issuance Date | Permit For: |
|---|---|---|
| 1987401 | 7/23/87 | 0.0075 MGD Cromaglass Plant with 35 septic tanks |
| 1988409 | 2/2/88 | Allowed for an “approved equal” to the plant under 1987401 |
| 1990405 | 4/4/90 | Sewer Extension with pump station |

| Waste Type | Degree of Treatment | Process Type | Disinfection | Avg Annual Flow (MGD) |
|---|---|---|---|---|
| Sewage | Secondary | Activated Sludge | Hypochlorite | 0.0075 |

| Hydraulic Capacity (MGD) | Organic Capacity (lbs/day) | Load Status | Biosolids Treatment | Biosolids Use/Disposal |
|---|---|---|---|---|
| 0.0075 | 25 | Not Overloaded | Aerobic Digestion | Other WWTP |

Changes Since Last Permit Issuance: None

Other Comments: The treatment facility as permitted under WQM Permit No. 1987401 consists of a pump station with grinder pumps receiving septic tank effluent, bar screen, aeration tank, clarifier, equalization, tablet chlorinator, and contact tank.

## Compliance History

**DMR Data for Outfall 001 (from August 1, 2021 to July 31, 2022)**

| Parameter | JUL-22 | JUN-22 | MAY-22 | APR-22 | MAR-22 | FEB-22 | JAN-22 | DEC-21 | NOV-21 | OCT-21 | SEP-21 | AUG-21 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow (MGD) Average Monthly | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| Flow (MGD) Daily Maximum | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| pH (S.U.) Minimum | 6.98 | 7.11 | 7.24 | 7.06 | 6.89 | 7.25 | 7.23 | 7.47 | 7.39 | 7.44 | 7.12 | 7.03 |
| pH (S.U.) Maximum | 7.63 | 7.56 | 7.63 | 7.54 | 7.81 | 7.94 | 8.12 | 7.99 | 8.06 | 8.07 | 7.76 | 7.63 |
| DO (mg/L) Minimum | 2.85 | 4.13 | 4.27 | 3.24 | 4.2 | 4.29 | 1.8 | 2.76 | 2.12 | 2.95 | 2.6 | 3.4 |
| TRC (mg/L) Average Monthly | 0.91 | 0.93 | 1.18 | 0.83 | 0.92 | 0.97 | 0.77 | 0.48 | 0.95 | 0.83 | 0.77 | 0.7 |
| TRC (mg/L) Instantaneous Maximum | 1.12 | 1.25 | 1.49 | 1.46 | 1.55 | 1.27 | 1.19 | 1.21 | 1.1 | 1.08 | 1.1 | 1.18 |
| CBOD5 (lbs/day) Average Monthly | < 0.1 | < 0.1 | < 0.1 | < 0.03 | < 0.2 | < 0.1 | 0.6 | 0.1 | < 0.1 | < 0.02 | < 0.1 | < 0.1 |
| CBOD5 (lbs/day) Weekly Average | < 0.1 | < 0.1 | < 0.1 | 0.4 | < 0.3 | < 0.1 | 0.6 | 0.1 | < 0.1 | < 0.02 | < 0.1 | < 0.1 |
| CBOD5 (mg/L) Average Monthly | < 3.0 | < 3.0 | < 3.0 | < 6.8 | < 3.0 | < 3.0 | 5.01 | < 3.0 | < 3.0 | < 3.76 | < 3.0 | < 3.0 |
| CBOD5 (mg/L) Weekly Average | < 3.0 | < 3.0 | < 3.0 | 10.6 | < 3.0 | < 3.0 | 8.48 | < 3.0 | < 3.0 | 4.52 | < 3.0 | < 3.0 |
| BOD5 (lbs/day) Raw Sewage Influent Average Monthly | 2.0 | 5.0 | 1.0 | 10.0 | 5.0 | 10 | 5.0 | 4.0 | 2 | 4.0 | 6.0 | < 4.0 |
| BOD5 (lbs/day) Raw Sewage Influent Daily Maximum | 2.0 | 7.0 | 2.0 | 7.0 | 7.0 | 12 | 5.0 | 5.0 | 2 | 5.0 | 5.0 | 7.0 |
| BOD5 (mg/L) Raw Sewage Influent Average Monthly | 73.5 | 120.0 | 118.6 | 176 | 120.7 | 231.0 | 103.2 | 101.5 | 58.3 | 88.1 | 108.9 | < 100.0 |
| TSS (lbs/day) Average Monthly | < 0.07 | 0.08 | 0.3 | 1.0 | < 0.07 | 0.2 | 0.3 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 |
| TSS (lbs/day) Raw Sewage Influent Average Monthly | 0.9 | 0.2 | 1.0 | 2.0 | 1 | 2.0 | 2.0 | 2.0 | 2.0 | 2 | 3.0 | < 1.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TSS (lbs/day) Raw Sewage Influent Daily Maximum | 0.9 | 0.2 | 2.0 | 2.0 | 1 | 3.0 | 2.0 | 2.0 | 2.0 | 1 | 6.0 | 2.0 |
| TSS (lbs/day) Weekly Average | < 0.07 | 0.08 | 0.2 | 0.6 | < 0.07 | 0.2 | 0.3 | 0.3 | 0.2 | 0.1 | 0.4 | 0.2 |
| TSS (mg/L) Average Monthly | < 3.4 | 1.8 | 3.0 | 13.6 | < 1.6 | 4.4 | 7.6 | 5.1 | 2.8 | 2.6 | 5.8 | 4.2 |
| TSS (mg/L) Raw Sewage Influent Average Monthly | 61.0 | 38 | 118.6 | 37.0 | 30 | 59.0 | 27.0 | 42.0 | 41 | 34 | 63 | < 33 |
| TSS (mg/L) Weekly Average | 5.2 | 2.0 | 4.0 | 25.6 | < 1.6 | 5.2 | 7.6 | 8.0 | 3.6 | 2.8 | 8.8 | 4.4 |
| Fecal Coliform (CFU/100 ml) Geometric Mean | < 1.0 | 5.4 | < 1.0 | 19.2 | < 1.0 | < 1.0 | 3.0 | < 1.0 | < 1.0 | < 1210.3 | 1.0 | 1.0 |
| Fecal Coliform (CFU/100 ml) Instantaneous Maximum | < 1.0 | 9.8 | < 1.0 | 36.4 | 2.0 | < 1.0 | 3.1 | < 1.0 | 1.0 | 2419.6 | 3.1 | 2.0 |

| **Compliance History** | |
|---|---|
| | |
| **Summary of Inspections:** | The facility has been inspected at least annually over the past permit term. The most recent inspection by the Department on November 2, 2021 identified no violations at the time of inspection. |
| **Other:** | A WMS query found no open violations for Greenwood Township Municipal Authority in eFACTS. |

**Existing Effluent Limitations and Monitoring Requirements**

| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Mass Units (lbs/day) (1) | | Concentrations (mg/L) | | | | Minimum (2) Measurement Frequency | Required Sample Type |
| | Average Monthly | Weekly Average | Minimum | Average Monthly | Weekly Average | Instant. Maximum | | |
| Flow (MGD) | Report | Report Daily Max | XXX | XXX | XXX | XXX | 1/day | Estimate |
| pH (S.U.) | XXX | XXX | 6.0 | XXX | XXX | 9.0 | 1/day | Grab |
| DO | XXX | XXX | Report | XXX | XXX | XXX | 1/day | Grab |
| TRC | XXX | XXX | XXX | 1.0 | XXX | 2.3 | 1/day | Grab |
| CBOD5 | 1.5 | 2.5 | XXX | 25.0 | 40.0 | 50 | 2/month | Grab |
| BOD5 Raw Sewage Influent | Report | Report Daily Max | XXX | Report | XXX | XXX | 2/month | Grab |
| TSS Raw Sewage Influent | Report | Report Daily Max | XXX | Report | XXX | XXX | 2/month | Grab |
| TSS | 1.5 | 2.5 | XXX | 30.0 | 45.0 | 60 | 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 |
| Total Nitrogen | Report Annl Avg | XXX | XXX | Report Annl Avg | XXX | XXX | 1/year | Grab |
| Total Phosphorus | Report Annl Avg | XXX | XXX | Report Annl Avg | XXX | XXX | 1/year | Grab |

## Development of Effluent Limitations

**Outfall No.** 001 **Design Flow (MGD)** 0.0075
**Latitude** 41º 7' 49.50" **Longitude** -76º 25' 22.00"
**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 |
|---|---|---|---|---|
| $CBOD_5$ | 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) |
| pH | 6.0 – 9.0 S.U. | Min – Max | 133.102(c) | 95.2(1) |
| 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) |
| Total Residual Chlorine | 0.5 | Average Monthly | - | 92a.48(b)(2) |

Comments: The above limits are applicable and are included in the NPDES Permit with the exception of TRC. This facility has an existing site-specific BAT limit of 1.0 mg/L for tablet chlorinators consistent with 25 Pa Code 92a.48(b)(1) and the Domestic Wastewater Facilities Manual which supports tablet chlorinators for facilities under 0.01 MGD.

### Water Quality-Based Limitations

#### DO, CBOD5 and NH3-N

The WQM7.0 model allows the Department to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD ($CBOD_5$), and ammonia-nitrogen ($NH_3$-N) into free-flowing streams and rivers. To accomplish this, the model simulates two basic processes: the mixing and degradation of $NH_3$-N in the stream and the mixing and consumption of DO in the stream due to the degradation of $CBOD_5$ and $NH_3$-N. WQM7.0 modeling was performed for the discharge to Rickard Hollow for the previous review and showed that no limitations are necessary beyond the technology-based secondary treatment limits listed above (see Attachment C).

### Total Residual Chlorine

The facility has an existing site-specific BAT limit for Total Residual Chlorine (TRC) of 1.0 mg/l which will remain. The Department uses a modeling spreadsheet to analyze the toxicity of a discharge's TRC in a receiving stream, accounting for available dilution. The attached results of the TRC spreadsheet (see Attachment C) show that the technology-based limit of 1.0 mg/l is adequate to protect the receiving stream.

### Toxics Management

No further "Reasonable Potential Analysis" was performed to determine additional parameters as candidates for limitations or monitoring for this minor municipal WWTP with no industrial influent.

### Chesapeake Bay/Nutrient Requirements

According to the Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, this facility is an existing Phase 5 Chesapeake Bay sewage discharger that is not expanding, and as such requires no nutrient loading limits. Annual nutrient monitoring was included in the existing permit. The average Total Nitrogen concentration over the past permit term was 8.7 mg/L and the Average Phosphorus concentration was 2.4 mg/L. Because the nutrient load has been adequately characterized no additional nutrient monitoring will be required at this time consistent with the Phase III WIP Wastewater Supplement.

**Best Professional Judgment (BPJ) Limitations**

Comments: None need beyond the Technology and Water Quality-Based limits noted above.

**e. Coli**
Due to recent changes to Chapter 93 of the Departments regulations and Department policy annual e. coli monitoring will be required at this time.

**Anti-Backsliding**

No proposed limitations are less stringent than the existing consistent with anti-backsliding provisions of the Clean Water Act and 40 CFR 122.44(l).

## Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

**Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date**.

| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Mass Units (lbs/day) (1) | | Concentrations (mg/L) | | | | Minimum (2) Measurement Frequency | Required Sample Type |
| | Average Monthly | Weekly Average | Minimum | Average Monthly | Weekly Average | Instant. Maximum | | |
| Flow (MGD) | Report | Report Daily Max | XXX | XXX | XXX | XXX | 1/day | Estimate |
| pH (S.U.) | XXX | XXX | 6.0 | XXX | XXX | 9.0 | 1/day | Grab |
| DO | XXX | XXX | Report | XXX | XXX | XXX | 1/day | Grab |
| TRC | XXX | XXX | XXX | 1.0 | XXX | 2.3 | 1/day | Grab |
| CBOD5 | 1.5 | 2.5 | XXX | 25.0 | 40.0 | 50 | 2/month | Grab |
| BOD5 Raw Sewage Influent | Report | Report Daily Max | XXX | Report | XXX | XXX | 2/month | Grab |
| TSS Raw Sewage Influent | Report | Report Daily Max | XXX | Report | XXX | XXX | 2/month | Grab |
| TSS | 1.5 | 2.5 | XXX | 30.0 | 45.0 | 60 | 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 |
| E. Coli (No./100 ml) | XXX | XXX | XXX | XXX | Report Daily Max | XXX | 1/year | Grab |

Compliance Sampling Location: Outfall 001

Other Comments: E. Coli monitoring is new consistent with as mentioned above. Total Nitrogen and Total Phosphorus monitoring have been removed as also mentioned above.

| Tools and References Used to Develop Permit | |
|---|---|
| | |
| ☒ | WQM for Windows Model (see Attachment **B**) |
| ☐ | Toxics Management Spreadsheet (see Attachment ) |
| ☒ | TRC Model Spreadsheet (see Attachment **C**) |
| ☐ | Temperature Model 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: Establishing Effluent Limitations for Individual Sewage Permits, rev. 03/24/2021 |
| ☐ | Other: |

Attachments:

A. Discharge Location Map
B. WQM7.0 Model
C. TRC Model