

Application Type Renewal
Facility Type Municipal
Major / Minor Minor

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application No. PA0020478
APS ID 10866
Authorization ID 1540620

Applicant and Facility Information

| | | | |
|---------------------------|--|------------------|---------------------------------|
| Applicant Name | <u>Bloomfield Borough Perry County</u> | Facility Name | <u>Bloomfield STP</u> |
| Applicant Address | <u>25 E McClure Street</u> | Facility Address | <u>300 Barnett Woods Road</u> |
| | <u>New Bloomfield, PA 17068-9334</u> | | <u>New Bloomfield, PA 17068</u> |
| Applicant Contact | <u>Damon Hartman</u> | Facility Contact | <u>Damon Hartman</u> |
| Applicant Phone | <u>(717) 582-2989</u> | Facility Phone | <u>(717) 582-2989</u> |
| Client ID | <u>71344</u> | Site ID | <u>248232</u> |
| Ch 94 Load Status | <u>Not Overloaded</u> | Municipality | <u>Bloomfield Borough</u> |
| Connection Status | <u>No Limitations</u> | County | <u>Perry</u> |
| Date Application Received | <u>September 4, 2025</u> | EPA Waived? | <u>Yes</u> |
| Date Application Accepted | <u>October 6, 2025</u> | If No, Reason | <u></u> |
| Purpose of Application | <u>This is an application request for NPDES renewal.</u> | | |

| Approve | Deny | Signatures | Date |
|---------|------|--|-------------------|
| X | | Nicholas Hong, P.E. / Environmental Engineer Nick Hong (via electronic signature) | October 14, 2025 |
| x | | Daniel W. Martin, P.E. / Environmental Engineer Manager Maria D. Bebenek for | November 20, 2025 |
| x | | Maria D. Bebenek, P.E. / Environmental Program Manager Maria D. Bebenek | November 20, 2025 |

Summary of Review

The application submitted by the applicant requests a NPDES renewal permit for the Bloomfield Borough WWTP located at 300 Barnett Woods Road, New Bloomfield, PA 17068 in Perry County, municipality of Bloomfield Borough. The existing permit became effective on January 1, 2021 and expires(d) on December 31, 2025. The application for renewal was received by DEP Southcentral Regional Office (SCRO) September 4, 2025.

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, a description of the facility's receiving waters attainment/non-attainment assessment status, and a description of any changes to the proposed monitoring/sampling frequency. Section 6 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 0.15 MGD average annual treatment facility. The hydraulic design capacity is 0.25 MGD. The applicant does not anticipate any proposed upgrades to the treatment facility in the next five years. The NPDES application has been processed as a Minor Sewage Facility (Level 2) due to the type of sewage and the design flow rate for the facility. The applicant disclosed the Act 14 requirement to Perry County Commissioners and Bloomfield Borough Council and the notice was received by the parties on July 11, 2025 and July 15, 2025. A planning approval letter was not necessary as the facility is neither new or expanding.

Utilizing the DEP's web-based Emap-PA information system, the receiving waters has been determined to be Tributary 11404 to Trout Run. The sequence of receiving streams that the Tributary 11404 to Trout Run discharges into are Trout Run and Little Juniata Creek which eventually drains into the Chesapeake Bay. The subject site is subject to the Chesapeake Bay implementation requirements. The receiving water has protected water usage for cold water fish (CWF) and migratory fish (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 Tributary 11404 to Trout Run is a Category 4c and 5 stream listed in the 2024 Integrated List of All Waters (formerly 303d Listed Streams). This stream is an impaired stream for aquatic life due to (1) habitat alterations from removal of riparian vegetation and (2) siltation from removal of riparian vegetation. The receiving waters is also impaired for recreational uses due to pathogens from an unknown source. The receiving waters is not subject to a total maximum daily load (TMDL) plan to improve water quality in the subject facility's watershed.

The existing permit and proposed permit differ as follows:

- **Monitoring for nitrogen species and phosphorus have been reduced to quarterly.**
- **Due to the EPA triennial review, monitoring for E.Coli shall be required.**
- **Monitoring and effluent limits shall be required for Total Lead and Total Zinc**

Sludge use and disposal description and location(s): DEP computer files do not show the facility submitted biosolids/sewage sludge disposal addendum.

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: | Bloomfield Borough WWTP |
| NPDES Permit # | PA0020478 |
| Physical Address: | 300 Barnett Woods Road New Bloomfield, PA 17068 |
| Mailing Address: | 25 East McClure Street New Bloomfield, PA 17068 |
| Contact: | damon.hartman78@gmail.com |
| Consultant: | Timothy Yingling Senior Project Manager Herbert, Rowland and Grubic, Inc. (717) 564-1121 tyingling@hrg-inc.com |

1.2 Permit History

Permit submittal included the following information.

- NPDES Application
- Influent Sample Data
- Effluent Sample Data

2.0 Treatment Facility Summary

2.1.1 Site location

The physical address for the facility is 300 Barnett Woods Road, New Bloomfield, PA 17068. 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

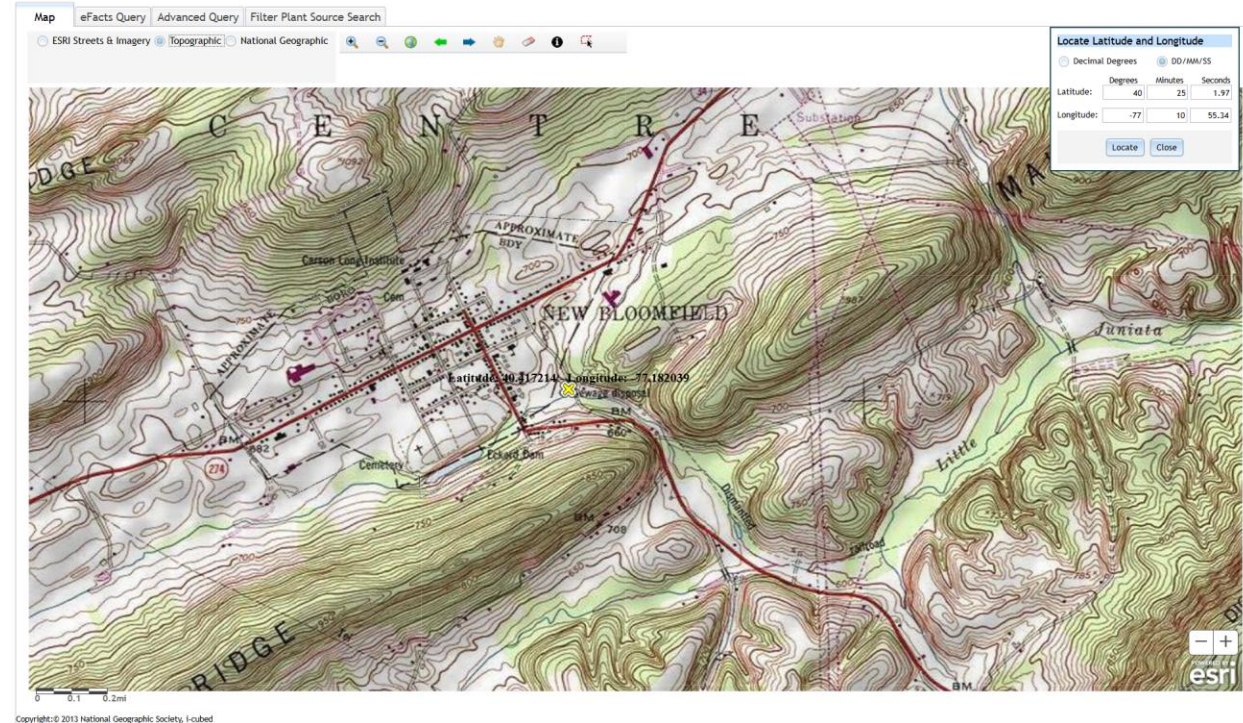
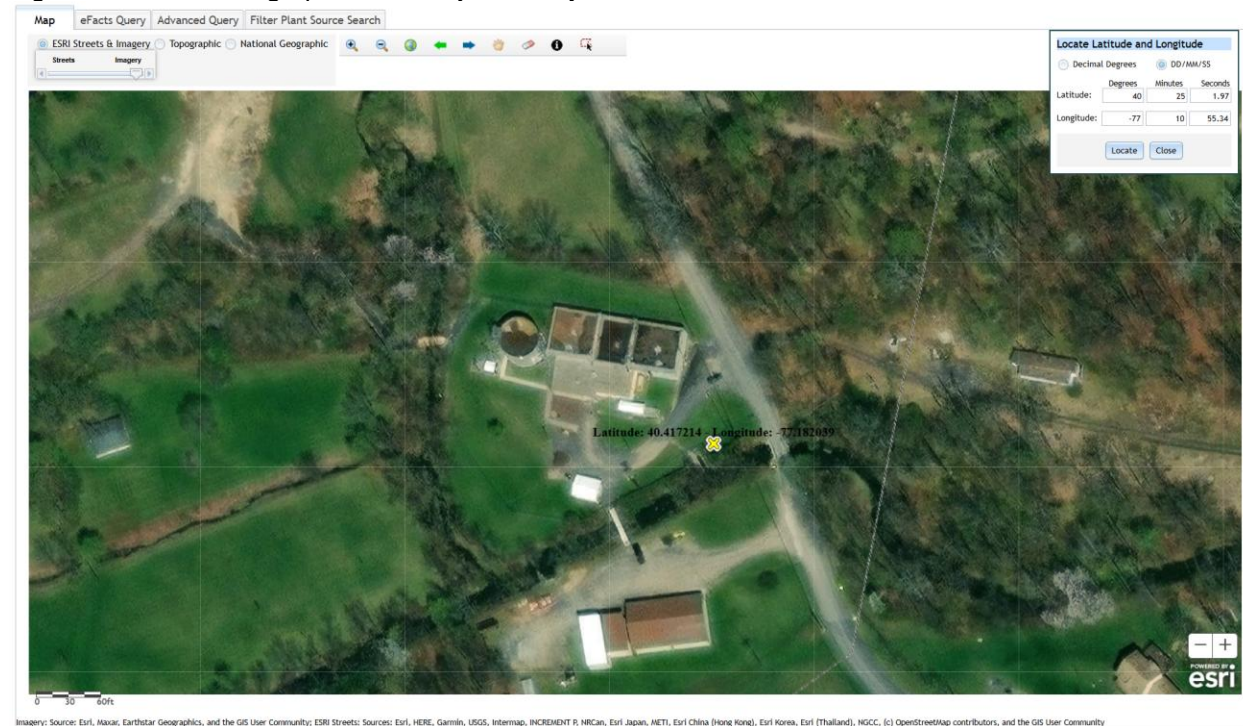


Figure 2: Aerial Photograph of the subject facility



2.1.2 Sources of Wastewater/Stormwater

The wastewater treatment plant receives 100% of the flow contributions from Bloomfield Borough.

The facility reported they do not have industrial/commercial users.

The facility did not receive any hauled in wastes in the last three years and does not anticipate receiving hauled in wastes in the next five years.

2.2 Description of Wastewater Treatment Process

The subject facility is a 0.25 MGD hydraulic design flow facility. The subject facility treats wastewater using a muffin monster, a SBR, and a UV disinfection unit prior to discharge through the outfall. The facility is being evaluated for flow, pH, dissolved oxygen, CBOD5, TSS, TRC, fecal coliform, UV, nitrogen species, phosphorus, total copper, total lead, and total zinc. The existing permits limits for the facility is summarized in Section 2.4.

The treatment process is summarized in the table.

| Treatment Facility Summary | | | | |
|---|----------------------------|--------------------------|---------------------|------------------------|
| Treatment Facility Name: Bloomfield STP | | | | |
| Waste Type | Degree of Treatment | Process Type | Disinfection | Avg Annual Flow (MGD) |
| Sewage | Secondary | Sequencing Batch Reactor | Ultraviolet | 0.15 |
| | | | | |
| Hydraulic Capacity (MGD) | Organic Capacity (lbs/day) | Load Status | Biosolids Treatment | Biosolids Use/Disposal |
| 0.25 | 460 | Not Overloaded | | |

2.3 Facility Outfall Information

The facility has the following outfall information for wastewater.

| | | | |
|---|---------------|-------------------|-----------------|
| Outfall No. | 001 | Design Flow (MGD) | .25 |
| Latitude | 40° 25' 1.97" | Longitude | -77° 10' 55.34" |
| Wastewater Description: Sewage Effluent | | | |

2.3.1 Operational Considerations- Chemical Additives

Chemical additives are chemical products introduced into a waste stream that is used for cleaning, disinfecting, or maintenance and which may be detected in effluent discharged to waters of the Commonwealth. Chemicals excluded are those used for neutralization of waste streams, the production of goods, and treatment of wastewater.

The subject facility utilizes the following chemicals as part of their treatment process.

- Zetage 1786 as polymer for sludge thickening
- Soda Ash Lime for adjusting pH in activated sludge

2.4 Existing NPDES Permits Limits

The existing NPDES permit limits are summarized in the table.

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

I. A. For Outfall 001, Latitude 40° 25' 1.97", Longitude 77° 10' 55.34", River Mile Index 0.85, Stream Code 11404

Receiving Waters: Unnamed Tributary to Trout Run (CWF)

Type of Effluent: Sewage Effluent

- The permittee is authorized to discharge during the period from **January 1, 2021** through **December 31, 2025**.
- 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⁾ | | Instantaneous Minimum | Concentrations (mg/L) | | | Minimum ⁽²⁾ Measurement Frequency | Required Sample Type |
| | Average Monthly | Weekly Average | | Average Monthly | Weekly Average | Instant. Maximum | | |
| Flow (MGD) | Report | Report Daily Max | XXX | XXX | XXX | XXX | Continuous | Measured |
| pH (S.U.) | XXX | XXX | 6.0 | XXX | XXX | 9.0 | 1/day | Grab |
| Dissolved Oxygen | XXX | XXX | 5.0 | XXX | XXX | XXX | 1/day | Grab |
| Carbonaceous Biochemical Oxygen Demand (CBOD5) | 52 | 83 | XXX | 25 | 40 | 50 | 1/week | 8-Hr Composite |
| Biochemical Oxygen Demand (BOD5) | Report | Report Daily Max | XXX | Report | XXX | XXX | 1/week | 8-Hr Composite |
| Raw Sewage Influent | Report | Report Daily Max | XXX | Report | XXX | XXX | 1/week | 8-Hr Composite |
| Total Suspended Solids | 62 | 93 | XXX | 30 | 45 | 60 | 1/week | 8-Hr Composite |
| Total Suspended Solids Raw Sewage Influent | Report | Report Daily Max | XXX | Report | XXX | XXX | 1/week | 8-Hr Composite |
| Fecal Coliform (No./100 ml) Oct 1 - Apr 30 | XXX | XXX | XXX | 2000 Geo Mean | XXX | 10000 | 1/week | Grab |
| Fecal Coliform (No./100 ml) May 1 - Sep 30 | XXX | XXX | XXX | 200 Geo Mean | XXX | 1000 | 1/week | Grab |
| Ultraviolet light transmittance (%) | XXX | XXX | Report | XXX | XXX | XXX | 1/day | Measured |
| Nitrate-Nitrite as N | XXX | XXX | XXX | Report | XXX | XXX | 1/month | 8-Hr Composite |

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|---------------------------------|-------------------------------------|----------------|-----------------------|-----------------------|----------------|------------------|--|----------------------|
| | Mass Units (lbs/day) ⁽¹⁾ | | Instantaneous Minimum | Concentrations (mg/L) | | | Minimum ⁽²⁾ Measurement Frequency | Required Sample Type |
| | Average Monthly | Weekly Average | | Average Monthly | Weekly Average | Instant. Maximum | | |
| Total Nitrogen | XXX | XXX | XXX | Report | XXX | XXX | 1/month | Calculation |
| Ammonia-Nitrogen Nov 1 - Apr 30 | 18.0 | XXX | XXX | 9.0 | XXX | 18 | 1/week | 8-Hr Composite |
| Ammonia-Nitrogen May 1 - Oct 31 | 6.0 | XXX | XXX | 3.0 | XXX | 6 | 1/week | 8-Hr Composite |
| Total Kjeldahl Nitrogen | XXX | XXX | XXX | Report | XXX | XXX | 1/month | 8-Hr Composite |
| Total Phosphorus | XXX | XXX | XXX | Report | XXX | XXX | 1/month | 8-Hr Composite |
| Copper, Total | XXX | XXX | XXX | Report Avg Qtrly | XXX | XXX | 1/quarter | 8-Hr Composite |
| Lead, Total | XXX | XXX | XXX | Report Avg Qtrly | XXX | XXX | 1/quarter | 8-Hr Composite |
| Zinc, Total | 0.35 | XXX | XXX | 0.17 | XXX | 0.42 | 1/week | 8-Hr Composite |

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

at Outfall 001

3.0 Facility NPDES Compliance History

3.1 Summary of Inspections

A summary of the most recent inspections during the existing permit review cycle is as follows.

The DEP inspector noted the following during the inspection.

11/09/2021:

- The facility was advised to ensure all SSO events are immediately reported to the DEP and submit the required 5-day report that summarizes the SSO.
- Recommend investigating/repairing the problem that is causing the intermittent low UV transmittance reading.
- Ensure calibration of facility flow meter is conducted annually.

06/28/2023:

- The purpose of the inspection was to discuss the facility's recent effluent non-compliances. Ammonia-Nitrogen exceedances were reported by the facility in April and May 2023. Mr. Hartman attributes the exceedances to low flow received by the treatment plant during those months. Mr. Hartman anticipates the facility maintaining compliance during the month of June. Laboratory analysis of Ammonia-Nitrogen on 6/7/2023 was 0.496 mg/L and 6/14/2023 was 0.167 mg/L.
- An influent pump seal failure occurred during the weekend prior to this inspection. A backup pump is maintained on-site.
- Bloomfield Borough is currently in the process of acquiring the lift station that serves Lakeside Estates.

3.2 Summary of DMR Data

A review of approximately 1-year of DMR data shows that the monthly average flow data for the facility below the design capacity of the treatment system. The maximum average flow data for the DMR reviewed was 0.214 MGD. The design capacity of the treatment system is 0.25 MGD.

The off-site laboratory used for the analysis of the parameters was ALS Environmental located at 301 Fulling Mill Road, Middletown, PA 17057

**NPDES Permit Fact Sheet
Bloomfield STP**

NPDES Permit No. PA0020478

DMR Data for Outfall 001 (from September 1, 2024 to August 31, 2025)

| Parameter | AUG-25 | JUL-25 | JUN-25 | MAY-25 | APR-25 | MAR-25 | FEB-25 | JAN-25 | DEC-24 | NOV-24 | OCT-24 | SEP-24 |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Flow (MGD) Average Monthly | 0.102 | 0.156 | 0.168 | 0.214 | 0.124 | 0.120 | 0.133 | 0.088 | 0.120 | 0.100 | 0.093 | 0.099 |
| Flow (MGD) Daily Maximum | 0.180 | 0.654 | 0.385 | 0.662 | 0.255 | 0.350 | 0.338 | 0.133 | 0.298 | 0.204 | 0.366 | 0.314 |
| pH (S.U.) Instantaneous Minimum | 6.9 | 7.1 | 7.0 | 7.1 | 7.1 | 6.9 | 7.3 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 |
| pH (S.U.) Instantaneous Maximum | 7.2 | 7.2 | 7.3 | 7.4 | 7.3 | 7.4 | 7.5 | 7.4 | 7.4 | 7.4 | 7.4 | 7.5 |
| DO (mg/L) Instantaneous Minimum | 6.8 | 6.9 | 7.0 | 7.0 | 7.0 | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.2 | 7 |
| CBOD5 (lbs/day) Average Monthly | 2.7 | 4.7 | 4.6 | 6.7 | 2 | 4.6 | 26.7 | 3.9 | 3.8 | 2 | 5.9 | 17 |
| CBOD5 (lbs/day) Weekly Average | 4.8 | 14.9 | 9.4 | 17 | 2.7 | 7.6 | 100 | 7.1 | 8.7 | 2.6 | 19.8 | 63.8 |
| CBOD5 (mg/L) Average Monthly | 3.2 | 2.5 | 3.2 | 2.7 | 2.5 | 4.5 | 31.9 | 5.5 | 5.6 | 2.5 | 5.7 | 19 |
| CBOD5 (mg/L) Weekly Average | 5.5 | 4.0 | 5.2 | 4.3 | 3.5 | 9.6 | 120 | 10.1 | 12.9 | 3 | 14 | 69.5 |
| BOD5 (lbs/day) Raw Sewage Influent Average Monthly | 207 | 189 | 204 | 172 | 180 | 181 | 159 | 170 | 268 | 106 | 161 | 263 |
| BOD5 (lbs/day) Raw Sewage Influent Daily Maximum | 399.8 | 335 | 349 | 203 | 249 | 266 | 202 | 207 | 364 | 148 | 256 | 151 |
| BOD5 (mg/L) Raw Sewage Influent Average Monthly | 265.8 | 184 | 145 | 110 | 229 | 175 | 192 | 243 | 252 | 132 | 213 | 222 |
| TSS (lbs/day) Average Monthly | 7.8 | 11.5 | 9.5 | 41.2 | 7.9 | 10.7 | 5.7 | 12.6 | 16.4 | 6.3 | 11.2 | 24.5 |
| TSS (lbs/day) Raw Sewage Influent Average Monthly | 239.4 | 178 | 204 | 215 | 194 | 309 | 138 | 136 | 125 | 96 | 225 | 299 |
| TSS (lbs/day) Raw Sewage Influent Daily Maximum | 451.4 | 230 | 416 | 360 | 305 | 636 | 385 | 232 | 276 | 126 | 436 | 176 |

**NPDES Permit Fact Sheet
Bloomfield STP**

NPDES Permit No. PA0020478

| | | | | | | | | | | | | |
|---|--------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| TSS (lbs/day) Weekly Average | 16.6 | 30 | 14.4 | 86.8 | 16.6 | 32.4 | 8.3 | 27.3 | 34.6 | 9.3 | 19.4 | 38.5 |
| TSS (mg/L) Average Monthly | 9.3 | 7.4 | 7 | 16.5 | 10 | 15.3 | 7 | 18 | 12.4 | 8 | 13.6 | 23 |
| TSS (mg/L) Raw Sewage Influent Average Monthly | 308 | 156 | 137 | 119 | 248 | 266 | 162 | 199 | 107 | 119 | 296 | 243 |
| TSS (mg/L) Weekly Average | 19 | 11 | 10 | 27 | 24 | 41 | 8 | 39 | 31 | 10 | 27 | 42 |
| Fecal Coliform (No./100 ml) Geometric Mean | 668.6 | 15 | 63 | 1.6 | 6 | 43 | 314 | 36 | 49 | 22 | 24 | 245 |
| Fecal Coliform (No./100 ml) Instantaneous Maximum | 2419.6 | 112 | 2419 | 7 | 59 | 2419.6 | 2420 | 136 | 2419 | 39 | 276 | 2419 |
| UV Transmittance (%) Instantaneous Minimum | 50 | 51 | 53 | 53 | 52 | 52 | 36 | 36 | 35 | 36 | 39 | 46 |
| Nitrate-Nitrite (mg/L) Average Monthly | 0.2 | 0.2 | 0.20 | 1.38 | 0.9 | 0.2 | 0.2 | 0.2 | 4.3 | 10 | 0.66 | 9.6 |
| Total Nitrogen (mg/L) Average Monthly | 5.9 | 4.9 | 4.0 | 5.0 | 4 | 6.6 | 2.8 | 4 | 6.6 | 12.5 | 7 | 11.7 |
| Ammonia (lbs/day) Average Monthly | 3.8 | 3.5 | 4.58 | 0.71 | 1.1 | 2.7 | 0.35 | 0.747 | 0.54 | 1.5 | 4.1 | 4.6 |
| Ammonia (mg/L) Average Monthly | 4.4 | 3.3 | 2.7 | 0.39 | 1.5 | 2.1 | 0.38 | 1.04 | 0.56 | 1.8 | 4.3 | 5.1 |
| TKN (mg/L) Average Monthly | 5.7 | 5.4 | 3.8 | 3.6 | 3.1 | 6.4 | 2.6 | 3.78 | 2.3 | 2.4 | 6.3 | 6.5 |
| Total Phosphorus (mg/L) Average Monthly | 4.2 | 0.78 | 3.2 | 1.5 | 2.6 | 0.5 | 0.10 | 0.68 | 3.6 | 5.5 | 1 | 6.6 |
| Total Copper (mg/L) Average Quarterly | | | 0.005 | | | 0.0080 | | | 0.007 | | | 0.015 |
| Total Lead (mg/L) Average Quarterly | | | 0.003 | | | 0.0030 | | | 0.003 | | | 0.003 |
| Total Zinc (lbs/day) Average Monthly | 0.042 | 0.036 | 0.039 | 0.116 | 0.045 | 0.076 | 0.061 | 0.065 | 0.14 | 0.072 | 0.040 | 0.061 |
| Total Zinc (mg/L) Average Monthly | 0.051 | 0.031 | 0.030 | 0.049 | 0.057 | 0.074 | 0.074 | 0.92 | 0.104 | 0.089 | 0.053 | 0.09 |

3.3 Non-Compliance

3.3.1 Non-Compliance- NPDES Effluent

A summary of the non-compliance to the permit limits for the existing permit cycle is as follows.

From the DMR data beginning in January 1, 2021 to October 7, 2025, the following were observed effluent non-compliances.

| Summary of Non-Compliance w/ NPDES Effluent Limits | | | | | | | | | | |
|--|----------------------------------|-----------------------------|------------------------|-----------------|-------------------------|------------------|---------------------|------------------------------|---|--|
| Beginning January 1, 2021 and Ending October 7, 2025 | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| NON_COMPLIANCE_DATE | NON_COMPL_TY_P E_DESC | NON_COMPL_CATEG ORY_DESC | PARAMETER | SAMPLE VALUE | VIOLATION_ CONDITION | PERMIT_ VALUE | UNIT_OF_MEAS URE | STAT_BASE_ CODE | DISCHARGE_COMMENTS | FACILITY_COMMENTS |
| 3/30/2021 | Late DMR Submission | Other Violations | | | | | | | | |
| 7/27/2021 | Violation of permit condition | Effluent | Fecal Coliform | 2430 | > | 1000 | No./100 ml | Instantaneo us Maximum | | Cleaned entire U.V disinfection area. Washed and cleaned screens. The lab did mess up on my MLSS sample results this same week and had to re run my results. It is possible they had an error in the labratory setting during initial testing. After cleaning the results have been well with in parameters. |
| 9/28/2021 | | Unauthorized Discharges | | | | | | | plant influent flow was .598 . sanitary piping could not convey water to plant fast enough. this manhole is 30" deep and is the weakest link in the system | |
| 10/28/2021 | | Unauthorized Discharges | | | | | | | Hydraulic overload in collection system. plant received 1.140 MGD. Main sewer interceptor to plant was cleaned on 9/27/21 in an attempt to resolve the issue. a sizable amount of debris was removed. | |
| 10/28/2021 | | Unauthorized Discharges | | | | | | | Plant received 1.061 MGD during this event. System could not convey to the plant fast enough. | |
| 11/24/2021 | Violation of permit condition | Effluent | Zinc, Total | 0.20 | > | .17 | mg/L | Average Monthly | | Concentration values from the lab results were in violation of the limit. But as a result the loading calculations are within the parameters. I will continue to track results as the lab produces them. |
| 1/4/2022 | Late DMR Submission | Other Violations | | | | | | | | |
| 5/27/2022 | Violation of permit condition | Effluent | Fecal Coliform | 2419.6 | > | 2000 | No./100 ml | Geometric Mean | | Unsure if issue is from lab results not being accurate. Lab has been short handed on staff since March. U.V system will be cleaned and bulbs changed. Effluent qaulity will continue to be monitored. |
| 6/27/2022 | Violation of permit condition | Effluent | Fecal Coliform | 1543.2 | > | 200 | No./100 ml | Geometric Mean | | Faulty equipment on the U.V disinfection system was diagnosed and replaced. We had an intermittent operating issue again like we did in 2018 which prompted the replacement of the system. System has been repaired and is operating at 75% of capacity at this time. We are awaiting parts to repair the remainder of the system. Lab results on fecal for the month of June have all been single digits 7, 4, and 3 as of todays date. |
| 6/27/2022 | Violation of permit condition | Effluent | Fecal Coliform | 2419.6 | > | 1000 | No./100 ml | Instantaneo us Maximum | | All equipment has been diagnosed and process control has been cleaned and verified for proper operation. So far all results in the month of June have been in the single digit range. Some of the issues were also from process issues (MLSS too high) which were also corrected and seem to be well within parameters. I will continue to closely monitor results to ensure proper disinfection. |
| 8/29/2022 | Late DMR Submission | Other Violations | | | | | | | | |
| 5/25/2023 | Violation of permit condition | Effluent | Ammonia-Nitrogen | 9.8 | > | 9.0 | mg/L | Average Monthly | | |
| 6/26/2023 | Violation of permit condition | Effluent | Ammonia-Nitrogen | 6.9 | > | 6.0 | lbs/day | Average Monthly | | |
| 6/26/2023 | Violation of permit condition | Effluent | Ammonia-Nitrogen | 7.3 | > | 3.0 | mg/L | Average Monthly | | |
| 9/26/2023 | Violation of permit condition | Effluent | Total Suspended Solids | 60 | > | 45 | mg/L | Weekly Average | | |
| 1/18/2024 | Violation of permit condition | Effluent | Total Suspended Solids | 110 | > | 45 | mg/L | Weekly Average | | |
| 1/18/2024 | Violation of permit condition | Effluent | Total Suspended Solids | 44.5 | > | 30 | mg/L | Average Monthly | | |
| 10/28/2024 | Violation of permit condition | Effluent | Ammonia-Nitrogen | 5.1 | > | 3.0 | mg/L | Average Monthly | | |

| | | | | | | | | | | |
|------------|-------------------------------|----------|--|--------|---|------|------------|-----------------------|--|--|
| 10/28/2024 | Violation of permit condition | Effluent | Carbonaceous Biochemical Oxygen Demand (CBOD5) | 69.5 | > | 40 | mg/L | Weekly Average | | |
| 10/28/2024 | Violation of permit condition | Effluent | Fecal Coliform | 2419 | > | 1000 | No./100 ml | Instantaneous Maximum | | |
| 10/28/2024 | Violation of permit condition | Effluent | Fecal Coliform | 245 | > | 200 | No./100 ml | Geometric Mean | | |
| 11/24/2024 | Violation of permit condition | Effluent | Ammonia-Nitrogen | 4.3 | > | 3.0 | mg/L | Average Monthly | | |
| 2/25/2025 | Violation of permit condition | Effluent | Zinc, Total | 0.92 | > | .17 | mg/L | Average Monthly | | |
| 3/27/2025 | Violation of permit condition | Effluent | Carbonaceous Biochemical Oxygen Demand (CBOD5) | 100 | > | 83 | lbs/day | Weekly Average | | |
| 3/27/2025 | Violation of permit condition | Effluent | Carbonaceous Biochemical Oxygen Demand (CBOD5) | 120 | > | 40 | mg/L | Weekly Average | | |
| 3/27/2025 | Violation of permit condition | Effluent | Carbonaceous Biochemical Oxygen Demand (CBOD5) | 31.9 | > | 25 | mg/L | Average Monthly | | |
| 7/27/2025 | Violation of permit condition | Effluent | Fecal Coliform | 2419 | > | 1000 | No./100 ml | Instantaneous Maximum | | |
| 8/28/2025 | Violation of permit condition | Effluent | Ammonia-Nitrogen | 3.3 | > | 3.0 | mg/L | Average Monthly | | |
| 9/17/2025 | Violation of permit condition | Effluent | Ammonia-Nitrogen | 4.4 | > | 3.0 | mg/L | Average Monthly | | |
| 9/17/2025 | Violation of permit condition | Effluent | Fecal Coliform | 2419.6 | > | 1000 | No./100 ml | Instantaneous Maximum | | Sludge pump was not pumping waste as efficiently as it should. ammonia levels increased as well as a fecal spike in SBR #1. Pump replaced with new sludge pump , levels appear to be returning to normal. will continue to monitor and adjust as needed. |
| 9/17/2025 | Violation of permit condition | Effluent | Fecal Coliform | 668.6 | > | 200 | No./100 ml | Geometric Mean | | |

3.3.2 Non-Compliance- Enforcement Actions

A summary of the non-compliance enforcement actions for the current permit cycle is as follows:

Beginning in January 1, 2021 to October 7, 2025, there were no observed enforcement actions.

3.4 Summary of Biosolids Disposal

A summary of the biosolids disposed of from the facility is as follows.

DEP computer files do not show the facility submitted biosolids/sewage sludge disposal addendum.

DEP operations staff has been conducted to follow-up.

3.5 Open Violations

No open violations existed as of October 2025.

4.0 Receiving Waters and Water Supply Information Detail Summary

4.1 Receiving Waters

The receiving waters has been determined to be Tributary 11404 to Trout Run. The sequence of receiving streams that the Tributary 11404 to Trout Run discharges into are Trout Run and Little Juniata Creek which eventually drains into the Chesapeake Bay.

4.2 Public Water Supply (PWS) Intake

The closest PWS to the subject facility is Suez Water (PWS ID #7220015) located approximately 21 miles downstream of the subject facility on the Susquehanna River. Based upon the distance and the flow rate of the facility, the PWS should not be impacted.

4.3 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.

4.4 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 4c and 5 waterbody. This stream is an impaired stream for aquatic life due to (1) habitat alterations from removal of riparian vegetation and (2) siltation from removal of riparian vegetation. The receiving waters is also impaired for recreational uses due to pathogens from an unknown source. The designated use has been classified as protected waters for cold water fishes (CWF) and migratory fishes (MF).

4.5 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 closest WQN station to the subject facility is the Susquehanna River @ Harrisburg (WQN202). This WQN station is located approximately 27 miles downstream of the subject facility.

The closest gauge station to the subject facility is the Susquehanna River at Harrisburg, PA (USGS station number 1570500). This gauge station is located approximately 27 miles downstream of the subject facility.

For WQM modeling, pH and stream water temperature data from the water quality network station was used. pH was estimated to be 8.25 and the stream water temperature was estimated to be 23.75 C.

The hardness of the stream was estimated from the water quality network to be 109 mg/l CaCO₃.

The low flow yield and Q710 differs from the previous Fact Sheet. USGS Selected Streamflow Statistics for Streamgauge Locations in and near Pennsylvania itemized two different sets of data. One data set was based upon the years 1901 to 1972. The second data set was based upon the years 1974 to 2008. The prior fact sheet used the older data set. This fact sheet used the later data set.

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

| Gauge Station Data | | |
|--|-------------------------------------|--------------------------------------|
| USGS Station Number | 1570500 | |
| Station Name | Susquehanna River at Harrisburg, PA | |
| Q710 | 3200 | ft ³ /sec |
| Drainage Area (DA) | 24,100 | mi ² |
| Calculations | | |
| The low flow yield of the gauge station is: | | |
| Low Flow Yield (LFY) = Q710 / DA | | |
| LFY = (3,200 ft ³ /sec / 24,100 mi ²) | | |
| LFY = | 0.1328 | ft ³ /sec/mi ² |
| The low flow at the subject site is based upon the DA of | | |
| | 4.56 | mi ² |
| Q710 = (LFY@gauge station)(DA@Subject Site) | | |
| Q710 = (0.1328 ft ³ /sec/mi ²)(4.56 mi ²) | | |
| Q710 = | 0.605 | ft ³ /sec |

4.6 Summary of Discharge, Receiving Waters and Water Supply Information

| | | | |
|--|---|------------------------------|--------------------------------|
| Outfall No. | <u>001</u> | Design Flow (MGD) | <u>.25</u> |
| Latitude | <u>40° 25' 1.50"</u> | Longitude | <u>-77° 10' 55.19"</u> |
| Quad Name | <u></u> | Quad Code | <u></u> |
| Wastewater Description: <u>Sewage Effluent</u> | | | |
| | | | |
| Receiving Waters | <u>Unnamed Tributary to Trout Run (CWF)</u> | Stream Code | <u>11404</u> |
| NHD Com ID | <u>56399287</u> | RMI | <u>0.86</u> |
| Drainage Area | <u>4.56</u> | Yield (cfs/mi ²) | <u>0.1328</u> |
| Q ₇₋₁₀ Flow (cfs) | <u>0.605</u> | Q ₇₋₁₀ Basis | <u>StreamStats/streamgauge</u> |
| Elevation (ft) | <u>640</u> | Slope (ft/ft) | <u></u> |
| Watershed No. | <u>7-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>Impaired for aquatic life</u> | | |
| Cause(s) of Impairment | <u>Habitat alteration / Siltation</u> | | |
| Source(s) of Impairment | <u>Removal of riparian vegetation</u> | | |
| TMDL Status | <u>Not applicable</u> | Name | <u></u> |
| | | | |
| Background/Ambient Data | | Data Source | |
| pH (SU) | <u>8.25</u> | WQN202; median Jul to Oct | <u></u> |
| Temperature (°C) | <u>23.75</u> | WQN202; median Jul to Oct | <u></u> |
| Hardness (mg/L) | <u>109</u> | WQN202; historical median | <u></u> |
| Other: | <u></u> | | <u></u> |
| | | | |
| Nearest Downstream Public Water Supply Intake | <u>Suez Water</u> | | |
| PWS Waters | <u>Susquehanna River</u> | Flow at Intake (cfs) | <u></u> |
| PWS RMI | <u>76.3</u> | Distance from Outfall (mi) | <u>21</u> |

5.0: Overview of Presiding Water Quality Standards

5.1 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.

5.2.1 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). Available TBEL requirements for the state of Pennsylvania are itemized in PA Code 25, Chapter 92a.47.

The presiding sources for the basis for the effluent limitations are governed by either federal or state regulation. The reference sources for each of the parameters is itemized in the tables. The following technology-based limitations apply, subject to water quality analysis and best professional judgement (BPJ) where applicable:

| Parameter | 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) |

5.2.2 Mass Based Limits

For publicly owned treatment works (POTW), mass loadings are calculated based upon design flow rate of the facility and the permit limit concentration. The generalized calculation for mass loadings is shown below:

$$Quantity \left(\frac{lb}{day} \right) = (MGD)(Concentration)(8.34)$$

5.3 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) | (Modeling Point #2) | Units |
|-----------------------|----------------------------|----------------------------|--------------|
| Stream Code | 11404 | 11404 | |
| River Mile Index | 0.86 | 0 | miles |
| Elevation | 640 | 606 | feet |
| Latitude | 40.417214 | 40.41014 | |
| Longitude | -77.182039 | -77.171145 | |
| Drainage Area | 4.56 | 9.57 | sq miles |
| Low Flow Yield | 0.605 | 0.605 | cfs/sq mile |

5.3.1 Water Quality Modeling 7.0

The WQM Model is a computer model that is used to determine NPDES discharge effluent limitations for Carbonaceous BOD (CBOD5), Ammonia Nitrogen (NH₃-N), and Dissolved Oxygen (DO) for single and multiple point source discharges scenarios. WQM Model is a complete-mix model which means that the discharge flow and the stream flow are assumed to instantly and completely mixed at the discharge node.

WQM recommends effluent limits for DO, CBOD5, and NH₃-N in mg/l for the discharge(s) in the simulation.

Four types of limits may be recommended. The limits are

- (a) a minimum concentration for DO in the discharge as 30-day average;
- (b) a 30-day average concentration for CBOD5 in the discharge;
- (c) a 30-day average concentration for the NH₃-N in the discharge;
- (d) 24-hour average concentration for NH₃-N in the discharge.

The WQM Model requires several input values for calculating output values. The source of data originates from either EMAP, the National Map, or Stream Stats. Data for stream gauge information, if any, was abstracted from USGS Low-Flow, Base-Flow, and Mean-Flow Regression Equations for Pennsylvania Streams authored by Marla H. Stuckey (Scientific Investigations Report 2006-5130).

The applicable WQM Effluent Limit Type are discussed in Section 6 under the corresponding parameter which is either DO, CBOD, or ammonia-nitrogen.

5.3.2 Toxics Modeling

The Toxics Management Spreadsheet model is a computer model that is used to determine effluent limitations for toxics (and other substances) for single discharge wasteload allocations. This computer model uses a mass-balance water quality analysis that includes consideration for mixing, first-order decay, and other factors used to determine recommended water quality-based effluent limits. Toxics Management Spreadsheet does not assume that all discharges completely mix with the stream. The point of compliance with water quality criteria are established using criteria compliance times (CCTs). The available CCTs are either acute fish criterion (AFC), chronic fish criterion (CFC), or human health criteria (THH & CRL).

Acute Fish Criterion (AFC) measures the criteria compliance time as either the maximum criteria compliance time (i.e. 15 minutes travel time downstream of the current discharge) or the complete mix time whichever comes first. AFC is evaluated at Q710 conditions.

Chronic Fish Criterion (CFC) measures the criteria compliance time as either the maximum criteria compliance time (i.e. 12 hours travel time downstream of the current discharge) or the complete mix time whichever comes first. CFC is evaluated at Q710 conditions.

Threshold Human Health (THH) measures the criteria compliance time as either the maximum criteria compliance time (i.e. 12 hours travel time downstream of the current discharge) or the estimated travel time downstream to the nearest potable water supply intake whichever comes first. THH is evaluated at Q710 conditions.

Cancer Risk Level (CRL) measures the criteria compliance time as either the maximum criteria compliance time (i.e. 12 hours travel time downstream of the current discharge) or the complete mix time whichever comes first. CRL is evaluated at Qh (harmonic mean or normal flow) conditions.

The Toxics Model requires several input values for calculating output values. The source of data originates from either EMAP, the National Map, or Stream Stats. Data for stream gauge information, if any, was abstracted from USGS Low-Flow, Base-Flow, and Mean-Flow Regression Equations for Pennsylvania Streams authored by Marla H. Stuckey (Scientific Investigations Report 2006-5130).

5.3.2.1 Determining if NPDES Permit Will Require Monitoring/Limits in the Proposed Permit for Toxic Pollutants

To determine if Toxics modeling is necessary, DEP has developed a Toxics Management Spreadsheet to identify toxics of concern. Toxic pollutants whose maximum concentrations as reported in the permit application or on DMRs are greater than the most stringent applicable water quality criterion are pollutants of concern. A Reasonable Potential Analysis was utilized to determine (a) if the toxic parameters modeled would require monitoring or (b) if permit limitations would be required for the parameters. The toxics reviewed for reasonable potential were the following pollutants: TDS, Chloride, Bromide, Sulfate, Total Copper, Total Lead, and Total Zinc.

The NPDES application collected one sample except for total zinc.

In lieu of the absent data for total zinc, DMR data was used for toxics modeling.

Based upon the SOP- Establishing Water Quality-Based Effluent Limitations (WQBELs) and Permit Conditions for Toxic Pollutants (Revised January 10, 2019), monitoring and/or limits will be established as follows.

- (a) When reasonable potential is demonstrated, establish limits where the maximum reported concentration equals or exceeds 50% of the WQBEL.
- (b) For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
- (c) For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10% - 50% of the WQBEL.

Applicable monitoring or permit limits for toxics are summarized in Section 6.

The Toxics Management Spreadsheet output has been included in Attachment B.

5.3.3 Whole Effluent Toxicity (WET)

The facility is not subject to WET.

5.4 Total Maximum Daily Loading (TMDL)

5.4.1 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:

$$\text{TMDL} = \Sigma \text{WLAs} + \Sigma \text{LAs} + \text{MOS}$$

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.

5.4.1.1 Local TMDL

The subject facility does not discharge into a local TMDL.

5.4.1.2 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 include 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.

For Phase 5 sewage facilities with individual permits (average annual design flow on August 29, 2005 > 0.002 MGD and < 0.2 MGD), DEP will issue individual permits with monitoring and reporting for TN and TP throughout the permit term at a frequency no less than annually, unless 1) the facility has already conducted at least two years of nutrient monitoring and 2) a summary of the monitoring results are included in the next permit's fact sheet. If, however, Phase 5 facilities choose to expand, the renewed or amended permits will contain Cap Loads based on the lesser of a) existing TN/TP concentrations at current design average annual flow or b) 7,306 lbs/yr TN and 974 lbs/yr TP.

If no data are available to determine existing concentrations for expanding Phase 4 or 5 facilities, default concentrations of 25 mg/l TN and 4 mg/l TP may be used (these are the average estimated concentrations of all non-significant sewage facilities).

DEP will not issue permits to existing Phase 4 and 5 facilities containing Cap Loads unless it is done on a broad scale or unless the facilities are expanding.

For new Phase 4 and 5 sewage discharges, in general DEP will issue new permits containing Cap Loads of "0" and new facilities will be expected to purchase credits and/or apply offsets to achieve compliance, with the exception of small flow and single residence facilities.

This facility is subject to Sector C monitoring requirements. Monitoring for nitrogen species and phosphorus shall be at least 1x/quarterly.

5.5 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.

5.6 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.I.1 and 40 CFR 122.I.2). A review of the existing permit limitations with the proposed permit limitations confirm that the facility is consistent with anti-backsliding requirements. The facility has proposed effluent limitations that are as stringent as the existing permit.

6.0 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;
- b) a summary of changes from the existing NPDES permit to the proposed permit; and
- c) a summary of the proposed NPDES effluent limits.

6.1 Recommended Monitoring Requirements and Effluent Limitations

A summary of the recommended monitoring requirements and effluent limitations are itemized in the tables. The tables are categorized by (a) Conventional Pollutants and Disinfection, (b) Nitrogen Species and Phosphorus, (c) Toxics, and (d) Non-Conventional Pollutants, and (e) Chapter 92a.61 targeted parameters

6.1.1 Conventional Pollutants and Disinfection

| Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection Bloomfield STP; PA0020478 | | | |
|---|--|-----------------|---|
| Parameter | Permit Limitation Required by ¹ : | Recommendation | |
| pH (S.U.) | TBEL | Monitoring: | The monitoring frequency shall be daily as a grab sample (Table 6-3). |
| | | Effluent Limit: | Effluent limits may range from pH = 6.0 to 9.0 |
| | | Rationale: | The monitoring frequency has been assigned in accordance with Table 6-3 and the effluent limits assigned by Chapter 95.2(1). |
| Dissolved Oxygen | BPJ | Monitoring: | The monitoring frequency shall be daily as a grab sample (Table 6-3). |
| | | Effluent Limit: | Effluent limits shall be greater than 5.0 mg/l. |
| | | Rationale: | The monitoring frequency has been assigned in accordance with Table 6-3 and the effluent limits assigned by best professional judgement. |
| CBOD | TBEL | Monitoring: | The monitoring frequency shall be 1x/wk as an 8-hr composite sample (Table 6-3). |
| | | Effluent Limit: | Effluent limits shall not exceed 52 lbs/day and 25 mg/l as an average monthly. |
| | | Rationale: | The monitoring frequency has been assigned in accordance with Table 6-3 and the effluent limits assigned by Chapter 92a.47(a)(1). WQM modeling indicates that the TBEL is more stringent than the WQBEL. Thus, the permit limit is confined to TBEL. |
| TSS | TBEL | Monitoring: | The monitoring frequency shall be 1x/wk as an 8-hr composite sample (Table 6-3). |
| | | Effluent Limit: | Effluent limits shall not exceed 62 lbs/day and 30 mg/l as an average monthly. |
| | | Rationale: | The monitoring frequency has been assigned in accordance with Table 6-3 and the effluent limits assigned by Chapter 92a.47(a)(1). While there is no WQM modeling for this parameter, the permit limit for TSS is generally assigned similar effluent limits as CBOD or BOD. |
| UV disinfection | SOP | Monitoring: | The monitoring frequency is 1x/day. The facility will be required to recording the UV transmittance. |
| | | Effluent Limit: | No effluent requirements. |
| | | Rationale: | Consistent with the SOP- Establishing Effluent Limitations for Individual Sewage Permits (Revised January 10, 2019), the facility will be required to have routine monitoring for UV transmittance, UV dosage, or UV intensity. |
| Fecal Coliform | TBEL | Monitoring: | The monitoring frequency shall be 1x/wl as a grab sample (Table 6-3). |
| | | Effluent Limit: | Summer effluent limits shall not exceed 200 No./100 mL as a geometric mean. Winter effluent limits shall not exceed 2000 No./100 mL as a geometric mean. |
| | | Rationale: | The monitoring frequency has been assigned in accordance with Table 6-3 and the effluent limits assigned by Chapter 92a.47(a)(4) and 92a.47(a)(5). |

Notes:

- 1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other
- 2 Monitoring frequency based on flow rate of 0.25 MGD.
- 3 Table 6-3 (Self Monitoring Requirements for Sewage Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits) (Document # 362-0400-001) Revised 10/97
- 4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)
- 5 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement, Revised September 13, 2021

6.1.2 Nitrogen Species and Phosphorus

| Summary of Proposed NPDES Parameter Details for Nitrogen Species and Phosphorus | | | |
|---|--|-----------------|--|
| Bloomfield STP; PA0020478 | | | |
| Parameter | Permit Limitation Required by ¹ : | Recommendation | |
| Ammonia-Nitrogen | WQBEL/Anti-backsliding | Monitoring: | The monitoring frequency shall be 1x/wk as an 8-hr composite sample |
| | | Effluent Limit: | During the months of May 1 to Oct 31, effluent limits shall not exceed 6.0 lbs/day and 3.0 mg/l as an average monthly. During the months of Nov 1 to Apr 30, effluent limits shall not exceed 18 lbs/day and 9.0 mg/l as an average monthly. |
| | | Rationale: | Due to anti-backsliding provisions, the current permit limit shall continue to the proposed permit. |
| Nitrate-Nitrite as N | Chesapeake Bay TMDL | Monitoring: | The monitoring frequency shall be 1x/quarter as an 8-hr composite sample |
| | | Effluent Limit: | No effluent requirements. |
| | | Rationale: | Due to the Chesapeake Bay Implementation Plan, the facility is required to be monitored on a frequency at least 1x/quarter |
| Total Nitrogen | Chesapeake Bay TMDL | Monitoring: | The monitoring frequency shall be 1x/quarter as an 8-hr composite sample |
| | | Effluent Limit: | No effluent requirements. |
| | | Rationale: | Due to the Chesapeake Bay Implementation Plan, the facility is required to be monitored on a frequency at least 1x/quarter |
| TKN | Chesapeake Bay TMDL | Monitoring: | The monitoring frequency shall be 1x/quarter as an 8-hr composite sample |
| | | Effluent Limit: | No effluent requirements. |
| | | Rationale: | Due to the Chesapeake Bay Implementation Plan, the facility is required to be monitored on a frequency at least 1x/quarter |
| Total Phosphorus | Chesapeake Bay TMDL | Monitoring: | The monitoring frequency shall be 1x/quarter as an 8-hr composite sample |
| | | Effluent Limit: | No effluent requirements. |
| | | Rationale: | Due to the Chesapeake Bay Implementation Plan, the facility is required to be monitored on a frequency at least 1x/quarter |
| Notes: | | | |

1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other

2 Monitoring frequency based on flow rate of 0.25 MGD.

3 Table 6-3 (Self Monitoring Requirements for Sewage Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document # 362-0400-001) Revised 10/97

4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)

5 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement, Revised September 13, 2021

6.1.3 Toxics

Two modeling runs were completed for toxics.

Run #1 utilized monitoring results reported in the NPDES renewal application

Run #2 utilized DMR data collected from January 2021 to April 2025. Elevated levels of copper and lead were observed in the October 2023 DMR. The operator stated that water line repairs may have attributed to the elevated levels. The October 2023 DMR data was considered outliers and excluded from calculating the maximum values for the data set.

In either Run #1 and Run #2, effluent limits for lead and zinc were recommended by TMS.

Based upon the DMR from September 2024 to August 2025, the facility should be able to meet the proposed effluent limits for lead and zinc.

| Summary of Proposed NPDES Parameter Details for Toxics | | | |
|--|--|-----------------|---|
| Bloomfield STP; PA0020478 | | | |
| Parameter | Permit Limitation Required by ¹ : | Recommendation | |
| Total Copper | WQBEL | Monitoring: | The monitoring frequency shall be 1x/quarter as an 8-hr composite sample |
| | | Effluent Limit: | No effluent limit requirements |
| | | Rationale: | Toxics Management Spreadsheet recommends monitoring. |
| Total Lead | WQBEL | Monitoring: | The monitoring frequency shall be 1x/mo as an 8-hr composite sample |
| | | Effluent Limit: | Effluent limits shall not exceed 0.059 lbs/day and 0.028 mg/l as an average monthly. |
| | | Rationale: | Toxics Management Spreadsheet recommends effluent limits |
| Total Zinc | WQBEL | Monitoring: | The monitoring frequency shall be 1x/mo as an 8-hr composite sample |
| | | Effluent Limit: | Effluent limits shall not exceed 1.39 lbs/day and 0.66 mg/l as an average monthly. |
| | | Rationale: | Toxics Management Spreadsheet recommends effluent limits. Due to an update on the Q710, the proposed permit limit is less stringent than the current permit limit |
| Notes: | | | |
| 1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other | | | |
| 2 Monitoring frequency based on flow rate of 0.25 MGD. | | | |
| 3 Table 6-3 (Self Monitoring Requirements for Sewage Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits) (Document # 362-0400-001) Revised 10/97 | | | |
| 4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002) | | | |
| 5 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement, Revised September 13, 2021 | | | |

6.1.3.1 Implementation of Regulation- Chapter 92a.61

Chapter 92a.61 provides provisions to DEP to monitor for pollutants that may have an impact on the quality of waters of the Commonwealth.

Based upon DEP policy directives the following pollutants shall be monitored:

- Consistent with DEP Management directives issued on March 22, 2021 and in conjunction with EPA's 2017 Triennial Review, monitoring for E. Coli shall be required. The monitoring frequency is based upon flow rate.

| Summary of Proposed NPDES Parameter Details for pollutants monitored under Chapter 92a.61 Bloomfield STP; PA0020478 | | | |
|--|---|-----------------|---|
| Parameter | Permit Limitation Required by ¹ : | Recommendation | |
| E. Coli | SOP; Chapter 92a.61 | Monitoring: | The monitoring frequency shall be 1x/quarter as a grab sample (SOP). |
| | | Effluent Limit: | No effluent requirements. |
| | | Rationale: | Consistent with the SOP- Establishing Effluent Limitations for Individual Sewage Permits (Revised Febraury 5, 2024) and under the authority of Chapter 92a.61, the facility will be required to monitor for E.Coli. |
| | | | |
| | | | |
| Notes: | | | |
| 1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other | | | |
| 2 Monitoring frequency based on flow rate of 0.25 MGD. | | | |
| 3 Table 6-3 (Self Monitoring Requirements for Sewage Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits) (Document # 362-0400-001) Revised 10/97 | | | |
| 4 Water Quality Antidegradation Implementation Guidance (Document # 391-0300-002) | | | |
| 5 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement, Revised September 13, 2021 | | | |

6.2 Summary of Changes From Existing Permit to Proposed Permit

A summary of how the proposed NPDES permit differs from the existing NPDES permit is summarized as follows.

- Monitoring for nitrogen species and phosphorus have been reduced to quarterly.
- Due to the EPA triennial review, monitoring for E.Coli shall be required.
- Monitoring and effluent limits shall be required for Total Lead and Total Zinc

6.3.1 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° 25' 1.97", Longitude 77° 10' 55.34", River Mile Index 0.86, Stream Code 11404

Receiving Waters: Unnamed Tributary to Trout Run (CWF)

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 | Weekly Average | Instantaneous Minimum | Average Monthly | Weekly Average | Instant. Maximum | | |
| Flow (MGD) | Report | Report Daily Max | XXX | XXX | XXX | XXX | Continuous | Measured |
| pH (S.U.) | XXX | XXX | 6.0 | XXX | XXX | 9.0 | 1/day | Grab |
| Dissolved Oxygen | XXX | XXX | 5.0 | XXX | XXX | XXX | 1/day | Grab |
| Carbonaceous Biochemical Oxygen Demand (CBOD5) | 52 | 83 | XXX | 25 | 40 | 50 | 1/week | 8-Hr Composite |
| Biochemical Oxygen Demand (BOD5) | Report | Report Daily Max | XXX | Report | XXX | XXX | 1/week | 8-Hr Composite |
| Raw Sewage Influent | Report | Report Daily Max | XXX | Report | XXX | XXX | 1/week | 8-Hr Composite |
| Total Suspended Solids Raw Sewage Influent | Report | Report Daily Max | XXX | Report | XXX | XXX | 1/week | 8-Hr Composite |
| Total Suspended Solids | 62 | 93 | XXX | 30 | 45 | 60 | 1/week | 8-Hr Composite |
| Fecal Coliform (No./100 ml) Oct 1 - Apr 30 | XXX | XXX | XXX | 2000 Geo Mean | XXX | 10000 | 1/week | Grab |
| Fecal Coliform (No./100 ml) May 1 - Sep 30 | XXX | XXX | XXX | 200 Geo Mean | XXX | 1000 | 1/week | Grab |
| E. Coli (No./100 ml) | XXX | XXX | XXX | XXX | Report Daily Max | XXX | 1/quarter | Grab |
| Ultraviolet light transmittance (%) | XXX | XXX | Report | XXX | XXX | XXX | 1/day | Measured |

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 | Weekly Average | Instantaneous Minimum | Average Monthly | Weekly Average | Instant. Maximum | | |
| Nitrate-Nitrite as N | XXX | XXX | XXX | Report Avg Qrtly | XXX | XXX | 1/quarter | 8-Hr Composite |
| Total Nitrogen | XXX | XXX | XXX | Report Avg Qrtly | XXX | XXX | 1/quarter | Calculation |
| Ammonia-Nitrogen Nov 1 - Apr 30 | 18.0 | XXX | XXX | 9.0 | XXX | 18 | 1/week | 8-Hr Composite |
| Ammonia-Nitrogen May 1 - Oct 31 | 6.0 | XXX | XXX | 3.0 | XXX | 6 | 1/week | 8-Hr Composite |
| Total Kjeldahl Nitrogen | XXX | XXX | XXX | Report Avg Qrtly | XXX | XXX | 1/quarter | 8-Hr Composite |
| Total Phosphorus | XXX | XXX | XXX | Report Avg Qrtly | XXX | XXX | 1/quarter | 8-Hr Composite |
| Copper, Total | XXX | XXX | XXX | Report Avg Qrtly | XXX | XXX | 1/quarter | 8-Hr Composite |
| Lead, Total | 0.059 | XXX | XXX | 0.028 | 0.044 Daily Max | 0.071 | 1/month | 8-Hr Composite |
| Zinc, Total | 1.39 | XXX | XXX | 0.66 | 1.03 Daily Max | 1.66 | 1/month | 8-Hr Composite |

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

at Outfall 001

6.3.2 Summary of Proposed Permit Part C Conditions

The subject facility has the following Part C conditions.

- SBR Batch Discharge Condition
- UV Monitoring Conditions
- Peak Flow Management Plan
- Hauled-in Waste Restrictions
- Chesapeake Bay Nutrient Definitions
- Solids Management for Non-Lagoon Treatment Systems

| Tools and References Used to Develop Permit | |
|---|--|
| <input checked="" type="checkbox"/> | WQM for Windows Model (see Attachment [REDACTED]) |
| <input checked="" 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: [REDACTED] |
| <input type="checkbox"/> | Other: [REDACTED] |

Attachment A

Stream Stats/Gauge Data

14 Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania

Table 1. List of U.S. Geological Survey streamgage locations in and near Pennsylvania with updated streamflow statistics.—Continued

[Latitude and Longitude in decimal degrees; mi², square miles]

| Streamgage number | Streamgage name | Latitude | Longitude | Drainage area (mi ²) | Regulated ¹ |
|-------------------|---|----------|-----------|----------------------------------|------------------------|
| 01561000 | Brush Creek at Gapsville, Pa. | 39.956 | -78.254 | 36.8 | N |
| 01562000 | Raystown Branch Juniata River at Saxton, Pa. | 40.216 | -78.265 | 756 | N |
| 01562500 | Great Trough Creek near Marklesburg, Pa. | 40.350 | -78.130 | 84.6 | N |
| 01563200 | Raystown Branch Juniata River below Rays Dam nr Huntingdon, Pa. | 40.429 | -77.991 | 960 | Y |
| 01563500 | Juniata River at Mapleton Depot, Pa. | 40.392 | -77.935 | 2,030 | Y |
| 01564500 | Aughwick Creek near Three Springs, Pa. | 40.213 | -77.925 | 205 | N |
| 01565000 | Kishacoquillas Creek at Reedsville, Pa. | 40.655 | -77.583 | 164 | N |
| 01565700 | Little Lost Creek at Oakland Mills, Pa. | 40.605 | -77.311 | 6.52 | N |
| 01566000 | Tuscarora Creek near Port Royal, Pa. | 40.515 | -77.419 | 214 | N |
| 01566500 | Cocolamus Creek near Millerstown, Pa. | 40.566 | -77.118 | 57.2 | N |
| 01567000 | Juniata River at Newport, Pa. | 40.478 | -77.129 | 3,354 | Y |
| 01567500 | Bixler Run near Loysville, Pa. | 40.371 | -77.402 | 15.0 | N |
| 01568000 | Sherman Creek at Shermans Dale, Pa. | 40.323 | -77.169 | 207 | N |
| 01568500 | Clark Creek near Carsonville, Pa. | 40.460 | -76.751 | 22.5 | LF |
| 01569000 | Stony Creek nr Dauphin, Pa. | 40.380 | -76.907 | 33.2 | N |
| 01569800 | Letort Spring Run near Carlisle, Pa. | 40.235 | -77.139 | 21.6 | N |
| 01570000 | Conodoguinet Creek near Hogestown, Pa. | 40.252 | -77.021 | 470 | LF |
| 01570500 | Susquehanna River at Harrisburg, Pa. | 40.255 | -76.886 | 24,100 | Y |
| 01571000 | Paxton Creek near Penbrook, Pa. | 40.308 | -76.850 | 11.2 | N |
| 01571500 | Yellow Breeches Creek near Camp Hill, Pa. | 40.225 | -76.898 | 213 | N |
| 01572000 | Lower Little Swatara Creek at Pine Grove, Pa. | 40.538 | -76.377 | 34.3 | N |
| 01572025 | Swatara Creek near Pine Grove, Pa. | 40.533 | -76.402 | 116 | N |
| 01572190 | Swatara Creek near Inwood, Pa. | 40.479 | -76.531 | 167 | N |
| 01573000 | Swatara Creek at Harper Tavern, Pa. | 40.403 | -76.577 | 337 | N |
| 01573086 | Beck Creek near Cleona, Pa. | 40.323 | -76.483 | 7.87 | N |
| 01573160 | Quittapahilla Creek near Bellegrove, Pa. | 40.343 | -76.562 | 74.2 | N |
| 01573500 | Manada Creek at Manada Gap, Pa. | 40.397 | -76.709 | 13.5 | N |
| 01573560 | Swatara Creek near Hershey, Pa. | 40.298 | -76.668 | 483 | N |
| 01574000 | West Conewago Creek near Manchester, Pa. | 40.082 | -76.720 | 510 | N |
| 01574500 | Codorus Creek at Spring Grove, Pa. | 39.879 | -76.853 | 75.5 | Y |
| 01575000 | South Branch Codorus Creek near York, Pa. | 39.921 | -76.749 | 117 | Y |
| 01575500 | Codorus Creek near York, Pa. | 39.946 | -76.755 | 222 | Y |
| 01576000 | Susquehanna River at Marietta, Pa. | 40.055 | -76.531 | 25,990 | Y |
| 01576085 | Little Conestoga Creek near Churchtown, Pa. | 40.145 | -75.989 | 5.82 | N |
| 01576500 | Conestoga River at Lancaster, Pa. | 40.050 | -76.277 | 324 | N |
| 01576754 | Conestoga River at Conestoga, Pa. | 39.946 | -76.368 | 470 | N |
| 01578310 | Susquehanna River at Conowingo, Md. | 39.658 | -76.174 | 27,100 | Y |
| 01578400 | Bowery Run near Quarryville, Pa. | 39.895 | -76.114 | 5.98 | N |
| 01580000 | Deer Creek at Rocks, Md. | 39.630 | -76.403 | 94.4 | N |
| 01581500 | Bynum Run at Bel Air, Md. | 39.541 | -76.330 | 8.52 | N |
| 01581700 | Winters Run near Benson, Md. | 39.520 | -76.373 | 34.8 | N |
| 01582000 | Little Falls at Blue Mount, Md. | 39.604 | -76.620 | 52.9 | N |
| 01582500 | Gunpowder Falls at Glencoe, Md. | 39.550 | -76.636 | 160 | Y |
| 01583000 | Slade Run near Glyndon, Md. | 39.495 | -76.795 | 2.09 | N |
| 01583100 | Piney Run at Dover, Md. | 39.521 | -76.767 | 12.3 | N |

Table 2 27

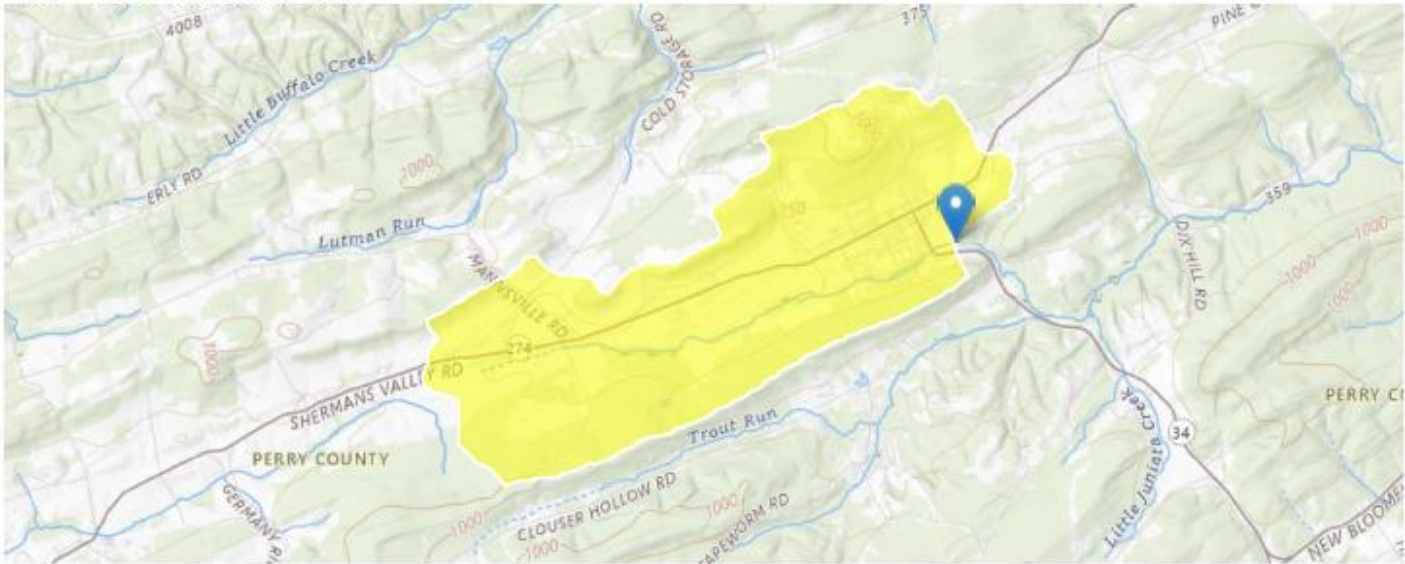
Table 2. Selected low-flow statistics for streamgage locations in and near Pennsylvania.—Continued

[ft³/s; cubic feet per second; —, statistic not computed; <, less than]

| Streamgage number | Period of record used in analysis ¹ | Number of years used in analysis | 1-day, 10-year (ft ³ /s) | 7-day, 10-year (ft ³ /s) | 7-day, 2-year (ft ³ /s) | 30-day, 10-year (ft ³ /s) | 30-day, 2-year (ft ³ /s) | 90-day, 10-year (ft ³ /s) |
|-------------------|--|----------------------------------|-------------------------------------|-------------------------------------|------------------------------------|--------------------------------------|-------------------------------------|--------------------------------------|
| 01565000 | 1941–2008 | 37 | 17.6 | 18.6 | 28.6 | 20.3 | 32.4 | 24.4 |
| 01565700 | 1965–1981 | 17 | .4 | .4 | .9 | .5 | 1.1 | .8 |
| 01566000 | 1913–2008 | 52 | 4.3 | 7.9 | 18.8 | 12.4 | 25.6 | 19.2 |
| 01566500 | 1932–1958 | 27 | 1.7 | 2.4 | 4.0 | 3.2 | 5.7 | 4.9 |
| 01567000 | ² 1974–2008 | 35 | 504 | 534 | 725 | 589 | 857 | 727 |
| 01567000 | ³ 1901–1972 | 72 | 311 | 367 | 571 | 439 | 704 | 547 |
| 01567500 | 1955–2008 | 54 | 2.0 | 2.2 | 3.3 | 2.6 | 3.8 | 3.1 |
| 01568000 | 1931–2008 | 78 | 12.7 | 15.5 | 25.5 | 19.2 | 32.0 | 26.0 |
| 01568500 | ² 1943–1997 | 55 | 1.8 | 2.3 | 4.3 | 2.7 | 5.0 | 3.1 |
| 01569000 | 1939–1974 | 14 | 2.6 | 4.0 | 7.4 | 5.1 | 9.4 | 7.8 |
| 01569800 | 1978–2008 | 31 | 15.9 | 17.0 | 24.4 | 18.4 | 26.1 | 20.3 |
| 01570000 | ³ 1913–1969 | 35 | — | 63.1 | 110 | 76.1 | 124 | 95.3 |
| 01570000 | ² 1971–2008 | 38 | 63.1 | 69.3 | 109 | 78.3 | 125 | 97.8 |
| 01570500 | ³ 1901–1972 | 72 | 2,310 | 2,440 | 4,000 | 2,830 | 4,950 | 3,850 |
| 01570500 | ² 1974–2008 | 35 | 3,020 | 3,200 | 5,180 | 3,690 | 6,490 | 4,960 |
| 01571000 | 1941–1995 | 16 | .1 | .2 | .6 | .3 | 1.2 | .8 |
| 01571500 | 1911–2008 | 62 | 81.6 | 86.8 | 115 | 94.0 | 124 | 105 |
| 01572000 | 1921–1984 | 14 | 2.1 | 2.3 | 4.8 | 3.0 | 6.5 | 4.5 |
| 01572025 | 1990–2008 | 17 | 15.2 | 16.4 | 26.7 | 18.5 | 34.6 | 27.7 |
| 01572190 | 1990–2008 | 17 | 19.1 | 20.5 | 36.2 | 23.9 | 45.8 | 35.3 |
| 01573000 | 1920–2008 | 89 | 18.0 | 22.0 | 52.0 | 30.8 | 69.2 | 50.9 |
| 01573086 | 1965–1981 | 17 | .5 | .6 | 2.6 | .8 | 3.3 | 1.1 |
| 01573160 | 1977–1994 | 18 | 26.9 | 29.6 | 46.4 | 33.6 | 51.9 | 39.5 |
| 01573500 | 1939–1958 | 20 | 1.3 | 1.4 | 2.5 | 1.8 | 3.2 | 2.6 |
| 01573560 | 1977–2008 | 30 | 50.3 | 62.0 | 104 | 76.9 | 131 | 108 |
| 01574000 | 1930–2008 | 79 | 8.0 | 11.1 | 32.0 | 17.7 | 47.0 | 33.9 |
| 01574500 | ² 1968–2008 | 41 | 14.2 | 24.0 | 35.9 | 29.4 | 42.0 | 33.3 |
| 01574500 | ³ 1930–1966 | 34 | 2.3 | 7.1 | 11.5 | 9.3 | 14.8 | 12.7 |
| 01575000 | ² 1973–1995 | 23 | .7 | 1.4 | 6.7 | 3.2 | 12.0 | 9.3 |
| 01575000 | ³ 1929–1971 | 43 | .1 | .6 | 10.3 | 2.3 | 15.0 | 6.1 |
| 01575500 | ² 1948–1996 | 49 | 12.1 | 18.7 | 41.3 | 23.9 | 50.0 | 33.8 |
| 01576000 | ³ 1933–1972 | 40 | 2,100 | 2,420 | 4,160 | 2,960 | 5,130 | 4,100 |
| 01576000 | ² 1974–2008 | 35 | 2,990 | 3,270 | 5,680 | 3,980 | 7,180 | 5,540 |
| 01576085 | 1984–1995 | 12 | .4 | .5 | .8 | .7 | 1.2 | 1.2 |
| 01576500 | 1931–2008 | 78 | 27.2 | 38.6 | 79.4 | 49.1 | 97.3 | 66.1 |
| 01576754 | 1986–2008 | 23 | 74.2 | 84.9 | 151 | 106 | 189 | 147 |
| *01578310 | 1969–2008 | 40 | 549 | 2,820 | 5,650 | 4,190 | 7,380 | 6,140 |
| 01578400 | 1964–1981 | 18 | 1.4 | 1.5 | 2.7 | 1.9 | 3.2 | 2.5 |
| *01580000 | 1928–2008 | 81 | 19.7 | 22.8 | 48.1 | 28.1 | 51.8 | 35.4 |
| *01581500 | 1946–2008 | 28 | .2 | .3 | 1.2 | .8 | 1.7 | 1.5 |
| *01581700 | 1969–2008 | 40 | 4.7 | 5.5 | 17.5 | 8.1 | 18.3 | 12.0 |
| *01582000 | 1946–2008 | 63 | 11.3 | 12.5 | 25.0 | 15.5 | 28.0 | 20.3 |
| *01582500 | 1979–2008 | 27 | 41.2 | 43.9 | 78.8 | 53.8 | 90.6 | 74.1 |
| *01583000 | 1949–1981 | 33 | .3 | .3 | .7 | .3 | 1.0 | .6 |
| *01583100 | 1984–2008 | 15 | 2.1 | 2.4 | 5.5 | 3.2 | 6.0 | 4.2 |

StreamStats Report

Region ID: PA
Workspace ID: PA20251007184756130000
Clicked Point (Latitude, Longitude): 40.41714, -77.18207
Time: 2025-10-07 14:48:17 -0400



Bloomfield Borough WWTP PA0020478 Modeling Point #1 October 2025

Collapse All

Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|----------------|--|-------|-----------------------|
| CARBON | Percentage of area of carbonate rock | 38.3 | percent |
| DRNAREA | Area that drains to a point on a stream | 4.56 | 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 | 0.84 | 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 |
|----------------|---------------------------|-------|-----------------------|-----------|-----------|
| CARBON | Percent Carbonate | 38.3 | percent | 0 | 99 |
| DRNAREA | Drainage Area | 4.56 | square miles | 4.93 | 1280 |
| PRECIP | Mean Annual Precipitation | 41 | inches | 35 | 50.4 |
| ROCKDEP | Depth to Rock | 5.7 | feet | 3.32 | 5.65 |
| STRDEN | Stream Density | 0.84 | miles per square mile | 0.51 | 3.1 |

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 | 2.11 | ft ³ /s |
| 30 Day 2 Year Low Flow | 2.35 | ft ³ /s |
| 7 Day 10 Year Low Flow | 1.48 | ft ³ /s |
| 30 Day 10 Year Low Flow | 1.59 | ft ³ /s |
| 90 Day 10 Year Low Flow | 1.91 | 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.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

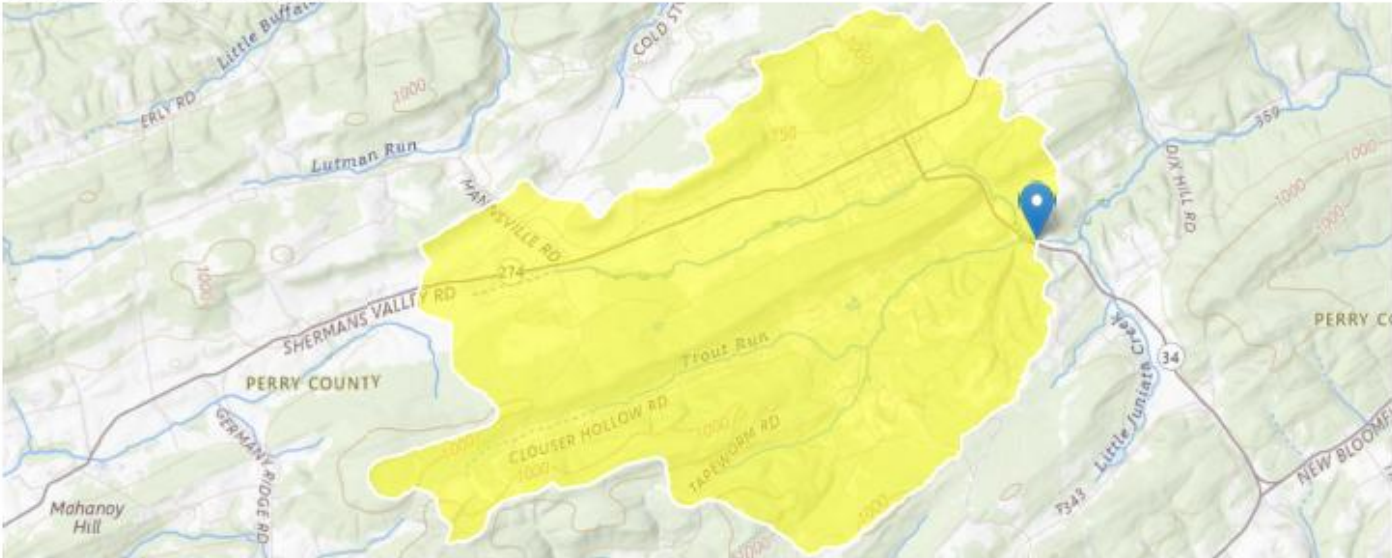
Application Version: 4.29.3

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

StreamStats Report

Region ID: PA
Workspace ID: PA20251007185201713000
Clicked Point (Latitude, Longitude): 40.41011, -77.17080
Time: 2025-10-07 14:52:39 -0400



Bloomfield Borough WWTP PA0020478 Modeling Point #2 October 2025

Collapse All

Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|----------------|--|-------|-----------------------|
| CARBON | Percentage of area of carbonate rock | 18.82 | percent |
| DRNAREA | Area that drains to a point on a stream | 9.57 | square miles |
| PRECIP | Mean Annual Precipitation | 41 | inches |
| ROCKDEP | Depth to rock | 5.4 | feet |
| STRDEN | Stream Density -- total length of streams divided by drainage area | 1.38 | 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 |
|----------------|---------------------------|-------|-----------------------|-----------|-----------|
| CARBON | Percent Carbonate | 18.82 | percent | 0 | 99 |
| DRNAREA | Drainage Area | 9.57 | square miles | 4.93 | 1280 |
| PRECIP | Mean Annual Precipitation | 41 | inches | 35 | 50.4 |
| ROCKDEP | Depth to Rock | 5.4 | feet | 3.32 | 5.65 |
| STRDEN | Stream Density | 1.38 | miles per square mile | 0.51 | 3.1 |

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

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEP: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

| Statistic | Value | Unit | SE | ASEp |
|-------------------------|-------|--------------------|----|------|
| 7 Day 2 Year Low Flow | 2.2 | ft ³ /s | 38 | 38 |
| 30 Day 2 Year Low Flow | 2.65 | ft ³ /s | 33 | 33 |
| 7 Day 10 Year Low Flow | 1.37 | ft ³ /s | 51 | 51 |
| 30 Day 10 Year Low Flow | 1.59 | ft ³ /s | 46 | 46 |
| 90 Day 10 Year Low Flow | 2.08 | ft ³ /s | 36 | 36 |

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.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.29.3

StreamStats Services Version: 1.2.2.2

NSS Services Version: 2.2.1

Attachment B

WQM 7.0 Modeling Output Values Toxics Management Spreadsheet Output Values

WQM 7.0 Effluent Limits

| <u>SWP Basin</u> | | <u>Stream Code</u> | | <u>Stream Name</u> | | | |
|------------------|----------------|--------------------|-----------------|-------------------------|--------------------------------|----------------------------|----------------------------|
| 07A | | 11404 | | Trib 11404 to Trout Run | | | |
| RMI | Name | Permit Number | Disc Flow (mgd) | Parameter | Effl. Limit 30-day Ave. (mg/L) | Effl. Limit Maximum (mg/L) | Effl. Limit Minimum (mg/L) |
| 0.860 | Bloomfield STP | PA0020478 | 0.250 | CBOD5 | 25 | | |
| | | | | NH3-N | 5.99 | 11.98 | |
| | | | | Dissolved Oxygen | | | 5 |

Document was last saved: Just now

WQM 7.0 Wasteload Allocations

| | | |
|------------------|--------------------|-------------------------|
| <u>SWP Basin</u> | <u>Stream Code</u> | <u>Stream Name</u> |
| 07A | 11404 | Trib 11404 to Trout Run |

NH3-N Acute Allocation

| RMI | Discharge Name | Baseline Criterion (mg/L) | Baseline WLA (mg/L) | Multiple Criterion (mg/L) | Multiple WLA (mg/L) | Critical Reach | Percent Reduction |
|-------|----------------|---------------------------|---------------------|---------------------------|---------------------|----------------|-------------------|
| 0.860 | Bloomfield STP | 3.35 | 25.83 | 3.35 | 25.83 | 0 | 0 |

NH3-N Chronic Allocation

| RMI | Discharge Name | Baseline Criterion (mg/L) | Baseline WLA (mg/L) | Multiple Criterion (mg/L) | Multiple WLA (mg/L) | Critical Reach | Percent Reduction |
|-------|----------------|---------------------------|---------------------|---------------------------|---------------------|----------------|-------------------|
| 0.860 | Bloomfield STP | .65 | 5.99 | .65 | 5.99 | 0 | 0 |

Dissolved Oxygen Allocation

| RMI | Discharge Name | <u>CBOD5</u> | | <u>NH3-N</u> | | <u>Dissolved Oxygen</u> | | Critical Reach | Percent Reduction |
|------|----------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-----------------|----------------|-------------------|
| | | Baseline (mg/L) | Multiple (mg/L) | Baseline (mg/L) | Multiple (mg/L) | Baseline (mg/L) | Multiple (mg/L) | | |
| 0.86 | Bloomfield STP | 25 | 25 | 5.99 | 5.99 | 5 | 5 | 0 | 0 |

Input Data WQM 7.0

| SWP Basin | Stream Code | Stream Name | RMI | Elevation (ft) | Drainage Area (sq mi) | Slope (ft/ft) | PWS Withdrawal (mgd) | Apply FC |
|--------------|----------------|-------------------------|-------|-------------------|-----------------------------|------------------|----------------------------|-------------------------------------|
| 07A | 11404 | Trib 11404 to Trout Run | 0.860 | 640.00 | 4.56 | 0.00000 | 0.00 | <input checked="" type="checkbox"/> |

Stream Data

| Design Cond. | LFY | Trib Flow | Stream Flow | Rch Trav Time | Rch Velocity | WD Ratio | Rch Width | Rch Depth | Tributary | | Stream | |
|-----------------|--------|--------------|----------------|---------------------|-----------------|-------------|--------------|--------------|-----------|------|--------------|------|
| | (cfsm) | (cfs) | (cfs) | (days) | (fps) | | (ft) | (ft) | Temp p | pH | Temp (°C) | pH |
| Q7-10 | 0.605 | 0.00 | 0.00 | 0.000 | 0.000 | 0.0 | 0.00 | 0.00 | 23.75 | 8.25 | 0.00 | 0.00 |
| Q1-10 | | 0.00 | 0.00 | 0.000 | 0.000 | | | | | | | |
| Q30-10 | | 0.00 | 0.00 | 0.000 | 0.000 | | | | | | | |

Discharge Data

| Name | Permit Number | Existing Disc Flow (mgd) | Permitted Disc Flow (mgd) | Design Disc Flow (mgd) | Reserve Factor | Disc Temp (°C) | Disc pH |
|----------------|------------------|-----------------------------------|------------------------------------|---------------------------------|-------------------|----------------------|------------|
| Bloomfield STP | PA0020478 | 0.2500 | 0.2500 | 0.2500 | 0.000 | 25.00 | 7.24 |

Parameter Data

| Parameter Name | Disc Conc (mg/L) | Trib Conc (mg/L) | Stream Conc (mg/L) | Fate Coef (1/days) |
|------------------|------------------------|------------------------|--------------------------|--------------------------|
| CBOD5 | 25.00 | 2.00 | 0.00 | 1.50 |
| Dissolved Oxygen | 5.00 | 8.24 | 0.00 | 0.00 |
| NH3-N | 25.00 | 0.00 | 0.00 | 0.70 |

Input Data WQM 7.0

| SWP Basin | Stream Code | Stream Name | RMI | Elevation (ft) | Drainage Area (sq mi) | Slope (ft/ft) | PWS Withdrawal (mgd) | Apply FC |
|--------------|----------------|-------------------------|-------|-------------------|-----------------------------|------------------|----------------------------|-------------------------------------|
| 07A | 11404 | Trib 11404 to Trout Run | 0.000 | 606.00 | 9.57 | 0.00000 | 0.00 | <input checked="" type="checkbox"/> |

Stream Data

| Design Cond. | LFY (cfsm) | Trib Flow (cfs) | Stream Flow (cfs) | Rch Trav Time (days) | Rch Velocity (fps) | WD Ratio | Rch Width (ft) | Rch Depth (ft) | Tributary Temp pH | Stream Temp pH |
|-----------------|---------------|-----------------------|-------------------------|-------------------------------|--------------------------|-------------|----------------------|----------------------|-------------------------|----------------------|
| Q7-10 | 0.605 | 0.00 | 0.00 | 0.000 | 0.000 | 0.0 | 0.00 | 0.00 | 23.75 | 8.25 |
| Q1-10 | | 0.00 | 0.00 | 0.000 | 0.000 | | | | | |
| Q30-10 | | 0.00 | 0.00 | 0.000 | 0.000 | | | | | |

Discharge Data

| Name | Permit Number | Existing Disc Flow (mgd) | Permitted Disc Flow (mgd) | Design Disc Flow (mgd) | Reserve Factor | Disc Temp (°C) | Disc pH |
|------|------------------|-----------------------------------|------------------------------------|---------------------------------|-------------------|----------------------|------------|
| | | 0.0000 | 0.0000 | 0.0000 | 0.000 | 25.00 | 7.00 |

Parameter Data

| Parameter Name | Disc Conc (mg/L) | Trib Conc (mg/L) | Stream Conc (mg/L) | Fate Coef (1/days) |
|------------------|------------------------|------------------------|--------------------------|--------------------------|
| CBOD5 | 25.00 | 2.00 | 0.00 | 1.50 |
| Dissolved Oxygen | 3.00 | 8.24 | 0.00 | 0.00 |
| NH3-N | 25.00 | 0.00 | 0.00 | 0.70 |

WQM 7.0 D.O.Simulation

| <u>SWP Basin</u> | <u>Stream Code</u> | <u>Stream Name</u> | | |
|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|------------------------|
| 07A | 11404 | Trib 11404 to Trout Run | | |
| <u>RMI</u> | <u>Total Discharge Flow (mgd)</u> | <u>Analysis Temperature (°C)</u> | <u>Analysis pH</u> | |
| 0.860 | 0.250 | 23.904 | 7.921 | |
| <u>Reach Width (ft)</u> | <u>Reach Depth (ft)</u> | <u>Reach WDRatio</u> | <u>Reach Velocity (fps)</u> | |
| 17.964 | 0.592 | 30.325 | 0.296 | |
| <u>Reach CBOD5 (mg/L)</u> | <u>Reach Kc (1/days)</u> | <u>Reach NH3-N (mg/L)</u> | <u>Reach Kn (1/days)</u> | |
| 4.83 | 0.898 | 0.74 | 0.945 | |
| <u>Reach DO (mg/L)</u> | <u>Reach Kr (1/days)</u> | <u>Kr Equation</u> | <u>Reach DO Goal (mg/L)</u> | |
| 7.844 | 23.071 | Tsivoglou | 5 | |
| <u>Reach Travel Time (days)</u> | <u>Subreach Results</u> | | | |
| 0.178 | <u>TravTime e (days)</u> | <u>CBOD5 (mg/L)</u> | <u>NH3-N (mg/L)</u> | <u>D.O. (mg/L)</u> |
| | 0.018 | 4.74 | 0.72 | 7.68 |
| | 0.036 | 4.65 | 0.71 | 7.68 |
| | 0.053 | 4.56 | 0.70 | 7.68 |
| | 0.071 | 4.47 | 0.69 | 7.68 |
| | 0.089 | 4.39 | 0.68 | 7.68 |
| | 0.107 | 4.30 | 0.67 | 7.68 |
| | 0.124 | 4.22 | 0.65 | 7.68 |
| | 0.142 | 4.14 | 0.64 | 7.68 |
| | 0.160 | 4.07 | 0.63 | 7.68 |
| | 0.178 | 3.99 | 0.62 | 7.68 |

WQM 7.0 Hydrodynamic Outputs

| <u>SWP Basin</u> | | <u>Stream Code</u> | | <u>Stream Name</u> | | | | | | | | |
|-------------------|-------------|--------------------|-----------------|-------------------------|-------------|-------|-------|-----------|----------|-----------------|---------------|-------------|
| 07A | | 11404 | | Trib 11404 to Trout Run | | | | | | | | |
| RMI | Stream Flow | PWS With | Net Stream Flow | Disc Analysis Flow | Reach Slope | Depth | Width | W/D Ratio | Velocity | Reach Trav Time | Analysis Temp | Analysis pH |
| | (cfs) | (cfs) | (cfs) | (cfs) | (ft/ft) | (ft) | (ft) | | | (days) | (°C) | |
| Q7-10 Flo | | | | | | | | | | | | |
| 0.860 | 2.76 | 0.00 | 2.76 | .3868 | 0.00749 | .592 | 17.96 | 30.33 | 0.30 | 0.178 | 23.90 | 7.92 |
| Q1-10 Flo | | | | | | | | | | | | |
| 0.860 | 2.59 | 0.00 | 2.59 | .3868 | 0.00749 | NA | NA | NA | 0.29 | 0.183 | 23.91 | 7.91 |
| Q30-10 Flo | | | | | | | | | | | | |
| 0.860 | 3.17 | 0.00 | 3.17 | .3868 | 0.00749 | NA | NA | NA | 0.32 | 0.166 | 23.89 | 7.95 |

WQM 7.0 Modeling Specifications

| | | | |
|--------------------|--------|-------------------------------------|-------------------------------------|
| Parameters | Both | Use Inputted Q1-10 and Q30-10 Flows | <input type="checkbox"/> |
| WLA Method | EMPR | Use Inputted W/D Ratio | <input type="checkbox"/> |
| Q1-10/Q7-10 Ratio | 0.94 | Use Inputted Reach Travel Times | <input type="checkbox"/> |
| Q30-10/Q7-10 Ratio | 1.15 | Temperature Adjust Kr | <input checked="" type="checkbox"/> |
| D.O. Saturation | 90.00% | Use Balanced Technology | <input checked="" type="checkbox"/> |
| D.O. Goal | 5 | | |



Run #1

Discharge Information

Instructions Discharge Stream

Facility: Bloomfield Borough WWTP

NPDES Permit No.: PA0020478

Outfall No.: 001

Evaluation Type: Major Sewage / Industrial Waste

Wastewater Description: Sewage effluent

| Discharge Characteristics | | | | | | | | |
|---------------------------|------------------|----------|----------------------------|-----|-----|-----|--------------------------|----------------|
| Design Flow (MGD)* | Hardness (mg/l)* | pH (SU)* | Partial Mix Factors (PMFs) | | | | Complete Mix Times (min) | |
| | | | AFC | CFC | THH | CRL | Q ₇₋₁₀ | Q _h |
| 0.25 | 100 | 7.24 | | | | | | |

| | | | | 0 if left blank | | 0.5 if left blank | | 0 if left blank | | | 1 if left blank | | | | |
|---------------------|---------------------------------|------|---|-----------------|--------------------|-------------------|-----------|-----------------|----------|-----------|-----------------|------------|-----|--------------|-------------|
| Discharge Pollutant | | | | Units | Max Discharge Conc | | Trib Conc | Stream Conc | Daily CV | Hourly CV | Stream CV | Fate Coeff | FOS | Criteria Mod | Chem Transl |
| Group 1 | Total Dissolved Solids (PWS) | mg/L | | 110 | | | | | | | | | | | |
| | Chloride (PWS) | mg/L | | 174 | | | | | | | | | | | |
| | Bromide | mg/L | < | 2.5 | | | | | | | | | | | |
| | Sulfate (PWS) | mg/L | | 64.3 | | | | | | | | | | | |
| | Fluoride (PWS) | mg/L | | | | | | | | | | | | | |
| Group 2 | Total Aluminum | µg/L | | | | | | | | | | | | | |
| | Total Antimony | µg/L | | | | | | | | | | | | | |
| | Total Arsenic | µg/L | | | | | | | | | | | | | |
| | Total Barium | µg/L | | | | | | | | | | | | | |
| | Total Beryllium | µg/L | | | | | | | | | | | | | |
| | Total Boron | µg/L | | | | | | | | | | | | | |
| | Total Cadmium | µg/L | | | | | | | | | | | | | |
| | Total Chromium (III) | µg/L | | | | | | | | | | | | | |
| | Hexavalent Chromium | µg/L | | | | | | | | | | | | | |
| | Total Cobalt | µg/L | | | | | | | | | | | | | |
| | Total Copper | µg/L | < | 15 | | | | | | | | | | | |
| | Free Cyanide | µg/L | | | | | | | | | | | | | |
| | Total Cyanide | µg/L | | | | | | | | | | | | | |
| | Dissolved Iron | µg/L | | | | | | | | | | | | | |
| | Total Iron | µg/L | | | | | | | | | | | | | |
| | Total Lead | µg/L | < | 44 | | | | | | | | | | | |
| | Total Manganese | µg/L | | | | | | | | | | | | | |
| | Total Mercury | µg/L | | | | | | | | | | | | | |
| | Total Nickel | µg/L | | | | | | | | | | | | | |
| | Total Phenols (Phenolics) (PWS) | µg/L | | | | | | | | | | | | | |
| | Total Selenium | µg/L | | | | | | | | | | | | | |
| | Total Silver | µg/L | | | | | | | | | | | | | |
| | Total Thallium | µg/L | | | | | | | | | | | | | |
| | Total Zinc | µg/L | | | 920 | | | | | | | | | | |
| | Total Molybdenum | µg/L | | | | | | | | | | | | | |
| | Acrolein | µg/L | < | | | | | | | | | | | | |
| | Acrylamide | µg/L | < | | | | | | | | | | | | |
| | Acrylonitrile | µg/L | < | | | | | | | | | | | | |
| | Benzene | µg/L | < | | | | | | | | | | | | |
| | Bromoform | µg/L | < | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|---------|-----------------------------|------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Group 3 | Carbon Tetrachloride | µg/L | < | | | | | | | | | | | | | | | | | |
| | Chlorobenzene | µg/L | < | | | | | | | | | | | | | | | | | |
| | Chlorodibromomethane | µg/L | < | | | | | | | | | | | | | | | | | |
| | Chloroethane | µg/L | < | | | | | | | | | | | | | | | | | |
| | 2-Chloroethyl Vinyl Ether | µg/L | < | | | | | | | | | | | | | | | | | |
| | Chloroform | µg/L | < | | | | | | | | | | | | | | | | | |
| | Dichlorobromomethane | µg/L | < | | | | | | | | | | | | | | | | | |
| | 1,1-Dichloroethane | µg/L | < | | | | | | | | | | | | | | | | | |
| | 1,2-Dichloroethane | µg/L | < | | | | | | | | | | | | | | | | | |
| | 1,1-Dichloroethylene | µg/L | < | | | | | | | | | | | | | | | | | |
| | 1,2-Dichloropropane | µg/L | < | | | | | | | | | | | | | | | | | |
| | 1,3-Dichloropropylene | µg/L | < | | | | | | | | | | | | | | | | | |
| | 1,4-Dioxane | µg/L | < | | | | | | | | | | | | | | | | | |
| | Ethylbenzene | µg/L | < | | | | | | | | | | | | | | | | | |
| | Methyl Bromide | µg/L | < | | | | | | | | | | | | | | | | | |
| | Methyl Chloride | µg/L | < | | | | | | | | | | | | | | | | | |
| | Methylene Chloride | µg/L | < | | | | | | | | | | | | | | | | | |
| | 1,1,2,2-Tetrachloroethane | µg/L | < | | | | | | | | | | | | | | | | | |
| | Tetrachloroethylene | µg/L | < | | | | | | | | | | | | | | | | | |
| | Toluene | µg/L | < | | | | | | | | | | | | | | | | | |
| | 1,2-trans-Dichloroethylene | µg/L | < | | | | | | | | | | | | | | | | | |
| | 1,1,1-Trichloroethane | µg/L | < | | | | | | | | | | | | | | | | | |
| | 1,1,2-Trichloroethane | µg/L | < | | | | | | | | | | | | | | | | | |
| | Trichloroethylene | µg/L | < | | | | | | | | | | | | | | | | | |
| | Vinyl Chloride | µg/L | < | | | | | | | | | | | | | | | | | |
| Group 4 | 2-Chlorophenol | µg/L | < | | | | | | | | | | | | | | | | | |
| | 2,4-Dichlorophenol | µg/L | < | | | | | | | | | | | | | | | | | |
| | 2,4-Dimethylphenol | µg/L | < | | | | | | | | | | | | | | | | | |
| | 4,6-Dinitro-o-Cresol | µg/L | < | | | | | | | | | | | | | | | | | |
| | 2,4-Dinitrophenol | µg/L | < | | | | | | | | | | | | | | | | | |
| | 2-Nitrophenol | µg/L | < | | | | | | | | | | | | | | | | | |
| | 4-Nitrophenol | µg/L | < | | | | | | | | | | | | | | | | | |
| | p-Chloro-m-Cresol | µg/L | < | | | | | | | | | | | | | | | | | |
| | Pentachlorophenol | µg/L | < | | | | | | | | | | | | | | | | | |
| | Phenol | µg/L | < | | | | | | | | | | | | | | | | | |
| | 2,4,6-Trichlorophenol | µg/L | < | | | | | | | | | | | | | | | | | |
| Group 5 | Acenaphthene | µg/L | < | | | | | | | | | | | | | | | | | |
| | Acenaphthylene | µg/L | < | | | | | | | | | | | | | | | | | |
| | Anthracene | µg/L | < | | | | | | | | | | | | | | | | | |
| | Benzidine | µg/L | < | | | | | | | | | | | | | | | | | |
| | Benzo(a)Anthracene | µg/L | < | | | | | | | | | | | | | | | | | |
| | Benzo(a)Pyrene | µg/L | < | | | | | | | | | | | | | | | | | |
| | 3,4-Benzofluoranthene | µg/L | < | | | | | | | | | | | | | | | | | |
| | Benzo(ghi)Perylene | µg/L | < | | | | | | | | | | | | | | | | | |
| | Benzo(k)Fluoranthene | µg/L | < | | | | | | | | | | | | | | | | | |
| | Bis(2-Chloroethoxy)Methane | µg/L | < | | | | | | | | | | | | | | | | | |
| | Bis(2-Chloroethyl)Ether | µg/L | < | | | | | | | | | | | | | | | | | |
| | Bis(2-Chloroisopropyl)Ether | µg/L | < | | | | | | | | | | | | | | | | | |
| | Bis(2-Ethylhexyl)Phthalate | µg/L | < | | | | | | | | | | | | | | | | | |
| | 4-Bromophenyl Phenyl Ether | µg/L | < | | | | | | | | | | | | | | | | | |
| | Butyl Benzyl Phthalate | µg/L | < | | | | | | | | | | | | | | | | | |
| | 2-Chloronaphthalene | µg/L | < | | | | | | | | | | | | | | | | | |
| | 4-Chlorophenyl Phenyl Ether | µg/L | < | | | | | | | | | | | | | | | | | |
| | Chrysene | µg/L | < | | | | | | | | | | | | | | | | | |
| | Dibenzo(a,h)Anthracene | µg/L | < | | | | | | | | | | | | | | | | | |
| | 1,2-Dichlorobenzene | µg/L | < | | | | | | | | | | | | | | | | | |
| | 1,3-Dichlorobenzene | µg/L | < | | | | | | | | | | | | | | | | | |
| | 1,4-Dichlorobenzene | µg/L | < | | | | | | | | | | | | | | | | | |
| | 3,3-Dichlorobenzidine | µg/L | < | | | | | | | | | | | | | | | | | |
| | Diethyl Phthalate | µg/L | < | | | | | | | | | | | | | | | | | |
| | Dimethyl Phthalate | µg/L | < | | | | | | | | | | | | | | | | | |
| | Di-n-Butyl Phthalate | µg/L | < | | | | | | | | | | | | | | | | | |
| | 2,4-Dinitrotoluene | µg/L | < | | | | | | | | | | | | | | | | | |

Page 3



Stream / Surface Water Information

Bloomfield Borough WWTP, NPDES Permit No. PA0020478, Outfall 001

Instructions Discharge **Stream**

Receiving Surface Water Name: **Tributary 11404 to Trout Run**

No. Reaches to Model: **1**

- ☒ Statewide Criteria
☐ Great Lakes Criteria
☐ ORSANCO Criteria

| Location | Stream Code* | RMI* | Elevation (ft)* | DA (mi ²)* | Slope (ft/ft) | PWS Withdrawal (MGD) | Apply Fish Criteria* |
|--------------------|--------------|------|-----------------|------------------------|---------------|----------------------|----------------------|
| Point of Discharge | 011404 | 0.86 | 640 | 4.56 | | | Yes |
| End of Reach 1 | 011404 | 0 | 606 | 18.82 | | | Yes |

Q₇₋₁₀

| Location | RMI | LFY (cfs/mi ²)* | Flow (cfs) | | W/D Ratio | Width (ft) | Depth (ft) | Velocity (fps) | Travel Time (days) | Tributary | | Stream | | Analysis | |
|--------------------|------|-----------------------------|------------|-----------|-----------|------------|------------|----------------|--------------------|-----------|----|-----------|------|----------|----|
| | | | Stream | Tributary | | | | | | Hardness | pH | Hardness* | pH* | Hardness | pH |
| Point of Discharge | 0.86 | 0.605 | | | | | | | | | | 109 | 8.25 | | |
| End of Reach 1 | 0 | 0.605 | | | | | | | | | | 109 | 8.25 | | |

Q_h

| Location | RMI | LFY (cfs/mi ²)* | Flow (cfs) | | W/D Ratio | Width (ft) | Depth (ft) | Velocity (fps) | Travel Time (days) | Tributary | | Stream | | Analysis | |
|--------------------|------|-----------------------------|------------|-----------|-----------|------------|------------|----------------|--------------------|-----------|----|----------|----|----------|----|
| | | | Stream | Tributary | | | | | | Hardness | pH | Hardness | pH | Hardness | pH |
| Point of Discharge | 0.86 | | | | | | | | | | | | | | |
| End of Reach 1 | 0 | | | | | | | | | | | | | | |



Model Results

Bloomfield Borough WWTP, NPDES Permit No. PA0020478, Outfall 001

Instructions

Results

RETURN TO INPUTS

SAVE AS PDF

PRINT

☒ All☐ Inputs☐ Results☐ Limits☐ Hydrodynamics☒ Wasteload Allocations☒ AFC

CCT (min): 8.624

PMF: 1

Analysis Hardness (mg/l): 107.89

Analysis pH: 7.92

| Pollutants | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | Comments |
|------------------------------|--------------------|-----------|------------------|-----------|------------|---------------|------------|----------------------------------|
| Total Dissolved Solids (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chloride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Sulfate (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Copper | 0 | 0 | | 0 | 14.436 | 15.0 | 122 | Chem Translator of 0.96 applied |
| Total Lead | 0 | 0 | | 0 | 70.144 | 89.9 | 731 | Chem Translator of 0.78 applied |
| Total Zinc | 0 | 0 | | 0 | 124.972 | 128 | 1,039 | Chem Translator of 0.978 applied |

☒ CFC

CCT (min): 8.624

PMF: 1

Analysis Hardness (mg/l): 107.89

Analysis pH: 7.92

| Pollutants | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | Comments |
|------------------------------|--------------------|-----------|------------------|-----------|------------|---------------|------------|----------------------------------|
| Total Dissolved Solids (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chloride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Sulfate (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Copper | 0 | 0 | | 0 | 9.556 | 9.95 | 81.0 | Chem Translator of 0.96 applied |
| Total Lead | 0 | 0 | | 0 | 2.733 | 3.5 | 28.5 | Chem Translator of 0.78 applied |
| Total Zinc | 0 | 0 | | 0 | 125.994 | 128 | 1,039 | Chem Translator of 0.986 applied |

☒ THH

CCT (min): 8.624

PMF: 1

Analysis Hardness (mg/l): N/A

Analysis pH: N/A

| Pollutants | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | Comments |
|------------------------------|--------------------|-----------|------------------|-----------|------------|---------------|------------|----------|
| Total Dissolved Solids (PWS) | 0 | 0 | | 0 | 500,000 | 500,000 | N/A | |
| Chloride (PWS) | 0 | 0 | | 0 | 250,000 | 250,000 | N/A | |
| Sulfate (PWS) | 0 | 0 | | 0 | 250,000 | 250,000 | N/A | |

| | | | | | | | |
|--------------|---|---|---|-----|-----|-----|--|
| Total Copper | 0 | 0 | 0 | N/A | N/A | N/A | |
| Total Lead | 0 | 0 | 0 | N/A | N/A | N/A | |
| Total Zinc | 0 | 0 | 0 | N/A | N/A | N/A | |

☒ **CRL** CCT (min): PMF: Analysis Hardness (mg/l): Analysis pH:

| Pollutants | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | Comments |
|------------------------------|--------------------|-----------|------------------|-----------|------------|---------------|------------|----------|
| Total Dissolved Solids (PWS) | 0 | 0 | 0 | 0 | N/A | N/A | N/A | |
| Chloride (PWS) | 0 | 0 | 0 | 0 | N/A | N/A | N/A | |
| Sulfate (PWS) | 0 | 0 | 0 | 0 | N/A | N/A | N/A | |
| Total Copper | 0 | 0 | 0 | 0 | N/A | N/A | N/A | |
| Total Lead | 0 | 0 | 0 | 0 | N/A | N/A | N/A | |
| Total Zinc | 0 | 0 | 0 | 0 | N/A | N/A | N/A | |

☒ **Recommended WQBELs & Monitoring Requirements**

No. Samples/Month:

| Pollutants | Mass Limits | | Concentration Limits | | | | Governing WQBEL | WQBEL Basis | Comments |
|--------------|---------------|---------------|----------------------|--------|--------|-------|-----------------|-------------|------------------------------------|
| | AML (lbs/day) | MDL (lbs/day) | AML | MDL | IMAX | Units | | | |
| Total Copper | Report | Report | Report | Report | Report | µg/L | 78.4 | AFC | Discharge Conc > 10% WQBEL (no RP) |
| Total Lead | 0.059 | 0.093 | 28.5 | 44.5 | 71.3 | µg/L | 28.5 | CFC | Discharge Conc ≥ 50% WQBEL (RP) |
| Total Zinc | 1.39 | 2.17 | 666 | 1,039 | 1,665 | µg/L | 666 | AFC | Discharge Conc ≥ 50% WQBEL (RP) |

☒ **Other Pollutants without Limits or Monitoring**

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

| Pollutants | Governing WQBEL | Units | Comments |
|------------------------------|-----------------|-------|--------------------|
| Total Dissolved Solids (PWS) | N/A | N/A | PWS Not Applicable |
| Chloride (PWS) | N/A | N/A | PWS Not Applicable |
| Bromide | N/A | N/A | No WQS |
| Sulfate (PWS) | N/A | N/A | PWS Not Applicable |



Toxics Management Spreadsheet
Version 1.4, May 2023

RUN #2

Discharge Information

Instructions Discharge Stream

Facility: Bloomfield Borough WWTP NPDES Permit No.: PA0020478 Outfall No.: 001
Evaluation Type: Major Sewage / Industrial Waste Wastewater Description: Sewage effluent

| Discharge Characteristics | | | | | | | | |
|---------------------------|------------------|----------|----------------------------|-----|-----|-----|--------------------------|----------------|
| Design Flow (MGD)* | Hardness (mg/l)* | pH (SU)* | Partial Mix Factors (PMFs) | | | | Complete Mix Times (min) | |
| | | | AFC | CFC | THH | CRL | Q ₇₋₁₀ | Q _h |
| 0.25 | 100 | 7.24 | | | | | | |

| Discharge Pollutant | Units | Max Discharge Conc | 0 if left blank | | 0.5 if left blank | | 0 if left blank | | 1 if left blank | |
|---------------------|---------------------------------|--------------------|-----------------|-------------|-------------------|-----------|-----------------|------------|-----------------|--------------|
| | | | Trib Conc | Stream Conc | Daily CV | Hourly CV | Stream CV | Fate Coeff | FOS | Criteria Mod |
| Group 1 | Total Dissolved Solids (PWS) | mg/L | 110 | | | | | | | |
| | Chloride (PWS) | mg/L | 174 | | | | | | | |
| | Bromide | mg/L | < 2.5 | | | | | | | |
| | Sulfate (PWS) | mg/L | 64.3 | | | | | | | |
| | Fluoride (PWS) | mg/L | | | | | | | | |
| Group 2 | Total Aluminum | µg/L | | | | | | | | |
| | Total Antimony | µg/L | | | | | | | | |
| | Total Arsenic | µg/L | | | | | | | | |
| | Total Barium | µg/L | | | | | | | | |
| | Total Beryllium | µg/L | | | | | | | | |
| | Total Boron | µg/L | | | | | | | | |
| | Total Cadmium | µg/L | | | | | | | | |
| | Total Chromium (III) | µg/L | | | | | | | | |
| | Hexavalent Chromium | µg/L | | | | | | | | |
| | Total Cobalt | µg/L | | | | | | | | |
| | Total Copper | µg/L | 20 | | | | | | | |
| | Free Cyanide | µg/L | | | | | | | | |
| | Total Cyanide | µg/L | | | | | | | | |
| | Dissolved Iron | µg/L | | | | | | | | |
| | Total Iron | µg/L | | | | | | | | |
| | Total Lead | µg/L | 40 | | | | | | | |
| | Total Manganese | µg/L | | | | | | | | |
| | Total Mercury | µg/L | | | | | | | | |
| | Total Nickel | µg/L | | | | | | | | |
| | Total Phenols (Phenolics) (PWS) | µg/L | | | | | | | | |
| | Total Selenium | µg/L | | | | | | | | |
| | Total Silver | µg/L | | | | | | | | |
| | Total Thallium | µg/L | | | | | | | | |
| | Total Zinc | µg/L | 920 | | | | | | | |
| | Total Molybdenum | µg/L | | | | | | | | |
| | Acrolein | µg/L | < | | | | | | | |
| | Acrylamide | µg/L | < | | | | | | | |
| | Acrylonitrile | µg/L | < | | | | | | | |
| | Benzene | µg/L | < | | | | | | | |
| | Bromoform | µg/L | < | | | | | | | |
| | Carbon Tetrachloride | µg/L | < | | | | | | | |
| | Chlorobenzene | µg/L | < | | | | | | | |
| | Chlorodibromomethane | µg/L | < | | | | | | | |
| | Chloroethane | µg/L | < | | | | | | | |
| | 2-Chloroethyl Vinyl Ether | µg/L | < | | | | | | | |

Page 2

Page 3



Stream / Surface Water Information

Bloomfield Borough WWTP, NPDES Permit No. PA0020478, Outfall 001

Instructions Discharge **Stream**

Receiving Surface Water Name: **Tributary 11404 to Trout Run**

No. Reaches to Model: **1**

- ☒ Statewide Criteria
- ☐ Great Lakes Criteria
- ☐ ORSANCO Criteria

| Location | Stream Code* | RMI* | Elevation (ft)* | DA (mi ²)* | Slope (ft/ft) | PWS Withdrawal (MGD) | Apply Fish Criteria* |
|--------------------|--------------|------|-----------------|------------------------|---------------|----------------------|----------------------|
| Point of Discharge | 011404 | 0.86 | 640 | 4.56 | | | Yes |
| End of Reach 1 | 011404 | 0 | 606 | 18.82 | | | Yes |

Q₇₋₁₀

| Location | RMI | LFY (cfs/mi ²)* | Flow (cfs) | | W/D Ratio | Width (ft) | Depth (ft) | Velocity (fps) | Travel Time | Tributary | | Stream | | Analysis | |
|--------------------|------|-----------------------------|------------|-----------|-----------|------------|------------|----------------|-------------|-----------|----|-----------|------|----------|----|
| | | | Stream | Tributary | | | | | | Hardness | pH | Hardness* | pH* | Hardness | pH |
| Point of Discharge | 0.86 | 0.605 | | | | | | | | | | 109 | 8.25 | | |
| End of Reach 1 | 0 | 0.605 | | | | | | | | | | 109 | 8.25 | | |

Q_n

| Location | RMI | LFY (cfs/mi ²)* | Flow (cfs) | | W/D Ratio | Width (ft) | Depth (ft) | Velocity (fps) | Travel Time | Tributary | | Stream | | Analysis | |
|--------------------|------|-----------------------------|------------|-----------|-----------|------------|------------|----------------|-------------|-----------|----|----------|----|----------|----|
| | | | Stream | Tributary | | | | | | Hardness | pH | Hardness | pH | Hardness | pH |
| Point of Discharge | 0.86 | | | | | | | | | | | | | | |
| End of Reach 1 | 0 | | | | | | | | | | | | | | |



Model Results

Bloomfield Borough WWTP, NPDES Permit No. PA0020478, Outfall 001

Instructions

Results

RETURN TO INPUTS

SAVE AS PDF

PRINT

☒ All☐ Inputs☐ Results☐ Limits☐ Hydrodynamics☒ Wasteload Allocations☒ AFC

CCT (min): 8.624

PMF: 1

Analysis Hardness (mg/l): 107.89

Analysis pH: 7.92

| Pollutants | Stream Conc | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | Comments |
|------------------------------|-------------|-----------|------------------|-----------|------------|---------------|------------|----------------------------------|
| Total Dissolved Solids (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chloride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Sulfate (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Copper | 0 | 0 | | 0 | 14.436 | 15.0 | 122 | Chem Translator of 0.96 applied |
| Total Lead | 0 | 0 | | 0 | 70.144 | 89.9 | 731 | Chem Translator of 0.78 applied |
| Total Zinc | 0 | 0 | | 0 | 124.972 | 128 | 1,039 | Chem Translator of 0.978 applied |

☒ CFC

CCT (min): 8.624

PMF: 1

Analysis Hardness (mg/l): 107.89

Analysis pH: 7.92

| Pollutants | Stream Conc | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | Comments |
|------------------------------|-------------|-----------|------------------|-----------|------------|---------------|------------|----------------------------------|
| Total Dissolved Solids (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chloride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Sulfate (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Copper | 0 | 0 | | 0 | 9.556 | 9.95 | 81.0 | Chem Translator of 0.96 applied |
| Total Lead | 0 | 0 | | 0 | 2.733 | 3.5 | 28.5 | Chem Translator of 0.78 applied |
| Total Zinc | 0 | 0 | | 0 | 125.994 | 128 | 1,039 | Chem Translator of 0.986 applied |

☒ THH

CCT (min): 8.624

PMF: 1

Analysis Hardness (mg/l): N/A

Analysis pH: N/A

| Pollutants | Stream Conc | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | Comments |
|------------------------------|-------------|-----------|------------------|-----------|------------|---------------|------------|----------|
| Total Dissolved Solids (PWS) | 0 | 0 | | 0 | 500,000 | 500,000 | N/A | |
| Chloride (PWS) | 0 | 0 | | 0 | 250,000 | 250,000 | N/A | |
| Sulfate (PWS) | 0 | 0 | | 0 | 250,000 | 250,000 | N/A | |
| Total Copper | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Lead | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Zinc | 0 | 0 | | 0 | N/A | N/A | N/A | |

☒ **CRL** CCT (min): PMF: Analysis Hardness (mg/l): Analysis pH:

| Pollutants | Stream Conc | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | Comments |
|------------------------------|-------------|-----------|------------------|-----------|------------|---------------|------------|----------|
| Total Dissolved Solids (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chloride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Sulfate (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Copper | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Lead | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Zinc | 0 | 0 | | 0 | N/A | N/A | N/A | |

☒ **Recommended WQBELs & Monitoring Requirements**

No. Samples/Month:

| Pollutants | Mass Limits | | Concentration Limits | | | | Governing WQBEL | WQBEL Basis | Comments |
|--------------|---------------|---------------|----------------------|--------|--------|-------|-----------------|-------------|------------------------------------|
| | AML (lbs/day) | MDL (lbs/day) | AML | MDL | IMAX | Units | | | |
| Total Copper | Report | Report | Report | Report | Report | µg/L | 78.4 | AFC | Discharge Conc > 10% WQBEL (no RP) |
| Total Lead | 0.059 | 0.093 | 28.5 | 44.5 | 71.3 | µg/L | 28.5 | CFC | Discharge Conc ≥ 50% WQBEL (RP) |
| Total Zinc | 1.39 | 2.17 | 666 | 1,039 | 1,665 | µg/L | 666 | AFC | Discharge Conc ≥ 50% WQBEL (RP) |

☒ **Other Pollutants without Limits or Monitoring**

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

| Pollutants | Governing WQBEL | Units | Comments |
|------------------------------|-----------------|-------|--------------------|
| Total Dissolved Solids (PWS) | N/A | N/A | PWS Not Applicable |
| Chloride (PWS) | N/A | N/A | PWS Not Applicable |
| Bromide | N/A | N/A | No WQS |
| Sulfate (PWS) | N/A | N/A | PWS Not Applicable |

Attachment C

DMR Data

| Monitoring Period Begin Date | Period End Date | DMR Received Date | Parameter Name | DMR Value | Units | Statistical Base Code |
|---------------------------------|--------------------|----------------------|----------------|-----------|-------|-----------------------|
| 01/01/2021 | 03/31/2021 | 04/28/2021 | Copper, Total | 0.006 | mg/L | Average Quarterly |
| 04/01/2021 | 06/30/2021 | 07/27/2021 | Copper, Total | < 0.005 | mg/L | Average Quarterly |
| 07/01/2021 | 09/30/2021 | 10/28/2021 | Copper, Total | < 0.005 | mg/L | Average Quarterly |
| 10/01/2021 | 12/31/2021 | 01/28/2022 | Copper, Total | 0.009 | mg/L | Average Quarterly |
| 01/01/2022 | 03/31/2022 | 04/26/2022 | Copper, Total | 0.007 | mg/L | Average Quarterly |
| 04/01/2022 | 06/30/2022 | 07/27/2022 | Copper, Total | 0.008 | mg/L | Average Quarterly |
| 07/01/2022 | 09/30/2022 | 10/27/2022 | Copper, Total | 0.005 | mg/L | Average Quarterly |
| 10/01/2022 | 12/31/2022 | 01/12/2023 | Copper, Total | 0.005 | mg/L | Average Quarterly |
| 01/01/2023 | 03/31/2023 | 04/19/2023 | Copper, Total | 0.008 | mg/L | Average Quarterly |
| 04/01/2023 | 06/30/2023 | 07/26/2023 | Copper, Total | 0.006 | mg/L | Average Quarterly |
| 07/01/2023 | 09/30/2023 | 10/27/2023 | Copper, Total | 0.005 | mg/L | Average Quarterly |
| 10/01/2023 | 12/31/2023 | 01/18/2024 | Copper, Total | 966 | mg/L | Average Quarterly |
| 01/01/2024 | 03/31/2024 | 04/26/2024 | Copper, Total | 0.01 | mg/L | Average Quarterly |
| 04/01/2024 | 06/30/2024 | 06/28/2024 | Copper, Total | 0.011 | mg/L | Average Quarterly |
| 07/01/2024 | 09/30/2024 | 10/24/2024 | Copper, Total | 0.015 | mg/L | Average Quarterly |
| 10/01/2024 | 12/31/2024 | 01/24/2025 | Copper, Total | 0.007 | mg/L | Average Quarterly |
| 01/01/2025 | 03/31/2025 | 04/28/2025 | Copper, Total | 0.008 | mg/L | Average Quarterly |
| 04/01/2025 | 06/30/2025 | 07/27/2025 | Copper, Total | 0.005 | mg/L | Average Quarterly |
| Min | | | | < 0.005 | | |
| Max | | | | 966 | | |
| Average | | | | 53.67 | | |

| Monitoring Period Begin Date | Period End Date | DMR Received Date | Parameter Name | DMR Value | Units | Statistical Base Code |
|---------------------------------|--------------------|----------------------|----------------|-----------|-----------------------------|-----------------------|
| 01/01/2021 | 03/31/2021 | 04/28/2021 | Copper, Total | 0.006 | mg/L | Average Quarterly |
| 04/01/2021 | 06/30/2021 | 07/27/2021 | Copper, Total | < 0.005 | mg/L | Average Quarterly |
| 07/01/2021 | 09/30/2021 | 10/28/2021 | Copper, Total | < 0.005 | mg/L | Average Quarterly |
| 10/01/2021 | 12/31/2021 | 01/28/2022 | Copper, Total | 0.009 | mg/L | Average Quarterly |
| 01/01/2022 | 03/31/2022 | 04/26/2022 | Copper, Total | 0.007 | mg/L | Average Quarterly |
| 04/01/2022 | 06/30/2022 | 07/27/2022 | Copper, Total | 0.008 | mg/L | Average Quarterly |
| 07/01/2022 | 09/30/2022 | 10/27/2022 | Copper, Total | 0.005 | mg/L | Average Quarterly |
| 10/01/2022 | 12/31/2022 | 01/12/2023 | Copper, Total | 0.005 | mg/L | Average Quarterly |
| 01/01/2023 | 03/31/2023 | 04/19/2023 | Copper, Total | 0.008 | mg/L | Average Quarterly |
| 04/01/2023 | 06/30/2023 | 07/26/2023 | Copper, Total | 0.006 | mg/L | Average Quarterly |
| 07/01/2023 | 09/30/2023 | 10/27/2023 | Copper, Total | 0.005 | mg/L | Average Quarterly |
| 10/01/2023 | 12/31/2023 | 01/18/2024 | Copper, Total | | mg/L | Average Quarterly |
| 01/01/2024 | 03/31/2024 | 04/26/2024 | Copper, Total | 0.01 | mg/L | Average Quarterly |
| 04/01/2024 | 06/30/2024 | 06/28/2024 | Copper, Total | 0.011 | mg/L | Average Quarterly |
| 07/01/2024 | 09/30/2024 | 10/24/2024 | Copper, Total | 0.015 | mg/L | Average Quarterly |
| 10/01/2024 | 12/31/2024 | 01/24/2025 | Copper, Total | 0.007 | mg/L | Average Quarterly |
| 01/01/2025 | 03/31/2025 | 04/28/2025 | Copper, Total | 0.008 | mg/L | Average Quarterly |
| 04/01/2025 | 06/30/2025 | 07/27/2025 | Copper, Total | 0.005 | mg/L | Average Quarterly |
| Min | | | | < 0.005 | | |
| Max | | | | 0.015 | | |
| Average | | | | 0.007 | **Data with outlier removed | |

| Period Begin Date | Period End Date | Received Date | Parameter Name | DMR Value | | Permit Limit | Units | Statistical Base Code |
|-------------------|-----------------|---------------|----------------|-----------|-------|--------------------|-------|-----------------------|
| 01/01/2021 | 03/31/2021 | 04/28/2021 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 04/01/2021 | 06/30/2021 | 07/27/2021 | Lead, Total | < | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 07/01/2021 | 09/30/2021 | 10/28/2021 | Lead, Total | < | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 10/01/2021 | 12/31/2021 | 01/28/2022 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 01/01/2022 | 03/31/2022 | 04/26/2022 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 04/01/2022 | 06/30/2022 | 07/27/2022 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 07/01/2022 | 09/30/2022 | 10/27/2022 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 10/01/2022 | 12/31/2022 | 01/12/2023 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 01/01/2023 | 03/31/2023 | 04/19/2023 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 04/01/2023 | 06/30/2023 | 07/26/2023 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 07/01/2023 | 09/30/2023 | 10/27/2023 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 10/01/2023 | 12/31/2023 | 01/18/2024 | Lead, Total | | 282 | Monitor and Report | mg/L | Average Quarterly |
| 01/01/2024 | 03/31/2024 | 04/26/2024 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 04/01/2024 | 06/30/2024 | 06/28/2024 | Lead, Total | | 0.044 | Monitor and Report | mg/L | Average Quarterly |
| 07/01/2024 | 09/30/2024 | 10/24/2024 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 10/01/2024 | 12/31/2024 | 01/24/2025 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 01/01/2025 | 03/31/2025 | 04/28/2025 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 04/01/2025 | 06/30/2025 | 07/27/2025 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| | | | | Min | < | 0.003 | | |
| | | | | Max | | 282 | | |
| | | | | Average | | 15.67 | | |

| Period Begin Date | Period End Date | Received Date | Parameter Name | DMR Value | | Permit Limit | Units | Statistical Base Code |
|-------------------|-----------------|---------------|----------------|-----------|-------|--------------------|-----------------------------|-----------------------|
| 01/01/2021 | 03/31/2021 | 04/28/2021 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 04/01/2021 | 06/30/2021 | 07/27/2021 | Lead, Total | < | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 07/01/2021 | 09/30/2021 | 10/28/2021 | Lead, Total | < | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 10/01/2021 | 12/31/2021 | 01/28/2022 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 01/01/2022 | 03/31/2022 | 04/26/2022 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 04/01/2022 | 06/30/2022 | 07/27/2022 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 07/01/2022 | 09/30/2022 | 10/27/2022 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 10/01/2022 | 12/31/2022 | 01/12/2023 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 01/01/2023 | 03/31/2023 | 04/19/2023 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 04/01/2023 | 06/30/2023 | 07/26/2023 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 07/01/2023 | 09/30/2023 | 10/27/2023 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 10/01/2023 | 12/31/2023 | 01/18/2024 | Lead, Total | | | Monitor and Report | mg/L | Average Quarterly |
| 01/01/2024 | 03/31/2024 | 04/26/2024 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 04/01/2024 | 06/30/2024 | 06/28/2024 | Lead, Total | | 0.044 | Monitor and Report | mg/L | Average Quarterly |
| 07/01/2024 | 09/30/2024 | 10/24/2024 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 10/01/2024 | 12/31/2024 | 01/24/2025 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 01/01/2025 | 03/31/2025 | 04/28/2025 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| 04/01/2025 | 06/30/2025 | 07/27/2025 | Lead, Total | | 0.003 | Monitor and Report | mg/L | Average Quarterly |
| | | | | Min | < | 0.003 | | |
| | | | | Max | | 0.044 | | |
| | | | | Average | | 0.005 | **Data with outlier removed | |

| Monitoring Period Begin Date | Monitoring Period End Date | DMR Received Date | Parameter Name | DMR Value | Permit Limit | Units | Statistical Base Code |
|---------------------------------|----------------------------------|----------------------|-------------------|-----------|--------------|-------|--------------------------|
| 01/01/2021 | 01/31/2021 | 02/26/2021 | Zinc, Total | 0.13 | 0.17 | mg/L | Average Monthly |
| 02/01/2021 | 02/28/2021 | 03/30/2021 | Zinc, Total | 0.11 | 0.17 | mg/L | Average Monthly |
| 03/01/2021 | 03/31/2021 | 04/28/2021 | Zinc, Total | 0.078 | 0.17 | mg/L | Average Monthly |
| 04/01/2021 | 04/30/2021 | 05/19/2021 | Zinc, Total | 0.11 | 0.17 | mg/L | Average Monthly |
| 05/01/2021 | 05/31/2021 | 06/25/2021 | Zinc, Total | 0.12 | 0.17 | mg/L | Average Monthly |
| 06/01/2021 | 06/30/2021 | 07/27/2021 | Zinc, Total | 0.092 | 0.17 | mg/L | Average Monthly |
| 07/01/2021 | 07/31/2021 | 08/26/2021 | Zinc, Total | 0.048 | 0.17 | mg/L | Average Monthly |
| 08/01/2021 | 08/31/2021 | 09/28/2021 | Zinc, Total | 0.113 | 0.17 | mg/L | Average Monthly |
| 09/01/2021 | 09/30/2021 | 10/28/2021 | Zinc, Total | 0.069 | 0.17 | mg/L | Average Monthly |
| 10/01/2021 | 10/31/2021 | 11/24/2021 | Zinc, Total | 0.2 | 0.17 | mg/L | Average Monthly |
| 11/01/2021 | 11/30/2021 | 01/04/2022 | Zinc, Total | 0.125 | 0.17 | mg/L | Average Monthly |
| 12/01/2021 | 12/31/2021 | 01/28/2022 | Zinc, Total | 0.158 | 0.17 | mg/L | Average Monthly |
| 01/01/2022 | 01/31/2022 | 03/10/2022 | Zinc, Total | 0.09 | 0.17 | mg/L | Average Monthly |
| 02/01/2022 | 02/28/2022 | 03/28/2022 | Zinc, Total | 0.1 | 0.17 | mg/L | Average Monthly |
| 03/01/2022 | 03/31/2022 | 04/26/2022 | Zinc, Total | 0.106 | 0.17 | mg/L | Average Monthly |
| 04/01/2022 | 04/30/2022 | 05/27/2022 | Zinc, Total | 0.126 | 0.17 | mg/L | Average Monthly |
| 05/01/2022 | 05/31/2022 | 06/27/2022 | Zinc, Total | 0.069 | 0.17 | mg/L | Average Monthly |
| 06/01/2022 | 06/30/2022 | 07/27/2022 | Zinc, Total | 0.117 | 0.17 | mg/L | Average Monthly |
| 07/01/2022 | 07/31/2022 | 08/29/2022 | Zinc, Total | 0.092 | 0.17 | mg/L | Average Monthly |
| 08/01/2022 | 08/31/2022 | 09/27/2022 | Zinc, Total | 0.056 | 0.17 | mg/L | Average Monthly |
| 09/01/2022 | 09/30/2022 | 10/27/2022 | Zinc, Total | 0.074 | 0.17 | mg/L | Average Monthly |
| 10/01/2022 | 10/31/2022 | 11/23/2022 | Zinc, Total | 0.087 | 0.17 | mg/L | Average Monthly |
| 11/01/2022 | 11/30/2022 | 12/19/2022 | Zinc, Total | 0.113 | 0.17 | mg/L | Average Monthly |
| 12/01/2022 | 12/31/2022 | 01/12/2023 | Zinc, Total | 0.068 | 0.17 | mg/L | Average Monthly |
| 01/01/2023 | 01/31/2023 | 02/09/2023 | Zinc, Total | 0.051 | 0.17 | mg/L | Average Monthly |
| 02/01/2023 | 02/28/2023 | 03/28/2023 | Zinc, Total | 0.097 | 0.17 | mg/L | Average Monthly |
| 03/01/2023 | 03/31/2023 | 04/19/2023 | Zinc, Total | 0.078 | 0.17 | mg/L | Average Monthly |
| 04/01/2023 | 04/30/2023 | 05/25/2023 | Zinc, Total | 0.07 | 0.17 | mg/L | Average Monthly |
| 05/01/2023 | 05/31/2023 | 06/26/2023 | Zinc, Total | 0.05 | 0.17 | mg/L | Average Monthly |
| 06/01/2023 | 06/30/2023 | 07/26/2023 | Zinc, Total | 0.053 | 0.17 | mg/L | Average Monthly |
| 07/01/2023 | 07/31/2023 | 08/25/2023 | Zinc, Total | 0.042 | 0.17 | mg/L | Average Monthly |
| 08/01/2023 | 08/31/2023 | 09/26/2023 | Zinc, Total | 0.032 | 0.17 | mg/L | Average Monthly |
| 09/01/2023 | 09/30/2023 | 10/27/2023 | Zinc, Total | 0.06 | 0.17 | mg/L | Average Monthly |
| 10/01/2023 | 10/31/2023 | 11/22/2023 | Zinc, Total | 0.05 | 0.17 | mg/L | Average Monthly |
| 11/01/2023 | 11/30/2023 | 12/26/2023 | Zinc, Total | 0.061 | 0.17 | mg/L | Average Monthly |
| 12/01/2023 | 12/31/2023 | 01/18/2024 | Zinc, Total | 0.12 | 0.17 | mg/L | Average Monthly |
| 01/01/2024 | 01/31/2024 | 02/27/2024 | Zinc, Total | 0.073 | 0.17 | mg/L | Average Monthly |
| 02/01/2024 | 02/29/2024 | 03/19/2024 | Zinc, Total | 0.081 | 0.17 | mg/L | Average Monthly |
| 03/01/2024 | 03/31/2024 | 04/26/2024 | Zinc, Total | 0.042 | 0.17 | mg/L | Average Monthly |
| 04/01/2024 | 04/30/2024 | 05/23/2024 | Zinc, Total | 0.05 | 0.17 | mg/L | Average Monthly |
| 05/01/2024 | 05/31/2024 | 06/28/2024 | Zinc, Total | 0.051 | 0.17 | mg/L | Average Monthly |
| 06/01/2024 | 06/30/2024 | 07/25/2024 | Zinc, Total | 0.038 | 0.17 | mg/L | Average Monthly |
| 07/01/2024 | 07/31/2024 | 08/27/2024 | Zinc, Total | 0.045 | 0.17 | mg/L | Average Monthly |
| 08/01/2024 | 08/31/2024 | 09/25/2024 | Zinc, Total | 0.05 | 0.17 | mg/L | Average Monthly |
| 09/01/2024 | 09/30/2024 | 10/28/2024 | Zinc, Total | 0.09 | 0.17 | mg/L | Average Monthly |
| 10/01/2024 | 10/31/2024 | 11/24/2024 | Zinc, Total | 0.053 | 0.17 | mg/L | Average Monthly |
| 11/01/2024 | 11/30/2024 | 12/17/2024 | Zinc, Total | 0.089 | 0.17 | mg/L | Average Monthly |
| 12/01/2024 | 12/31/2024 | 01/24/2025 | Zinc, Total | 0.104 | 0.17 | mg/L | Average Monthly |
| 01/01/2025 | 01/31/2025 | 02/25/2025 | Zinc, Total | 0.92 | 0.17 | mg/L | Average Monthly |
| 02/01/2025 | 02/28/2025 | 03/27/2025 | Zinc, Total | 0.074 | 0.17 | mg/L | Average Monthly |
| 03/01/2025 | 03/31/2025 | 04/28/2025 | Zinc, Total | 0.074 | 0.17 | mg/L | Average Monthly |
| 04/01/2025 | 04/30/2025 | 05/28/2025 | Zinc, Total | 0.057 | 0.17 | mg/L | Average Monthly |
| 05/01/2025 | 05/31/2025 | 06/27/2025 | Zinc, Total | 0.049 | 0.17 | mg/L | Average Monthly |
| 06/01/2025 | 06/30/2025 | 07/27/2025 | Zinc, Total | 0.03 | 0.17 | mg/L | Average Monthly |
| 07/01/2025 | 07/31/2025 | 08/28/2025 | Zinc, Total | 0.031 | 0.17 | mg/L | Average Monthly |
| 08/01/2025 | 08/31/2025 | 09/17/2025 | Zinc, Total | 0.051 | 0.17 | mg/L | Average Monthly |
| | | | Min | 0.03 | | | |
| | | | Max | 0.92 | | | |
| | | | Average | 0.094 | | | |

Attachment D

Correspondence

Hong, Nicholas

From: damon.hartman78 <damon.hartman78@gmail.com>
Sent: Thursday, October 9, 2025 7:21 AM
To: Hong, Nicholas
Cc: tyingling@hrg-inc.com
Subject: [External] RE: PA0020478 / Bloomfield / NPDE renewal application

ATTENTION: This email message is from an external sender. Do not open links or attachments from unknown senders. To report suspicious email, use the [Report Phishing button in Outlook](#).

Nick,

After reviewing my records, it appears you are correct. My total copper was a 966 mg/l and the total lead was 282 mg/l on the 4th quarter of 2023.

Normal numbers come back as non detected. I believe that was a one time occurrence, possibly from water line repairs / replacements.

Any other questions let me know.

Sincerely,
Damon

----- Original message -----

From: "Hong, Nicholas" <nhong@pa.gov>
Date: 10/8/25 2:16 PM (GMT-05:00)
To: "damon.hartman78" <damon.hartman78@gmail.com>
Cc: tyingling@hrg-inc.com
Subject: PA0020478 / Bloomfield / NPDE renewal application

Bloomfield:

DEP has the following preliminary comments on the NPDES renewal application.

DMR data shows the October 1, 2023 DMR data for total copper at 966 mg/l. Please confirm this data is accurate.

DMR data shows the October 1, 2023 DMR data for total lead at 282 mg/l. Please confirm this data is accurate.

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