

Application Type Renewal
 Facility Type Municipal
 Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0037711
 APS ID 30580
 Authorization ID 1547225

Applicant and Facility Information

| | | | |
|---------------------------|--|------------------|--|
| Applicant Name | <u>Everett Borough Area Municipal Authority Bedford County</u> | Facility Name | <u>Everett STP</u> |
| Applicant Address | <u>100 Mechanic Street Everett, PA 15537-1177</u> | Facility Address | <u>183 Sewer Plant Road Everett, PA 15537-1177</u> |
| Applicant Contact | <u>Kirk Feaster</u> | Facility Contact | <u>Kirk Feaster</u> |
| Applicant Phone | <u>(814) 652-9202</u> | Facility Phone | <u>(814) 652-9202</u> |
| Client ID | <u>87467</u> | Site ID | <u>249247</u> |
| Ch 94 Load Status | <u>Existing Hydraulic Overload</u> | Municipality | <u>Everett Borough</u> |
| Connection Status | <u>No Exceptions Allowed</u> | County | <u>Bedford</u> |
| Date Application Received | <u>October 28, 2025</u> | EPA Waived? | <u>No</u> |
| Date Application Accepted | <u>December 8, 2025</u> | If No, Reason | <u>Significant CB Discharge</u> |
| Purpose of Application | <u>This is an application for a NPDES renewal.</u> | | |

| Approve | Deny | Signatures | Date |
|---------|------|--|-------------------|
| x | | Nicholas Hong, P.E. / Environmental Engineer Nick Hong (via electronic signature) | January 13, 2026 |
| x | | Daniel W. Martin, P.E. / Environmental Engineer Manager <i>Maria D. Bebenek</i> for | February 17, 2026 |
| x | | Maria D. Bebenek, P.E. / Environmental Program Manager <i>Maria D. Bebenek</i> | February 17, 2026 |

Summary of Review

The application submitted by the applicant requests a NPDES renewal permit for the Everett STP located at 183 Sewer Plant Road, Everett, PA 15537 in Bedford County, municipality of Everett. The existing permit became effective on May 1, 2021 and expires(d) on April 30, 2026. The application for renewal was received by DEP Southcentral Regional Office (SCRO) on October 28, 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 currently a 0.87 MGD average annual design flow treatment facility. The applicant anticipates proposed upgrades to the treatment facility in the next five years. The proposed average annual flow rate shall increase to 0.995 MGD.

BEAMA is presently under a Consent Order and Agreement (COA) with the Department of Environmental Protection (DEP) to eliminate Sanitary Sewer Overflows (SSOs) and address ongoing hydraulic overload conditions within the system. Related but not addressed within the COA, nearly all components of the current WWTP have reached the end of their useful service life and are in need of upgrade or replacement. Under the terms of the COA, BEAMA undertook an Act 537 Sewage Facilities Plan Special Study to supplement the existing 1987 Act 537 Plan. The Special Study evaluated alternatives to increase the WWTP hydraulic capacity and address the aging infrastructure, with the ultimate goal of eliminating all SSOs. Based on the analysis, the selected alternative includes constructing a new Sequencing Batch Reactor (SBR) based treatment plant adjacent to the existing facility, then abandoning and demolishing most of the old plant.

The proposed work will include the following primary components, described in more detail within this report:

- Construction of a new influent pump station with wet weather redirect;
- Construction of a new influent fine screen;
- Construction of a new dual train SBR treatment unit;
- Construction of three new sludge digester tanks;
- Construction of a new ultraviolet disinfection unit;
- Construction of a new control building and office/lab building;
- Modification of the existing Schreiber tanks to wet weather detention tanks;
- Demolition of the existing influent pump station, control building, sludge digester, and chlorine contact tank; and
- Reconnection to the existing sludge reed beds.

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 Bedford County Commissioners and West Providence Township and the notice was received by the parties on July 28, 2025. In lieu of a planning approval letter, the facility was subject to a Consent Order and Agreement (COA) to address compliances issues and plant expansion.

Utilizing the DEP's web-based Emap-PA information system, the receiving waters has been determined to be Raystown Branch Juniata River. The sequence of receiving streams that the Raystown Branch Juniata River discharges into are Juniata River and the Susquehanna River 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 trout stocking fish (TSF) and migratory fishes (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 Raystown Branch Juniata River is a Category 2 stream listed in the 2024 Integrated List of All Waters (formerly 303d Listed Streams). This stream is an attaining stream that supports aquatic life. The receiving waters is not subject to a total maximum daily load (TMDL) plan to improve water quality in the subject facility's watershed.

Summary of Review

The existing permit and proposed permit differ as follows:

- **The proposed permit has two sets effluent limits. Interim limits apply for the current treatment process. Final limits will apply once the upgraded treatment plant has started up.**
- **Due to the EPA triennial review, monitoring shall be required for E. Coli.**

Sludge use and disposal description and location(s):

No biosolids/sewage sludge disposed in 2024.

Proposed locations for disposal include the following:

- Manor Meadows Farm; West Providence Township, Bedford County under PAG-08-3562 as agricultural utilization
- LoJo Farm Field 32/ LoJo Farm Field 13; East Providence Township, Bedford County under PAG-08- as agricultural utilization

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: Everett STP

NPDES Permit # PA0037711

Physical Address: 183 Sewer Plant Road
Everett, PA 15537

Mailing Address: 100 Mechanic Street
Everett, PA 15537

Contact: Kirk Feaster
watersewer@everettboro.com

Consultant: David Cunningham
Keller Engineers
(814) 696-7430
dcunningham@keller-engineers.com

1.2 Permit History

Permit submittal included the following information.

- NPDES Application
- Flow Diagrams
- Influent Sample Data
- Effluent Sample Data

2.0 Treatment Facility Summary

2.1.1 Site location

The physical address for the facility is 183 Sewer Plant Road, Everett, PA 15537. 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

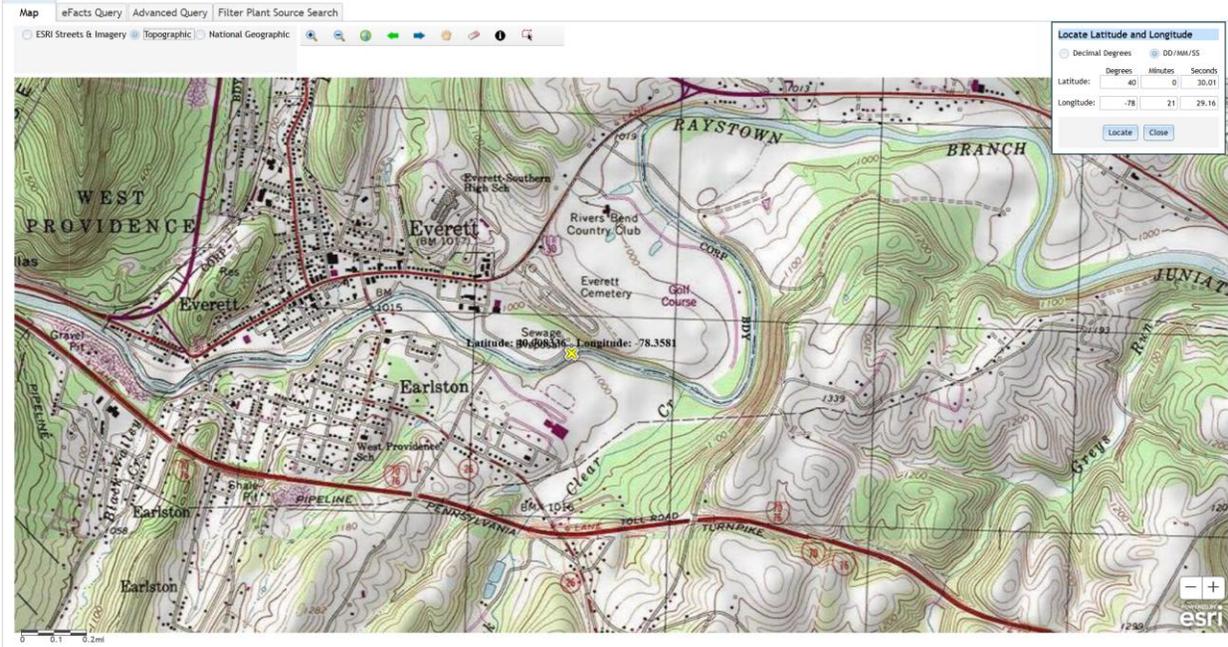
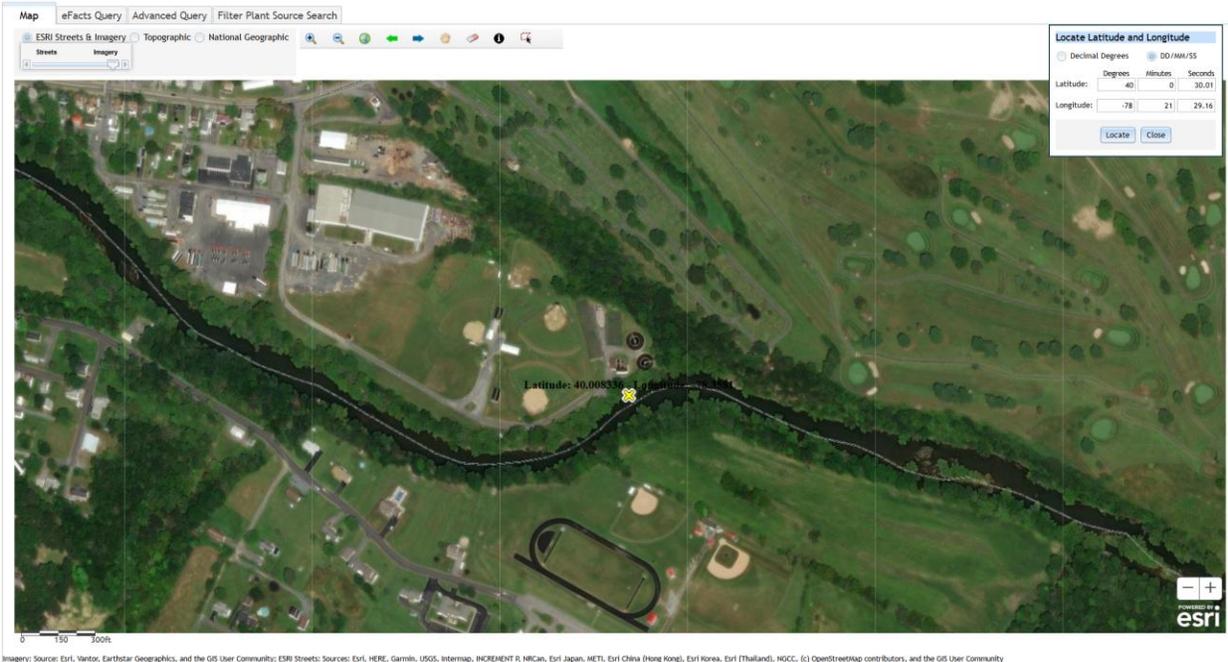


Figure 2: Aerial Photograph of the subject facility



2.1.2 Sources of Wastewater/Stormwater

The facility receives wastewater contributions from the following municipalities:

Everett Borough at 55% flow contribution. West Providence Township at 45% flow contribution.

The facility receives industrial/commercial wastewater contributions.

The business name listed for industrial/commercial contributions was Lampire Biological Laboratories. This facility is a significant industrial user discharging an average annual wastewater flow of 0.0030 MGD.

The facility does not have an EPA-approved pretreatment program.

The facility did not receive hauled-in wastes in the past three years and does not accept hauled-in wastes in the next five years.

2.2 Description of Wastewater Treatment Process

Current Treatment System:

The subject facility is a 0.87 MGD average annual design flow facility. The hydraulic design capacity is 1.08 MGD. The subject facility treats wastewater using a Schreibers tank(s), a post aeration tank, a chlorine contact tank, an aerobic digester(s), and reed beds.

The facility is being evaluated for flow, pH, dissolved oxygen, TRC, CBOD5, TSS, fecal coliform, total copper, nitrogen species, and phosphorus. 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: Everett STP | | | | |
| WQM Permit No. | | Issuance Date | | |
| 0598404 | | 10/18/2016 | | |
| | | | | |
| Waste Type | Degree of Treatment | Process Type | Disinfection | Avg Annual Flow (MGD) |
| Sewage | Secondary | Counter Current | Gas Chlorine | 0.87 |
| | | | | |
| Hydraulic Capacity (MGD) | Organic Capacity (lbs/day) | Load Status | Biosolids Treatment | Biosolids Use/Disposal |
| 1.08 | 1021 | Existing Hydraulic Overload | | |

After Upgrade:

The upgraded average annual design flow is 0.995 MGD. The hydraulic design capacity is MGD.

The hydraulic design capacity shall be 1.08 MGD.

The subject facility treats wastewater using a SBR, a sludge digester, an ultraviolet disinfection unit, and reed beds.

| Treatment Facility Summary | | | | |
|--------------------------------------|----------------------------|---------------|---------------------|------------------------|
| Treatment Facility Name: Everett STP | | | | |
| WQM Permit No. | | Issuance Date | | |
| 0525201 | | TBD | | |
| Waste Type | Degree of Treatment | Process Type | Disinfection | Avg Annual Flow (MGD) |
| Sewage | Secondary | SBR | Ultraviolet | 0.995 |
| Hydraulic Capacity (MGD) | Organic Capacity (lbs/day) | Load Status | Biosolids Treatment | Biosolids Use/Disposal |
| 1.08 | 2052 | | | |

2.3 Facility Outfall Information

The facility has the following outfall information for wastewater.

Outfall No. 001 Design Flow (MGD) .87
 Latitude 40° 0' 30.62" Longitude -78° 21' 29.17"
 Wastewater Description: Effluent

Outfall No. 002 Design Flow (MGD) 0
 Latitude 40° 0' 30.00" Longitude -78° 21' 31.00"
 Wastewater Description: Untreated Combined Sewer Overflow

Outfall No. 003 Design Flow (MGD) 0
 Latitude 40° 0' 39.00" Longitude -78° 22' 19.00"
 Wastewater Description: Untreated Combined Sewer Overflow

The COA stipulates elimination of SSOs by October 31, 2018.

The subject facility outfall is within the vicinity of another sewage/wastewater outfall. The downstream outfall is the Riverview Homeowners Association (PA0083569) which is about 3 miles from the subject facility.

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.

- ChemPac 70 for phosphorus removal
- Sodium Hypochlorite for disinfection

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° 0' 30.62", Longitude 78° 21' 29.17", River Mile Index 79, Stream Code 13349

Receiving Waters: Raystown Branch Juniata River (TSF)

Type of Effluent: Effluent

1. The permittee is authorized to discharge during the period from **May 1, 2021** through **April 30, 2026**.
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 | 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 Inst Min | XXX | XXX | 9.0 | 1/day | Grab |
| Dissolved Oxygen | XXX | XXX | 5.0 Inst Min | XXX | XXX | XXX | 1/day | Grab |
| Total Residual Chlorine (TRC) | XXX | XXX | XXX | 0.5 | XXX | 1.6 | 1/day | Grab |
| Carbonaceous Biochemical Oxygen Demand (CBOD5) | 181 | 290 | XXX | 25 | 40 | 50 | 1/week | 24-Hr Composite |
| Biochemical Oxygen Demand (BOD5) Raw Sewage Influent | Report | Report Daily Max | XXX | Report | XXX | XXX | 1/week | 24-Hr Composite |
| Total Suspended Solids | 218 | 327 | XXX | 30 | 45 | 60 | 1/week | 24-Hr Composite |
| Total Suspended Solids Raw Sewage Influent | Report | Report Daily Max | XXX | Report | XXX | XXX | 1/week | 24-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 |

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 | Minimum | Average Monthly | Weekly Average | Instant. Maximum | | |
| Ammonia-Nitrogen | XXX | XXX | XXX | Report | XXX | XXX | 2/week | 24-Hr Composite |
| Total Phosphorus | 15 | XXX | XXX | 2.0 | XXX | 4 | 2/week | 24-Hr Composite |
| Copper, Total | XXX | XXX | XXX | Report Avg Qrtly | XXX | XXX | 1/quarter | 24-Hr Composite |

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

at Outfall 001

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

I. B. For Outfall 001, Latitude 40° 0' 30.62", Longitude 78° 21' 29.17", River Mile Index 79, Stream Code 13349

Receiving Waters: Raystown Branch Juniata River (TSF)

Type of Effluent: Effluent

1. The permittee is authorized to discharge during the period from **May 1, 2021** through **April 30, 2026**.
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 |
| | Monthly | Annual | Monthly | Monthly Average | Maximum | Instant. Maximum | | |
| Ammonia-N | Report | Report | XXX | Report | XXX | XXX | 2/week | 24-Hr Composite |
| Kjeldahl-N | Report | XXX | XXX | Report | XXX | XXX | 2/week | 24-Hr Composite |
| Nitrate-Nitrite as N | Report | XXX | XXX | Report | XXX | XXX | 2/week | 24-Hr Composite |
| Total Nitrogen | Report | Report | XXX | Report | XXX | XXX | 2/week | Calculation |
| Total Phosphorus | Report | Report | XXX | Report | XXX | XXX | 2/week | 24-Hr Composite |
| Net Total Nitrogen | Report | 15890 | XXX | XXX | XXX | XXX | 1/month | Calculation |
| Net Total Phosphorus | Report | 2119 | XXX | XXX | XXX | XXX | 1/month | Calculation |

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

at Outfall 001

Footnotes:

(1) See Part C for Chesapeake Bay Requirements.

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.

12/21/2021:

- Recent repair work includes new diffusers in the south Schrieber tank, rake repair in the north tank, and one raw sewage pump was rebuilt. A sludge pump was being repaired.
- The facility's security fencing was damaged during tropical storm Ida and there was flooding in the control building. No major treatment units were damaged.
- A new Consent Order and Agreement was issued on February 4, 2021 to address inflow and infiltration problems within the borough's collection system and a contributing system owned by West Providence Township. The Borough's Corrective Action Plan calls for further I&I detection and repair work in order to eliminate sanitary sewer overflows. Nine SSOs were reported in 2021, four of which were caused by tropical storm Ida in September 2021. Remote metering in the collection system is currently taking place. Jetting and televising of the collection system line upstream of the Bloody Run pump station revealed two major sources of inflow and repairs were conducted. Several home laterals were also repaired.

01/30/2023:

The Authority's Chapter 94 report for 2021 noted a hydraulic overload condition at the treatment plant. The DEP and the Authority are currently working on finalizing a new Consent Order and Agreement (COA) to address the plant overload condition and eliminating SSOs within the collection system. The COA will likely include a plant upgrade project

02/08/2024:

- Since last inspection the #2 blower was repaired and the concrete wall for one of the Schrieber tanks was repaired.
- A new auto sampler and sample storage refrigerator were purchased last year. Both samplers have been connected to the flow meter and are now collecting a flow paced composite sample.
- The Authority removed sludge from two reed beds in 2023 and may be cleaning out additional beds this year.
- Collection system work conducted in 2023 includes camera inspections, replacement of 200 ft of main line, and elimination of one manhole.

02/11/2025:

There were 21 sanitary sewer overflows reported in 2024. The SSOs occurred either at the treatment plant or the Bloody Run pump stations and were attributed to heavy rain.

05/16/2025:

- The treatment plant was affected by flooding of the Raystown Branch during a heavy rain event on May 13 and 14, 2025. Kirk said they recorded 3 inches of rain at the plant. High water flowed in front of the control building and flooded the influent chamber in the basement below the building. The plant was also not accessible during part of the day on May 14 due to flood water over the access road. A sump pump was used to pump out the basement and the plant accessible again in the early hours of May 15. The submersible style influent pumps stayed in service during the event and the treatment plant continued to operate. Kirk said there were no electrical problems or any damage to the plant. The rain event caused sanitary sewer overflows at outfalls 002 and 004. Kirk will be reporting the noncompliant discharges through eDMR.
- Kirk mentioned that the new sewage plant will be constructed at a higher elevation and should be less likely to be affected by minor flooding. Construction of the plant has been delayed and may begin sometime in 2026

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 0.6055 MGD in May 2025. The design capacity of the treatment system is 1.08 MGD.

The off-site laboratory used for the analysis of the parameters was Pace Analytical located at 2019 Ninth Avenue, Altoona, PA 16602

DMR Data for Outfall 001 (from November 1, 2024 to October 31, 2025)

| Parameter | OCT-25 | SEP-25 | AUG-25 | JUL-25 | JUN-25 | MAY-25 | APR-25 | MAR-25 | FEB-25 | JAN-25 | DEC-24 | NOV-24 |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Flow (MGD) Average Monthly | 0.1930 | 0.1899 | 0.2064 | 0.3156 | 0.5804 | 0.6055 | 0.2898 | 0.2667 | 0.3977 | 0.2043 | 0.2930 | 0.2466 |
| Flow (MGD) Daily Maximum | 0.5179 | 0.2747 | 0.3744 | 0.5824 | 1.3911 | 1.7243 | 0.6169 | 0.5954 | 1.1331 | 0.2992 | 0.8570 | 0.5008 |
| pH (S.U.) Instantaneous Minimum | 7.1 | 7.0 | 7.0 | 7.4 | 7.3 | 7.2 | 7.4 | 7.4 | 7.3 | 7.3 | 7.0 | 7.1 |
| pH (S.U.) Instantaneous Maximum | 7.7 | 7.9 | 7.9 | 8.0 | 7.8 | 7.7 | 7.7 | 7.8 | 7.7 | 7.8 | 7.5 | 7.5 |
| DO (mg/L) Instantaneous Minimum | 5.0 | 6.8 | 7.3 | 7.4 | 7.6 | 7.5 | 7.3 | 9.5 | 6.8 | 6.6 | 5.0 | 5.1 |
| TRC (mg/L) Average Monthly | 0.25 | 0.26 | 0.27 | 0.22 | 0.27 | 0.27 | 0.23 | 0.34 | 0.41 | 0.45 | 0.42 | 0.43 |
| TRC (mg/L) Instantaneous Maximum | 0.56 | 0.47 | 0.46 | 0.57 | 0.57 | 0.63 | 0.66 | 0.55 | 0.69 | 0.82 | 0.82 | 0.68 |
| CBOD5 (lbs/day) Average Monthly | 5.1 | 5.0 | 5.1 | 6.5 | 18.2 | 18.1 | 7.1 | 6.0 | 8.1 | 4.9 | 7.5 | 6.3 |
| CBOD5 (lbs/day) Weekly Average | 6.9 | 6.4 | 5.6 | 8.4 | 28.7 | 43.1 | 9.7 | 7.6 | 11.4 | 5.5 | 12.3 | 10.8 |
| CBOD5 (mg/L) Average Monthly | 3.2 | 3.3 | 3.0 | 3.0 | 3.0 | 3.0 | 3.4 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| CBOD5 (mg/L) Weekly Average | 3.6 | 4.5 | 3.0 | 3.0 | 3.1 | 3.0 | 5.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| BOD5 (lbs/day) Raw Sewage Influent Average Monthly | 459 | 445 | 360 | 411 | 593 | 774 | 380 | 374 | 347 | 555 | 347 | 373 |
| BOD5 (lbs/day) Raw Sewage Influent Daily Maximum | 646 | 516 | 404 | 616 | 828 | 1553 | 485 | 402 | 419 | 765 | 437 | 451 |

**NPDES Permit Fact Sheet
Everett STP**

NPDES Permit No. PA0037711

| | | | | | | | | | | | | |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|---------|---------|
| BOD5 (mg/L) Raw Sewage Influent Average Monthly | 286 | 291 | 213 | 190 | 111 | 144 | 189 | 191 | 142 | 340 | 160 | 214 |
| TSS (lbs/day) Average Monthly | 6.0 | 2.8 | 3.4 | 5.4 | 13.1 | 27.2 | 10.9 | 7.5 | 12.3 | 5.8 | 6.9 | 3.8 |
| TSS (lbs/day) Raw Sewage Influent Average Monthly | 333 | 285 | 217 | 246 | 419 | 534 | 249 | 228 | 320 | 485 | 161 | 147 |
| TSS (lbs/day) Raw Sewage Influent Daily Maximum | 486 | 392 | 331 | 434 | 955 | 1309 | 435 | 353 | 458 | 809 | 230 | 217 |
| TSS (lbs/day) Weekly Average | 9.3 | 3.2 | 5.3 | 8.7 | 26.7 | 69.0 | 22.1 | 11.2 | 22.8 | 8.7 | 9.9 | 5.8 |
| TSS (mg/L) Average Monthly | 3.7 | 1.8 | 2.0 | 2.6 | 2.1 | 4.2 | 4.7 | 3.7 | 4.0 | 3.5 | 2.9 | 1.9 |
| TSS (mg/L) Raw Sewage Influent Average Monthly | 205 | 186 | 131 | 114 | 63 | 87 | 115 | 118 | 124 | 300 | 68 | 74 |
| TSS (mg/L) Weekly Average | 5.6 | 2.0 | 2.8 | 4.8 | 2.8 | 4.8 | 6.8 | 4.4 | 6.0 | 4.8 | 4.0 | 2.8 |
| Fecal Coliform (No./100 ml) Geometric Mean | 6.3 | 3.5 | 3.6 | 4.1 | 11.9 | 156.5 | 11.8 | 22.9 | 2.1 | 24.8 | 17.3 | 8.6 |
| Fecal Coliform (No./100 ml) Instantaneous Maximum | 2419.6 | 28.8 | 5.2 | 52.9 | 47.9 | 6488.0 | 770.1 | 214.2 | 5.2 | 2419.0 | 2595.2 | 140.0 |
| Nitrate-Nitrite (mg/L) Average Monthly | 6.544 | 5.073 | 3.545 | < 2.300 | 4.196 | < 4.288 | < 2.006 | < 2.300 | < 2.768 | < 2.824 | < 4.713 | < 5.631 |
| Nitrate-Nitrite (lbs) Total Monthly | 399 | 248 | 182 | < 186 | 636 | < 943 | < 137 | < 150 | < 262 | < 147 | < 360 | < 319 |
| Total Nitrogen (mg/L) Average Monthly | < 7.276 | < 6.203 | < 4.234 | < 2.851 | < 4.728 | < 5.389 | < 3.106 | < 3.770 | < 6.643 | < 11.078 | < 5.373 | < 6.265 |
| Total Nitrogen (lbs) Effluent Net Total Monthly | < 438 | < 300 | < 217 | < 230 | < 713 | < 1168 | < 216 | < 247 | < 620 | < 576 | < 417 | < 356 |

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|--|----------|----------|----------|----------|----------|----------|----------|----------|--------|--------|----------|----------|
| Total Nitrogen (lbs) Total Monthly | < 438 | < 300 | < 217 | < 230 | < 713 | < 1168 | < 216 | < 247 | < 620 | < 576 | < 417 | < 356 |
| Total Nitrogen (lbs) Effluent Net Total Annual | | < 5551 | | | | | | | | | | |
| Total Nitrogen (lbs) Total Annual | | < 5551 | | | | | | | | | | |
| Ammonia (mg/L) Average Monthly | < 0.1000 | < 0.4473 | < 0.1000 | < 0.1000 | < 0.1372 | < 0.3255 | < 0.1000 | < 0.2680 | 1.6786 | 3.8949 | < 0.1366 | < 0.1009 |
| Ammonia (lbs) Average Monthly | < 6 | < 20 | < 5 | < 8 | < 18 | < 95 | < 7 | < 17 | 167 | 202 | < 10 | < 6 |
| Ammonia (lbs) Total Annual | | < 568 | | | | | | | | | | |
| TKN (mg/L) Average Monthly | < 0.7319 | < 1.1303 | < 0.6894 | < 0.5512 | < 0.5317 | < 1.0551 | 1.0999 | 1.4699 | 3.8756 | 8.2542 | < 0.6601 | < 0.6347 |
| TKN (lbs) Total Monthly | < 40 | < 52 | < 35 | < 44 | < 78 | < 209 | 78 | 96 | 359 | 430 | < 56 | < 37 |
| Total Phosphorus (lbs/day) Average Monthly | 3.2 | 3.7 | 3.3 | 1.2 | 2.2 | 6.0 | 2.6 | 2.0 | 4.0 | 3.1 | 2.8 | 5.3 |
| Total Phosphorus (mg/L) Average Monthly | 1.66 | 2.38 | 2.0 | 0.49 | 0.42 | 1.03 | 0.99 | 0.98 | 1.22 | 1.84 | 1.18 | 2.80 |
| Total Phosphorus (lbs) Effluent Net Total Monthly | 98 | 112 | 104 | 37 | 65 | 185 | 77 | 63 | 111 | 95 | 88 | 159 |
| Total Phosphorus (lbs) Total Monthly | 98 | 112 | 104 | 37 | 65 | 185 | 77 | 63 | 111 | 95 | 88 | 159 |
| Total Phosphorus (lbs) Effluent Net Total Annual | | 1199 | | | | | | | | | | |
| Total Phosphorus (lbs) Total Annual | | 1199 | | | | | | | | | | |
| Total Copper (mg/L) Average Quarterly | | < 0.0100 | | | < 0.0100 | | | < 0.0100 | | | < 0.0100 | |

3.2.1 Chesapeake Bay Truing

The table summarizes the facility’s compliance/noncompliance with Chesapeake Bay cap loads.

| Chesapeake Bay Annual Nutrient Summary | | | | | | |
|---|---------------------------------------|---------------------------------|---------------------------------------|---------------------------------|--|-------------------|
| Everett STP | | | | | | |
| PA0037711 | | | | | | |
| Year for Truing Period (Oct 1 - Sept 30) | Nitrogen (lbs) | | Phosphorus (lbs) | | Compliant with Permit Limits (Yes/No) | |
| | Annual Total Mass Load | Annual Net Mass Load | Annual Total Mass Load | Annual Net Mass Load | Nitrogen | Phosphorus |
| 2020 | 6565 | 6565 | 1285 | 1285 | Yes | Yes |
| 2021 | 7460 | 7460 | 1295 | 1295 | Yes | Yes |
| 2022 | 4338 | 4338 | 1165 | 1165 | Yes | Yes |
| 2023 | 5022 | 5022 | 1740 | 1740 | Yes | Yes |
| 2024 | 5551 | 5551 | 1199 | 1199 | Yes | Yes |
| Notes: | | | | | | |
| Nitrogen Annual Net Mass CAP Load = | | | 15,890 | lbs/yr | | |
| Phosphorus Annual Net Mass CAP Load = | | | 2,119 | lbs/yr | | |

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 May 1, 2021 to December 10, 2025, the following were observed effluent non-compliances.

| Summary of Non-Compliance with NPDES Effluent Limits | | | | | | | | | | |
|--|-------------------------------|-------------------------|------------------|--------------|---------------------|--------------|-----------------|-----------------------|---|--|
| Beginning May 1, 2021 and Ending December 10, 2025 | | | | | | | | | | |
| NON_COMPLIANCE_DATE | NON_COMPLTYPE_DESC | NON_COMPLCATEGORY_DESC | PARAMETER | SAMPLE_VALUE | VIOLATION_CONDITION | PERMIT_VALUE | UNIT_OF_MEASURE | STAT_BASE_CODE | DISCHARGE_COMMENTS | FACILITY_COMMENTS |
| 8/26/2021 | Violation of permit condition | Effluent | Total Phosphorus | 2.16 | > | 2.0 | mg/L | Average Monthly | | Delivery of Ferrus Sulfate was delayed(brought out of New York) and feed rate was reduced. We will now order sooner to try to eliminate this issue in the future. |
| 10/26/2021 | Violation of permit condition | Effluent | Fecal Coliform | 2068.0 | > | 1000 | No./100 ml | Instantaneous Maximum | | WWTP and other locations within the collection system were under water due to the river coming up over the banks. Hurricane Ida remnants dropped almost 6inches of rain on us locally. Hydraulic conditions were extremely high and were over plant design flows. |
| 11/16/2021 | Violation of permit condition | Effluent | Total Phosphorus | 2.31 | > | 2.0 | mg/L | Average Monthly | | Supply of our Ferrus sulfate chemical has been extremely unreliable. The product comes out of New York and drivers/truck shortages are creating backlogs. We set up an automatic fill schedule monthly now instead of trying to call when we are getting low. They are telling us that this should help us get our product in a more timely manor. When low we turn our feed pump down to stretch the product to keep it as low as possible. |
| 10/17/2022 | Violation of permit condition | Effluent | Fecal Coliform | 2419.6 | > | 1000 | No./100 ml | Instantaneous Maximum | | |
| 4/24/2024 | | Unauthorized Discharges | | | | | | | Heavy snow melt | |
| 4/24/2024 | | Unauthorized Discharges | | | | | | | Heavy snow melt | |
| 4/24/2024 | | Unauthorized Discharges | | | | | | | Heavy rainfall/ snow melt | |
| 4/24/2024 | | Unauthorized Discharges | | | | | | | Rainfall | |
| 4/24/2024 | | Unauthorized Discharges | | | | | | | Heavy Rainfall 1.32" | |
| 5/15/2024 | | Unauthorized Discharges | | | | | | | Flood waters over the plant headworks | |
| 5/15/2024 | | Unauthorized Discharges | | | | | | | Flooding of river water over WWTP headworks | |
| 5/15/2024 | | Unauthorized Discharges | | | | | | | heavy rainfall | |
| 5/15/2024 | | Unauthorized Discharges | | | | | | | Heavy rainfall - Over 4" | |
| 5/15/2024 | | Unauthorized Discharges | | | | | | | heavy rainfall- 1.26" | |
| 5/15/2024 | | Unauthorized Discharges | | | | | | | Heavy rainfall over 4" | |
| 5/15/2024 | | Unauthorized Discharges | | | | | | | Heavy rainfall/flooding | |
| 5/15/2024 | | Unauthorized Discharges | | | | | | | River waters over plant headworks | |
| 6/21/2024 | Violation of permit condition | Effluent | Total Phosphorus | 2.21 | > | 2.0 | mg/L | Average Monthly | | |
| 6/7/2024 | | Unauthorized Discharges | | | | | | | Heavy rain over 3" | |
| 6/7/2024 | | Unauthorized Discharges | | | | | | | Thunderstorm when flows already high from previous storms | |

NPDES Permit Fact Sheet
Everett STP

NPDES Permit No. PA0037711

| | | | | | | | | | | |
|------------|-------------------------------|-------------------------|------------------|--------|---|------|------------|-----------------------|---|--|
| 6/7/2024 | | Unauthorized Discharges | | | | | | | Heavy Rainfall over 1.25" | |
| 8/22/2024 | Violation of permit condition | Effluent | Total Phosphorus | 3.02 | > | 2.0 | mg/L | Average Monthly | | Extreme dry weather made dosing very difficult |
| 8/9/2024 | | Unauthorized Discharges | | | | | | | 1.32 inches of rain fell within a 30 minute period. Will not know the duration until the data is downloaded and processed at the end of the month. I will include that information with the reports that get submitted. | |
| 8/13/2024 | | Unauthorized Discharges | | | | | | | Tropical Storm Debbie, Total rainfall amount of over 5 inches. Duration will be sent in with lab result data | |
| 8/13/2024 | | Unauthorized Discharges | | | | | | | Tropical Storm Debbie, total storm amount of 5 inches of rain. Will not know the duration until I process the data at the end of the month. This data will then be submitted with the lab results | |
| 10/23/2024 | Violation of permit condition | Effluent | Fecal Coliform | 1250.0 | > | 1000 | No./100 ml | Instantaneous Maximum | | |
| 12/27/2024 | Violation of permit condition | Effluent | Total Phosphorus | 2.80 | > | 2.0 | mg/L | Average Monthly | | |
| 6/23/2025 | Violation of permit condition | Effluent | Fecal Coliform | 6488.0 | > | 1000 | No./100 ml | Instantaneous Maximum | | |
| 5/16/2025 | | Unauthorized Discharges | | | | | | | River had flood waters over its banks and up over our headworks at the WWTP. Road and surrounding areas were flooded and barely accessible. All operations were normal. Constant bypasses took place due to flood waters over our influent screening room and wet well areas. | |
| 5/16/2025 | | Unauthorized Discharges | | | | | | | Flooding at the WWTP did not allow sewage to be conveyed and was relieved at this location. River gates were closed during this time and Bloody Run was being pumped. | |
| 5/16/2025 | | Unauthorized Discharges | | | | | | | River had flooded over its banks and was over our influent screening room and wet well area. Spoke with Sarah Wriglesworth regarding the incident on 5/15/2025. Followed up with an email. Met with Fred Clark on 5/14/25 onsite to discuss flood conditions and for him to get photos. | |
| 5/16/2025 | | Unauthorized Discharges | | | | | | | Flood waters restricted the sewage from going through the WWTP. Flood gates were closed through this time as well. | |
| 5/16/2025 | | Unauthorized Discharges | | | | | | | Met with Fred Clark at 0900 to follow up after his last visit. All plant operations are as normal and flood waters have receded to within its banks. No longer bypassing as of 0530 when operators arrived. | |
| 6/3/2025 | | Unauthorized Discharges | | | | | | | 0.78 inches of rain when the plant was already inundated by flooding | |
| 6/13/2025 | | Unauthorized Discharges | | | | | | | Around 2 inches of rainfall fell within 30 minutes. Heavy local flooding of tributaries to the river. Storm drains and roadways flooded. | |
| 6/13/2025 | | Unauthorized Discharges | | | | | | | Around 2 inches of rainfall fell within 30 minutes. Heavy local flooding of tributaries to the river. Storm drains and roadways flooded. Bloody Run was over its banks/channel. | |
| 6/13/2025 | | Unauthorized Discharges | | | | | | | Around 2 inches of rainfall fell within 30 minutes. Heavy local flooding of tributaries to the river. Storm drains and roadways flooded. | |
| 6/13/2025 | | Unauthorized Discharges | | | | | | | Around 2 inches of rainfall fell within 30 minutes. Heavy local flooding of tributaries to the river. Storm drains and roadways flooded. Bloody Run over its banks/channel. | |
| 6/20/2025 | | Unauthorized Discharges | | | | | | | Over an inch of rain fell in less than one hour. Short term, localized flooding of low areas, streets. Have not downloaded the data. I will provide the exact duration of the event when I submit the edmr for June. | |
| 10/17/2025 | Violation of permit condition | Effluent | Total Phosphorus | 2.38 | > | 2.0 | mg/L | Average Monthly | 17 | |

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 May 31, 2021 to December 10, 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.

No biosolids/sewage sludge disposed in 2024.

Proposed locations for disposal include the following:

- Manor Meadows Farm; West Providence Township, Bedford County under PAG-08-3562 as agricultural utilization
- LoJo Farm Field 32/ LoJo Farm Field 13; East Providence Township, Bedford County under PAG-08- as agricultural utilization

3.5 Open Violations

No open violations existed as of December 2025.

4.0 Receiving Waters and Water Supply Information Detail Summary

4.1 Receiving Waters

The receiving waters has been determined to be Raystown Branch Juniata River. The sequence of receiving streams that the Raystown Branch Juniata River discharges into are Juniata River and the Susquehanna River which eventually drains into the Chesapeake Bay.

4.2 Public Water Supply (PWS) Intake

The closest PWS to the subject facility is Saxton Municipal Water Authority (PWS ID #4050021) located approximately 41 miles downstream of the subject facility on the Juniata 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 2 waterbody. The surface waters is an attaining stream that supports aquatic life. The designated use has been classified as protected waters for trout stocking fish (TSF) 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 Raystown Branch Juniata station (WQN223). This WQN station is located approximately 41 miles downstream of the subject facility.

The closest gauge station to the subject facility is the Raystown Branch Juniata station (USGS station number 1562000). This gauge station is located approximately 41 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 8.0 and the stream water temperature was estimated to be 23.3 C.

The hardness of the stream was estimated from the water quality network to be 96 mg/l CaCO₃.

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

| Gauge Station Data | | |
|---|---|--------------------------------------|
| USGS Station Number | 1562000 | |
| Station Name | Raystown Branch Juniata River at Saxton, PA | |
| Q710 | 67.1 | ft ³ /sec |
| Drainage Area (DA) | 756 | mi ² |
| Calculations | | |
| The low flow yield of the gauge station is: | | |
| Low Flow Yield (LFY) = Q710 / DA | | |
| LFY = (67.1 ft ³ /sec / 172 mi ²) | | |
| LFY = | 0.0888 | ft ³ /sec/mi ² |
| The low flow at the subject site is based upon the DA of | | |
| | 432 | mi ² |
| Q710 = (LFY@gauge station)(DA@Subject Site) | | |
| Q710 = (0.0888 ft ³ /sec/mi ²)(432 mi ²) | | |
| Q710 = | 38.343 | ft ³ /sec |

4.6.1 Summary of Discharge, Receiving Waters and Water Supply Information

| | | | |
|---|----------------------|-------------------|------------------------|
| Outfall No. | <u>001</u> | Design Flow (MGD) | <u>.87</u> |
| Latitude | <u>40° 0' 30.02"</u> | Longitude | <u>-78° 21' 28.86"</u> |
| Quad Name | <u></u> | Quad Code | <u></u> |
| Wastewater Description: <u>Effluent</u> | | | |

| | | | |
|------------------------------|---|------------------------------|---------------------------------|
| Receiving Waters | <u>Raystown Branch Juniata River (TSF)</u> | Stream Code | <u>13349</u> |
| NHD Com ID | <u>65847407</u> | RMI | <u>80</u> |
| Drainage Area | <u>432</u> | Yield (cfs/mi ²) | <u>0.0888</u> |
| Q ₇₋₁₀ Flow (cfs) | <u>38.3</u> | Q ₇₋₁₀ Basis | <u>StreamStats/stream gauge</u> |
| Elevation (ft) | <u>991</u> | Slope (ft/ft) | <u></u> |
| Watershed No. | <u>11-C</u> | Chapter 93 Class. | <u>TSF, MF</u> |
| Existing Use | <u></u> | Existing Use Qualifier | <u></u> |
| Exceptions to Use | <u></u> | Exceptions to Criteria | <u></u> |
| Assessment Status | <u>Attaining Use(s) supports aquatic life</u> | | |
| Cause(s) of Impairment | <u>Not applicable</u> | | |
| Source(s) of Impairment | <u>Not applicable</u> | | |
| TMDL Status | <u>Not applicable</u> | Name | <u></u> |

| | | | |
|-------------------------|-------------|-----------------------------|---------|
| Background/Ambient Data | | Data Source | |
| pH (SU) | <u>8.00</u> | WQN223; median July to Sept | <u></u> |
| Temperature (°C) | <u>23.3</u> | WQN223; median July to Sept | <u></u> |
| Hardness (mg/L) | <u>96</u> | WQN223; historical median | <u></u> |
| Other: | <u></u> | | <u></u> |

| | | | |
|---|---|----------------------------|-----------|
| Nearest Downstream Public Water Supply Intake | <u>Saxton Municipal Water Authority</u> | | |
| PWS Waters | <u>Juniata River</u> | Flow at Intake (cfs) | <u></u> |
| PWS RMI | <u>41</u> | Distance from Outfall (mi) | <u>41</u> |

4.6.2 Summary of Discharge, Receiving Waters and Water Supply Information

| | | | |
|--|----------------------|-------------------|------------------------|
| Outfall No. | <u>002</u> | Design Flow (MGD) | <u>0</u> |
| Latitude | <u>40° 0' 29.15"</u> | Longitude | <u>-78° 21' 30.56"</u> |
| Quad Name | <u></u> | Quad Code | <u></u> |
| Wastewater Description: <u>Untreated Combined Sewer Overflow</u> | | | |

4.6.3 Summary of Discharge, Receiving Waters and Water Supply Information

| | | | |
|--|----------------------|-------------------|------------------------|
| Outfall No. | <u>003</u> | Design Flow (MGD) | <u>0</u> |
| Latitude | <u>40° 0' 35.95"</u> | Longitude | <u>-78° 22' 16.24"</u> |
| Quad Name | <u></u> | Quad Code | <u></u> |
| Wastewater Description: <u>Untreated Combined Sewer Overflow</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) | (Modeling Point #3) | (Modeling Point #4) | Units |
|-----------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------|
| Stream Code | 13349 | 13349 | 13349 | 13349 | |
| River Mile Index | 80 | 76.74 | 76.44 | 75.3 | miles |
| Elevation | 991 | 977 | 975 | 970 | feet |
| Latitude | 40.008336 | 40.01205 | 40.012083 | 40.005838 | |
| Longitude | -78.3581 | -78.33193 | -78.327038 | -78.308713 | |
| Drainage Area | 432 | 454 | 454 | 460 | sq miles |
| Low Flow Yield | 0.0888 | 0.0888 | 0.0888 | 0.0888 | 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 three samples.

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:

$$TMDL = \sum WLAs + \sum LAs + MOS$$

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 A discharger. The supplement defines Sector A as a sewage facility is considered significant if it has a design flow of at least 0.4 MGD.

Table 5 of the Phase 3 WIP (revised September 13, 2021) presents all NPDES permits for Significant Sewage dischargers with Cap Loads. The NPDES Permit No., phase, facility name, latest permit issuance date, expiration date, Cap Load compliance start date, TN and TP Cap Loads, and TN and TP Delivery Ratios are presented. In addition, if TN Offsets were incorporated into the TN Cap Loads when the permit was issued, the amount is shown; these Offsets will be removed from Cap Loads upon issuance of renewed permits to implement Section IV of this document (i.e., a facility may use Offsets for compliance but may not register them as credits).

The total nitrogen (TN) and total phosphorus (TP) cap loads itemized by Table 5 for the subject facility are as follows:

| | |
|----------------------|--------|
| TN Cap Load (lbs/yr) | 15,890 |
| TN Delivery Ratio | 0.599 |
| TP Cap Load (lbs/yr) | 2,119 |
| TP Delivery Ratio | 0.229 |

Expansions by any Significant Sewage discharger will not result in any increase in Cap Loads. Where non-significant facilities expand to a design flow of 0.4 MGD or greater, the lesser of baseline Cap Loads of 7,306 lbs/yr TN and 974 lbs/yr TP or existing performance will be used for permits, and the load will be moved from the Non-Significant sector load to the Significant Sewage sector load. If considered necessary for environmental protection, DEP may decide to move load from the Point Source Reserve to the Significant Sewage sector in the future.

The minimum monitoring frequency for TN species and TP in new or renewed NPDES permits for Significant Sewage dischargers is 2/week.

This facility is subject to Sector A monitoring requirements. Monitoring shall be required at least 2x/wk.

Reporting

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.

Facilities with NPDES permits must use DEP's eDMR system for reporting, except small flow treatment facilities. An Annual DMR must be submitted by the end of the Truing Period, November 28. As attachments to the Annual DMR a facility must submit a completed Annual Chesapeake Bay Spreadsheet, available through DEP's Supplemental Reports website, which contains an Annual Nutrient Monitoring worksheet and an Annual Nutrient Budget worksheet. This Spreadsheet will be submitted once per Compliance Year only, and reflect all nutrient sample results (for the period October 1 – September 30), Credit transactions (including the Truing Period) and Offsets applied during the Compliance Year.

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 122.1.1 and 40 CFR 122.1.2). 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

Two modeling runs for toxics were completed using Water Quality Management (WQM).

Modeling Run #1 utilized an average annual flow rate of 0.87 MGD.

Modeling Run #2 utilized an average annual flow rate of 0.995 MGD.

Both modeling runs recommended (a) secondary effluent limits and (b) an ammonia limit which exceeded 15 mg/l.

Effluent limits were not recommended for ammonia.

| Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection | | | |
|--|--|-----------------|--|
| Everett STP, PA0037711 | | | |
| 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/week as an 24-hr composite sample (Table 6-3). |
| | | Effluent Limit: | Effluent limits shall not exceed 181 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/week as a 24-hr composite sample (Table 6-3). |
| | | Effluent Limit: | Effluent limits shall not exceed 218 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. |
| TRC | TBEL | Monitoring: | The monitoring frequency shall be on a daily basis as a grab sample (Table 6-3). |
| | | Effluent Limit: | The average monthly limit should not exceed 0.5 mg/l and/or 1.6 mg/l as an instantaneous maximum. |
| | | Rationale: | Chlorine in both combined (chloramine) and free form is extremely toxic to freshwater fish and other forms of aquatic life (Implementation Guidance Total Residual Chlorine 1). The TRC effluent limitations to be imposed on a discharger shall be the more stringent of either the WQBEL or TBEL requirements and shall be expressed in the NPDES permit as an average monthly and instantaneous maximum effluent concentration (Implementation Guidance Total Residual Chlorine 4). Based on the stream flow rate (lowest 7-day flow rate in 10 years) and the design flow rate of the subject facility calculated by the TRC Evaluation worksheet, the TBEL is more stringent than the WQBEL. The monitoring frequency has been assigned in accordance with Table 6-3 and the effluent limits assigned by Chapter 92a.48(b)(2) |
| Fecal Coliform | TBEL | Monitoring: | The monitoring frequency shall be 1x/week 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 0.87 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

Effluent limits after Construction start-up

| Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection Everett STP, PA0037711 | | | |
|--|--|-----------------|---|
| Parameter | Permit Limitation Required by ¹ : | Recommendation | |
| CBOD | TBEL | Monitoring: | The monitoring frequency shall be 1x/week as an 24-hr composite sample (Table 6-3). |
| | | Effluent Limit: | Effluent limits shall not exceed 207 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/week as a 24-hr composite sample (Table 6-3). |
| | | Effluent Limit: | Effluent limits shall not exceed 249 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 1/day. The facility will be required to recording the UV transmittance, UV dosage, or UV intensity. |
| | | 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. |
| 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 0.995 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

Everett STP, PA0037711

| Parameter | Permit Limitation Required by ¹ : | Recommendation | |
|-----------------------------|--|-----------------|--|
| Ammonia-Nitrogen | Chesapeake Bay TMDL | Monitoring: | The monitoring frequency shall be 2x/wk as a 24-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 2x/wk. |
| Nitrate-Nitrite as N | Chesapeake Bay TMDL | Monitoring: | The monitoring frequency shall be 2x/wk as a 24-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 2x/wk. |
| Total Nitrogen | Chesapeake Bay TMDL | Monitoring: | The monitoring frequency shall be 2x/wk as a 24-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 2x/wk. |
| TKN | Chesapeake Bay TMDL | Monitoring: | The monitoring frequency shall be 2x/wk as a 24-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 2x/wk. |
| Total Phosphorus | Chesapeake Bay TMDL | Monitoring: | The monitoring frequency shall be 2x/wk as a 24-hr composite sample |
| | | Effluent Limit: | Effluent limits shall not exceed 15 lbs/day and 2.0 mg/l as an average monthly. |
| | | Rationale: | Due to the Chesapeake Bay Implementation Plan, the facility is required to be monitored on a frequency at least 2x/wk. |
| Net Total Nitrogen | Chesapeake Bay TMDL | Monitoring: | The monitoring frequency shall be 1x/yr as a calculation |
| | | Effluent Limit: | Effluent limits shall not exceed 15,890 lbs/yr |
| | | Rationale: | Due to the Chesapeake Bay Implementation Plan, the facility is required to be monitored on a frequency at least 1x/yr. |
| Net Total Phosphorus | Chesapeake Bay TMDL | Monitoring: | The monitoring frequency shall be 1x/yr as a calculation |
| | | Effluent Limit: | Effluent limits shall not exceed 2,119 lbs/yr |
| | | Rationale: | Due to the Chesapeake Bay Implementation Plan, the facility is required to be monitored on a frequency at least 1x/yr. |

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 0.87 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

Effluent limits after Construction start-up

Summary of Proposed NPDES Parameter Details for Nitrogen Species and Phosphorus

Everett STP, PA0037711

| Parameter | Permit Limitation Required by ¹ : | Recommendation | |
|------------------|--|-----------------|--|
| Total Phosphorus | Anti-backsliding | Monitoring: | The monitoring frequency shall be 2x/wk as a 24-hr composite sample |
| | | Effluent Limit: | Effluent limits shall not exceed 16.5 lbs/day and 2.0 mg/l as an average monthly. |
| | | Rationale: | Due to anti-backsliding, the current permit limits shall continue to the proposed permit |

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 0.995 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

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

I. B. For Outfall 001, Latitude 40° 0' 30.62", Longitude 78° 21' 29.17", River Mile Index 80, Stream Code 13349

Receiving Waters: Raystown Branch Juniata River (TSF)

Type of Effluent: Effluent

1. The permittee is authorized to discharge during the period from **Startup of New or Upgraded Facilities** 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 | Daily Minimum | Average Monthly | Weekly Average | Instant. Maximum | | |
| Carbonaceous Biochemical Oxygen Demand (CBOD5) | 207 | 332 | XXX | 25.0 | 40.0 | 50 | 1/week | 24-Hr Composite |
| Total Suspended Solids | 249 | 373 | XXX | 30.0 | 45.0 | 60 | 1/week | 24-Hr Composite |
| Ultraviolet light intensity (µw/cm ²) | XXX | XXX | Report | XXX | XXX | XXX | 1/day | Recorded |
| Total Phosphorus | 16.5 | XXX | XXX | 2.0 | XXX | XXX | 2/week | 24-Hr Composite |

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

at Outfall 001

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

I. C. For Outfall 001, Latitude 40° 0' 30.62", Longitude 78° 21' 29.17", River Mile Index 80, Stream Code 13349

Receiving Waters: Raystown Branch Juniata River (TSF)

Type of Effluent: 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 | Daily Maximum | Minimum | Average Monthly | Daily Maximum | Instant. Maximum | | |
| Flow (MGD) | Report | Report | XXX | XXX | XXX | XXX | Continuous | Measured |
| pH (S.U.) | XXX | XXX | 6.0 Inst Min | XXX | XXX | 9.0 | 1/day | Grab |
| Dissolved Oxygen | XXX | XXX | 5.0 Inst Min | XXX | XXX | XXX | 1/day | Grab |
| Biochemical Oxygen Demand (BOD5) Raw Sewage Influent | Report | Report | XXX | Report | XXX | XXX | 1/week | 24-Hr Composite |
| Total Suspended Solids Raw Sewage Influent | Report | Report | XXX | Report | XXX | XXX | 1/week | 24-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 | XXX | 1/quarter | Grab |
| Ammonia-Nitrogen | XXX | XXX | XXX | Report | XXX | XXX | 2/week | 24-Hr Composite |
| Copper, Total | XXX | XXX | XXX | Report Avg Qrtly | XXX | XXX | 1/quarter | 24-Hr Composite |
| Zinc, Total | XXX | XXX | XXX | Report Avg Qrtly | XXX | XXX | 1/quarter | Grab |

6.1.3 Toxics

Two modeling runs for toxics were completed using Toxics Management Spreadsheet (TMS).

Modeling Run #1 utilized an average annual flow rate of 0.87 MGD.

Modeling Run #2 utilized an average annual flow rate of 0.995 MGD.

Both modeling runs recommended monitoring for total copper and total zinc.

Summary of Proposed NPDES Parameter Details for Toxics

Everett STP, PA0037711

| Parameter | Permit Limitation Required by ¹ : | Recommendation | |
|--------------|--|-----------------|--|
| Total Copper | WQBEL | Monitoring: | The monitoring frequency shall be 1x/quarter as a 24-hr composite sample |
| | | Effluent Limit: | No effluent requirements |
| | | Rationale: | Toxics Management Spreadsheet recommends monitoring. |
| Total Zinc | WQBEL | Monitoring: | The monitoring frequency shall be 1x/quarter as a 24-hr composite sample |
| | | Effluent Limit: | No effluent requirements |
| | | Rationale: | Toxics Management Spreadsheet recommends monitoring. |

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 0.87 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 | | | |
|--|--|-----------------|---|
| #REF! | | | |
| Parameter | Permit Limitation Required by ¹ : | Recommendation | |
| E. Coli | 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 February 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 0.87 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 | | | |

6.2 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.

- The proposed permit has two sets effluent limits. Interim limits apply for the current treatment process. Final limits will apply once the upgraded treatment plant has started up.
- Due to the EPA triennial review, monitoring shall be required for E. Coli.

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° 0' 30.62", Longitude 78° 21' 29.17", River Mile Index 80, Stream Code 13349

Receiving Waters: Raystown Branch Juniata River (TSF)

Type of Effluent: Effluent

1. The permittee is authorized to discharge during the period from **Permit Effective Date** through **Completion of Construction**.
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 | Minimum | Average Monthly | Weekly Average | | | Instant. Maximum |
| Total Residual Chlorine (TRC) | XXX | XXX | XXX | 0.5 | XXX | 1.6 | 1/day | Grab |
| Carbonaceous Biochemical Oxygen Demand (CBOD5) | 181 | 290 | XXX | 25 | 40 | 50 | 1/week | 24-Hr Composite |
| Total Suspended Solids | 218 | 327 | XXX | 30 | 45 | 60 | 1/week | 24-Hr Composite |
| Total Phosphorus | 15 | XXX | XXX | 2.0 | XXX | XXX | 2/week | 24-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.

- Chlorine Minimization (Current treatment plant)
- SBR Batch Discharge Condition (Upgraded treatment plant)
- UV Monitoring Conditions (Upgraded treatment plant)
- Peak Flow Management Plan
- Hauled-in Waste Restrictions
- Chesapeake Bay Nutrient Definitions
- Solids Management for Non-Lagoon Treatment Systems
- Stormwater Requirements

| 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 Streamgauge Locations in and near Pennsylvania

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

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

| Streamgauge number | Streamgauge 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 Belle Grove, 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 |

26 Selected Streamflow Statistics for Streamgauge Locations in and near Pennsylvania

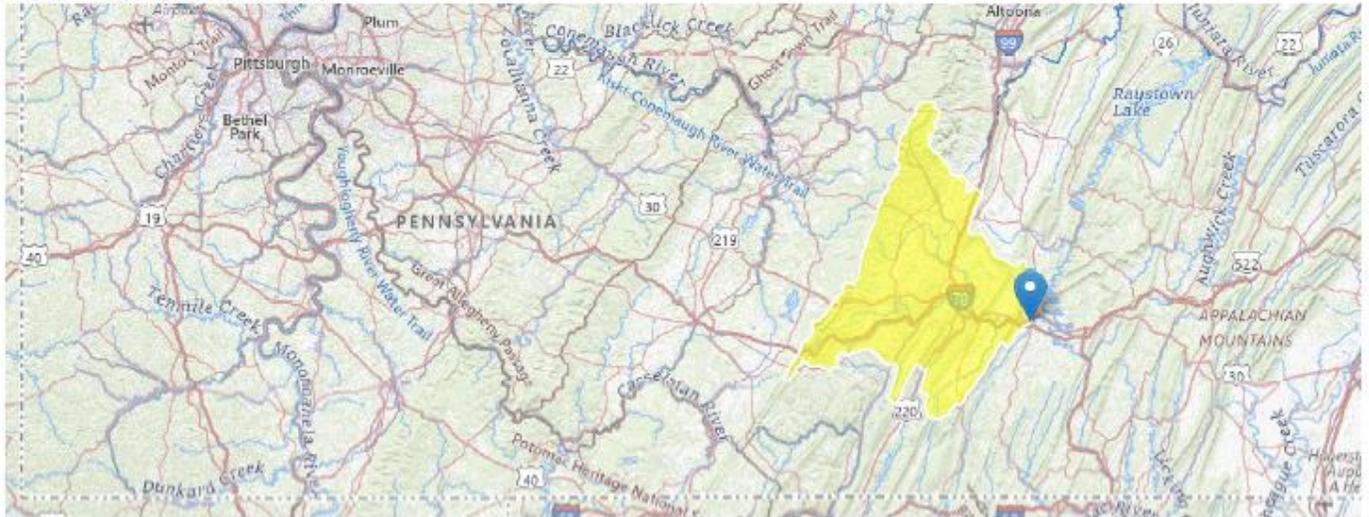
Table 2. Selected low-flow statistics for streamgauge locations in and near Pennsylvania.—Continued

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

| Streamgauge 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) |
|--------------------|--|----------------------------------|-------------------------------------|-------------------------------------|------------------------------------|--------------------------------------|-------------------------------------|--------------------------------------|
| 01546000 | 1912–1934 | 17 | 1.8 | 2.2 | 6.8 | 3.7 | 12.1 | 11.2 |
| 01546400 | 1986–2008 | 23 | 13.5 | 14.0 | 19.6 | 15.4 | 22.3 | 18.7 |
| 01546500 | 1942–2008 | 67 | 26.8 | 29.0 | 41.3 | 31.2 | 44.2 | 33.7 |
| 01547100 | 1969–2008 | 40 | 102 | 105 | 128 | 111 | 133 | 117 |
| 01547200 | 1957–2008 | 52 | 99.4 | 101 | 132 | 106 | 142 | 115 |
| 01547500 | ² 1971–2008 | 38 | 28.2 | 109 | 151 | 131 | 172 | 153 |
| 01547500 | ³ 1956–1969 | 14 | 90.0 | 94.9 | 123 | 98.1 | 131 | 105 |
| 01547700 | 1957–2008 | 52 | .5 | .6 | 2.7 | 1.1 | 3.9 | 2.2 |
| 01547800 | 1971–1981 | 11 | 1.6 | 1.8 | 2.4 | 2.1 | 2.9 | 3.5 |
| 01547950 | 1970–2008 | 39 | 12.1 | 13.6 | 28.2 | 17.3 | 36.4 | 23.8 |
| 01548005 | ² 1971–2000 | 25 | 142 | 151 | 206 | 178 | 241 | 223 |
| 01548005 | ³ 1912–1969 | 58 | 105 | 114 | 147 | 125 | 165 | 140 |
| 01548500 | 1920–2008 | 89 | 21.2 | 24.2 | 50.1 | 33.6 | 68.6 | 49.3 |
| 01549000 | 1910–1920 | 11 | 26.0 | 32.9 | 78.0 | 46.4 | 106 | 89.8 |
| 01549500 | 1942–2008 | 67 | .6 | .8 | 2.5 | 1.4 | 3.9 | 2.6 |
| 01549700 | 1959–2008 | 50 | 33.3 | 37.2 | 83.8 | 51.2 | 117 | 78.4 |
| 01550000 | 1915–2008 | 94 | 6.6 | 7.6 | 16.8 | 11.2 | 24.6 | 18.6 |
| 01551500 | ² 1963–2008 | 46 | 520 | 578 | 1,020 | 678 | 1,330 | 919 |
| 01551500 | ³ 1901–1961 | 61 | 400 | 439 | 742 | 523 | 943 | 752 |
| 01552000 | 1927–2008 | 80 | 20.5 | 22.2 | 49.5 | 29.2 | 69.8 | 49.6 |
| 01552500 | 1942–2008 | 67 | .9 | 1.2 | 3.1 | 1.7 | 4.4 | 3.3 |
| 01553130 | 1969–1981 | 13 | 1.0 | 1.1 | 1.5 | 1.3 | 1.8 | 1.7 |
| 01553500 | ² 1968–2008 | 41 | 760 | 838 | 1,440 | 1,000 | 1,850 | 1,470 |
| 01553500 | ³ 1941–1966 | 26 | 562 | 619 | 880 | 690 | 1,090 | 881 |
| 01553700 | 1981–2008 | 28 | 9.1 | 10.9 | 15.0 | 12.6 | 17.1 | 15.2 |
| 01554000 | ² 1981–2008 | 28 | 1,830 | 1,990 | 3,270 | 2,320 | 4,210 | 3,160 |
| 01554000 | ³ 1939–1979 | 41 | 1,560 | 1,630 | 2,870 | 1,880 | 3,620 | 2,570 |
| 01554500 | 1941–1993 | 53 | 16.2 | 22.0 | 31.2 | 25.9 | 35.7 | 31.4 |
| 01555000 | 1931–2008 | 78 | 33.5 | 37.6 | 58.8 | 43.4 | 69.6 | 54.6 |
| 01555500 | 1931–2008 | 78 | 4.9 | 6.5 | 18.0 | 9.4 | 24.3 | 16.6 |
| 01556000 | 1918–2008 | 91 | 43.3 | 47.8 | 66.0 | 55.1 | 75.0 | 63.7 |
| 01557500 | 1946–2008 | 63 | 2.8 | 3.2 | 6.3 | 4.2 | 8.1 | 5.8 |
| 01558000 | 1940–2008 | 69 | 56.3 | 59.0 | 79.8 | 65.7 | 86.2 | 73.7 |
| 01559000 | 1943–2008 | 66 | 104 | 177 | 249 | 198 | 279 | 227 |
| 01559500 | 1931–1958 | 28 | 9.3 | 10.5 | 15.0 | 12.4 | 17.8 | 15.8 |
| 01559700 | 1963–1978 | 16 | .1 | .1 | .2 | .1 | .3 | .2 |
| 01560000 | 1941–2008 | 68 | 8.5 | 9.4 | 15.6 | 12.0 | 20.2 | 16.2 |
| 01561000 | 1932–1958 | 27 | .4 | .5 | 1.6 | .8 | 2.5 | 1.7 |
| 01562000 | 1913–2008 | 96 | 64.1 | 67.1 | 106 | 77.4 | 122 | 94.5 |
| 01562500 | 1931–1957 | 27 | 1.1 | 1.6 | 3.8 | 2.3 | 5.4 | 3.7 |
| 01563200 | ² 1974–2008 | 35 | — | — | — | 112 | 266 | 129 |
| 01563200 | ³ 1948–1972 | 25 | 10.3 | 28.2 | 86.1 | 64.5 | 113 | 95.5 |
| 01563500 | ² 1974–2008 | 35 | 384 | 415 | 519 | 441 | 580 | 493 |
| 01563500 | ³ 1939–1972 | 34 | 153 | 242 | 343 | 278 | 399 | 333 |
| 01564500 | 1940–2008 | 69 | 3.6 | 4.2 | 10.0 | 6.2 | 14.4 | 10.6 |

StreamStats Report

Region ID: PA
 Workspace ID: PA20251209173927441000
 Clicked Point (Latitude, Longitude): 40.00839, -78.35803
 Time: 2025-12-09 12:39:51 -0500



Borough of Everett Area MA PA0037711 Modeling Point #1 December 2025

Collapse All

Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|----------------|--|-------|-----------------------|
| CARBON | Percentage of area of carbonate rock | 15.4 | percent |
| DRNAREA | Area that drains to a point on a stream | 432 | square miles |
| PRECIP | Mean Annual Precipitation | 38 | inches |
| ROCKDEP | Depth to rock | 4.2 | feet |
| STRDEN | Stream Density -- total length of streams divided by drainage area | 2.39 | 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 | 15.4 | percent | 0 | 99 |
| DRNAREA | Drainage Area | 432 | square miles | 4.93 | 1280 |
| PRECIP | Mean Annual Precipitation | 38 | inches | 35 | 50.4 |
| ROCKDEP | Depth to Rock | 4.2 | feet | 3.32 | 5.65 |
| STRDEN | Stream Density | 2.39 | 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 | 40 | ft ³ /s | 38 | 38 |
| 30 Day 2 Year Low Flow | 52.7 | ft ³ /s | 33 | 33 |
| 7 Day 10 Year Low Flow | 21.1 | ft ³ /s | 51 | 51 |
| 30 Day 10 Year Low Flow | 28.2 | ft ³ /s | 46 | 46 |
| 90 Day 10 Year Low Flow | 41.2 | 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/>)

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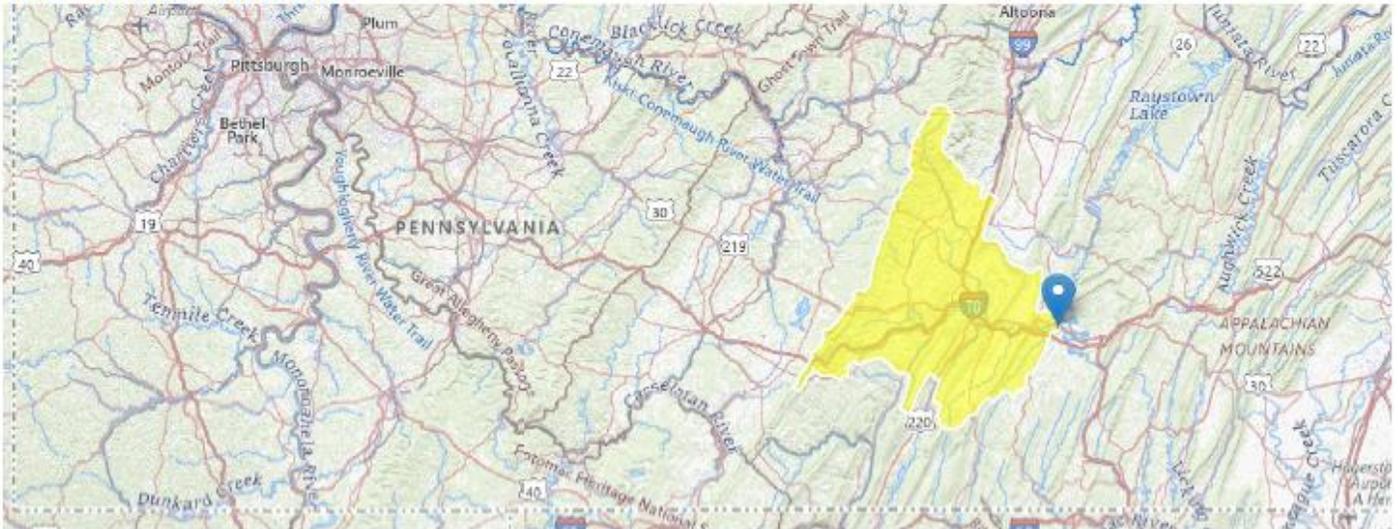
Application Version: 4.29.4

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

StreamStats Report

Region ID: PA
 Workspace ID: PA20251209174818971000
 Clicked Point (Latitude, Longitude): 40.01187, -78.33203
 Time: 2025-12-09 12:48:47 -0500



Boro of Everett Area MA PA0037711 Modeling Point #2 December 2025

Collapse All

Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|----------------|--|-------|-----------------------|
| CARBON | Percentage of area of carbonate rock | 14.92 | percent |
| DRNAREA | Area that drains to a point on a stream | 454 | square miles |
| PRECIP | Mean Annual Precipitation | 38 | inches |
| ROCKDEP | Depth to rock | 4.2 | feet |
| STRDEN | Stream Density -- total length of streams divided by drainage area | 2.4 | 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 | 14.92 | percent | 0 | 99 |
| DRNAREA | Drainage Area | 454 | square miles | 4.93 | 1280 |
| PRECIP | Mean Annual Precipitation | 38 | inches | 35 | 50.4 |
| ROCKDEP | Depth to Rock | 4.2 | feet | 3.32 | 5.65 |
| STRDEN | Stream Density | 2.4 | 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 | 41.9 | ft ³ /s | 38 | 38 |
| 30 Day 2 Year Low Flow | 55.1 | ft ³ /s | 33 | 33 |
| 7 Day 10 Year Low Flow | 22.1 | ft ³ /s | 51 | 51 |
| 30 Day 10 Year Low Flow | 29.6 | ft ³ /s | 46 | 46 |
| 90 Day 10 Year Low Flow | 43.2 | 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/>)

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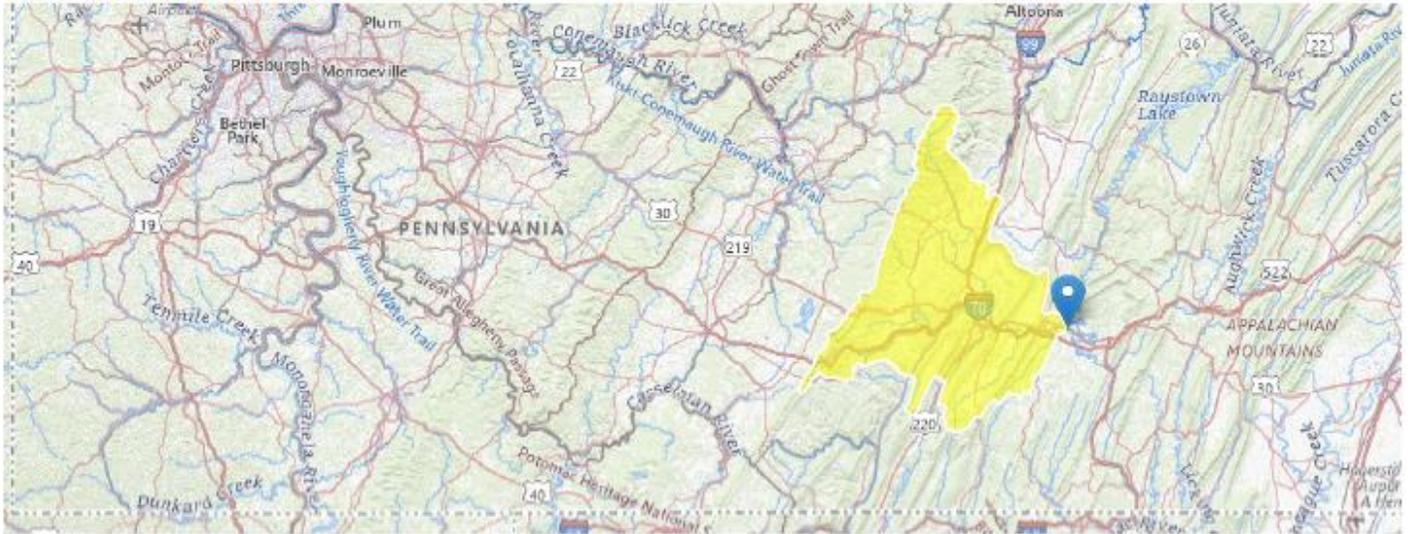
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Application Version: 4.29.4
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

StreamStats Report

Region ID: PA
 Workspace ID: PA20251209181246614000
 Clicked Point (Latitude, Longitude): 40.01197, -78.32703
 Time: 2025-12-09 13:13:10 -0500



Boro of Everett Area MA PA0037711 Modeling Point #3 (Riverview HOA) December 2025

[Collapse All](#)

Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|----------------|--|-------|-----------------------|
| CARBON | Percentage of area of carbonate rock | 14.92 | percent |
| DRNAREA | Area that drains to a point on a stream | 454 | square miles |
| PRECIP | Mean Annual Precipitation | 38 | inches |
| ROCKDEP | Depth to rock | 4.2 | feet |
| STRDEN | Stream Density -- total length of streams divided by drainage area | 2.4 | 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 | 14.92 | percent | 0 | 99 |
| DRNAREA | Drainage Area | 454 | square miles | 4.93 | 1280 |
| PRECIP | Mean Annual Precipitation | 38 | inches | 35 | 50.4 |
| ROCKDEP | Depth to Rock | 4.2 | feet | 3.32 | 5.65 |
| STRDEN | Stream Density | 2.4 | 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, PseudoR*2: Pseudo R Squared (other -- see report)

| Statistic | Value | Unit | SE | ASEp |
|-------------------------|-------|--------------------|----|------|
| 7 Day 2 Year Low Flow | 41.9 | ft ³ /s | 38 | 38 |
| 30 Day 2 Year Low Flow | 55.1 | ft ³ /s | 33 | 33 |
| 7 Day 10 Year Low Flow | 22.1 | ft ³ /s | 51 | 51 |
| 30 Day 10 Year Low Flow | 29.6 | ft ³ /s | 46 | 46 |
| 90 Day 10 Year Low Flow | 43.2 | 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/>)

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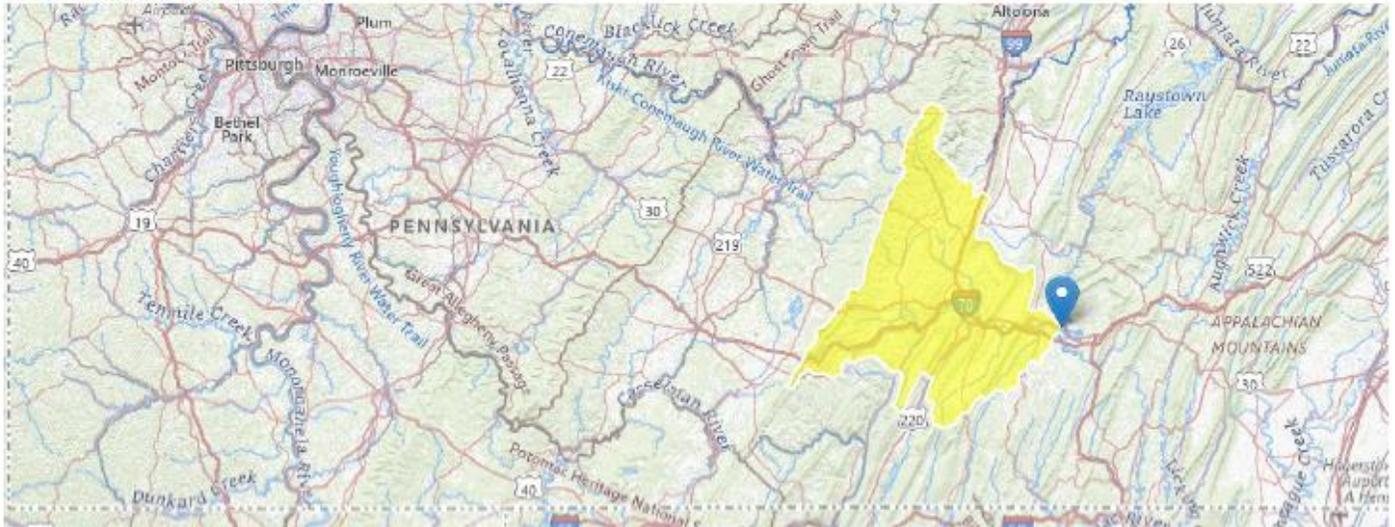
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Application Version: 4.29.4
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

StreamStats Report

Region ID: PA
 Workspace ID: PA20251209183850243000
 Clicked Point (Latitude, Longitude): 40.00586, -78.30913
 Time: 2025-12-09 13:39:15 -0500



Boro of Everett Area MA PA0037711 Modeling Point #4 December 2025

[Collapse All](#)

Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|----------------|--|-------|-----------------------|
| CARBON | Percentage of area of carbonate rock | 14.72 | percent |
| DRNAREA | Area that drains to a point on a stream | 460 | square miles |
| PRECIP | Mean Annual Precipitation | 38 | inches |
| ROCKDEP | Depth to rock | 4.2 | feet |
| STRDEN | Stream Density -- total length of streams divided by drainage area | 2.39 | 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 | 14.72 | percent | 0 | 99 |
| DRNAREA | Drainage Area | 460 | square miles | 4.93 | 1280 |
| PRECIP | Mean Annual Precipitation | 38 | inches | 35 | 50.4 |
| ROCKDEP | Depth to Rock | 4.2 | feet | 3.32 | 5.65 |
| STRDEN | Stream Density | 2.39 | 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 | 42.5 | ft ³ /s | 38 | 38 |
| 30 Day 2 Year Low Flow | 56 | ft ³ /s | 33 | 33 |
| 7 Day 10 Year Low Flow | 22.5 | ft ³ /s | 51 | 51 |
| 30 Day 10 Year Low Flow | 30.1 | ft ³ /s | 46 | 46 |
| 90 Day 10 Year Low Flow | 44 | 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/>)

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Application Version: 4.29.4
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Attachment B

WQM 7.0 Modeling Output Values

Toxics Management Spreadsheet Output Values

Flow Rate at 0.87 MGD

WQM 7.0 Effluent Limits

| <u>SWP Basin</u> | <u>Stream Code</u> | <u>Stream Name</u> | | | | | |
|------------------|--------------------|-------------------------------|--|--|--|--|--|
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIVER | | | | | |

| 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) |
|--------|-------------|---------------|-----------------|------------------|--------------------------------|----------------------------|----------------------------|
| 80.000 | Everett STP | PA0037711-25 | 0.870 | CBOD5 | 25 | | |
| | | | | NH3-N | 22.06 | 44.12 | |
| | | | | Dissolved Oxygen | | | 5 |

| 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) |
|--------|---------------|---------------|-----------------|------------------|--------------------------------|----------------------------|----------------------------|
| 76.440 | Riverview HOA | PA0083569-25 | 0.015 | CBOD5 | 25 | | |
| | | | | NH3-N | 25 | 50 | |
| | | | | Dissolved Oxygen | | | 5 |

WQM 7.0 Wasteload Allocations

| | | |
|------------------|--------------------|-------------------------------|
| <u>SWP Basin</u> | <u>Stream Code</u> | <u>Stream Name</u> |
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIVER |

NH3-N Acute Allocations

| RMI | Discharge Name | Baseline Criterion (mg/L) | Baseline WLA (mg/L) | Multiple Criterion (mg/L) | Multiple WLA (mg/L) | Critical Reach | Percent Reduction |
|--------|----------------|---------------------------------|---------------------------|---------------------------------|---------------------------|-------------------|----------------------|
| 80.000 | Everett STP | 3.16 | 50 | 3.16 | 50 | 0 | 0 |
| 76.740 | | NA | NA | 3.15 | NA | NA | NA |
| 76.440 | Riverview HOA | 2.98 | 50 | 3.16 | 50 | 0 | 0 |

NH3-N Chronic Allocations

| RMI | Discharge Name | Baseline Criterion (mg/L) | Baseline WLA (mg/L) | Multiple Criterion (mg/L) | Multiple WLA (mg/L) | Critical Reach | Percent Reduction |
|--------|----------------|---------------------------------|---------------------------|---------------------------------|---------------------------|-------------------|----------------------|
| 80.000 | Everett STP | .65 | 22.06 | .65 | 22.06 | 0 | 0 |
| 76.740 | | NA | NA | .65 | NA | NA | NA |
| 76.440 | Riverview HOA | .63 | 25 | .65 | 25 | 0 | 0 |

Dissolved Oxygen Allocations

| 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) | | |
| 80.00 | Everett STP | 25 | 25 | 22.06 | 22.06 | 5 | 5 | 0 | 0 |
| 76.74 | | NA | NA | NA | NA | NA | NA | NA | NA |
| 76.44 | Riverview HOA | 25 | 25 | 25 | 25 | 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 |
|-----------|-------------|-----------------------------|--------|----------------|-----------------------|---------------|----------------------|-------------------------------------|
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIV | 80.000 | 991.00 | 432.00 | 0.00000 | 0.00 | <input checked="" type="checkbox"/> |

Stream Data

| Design Cond. | LFY (cfs) | Trib Flow (cfs) | Stream Flow (cfs) | Rch Trav Time (days) | Rch Velocity (fps) | WD Ratio | Rch Width (ft) | Rch Depth (ft) | Tributary | | Stream | |
|--------------|-----------|-----------------|-------------------|----------------------|--------------------|----------|----------------|----------------|-----------|------|-----------|------|
| | | | | | | | | | Temp (°C) | pH | Temp (°C) | pH |
| Q7-10 | 0.089 | 0.00 | 0.00 | 0.000 | 0.000 | 0.0 | 0.00 | 0.00 | 23.30 | 8.00 | 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 |
|-------------|---------------|--------------------------|---------------------------|------------------------|----------------|----------------|---------|
| Everett STP | PA0037711-25 | 0.8700 | 0.8700 | 0.8700 | 0.000 | 25.00 | 7.47 |

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 |
|-----------|-------------|-----------------------------|--------|----------------|-----------------------|---------------|----------------------|-------------------------------------|
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIV | 76.740 | 977.00 | 454.00 | 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 | | Stream | |
|--------------|------------|-----------------|-------------------|----------------------|--------------------|----------|----------------|----------------|-----------|------|-----------|------|
| | | | | | | | | | Temp (°C) | pH | Temp (°C) | pH |
| Q7-10 | 0.089 | 0.00 | 0.00 | 0.000 | 0.000 | 0.0 | 0.00 | 0.00 | 23.30 | 8.00 | 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 |
| | | 0.0000 | 0.0000 | 0.0000 | 0.000 | 0.00 | 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 | | | |

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 |
|-----------|-------------|-----------------------------|--------|----------------|-----------------------|---------------|----------------------|-------------------------------------|
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIV | 76.440 | 975.00 | 455.00 | 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 (°C) | pH | Temp (°C) | pH |
| Q7-10 | 0.089 | 0.00 | 0.00 | 0.000 | 0.000 | 0.0 | 0.00 | 0.00 | 23.30 | 8.00 | 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 |
|---------------|---------------|--------------------------|---------------------------|------------------------|----------------|----------------|---------|
| Riverview HOA | PA0083569-25 | 0.0150 | 0.0150 | 0.0150 | 0.000 | 20.00 | 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 | 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 |
|-----------|-------------|-----------------------------|--------|----------------|-----------------------|---------------|----------------------|-------------------------------------|
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIV | 75.300 | 970.00 | 460.00 | 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 (°C) | pH | Temp (°C) | pH |
| Q7-10 | 0.089 | 0.00 | 0.00 | 0.000 | 0.000 | 0.0 | 0.00 | 0.00 | 23.30 | 8.00 | 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 |
|------|---------------|--------------------------|---------------------------|------------------------|----------------|----------------|---------|
| | | 0.0000 | 0.0000 | 0.0000 | 0.000 | 0.00 | 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> | | | |
|---------------------------------|-----------------------------------|----------------------------------|--------------|-----------------------------|--|
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIVER | | | |
| <hr/> | | | | | |
| <u>RMI</u> | <u>Total Discharge Flow (mgd)</u> | <u>Analysis Temperature (°C)</u> | | <u>Analysis pH</u> | |
| 80.000 | 0.870 | 23.358 | | 7.966 | |
| <u>Reach Width (ft)</u> | <u>Reach Depth (ft)</u> | <u>Reach WDRatio</u> | | <u>Reach Velocity (fps)</u> | |
| 107.236 | 0.991 | 108.224 | | 0.374 | |
| <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> | |
| 2.78 | 0.329 | 0.75 | | 0.906 | |
| <u>Reach DO (mg/L)</u> | <u>Reach Kr (1/days)</u> | <u>Kr Equation</u> | | <u>Reach DO Goal (mg/L)</u> | |
| 8.133 | 1.535 | Tsivoglou | | 5 | |
| <u>Reach Travel Time (days)</u> | | | | | |
| 0.533 | | | | | |
| | <u>Subreach Results</u> | | | | |
| | <u>TravTime</u> | <u>CBOD5</u> | <u>NH3-N</u> | <u>D.O.</u> | |
| | (days) | (mg/L) | (mg/L) | (mg/L) | |
| | 0.053 | 2.72 | 0.71 | 7.76 | |
| | 0.107 | 2.67 | 0.68 | 7.76 | |
| | 0.160 | 2.61 | 0.65 | 7.61 | |
| | 0.213 | 2.56 | 0.62 | 7.48 | |
| | 0.267 | 2.51 | 0.59 | 7.37 | |
| | 0.320 | 2.46 | 0.56 | 7.27 | |
| | 0.373 | 2.41 | 0.53 | 7.19 | |
| | 0.426 | 2.36 | 0.51 | 7.12 | |
| | 0.480 | 2.31 | 0.48 | 7.06 | |
| | 0.533 | 2.27 | 0.46 | 7.02 | |
| <hr/> | | | | | |
| <u>RMI</u> | <u>Total Discharge Flow (mgd)</u> | <u>Analysis Temperature (°C)</u> | | <u>Analysis pH</u> | |
| 76.740 | 0.870 | 23.355 | | 7.968 | |
| <u>Reach Width (ft)</u> | <u>Reach Depth (ft)</u> | <u>Reach WDRatio</u> | | <u>Reach Velocity (fps)</u> | |
| 107.386 | 0.985 | 109.011 | | 0.394 | |
| <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> | |
| 2.25 | 0.204 | 0.44 | | 0.906 | |
| <u>Reach DO (mg/L)</u> | <u>Reach Kr (1/days)</u> | <u>Kr Equation</u> | | <u>Reach DO Goal (mg/L)</u> | |
| 7.077 | 2.512 | Tsivoglou | | 5 | |
| <u>Reach Travel Time (days)</u> | | | | | |
| 0.047 | | | | | |
| | <u>Subreach Results</u> | | | | |
| | <u>TravTime</u> | <u>CBOD5</u> | <u>NH3-N</u> | <u>D.O.</u> | |
| | (days) | (mg/L) | (mg/L) | (mg/L) | |
| | 0.005 | 2.25 | 0.44 | 7.08 | |
| | 0.009 | 2.25 | 0.44 | 7.09 | |
| | 0.014 | 2.25 | 0.43 | 7.09 | |
| | 0.019 | 2.24 | 0.43 | 7.10 | |
| | 0.023 | 2.24 | 0.43 | 7.11 | |
| | 0.028 | 2.24 | 0.43 | 7.11 | |
| | 0.033 | 2.24 | 0.43 | 7.12 | |
| | 0.037 | 2.23 | 0.43 | 7.12 | |
| | 0.042 | 2.23 | 0.42 | 7.13 | |
| | 0.047 | 2.23 | 0.42 | 7.13 | |
| <hr/> | | | | | |

WQM 7.0 D.O. Simulation

| <u>SWP Basin</u> | <u>Stream Code</u> | <u>Stream Name</u> | | |
|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|--------------------|
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIVER | | |
| <hr/> | | | | |
| <u>RMI</u> | <u>Total Discharge Flow (mgd)</u> | <u>Analysis Temperature (°C)</u> | <u>Analysis pH</u> | |
| 76.440 | 0.885 | 23.353 | 7.966 | |
| <u>Reach Width (ft)</u> | <u>Reach Depth (ft)</u> | <u>Reach WDRatio</u> | <u>Reach Velocity (fps)</u> | |
| 109.998 | 0.997 | 110.287 | 0.381 | |
| <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> | |
| 2.24 | 0.179 | 0.43 | 0.906 | |
| <u>Reach DO (mg/L)</u> | <u>Reach Kr (1/days)</u> | <u>Kr Equation</u> | <u>Reach DO Goal (mg/L)</u> | |
| 7.135 | 1.597 | Tsivoglou | 5 | |
| <u>Reach Travel Time (days)</u> | <u>Subreach Results</u> | | | |
| 0.183 | <u>TravTime (days)</u> | <u>CBOD5 (mg/L)</u> | <u>NH3-N (mg/L)</u> | <u>D.O. (mg/L)</u> |
| | 0.018 | 2.23 | 0.43 | 7.13 |
| | 0.037 | 2.22 | 0.42 | 7.13 |
| | 0.055 | 2.21 | 0.41 | 7.13 |
| | 0.073 | 2.21 | 0.41 | 7.13 |
| | 0.091 | 2.20 | 0.40 | 7.13 |
| | 0.110 | 2.19 | 0.39 | 7.13 |
| | 0.128 | 2.18 | 0.39 | 7.13 |
| | 0.146 | 2.17 | 0.38 | 7.13 |
| | 0.165 | 2.16 | 0.37 | 7.14 |
| | 0.183 | 2.16 | 0.37 | 7.14 |

WQM 7.0 Hydrodynamic Outputs

| <u>SWP Basin</u> | | <u>Stream Code</u> | | | | <u>Stream Name</u> | | | | | | |
|--------------------|-------------------|--------------------|-----------------------|--------------------------|---------------------|-------------------------------|------------|-----------|----------------|------------------------|--------------------|-------------|
| 11D | | 13349 | | | | RAYSTOWN BRANCH JUNIATA RIVER | | | | | | |
| RMI | Stream Flow (cfs) | PWS With (cfs) | Net Stream Flow (cfs) | Disc Analysis Flow (cfs) | Reach Slope (ft/ft) | Depth (ft) | Width (ft) | W/D Ratio | Velocity (fps) | Reach Trav Time (days) | Analysis Temp (°C) | Analysis pH |
| Q7-10 Flow | | | | | | | | | | | | |
| 80.000 | 38.36 | 0.00 | 38.36 | 1.3459 | 0.00081 | .991 | 107.24 | 108.22 | 0.37 | 0.533 | 23.36 | 7.97 |
| 76.740 | 40.32 | 0.00 | 40.32 | 1.3459 | 0.00126 | .985 | 107.39 | 109.01 | 0.39 | 0.047 | 23.35 | 7.97 |
| 76.440 | 40.40 | 0.00 | 40.40 | 1.3691 | 0.00083 | .997 | 110 | 110.29 | 0.38 | 0.183 | 23.35 | 7.97 |
| Q1-10 Flow | | | | | | | | | | | | |
| 80.000 | 36.83 | 0.00 | 36.83 | 1.3459 | 0.00081 | NA | NA | NA | 0.37 | 0.545 | 23.36 | 7.96 |
| 76.740 | 38.70 | 0.00 | 38.70 | 1.3459 | 0.00126 | NA | NA | NA | 0.39 | 0.048 | 23.36 | 7.97 |
| 76.440 | 38.79 | 0.00 | 38.79 | 1.3691 | 0.00083 | NA | NA | NA | 0.37 | 0.187 | 23.36 | 7.96 |
| Q30-10 Flow | | | | | | | | | | | | |
| 80.000 | 44.12 | 0.00 | 44.12 | 1.3459 | 0.00081 | NA | NA | NA | 0.40 | 0.494 | 23.35 | 7.97 |
| 76.740 | 46.36 | 0.00 | 46.36 | 1.3459 | 0.00126 | NA | NA | NA | 0.42 | 0.043 | 23.35 | 7.97 |
| 76.440 | 46.46 | 0.00 | 46.46 | 1.3691 | 0.00083 | NA | NA | NA | 0.41 | 0.170 | 23.35 | 7.97 |

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 | 0.96 | 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 | | |

Flow Rate at 0.995 MGD

WQM 7.0 Effluent Limits

| <u>SWP Basin</u> | <u>Stream Code</u> | <u>Stream Name</u> | | | | | |
|------------------|--------------------|-------------------------------|-----------------|------------------|--------------------------------|----------------------------|----------------------------|
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIVER | | | | | |
| 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) |
| 80.000 | Everett STP | PA0037711-25 | 0.995 | CBOD5 | 25 | | |
| | | | | NH3-N | 19.47 | 38.94 | |
| | | | | Dissolved Oxygen | | | 5 |
| 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) |
| 76.440 | Riverview HOA | PA0083569-25 | 0.015 | CBOD5 | 25 | | |
| | | | | NH3-N | 25 | 50 | |
| | | | | Dissolved Oxygen | | | 5 |

WQM 7.0 Wasteload Allocations

| | | |
|------------------|--------------------|-------------------------------|
| <u>SWP Basin</u> | <u>Stream Code</u> | <u>Stream Name</u> |
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIVER |

NH3-N Acute Allocations

| RMI | Discharge Name | Baseline Criterion (mg/L) | Baseline WLA (mg/L) | Multiple Criterion (mg/L) | Multiple WLA (mg/L) | Critical Reach | Percent Reduction |
|--------|----------------|---------------------------------|---------------------------|---------------------------------|---------------------------|-------------------|----------------------|
| 80.000 | Everett STP | 3.18 | 50 | 3.18 | 50 | 0 | 0 |
| 76.740 | | NA | NA | 3.17 | NA | NA | NA |
| 76.440 | Riverview HOA | 2.98 | 50 | 3.18 | 50 | 0 | 0 |

NH3-N Chronic Allocations

| RMI | Discharge Name | Baseline Criterion (mg/L) | Baseline WLA (mg/L) | Multiple Criterion (mg/L) | Multiple WLA (mg/L) | Critical Reach | Percent Reduction |
|--------|----------------|---------------------------------|---------------------------|---------------------------------|---------------------------|-------------------|----------------------|
| 80.000 | Everett STP | .66 | 19.47 | .66 | 19.47 | 0 | 0 |
| 76.740 | | NA | NA | .66 | NA | NA | NA |
| 76.440 | Riverview HOA | .63 | 25 | .66 | 25 | 0 | 0 |

Dissolved Oxygen Allocations

| 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) | | |
| 80.00 | Everett STP | 25 | 25 | 19.47 | 19.47 | 5 | 5 | 0 | 0 |
| 76.74 | | NA | NA | NA | NA | NA | NA | NA | NA |
| 76.44 | Riverview HOA | 25 | 25 | 25 | 25 | 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 |
|-----------|-------------|-----------------------------|--------|----------------|-----------------------|---------------|----------------------|-------------------------------------|
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIV | 80.000 | 991.00 | 432.00 | 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 Temp | Tributary pH | Stream Temp | Stream pH |
|--------------|--------|-----------|-------------|---------------|--------------|----------|-----------|-----------|----------------|--------------|-------------|-----------|
| | (cfsm) | (cfs) | (cfs) | (days) | (fps) | | (ft) | (ft) | (°C) | | (°C) | |
| Q7-10 | 0.089 | 0.00 | 0.00 | 0.000 | 0.000 | 0.0 | 0.00 | 0.00 | 23.30 | 8.00 | 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 |
|-------------|---------------|--------------------------|---------------------------|------------------------|----------------|----------------|---------|
| Everett STP | PA0037711-25 | 0.9950 | 0.9950 | 0.9950 | 0.000 | 25.00 | 7.47 |

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 |
|-----------|-------------|-----------------------------|--------|----------------|-----------------------|---------------|----------------------|-------------------------------------|
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIV | 76.740 | 977.00 | 454.00 | 0.00000 | 0.00 | <input checked="" type="checkbox"/> |

Stream Data

| Design Cond. | LFY (cfs) | Trib Flow (cfs) | Stream Flow (cfs) | Rch Trav Time (days) | Rch Velocity (fps) | WD Ratio | Rch Width (ft) | Rch Depth (ft) | Tributary | | Stream | |
|--------------|-----------|-----------------|-------------------|----------------------|--------------------|----------|----------------|----------------|-----------|------|-----------|------|
| | | | | | | | | | Temp (°C) | pH | Temp (°C) | pH |
| Q7-10 | 0.089 | 0.00 | 0.00 | 0.000 | 0.000 | 0.0 | 0.00 | 0.00 | 23.30 | 8.00 | 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 |
|------|---------------|--------------------------|---------------------------|------------------------|----------------|----------------|---------|
| | | 0.0000 | 0.0000 | 0.0000 | 0.000 | 0.00 | 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 |

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 |
|-----------|-------------|-----------------------------|--------|----------------|-----------------------|---------------|----------------------|-------------------------------------|
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIV | 76.440 | 975.00 | 455.00 | 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 Temp | Tributary pH | Stream Temp | Stream pH |
|--------------|--------|-----------|-------------|---------------|--------------|----------|-----------|-----------|----------------|--------------|-------------|-----------|
| | (cfsm) | (cfs) | (cfs) | (days) | (fps) | | (ft) | (ft) | (°C) | | (°C) | |
| Q7-10 | 0.089 | 0.00 | 0.00 | 0.000 | 0.000 | 0.0 | 0.00 | 0.00 | 23.30 | 8.00 | 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 |
|---------------|---------------|--------------------------|---------------------------|------------------------|----------------|----------------|---------|
| Riverview HOA | PA0083569-25 | 0.0150 | 0.0150 | 0.0150 | 0.000 | 20.00 | 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 | 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 |
|-----------|-------------|-----------------------------|--------|----------------|-----------------------|---------------|----------------------|-------------------------------------|
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIV | 75.300 | 970.00 | 460.00 | 0.00000 | 0.00 | <input checked="" type="checkbox"/> |

Stream Data

| Design Cond. | LFY (cfs) | Trib Flow (cfs) | Stream Flow (cfs) | Rch Trav Time (days) | Rch Velocity (fps) | WD Ratio | Rch Width (ft) | Rch Depth (ft) | Tributary | | Stream | |
|--------------|-----------|-----------------|-------------------|----------------------|--------------------|----------|----------------|----------------|-----------|------|-----------|------|
| | | | | | | | | | Temp (°C) | pH | Temp (°C) | pH |
| Q7-10 | 0.089 | 0.00 | 0.00 | 0.000 | 0.000 | 0.0 | 0.00 | 0.00 | 23.30 | 8.00 | 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 |
| | | 0.0000 | 0.0000 | 0.0000 | 0.000 | 0.00 | 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> | | |
|---------------------------------|-----------------------------------|----------------------------------|--------------|-----------------------------|
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIVER | | |
| <hr/> | | | | |
| <u>RMI</u> | <u>Total Discharge Flow (mgd)</u> | <u>Analysis Temperature (°C)</u> | | <u>Analysis pH</u> |
| 80.000 | 0.995 | 23.366 | | 7.962 |
| <u>Reach Width (ft)</u> | <u>Reach Depth (ft)</u> | <u>Reach WDRatio</u> | | <u>Reach Velocity (fps)</u> |
| 107.432 | 0.991 | 108.388 | | 0.375 |
| <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> |
| 2.89 | 0.364 | 0.75 | | 0.907 |
| <u>Reach DO (mg/L)</u> | <u>Reach Kr (1/days)</u> | <u>Kr Equation</u> | | <u>Reach DO Goal (mg/L)</u> |
| 8.118 | 1.540 | Tsivoglou | | 5 |
| <u>Reach Travel Time (days)</u> | | | | |
| 0.532 | | | | |
| | Subreach Results | | | |
| | <u>TravTime</u> | <u>CBOD5</u> | <u>NH3-N</u> | <u>D.O.</u> |
| | (days) | (mg/L) | (mg/L) | (mg/L) |
| | 0.053 | 2.82 | 0.72 | 7.76 |
| | 0.106 | 2.76 | 0.68 | 7.73 |
| | 0.160 | 2.70 | 0.65 | 7.57 |
| | 0.213 | 2.64 | 0.62 | 7.43 |
| | 0.266 | 2.58 | 0.59 | 7.31 |
| | 0.319 | 2.52 | 0.56 | 7.21 |
| | 0.372 | 2.46 | 0.54 | 7.12 |
| | 0.425 | 2.41 | 0.51 | 7.05 |
| | 0.479 | 2.36 | 0.49 | 6.99 |
| | 0.532 | 2.30 | 0.46 | 6.94 |
| <hr/> | | | | |
| <u>RMI</u> | <u>Total Discharge Flow (mgd)</u> | <u>Analysis Temperature (°C)</u> | | <u>Analysis pH</u> |
| 76.740 | 0.995 | 23.363 | | 7.963 |
| <u>Reach Width (ft)</u> | <u>Reach Depth (ft)</u> | <u>Reach WDRatio</u> | | <u>Reach Velocity (fps)</u> |
| 107.573 | 0.985 | 109.168 | | 0.395 |
| <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> |
| 2.29 | 0.230 | 0.44 | | 0.907 |
| <u>Reach DO (mg/L)</u> | <u>Reach Kr (1/days)</u> | <u>Kr Equation</u> | | <u>Reach DO Goal (mg/L)</u> |
| 7.000 | 2.519 | Tsivoglou | | 5 |
| <u>Reach Travel Time (days)</u> | | | | |
| 0.046 | | | | |
| | Subreach Results | | | |
| | <u>TravTime</u> | <u>CBOD5</u> | <u>NH3-N</u> | <u>D.O.</u> |
| | (days) | (mg/L) | (mg/L) | (mg/L) |
| | 0.005 | 2.29 | 0.44 | 7.01 |
| | 0.009 | 2.28 | 0.44 | 7.01 |
| | 0.014 | 2.28 | 0.44 | 7.02 |
| | 0.019 | 2.28 | 0.43 | 7.02 |
| | 0.023 | 2.27 | 0.43 | 7.03 |
| | 0.028 | 2.27 | 0.43 | 7.04 |
| | 0.033 | 2.27 | 0.43 | 7.04 |
| | 0.037 | 2.27 | 0.43 | 7.05 |
| | 0.042 | 2.26 | 0.43 | 7.05 |
| | 0.046 | 2.26 | 0.42 | 7.06 |
| <hr/> | | | | |

WQM 7.0 D.O.Simulation

| <u>SWP Basin</u> | <u>Stream Code</u> | <u>Stream Name</u> | | |
|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|--------------------|
| 11D | 13349 | RAYSTOWN BRANCH JUNIATA RIVER | | |
| <hr/> | | | | |
| <u>RMI</u> | <u>Total Discharge Flow (mgd)</u> | <u>Analysis Temperature (°C)</u> | <u>Analysis pH</u> | |
| 76.440 | 1.010 | 23.361 | 7.962 | |
| <u>Reach Width (ft)</u> | <u>Reach Depth (ft)</u> | <u>Reach WDRatio</u> | <u>Reach Velocity (fps)</u> | |
| 110.189 | 0.998 | 110.447 | 0.382 | |
| <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> | |
| 2.27 | 0.200 | 0.44 | 0.907 | |
| <u>Reach DO (mg/L)</u> | <u>Reach Kr (1/days)</u> | <u>Kr Equation</u> | <u>Reach DO Goal (mg/L)</u> | |
| 7.062 | 1.602 | Tsivoglou | 5 | |
| <u>Reach Travel Time (days)</u> | <u>Subreach Results</u> | | | |
| 0.182 | <u>TravTime (days)</u> | <u>CBOD5 (mg/L)</u> | <u>NH3-N (mg/L)</u> | <u>D.O. (mg/L)</u> |
| | 0.018 | 2.26 | 0.43 | 7.06 |
| | 0.036 | 2.25 | 0.42 | 7.06 |
| | 0.055 | 2.24 | 0.42 | 7.06 |
| | 0.073 | 2.23 | 0.41 | 7.06 |
| | 0.091 | 2.22 | 0.40 | 7.06 |
| | 0.109 | 2.22 | 0.40 | 7.06 |
| | 0.128 | 2.21 | 0.39 | 7.06 |
| | 0.146 | 2.20 | 0.38 | 7.06 |
| | 0.164 | 2.19 | 0.38 | 7.07 |
| | 0.182 | 2.18 | 0.37 | 7.07 |

WQM 7.0 Hydrodynamic Outputs

| <u>SWP Basin</u> | | <u>Stream Code</u> | | | | <u>Stream Name</u> | | | | | | |
|--------------------|-------------------|--------------------|-----------------------|--------------------------|---------------------|-------------------------------|------------|-----------|----------------|------------------------|--------------------|-------------|
| 11D | | 13349 | | | | RAYSTOWN BRANCH JUNIATA RIVER | | | | | | |
| RMI | Stream Flow (cfs) | PWS With (cfs) | Net Stream Flow (cfs) | Disc Analysis Flow (cfs) | Reach Slope (ft/ft) | Depth (ft) | Width (ft) | W/D Ratio | Velocity (fps) | Reach Trav Time (days) | Analysis Temp (°C) | Analysis pH |
| Q7-10 Flow | | | | | | | | | | | | |
| 80.000 | 38.36 | 0.00 | 38.36 | 1.5393 | 0.00081 | .991 | 107.43 | 108.39 | 0.37 | 0.532 | 23.37 | 7.96 |
| 76.740 | 40.32 | 0.00 | 40.32 | 1.5393 | 0.00126 | .985 | 107.57 | 109.17 | 0.39 | 0.046 | 23.36 | 7.96 |
| 76.440 | 40.40 | 0.00 | 40.40 | 1.5625 | 0.00083 | .998 | 110.19 | 110.45 | 0.38 | 0.182 | 23.36 | 7.96 |
| Q1-10 Flow | | | | | | | | | | | | |
| 80.000 | 36.83 | 0.00 | 36.83 | 1.5393 | 0.00081 | NA | NA | NA | 0.37 | 0.543 | 23.37 | 7.96 |
| 76.740 | 38.70 | 0.00 | 38.70 | 1.5393 | 0.00126 | NA | NA | NA | 0.39 | 0.047 | 23.37 | 7.96 |
| 76.440 | 38.79 | 0.00 | 38.79 | 1.5625 | 0.00083 | NA | NA | NA | 0.37 | 0.187 | 23.36 | 7.96 |
| Q30-10 Flow | | | | | | | | | | | | |
| 80.000 | 44.12 | 0.00 | 44.12 | 1.5393 | 0.00081 | NA | NA | NA | 0.40 | 0.493 | 23.36 | 7.97 |
| 76.740 | 46.36 | 0.00 | 46.36 | 1.5393 | 0.00126 | NA | NA | NA | 0.43 | 0.043 | 23.35 | 7.97 |
| 76.440 | 46.46 | 0.00 | 46.46 | 1.5625 | 0.00083 | NA | NA | NA | 0.41 | 0.169 | 23.35 | 7.97 |

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 | 0.96 | 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 | | |



Flow Rate is 0.87 MGD

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions **Discharge** Stream

Facility: **Everett STP** NPDES Permit No.: **PA0037711** 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 |
| 0.87 | 100 | 7.47 | | | | | | |

| 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 | Chem Transl |
| Group 1 | Total Dissolved Solids (PWS) | mg/L | 5.76 | | | | | | | | |
| | Chloride (PWS) | mg/L | 219 | | | | | | | | |
| | Bromide | mg/L | < 0.011 | | | | | | | | |
| | Sulfate (PWS) | mg/L | 57.3 | | | | | | | | |
| | 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 | < 9.8 | | | | | | | | |
| | Free Cyanide | µg/L | | | | | | | | | |
| | Total Cyanide | µg/L | | | | | | | | | |
| | Dissolved Iron | µg/L | | | | | | | | | |
| | Total Iron | µg/L | | | | | | | | | |
| | Total Lead | µg/L | < 4.2 | | | | | | | | |
| | 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 | 76.8 | | | | | | | | | |
| 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 | < | | | | | | | | | | | | | | | | | | |



Stream / Surface Water Information

Everett STP, NPDES Permit No. PA0037711, Outfall 001

Instructions Discharge **Stream**

Receiving Surface Water Name: **Raystown Branch Juniata River** 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 | 013349 | 80 | 991 | 432 | | | Yes |
| End of Reach 1 | 013349 | 75.3 | 970 | 460 | | | 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 | 80 | 0.0888 | 21.1 | | | | | | | | | 96 | 8 | | |
| End of Reach 1 | 75.3 | 0.0888 | | | | | | | | | | 96 | 8 | | |

Q_n

| 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 | 80 | | | | | | | | | | | | | | |
| End of Reach 1 | 75.3 | | | | | | | | | | | | | | |



Model Results

Everett STP, NPDES Permit No. PA0037711, Outfall 001

Instructions

Results

RETURN TO INPUTS

SAVE AS PDF

PRINT

All

Inputs

Results

Limits

Hydrodynamics

Wasteload Allocations

AFC

CCT (min): 15

PMF: 0.211

Analysis Hardness (mg/l): 96.929

Analysis pH: 7.81

| 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 | 13.050 | 13.6 | 58.5 | Chem Translator of 0.96 applied |
| Total Lead | 0 | 0 | | 0 | 62.424 | 78.5 | 338 | Chem Translator of 0.796 applied |
| Total Zinc | 0 | 0 | | 0 | 114.125 | 117 | 502 | Chem Translator of 0.978 applied |

CFC

CCT (min): #####

PMF: 1

Analysis Hardness (mg/l): 96.24

Analysis pH: 7.94

| 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 | 8.667 | 9.03 | 151 | Chem Translator of 0.96 applied |
| Total Lead | 0 | 0 | | 0 | 2.414 | 3.03 | 50.5 | Chem Translator of 0.797 applied |
| Total Zinc | 0 | 0 | | 0 | 114.364 | 116 | 1,934 | Chem Translator of 0.986 applied |

THH

CCT (min): #####

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 | 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 | 37.5 | AFC | Discharge Conc > 10% WQBEL (no RP) |
| Total Zinc | Report | Report | Report | Report | Report | µg/L | 322 | AFC | Discharge Conc > 10% WQBEL (no 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 |
| Total Lead | 50.5 | µg/L | Discharge Conc ≤ 10% WQBEL |



Flow Rate of 0.995 MGD

Discharge Information

Instructions Discharge Stream

Facility: **Everett STP** NPDES Permit No.: **PA0037711** 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 |
| 0.995 | 100 | 7.47 | | | | | | |

| 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 | Chem Transl |
| Group 1 | Total Dissolved Solids (PWS) | mg/L | 5.76 | | | | | | | | |
| | Chloride (PWS) | mg/L | 219 | | | | | | | | |
| | Bromide | mg/L | < 0.011 | | | | | | | | |
| | Sulfate (PWS) | mg/L | 57.3 | | | | | | | | |
| | 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 | < 9.8 | | | | | | | | |
| | Free Cyanide | µg/L | | | | | | | | | |
| | Total Cyanide | µg/L | | | | | | | | | |
| | Dissolved Iron | µg/L | | | | | | | | | |
| | Total Iron | µg/L | | | | | | | | | |
| | Total Lead | µg/L | < 4.2 | | | | | | | | |
| | 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 | 76.8 | | | | | | | | | |
| 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 | < | | | | | | | | | | | | | | | | | |
| | Benidine | 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 | < | | | | | | | | | | | | | | | | | | |



Stream / Surface Water Information

Everett STP, NPDES Permit No. PA0037711, Outfall 001

Instructions Discharge Stream

Receiving Surface Water Name: **Raystown Branch Juniata River** 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 | 013349 | 80 | 991 | 432 | | | Yes |
| End of Reach 1 | 013349 | 75.3 | 970 | 460 | | | 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 | 80 | 0.0888 | 21.1 | | | | | | | | | 96 | 8 | | |
| End of Reach 1 | 75.3 | 0.0888 | | | | | | | | | | 96 | 8 | | |

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 | 80 | | | | | | | | | | | | | | |
| End of Reach 1 | 75.3 | | | | | | | | | | | | | | |



Model Results

Everett STP, NPDES Permit No. PA0037711, Outfall 001

Instructions

Results

RETURN TO INPUTS

SAVE AS PDF

PRINT

All Inputs Results Limits

Hydrodynamics

Wasteload Allocations

AFC CCT (min): 15 PMF: 0.212 Analysis Hardness (mg/l): 97.024 Analysis pH: 7.79

| 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 | 13.062 | 13.6 | 53.1 | Chem Translator of 0.96 applied |
| Total Lead | 0 | 0 | | 0 | 62.491 | 78.6 | 307 | Chem Translator of 0.795 applied |
| Total Zinc | 0 | 0 | | 0 | 114.219 | 117 | 456 | Chem Translator of 0.978 applied |

CFC CCT (min): ##### PMF: 1 Analysis Hardness (mg/l): 96.272 Analysis pH: 7.93

| 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 | 8.670 | 9.03 | 133 | Chem Translator of 0.96 applied |
| Total Lead | 0 | 0 | | 0 | 2.415 | 3.03 | 44.6 | Chem Translator of 0.797 applied |
| Total Zinc | 0 | 0 | | 0 | 114.396 | 116 | 1,706 | Chem Translator of 0.986 applied |

THH CCT (min): ##### 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 | 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 | 34.1 | AFC | Discharge Conc > 10% WQBEL (no RP) |
| Total Zinc | Report | Report | Report | Report | Report | µg/L | 292 | AFC | Discharge Conc > 10% WQBEL (no 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 |
| Total Lead | 44.6 | µg/L | Discharge Conc ≤ 10% WQBEL |

Attachment C

TRC Evaluation

Everett STP
PA0037711

December 2025

| 1A | B | C | D | E | F | G |
|----|---|--|-------------------------------|-----------|--------------------------------------|---|
| 2 | TRC EVALUATION | | | | | |
| 3 | Input appropriate values in B4:B8 and E4:E7 | | | | | |
| 4 | 38.34285714 | = Q stream (cfs) | | 0.5 | = CV Daily | |
| 5 | 0.87 | = Q discharge (MGD) | | 0.5 | = CV Hourly | |
| 6 | 30 | = no. samples | | 1 | = AFC_Partial Mix Factor | |
| 7 | 0.3 | = Chlorine Demand of Stream | | 1 | = CFC_Partial Mix Factor | |
| 8 | 0 | = Chlorine Demand of Discharge | | 15 | = AFC_Criteria Compliance Time (min) | |
| 9 | 0.5 | = BAT/BPJ Value | | 720 | = CFC_Criteria Compliance Time (min) | |
| 9 | 0 | = %Factor of Safety (FOS) | | 0 | = Decay Coefficient (K) | |
| 10 | Source | Reference | AFC Calculations | Reference | CFC Calculations | |
| 11 | TRC | 1.3.2 iii | WLA_afc = 9.107 | 1.3.2 iii | WLA_cfc = 8.871 | |
| 12 | PENTOXSD TRG | 5.1a | LTAMULT_afc = 0.373 | 5.1c | LTAMULT_cfc = 0.581 | |
| 13 | PENTOXSD TRG | 5.1b | LTA_afc = 3.393 | 5.1d | LTA_cfc = 5.157 | |
| 14 | | | | | | |
| 15 | Source | Effluent Limit Calculations | | | | |
| 16 | PENTOXSD TRG | 5.1f | AML_MULT = 1.231 | | | |
| 17 | PENTOXSD TRG | 5.1g | AVG_MON_LIMIT (mg/l) = 0.500 | | BAT/BPJ | |
| 18 | | | INST_MAX_LIMIT (mg/l) = 1.635 | | | |
| | WLA_afc | $((0.191e^{-k \cdot AFC_tc}) + ((AFC_Yc \cdot Qs \cdot 0.019/Qd) \cdot e^{-k \cdot AFC_tc})) \dots + Xd + (AFC_Yc \cdot Qs \cdot Xs/Qd)^{(1-FOS/100)}$ | | | | |
| | LTAMULT_afc | $EXP((0.5 \cdot LN(cvh^2+1)) - 2.326 \cdot LN(cvh^2+1)^{0.5})$ | | | | |
| | LTA_afc | wla_afc * LTAMULT_afc | | | | |
| | WLA_cfc | $((0.111e^{-k \cdot CFC_tc}) + ((CFC_Yc \cdot Qs \cdot 0.011/Qd) \cdot e^{-k \cdot CFC_tc})) \dots + Xd + (CFC_Yc \cdot Qs \cdot Xs/Qd)^{(1-FOS/100)}$ | | | | |
| | LTAMULT_cfc | $EXP((0.5 \cdot LN(cvd^2/no_samples+1)) - 2.326 \cdot LN(cvd^2/no_samples+1)^{0.5})$ | | | | |
| | LTA_cfc | wla_cfc * LTAMULT_cfc | | | | |
| | AML_MULT | $EXP(2.326 \cdot LN((cvd^2/no_samples+1)^{0.5}) - 0.5 \cdot LN(cvd^2/no_samples+1))$ | | | | |
| | AVG_MON_LIMIT | MIN(BAT_BPJ, MIN(LTA_afc, LTA_cfc) * AML_MULT) | | | | |
| | INST_MAX_LIMIT | 1.5 * ((av_mon_limit/AML_MULT) * LTAMULT_afc) | | | | |

Attachment D

DMR Data - Copper

Summary of DMR Data Copper
Beginning May 1, 2021 and Ending January 7, 2026

| Monitoring Period Begin Date | Monitoring Period End Date | DMR Value | Units | Statistical Base Code |
|------------------------------|----------------------------|-----------|-------|-----------------------|
| 07/01/2021 | 09/30/2021 | < 0.0100 | mg/L | Average Quarterly |
| 10/01/2021 | 12/31/2021 | < 0.0100 | mg/L | Average Quarterly |
| 01/01/2022 | 03/31/2022 | < 0.0100 | mg/L | Average Quarterly |
| 04/01/2022 | 06/30/2022 | < 0.0100 | mg/L | Average Quarterly |
| 07/01/2022 | 09/30/2022 | < 0.0100 | mg/L | Average Quarterly |
| 10/01/2022 | 12/31/2022 | < 0.01000 | mg/L | Average Quarterly |
| 01/01/2023 | 03/31/2023 | < 0.0100 | mg/L | Average Quarterly |
| 04/01/2023 | 06/30/2023 | < 0.0100 | mg/L | Average Quarterly |
| 07/01/2023 | 09/30/2023 | < 0.0100 | mg/L | Average Quarterly |
| 10/01/2023 | 12/31/2023 | < 0.0100 | mg/L | Average Quarterly |
| 01/01/2024 | 03/31/2024 | < 0.0100 | mg/L | Average Quarterly |
| 04/01/2024 | 06/30/2024 | < 0.0100 | mg/L | Average Quarterly |
| 07/01/2024 | 09/30/2024 | < 0.0100 | mg/L | Average Quarterly |
| 10/01/2024 | 12/31/2024 | < 0.0100 | mg/L | Average Quarterly |
| 01/01/2025 | 03/31/2025 | < 0.0100 | mg/L | Average Quarterly |
| 04/01/2025 | 06/30/2025 | < 0.0100 | mg/L | Average Quarterly |
| 07/01/2025 | 09/30/2025 | < 0.0100 | mg/L | Average Quarterly |
| 10/01/2025 | 12/31/2025 | < 0.0100 | mg/L | Average Quarterly |
| | Max | <0.0100 | mg/l | |

Attachment E

Revised NPDES application data

| EFFLUENT TESTING INFORMATION – DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD | | | | | | |
|---|---------------|-------|---------------|-------|-------------|-------------|
| All sewage facilities with a design flow greater than or equal to 0.1 MGD must report the concentration results of all effluent samples analyzed in the past two years for pH (Minimum and Maximum), Total Residual Chlorine (TRC), Fecal Coliform, Biochemical Oxygen Demand (BOD ₅ or CBOD ₅), TSS, NH ₃ -N, Total N, and Total P. A minimum of three results must be reported per parameter. In addition, facilities with design flows greater than or equal to 0.1 MGD must report the concentration results of at least one sample analyzed in the past two years for Dissolved Oxygen (Minimum), Temperature, TKN, NO ₂ -N + NO ₃ -N, TDS, Chloride, Bromide, Sulfate, Oil and Grease, and Total Maximum Daily Load (TMDL) parameters. *If the facility receives industrial or commercial contributions, at least one result is required for Total Copper, Total Lead, Total Zinc and any other parameters that are known or suspected to be present in effluent. 24-hour composite sample(s) are preferred. All samples must be analyzed in accordance with EPA methods (40 CFR Part 136). | | | | | | |
| Outfall No.: 001 _____ | | | | | | |
| PARAMETER | MIN/MAX VALUE | | AVERAGE VALUE | | No. Samples | Sample Type |
| | Value | Units | Value | Units | | |
| pH (Minimum) | 6.8 | S.U. | | | 731 | Grab |
| pH (Maximum) | 8.0 | S.U. | | | 731 | Grab |
| Dissolved Oxygen (Minimum) | 5.0 | mg/L | 8.6 | mg/L | 731 | Grab |

| | | | | | | | |
|--|-------------------|---------|------------|----------|------------|-----|-----------|
| TRC | | 1.18 | mg/L | 0.31 | mg/L | 731 | Grab |
| Fecal Coliform | | 2595 | No./100 mL | <90.9 | No./100 mL | 105 | Grab |
| Biochemical Oxygen Demand (Report one) | BOD ₅ | | mg/L | | mg/L | | |
| | CBOD ₅ | 7.9 | mg/L | <3.2 | mg/L | 108 | Composite |
| TSS | | 10 | mg/L | <2.9 | mg/L | 108 | Composite |
| NH ₃ -N | | 55.32 | mg/L | <0.8871 | mg/L | 209 | Composite |
| Total N | | <47.59 | mg/L | <4.92 | mg/L | 209 | Composite |
| Total P | | 4.94 | mg/L | 1.76 | mg/L | 209 | Composite |
| Temperature | | 77 | °F | 73.4 | °F | 3 | Composite |
| TKN | | 0.7196 | mg/L | 0.6768 | mg/L | 3 | Composite |
| NO ₂ -N + NO ₃ -N | | 4.782 | mg/L | 3.658 | mg/L | 3 | Composite |
| TDS | | 576 | mg/L | 493 | mg/L | 3 | Composite |
| Chloride | | 219 | mg/L | 204 | mg/L | 3 | Composite |
| Bromide | | <0.011 | mg/L | <0.011 | mg/L | 3 | Composite |
| Sulfate | | 57.3 | mg/L | 55.8 | mg/L | 3 | Composite |
| Oil and Grease | | 2.18 | mg/L | <1.87 | mg/L | 3 | Composite |
| Total Copper* | | <0.0098 | mg/L | <0.00785 | mg/L | 3 | Composite |
| Total Lead* | | <0.0042 | mg/L | <0.00303 | mg/L | 3 | Composite |
| Total Zinc* | | 0.0768 | mg/L | 0.0696 | mg/L | 3 | Composite |
| TMDL Parameters: | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Other Parameters Known or Suspected to be Present in the Effluent: | | | | | | | |
| COD | | 24.8 | mg/L | 18.8 | mg/L | 3 | Composite |
| | | | | | | | |
| | | | | | | | |