Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

| | | | |
|---|---|---|---|
| Application Type | **Renewal** | Application No. | **PA0000302** |
| Facility Type | **Industrial** | APS ID | **1079181** |
| Major / Minor | **Minor** | Authorization ID | **1423833** |

# NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

## Applicant and Facility Information

| | | | |
|---|---|---|---|
| Applicant Name | **Pennsylvania American Water Company - Indiana** | Facility Name | **Pennsylvania American Water – Two Lick Creek Plant - Indiana** |
| Applicant Address | 852 Wesley Drive<br>Mechanicsburg, PA 17055-4436 | Facility Address | 1034 Waterworks Road<br>Indiana, PA 15701-6119 |
| Applicant Contact | James Runzer | Facility Contact | Sammi Medivitz |
| Applicant Phone | (717) 550-1540 | Facility Phone | 724-415--7823 |
| Client ID | 87712 | Site ID | 262074 |
| SIC Code | 4941 | Municipality | White Township |
| SIC Description | Trans. & Utilities - Water Supply | County | Indiana |
| Date Application Received | January 9, 2023 | EPA Waived? | No |
| Date Application Accepted | | If No, Reason | TMDL |

Purpose of Application: Renewal of NPDES Permit PA0000302.

## Summary of Review

The Two Lick Creek Plant is a potable public water treatment plant (WTP). The WTP purifies water withdrawn from the Two Lick Creek for public consumption. The raw water is treated with lime, caustic soda, carbon, ferric chloride, and polymer, and then passes through an in-line static mixer. The water is then routed to the Aldrich Purification Units for clarification, sedimentation, and filtration. Finished water is treated with chlorine, fluoride, lime, and caustic soda. Finished water is routed to the two in-line clearwells prior to being pumped into the distribution system to Indiana Borough, White Township, and surrounding areas.

There are three discharges from the facility; 001, 002, and 003. 001 consists of treated filter backwash, sludge blanket wasting, and laboratory waste from sample taps and on-line analyzers located within the treatment plant. The wastewater from the treatment process flows to Lagoon No.1, where settling occurs. The decant flows to Outfall 001. If Lagoon No.1 is out of service, the wastewater flows to Lagoon No.2 and the same process occurs, with the decant flowing to Outfall 002. Outfalls 001 and 002 never simultaneously discharge. Drying beds 3A and 3B have not been utilized in the past 15+ years, but any discharge from these drying beds would flow to Outfall 003. It will be retained in the permit for emergency purposes. All three outfalls process the same wastewater load and flow, and will have the same effluent limits.

Changes to the permit: Total Mercury monitoring has been added to the permit.

There are open violations for this Applicant, but only in SERO and NERO. There are no open violations for the NWRO.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-

| Approve | Deny | Signatures | Date |
|---|---|---|---|
| X | | Benjamin R. Lockwood<br>Benjamin R. Lockwood / Environmental Engineering Specialist | March 27, 2025 |
| | | Adam Olesnanik, P.E. / Environmental Engineer Manager | Okay to Draft<br>JCD 4/4/2025 |

| **Summary of Review** |
| --- |
| day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge. |

**Discharge, Receiving Waters and Water Supply Information**

| | | | |
|---|---|---|---|
| Outfall No. | 001 | Design Flow (MGD) | .353 |
| Latitude | 40º 35' 47" | Longitude | -79º 7' 8" |
| Quad Name | | Quad Code | |
| Wastewater Description: | Treated backwash water, clarifier supernatant, and miscellaneous wastewater | | |
| Receiving Waters | Two Lick Creek (TSF) | Stream Code | 44073 |
| NHD Com ID | 123716309 | RMI | 13.1 |
| Drainage Area | 79.1 $mi^2$ | Yield ($cfs/mi^2$) | 0.074 |
| $Q_{7-10}$ Flow (cfs) | 5.83 | $Q_{7-10}$ Basis | USGS PA StreamStats |
| Elevation (ft) | 1511 | Slope (ft/ft) | |
| Watershed No. | 18-D | Chapter 93 Class. | TSF |
| Existing Use | N/A | Existing Use Qualifier | N/A |
| Exceptions to Use | N/A | Exceptions to Criteria | N/A |
| Assessment Status | Impaired | | |
| Cause(s) of Impairment | Metals, pH, Pathogens, Pathogens | | |
| Source(s) of Impairment | Acid Mine Drainage, Acid Mine Drainage, Agriculture, Urban Runoff/Storm Sewers | | |
| TMDL Status | Final | Name | Kiskiminetas-Conemaugh River Watersheds TMDL |
| Nearest Downstream Public Water Supply Intake | Saltsburg Municipal Works | | |
| PWS Waters | Conemaugh River | Flow at Intake (cfs) | |
| PWS RMI | | Distance from Outfall (mi) | 37 |

Changes Since Last Permit Issuance: None

Other Comments: None

**Discharge, Receiving Waters and Water Supply Information**

| | | | |
|---|---|---|---|
| Outfall No. | 002 | Design Flow (MGD) | .353 |
| Latitude | 40º 35' 48" | Longitude | -79º 7' 9" |
| Quad Name | | Quad Code | |
| Wastewater Description: | Treated backwash water, clarifier supernatant, and miscellaneous wastewater | | |
| Receiving Waters | Two Lick Creek (TSF) | Stream Code | 44073 |
| NHD Com ID | 123716309 | RMI | 13.1 |
| Drainage Area | 79.1 $mi^2$ | Yield ($cfs/mi^2$) | 0.074 |
| $Q_{7-10}$ Flow (cfs) | 5.83 | $Q_{7-10}$ Basis | USGS PA StreamStats |
| Elevation (ft) | 1511 | Slope (ft/ft) | |
| Watershed No. | 18-D | Chapter 93 Class. | TSF |
| Existing Use | N/A | Existing Use Qualifier | N/A |
| Exceptions to Use | N/A | Exceptions to Criteria | N/A |
| Assessment Status | Impaired | | |
| Cause(s) of Impairment | Metals, pH, Pathogens, Pathogens | | |
| Source(s) of Impairment | Acid Mine Drainage, Acid Mine Drainage, Agriculture, Urban Runoff/Storm Sewers | | |
| TMDL Status | Final | Name | Kiskiminetas-Conemaugh River Watersheds TMDL |
| Nearest Downstream Public Water Supply Intake | Saltsburg Municipal Works | | |
| PWS Waters | Conemaugh River | Flow at Intake (cfs) | |
| PWS RMI | | Distance from Outfall (mi) | 37 |

Changes Since Last Permit Issuance: None

Other Comments: None

**Discharge, Receiving Waters and Water Supply Information**

| | | | |
|---|---|---|---|
| Outfall No. | 003 | Design Flow (MGD) | .353 |
| Latitude | 40º 35' 49" | Longitude | -79º 7' 12" |
| Quad Name | | Quad Code | |
| Wastewater Description: | Treated backwash water, clarifier supernatant, and miscellaneous wastewater | | |
| Receiving Waters | Two Lick Creek (TSF) | Stream Code | 44073 |
| NHD Com ID | 123716309 | RMI | 13.1 |
| Drainage Area | 79.1 $mi^2$ | Yield ($cfs/mi^2$) | 0.074 |
| $Q_{7-10}$ Flow (cfs) | 5.83 | $Q_{7-10}$ Basis | USGS PA StreamStats |
| Elevation (ft) | 1511 | Slope (ft/ft) | |
| Watershed No. | 18-D | Chapter 93 Class. | TSF |
| Existing Use | N/A | Existing Use Qualifier | N/A |
| Exceptions to Use | N/A | Exceptions to Criteria | N/A |
| Assessment Status | Impaired | | |
| Cause(s) of Impairment | Metals, pH, Pathogens, Pathogens | | |
| Source(s) of Impairment | Acid Mine Drainage, Acid Mine Drainage, Agriculture, Urban Runoff/Storm Sewers | | |
| TMDL Status | Final | Name | Kiskiminetas-Conemaugh River Watersheds TMDL |
| Nearest Downstream Public Water Supply Intake | Saltsburg Municipal Works | | |
| PWS Waters | Conemaugh River | Flow at Intake (cfs) | |
| PWS RMI | | Distance from Outfall (mi) | 37 |

Changes Since Last Permit Issuance: None

Other Comments: None

| Compliance History | |
|---|---|
| | |
| **Summary of DMRs:** | There were no effluent violations reported in the last year of eDMR data. |
| **Summary of Inspections:** | 5/13/2019: An inspection was conducted, and no violations were noted.<br>5/17/2024: An inspection was conducted, and no violations were noted. |

Other Comments: None

## Compliance History

**DMR Data for Outfall 001 (from February 1, 2024 to January 31, 2025)**

| Parameter | JAN-25 | DEC-24 | NOV-24 | OCT-24 | SEP-24 | AUG-24 | JUL-24 | JUN-24 | MAY-24 | APR-24 | MAR-24 | FEB-24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow (MGD) Average Monthly | 0.146 | 0.14 | 0.144 | 0.148 | 0.153 | 0.151 | 0.163 | 0.155 | 0.122 | 0.137 | 0.153 | 0.112 |
| Flow (MGD) Daily Maximum | 0.319 | 0.335 | 0.322 | 0.317 | 0.32 | 0.327 | 0.334 | 0.318 | 0.329 | 0.314 | 0.213 | 0.304 |
| pH (S.U.) Minimum | 6.5 | 6.7 | 6.8 | 6.6 | 6.7 | 6.8 | 6.7 | 6.8 | 6.9 | 6.7 | 6.7 | 6.5 |
| pH (S.U.) Maximum | 7.1 | 7.5 | 7.4 | 7.4 | 7.3 | 7.2 | 7.6 | 7.5 | 7.6 | 7.5 | 7.4 | 7.0 |
| TRC (mg/L) Average Monthly | 0.19 | 0.18 | 0.16 | 0.19 | 0.14 | 0.10 | 0.12 | 0.12 | 0.12 | 0.16 | 0.18 | 0.16 |
| TRC (mg/L) Instantaneous Maximum | 0.31 | 0.39 | 0.29 | 0.39 | 0.19 | 0.17 | 0.3 | 0.34 | 0.19 | 0.35 | 0.36 | 0.32 |
| TSS (mg/L) Average Monthly | < 2.0 | < 2.0 | < 2 | < 2.0 | < 2 | < 4.0 | < 2.0 | 2.0 | < 2.0 | < 2.0 | < 3.0 | < 2.0 |
| TSS (mg/L) Instantaneous Maximum | < 2.0 | < 2 | < 2 | < 2.0 | < 2 | 6.0 | < 2 | 2 | 2.0 | 2 | 4 | < 2.0 |
| Total Aluminum (mg/L) Average Monthly | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Total Aluminum (mg/L) Instantaneous Maximum | < 0.10 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.10 | < 0.10 | < 0.10 | < 0.1 | < 0.10 |
| Total Iron (mg/L) Average Monthly | 0.19 | 0.32 | 0.29 | 0.41 | 0.23 | 0.87 | 0.36 | 0.19 | 0.29 | 0.20 | 0.59 | 0.34 |
| Total Iron (mg/L) Instantaneous Maximum | 0.20 | 0.36 | 0.36 | 0.46 | 0.29 | 1.49 | 0.36 | 0.2 | 0.37 | 0.22 | 0.76 | 0.40 |
| Total Manganese (mg/L) Average Monthly | 0.12 | 0.13 | 0.09 | 0.21 | 0.23 | 0.27 | 0.40 | 0.52 | 0.84 | 0.18 | 0.21 | 0.18 |
| Total Manganese (mg/L) Instantaneous Maximum | 0.12 | 0.13 | 0.09 | 0.24 | 0.27 | 0.34 | 0.51 | 0.58 | 0.94 | 0.22 | 0.22 | 0.18 |

**DMR Data for Outfall 002 (from February 1, 2024 to January 31, 2025)**

| Parameter | JAN-25 | DEC-24 | NOV-24 | OCT-24 | SEP-24 | AUG-24 | JUL-24 | JUN-24 | MAY-24 | APR-24 | MAR-24 | FEB-24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow (MGD) Average Monthly | | | | | | | | | 0.122 | | | |
| Flow (MGD) Daily Maximum | | | | | | | | | 0.329 | | | |
| pH (S.U.) Minimum | | | | | | | | | 7.2 | | | |
| pH (S.U.) Maximum | | | | | | | | | 7.6 | | | |
| TRC (mg/L) Average Monthly | | | | | | | | | 0.07 | | | |
| TRC (mg/L) Instantaneous Maximum | | | | | | | | | 0.09 | | | |
| TSS (mg/L) Average Monthly | | | | | | | | | < 2.0 | | | |
| TSS (mg/L) Instantaneous Maximum | | | | | | | | | 2.0 | | | |
| Total Aluminum (mg/L) Average Monthly | | | | | | | | | < 0.10 | | | |
| Total Aluminum (mg/L) Instantaneous Maximum | | | | | | | | | < 0.10 | | | |
| Total Iron (mg/L) Average Monthly | | | | | | | | | 0.11 | | | |
| Total Iron (mg/L) Instantaneous Maximum | | | | | | | | | 0.14 | | | |
| Total Manganese (mg/L) Average Monthly | | | | | | | | | 0.25 | | | |
| Total Manganese (mg/L) Instantaneous Maximum | | | | | | | | | 0.27 | | | |

## Development of Effluent Limitations

**Outfall No.** 001 **Design Flow (MGD)** .353
**Latitude** 40º 35' 47" **Longitude** -79º 7' 8"
**Wastewater Description:** IW Process Effluent without ELG

### Technology-Based Limitations

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

| Parameter | Limit (mg/l) | SBC | Federal Regulation | State Regulation |
|---|---|---|---|---|
| Total Suspended Solids | 30 | Average Monthly | | 362-2183-003 |
| Total Suspended Solids | 40 | Daily Maximum | | 362-2183-003 |
| Aluminum | 4.0 | Average Monthly | | 362-2183-003 |
| Aluminum | 8.0 | Daily Maximum | | 362-2183-003 |
| Manganese | 1.0 | Average Monthly | | 362-2183-003 |
| Manganese | 2.0 | Daily Maximum | | 362-2183-003 |
| Total Iron | 2.0 | Average Monthly | | 362-2183-003 |
| Total Iron | 4.0 | Daily Maximum | | 362-2183-003 |
| Total Residual Chlorine | 0.5 | Average Monthly | - | 92a.48(b)(2) |
| Total Residual Chlorine | 1.0 | Daily Maximum | | 362-2183-003 |
| pH | 6.0 – 9.0 S.U. | Min – Max | 133.102(c) | 95.2(1) |

Comments: The DEP Guidance “Technology-based Control Requirements for Water Treatment Plant Wastes” (362-2183-001) provides these limits that are based on Best Practical Control Technology (BPT).The Two Lick Creek Plant is not subject to Federal Effluent Limitation Guidelines (ELGs) as the SIC code is not listed under 40 CFR parts 405 through 471.

### Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

| Parameter | Limit (mg/l) | SBC | Model |
|---|---|---|---|
| Total Mercury | Report | Daily Max | Toxics Management Spreadsheet |

Comments: The Toxics Management Spreadsheet recommended a monitoring requirement for Total Mercury since the discharge concentration reported on the application was greater than 10% of the calculated WQBEL. Output files are attached to the fact sheet.

### Best Professional Judgment (BPJ) Limitations

Comments: See “Technology-Based Limitations” section above for BPT limits.

### Kiskiminetas-Conemaugh River Watershed TMDL

A TMDL was finalized on January 29, 2010 for the Kiskiminetas-Conemaugh River Watersheds. The TMDL established waste load allocations for the discharge of aluminum, iron, and manganese within the watershed. This facility is included in the TMDL in Appendix G, which required the load allocations shown in the table below. These load allocations are imposed as effluent limitations in the NPDES permit. These limits are included in the existing permit, so no changes will be made to these in the renewal.

| Region | SWS | PERMIT | PIPE | Metal | Baseline Load (lbs/yr) | Baseline Concentration (mg/L) | Allocated Load (lbs/yr) | Allocated Concentration (mg/L) | % Reduction |
|---|---|---|---|---|---|---|---|---|---|
| 4 | 4410 | PA0000302 | 1 | Aluminum | 1,694 | 4.00 | 318 | 0.75 | 81 |
| 4 | 4410 | PA0000302 | 1 | Iron | 847 | 2.00 | 635 | 1.50 | 25 |
| 4 | 4410 | PA0000302 | 1 | Manganese | 423 | 1.00 | 423 | 1.00 | 0 |
| 4 | 4410 | PA0000302 | 2 | Aluminum | 1,694 | 4.00 | 318 | 0.75 | 81 |
| 4 | 4410 | PA0000302 | 2 | Iron | 847 | 2.00 | 635 | 1.50 | 25 |
| 4 | 4410 | PA0000302 | 2 | Manganese | 423 | 1.00 | 423 | 1.00 | 0 |

## Additional Considerations

Monitoring for PFAS parameters – PFOA, PFOS, PFBS, and HFPO-DA –will not be required at this time because the facility does not currently have treatment to remove PFAS.

## Anti-Backsliding

Pursuant to 40 CFR § 122.44(l)(1), all proposed permit requirements addressed in this fact sheet are at least as stringent as the requirements implemented in the existing NPDES permit.

## Development of Effluent Limitations

| | | | |
|---|---|---|---|
| **Outfall No.** | 002 | **Design Flow (MGD)** | .353 |
| **Latitude** | 40º 35' 48" | **Longitude** | -79º 7' 9" |

**Wastewater Description:** IW Process Effluent without ELG

Outfall 002 processes the same wastewater load and flow as Outfall 001; therefore, this outfall will be analyzed using the same methodology and will have the same effluent limitations.

Refer to Outfall 001 Development of Effluent Limitations for methodology of effluent limits.

## Development of Effluent Limitations

| | | | |
|---|---|---|---|
| **Outfall No.** | 003 | **Design Flow (MGD)** | 0.353 |
| **Latitude** | 40º 35' 49" | **Longitude** | -79º 7' 12" |

**Wastewater Description:** IW Process Effluent without ELG

Outfall 003 processes the same wastewater load and flow as Outfall 001; therefore, this outfall will be analyzed using the same methodology and will have the same effluent limitations.

Refer to Outfall 001 Development of Effluent Limitations for methodology of effluent limits.

## Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), SOPs and/or BPJ.

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

| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Mass Units (lbs/day) (1) | | Concentrations (mg/L) | | | | Minimum (2) Measurement Frequency | Required Sample Type |
| | Average Monthly | Average Weekly | Minimum | Average Monthly | Daily Maximum | Instant. Maximum | | |
| Flow (MGD) | Report | Report Daily Max | XXX | XXX | XXX | XXX | 2/month | Measured |
| pH (S.U.) | XXX | XXX | 6.0 Inst Min | XXX | XXX | 9.0 | 2/month | Grab |
| TRC | XXX | XXX | XXX | 0.5 | XXX | 1.0 | 2/month | Grab |
| TSS | XXX | XXX | XXX | 30 | XXX | 60 | 2/month | Grab |
| Total Aluminum | XXX | XXX | XXX | 0.75 | XXX | 1.5 | 2/month | Grab |
| Total Iron | XXX | XXX | XXX | 1.5 | XXX | 3.0 | 2/month | Grab |
| Total Manganese | XXX | XXX | XXX | 1.0 | XXX | 2.0 | 2/month | Grab |
| Total Mercury | XXX | XXX | XXX | XXX | Report | XXX | 1/month | Grab |

Compliance Sampling Location: Outfall 001

Other Comments: None

## Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), SOPs and/or BPJ.

**Outfall 002, Effective Period: Permit Effective Date through Permit Expiration Date**.

| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Mass Units (lbs/day) (1) | | Concentrations (mg/L) | | | | Minimum (2) Measurement Frequency | Required Sample Type |
| | Average Monthly | Average Weekly | Minimum | Average Monthly | Maximum | Instant. Maximum | | |
| Flow (MGD) | Report | Report Daily Max | XXX | XXX | XXX | XXX | 2/month | Measured |
| pH (S.U.) | XXX | XXX | 6.0 Inst Min | XXX | XXX | 9.0 | 2/month | Grab |
| TRC | XXX | XXX | XXX | 0.5 | XXX | 1.0 | 2/month | Grab |
| TSS | XXX | XXX | XXX | 30 | XXX | 60 | 2/month | Grab |
| Total Aluminum | XXX | XXX | XXX | 0.75 | XXX | 1.5 | 2/month | Grab |
| Total Iron | XXX | XXX | XXX | 1.5 | XXX | 3.0 | 2/month | Grab |
| Total Manganese | XXX | XXX | XXX | 1.0 | XXX | 2.0 | 2/month | Grab |
| Total Mercury | XXX | XXX | XXX | XXX | Report | XXX | 1/month | Grab |

Compliance Sampling Location: Outfall 002

Other Comments: None

## Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), SOPs and/or BPJ.

**Outfall 003, Effective Period: Permit Effective Date through Permit Expiration Date**.

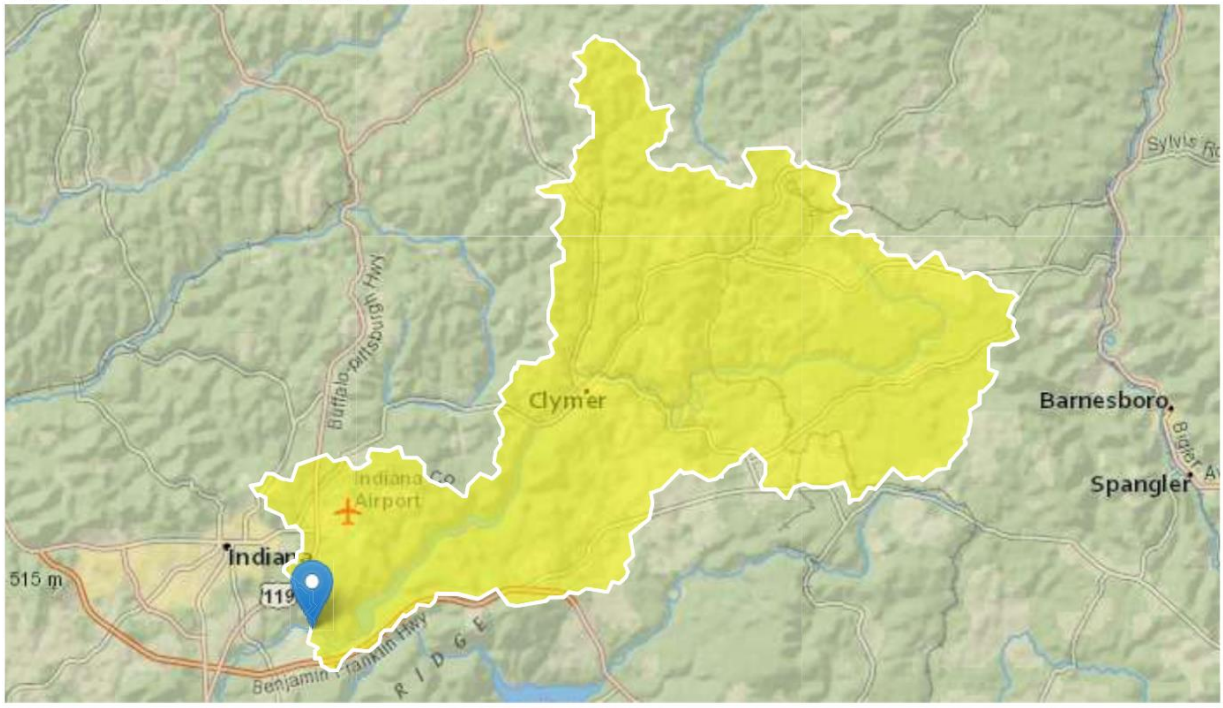
| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Mass Units (lbs/day) (1) | | Concentrations (mg/L) | | | | Minimum (2) Measurement Frequency | Required Sample Type |
| | Average Monthly | Average Weekly | Minimum | Average Monthly | Maximum | Instant. Maximum | | |
| Flow (MGD) | Report | Report Daily Max | XXX | XXX | XXX | XXX | 2/month | Measured |
| pH (S.U.) | XXX | XXX | 6.0 Inst Min | XXX | XXX | 9.0 | 2/month | Grab |
| TRC | XXX | XXX | XXX | 0.5 | XXX | 1.0 | 2/month | Grab |
| TSS | XXX | XXX | XXX | 30 | XXX | 60 | 2/month | Grab |
| Total Aluminum | XXX | XXX | XXX | 0.75 | XXX | 1.5 | 2/month | Grab |
| Total Iron | XXX | XXX | XXX | 1.5 | XXX | 3.0 | 2/month | Grab |
| Total Manganese | XXX | XXX | XXX | 1.0 | XXX | 2.0 | 2/month | Grab |
| Total Mercury | XXX | XXX | XXX | XXX | Report | XXX | 1/month | Grab |

Compliance Sampling Location: Outfall 003

Other Comments: None

# PA American Water Company PA0000302 Outfall 001

**Region ID:** PA
**Workspace ID:** PA20250325001550782000
**Clicked Point (Latitude, Longitude):** 40.59629, -79.11972
**Time:** 2025-03-24 20:16:15 -0400

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## Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|---|---|---|---|
| DRNAREA | Area that drains to a point on a stream | 79.1 | square miles |
| ELEV | Mean Basin Elevation | 1511 | feet |
| PRECIP | Mean Annual Precipitation | 47 | inches |

## Low-Flow Statistics

### Low-Flow Statistics Parameters [Low Flow Region 3]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 79.1 | square miles | 2.33 | 1720 |
| ELEV | Mean Basin Elevation | 1511 | feet | 898 | 2700 |
| PRECIP | Mean Annual Precipitation | 47 | inches | 38.7 | 47.9 |

### Low-Flow Statistics Flow Report [Low Flow Region 3]

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 | 10.5 | ft^3/s | 43 | 43 |
| 30 Day 2 Year Low Flow | 14.8 | ft^3/s | 38 | 38 |
| 7 Day 10 Year Low Flow | 5.82 | ft^3/s | 54 | 54 |
| 30 Day 10 Year Low Flow | 7.61 | ft^3/s | 49 | 49 |
| 90 Day 10 Year Low Flow | 10.7 | ft^3/s | 41 | 41 |

*Low-Flow Statistics Citations*

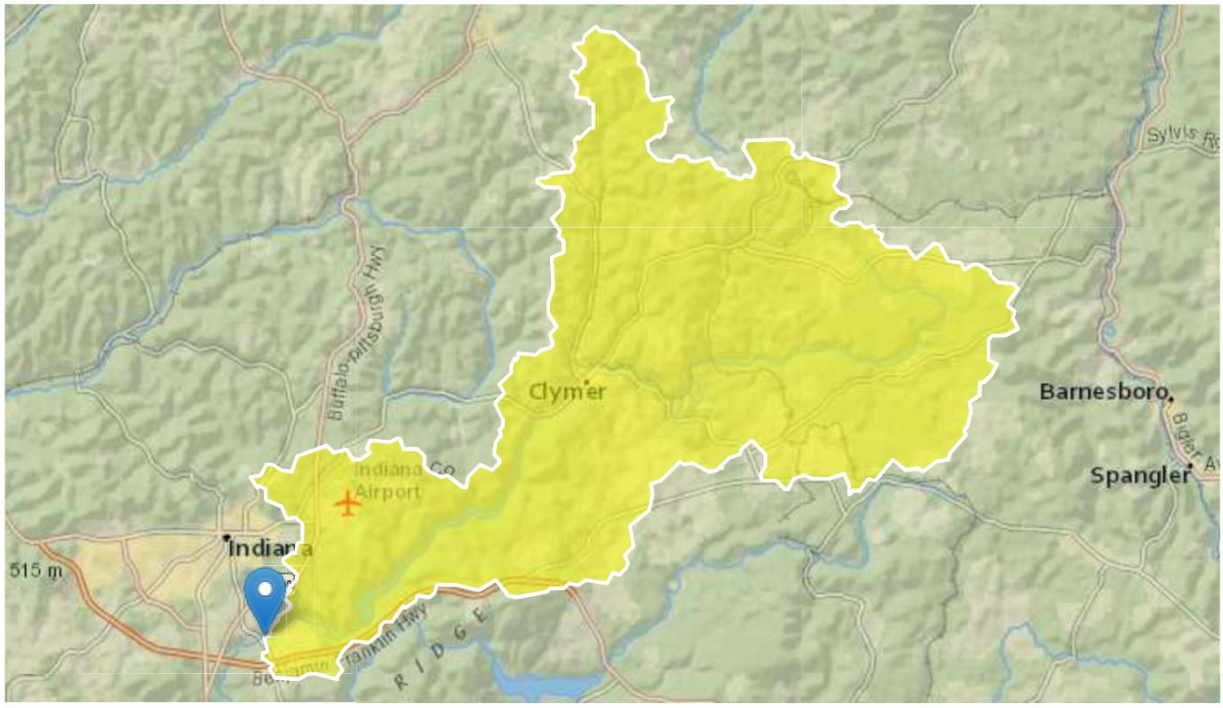
**Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)**

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

Application Version: 4.28.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

# PA American Water Company PA0000302 RMI = 11.9

**Region ID:** PA
**Workspace ID:** PA20250325002803496000
**Clicked Point (Latitude, Longitude):** 40.59131, -79.13806
**Time:** 2025-03-24 20:28:26 -0400




Collapse All

## Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|---|---|---|---|
| DRNAREA | Area that drains to a point on a stream | 80.9 | square miles |
| ELEV | Mean Basin Elevation | 1507 | feet |
| PRECIP | Mean Annual Precipitation | 47 | inches |

## Low-Flow Statistics

### Low-Flow Statistics Parameters [Low Flow Region 3]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 79.1 | square miles | 2.33 | 1720 |
| ELEV | Mean Basin Elevation | 1511 | feet | 898 | 2700 |
| PRECIP | Mean Annual Precipitation | 47 | inches | 38.7 | 47.9 |

### Low-Flow Statistics Flow Report [Low Flow Region 3]

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 | 10.5 | ft^3/s | 43 | 43 |
| 30 Day 2 Year Low Flow | 14.8 | ft^3/s | 38 | 38 |
| 7 Day 10 Year Low Flow | 5.82 | ft^3/s | 54 | 54 |
| 30 Day 10 Year Low Flow | 7.61 | ft^3/s | 49 | 49 |
| 90 Day 10 Year Low Flow | 10.7 | ft^3/s | 41 | 41 |

*Low-Flow Statistics Citations*

**Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)**

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

Application Version: 4.28.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

TRC_CALC

| 1A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| 2 | **TRC EVALUATION** | | | | | |
| 3 | Input appropriate values in B4:B8 and E4:E7 | | | | | |
| 4 | 5.83 | = Q stream (cfs) | | 0.5 | = CV Daily | |
| 5 | 0.353 | = 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) | |
| | 0 | = % Factor of Safety (FOS) | | | =Decay Coefficient (K) | |
| 10 | Source | Reference | AFC Calculations | | Reference | CFC Calculations |
| 11 | TRC | 1.3.2.iii | WLA afc = 3.425 | | 1.3.2.iii | WLA cfc = 3.331 |
| 12 | PENTOXSD TRG | 5.1a | LTAMULT afc = 0.373 | | 5.1c | LTAMULT cfc = 0.581 |
| 13 | PENTOXSD TRG | 5.1b | LTA_afc= 1.276 | | 5.1d | LTA_cfc = 1.937 |
| 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 | **(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...** **...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)** |
| LTAMULT afc | EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5) |
| LTA_afc | wla_afc*LTAMULT_afc |
| **WLA_cfc** | **(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc) )...** **...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)** |
| LTAMULT_cfc | EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5) |
| **LTA_cfc** | wla_cfc*LTAMULT_cfc |
| AML MULT | EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*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)** |

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Toxics Management Spreadsheet
Version 1.4, May 2023

# Discharge Information

Instructions | Discharge | Stream

Facility: **PA American Water Company - Indiana** NPDES Permit No.: **PA0000302** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Treated backwash water**

| Discharge Characteristics | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Design Flow (MGD)* | Hardness (mg/l)* | pH (SU)* | Partial Mix Factors (PMFs) | | | | Complete Mix Times (min) | |
| | | | AFC | CFC | THH | CRL | $Q_{7-10}$ | $Q_h$ |
| 0.353 | 127 | 7.7 | | | | | | |

| | | | | | *0 if left blank* | | *0.5 if left blank* | | *0 if left blank* | | | *1 if left blank* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Discharge Pollutant | Units | Max Discharge Conc | | Trib Conc | Stream Conc | Daily CV | Hourly CV | Stream CV | Fate Coeff | FOS | Criteria Mod | Chem Transl |
| Group 1 | Total Dissolved Solids (PWS) | mg/L | | 235 | | | | | | | | | |
| | Chloride (PWS) | mg/L | | 43.6 | | | | | | | | | |
| | Bromide | mg/L | | 0.1 | | | | | | | | | |
| | Sulfate (PWS) | mg/L | | 102 | | | | | | | | | |
| | Fluoride (PWS) | mg/L | | 0.08 | | | | | | | | | |
| Group 2 | Total Aluminum | µg/L | | 16.2 | | | | | | | | | |
| | Total Antimony | µg/L | | 0.5 | | | | | | | | | |
| | Total Arsenic | µg/L | | 0.5 | | | | | | | | | |
| | Total Barium | µg/L | | 37.5 | | | | | | | | | |
| | Total Beryllium | µg/L | | 0.5 | | | | | | | | | |
| | Total Boron | µg/L | | 24 | | | | | | | | | |
| | Total Cadmium | µg/L | | 0.1 | | | | | | | | | |
| | Total Chromium (III) | µg/L | | 2.1 | | | | | | | | | |
| | Hexavalent Chromium | µg/L | | 0.0015 | | | | | | | | | |
| | Total Cobalt | µg/L | | 0.2 | | | | | | | | | |
| | Total Copper | µg/L | | 1.7 | | | | | | | | | |
| | Free Cyanide | µg/L | | | | | | | | | | | |
| | Total Cyanide | µg/L | | 0.01 | | | | | | | | | |
| | Dissolved Iron | µg/L | | 20 | | | | | | | | | |
| | Total Iron | µg/L | | 410 | | | | | | | | | |
| | Total Lead | µg/L | | 0.2 | | | | | | | | | |
| | Total Manganese | µg/L | | 406 | | | | | | | | | |
| | Total Mercury | µg/L | | 0.1 | | | | | | | | | |
| | Total Nickel | µg/L | | 2.7 | | | | | | | | | |
| | Total Phenols (Phenolics) (PWS) | µg/L | | 5 | | | | | | | | | |
| | Total Selenium | µg/L | | 0.5 | | | | | | | | | |
| | Total Silver | µg/L | | 0.1 | | | | | | | | | |
| | Total Thallium | µg/L | | 0.1 | | | | | | | | | |
| | Total Zinc | µg/L | | 4.7 | | | | | | | | | |
| | Total Molybdenum | µg/L | | 1.2 | | | | | | | | | |
| | 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)Anthrancene | 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 | < | | | | | | | | | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2,6-Dinitrotoluene | µg/L | < | | | | | | | | | | |
| | Di-n-Octyl Phthalate | µg/L | < | | | | | | | | | | |
| | 1,2-Diphenylhydrazine | µg/L | < | | | | | | | | | | |
| | Fluoranthene | µg/L | < | | | | | | | | | | |
| | Fluorene | µg/L | < | | | | | | | | | | |
| | Hexachlorobenzene | µg/L | < | | | | | | | | | | |
| | Hexachlorobutadiene | µg/L | < | | | | | | | | | | |
| | Hexachlorocyclopentadiene | µg/L | < | | | | | | | | | | |
| | Hexachloroethane | µg/L | < | | | | | | | | | | |
| | Indeno(1,2,3-cd)Pyrene | µg/L | < | | | | | | | | | | |
| | Isophorone | µg/L | < | | | | | | | | | | |
| | Naphthalene | µg/L | < | | | | | | | | | | |
| | Nitrobenzene | µg/L | < | | | | | | | | | | |
| | n-Nitrosodimethylamine | µg/L | < | | | | | | | | | | |
| | n-Nitrosodi-n-Propylamine | µg/L | < | | | | | | | | | | |
| | n-Nitrosodiphenylamine | µg/L | < | | | | | | | | | | |
| | Phenanthrene | µg/L | < | | | | | | | | | | |
| | Pyrene | µg/L | < | | | | | | | | | | |
| | 1,2,4-Trichlorobenzene | µg/L | < | | | | | | | | | | |
| Group 6 | Aldrin | µg/L | < | | | | | | | | | | |
| | alpha-BHC | µg/L | < | | | | | | | | | | |
| | beta-BHC | µg/L | < | | | | | | | | | | |
| | gamma-BHC | µg/L | < | | | | | | | | | | |
| | delta BHC | µg/L | < | | | | | | | | | | |
| | Chlordane | µg/L | < | | | | | | | | | | |
| | 4,4-DDT | µg/L | < | | | | | | | | | | |
| | 4,4-DDE | µg/L | < | | | | | | | | | | |
| | 4,4-DDD | µg/L | < | | | | | | | | | | |
| | Dieldrin | µg/L | < | | | | | | | | | | |
| | alpha-Endosulfan | µg/L | < | | | | | | | | | | |
| | beta-Endosulfan | µg/L | < | | | | | | | | | | |
| | Endosulfan Sulfate | µg/L | < | | | | | | | | | | |
| | Endrin | µg/L | < | | | | | | | | | | |
| | Endrin Aldehyde | µg/L | < | | | | | | | | | | |
| | Heptachlor | µg/L | < | | | | | | | | | | |
| | Heptachlor Epoxide | µg/L | < | | | | | | | | | | |
| | PCB-1016 | µg/L | < | | | | | | | | | | |
| | PCB-1221 | µg/L | < | | | | | | | | | | |
| | PCB-1232 | µg/L | < | | | | | | | | | | |
| | PCB-1242 | µg/L | < | | | | | | | | | | |
| | PCB-1248 | µg/L | < | | | | | | | | | | |
| | PCB-1254 | µg/L | < | | | | | | | | | | |
| | PCB-1260 | µg/L | < | | | | | | | | | | |
| | PCBs, Total | µg/L | < | | | | | | | | | | |
| | Toxaphene | µg/L | < | | | | | | | | | | |
| | 2,3,7,8-TCDD | ng/L | < | | | | | | | | | | |
| Group 7 | Gross Alpha | pCi/L | | | | | | | | | | | |
| | Total Beta | pCi/L | < | | | | | | | | | | |
| | Radium 226/228 | pCi/L | < | | | | | | | | | | |
| | Total Strontium | µg/L | < | | | | | | | | | | |
| | Total Uranium | µg/L | < | | | | | | | | | | |
| | Osmotic Pressure | mOs/kg | | | | | | | | | | | |
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Toxics Management Spreadsheet
Version 1.4, May 2023

# Stream / Surface Water Information

**PA American Water Company - Indiana, NPDES Permit No. PA0000302, Outfall 001**

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Two Lick Creek**

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 | 044073 | 13.1 | 1511 | 79.1 | | | Yes |
| End of Reach 1 | 044073 | 11.9 | 1507 | 80.9 | | | Yes |

***$Q_{7-10}$***

| 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 | 13.1 | 0.1 | 5.83 | | | | | | | | | 100 | 7 | | |
| End of Reach 1 | 11.9 | 0.1 | 5.95 | | | | | | | | | 100 | 7 | | |

***$Q_h$***

| 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 | 13.1 | | | | | | | | | | | | | | |
| End of Reach 1 | 11.9 | | | | | | | | | | | | | | |

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Toxics Management Spreadsheet
Version 1.4, May 2023

# Model Results

**PA American Water Company - Indiana, NPDES Permit No. PA0000302, Outfall 001**

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | ◉ All ○ Inputs ○ Results ○ Limits

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.334 Analysis Hardness (mg/l): 105.91 Analysis pH: 7.08

| 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 | |
| Fluoride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Aluminum | 0 | 0 | | 0 | 750 | 750 | 3,424 | |
| Total Antimony | 0 | 0 | | 0 | 1,100 | 1,100 | 5,022 | |
| Total Arsenic | 0 | 0 | | 0 | 340 | 340 | 1,552 | Chem Translator of 1 applied |
| Total Barium | 0 | 0 | | 0 | 21,000 | 21,000 | 95,880 | |
| Total Boron | 0 | 0 | | 0 | 8,100 | 8,100 | 36,982 | |
| Total Cadmium | 0 | 0 | | 0 | 2.129 | 2.26 | 10.3 | Chem Translator of 0.942 applied |
| Total Chromium (III) | 0 | 0 | | 0 | 597.214 | 1,890 | 8,629 | Chem Translator of 0.316 applied |
| Hexavalent Chromium | 0 | 0 | | 0 | 16 | 16.3 | 74.4 | Chem Translator of 0.982 applied |
| Total Cobalt | 0 | 0 | | 0 | 95 | 95.0 | 434 | |
| Total Copper | 0 | 0 | | 0 | 14.187 | 14.8 | 67.5 | Chem Translator of 0.96 applied |
| Dissolved Iron | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Iron | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Lead | 0 | 0 | | 0 | 68.746 | 87.8 | 401 | Chem Translator of 0.783 applied |
| Total Manganese | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Mercury | 0 | 0 | | 0 | 1.400 | 1.65 | 7.52 | Chem Translator of 0.85 applied |
| Total Nickel | 0 | 0 | | 0 | 491.557 | 493 | 2,249 | Chem Translator of 0.998 applied |
| Total Phenols (Phenolics) (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Selenium | 0 | 0 | | 0 | N/A | N/A | N/A | Chem Translator of 0.922 applied |
| Total Silver | 0 | 0 | | 0 | 3.551 | 4.18 | 19.1 | Chem Translator of 0.85 applied |
| Total Thallium | 0 | 0 | | 0 | 65 | 65.0 | 297 | |
| Total Zinc | 0 | 0 | | 0 | 123.026 | 126 | 574 | Chem Translator of 0.978 applied |

☑ ***CFC*** CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): 102.31 Analysis pH: 7.03

| 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 | |
| Fluoride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Aluminum | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Antimony | 0 | 0 | | 0 | 220 | 220 | 2,569 | |
| Total Arsenic | 0 | 0 | | 0 | 150 | 150 | 1,751 | Chem Translator of 1 applied |
| Total Barium | 0 | 0 | | 0 | 4,100 | 4,100 | 47,871 | |
| Total Boron | 0 | 0 | | 0 | 1,600 | 1,600 | 18,681 | |
| Total Cadmium | 0 | 0 | | 0 | 0.250 | 0.28 | 3.21 | Chem Translator of 0.908 applied |
| Total Chromium (III) | 0 | 0 | | 0 | 75.515 | 87.8 | 1,025 | Chem Translator of 0.86 applied |
| Hexavalent Chromium | 0 | 0 | | 0 | 10 | 10.4 | 121 | Chem Translator of 0.962 applied |
| Total Cobalt | 0 | 0 | | 0 | 19 | 19.0 | 222 | |
| Total Copper | 0 | 0 | | 0 | 9.132 | 9.51 | 111 | Chem Translator of 0.96 applied |
| Dissolved Iron | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Iron | 0 | 0 | | 0 | 1,500 | 1,500 | 17,514 | WQC = 30 day average; PMF = 1 |
| Total Lead | 0 | 0 | | 0 | 2.580 | 3.28 | 38.2 | Chem Translator of 0.788 applied |
| Total Manganese | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Mercury | 0 | 0 | | 0 | 0.770 | 0.91 | 10.6 | Chem Translator of 0.85 applied |
| Total Nickel | 0 | 0 | | 0 | 53.022 | 53.2 | 621 | Chem Translator of 0.997 applied |
| Total Phenols (Phenolics) (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Selenium | 0 | 0 | | 0 | 4.600 | 4.99 | 58.3 | Chem Translator of 0.922 applied |
| Total Silver | 0 | 0 | | 0 | N/A | N/A | N/A | Chem Translator of 1 applied |
| Total Thallium | 0 | 0 | | 0 | 13 | 13.0 | 152 | |
| Total Zinc | 0 | 0 | | 0 | 120.450 | 122 | 1,426 | 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 | |
| Fluoride (PWS) | 0 | 0 | | 0 | 2,000 | 2,000 | N/A | |
| Total Aluminum | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Antimony | 0 | 0 | | 0 | 5.6 | 5.6 | 65.4 | |
| Total Arsenic | 0 | 0 | | 0 | 10 | 10.0 | 117 | |
| Total Barium | 0 | 0 | | 0 | 2,400 | 2,400 | 28,022 | |
| Total Boron | 0 | 0 | | 0 | 3,100 | 3,100 | 36,195 | |
| Total Cadmium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Chromium (III) | 0 | 0 | | 0 | N/A | N/A | N/A | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Cobalt | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Copper | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Dissolved Iron | 0 | 0 | | 0 | 300 | 300 | 3,503 | |
| Total Iron | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Lead | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Manganese | 0 | 0 | | 0 | 1,000 | 1,000 | 11,676 | |
| Total Mercury | 0 | 0 | | 0 | 0.050 | 0.05 | 0.58 | |
| Total Nickel | 0 | 0 | | 0 | 610 | 610 | 7,122 | |
| Total Phenols (Phenolics) (PWS) | 0 | 0 | | 0 | 5 | 5.0 | N/A | |
| Total Selenium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Silver | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Thallium | 0 | 0 | | 0 | 0.24 | 0.24 | 2.8 | |
| Total Zinc | 0 | 0 | | 0 | N/A | N/A | N/A | |

☑ ***CRL*** CCT (min): 50.444 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 | 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 | |
| Fluoride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Aluminum | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Antimony | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Arsenic | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Barium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Boron | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Cadmium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Chromium (III) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Hexavalent Chromium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Cobalt | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Copper | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Dissolved Iron | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Iron | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Lead | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Manganese | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Mercury | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Nickel | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Phenols (Phenolics) (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Selenium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Silver | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Thallium | 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:** 4

| | *Mass Limits* | | *Concentration Limits* | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Pollutants | AML (lbs/day) | MDL (lbs/day) | AML | MDL | IMAX | Units | Governing WQBEL | WQBEL Basis | Comments |
| Total Mercury | Report | Report | Report | Report | Report | µg/L | 0.58 | THH | 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 |
| Fluoride (PWS) | N/A | N/A | PWS Not Applicable |
| Total Aluminum | 2,195 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Antimony | 65.4 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Arsenic | 117 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Barium | 28,022 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Beryllium | N/A | N/A | No WQS |
| Total Boron | 18,681 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Cadmium | 3.21 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Chromium (III) | 1,025 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Hexavalent Chromium | 47.7 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Cobalt | 222 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Copper | 43.2 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Cyanide | N/A | N/A | No WQS |
| Dissolved Iron | 3,503 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Iron | 17,514 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Lead | 38.2 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Manganese | 11,676 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Nickel | 621 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Phenols (Phenolics) (PWS) | | µg/L | PWS Not Applicable |
| Total Selenium | 58.3 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Silver | 12.2 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Thallium | 2.8 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Zinc | 368 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Molybdenum | N/A | N/A | No WQS |

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Model Results