

Application Type Renewal
Facility Type Non-Municipal
Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0038318
APS ID 10672
Authorization ID 1521478

Applicant and Facility Information

Applicant Name	<u>Pequea Valley School District</u>	Facility Name	<u>Salisbury Elementary School</u>
Applicant Address	<u>166 S New Holland Road, PO Box 130</u> <u>Kinzers, PA 17535-5600</u>	Facility Address	<u>422 School Lane Road</u> <u>Gap, PA 17527</u>
Applicant Contact	<u>Gavin Scayler</u>	Facility Contact	<u>Brian Norris</u>
Applicant Phone	<u>(717) 406-8807</u>	Facility Phone	<u>(610) 633-8009</u>
Client ID	<u>108</u>	Site ID	<u>452076</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Salisbury Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Lancaster</u>
Date Application Received	<u>March 30, 2025</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>April 1, 2025</u>	If No, Reason	<u></u>
Purpose of Application	<u>NPDES Renewal.</u>		

Summary of Review

Pequea Valley School District has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit. The existing permit was issued September 15, 2020, and became effective on October 1, 2020, authorizing discharge of treated sewage from the Salisbury Elementary School WWTP into Pequea Creek. The existing permit expiration date was September 30, 2025, and the permit has been administratively extended since that time.

Changes in this renewal: E. Coli monitoring has been added to the permit.

Sludge use and disposal description and location(s): Sludge holding tank with offsite disposal.

Supplemental information for this facility is provided at the end of this fact sheet.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		Benjamin R. Lockwood Benjamin R. Lockwood / Environmental Engineering Specialist	December 15, 2025
X		Daniel W. Martin Daniel W. Martin, P.E. / Environmental Engineer Manager	February 5, 2026

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>001</u>	Design Flow (MGD)	<u>.009</u>
Latitude	<u>40° 1' 8.8"</u>	Longitude	<u>76° 0' 28.4"</u>
Quad Name	<u></u>	Quad Code	<u></u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>Pequea Creek (WWF)</u>	Stream Code	<u>07450</u>
NHD Com ID	<u>57463423</u>	RMI	<u>39.9</u>
Drainage Area	<u>27.9 mi²</u>	Yield (cfs/mi ²)	<u>0.136</u>
Q ₇₋₁₀ Flow (cfs)	<u>3.79</u>	Q ₇₋₁₀ Basis	<u>USGS PA StreamStats</u>
Elevation (ft)	<u>394</u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>7-K</u>	Chapter 93 Class.	<u>WWF</u>
Existing Use	<u>N/A</u>	Existing Use Qualifier	<u>N/A</u>
Exceptions to Use	<u>N/A</u>	Exceptions to Criteria	<u>N/A</u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>Pathogens, Siltation, Nutrients, Organic Enrichment, Habitat Alterations, Siltation</u>		
Source(s) of Impairment	<u>Source Unknown, Habitat Modification – Other Than Hydromodification, Agriculture, Agriculture, Habitat Modification – Other Than Hydromodification, Agriculture</u>		
TMDL Status	<u>Final</u>	Name	<u>Pequea Creek</u>
Nearest Downstream Public Water Supply Intake	<u>Chester Water Authority</u>		
PWS Waters	<u>Susquehanna River</u>	Flow at Intake (cfs)	<u></u>
PWS RMI	<u></u>	Distance from Outfall (mi)	<u>53</u>

Changes Since Last Permit Issuance: USGS PA StreamStats provided a drainage area of 27.9 mi² and a Q₇₋₁₀ flow of 3.79 cfs.

Other Comments: None

Treatment Facility Summary				
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Activated Sludge	Hypochlorite	0.009
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.009		Not Overloaded	Sludge Holding	Other WWTP

Changes Since Last Permit Issuance: None

Other Comments: The WWTP process consists of: Comminutor, Aeration Tank, Settling Tank, Chlorine Contact Tank, Aerated Sludge Holding Outfall 001 to Pequea Creek.

Compliance History	
Summary of DMRs:	A summary of the DMR data is presented on the next page of the fact sheet.
Summary of Inspections:	4/3/2025: A routine inspection was conducted. The chlorine contact tank contents appeared to have a greenish blue appearance and some corrosion was observed along the baffle wall. Outfall 001 headwall was observed, and no concerns were noted in the receiving stream. Field sample results were within permitted limits. No other issues were noted.

Other Comments: There are no open violations for this Applicant.

Compliance History

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	0.00184	0.00195	0.00154	0.0011	0.00117	0.00194	0.00175	0.00128	0.00125	0.0015	0.00136	0.00184
Flow (MGD) Daily Maximum	0.00629	0.00419	0.0039	0.00394	0.00260	0.00331	0.00780	0.00248	0.00304	0.00326	0.00336	0.00502
pH (S.U.) Instantaneous Minimum	7.45	7.14	7.41	7.10	7.24	7.29	7.13	7.40	7.43	7.43	7.39	7.02
pH (S.U.) Instantaneous Maximum	8.00	8.00	8.47	7.70	8.52	8.38	8.78	8.68	8.33	7.62	7.65	7.60
DO (mg/L) Instantaneous Minimum	7.0	7.0	7.0	6.9	6.8	7.0	7.0	7.0	7.0	6.9	7.3	7.0
TRC (mg/L) Average Monthly	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
TRC (mg/L) Instantaneous Maximum	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CBOD5 (mg/L) Average Monthly	< 2	< 2	< 2	< 2	< 2	< 3	< 3.85	6.25	2.35	3.35	< 2.7	< 5.8
TSS (mg/L) Average Monthly	16.5	14	6	9.5	12	7	11	13.5	8.5	10.5	17	13
Fecal Coliform (No./100 ml) Geometric Mean	< 2.4	< 2	< 2	< 2	< 2	< 2	< 2	< 12	< 13.9	< 2	< 2	< 2.4
Fecal Coliform (No./100 ml) Instantaneous Maximum	3	< 2	< 2	< 2	< 2	< 2	< 2	72	96	< 2	< 2	3
Nitrate-Nitrite (mg/L) Average Monthly	70.2	46.8	13.8	56.8	92.0	97.3	87.5	78.3	78.8	71.5	77.9	79.4
Nitrate-Nitrite (lbs) Total Monthly	34.48	11.71	4.85	8.81	23.02	50.31	39.41	30.37	23.92	8.50	8.06	49.66
Total Nitrogen (mg/L) Average Monthly	< 70.7	< 47.3	< 14.3	< 57.3	< 92.5	< 97.8	< 88.0	< 78.8	< 79.3	< 72	< 78.4	< 79.9
Total Nitrogen (lbs) Total Monthly	< 34.72	< 11.82	< 5.022	< 8.897	< 23.13	< 50.56	< 39.63	< 30.57	< 24.08	< 8.556	< 8.122	< 49.98

NPDES Permit Fact Sheet
Salisbury Elementary School

NPDES Permit No. PA0038318

Ammonia (mg/L) Average Monthly	< 0.02	0.02	0.02	< 0.1	0.02	< 0.02	0.02	< 0.02	< 0.02	0.05	< 0.02	< 0.02
TKN (mg/L) Average Monthly	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.5	< 0.5	< 0.5	< 0.5
TKN (lbs) Total Monthly	< 0.246	< 0.125	< 0.176	< 0.078	< 0.125	< 0.259	< 0.225	0.194	< 0.152	< 0.059	< 0.052	< 0.313
Total Phosphorus (mg/L) Average Monthly	8.82	6.53	2.04	9.81	11.0	9.52	8.93	6.43	7.05	9.32	9.55	8.89
Total Phosphorus (lbs) Total Monthly	4.333	1.634	7.17	1.522	2.752	4.923	4.022	2.494	2.140	1.108	0.988	5.561
Total Phosphorus (lbs) Total Annual		32										

Existing Effluent Limitations and Monitoring Requirements

Outfall 001

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Total Annual	Minimum	Average Monthly	Maximum	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)	XXX	XXX	XXX	25	XXX	50	2/month	8-Hr Composite
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Ammonia-Nitrogen	XXX	XXX	XXX	Report	XXX	Report	1/month	8-Hr Composite
Total Kjeldahl Nitrogen (lbs/mo)	Report Total Mo	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Nitrate-Nitrite as N (lbs/mo)	Report Total Mo	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Total Nitrogen (lbs/mo)	Report Total Mo	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus (lbs/mo)	Report Total Mo	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Total Phosphorus (lbs/year)	XXX	274	XXX	XXX	XXX	XXX	1/year	Calculation

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

at Outfall 001

Development of Effluent Limitations

Outfall No.	001	Design Flow (MGD)	.009
Latitude	40° 1' 8.8"	Longitude	76° 0' 28.4"
Wastewater Description:	Sewage Effluent		

Technology-Based Limitations

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

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
CBOD ₅	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Water Quality-Based Limitations

CBOD₅, NH₃-N

Pursuant to 40 CFR § 122.44(d)(1)(i), more stringent requirements should be considered when pollutants are discharged at the levels which have the reasonable potential to cause or contribute to excursions above water quality standards.

WQM 7.0 ver. 1.1b is a water quality model designed to assist DEP in determining appropriate water quality based effluent limits (WQBELs) for carbonaceous biochemical oxygen demand (CBOD₅), ammonia (NH₃-N) and dissolved oxygen (D.O.). DEP's Technical Guidance No. 391-2000-007 provides the technical methods contained in WQM 7.0 for determining wasteload allocations and for determining recommended NPDES effluent limits for point source discharges. The model was utilized for this permit renewal. The model output indicated a CBOD₅ average monthly limit of 25 mg/l, an NH₃-N average monthly limit of 25 mg/l, and a D.O. minimum limit of 5.0 mg/l were protective of water quality. The flow data used to run the model was acquired from USGS PA StreamStats and is included as an attachment. The CBOD₅ limit is the same as the existing limit, which will remain in the permit. Per DEP's SOP No. BCW-PMT-033, for existing discharges, if WQM modeling results indicate that an average monthly limit of 25 mg/l is acceptable, a year-round monitoring requirement for ammonia-nitrogen should be established at a minimum, which is consistent with the existing permit limits.

There are no industrial/commercial users contributing industrial wastewater to the system and Pequea Valley School District does not currently have an EPA-approved pretreatment program. Accordingly, evaluating reasonable potential of toxic pollutants is not necessary as effluent levels of toxic pollutants are expected to be insignificant.

Additional Considerations

Chesapeake Bay Total Maximum Daily Load (TMDL)

DEP developed a strategy to comply with the EPA and Chesapeake Bay Foundation requirements by reducing point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP). This strategy can be located in the *Pennsylvania Chesapeake Watershed Implementation Plan (WIP)*, dated January 11, 2011. Subsequently, an update to the WIP was published as the Phase 2 WIP. As part of the Phase 2 WIP, a *Phase 2 Watershed Implementation Plan Wastewater Supplement* (Phase 2 Supplement) was developed, providing an update on TMDL implementation for point sources and DEP's current

implementation strategy for wastewater. A new update to the WIP was published as the Phase 3 WIP in August 2019. As part of the Phase 3 WIP, a *Phase 3 Watershed Implementation Plan Wastewater Supplement* (Phase 3 Supplement) was developed, and was most recently revised on December 17, 2019, and is the basis for the development of any Chesapeake Bay related permit parameters. Sewage discharges have been prioritized based on their design flow to the Bay. The highest priority (Phases 1, 2, and 3) dischargers will receive annual Cap Loads based on their design flow on August 29, 2005 and concentrations of 6 mg/l TN and 0.8 mg/l TP. These limits may be achieved through a combination of treatment technology, credits, or offsets. For Phase 4 and 5 facilities, Cap Loads are not currently being implemented for renewed or amended permits for facilities that do not increase design flow.

This facility is considered a Phase 5 non-significant facility with a design flow less than 0.2 MGD but greater than 0.002 MGD. According to the Phase 3 WIP, TN and TP monitoring is recommended for this facility, which is consistent with the existing permit. TN and TP monitoring will remain in the renewal permit.

Pequea Creek TMDL

A TMDL exists for Pequea Creek for phosphorus and sediment. The TMDL was completed and approved on April 9, 2001 and was revised in 2006. The TMDL established a TP mass loading of 274 lbs/year for this facility. This limit will remain in the renewal permit.

Total Residual Chlorine

The attached computer printout utilizes the equations and calculations as presented in the Department's May 1, 2003 Implementation Guidance for Total Residual Chlorine (TRC) (ID No. 391-2000-015) for developing chlorine limitations. The Guidance references Chapter 92, Section 92.2d (3) which establishes a standard BAT limit of 0.5 mg/l unless a facility-specific BAT has been developed. The attached printout indicates that a water quality limit of 0.5 mg/l would be needed to prevent toxicity concerns. It is recommended that a TRC limit of 0.5 mg/l monthly average and 1.6 mg/l instantaneous maximum be applied this permit cycle, the same as the existing limit.

Fecal Coliform

PA Code § 92a.47.(a)(4) requires a monthly average limit of 200/100 mL as a geometric mean and an instantaneous maximum limit not greater than 1,000/100 mL from May through September for fecal coliform. PA Code § 92a.47.(a)(5) requires a monthly average limit of 2,000/100 mL as a geometric mean and an instantaneous maximum limit not greater than 10,000/100 mL from October through April for fecal coliform. This is consistent with the existing permit limits, which will remain in the renewal.

E. Coli

PA Code § 92a.61 requires IMAX reporting of E. Coli. Per DEP's SOP No. BCW-PMT-033, sewage dischargers with a design flow of 0.002 – 0.05 mgd will include E. Coli monitoring with a frequency of 1/year. This parameter has been added to the renewal permit.

Sampling Frequency & Sample Type

The monitoring requirements were established based on BPJ and/or Table 6-3 of DEP's Technical Guidance No. 362-0400-001.

Anti-Degradation

The effluent limits for this discharge have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. No Exceptional Value Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

303(d) Listed Streams

The discharge is located on a stream segment that is designated as impaired. There is an aquatic life impairment for siltation and habitat alterations from habitat modification – other than hydromodification, nutrients, organic enrichment and siltation from agriculture. There is a recreational impairment for pathogens from an unknown source.

Class A Wild Trout Fisheries

No Class A Wild Trout Fisheries are impacted by this discharge.

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 unless any exceptions are addressed by DEP in this fact sheet.

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	Maximum	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
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30	XXX	60	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
E. Coli	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Ammonia	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
TKN	Report Total Mo	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Nitrate-Nitrite	Report Total Mo	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Total Nitrogen	Report Total Mo	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report Total Mo	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Total Phosphorus (lbs/year)	XXX	274 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

Compliance Sampling Location: Outfall 001

Other Comments: None

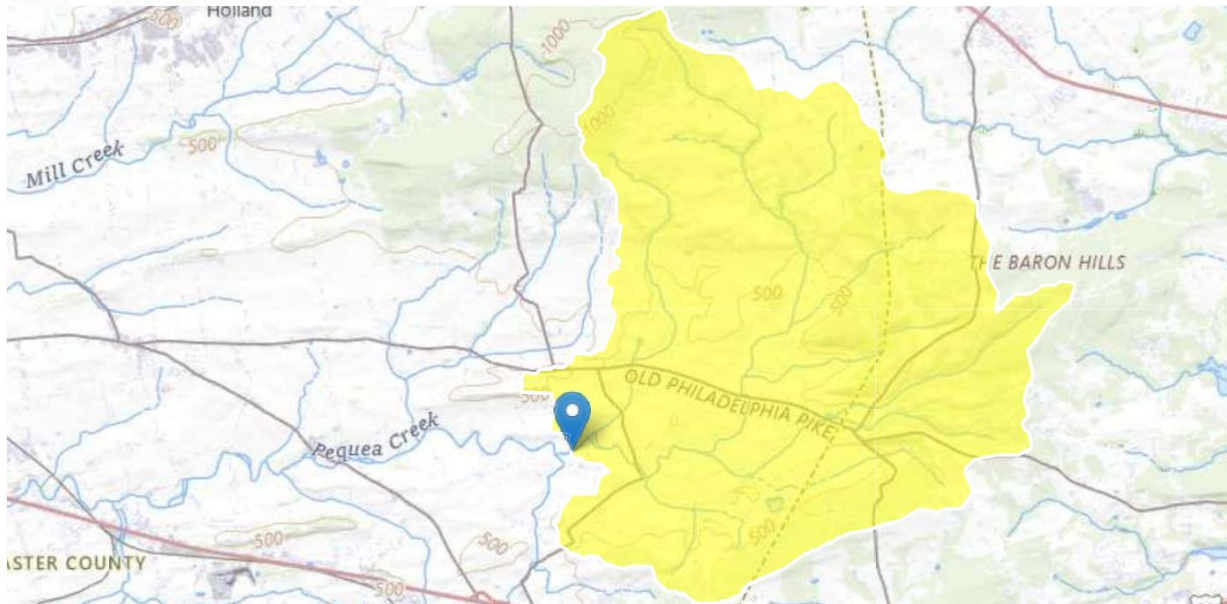
Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☒	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☒	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.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	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.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: BCW-PMT-033
☐	Other:

Pequea Valley School District PA0038318 Outfall 001

Region ID: PA

Clicked Point (Latitude, Longitude): 40.01945, -76.00730

Time: 2025-12-15 14:17:21 -0500



StreamStats Update

Starting with version 4.30.0, the StreamStats application uses services that were redeveloped with open-source software components. Users may observe minor variations in computed results when compared to those from previous versions. These differences are expected and do not reflect errors in the underlying data or analytical methods. Users are advised to consider these potential variations when interpreting or comparing results generated across different versions of StreamStats. Please email streamstats@usgs.gov with any questions or concerns. A full list of changes can be found at <https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release> (<https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release>).

Collapse All

➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	3.8695	degrees
DRNAREA	Area that drains to a point on a stream	27.9	square miles
ROCKDEP	Depth to rock	5.34	feet
URBAN	Percentage of basin with urban development	1.0182	percent

➤ Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLOPD	Mean Basin Slope degrees	3.8695	degrees	1.7	6.4
DRNAREA	Drainage Area	27.9	square miles	4.78	1150
ROCKDEP	Depth to Rock	5.34	feet	4.13	5.21
URBAN	Percent Urban	1.0182	percent	0	89

Low-Flow Statistics Disclaimers [Low Flow Region 1]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Low-Flow Statistics Flow Report [Low Flow Region 1]

Statistic	Value	Unit
7 Day 2 Year Low Flow	7.43	ft ³ /s
30 Day 2 Year Low Flow	9.27	ft ³ /s
7 Day 10 Year Low Flow	3.79	ft ³ /s
30 Day 10 Year Low Flow	4.75	ft ³ /s
90 Day 10 Year Low Flow	7.28	ft ³ /s

Low-Flow Statistics Citations

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

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Application Version: 4.30.0

SSHydro Services Version: 1.0.0

SSDelineate Services Version: 1.0.0

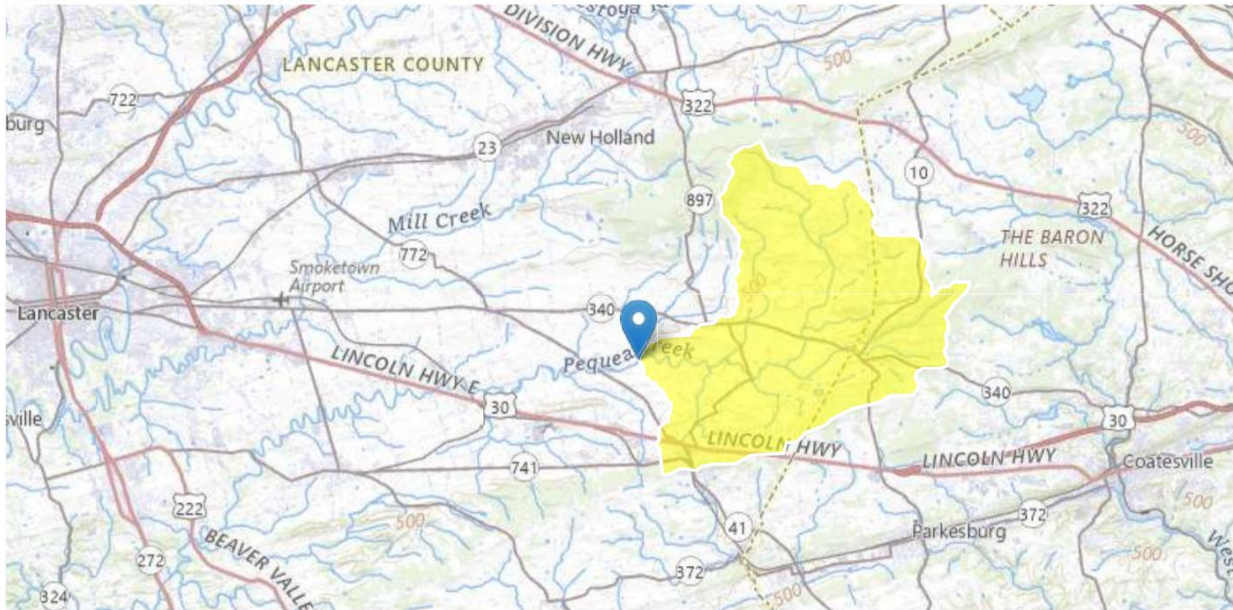
NSS Services Version: 2.2.1

Pequea Valley School District PA0038318 RMI = 37.1

Region ID: PA

Clicked Point (Latitude, Longitude): 40.02137, -76.04217

Time: 2025-12-15 14:19:56 -0500



StreamStats Update

Starting with version 4.30.0, the StreamStats application uses services that were redeveloped with open-source software components. Users may observe minor variations in computed results when compared to those from previous versions. These differences are expected and do not reflect errors in the underlying data or analytical methods. Users are advised to consider these potential variations when interpreting or comparing results generated across different versions of StreamStats. Please email streamstats@usgs.gov with any questions or concerns. A full list of changes can be found at <https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release> (<https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release>).

Collapse All

➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	3.8005	degrees
DRNAREA	Area that drains to a point on a stream	33.6	square miles
ROCKDEP	Depth to rock	5.34	feet

Parameter Code	Parameter Description	Value	Unit
URBAN	Percentage of basin with urban development	2.0103	percent

➤ Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLOPD	Mean Basin Slope degrees	3.8005	degrees	1.7	6.4
DRNAREA	Drainage Area	33.6	square miles	4.78	1150
ROCKDEP	Depth to Rock	5.34	feet	4.13	5.21
URBAN	Percent Urban	2.0103	percent	0	89

Low-Flow Statistics Disclaimers [Low Flow Region 1]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Low-Flow Statistics Flow Report [Low Flow Region 1]

Statistic	Value	Unit
7 Day 2 Year Low Flow	8.93	ft ³ /s
30 Day 2 Year Low Flow	11.2	ft ³ /s
7 Day 10 Year Low Flow	4.59	ft ³ /s
30 Day 10 Year Low Flow	5.75	ft ³ /s
90 Day 10 Year Low Flow	8.86	ft ³ /s

Low-Flow Statistics Citations

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

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TRC_CALC

1A	B	C	D	E	F	G
2	TRC EVALUATION					
3	Input appropriate values in B4:B8 and E4:E7					
4	3.79	= Q stream (cfs)		0.5	= CV Daily	
5	0.009	= 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 = 86.854		1.3.2.iii	WLA cfc = 84.669
12	PENTOXSD TRG	5.1a	LTAMULT afc = 0.373		5.1c	LTAMULT cfc = 0.581
13	PENTOXSD TRG	5.1b	LTA_afc = 32.364		5.1d	LTA_cfc = 49.222
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	$(.019/e^{-k \cdot AFC_tc}) + [(AFC_Yc \cdot Qs \cdot .019 / Qd \cdot e^{-k \cdot AFC_tc}) \dots + Xd + (AFC_Yc \cdot Qs \cdot Xs / Qd)] \cdot (1 - FOS / 100)$				
	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	$(.011/e^{-k \cdot CFC_tc}) + [(CFC_Yc \cdot Qs \cdot .011 / Qd \cdot e^{-k \cdot CFC_tc}) \dots + Xd + (CFC_Yc \cdot Qs \cdot Xs / Qd)] \cdot (1 - FOS / 100)$				
	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)				

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
07K	7450	PEQUEA CREEK	39.900	394.00	27.90	0.00000	0.00	☒

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary		Stream	
	(cfsm)	(cfs)	(cfs)				(ft)	(ft)	Temp (°C)	pH	Temp (°C)	pH
Q7-10	0.100	0.00	3.79	0.000	0.000	0.0	0.00	0.00	20.00	7.00	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
PVSD	PA0038318	0.0090	0.0090	0.0090	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	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
07K	7450	PEQUEA CREEK	37.100	375.00	33.60	0.00000	0.00	☒

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary		Stream	
	(cfsm)	(cfs)	(cfs)						Temp (°C)	pH	Temp (°C)	pH
Q7-10	0.100	0.00	4.59	0.000	0.000	0.0	0.00	0.00	20.00	7.00	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	25.00	7.00

Parameter Data

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

WQM 7.0 Hydrodynamic Outputs

<u>SWP Basin</u>		<u>Stream Code</u>				<u>Stream Name</u>						
07K		7450				PEQUEA CREEK						
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												
39.900	3.79	0.00	3.79	.0139	0.00129	.659	30.28	45.98	0.19	0.897	20.02	7.00
Q1-10 Flow												
39.900	2.43	0.00	2.43	.0139	0.00129	NA	NA	NA	0.15	1.151	20.03	7.00
Q30-10 Flow												
39.900	5.15	0.00	5.15	.0139	0.00129	NA	NA	NA	0.23	0.756	20.01	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☒
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☒
D.O. Saturation	90.00%	Use Balanced Technology	☒
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

<u>SWP Basin</u>		<u>Stream Code</u>		<u>Stream Name</u>					
07K		7450		PEQUEA CREEK					
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		
39.900	PVSD	16.72	50	16.72	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		
39.900	PVSD	1.89	25	1.89	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)		
39.90	PVSD	25	25	25	25	5	5	0	0

WQM 7.0 D.O.Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>		
07K	7450	PEQUEA CREEK		
<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>	<u>Analysis pH</u>	
39.900	0.009	20.018	7.000	
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>	<u>Reach Velocity (fps)</u>	
30.284	0.659	45.975	0.191	
<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>	
2.08	0.037	0.09	0.701	
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>	<u>Reach DO Goal (mg/L)</u>	
8.231	2.330	Tsivoglou	5	
<u>Reach Travel Time (days)</u>	Subreach Results			
0.897	TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
	0.090	2.08	0.09	8.24
	0.179	2.07	0.08	8.24
	0.269	2.06	0.08	8.24
	0.359	2.06	0.07	8.24
	0.449	2.05	0.07	8.24
	0.538	2.04	0.06	8.24
	0.628	2.04	0.06	8.24
	0.718	2.03	0.06	8.24
	0.808	2.02	0.05	8.24
	0.897	2.02	0.05	8.24

WQM 7.0 Effluent Limits

<u>SWP Basin</u>		<u>Stream Code</u>	<u>Stream Name</u>				
07K		7450	PEQUEA CREEK				
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)
39.900	PVSD	PA0038318	0.009	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			5