

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

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application No. PA0080756
APS ID 277015
Authorization ID 1497071

Applicant and Facility Information

Applicant Name <u>Hershey Farm Restaurant & Motor Inn</u>	Facility Name <u>Hershey Farm Restaurant & Motor Inn</u>
Applicant Address <u>240 Hartman Bridge Road, PO Box 159</u> <u>Strasburg, PA 17579</u>	Facility Address <u>240 Hartman Bridge Road</u> <u>Strasburg, PA 17579</u>
Applicant Contact <u>Clair Zeager</u>	Facility Contact <u>Clair Zeager</u>
Applicant Phone <u>(717) 299-6877</u>	Facility Phone <u>(717) 299-6877</u>
Client ID <u>63728</u>	Site ID <u>452693</u>
Ch 94 Load Status <u>Not Overloaded</u>	Municipality <u>Strasburg Township</u>
Connection Status <u>No Limitations</u>	County <u>Lancaster</u>
Date Application Received <u>August 27, 2024</u>	EPA Waived? <u>Yes</u>
Date Application Accepted <u>September 18, 2024</u>	If No, Reason <u></u>
Purpose of Application <u>NPDES Renewal.</u>	

Summary of Review

Hershey Farm Restaurant & Motor Inn 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 on February 27, 2020, and became effective on March 1, 2020, authorizing discharge of treated sewage from the facility into Pequea Creek. The existing permit expiration date was February 28, 2025, and the permit has been administratively extended since that time.

According to the previous fact sheet, this facility serves the Hershey Farms Motor Lodge, the Hershey Farms Restaurant, and the Sight and Sound Theater. Peak flows occur on weekends and especially during the summer/fall tourist season and other holidays.

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*

Approve	Deny	Signatures	Date
X		Benjamin R. Lockwood Benjamin R. Lockwood / Environmental Engineering Specialist	June 2, 2025
X		Maria D. Bebenek for Daniel W. Martin, P.E. / Environmental Engineer Manager	July 1, 2025

Summary of Review

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)	.16
Latitude	40° 0' 5"	Longitude	76° 11' 15"
Quad Name		Quad Code	
Wastewater Description:		Sewage Effluent	
Receiving Waters	Pequea Creek (WWF, MF)	Stream Code	7450
NHD Com ID	57464553	RMI	24
Drainage Area	73.4 mi ²	Yield (cfs/mi ²)	0.127
Q ₇₋₁₀ Flow (cfs)	9.35	Q ₇₋₁₀ Basis	USGS PA StreamStats
Elevation (ft)	315	Slope (ft/ft)	
Watershed No.	7-K	Chapter 93 Class.	WWF, MF
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	Pathogens, Organic Enrichment, Siltation, Nutrients, Siltation, Habitat Alterations, Dissolved Oxygen		
Source(s) of Impairment	Source Unknown, Agriculture, Habitat Modification – Other than Hydromodification, Agriculture, Agriculture, Habitat Modification – Other than Hydromodification, Agriculture		
TMDL Status	Final	Name	Pequea Creek
Nearest Downstream Public Water Supply Intake	Exelon Generation Company LLC		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	35

Changes Since Last Permit Issuance: USGS PA StreamStats provided a drainage area of 73.4 mi² and a Q₇₋₁₀ flow of 9.35 ft³/s at the point of discharge.

Other Comments: None

Treatment Facility Summary				
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Total Nitrogen and Total Phosphorus Reduction	Modified Luzack-Ettinger	Ultraviolet	0.16
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.16	567	Not Overloaded	Aerated Sludge Holding	Other WWTP

Changes Since Last Permit Issuance: None

Other Comments: The upgraded WWTP consists of two dual trains. There is a 50,000 gpd (2 x 25,000 gpd) train, and a 120,000 gpd (2 x 60,000 gpd) train, which can be operated in combinations to suit the capacity demands. The allows the system to handle seasonal flows.

The treatment process consists of: Grease Traps, Fine Screen, Equalization Tank, Duplex Lift Pumps, BESST Activated Single Sludge Process (Anoxic Tank, Aeration Tank, Final Clarifier), UV Disinfection System, Aerated Sludge Holding Tank, Outfall 001 to Pequea Creek

Compliance History	
Summary of DMRs:	A summary of past DMR effluent data is presented on the next page of this fact sheet.
Summary of Inspections:	<p>2/26/2020: A routine inspection was conducted. The final tank following UV disinfection had some white foam and was aerated. Field sampling results were within permitted limits. No issues were observed.</p> <p>10/24/2024: A routine inspection was conducted. The clarifier effluent trough appeared clear and free of solids. The effluent post UV appeared clear. A clear discharge was observed at Outfall 001. Field sampling results were within permitted limits.</p>

Other Comments: There are currently no open violations associated with the Applicant.

Compliance History

DMR Data for Outfall 001 (from April 1, 2024 to March 31, 2025)

Parameter	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24
Flow (MGD) Average Monthly	0.0198	0.0067	0.006	0.0286	0.0223	0.0248	0.02157	0.0296	0.0243	0.0217	0.0263	0.0267
Flow (MGD) Daily Maximum	0.0459	0.017	0.0176	0.0556	0.0529	0.0557	0.0521	0.0768	0.073	0.053	0.0571	0.0802
pH (S.U.) Instantaneous Minimum	7.9	8.2	8.1	7.7	8.0	7.4	8.2	8.1	7.9	7.7	7.8	8.1
pH (S.U.) Instantaneous Maximum	8.6	8.6	8.7	8.5	8.7	8.6	8.8	8.9	8.7	8.7	8.7	8.7
DO (mg/L) Instantaneous Minimum	7.1	7.5	7.9	7.0	6.9	6.8	6.2	6.1	6.0	6.3	6.4	7.5
CBOD5 (mg/L) Average Monthly	3.0	4.0	16.0	8.0	2.1	2	5.3	< 2.0	3.1	2.0	2.0	2.2
TSS (mg/L) Average Monthly	2.0	1.0	12.0	11.0	5.0	4.0	6.0	< 5.0	5.0	1.0	4.0	4.0
Oil and Grease (mg/L) Average Monthly	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Fecal Coliform (No./100 ml) Geometric Mean	9	12	64	159	116	107	35	181	97	14	9	3
Fecal Coliform (No./100 ml) Instantaneous Maximum	25	20	205	260	250	248	98	290	360	66	44	5
UV Transmittance (%) Instantaneous Minimum	100	100	100	82	96	100	96	100	100	68	100	100
Nitrate-Nitrite (mg/L) Average Monthly	7	14	9.1	5	7.8	7.1	6	5	15	14	14	21
Nitrate-Nitrite (lbs) Total Monthly	36	20	1.8	36	43	46	33	38	94	76	92	140
Total Nitrogen (mg/L) Average Monthly	16	17	14	8	10	0.9	13	12	16	19	16	22
Total Nitrogen (lbs) Total Monthly	71	24	17	33	56	29	70	91	100	103	108	147

NPDES Permit Fact Sheet
Hershey Farm Restaurant & Motor Inn

NPDES Permit No. PA0080756

Total Nitrogen (lbs) Effluent Net Total Annual							6464					
Total Nitrogen (lbs) Total Annual							842					
Ammonia (mg/L) Average Monthly	8	1.0	2	1.2	1.1	0.1	5.8	5.0	0.6	2.5	0.2	0.7
Ammonia (lbs) Total Monthly	41	0.5	0.9	6	6	0.3	31	38	4	14	2	5
Ammonia (lbs) Total Annual							137.1					
TKN (mg/L) Average Monthly	10	3	5	3	2.0	2	7	7	0.3	4	1	1
TKN (lbs) Total Monthly	51	1	5	18	11	5	38	53	2	6	7	7
Total Phosphorus (mg/L) Average Monthly	0.1	0.2	1.0	0.1	0.1	0.1	0.1	0.2	0.4	0.1	0.2	0.3
Total Phosphorus (lbs) Total Monthly	0.5	0.3	0.5	0.4	0.6	0.2	0.5	1.5	3	3	0.9	2
Total Phosphorus (lbs) Effluent Net Total Annual							843					
Total Phosphorus (lbs) Total Annual							9					

Existing Effluent Limitations and Monitoring Requirements

Outfall 001

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
Dissolved Oxygen	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	25	XXX	50	2/month	24-Hr Composite
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60	2/month	24-Hr Composite
Oil and Grease	XXX	XXX	XXX	15	XXX	30	2/month	Grab
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 Nov 1 - Apr 30	XXX	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	9.5	XXX	19	2/month	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4.0	2/month	24-Hr Composite

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

at Outfall 001

Parameter	Effluent Limitations					Monitoring Requirements	
	Mass Units (lbs) ⁽¹⁾		Concentrations (mg/L)			Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Monthly	Annual	Minimum	Monthly Average	Instant. Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	2/month	24-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	2/month	24-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	2/month	24-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	2/month	24-Hr Composite
Net Total Nitrogen	XXX	7,306	XXX	XXX	XXX	1/year	Calculation
Net Total Phosphorus	XXX	852	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
Latitude 40° 0' 5"
Wastewater Description: Sewage Effluent

Design Flow (MGD) .16
Longitude 76° 11' 15"

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 flow data used to run the model was acquired from USGS PA StreamStats and is included in the attachment. Default stream pH and temperature inputs were used for this model run. 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 existing NH₃-N limit of 9.5 mg/l is more stringent and will remain in the permit. The CBOD₅ limit of 25 mg/l is the same as the existing limit, which will remain in the renewal.

Toxics

Effluent sample results for toxic pollutants reported on the renewal application were entered into DEP's Toxics Management Spreadsheet Version 1.4 to develop appropriate permit requirements for toxic pollutants of concern. The Toxics Management Spreadsheet combines the functions of PENTOXSD and DEP's Toxics Screening Analysis. Default stream hardness and pH values were used. A default discharge hardness of 100 mg/l was used in modeling. Based on effluent sample results reported on the application, the Toxics Management Spreadsheet did not recommend any toxics limits or monitoring.

This data was analyzed based on the guidelines found in DEP's Water Quality Toxics Management Strategy (Document No. 361-0100-003) and DEP's SOP No. BPNPSM-PMT-033. The results are attached to this fact sheet. The Toxics Management Spreadsheet uses the following logic:

- a. Establish average monthly and instantaneous maximum (IMAX) limits in the draft permit where the maximum reported concentration 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.

Since the reported maximum concentrations were below 10% of their respective WQBEL, no limits or monitoring are required.

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 July 29, 2022, 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.

Hershey Farm Restaurant & Motor Inn WWTP is a Phase 5 non-significant discharger with a design flow less than 0.2 mgd but greater than 0.002 mgd. Due to the expansion of this facility, previous permits assigned Cap Loads based on the above guidance. Due to the established TP permit limit from the Pequea Creek TMDL, the more stringent TP Cap Load of 852 lbs/yr was used instead of 974 lbs/yr. A Cap Load of 7,306 lbs/yr TN was used in the permit. These limits will remain in the renewal permit.

Dissolved Oxygen

A minimum D.O. limit of 5.0 mg/L is a D.O. water quality criterion found in 25 Pa. Code § 93.7(a). This limit is included in the existing NPDES permit based BPJ. It is still recommended to include this limit in the draft permit to ensure that the facility continues to achieve compliance with DEP water quality standards.

Total Phosphorus

For Total Phosphorus (TP), the current NPDES permit requires the permittee to comply with average monthly and IMAX limits of 2.0 mg/L and 4.0 mg/L, respectively. These existing limits will remain unchanged in the permit to protect the local watershed.

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. These limits are consistent with the existing permit.

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 ≥ 0.05 mgd and < 1 mgd will include E. Coli monitoring with a frequency of 1/quarter. This parameter has been added to 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 permit limit for TP of 852 lbs/year to this facility. This limit, and the monthly average limit of 2.0 mg/l, will remain in the permit.

Oil and Grease

A restaurant is a major contributor of wastewater to this facility. Per the previous fact sheet, it is recommended to require the standard limits of 15 mg/l average monthly and 30 mg/l IMAX as required from PA Code 95.2(ii).

UV Monitoring

DEP's SOP No. BPNPSM-PMT-033 recommends at a minimum, routine monitoring of UV transmittance, dosage, or intensity when the facility is utilizing a UV disinfection system. The monitoring should occur at the same frequency as would be used for TRC. This recommendation was implemented as a part of the proper operation and maintenance requirement specified in Part B of the NPDES permit, requesting permittees to demonstrate the effectiveness of UV disinfection system. This is a reasonable approach and has been assigned to other facilities equipped with similar technology. A monitoring requirement for UV Transmittance is included in the existing permit, and will remain in the renewal.

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 High Quality 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 on the 303(d) list as impaired. There is a recreational impairment due to pathogens from an unknown source. There is an aquatic life impairment due to organic enrichment from agriculture, siltation from habitat modification – other than hydromodification, nutrients due to agriculture, siltation due to agriculture, habitat alterations due to habitat modification – other than hydromodification, and dissolved oxygen due to agriculture.

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	Instantaneous 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	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50	2/month	24-Hr Composite
TSS	XXX	XXX	XXX	30.0	XXX	60	2/month	24-Hr Composite
Oil and Grease	XXX	XXX	XXX	15	XXX	30	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	9.5	XXX	19	2/month	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4	2/month	24-Hr Composite

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, to comply with Pennsylvania's Chesapeake Bay Tributary Strategy.

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Net Total Nitrogen	XXX	7,306	XXX	XXX	XXX	XXX	1/year	Calculation
Net Total Phosphorus	XXX	852	XXX	XXX	XXX	XXX	1/year	Calculation

Compliance Sampling Location: Outfall 001

Other Comments: None

Tools and References Used to Develop Permit	
<input checked="" type="checkbox"/>	WQM for Windows Model (see Attachment)
<input checked="" type="checkbox"/>	Toxics Management Spreadsheet (see Attachment)
<input type="checkbox"/>	TRC Model Spreadsheet (see Attachment)
<input type="checkbox"/>	Temperature Model Spreadsheet (see Attachment)
<input checked="" type="checkbox"/>	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
<input checked="" 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 checked="" 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 checked="" 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 checked="" 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: BCW-PMT-033, BCW-PMT-002
<input type="checkbox"/>	Other:

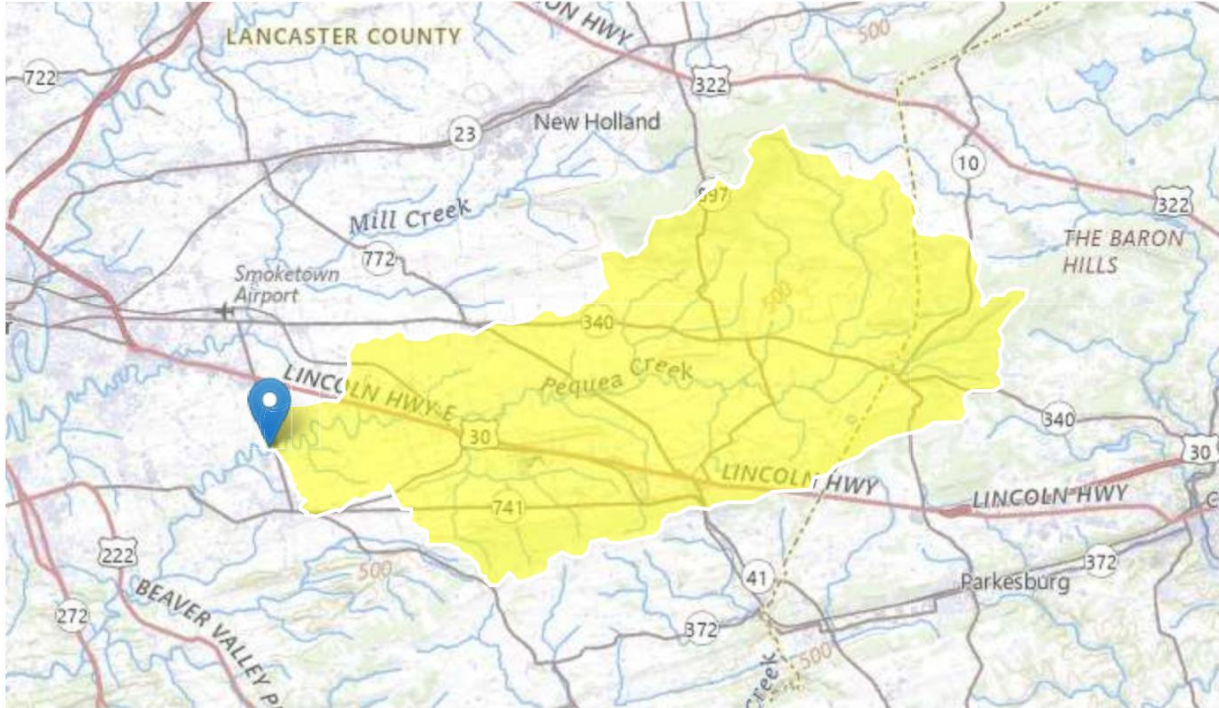
Hershey Farm Restaurant & Motor Inn PA0080756 Outfall 001

Region ID: PA

Workspace ID: PA20250602152129254000

Clicked Point (Latitude, Longitude): 40.00142, -76.18727

Time: 2025-06-02 11:21:56 -0400



[+ Collapse All](#)

➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	3.3816	degrees
DRNAREA	Area that drains to a point on a stream	73.4	square miles
ROCKDEP	Depth to rock	5.4	feet
URBAN	Percentage of basin with urban development	2.8538	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	3.3816	degrees	1.7	6.4
DRNAREA	Drainage Area	73.4	square miles	4.78	1150
ROCKDEP	Depth to Rock	5.4	feet	4.13	5.21
URBAN	Percent Urban	2.8538	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	18	ft ³ /s
30 Day 2 Year Low Flow	22.9	ft ³ /s
7 Day 10 Year Low Flow	9.35	ft ³ /s
30 Day 10 Year Low Flow	11.8	ft ³ /s
90 Day 10 Year Low Flow	18.8	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: 4.29.1

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

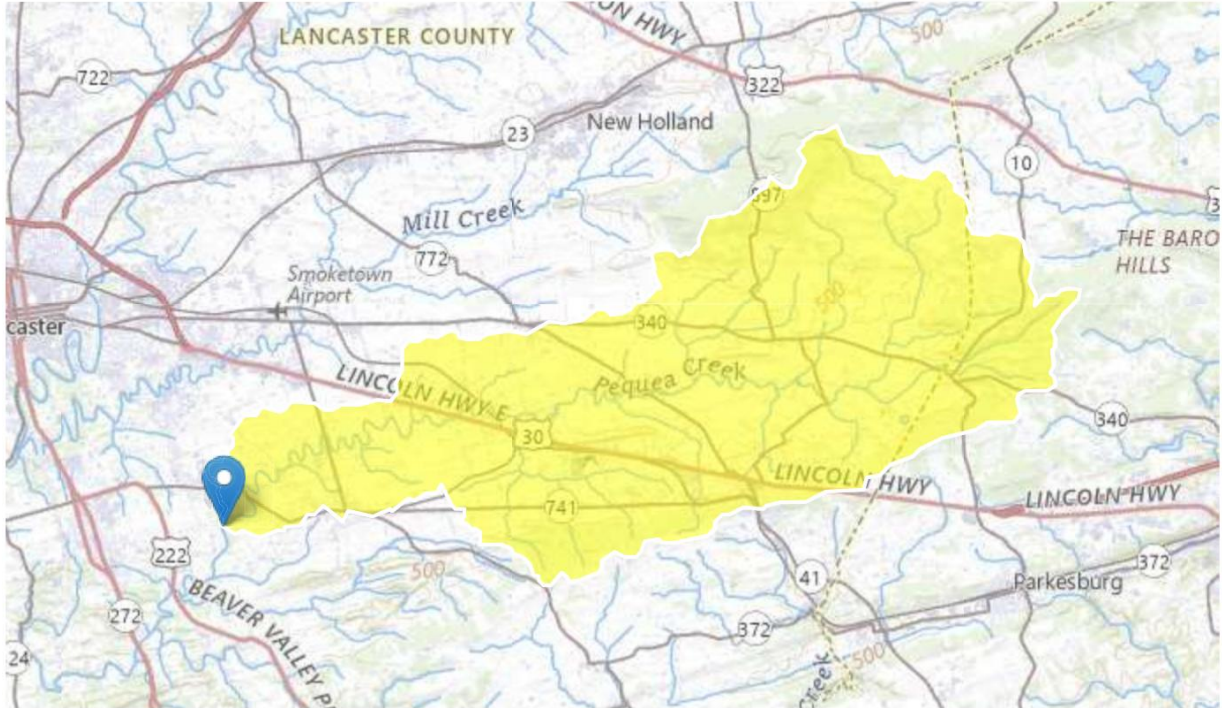
Hershey Farm Restaurant & Motor Inn PA0080756 RMI = 18.8

Region ID: PA

Workspace ID: PA20250602191006952000

Clicked Point (Latitude, Longitude): 39.97807, -76.22585

Time: 2025-06-02 15:10:37 -0400



[+ Collapse All](#)

➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	3.3885	degrees
DRNAREA	Area that drains to a point on a stream	78.8	square miles
ROCKDEP	Depth to rock	5.4	feet
URBAN	Percentage of basin with urban development	3.2368	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	3.3885	degrees	1.7	6.4
DRNAREA	Drainage Area	78.8	square miles	4.78	1150
ROCKDEP	Depth to Rock	5.4	feet	4.13	5.21
URBAN	Percent Urban	3.2368	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	19.6	ft ³ /s
30 Day 2 Year Low Flow	24.8	ft ³ /s
7 Day 10 Year Low Flow	10.2	ft ³ /s
30 Day 10 Year Low Flow	12.8	ft ³ /s
90 Day 10 Year Low Flow	20.4	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: 4.29.1

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

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	24.000	315.00	73.40	0.00000	0.00	<input checked="" type="checkbox"/>

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	9.35	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
Hershey Farm	PA0080756	0.1600	0.1600	0.1600	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	18.800	297.00	78.80	0.00000	0.00	<input checked="" type="checkbox"/>

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	10.20	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	PWS With	Net Stream Flow	Disc Analysis Flow	Reach Slope	Depth	Width	W/D Ratio	Velocity	Reach Trav Time	Analysis Temp	Analysis pH
	(cfs)	(cfs)	(cfs)	(cfs)	(ft/ft)	(ft)	(ft)		(fps)	(days)	(°C)	
Q7-10 Flow												
24.000	9.35	0.00	9.35	.2475	0.00066	.785	49.93	63.57	0.24	1.298	20.13	7.00
Q1-10 Flow												
24.000	5.98	0.00	5.98	.2475	0.00066	NA	NA	NA	0.19	1.654	20.20	7.00
Q30-10 Flow												
24.000	12.72	0.00	12.72	.2475	0.00066	NA	NA	NA	0.29	1.097	20.10	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	<input checked="" type="checkbox"/>
WLA Method	EMPR	Use Inputted W/D Ratio	<input type="checkbox"/>
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	<input type="checkbox"/>
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	<input checked="" type="checkbox"/>
D.O. Saturation	90.00%	Use Balanced Technology	<input checked="" type="checkbox"/>
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		
24.000	Hershey Farm	16.49	50	16.49	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		
24.000	Hershey Farm	1.88	25	1.88	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)		
24.00	Hershey Farm	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>	
24.000	0.160	20.129	7.000	
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>	<u>Reach Velocity (fps)</u>	
49.926	0.785	63.568	0.245	
<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>	
2.59	0.184	0.64	0.707	
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>	<u>Reach DO Goal (mg/L)</u>	
8.159	1.529	Tsivoglou	5	
<u>Reach Travel Time (days)</u>	Subreach Results			
1.298	TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
	0.130	2.53	0.59	8.02
	0.260	2.47	0.54	7.92
	0.389	2.41	0.49	7.87
	0.519	2.36	0.45	7.84
	0.649	2.30	0.41	7.84
	0.779	2.25	0.37	7.85
	0.909	2.19	0.34	7.87
	1.039	2.14	0.31	7.91
	1.168	2.09	0.28	7.95
	1.298	2.04	0.26	7.99

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)
24.000	Hershey Farm	PA0080756	0.160	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			5



Discharge Information

Instructions Discharge Stream

Facility: **Hershey Farm Restaurant & Motor Inn** NPDES Permit No.: **PA0080756** 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
0.16	100	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		1880											
	Chloride (PWS)	mg/L		983											
	Bromide	mg/L	<	1											
	Sulfate (PWS)	mg/L		77.3											
	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	mg/L		0.002											
	Free Cyanide	µg/L													
	Total Cyanide	µg/L													
	Dissolved Iron	µg/L													
	Total Iron	µg/L													
	Total Lead	mg/L	<	0.001											
	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	mg/L		0.009											
	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	<																	
Group 4	1,1,1-Trichloroethane	µg/L	<																	
	1,1,2-Trichloroethane	µg/L	<																	
	Trichloroethylene	µg/L	<																	
	Vinyl Chloride	µg/L	<																	
	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	<																	
Group 5	4-Nitrophenol	µg/L	<																	
	p-Chloro-m-Cresol	µg/L	<																	
	Pentachlorophenol	µg/L	<																	
	Phenol	µg/L	<																	
	2,4,6-Trichlorophenol	µg/L	<																	
	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	<																	
Group 5	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	<																	
Group 5	Di-n-Butyl Phthalate	µg/L	<																	
	2,4-Dinitrotoluene	µg/L	<																	

Page 3



Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Hershey Farm Restaurant & Motor Inn, NPDES Permit No. PA0080756, Outfall 001

Instructions Discharge Stream

Receiving Surface Water Name: **Pequea 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	007450	24	315	73.4			Yes
End of Reach 1	007450	18.8	297	78.8			Yes

Q₇₋₁₀

Location	RMI	LFY (cfs/mi ²)*	Flow (cfs)		W/D Ratio	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary					Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	24	0.1	9.35								100	7		
End of Reach 1	18.8	0.1	10.2								100	7		

Q_h

Location	RMI	LFY (cfs/mi ²)*	Flow (cfs)		W/D Ratio	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary					Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	24													
End of Reach 1	18.8													

Model Results

Hershey Farm Restaurant & Motor Inn, NPDES Permit No. PA0080756, Outfall 001

Instructions

Results

RETURN TO INPUTS

SAVE AS PDF

PRINT

Inputs

Limits

☐ **Hydrodynamics**☒ **Wasteload Allocations**☒ AFC

CCT (min): 15

PMF:

0.287

Analysis Hardness (mg/l):

100

Analysis pH:

7.00

[illegible]

<input checked="" type="checkbox"/> CFC	CCT (min):	#####	PMF:	1	Analysis Hardness (mg/l):	100	Analysis pH:	7.00
---	------------	-------	------	---	---------------------------	-----	--------------	------

[illegible]

<input checked="" type="checkbox"/> THH	CCT (min):	#####	PMF:	1	Analysis Hardness (mg/l):	N/A	Analysis pH:	N/A
--	------------	-------	------	---	---------------------------	-----	--------------	-----

[illegible]

[illegible]

<input checked="" type="checkbox"/> CRL	CCT (min):	61.739	PMF:	1	Analysis Hardness (mg/l):	N/A	Analysis pH:	N/A
--	------------	--------	------	---	---------------------------	-----	--------------	-----

[illegible]

No. Samples/Month: 4

[illegible]

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).

[illegible]
