Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0210781**
Facility Type	**Municipal**	APS ID	**1095373**
Major / Minor	**Minor**	Authorization ID	**1451777**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Hamlin Township**	Facility Name	**Hazel Hurst WWTP**
Applicant Address	PO Box 235 22 Park Road	Facility Address	664 Dewey Avenue
	Hazel Hurst, PA 16733-0235		Hazel Hurst, PA 16733
Applicant Contact	Katy Johnson	Facility Contact	Katy Johnson
Applicant Phone	(814) 778-5855	Facility Phone	(814) 778-5855
Client ID	113802	Site ID	237597
Ch 94 Load Status	Not Overloaded	Municipality	Hamlin Township
Connection Status	No Limitations	County	McKean
Date Application Received	August 3, 2023	EPA Waived?	Yes
Date Application Accepted	September 11, 2023	If No, Reason	

Purpose of Application: Renewal of Existing NPDES Permit

Summary of Review

Hamlin Township has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of a NPDES permit for the Hazel Hurst STP. The permit was last reissued on February 27, 2019 with an effective date of March 1, 2019. The permit expired on February 29, 2024, but the terms and conditions of the permit have been administratively extended since that time.

Based on the review outlined in this fact sheet, it is recommended that the permit be drafted, and a notice of the draft permit be published in the *Pennsylvania Bulletin* for public comments for 30 days.

Sludge use and disposal description and location(s): Ridgeway STP

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		*Aaron Baar* Aaron Baar / Project Manager	March 30, 2025
		Adam Olesnanik, P.E. / Environmental Engineer Manager	Okay to Draft JCD 4/3/2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.05
Latitude	41º 42' 37.59"	Longitude	-78º 34' 18.75"
Quad Name	Hazel Hurst	Quad Code	02091
Wastewater Description:	Sewage Effluent		

Receiving Waters	Marvin Creek (CWF)	Stream Code	57733
NHD Com ID	112377257	RMI	13.15
Drainage Area	10.2 sq. mi.	Yield (cfs/mi^2)	0.07
Q_{7-10} Flow (cfs)	0.714	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1676.61	Slope (ft/ft)	
Watershed No.	16-C	Chapter 93 Class.	CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired (Recreation)		
Cause(s) of Impairment	Pathogens		
Source(s) of Impairment	Unknown		
TMDL Status		Name	

Background/Ambient Data		Data Source
pH (SU)	7.0	Default
Temperature (°C)	20	Default (CWF)
Hardness (mg/L)	100	Default
Other: Ammonia	0.1	Default

Nearest Downstream Public Water Supply Intake		PA/NY State Line	
PWS Waters	Allegheny River	Flow at Intake (cfs)	
PWS RMI	263.35	Distance from Outfall (mi)	

Drainage Area

The discharge is to Marvin Creek at RMI 13.15. A drainage area upstream of the discharge is determined to be 10.2 sq.mi. according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Stream Flow

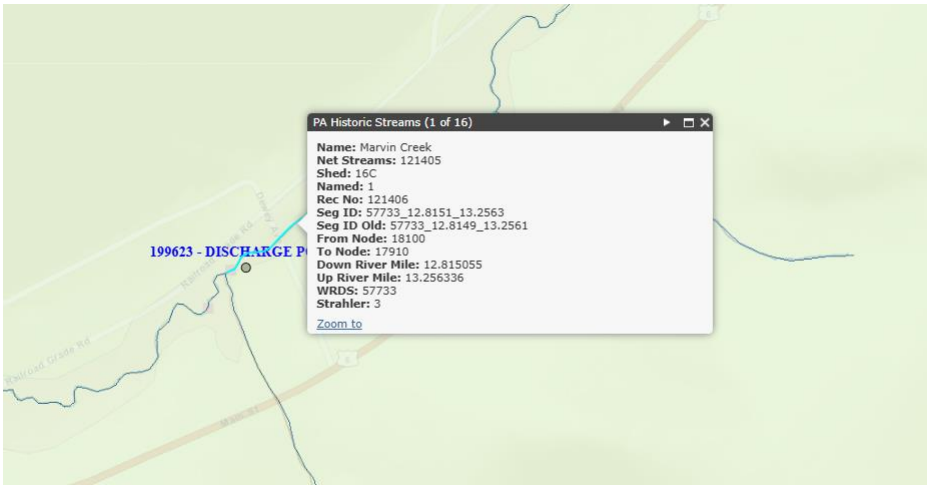
According to StreamStats, the watershed has a Q_{7-10} of 0.714 cfs. This information was used to obtain a Low Flow Yield (LFY), a chronic 30-day (Q_{30-10}) and acute (Q_{1-10}) exposure stream flows for the discharge point as follows (Guidance No. 391-2000-023).

Q_{7-10} = 0.714 cfs
Q_{30-10} = 1.36 * 0.714 cfs = 0.9710 cfs
Q_{1-10} = 0.64 * 0.714 cfs = 0.4570 cfs
LFY = 0.714 cfs/10.2 mi^2 = 0.07 cfs/mi^2

Marvin Creek

25 Pa Code §93.9 classifies the receiving water, Marvin Creek, with a Cold-Water Fishery (CWF) Existing Use designation. Effluent limits for this discharge have been developed to ensure that existing in-stream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. The discharge is in a stream segment listed as attaining uses.

The previous renewal identified the receiving water Stream Code as 57625. eMapPA currently identifies the receiving water Stream Code as 57733. The reason for the difference is not clear. In the absence of evidence to the contrary, this renewal will assume the value listed in eMapPA is correct.



Local Watershed Total Maximum Daily Loads (TMDLs)

According to PA's 2024 Integrated Water Quality Monitoring and Assessment Report, Marvin Creek in the vicinity of the point of discharge is impaired for recreation due to pathogens. The waterway's impairment is listed as Category 5 in the 2024 Integrated Report, indicating that the receiving water is impaired for one or more uses by a pollutant that require the development of a TMDL. No TMDL has been developed for Marvin Creek to date, so no local watershed TMDL has been taken into consideration during this review.

Public Water Supply Intake

There is no downstream public water supply intake between this facility and the Pennsylvania-New York state line. Considering the nature of the discharge and distance, the discharge is not expected to impact the water supply in New York State.

Class A Wild Trout Streams

The receiving stream is not a Class A Wild Trout stream; therefore, no Class A Wild Trout Fishery is impacted by this discharge.

Treatment Facility Summary

Treatment Facility Name: Hazel Hurst WWTP

WQM Permit No.	Issuance Date
4294401	4/13/1994

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Sequencing Batch Reactor	Ultraviolet	0.05

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.05	92	Not Overloaded	Aerobic Digestion	

Hamlin Township operates and owns the wastewater treatment facility located at 664 Dewey Ave (Hamlin Township, McKean County). The facility currently serves the Hazel Hurst area of Hamlin Township. With an annual average design flow and hydraulic design capacity of 0.050 MGD, the treatment process is as follows:

Comminutor → Splitter Box (divides flow between 2 trains) → 2 Sequencing Batch Reactors (1 per train) → UV Disinfection → Outfall 001

The application does not identify the use of any wastewater treatment chemicals at the facility; there is a reference to Soda Ash (pH control) in the 2023 inspection report discussed below. Solids are hauled to the Ridgway STP; no solids treatment process is described in the application.

Compliance History	
Summary of DMRs:	DMR results for the past year are presented below.
Summary of Inspections:	Since the last renewal of the facility's NPDES permit, the following inspection has been logged in WMS: March 15, 2023: A routine CEI was conducted by Alan Poyer. No violations were noted. Recommendations were made to increase maintenance/ cleaning of the UV bulbs, increasing sludge wasting, requesting that a Certified Operator should conduct onsite visits more frequently to troubleshoot/respond to numerous effluent violations, remove or provide secondary containment for ripped bags of soda ash inside Treatment Plant Building, and routinely monitor the area at outfall # 001 and improve process controls to prevent future material deposits in the creek. The following ongoing non-compliance was documented: 1. 25 Pa. Code 92a.41(c): Discharge contained floating materials, scum, sheen, foam, oil, grease or substances that produced an observable change or resulted in deposits in receiving waters See general comments/ recommendations to prevent discharge of solids/organic materials into Marvin Creek.

Other Comments: As of March 30, 2025, there are no open violations associates with this facility.

Existing Effluent Limitations and Monitoring Requirements

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	4/week	Grab
DO	XXX	XXX	4.0 Daily Min	XXX	XXX	XXX	4/week	Grab
CBOD5	10.4	16.7	XXX	25	40	50	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS	12.5	18.8	XXX	30	45	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
UV Intensity (µw/cm²)	XXX	XXX	XXX	Report	XXX	XXX	4/week	Measured
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	8-Hr Composite
Ammonia Nov 1 - Apr 30	Report	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Ammonia May 1 - Oct 31	7.9	XXX	XXX	19.0	XXX	XXX	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	8-Hr Composite

Compliance Sampling Location: Outfall 001

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	0.018	0.026	0.018	0.011	0.011	0.022	0.012	0.014	0.014	0.033	0.026	0.021
Flow (MGD) Daily Maximum	0.042	0.072	0.045	0.036	0.023	0.084	0.038	0.047	0.029	0.092	0.06	0.061
pH (S.U.) Daily Minimum	6.16	6.3	6.1	6.0	6.2	6.4	6.3	6.3	6.3	6.4	6.9	6.8
pH (S.U.) Daily Maximum	6.71	7.0	7.0	6.8	6.9	7.0	6.9	7.0	7.13	7.7	7.1	7.0
DO (mg/L) Daily Minimum	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.1	4.0	4.5	4.4
CBOD5 (lbs/day) Average Monthly	0.3	< 0.5	0.2	0.2	0.2	0.5	0.2	0.4	0.3	1.0	0.4	0.4
CBOD5 (lbs/day) Weekly Average	0.3	< 0.6	0.2	0.3	0.2	0.8	0.3	0.5	0.3	2.0	0.4	0.4
CBOD5 (mg/L) Average Monthly	2.0	< 2.0	3.0	2.0	3.0	2.0	3	4	3.0	3.0	3.0	3.0
CBOD5 (mg/L) Weekly Average	2.0	2.0	3.0	2.0	3.0	2.0	3	4	3.0	3.0	3.0	3.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	11.0	8.0	12	4.0	4.0	13.0	2	4	7.0	< 8	4	5
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	11.0	11.0	21	4.0	5.0	18.0	3	6	10	< 8	5	6
BOD5 (mg/L) Raw Sewage Influent Average Monthly	78.0	39.0	175	37.0	54	52.0	34	41	62	< 27	26	35
TSS (lbs/day) Average Monthly	1.0	< 0.9	0.3	0.3	< 0.2	< 0.8	< 0.3	< 0.4	1.0	< 6.0	0.6	2.0
TSS (lbs/day) Raw Sewage Influent Average Monthly	7.0	10.0	14	3.0	4.0	4.0	0.9	4	5.0	7	4	6
TSS (lbs/day) Raw Sewage Influent Daily Maximum	8.0	16.0	27	3.0	4.0	6.0	1	5	6.0	10	4	7

TSS (lbs/day) Weekly Average	1.0	< 1.0	0.4	0.4	0.3	< 1.0	< 0.3	0.5	1.0	12.0	0.7	3.0
TSS (mg/L) Average Monthly	7.0	< 5.0	< 5.0	3.0	< 4.0	< 3.0	< 4	< 5	10	< 13.0	5	13.0
TSS (mg/L) Raw Sewage Influent Average Monthly	49.0	41.0	213	33.0	54	15.0	13	50	44	29	27	40
TSS (mg/L) Weekly Average	8.0	6.0	6.0	3.0	4.0	< 3.0	4	7	12	23	5	20.0
Fecal Coliform (No./100 ml) Geometric Mean	17.0	< 2.0	3.0	< 2.0	< 3	49	4	280	16	12	10	3
Fecal Coliform (No./100 ml) Instantaneous Maximum	32.0	4.0	4.0	6.0	10	2420	8	285	88	13	10	8
UV Intensity (µw/cm²) Average Monthly	0.8	2.8	3.5	2.9	4.0	7.9	7.1	10	11.2	13.6	13.9	13.8
Total Nitrogen (mg/L) Daily Maximum		6.32										
Ammonia (lbs/day) Average Monthly	0.1	0.1	0.04	< 0.06	< 0.04	< 0.1	0.06	0.2	0.2	0.7	0.3	< 0.08
Ammonia (mg/L) Average Monthly	1.05	1.0	0.61	< 0.63	< 0.57	< 0.5	0.83	2.2	1.69	1.25	2.28	< 0.5
Total Phosphorus (mg/L) Daily Maximum		0.5										

Compliance History

Effluent Violations for Outfall 001, from: March 1, 2024 To: January 31, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	06/30/24	Geo Mean	280	No./100 ml	200	No./100 ml
Fecal Coliform	08/31/24	IMAX	2420	No./100 ml	1000	No./100 ml

Other Comments: The June 2024 DMR states that, “The UV light bulbs need to be cleaned more frequently than twice per month and the new operator has been informed of those requirements to consistently meet the fecal coliform disinfection. The August 2024 DMR states, “UV bulbs will be cleaned more frequently, and two bulbs needed replaced.”

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .05
Latitude 41º 42' 37.09" **Longitude** -78º 34' 18.25"
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)

Comments: These standards apply, subject to water quality analysis and BPJ where applicable.

Water Quality-Based Limitations

CBOD5, NH3-N and Dissolved Oxygen (DO)

1. WQM 7.0 version 1.0b is a water quality model designed to assist DEP to determine appropriate permit requirements for CBOD5, NH3-N and DO. DEP's guidance no. 391-2000-007 provides the technical methods contained in WQM 7.0 for conducting wasteload allocation and for determining recommended NPDES effluent limits for point source discharges. The model was utilized using data derived by USGS StreamStats and the model output indicated that existing WQBELs for CBOD5 and ammonia are still protective of water quality.

   The model also determined that the facility's existing DO limits of 4 mg/L are still protective of water quality.

   Note: The 2019 NPDES renewal permit utilized sample data collected on August 3, 2016 from the confluence of Blacksmith Run and Marvin Creek to model background pH, Hardness, and ammonia. The reviewer notes that default values for these parameters were used in this renewal without any change to the resulting effluent limits determined by WQM 7.0.

   See attached for model inputs and outputs.

Toxics

DEP's NPDES permit application for minor sewages (less than 0.1 MGD) does not require sampling for heavy metals including Total Copper, Total Lead, and Total Zinc.

E. Coli Monitoring

In conformity with the Department's *Establishing Effluent Limitations for Individual Sewage Permits* (SOP No. BCW-PMT-033) and as authorized by § 92a.61 of the PA Code, quarterly E. Coli monitoring has been proposed in this permit. The collection method will be via grab sample.

Best Professional Judgment (BPJ) Limitations

Ultraviolet Disinfection

The existing UV system is equipped with an intensity sensor; therefore, UV intensity is proposed to be continued as the monitoring parameter for the UV system.

Total Phosphorus & Total Nitrogen

DEP's SOP no. BPNPSM-PMT-033 (Establishing Effluent Limitations for Individual Sewage Permits) recommends monitoring requirements for Total Phosphorus and Total Nitrogen for all sewage facilities. Therefore, routine monitoring for Total Phosphorus and Total Nitrogen are recommended to be continued in this permit. Sampling frequency for is currently required 1/year; no change is proposed.

Additional Considerations

Flow Monitoring

The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR § 122.44(i)(1)(ii). The current permit requires the flow to be monitored 1/week; however, DMR records indicate that the facility is currently recording flow data 5/week. Given the need to increase the monitoring of conventional pollutants in this renewal to 1/day (see below), the Department proposes increasing the required flow monitoring requirement to 1/day as well.

Monitoring Frequency and Sample Type

In the 2019 NPDES Renewal Addendum to the final permit, it was stated that, "The monitoring frequencies for D.O., pH and UV intensity will be relaxed to 4/week for the [2019-2024] renewed permit cycle with expectation that 1/day sampling will be enacted for these parameters in the next permit cycle." In conformity with this statement, the monitoring frequencies of D.O., pH and UV intensity are proposed to be increased to 1/day in this renewal.

Table 6-3 of DEP's Technical Guidance for Development and Specification of effluent Limitations (No. 362-0400-001) recommends that for facilities rated for 0.01 mgd to 1.0 mgd, ammonia should be monitored 2/month. The current NPDES permit only requires the sampling of ammonia in cold weather months 1/month. To bring this permit into consistency with Department guidance, the winter-time ammonia monitoring frequency is proposed to be increased to 2/month.

Unless discussed otherwise above, the permit's monitoring frequency and sample type for all parameters will remain unchanged from the last permit renewal.

Antidegradation Requirements

All effluent limitations and monitoring requirements 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.

Anti-backsliding Requirement

All effluent limits proposed in this fact sheet are as stringent as effluent limits specified in the existing permit renewal unless noted otherwise above. This approach is in accordance with 40 CFR §122.44(l(1).

Annual Fees

An annual fee clause is continued in the permit in accordance with 25 Pa. Code § 92a.62. The facility covered by the permit is classified in the Minor Sewage Facility >=0.05 and <1 MGD fee category, which has an annual fee of $1,000.

Mass Loading Limitations

Unless stated otherwise in this fact sheet, mass loading effluent limits are calculated based on the formula: design flow (average annual) (MGD) x concentration limit (mg/L) at design flow x conversion factor (8.34).

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	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/day	Grab
CBOD5	10.4	16.7	XXX	25	40	50	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS	12.5	18.8	XXX	30	45	60	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	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 Intensity (µw/cm²)	XXX	XXX	Report	Report	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	8-Hr Composite
Ammonia Nov 1 - Apr 30	Report	XXX	XXX	Report	XXX	XXX	2/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)	Required
	Average Monthly	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum	Measurement Frequency	Sample Type
Ammonia May 1 - Oct 31	7.9	XXX	XXX	19.0	XXX	XXX	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	8-Hr Composite

Compliance Sampling Location: Outfall 001

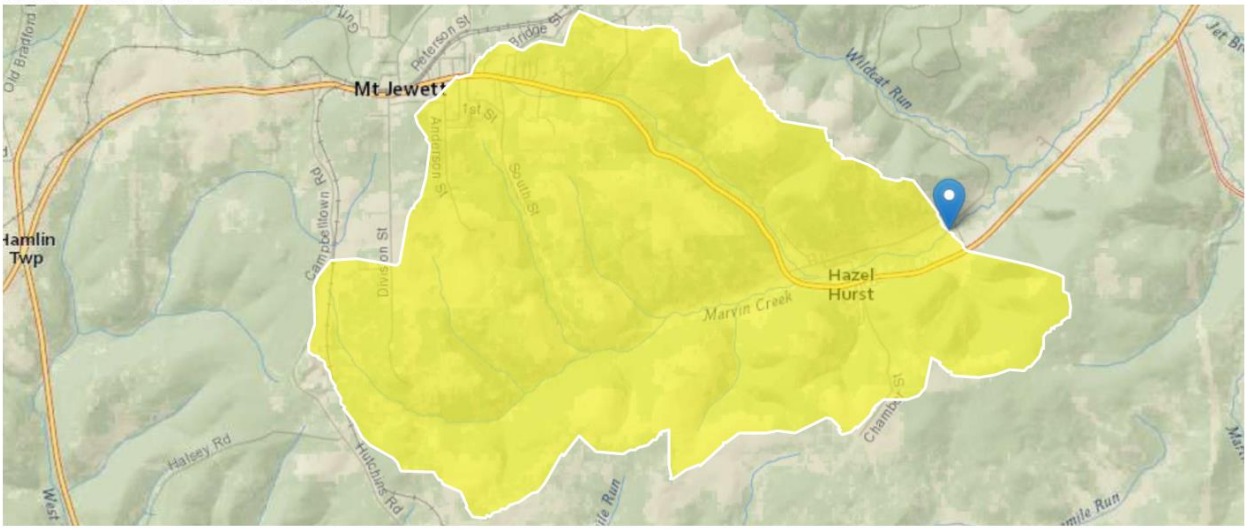
Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical 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:
☐	Other:


199623 - DISCHARGE POINT
Railroad Grade Rd
Dewey Ave
Thomas Rd
Dewey Ave
Railroad Grade Rd
Marvin Creek
6
Main St
New St
Harrison Ave
School St
Healy St
6
Main St
Hazel Hurst
Main St
Orchard Row
Randall St
Columbus Ave
Cleveland Ave
Forest Ave
School St

Hazel Hurst - 001

StreamStats Report

Region ID: PA
Workspace ID: PA20250330111542801000
Clicked Point (Latitude, Longitude): 41.71036, -78.57199
Time: 2025-03-30 07:16:06 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	10.2	square miles
ELEV	Mean Basin Elevation	2086	feet
PRECIP	Mean Annual Precipitation	45	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	10.2	square miles	2.33	1720
ELEV	Mean Basin Elevation	2086	feet	898	2700
PRECIP	Mean Annual Precipitation	45	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	1.49	ft^3/s	43	43
30 Day 2 Year Low Flow	2.11	ft^3/s	38	38

Statistic	Value	Unit	SE	ASEp
7 Day 10 Year Low Flow	0.714	ft^3/s	54	54
30 Day 10 Year Low Flow	0.935	ft^3/s	49	49
90 Day 10 Year Low Flow	1.36	ft^3/s	41	41

Low-Flow Statistics Citations

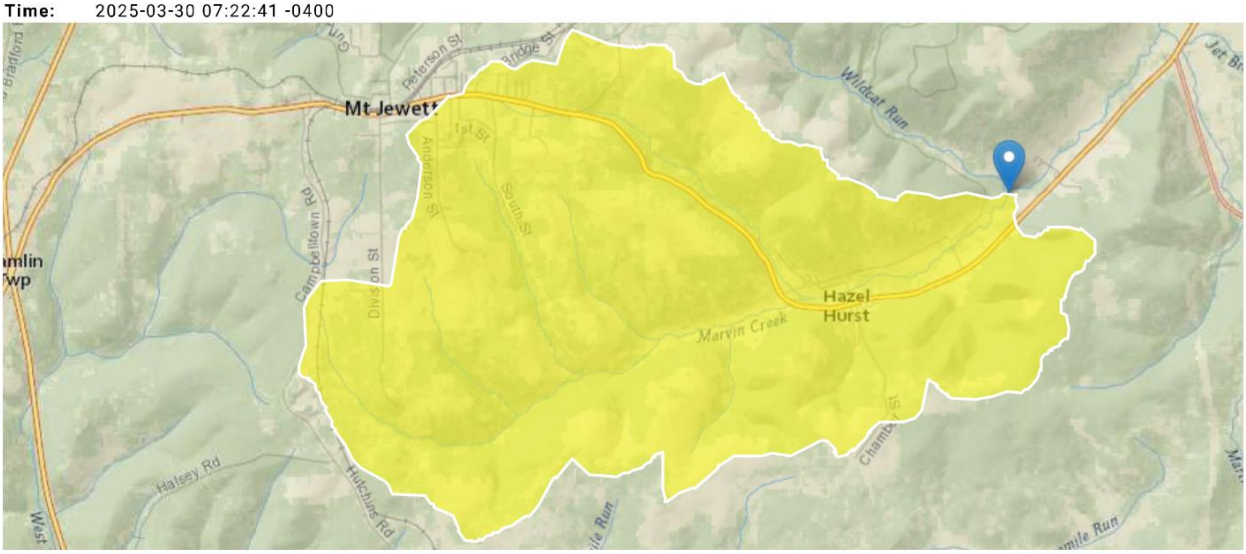
Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

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

Hazel Hurst - Downstream Reach

StreamStats Report

Region ID: PA
Workspace ID: PA20250330112216619000
Clicked Point (Latitude, Longitude): 41.71609, -78.56379
Time: 2025-03-30 07:22:41 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	10.7	square miles
ELEV	Mean Basin Elevation	2078	feet
PRECIP	Mean Annual Precipitation	45	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	10.7	square miles	2.33	1720
ELEV	Mean Basin Elevation	2078	feet	898	2700
PRECIP	Mean Annual Precipitation	45	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	1.56	ft^3/s	43	43

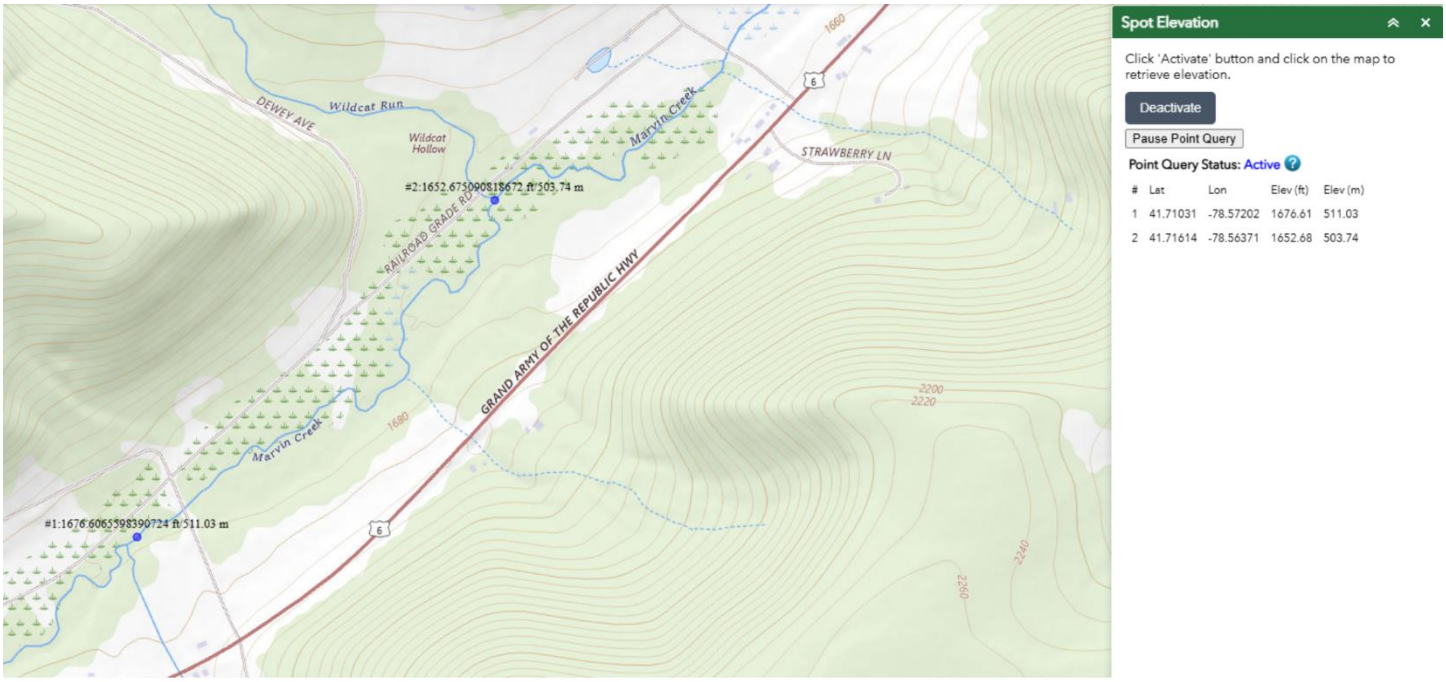
Statistic	Value	Unit	SE	ASEp
30 Day 2 Year Low Flow	2.21	ft^3/s	38	38
7 Day 10 Year Low Flow	0.749	ft^3/s	54	54
30 Day 10 Year Low Flow	0.981	ft^3/s	49	49
90 Day 10 Year Low Flow	1.42	ft^3/s	41	41

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/)

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

Hazel Hurst - Elev



Hazel Hurst - WQM 1

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
16C	57733	MARVIN 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)
13.150	Hazel Hurst	PA0210781	0.050	CBOD5	25		
				NH3-N	19	38	
				Dissolved Oxygen			4

Hazel Hurst - WQM 2

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
16C	57733	MARVIN 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
13.150	Hazel Hurst	17.36	38	17.36	38	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
13.150	Hazel Hurst	1.89	19	1.89	19	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
13.15	Hazel Hurst	25	25	19	19	4	4	0	0

Hazel Hurst - WQM 3

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
16C	57733	MARVIN CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
13.150	0.050	20.489	6.917
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
14.143	0.498	28.421	0.112
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
4.25	0.748	1.95	0.727
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.828	18.465	Owens	6
Reach Travel Time (days)			
0.402			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.040	4.12	1.89	8.17
0.080	3.99	1.84	8.17
0.121	3.87	1.78	8.17
0.161	3.76	1.73	8.17
0.201	3.64	1.68	8.17
0.241	3.53	1.63	8.17
0.282	3.43	1.59	8.17
0.322	3.32	1.54	8.17
0.362	3.22	1.50	8.17
0.402	3.12	1.45	8.17

Hazel Hurst - WQM 4

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	6		

Hazel Hurst - WQM 5

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
16C	57733	MARVIN 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												
13.150	0.71	0.00	0.71	.0773	0.00612	.498	14.14	28.42	0.11	0.402	20.49	6.92
Q1-10 Flow												
13.150	0.46	0.00	0.46	.0773	0.00612	NA	NA	NA	0.09	0.501	20.72	6.88
Q30-10 Flow												
13.150	0.97	0.00	0.97	.0773	0.00612	NA	NA	NA	0.13	0.344	20.37	6.94

Hazel Hurst - WQM 6

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
16C	57733	MARVIN CREEK	**13.150**	1676.61	10.20	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.000	0.00	0.71	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
Hazel Hurst	PA0210781	0.0500	0.0500	0.0500	0.000	25.00	6.50

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	4.00	8.24	0.00	0.00
NH3-N	19.00	0.10	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
16C	57733	MARVIN CREEK	**12.410**	1652.68	10.70	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.000	0.00	0.75	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