Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0239160**
Facility Type	**Municipal**	APS ID	**1140181**
Major / Minor	**Minor**	Authorization ID	**1531945**

Applicant and Facility Information

Applicant Name	**McCalmont Township - Jefferson County**	Facility Name	**McCalmont Township WWTP**
Applicant Address	PO Box 255 127 Firehouse Lane	Facility Address	127 Firehouse Lane
	Anita, PA 15711-0255		Anita, PA 15711
Applicant Contact	Carolyn Heitzenrater	Facility Contact	Vincent Hess
Applicant Phone	(814) 938-9711	Facility Phone	(814) 938-9711
Client ID	75798	Site ID	613542
Ch 94 Load Status	Not Overloaded	Municipality	McCalmont Township
Connection Status	No Limitations	County	Jefferson
Date Application Received	June 25, 2025	EPA Waived?	Yes
Date Application Accepted		If No, Reason	-

Purpose of Application: Renewal application for a Wastewater Treatment Plant classified as a Minor Sewage Facility

Summary of Review

The permittee is applying for reissuance of Individual Permit No. PA0239160 which is set to expire on December 31, 2025. This is an existing discharge with a design flow of 0.097 MGD to Elk Run (CWF).

Act 14 notifications were submitted and received.

The facility is currently using the eDMR system.

The addition of E. coli monitoring and updated Ammonia-Nitrogen limits are part of this permit renewal.

The EPA waiver is in effect.

There are no open violations for the subject Client ID (75798) as of July 8, 2025.

Sludge use and disposal description and location(s): Punxsutawney Wastewater Treatment Plant. Last year 5.74 dry tons were taken to disposal.

Approve	Deny	Signatures	Date
X		Carlee Wilson Carlee Wilson / Environmental Engineering Trainee	July 16, 2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	July 23, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.097
Latitude	40º 59' 38.74"	Longitude	-78º 58' 19.02"
Quad Name	Punxsutawney	Quad Code	1114
Wastewater Description:	Sewage Effluent		
Receiving Waters	Elk Run (CWF)	Stream Code	47783
NHD Com ID	123852323	RMI	3.69
Drainage Area	4.37	Yield (cfs/mi^2)	0.054
Q_{7-10} Flow (cfs)	0.235	Q_{7-10} Basis	USGS-StreamStats
Elevation (ft)	1338	Slope (ft/ft)	-
Watershed No.	17-D	Chapter 93 Class.	CWF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	-		
Source(s) of Impairment	-		
TMDL Status	-	Name	-

Background/Ambient Data		Data Source
pH (SU)	-	-
Temperature (°F)	-	-
Hardness (mg/L)	-	-
Other:	-	-

Nearest Downstream Public Water Supply Intake	Kittanning Suburban Joint Water Authority		
PWS Waters	Allegheny River	Flow at Intake (cfs)	987
PWS RMI	42.9	Distance from Outfall (mi)	42

Changes Since Last Permit Issuance: Elevation was revised using Google Earth. Drainage Area and Q_{7-10} Flow were revised using StreamStats.

Other Comments:

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.

Treatment Facility Summary				
Treatment Facility Name: McCalmont Township WWTP				
WQM Permit No.	**Issuance Date**			
3303401 A-1	5/19/2011			
3304401	2/4/2005			
3303401	9/23/2003			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Activated Sludge	Ultraviolet	0.097
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.097	194.2	Not Overloaded	Gravity Thickening	Off-site

Changes Since Last Permit Issuance: None

Other Comments:

WQM Permit No. 3303401 was issued on September 9, 2003, for an 80-gpm Adrian Mines pump station and sanitary sewers. The permit was issued with 2004 sewerage conditions 1, 2, 4, 5, 6,8, 9, 11,12, 13, 14, 17, 18, 19, 20, 21. 23, 24, and 26. The permit was for (collection) 33,000-feet 8-inch gravity sewers, 2,000-feet 4-inch laterals, 163-gpm pump station with forch main, and 6 grinder pump stations; (treatment) aerated equalization with comminution, bypass bar screen, and two submersible pumps and two diffused aeration chambers to clarifier chambers, UV disinfection, and a flow meter. Design flow is for 0.097 MGD, and 194.2 PPD. Planning approval was for 0.097 MGD and dated April 16, 2002. The application was dated December 4, 2002.

WQM Permit No. 3304401 was issued on February 4, 2005. The system consists of 32,894-gallon equalization tank, 2 aeration tanks with a 98,502-gallon (total capacity), clarifier geyer pumps, chemical feed (alkalinity), clarifier covers, post aeration tank sump pumps, influent and effluent composite samplers, and a 32,834-gallon aerobic digester. This is a modification to WQM permit 3303401 issued on September 23, 2003. The permit was issued with 2001 sewerage conditions 1, 2, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24, 25, and 26.

An amendment for WQM Permit No. 3303401 (3303401 A-1) for a higher design load was issued on May 19, 2011. The engineer's certificate is dated October 24, 2011, and was received on October 26, 2011. Noted as not completed was an influent composite sampler UV/Post aeration tank sump pump. This permit is for 0.098 MGD and 196.2 PPD. The design is the manufacturer's system rating. With the additional proposed monitoring the influent composite sampler will be needed and may be already installed.

Compliance History

DMR Data for Outfall 001 (from June 1, 2024, to May 31, 2025)

Parameter	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24
Flow (MGD) Average Monthly	0.051	0.095	0.039	0.039	0.022	0.022	0.023	0.023	0.034	0.041	0.037	0.035
Flow (MGD) Daily Maximum	0.084	1.337	0.066	0.104	0.038	0.037	0.035	0.037	0.047	0.093	0.060	0.051
pH (S.U.) Instantaneous Minimum	6.7	6.5	6.7	6.2	6.4	6.4	6.6	6.4	6.4	6.3	6.4	6.5
pH (S.U.) Instantaneous Maximum	8.7	7.0	7.0	7.2	7.2	7.1	7.4	7.1	7.2	7.1	7.0	7.2
DO (mg/L) Daily Minimum	4.5	4.80	4.90	5.1	5.1	4.7	5.2	5.2	4.2	4.4	4.5	4.4
CBOD5 (lbs/day) Average Monthly	5.4	4.3	0.80	2.2	< 0.45	1.3	1.1	< 0.44	< 0.70	< 0.67	< 0.57	1.36
CBOD5 (lbs/day) Weekly Average	9.3	7.2	0.80	3.0	0.65	1.8	1.4	0.46	0.70	< 0.76	< 0.60	1.8
CBOD5 (mg/L) Average Monthly	11.0	9.56	2.51	9.6	< 2.7	4.9	5.01	< 2.54	< 2.4	< 2.2	< 2.2	4.4
CBOD5 (mg/L) Weekly Average	18.5	14.80	2.92	14.9	3.43	5.9	6.58	2.67	< 2.4	< 2.4	< 2.4	5.88
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	123.0	E	123.0	89	26	54.0	62	34	80	75	93	70
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	123.0	E	123.0	89	26	54.0	62	34	80	75	93	74
BOD5 (mg/L) Raw Sewage Influent Average Monthly	335.0	E	368.0	290	171.0	269.0	312	258.0	383.0	274.0	329.0	345
TSS (lbs/day) Average Monthly	5.0	3.6	0.80	1.7	< 0.40	2.0	1.60	< 0.60	1.2	< 0.75	< 0.97	< 1.9
TSS (lbs/day) Raw Sewage Influent Average Monthly	131.0	E	127.0	104	32	60.0	62	43	102	95	13	67

TSS (lbs/day) Raw Sewage Influent Daily Maximum	131.0	E	127.0	104	32	60.0	62	43	102	95	13	72
TSS (lbs/day) Weekly Average	5.8	6.0	1.50	1.7	< 0.48	2.8	1.80	0.71	1.7	< 0.79	1.3	2.3
TSS (mg/L) Average Monthly	11.0	8.0	< 4.3	6.8	< 2.5	8.5	7.50	< 3.5	4.0	< 2.5	< 3.8	< 6.3
TSS (mg/L) Raw Sewage Influent Average Monthly	356.0	E	380.0	336	216.0	300.0	308	320.0	488.0	344	45.5	289
TSS (mg/L) Weekly Average	11.5	12.50	6.0	8.5	2.5	9.0	8.50	4.5	4.5	< 2.5	5.0	7.5
Fecal Coliform (No./100 ml) Geometric Mean	< 5.0	47.2	58.2	106	24.5	10.8	16.5	18.9	85.7	169.0	84.9	30.8
UV Intensity (µw/cm²) Average Monthly	74.4	74.4	74.4	74.4	74.4	74.4	74.4	74.4	74.4	74.4	74.4	74.4
Total Nitrogen (mg/L) Average Quarterly			5.72			< 5.1			< 1.05			3.47
Ammonia (lbs/day) Average Monthly	0.78	0.82	2.23	0.80	0.19	1.1	1.20	0.16	0.10	< 0.11	0.06	0.32
Ammonia (mg/L) Average Monthly	1.80	2.19	8.87	3.72	0.90	3.42	5.52	0.91	0.4283	0.3674	0.20	1.06
Total Phosphorus (mg/L) Average Quarterly			3.75			5.23			6.58			4.30

Compliance History	
Summary of DMRs:	There have been no effluent violations in the past year.
Summary of Inspections:	The last site inspection was conducted on April 17, 2023, by Brian Tollini. No violations were noted.
Future Compliance:	The facility should be able to meet the effluent limits based on historic DMR data.

Development of Effluent Limitations

Outfall No.	001	**Design Flow (MGD)**	.097
Latitude	40º 59' 39.00"	**Longitude**	-78º 58' 20.00"
Wastewater Description:	Sewage Effluent		

1. Technology-Based Limitations

The following limits are the minimum technology-based limitations applied to this permit. The addition of E. coli monitoring 1/year has been added as recommended by the SOP for flows between 0.05 MGD and 1.0 MGD.

The limits for pH are technology-based on Chapter 93.7. The limits for Total Suspended Solids, and Fecal Coliforms are technology-based on Chapter 92a.47. Monitoring for E. Coli, Total Nitrogen, and Total Phosphorus are based on Chapter 92a.61.

Table 1. Technology-Based Effluent Limits

Paramter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
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 Nitrogen	Report	Average Quarterly	-	92a.61
Total Phosphorus	Report	Average Quarterly	-	92a.61
E. coli	Report	1/year	-	92a.61

2. Water Quality-Based Limitations

Table 2. WQM 7.0 Model Results

Parameter	Limit (mg/l)	SBC	Model
CBOD5	25	Average Monthly	WQM 7.0
	50	IMAX	
NH3-N	5.3	Average Monthly	WQM 7.0
	10.6	IMAX	
DO	4.0	Daily Minimum	WQM 7.0

The Department's Toxics Management Spreadsheet was not used for this case since no sampling other than sewage-related parameters was performed for this facility with the renewal application. The above parameters were evaluated using the WQM 7.0 Model (Attachment 5).

The WQM 7.0 Model suggests an average monthly limit of 25 mg/l and an IMAX of 50 mg/l, however, since the current permit limits are more stringent, they will be retained as 18 mg/l for average monthly, 27 mg/l for weekly average, and an IMAX of 36 mg/l.

The model recommends an average monthly limit of 5.3 mg/l and an IMAX limit of 10.6 mg/l for Ammonia-Nitrogen limits. These results are more stringent than the current permit limits (Table 3). To protect the stream, it is proposed to change the current permit limits to the more stringent limits recommended by the model. According to historic DMR data, the permittee is not in risk of noncompliance with these more stringent limits and will not need a compliance schedule.

The DO remained the same as a daily minimum of 4.0 mg/l.

3. Anti-Backsliding

Table 3. Effluent Limitations in the Current Permit						
Parameter	**Mass Units (lbs/day)**		**Concentrations (mg/L)**			
	Average Monthly	**Weekly Average**	**Minimum**	**Average Monthly**	**Weekly Average**	**Instant. Maximum**
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0
Dissolved Oxygen	XXX	XXX	4.0 Daily Min	XXX	XXX	XXX
Carbonaceous Biochemical Oxygen Demand (CBOD5)	14.5	21	XXX	18.0	27.0	36
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX
Total Suspended Solids	24.0	36.0	XXX	30.0	45.0	60
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000
Ultraviolet light intensity (µw/cm²)	XXX	XXX	XXX	Report	XXX	XXX
Total Nitrogen	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX
Ammonia-Nitrogen Nov 1 - Apr 30	15.8	XXX	XXX	19.5	XXX	39
Ammonia-Nitrogen May 1 - Oct 31	5.3	XXX	XXX	6.5	XXX	13
Total Phosphorus	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX

Comments: Water Quality Modeling suggests more stringent limits for Ammonia-Nitrogen (highlighted above). All other effluent limits from the current permit will be retained with the addition of E. coli.

Proposed Effluent Limitations and Monitoring Requirements

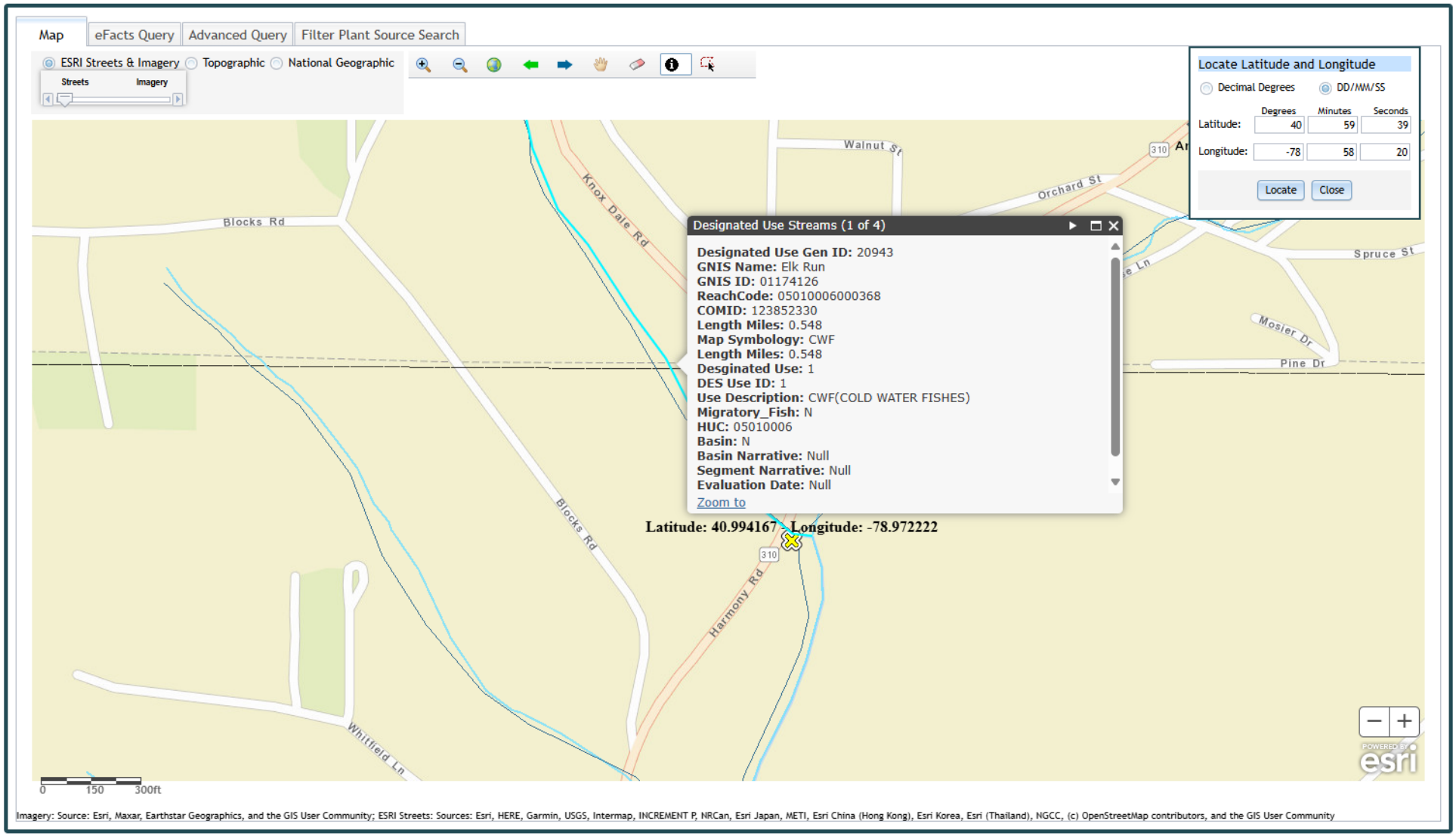
The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). 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	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 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Daily Min	XXX	XXX	XXX	1/day	Grab
CBOD5	14.5	21	XXX	18.0	27.0	36	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/month	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/month	Grab
TSS	24.0	36.0	XXX	30.0	45.0	60	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
UV Intensity (µw/cm²)	XXX	XXX	XXX	Report	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite
Ammonia Nov 1 - Apr 30	12.8	XXX	XXX	15.9	XXX	31.8	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	4.2	XXX	XXX	5.3	XXX	10.6	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite
E. coli	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab

Compliance Sampling Location: **Outfall 001 – after disinfection**

Attachment 1
eMapPA – Receiving Stream Location and Designation



Attachment 2
Google Earth – Aerial Site View

Attachment 3
USGS (StreamStats) – Discharge Point

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 3]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	4.37	square miles	2.33	1720
ELEV	Mean Basin Elevation	1637	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	0.523	ft^3/s	43	43
30 Day 2 Year Low Flow	0.763	ft^3/s	38	38
7 Day 10 Year Low Flow	0.235	ft^3/s	54	54
30 Day 10 Year Low Flow	0.327	ft^3/s	49	49
90 Day 10 Year Low Flow	0.48	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.

Attachment 4
USGS (StreamStats) – End Point

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 3]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	5.07	square miles	2.33	1720
ELEV	Mean Basin Elevation	1610	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	0.601	ft^3/s	43	43
30 Day 2 Year Low Flow	0.876	ft^3/s	38	38
7 Day 10 Year Low Flow	0.272	ft^3/s	54	54
30 Day 10 Year Low Flow	0.378	ft^3/s	49	49
90 Day 10 Year Low Flow	0.554	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.

Attachment 5
WQM 7.0 Modeling Results

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
17D	47783	ELK RUN	**3.630**	1338.00	4.37	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	0.054	0.00	0.23	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
McCalmont WWTP	PA0239160	0.0000	0.0970	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	4.00	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
17D	47783	ELK RUN	**2.800**	1302.00	5.07	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	0.054	0.00	0.27	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	0.00	7.00

Parameter Data

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

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
17D	47783	ELK RUN

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												
3.630	0.23	0.00	0.23	.1501	0.00821	.436	9.52	21.82	0.09	0.547	21.95	7.00
Q1-10 Flow												
3.630	0.15	0.00	0.15	.1501	0.00821	NA	NA	NA	0.08	0.628	22.50	7.00
Q30-10 Flow												
3.630	0.32	0.00	0.32	.1501	0.00821	NA	NA	NA	0.10	0.489	21.60	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	6		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
17D	47783	ELK RUN

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
3.630	McCalmont WWT	13.63	27.28	13.63	27.28	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
3.630	McCalmont WWT	1.7	5.33	1.7	5.33	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)		
3.63	McCalmont WWTP	25	25	5.33	5.33	4	4	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
17D	47783	ELK RUN

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
3.630	0.097	21.949	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
9.518	0.436	21.820	0.093
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
10.96	1.249	2.08	0.813
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.589	21.439	Owens	6
Reach Travel Time (days)			
0.547			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.055	10.17	1.99	7.21
0.109	9.44	1.90	7.46
0.164	8.76	1.82	7.59
0.219	8.13	1.74	7.69
0.273	7.55	1.66	7.76
0.328	7.00	1.59	7.83
0.383	6.50	1.52	7.90
0.438	6.03	1.45	7.95
0.492	5.60	1.39	7.95
0.547	5.19	1.33	7.95

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
17D	47783	ELK RUN

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)
3.630	McCalmont WWTP	PA0239160	0.000	CBOD5	25		
				NH3-N	5.33	10.66	
				Dissolved Oxygen			4

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment **5**)
☒	SOP: Establishing Effluent Limitations for Individual Sewage Permits
☒	SOP: New and Reissuance Individual Sewage NPDES Permits
☒	SOP: Establishing WQBELs and Permit Conditions for Toxic Pollutants in NPDES Permits
☒	Permit Writers' Manual