pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0272949**
Facility Type	**Municipal**	APS ID	**1015673**
Major / Minor	**Minor**	Authorization ID	**1313177**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Hamlin Township**	Facility Name	**Hamlin Township Kushequa STP**
Applicant Address	PO Box 235	Facility Address	Village of Kushequa
	Hazel Hurst, PA 16733-0235		Kane, PA 16735
Applicant Contact	Cheryl Putnam	Facility Contact	Beth Crowley
Applicant Phone	(814) 778-5855	Facility Phone	(814) 778-5855
Client ID	113802	Site ID	788638
Ch 94 Load Status	Not Overloaded (New)	Municipality	Hamlin Township
Connection Status	No Limitations (New)	County	McKean
Date Application Received	April 3, 2020	EPA Waived?	Yes
Date Application Accepted	May 11, 2020	If No, Reason	-

Purpose of Application: NPDES permit renewal for a discharge of treated sanitary wastewater from a new POTW.

Summary of Review

This is a NPDES renewal for a proposed minor Publicly Owned Treatment Works sewage discharge of 0.02 MGD located in Hamlin Township, McKean County. The treatment facility has not yet been constructed.

Act 14 – Proof of Notification was submitted and received.

There are no open violations for subject client ID (113802) as of 8/19/2021.

Treatment is proposed to consist of a package extended aeration sewage treatment plant with Ultraviolet (UV) light disinfection. The new STP will serve 33 EDUs, or 132 persons at 4 persons per EDU. The new discharge will flow from to the Kinzua Creek, which is a Cold Water Fishery that is attaining all its uses.

A Part II Water Quality Management permit will be required prior to any construction being started on this proposed STP.

Sludge use and disposal description and location(s): Septage must be pumped and hauled off-site by a septage hauler for land application under a general permit authorized by DEP or disposal at an STP.

The applicant should be able to meet the limits of this permit, which will protect the uses of the receiving stream.

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		Jon F. Bucha Jonathan F. Bucha / Civil Engineer General	August 20, 2021
X		Justin C. Dickey Justin C. Dickey, P.E. / Environmental Engineer Manager	September 2, 2021

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.02
Latitude	41º 44' 50.58"	Longitude	-78º 37' 23.94"
Quad Name	Hazel Hurst	Quad Code	0517
Wastewater Description:	Sewage Effluent		
Receiving Waters	Kinzua Creek (CWF)	Stream Code	56522
NHD Com ID	112375979	RMI	26.65
Drainage Area	23.6 mi^2	Yield (cfs/mi^2)	0.13 (Reference gage no. 03011800 on Kinzua Creek near Guffey PA)
Q_{7-10} Flow (cfs)	3.07	Q_{7-10} Basis	Calculated
Elevation (ft)	1717 (Google Earth)	Slope (ft/ft)	0.005
Watershed No.	16-B	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)	7.0	Default
Temperature (°F)	20 ºC	Default
Hardness (mg/L)	-	-
Other:	-	-

Nearest Downstream Public Water Supply Intake		Aqua Pennsylvania, Inc. - Emlenton	
PWS Waters	Allegheny River	Flow at Intake (cfs)	1,376
PWS RMI	90.0	Distance from Outfall (mi)	126.0

Changes Since Last Permit Issuance:

Drainage Area, elevations, and RMI's were slightly refined from the previous permit issuance due to using updated versions of Streamstats and Google Earth, which did not result in any changes to the effluent limitations.

E. Coli monitoring of 1/year, daily reporting of Ultraviolet Light Dosage, and average quarterly reporting for Total Nitrogen and Total Phosphorus were added per the SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits".

Other Comments: This treatment system should be capable of meeting effluent requirements.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .02
Latitude 41º 44' 50.58" **Longitude** -78º 37' 23.94"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Water Quality-Based Limitations

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

Parameter	Limit (mg/l)	SBC	Model
Dissolved Oxygen	4.0	Minimum	WQM 7.0
CBOD5	25.0	Average Monthly	WQM 7.0
Ammonia-Nitrogen (May 1 – Oct 31)	25.0	Average Monthly	WQM 7.0
Ammonia-Nitrogen (Nov 1 – April 30)	Report	Average Monthly	WQM7.0

Comments: Water quality modeling results did not result in more stringent limits than the minimum technology and BPJ standards. The summer limits for Ammonia-Nitrogen will be included in the NPDES permit with the winter months being monitor only as the SOP recommends for new discharges.

Best Professional Judgment (BPJ) Limitations

Comments: Total Nitrogen, Total Phosphorus, and E. Coli monitoring is based on Ch. 92a.61 and the Departments SOP for Establishing Effluent Limitations for Individual Sewage Permits (SOP No. BPNPSM-PMT-033). Total Nitrogen and Total Phosphorus monitoring frequency will remain at 1/quarter from the previous permit in order to collect data for the next permit renewal, since this treatment facility has not yet been constructed. E. Coli monitoring is a new addition to this permit renewal and will have a frequency of 1/year. Raw sewage influent monitoring will remain in the permit renewal as recommended by the SOP (No. BPNPSM-PMT-033) for parameters BOD_5 and Total Suspended Solids (TSS).

Daily monitoring of Ultraviolet Light Dosage (mJ/cm^2) is being incorporated into this permit renewal based on the type of disinfection used and the Departments SOP No. BPNPSM-PMT-033.

Anti-Backsliding

Anti-Backsliding considerations do not apply since the effluent limitations are all remaining the same as in the previous permit renewal.

Proposed Effluent Limitations and Monitoring Requirements

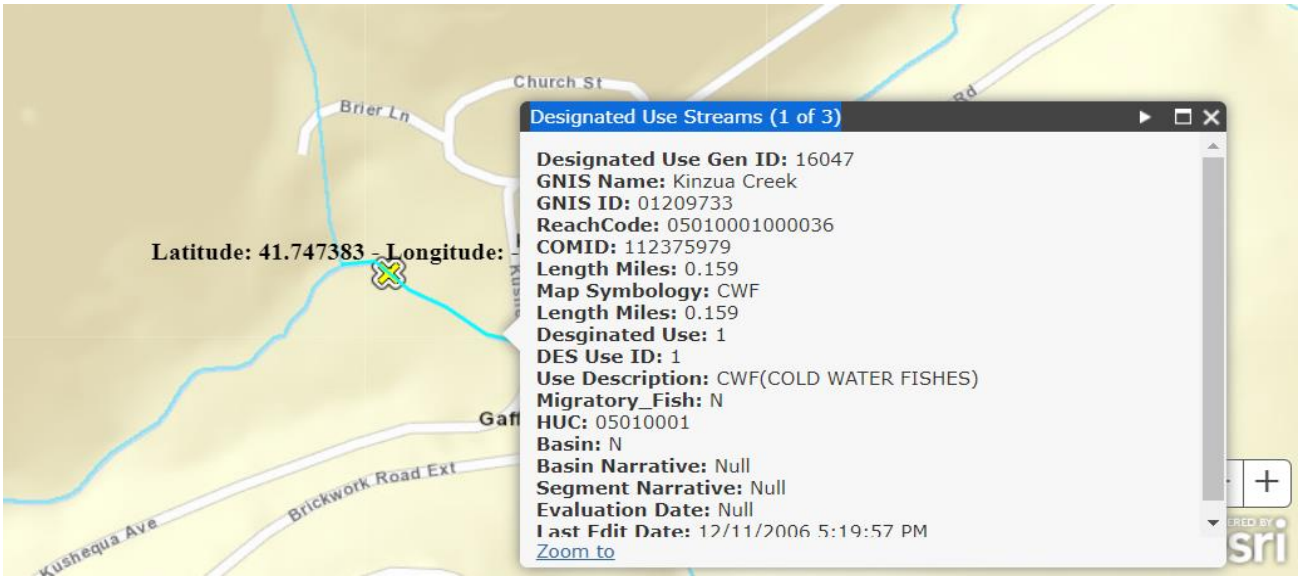
The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
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 Inst Min	XXX	XXX	XXX	1/day	Grab
CBOD5	4.1	XXX	XXX	25.0	XXX	50	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS	5.0	XXX	XXX	30.0	XXX	60	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ultraviolet Light Dosage (mJ/cm^2)	XXX	XXX	XXX	Report	XXX	XXX	1/day	measured
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Nitrogen	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	Grab
Ammonia Nov 1 - Apr 30	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	4.1	XXX	XXX	25.0	XXX	50	2/month	8-Hr Composite
Total Phosphorus	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	Grab

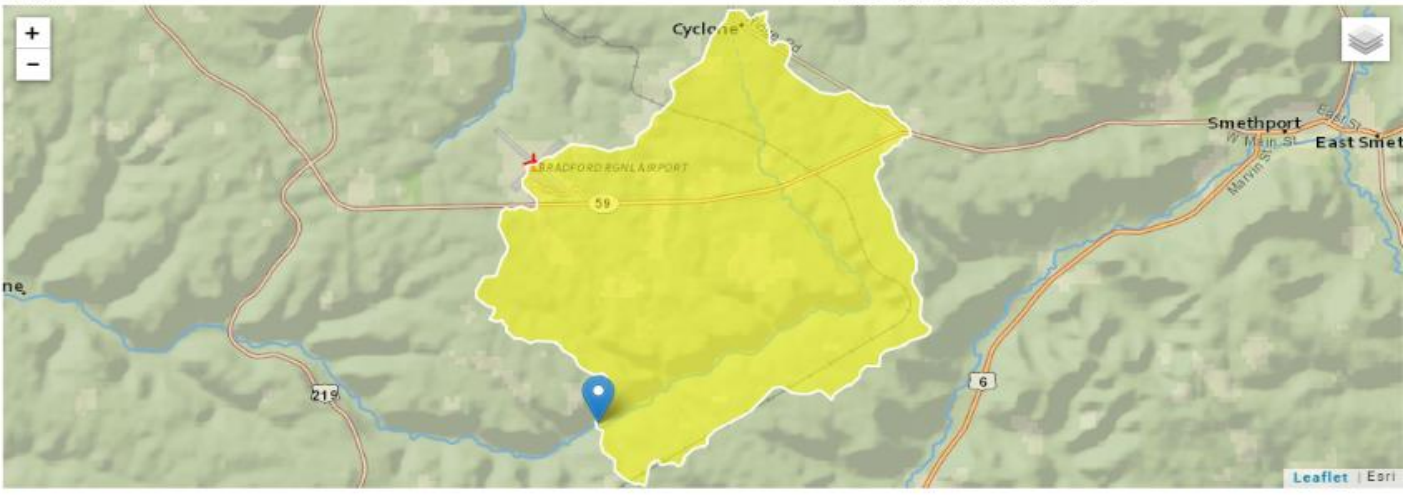
Compliance Sampling Location: Outfall 001 after Ultraviolet disinfection.

ATTACHMENT A
eMAP – Stream Designation



ATTACHMENT B
StreamStats REPORT – RMI 26.65 On Kinzua Creek

Region ID:	PA
Workspace ID:	PA20210818191613282000
Clicked Point (Latitude, Longitude):	41.74744, -78.62343
Time:	2021-08-18 15:16:38 -0400



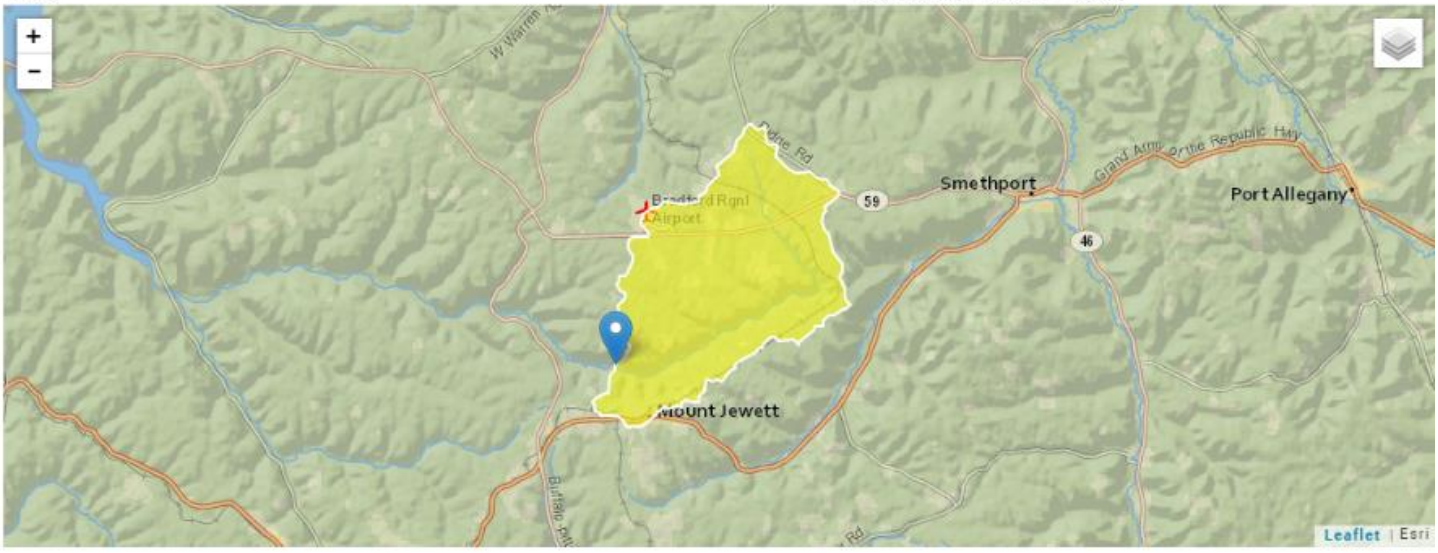
Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	23.6	square miles
ELEV	Mean Basin Elevation	2078	feet
PRECIP	Mean Annual Precipitation	45	inches

ATTACHMENT C

StreamStats REPORT – RMI 24.51 On Kinzua Creek

Region ID:	PA
Workspace ID:	PA20210818192430283000
Clicked Point (Latitude, Longitude):	41.74474, -78.65580
Time:	2021-08-18 15:24:51 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	28.7	square miles
ELEV	Mean Basin Elevation	2071	feet
PRECIP	Mean Annual Precipitation	45	inches

ATTACHMENT D
WQM 7.0 MODEL OUTPUT FILE

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
16B	56522	KINZUA 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)
26.650	Hamlin Twp Kush	PA0272949	0.000	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			4

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
16B	56522	KINZUA CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
26.650	0.020	20.000	7.003
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
25.364	0.618	41.020	0.198
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.23	0.110	0.25	0.700
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.201	9.471	Tsivoglou	6
Reach Travel Time (days)			
0.662			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.066	2.21	0.24	8.24
0.132	2.20	0.23	8.24
0.199	2.18	0.22	8.24
0.265	2.17	0.21	8.24
0.331	2.15	0.20	8.24
0.397	2.13	0.19	8.24
0.463	2.12	0.18	8.24
0.529	2.10	0.17	8.24
0.596	2.09	0.16	8.24
0.662	2.07	0.16	8.24

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
16B	56522	KINZUA CREEK	26.650	1717.00	23.60	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	0.130	0.00	0.00	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
Hamlin Twp Kush	PA0272949	0.0000	0.0000	0.0200	0.000	20.00	7.50

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	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
16B	56522	KINZUA CREEK	24.510	1660.00	28.70	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	0.130	0.00	0.00	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

SWP Basin	Stream Code	Stream Name
16B	56522	KINZUA 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												
26.650	3.07	0.00	3.07	.0309	0.00504	.618	25.36	41.02	0.20	0.662	20.00	7.00
Q1-10 Flow												
26.650	1.96	0.00	1.96	.0309	0.00504	NA	NA	NA	0.15	0.847	20.00	7.00
Q30-10 Flow												
26.650	4.17	0.00	4.17	.0309	0.00504	NA	NA	NA	0.23	0.558	20.00	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
16B	56522	KINZUA 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
26.650	Hamlin Twp Kush	9.64	50	9.64	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
26.650	Hamlin Twp Kush	1.91	25	1.91	25	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)		
26.65	Hamlin Twp Kush	25	25	25	25	4	4	0	0

ATTACHMENT E
USGS Drainage Area of Stream Gage No. 03011800

16 **Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania**

Table 1. List of U.S. Geological Survey streamgage locations in and near Pennsylvania with updated streamflow statistics.—Continued

[Latitude and Longitude in decimal degrees; mi², square miles]

Streamgage number	Streamgage name	Latitude	Longitude	Drainage area (mi²)	Regulated[1]
01614000	Back Creek near Jones Springs, W.Va.	39.512	-78.037	235	N
01614090	Conococheague Creek near Fayetteville, Pa.	39.930	-77.439	5.05	N
01614500	Conococheague Creek at Fairview, Md.	39.716	-77.825	494	N
01616500	Opequon Creek near Martinsburg, W.Va.	39.424	-77.939	273	N
01617000	Tuscarora Creek above Martinsburg, W.Va.	39.470	-77.971	11.3	N
01617800	Marsh Run at Grimes, Md.	39.515	-77.777	18.9	N
01618000	Potomac River at Shepherdstown, W.Va.	39.435	-77.801	5,939	N
01619000	Antietam Creek near Waynesboro, Pa.	39.716	-77.607	93.5	N
01619500	Antietam Creek near Sharpsburg, Md.	39.450	-77.730	281	LF
01637500	Catoctin Creek near Middletown, Md.	39.427	-77.556	66.9	N
01639000	Monocacy River at Bridgeport, Md.	39.679	-77.235	173	N
01639140	Piney Creek near Taneytown, Md.	39.661	-77.221	31.3	N
01639500	Big Pipe Creek at Bruceville, Md.	39.612	-77.237	102	N
01640500	Owens Creek at Lantz, Md.	39.677	-77.464	5.93	N
01640965	Hunting Creek near Foxville, Md.	39.620	-77.466	2.14	N
01640970	Hunting Creek Tributary near Foxville, Md.	39.628	-77.462	4.01	N
01641000	Hunting Creek at Jimtown, Md.	39.594	-77.397	18.4	LF
01641500	Fishing Creek near Lewistown, Md.	39.527	-77.467	7.29	N
01642500	Linganore Creek near Frederick, Md.	39.415	-77.333	82.3	LF
01643000	Monocacy River at Jug Bridge near Frederick, Md.	39.403	-77.366	817	N
01643500	Bennett Creek at Park Mills, Md.	39.294	-77.407	62.8	N
03007800	Allegheny River at Port Allegany, Pa.	41.819	-78.293	248	N
03008000	Newell Creek near Port Allegany, Pa.	41.895	-78.349	7.79	N
03009680	Potato Creek at Smethport, Pa.	41.810	-78.430	160	N
03010500	Allegheny River at Eldred, Pa.	41.963	-78.386	550	N
03010655	Oswayo Creek at Shinglehouse, Pa.	41.962	-78.198	98.7	N
03011020	Allegheny River at Salamanca, N.Y.	42.156	-78.715	1,608	N
03011800	Kinzua Creek near Guffey, Pa.	41.766	-78.719	38.8	N

ATTACHMENT F

USGS Q_{7-10} of Stream Gage No. 03011800

Table 2. Selected low-flow statistics for streamgage locations in and near Pennsylvania.—Continued

[ft³/s; cubic feet per second; —, statistic not computed; <, less than]

Streamgage number	Period of record used in analysis[1]	Number of years used in analysis	1-day, 10-year (ft³/s)	7-day, 10-year (ft³/s)	7-day, 2-year (ft³/s)	30-day, 10-year (ft³/s)	30-day, 2-year (ft³/s)	90-day, 10-year (ft³/s)
[5]01611500	1924–2008	83	37.2	39.3	56.4	45.6	65.6	56.0
[4]01613000	1934–2008	75	270	286	446	335	534	453
01613050	1967–2008	40	0	0	.1	<.1	.4	.2
[5]01614000	1930–2008	41	3.2	3.8	8.2	5.4	11.4	8.1
01614090	1962–1981	19	.2	.3	.8	.4	1.0	.7
[4]01614500	1930–2008	79	48.1	55.0	91.9	65.3	105	81.4
[5]01616500	1949–2008	60	34.4	36.7	54.4	41.0	61.9	48.7
01617000	1950–2008	24	.8	1.1	2.3	1.3	2.7	1.5
[4]01617800	1966–2008	43	.2	.5	3.0	.9	3.4	1.4
01618000	1930–2004	68	333	424	708	516	869	680
01619000	1950–2008	19	22.5	23.4	37.5	25.9	41.8	32.9
[4]01619500	1901–2008	82	57.9	65.2	93.1	72.4	103	82.5
[4]01637500	1949–2008	60	.6	.9	3.2	1.7	5.4	4.2
[4]01639000	1944–2008	65	.6	.8	4.7	2.9	8.2	6.6
[4]01639140	1992–2001	10	0	.1	.9	.3	1.5	.8
[4]01639500	1949–2008	60	—	7.1	23.9	10.4	26.6	17.2
[4]01640500	1933–1984	52	.1	.2	.6	.3	.8	.6
[4]01640965	1983–1994	12	<.1	<.1	.1	.1	.1	.1
[4]01640970	1983–1991	9	0.1	0.1	0.3	0.2	0.5	0.4
[4]01641000	[3]1951–1968	18	.9	1.1	1.9	1.5	2.5	1.9
[4]01641000	[2]1970–1991	22	2.1	2.4	3.6	3.2	4.6	4.2
[4]01641500	1949–1984	36	.8	.9	1.5	1.1	1.8	1.4
[4]01642500	[3]1933–1970	35	6.0	6.8	15.3	9.0	18.5	13.4
[4]01642500	[2]1972–1982	11	7.2	8.6	18.1	12.2	23.9	19.9
[4]01643000	1931–2008	78	45.1	49.2	105	63.9	128	93.1
[4]01643500	1950–2008	50	3.2	3.8	11.0	5.9	13.0	10.2
03007800	1976–2008	33	13.2	15.4	35.2	20.9	47.8	35.5
03008000	1968–1979	12	0	0	.2	<.1	.6	<.1
03009680	1976–1995	20	11.2	13.5	26.9	17.2	38.8	29.5
03010500	1941–2008	68	27.6	31.0	65.0	42.8	91.5	63.0
03010655	1976–2008	33	4.9	5.7	11.8	7.4	15.6	10.6
03011020	1905–2008	104	117	127	218	159	291	217
03011800	1967–2008	42	4.2	4.9	8.8	6.2	12.1	9.0