Pennsylvania Department of Environmental Protection

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0084697**
Facility Type	**Municipal**	APS ID	**278319**
Major / Minor	**Minor**	Authorization ID	**1487253**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Wiconisco Township**	Facility Name	**Wiconisco Village STP**
Applicant Address	PO Box 370 305 Walnut Street	Facility Address	PO Box 370
	Wiconisco, PA 17097-0370		Wiconisco, PA 17097-0370
Applicant Contact	John Coles	Facility Contact	Daniel Schell
Applicant Phone	(717) 453-7571	Facility Phone	(717) 453-7743
Client ID	83945	Site ID	246994
Ch 94 Load Status	Not Overloaded	Municipality	Wiconisco Township
Connection Status	No Limitations	County	Dauphin
Date Application Received	May 31, 2024	EPA Waived?	Yes
Date Application Accepted	June 5, 2024	If No, Reason	
Purpose of Application	NPDES permit renewal		

Summary of Review

1.0 General Discussion

This fact sheet supports the renewal of an existing NPDES permit for discharge of treated domestic wastewater from Wiconisco Village wastewater treatment plant located in Wiconisco Township, Dauphin County. Wiconisco Township Board of Supervisors owns and operates the wastewater treatment plant, which provides sanitary services to Wiconisco Township. The sewer collection system is not combined and there is no bypasses or overflows approved in the collection system. The lagoon waste treatment plant at the site has a hydraulic design capacity of 0.125 MGD and an organic design capacity of 260 lbs/day-BOD5. The discharge goes to Bear Creek, a tributary to Wiconisco Creek, which is classified for Cold Water Fishes (CWF). The existing NPDES permit was issued on November 26, 2019, with an effective date of December 1, 2019, and expiration date of November 30, 2024. The applicant submitted a timely NPDES permit renewal application to the Department and is currently operating under the terms and conditions in the existing permit under administrative extension provisions pending Department action on the renewal application. A topographic map showing the discharge location is presented in attachment A.

1.1 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

Approve	Deny	Signatures	Date
X		*J. Pascal Kwedza* J. Pascal Kwedza, P.E. / Environmental Engineer	April 18, 2025
X		*Maria D. Bebenek for* Daniel W. Martin, P.E. / Environmental Engineer Manager	April 30, 2025
X		*Maria D. Bebenek* Maria D. Bebenek, P.E. / Program Manager	April 30, 2025

Summary of Review
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.

1.3 Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.125
Latitude	40º 34' 18.85"	Longitude	-76º 41' 49.69"
Quad Name	Lykens	Quad Code	1432
Wastewater Description:	Sewage Effluent		

Receiving Waters	Bear Creek (CWF, MF)	Stream Code	17041
NHD Com ID	54972657	RMI	0.2
Drainage Area	4.69	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	0.19	Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	6-C	Chapter 93 Class.	CWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Acid Mine Drainage		
Source(s) of Impairment	Metals and Siltation		
TMDL Status	Final	Name	Bear Creek Watershed TMDL

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

Nearest Downstream Public Water Supply Intake	Veolia Water PA		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	50

Changes Since Last Permit Issuance: None

1.3.1 Water Supply Intake

The nearest downstream water supply intake is approximately 50 miles downstream for Veolia Water PA on Susquehanna River in Susquehanna Township, Dauphin County. No impact is expected from this discharge on the intake.

2.0 Treatment Facility Summary				
Treatment Facility Name: Wiconisco STP				
WQM Permit No.	**Issuance Date**			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Aerated Lagoon	Gas Chlorine	0.125
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.125	260	Not Overloaded		

Changes Since Last Permit Issuance: None

2.1 Treatment System

The treatment system consists of 2 influent pump stations (collection system), comminutor, distribution box, 2 aerated treatment lagoons, lagoon 1 has 3 aerators and 1 solar mixer and lagoon 2 has 3 aerators and 2 solar mixers. The lagoons are divided into 2 sections primary and secondary. Effluent from the 2 lagoons are decanted to the chlorine contact tank. and gas chlorinated at beginning of the chlorine contact tank. Bioaugmentation (micronutrient and Bacteria) is added to the lagoons during the summer to enhance treatment. Influent and effluent flow meters measure flow. The last time sludge was removed from the lagoons was in 2015. The operator indicated they are planning to get it done soon.

3.0 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	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.63	1/day	Grab
CBOD5	26	42	XXX	25	40	50	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	47	68	XXX	45	65	90	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-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
Nitrate-Nitrite	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/6 months	24-Hr Composite
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/6 months	Calculation
Ammonia	Report	XXX	XXX	Report	Report Daily Max	XXX	1/month	24-Hr Composite
TKN	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/6 months	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/6 months	24-Hr Composite
Total Aluminum	XXX	Report Daily Max	XXX	Report Daily Max	XXX	XXX	1/6 months	24-Hr Composite
Total Iron	XXX	Report Daily Max	XXX	Report Daily Max	XXX	XXX	1/6 months	24-Hr Composite
Total Manganese	XXX	Report Daily Max	XXX	Report Daily Max	XXX	XXX	1/6 months	24-Hr Composite

3.1 Compliance History

3.1.1 DMR Data for Outfall 001 (from March 1, 2024 to February 28, 2025)

Parameter	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24
Flow (MGD) Average Monthly	0.041	0.032	0.042	0.037	0.028	0.028	0.045	0.032	0.032	0.043	0.0575	0.054
Flow (MGD) Daily Maximum	0.06	0.045	0.082	0.084	0.042	0.063	0.132	0.083	0.058	0.082	0.14	0.103
pH (S.U.) Instantaneous Minimum	7.19	7.3	7.17	7.08	7.00	7.03	6.84	7.26	7.01	7.24	7.3	7.02
pH (S.U.) Instantaneous Maximum	7.52	7.64	7.63	7.47	7.32	7.57	7.58	7.71	7.63	7.45	7.61	7.49
DO (mg/L) Daily Minimum	9.53	7.88	7.94	6.57	6.01	5.49	5.11	5.11	5.12	5.59	5.63	6.62
TRC (mg/L) Average Monthly	0.5	0.39	0.5	0.4	0.5	0.4	0.2	0.3	0.32	0.5	0.4	0.34
TRC (mg/L) Instantaneous Maximum	1.00	1.00	0.70	1.20	0.80	1.10	1.10	0.70	1.00	1.20	1.00	1.10
CBOD5 (lbs/day) Average Monthly	5	4	4	2	1	1	1	1	1	2	3	3
CBOD5 (lbs/day) Weekly Average	6	11	6	3	2	2	1	1	2	3	5	4
CBOD5 (mg/L) Average Monthly	17	16	11	7	6	5	4	4	6	5	6	8
CBOD5 (mg/L) Weekly Average	19	33	15	9	8	6	7	6	7	10	10	10
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	96	102	92	79	73	66	57	57	62	85	77	84
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	120	157	112	88	87	83	75	68	85	126	88	90
BOD5 (mg/L) Raw Sewage Influent Average Monthly	271	266	308	281	287	257	210	227	223	260	180	242
TSS (lbs/day) Average Monthly	6	3	8	5	3	3	3	3	4	4	5	4
TSS (lbs/day) Raw Sewage Influent Average Monthly	38	36	39	31	24	32	23	32	35	49	63	63

TSS (lbs/day) Raw Sewage Influent Daily Maximum	61	73	50	35	30	50	27	43	58	97	90	145
TSS (lbs/day) Weekly Average	8	5	17	6	4	4	5	8	5	4	12	7
TSS (mg/L) Average Monthly	18	13	20	15	13	12	11	9	16	12	9	11
TSS (mg/L) Raw Sewage Influent Average Monthly	108	88	128	110	95	125	83	127	122	149	144	168
TSS (mg/L) Weekly Average	23	14	26	17	18	16	16	13	18	16	13	14
Fecal Coliform (No./100 ml) Geometric Mean	< 3	< 2	< 9	< 1	< 2	< 6	65	< 5	< 10	< 2	< 11	< 5
Fecal Coliform (No./100 ml) Instantaneous Maximum	27	11	2300	< 3	< 3	392	3000	224	8500	< 3	150	220
Nitrate-Nitrite (mg/L) Daily Maximum			3.25						2.60			
Total Nitrogen (mg/L) Daily Maximum			19.2						32			
Ammonia (lbs/day) Average Monthly	8	6	8	2	0.5	1	0.1	3	4	8	10	9
Ammonia (mg/L) Average Monthly	23.8	23.6	11.4	6.63	2.29	4.86	0.27	8.87	18.7	22.2	22.5	20.7
Ammonia (mg/L) Daily Maximum	23.8	23.6	11.4	6.63	2.29	4.86	0.27	8.87	18.7	22.2	22.5	20.7
TKN (mg/L) Daily Maximum			15.9						29.4			
Total Phosphorus (mg/L) Daily Maximum			6.60						5.69			
Total Aluminum (lbs/day) Daily Maximum			0.07						< 0.03			
Total Aluminum (mg/L) Daily Maximum			0.174						< 0.1			
Total Iron (lbs/day) Daily Maximum			< 0.04						0.04			
Total Iron (mg/L) Daily Maximum			< 0.1						0.142			
Total Manganese (lbs/day) Daily Maximum			0.008						0.006			
Total Manganese (mg/L) Daily Maximum			0.02						0.021			

3.1.2 Effluent Violations for Outfall 001, from: April 1, 2024 To: February 28, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	08/31/24	IMAX	3000	No./100 ml	1000	No./100 ml
Fecal Coliform	06/30/24	IMAX	8500	No./100 ml	1000	No./100 ml

3.1.3 Summary of DMRs:

DMRs review for the facility for the last 12 months of operation, presented on the table above in section 3.1.1 indicates permit limits have been met most of the time. Two Fecal Coliform violations occurred during the period presented in section 3.1.2, no reasons were given for these violations. The facility's compliance record is satisfactory.

3.1.4 Summary of Inspections:

The facility has been inspected during the past permit cycle. No violation noted during plant inspections.

4.0 Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .125
Latitude 40º 34' 18.85" **Longitude** -76º 41' 49.69"
Wastewater Description: Sewage Effluent

4.1 Basis for Effluent Limitations

In general, the Clean Water Act (CWA) requires that the effluent limits for a particular pollutant be the more stringent of either technology-based limits or water quality-based limits. Technology-based limits are set according to the level of treatment that is achievable using available technology. A water quality-based effluent limit is designed to ensure that the water quality standards applicable to a waterbody are being met and may be more stringent than technology-based effluent limits.

4.1.1 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: TSS limits on the table are not applicable to this permit. See report under TSS for details

4.2 Mass-Based Limits

The federal regulation at 40 CFR 122.45(f) requires that effluent limits be expressed in terms of mass, if possible. The regulation at 40 CFR 122.45(b) requires that effluent limitations for POTWs be calculated based on the design flow of the facility. The mass-based limits are expressed in pounds per day and are calculated as follows: Mass based limit (lb/day) = concentration limit (mg/L) × design flow (mgd) × 8.34

4.3 Water Quality-Based Limitations

4.3.1 Receiving Stream

The receiving stream is the Bear Creek. It has been assigned stream code 17041. According to the Department's Integrated Water Quality Monitoring and Assessment Report, this stream is impaired for aquatic life due to pH, siltation and metals from abandoned Acid Mine Drainage (AMD). Bear Creek is affected by AMD and has no apparent aquatic community in the area of the discharge. The creek does not recover, and the point of first aquatic use is at the confluence with Wiconisco Creek. A TMDL for the effects of AMD was completed and approved for Bear Creek watershed on April 9, 2001 and is discussed further in this report under the 303d listed stream section. Since Bear Creek is listed as an AMD impacted stream, the effluent limits in this renewal were evaluated based upon PA Code 25 Chapter 95.5 "Treatment requirements for discharges to waters affected by acid mine drainage"

4.3.2 Streamflow:

Streamflows for the water quality analysis were determined by correlating with the yield of USGS gauging station No. 0155500 on Mahantango. The Q_{7-10} and drainage area at the gage are 6.38ft^3/s and 164 mi^2 respectively. The resulting yields are as follows:

Q_{7-10} = 6.38 cfs /164 sq. mi = 0.04cfs/sq.mi
Q_{30-10} /Q_{7-10} = 1.47
Q_{1-10} /Q_{7-10} = 0.74

The drainage area at the point of discharge taken from previous protection report = 4.69 sq. mi.
The design flow is calculated as: Q_{7-10} = 0.04cfs x 4.69 sq. mi = 0.19cfs

4.3.3 NH_3N Calculations

NH_3N calculations will be based on the Department's Implementation Guidance of Section 93.7 Ammonia Criteria, dated 11/4/97 (ID No. 391-2000-013). The following data is necessary to determine the instream NH_3N criteria used in the attached computer model of the stream:

- STP pH = 7.0 (DMR median July – Sept.)
- STP Temperature = 25 ^{o} C (default)
- Stream pH = 7.0 (Default)
- Stream Temperature = 20 ^{o}C (Default)
- Background NH_3-N = 0.0 (default)

4.3.4 $CBOD_5$ & NH_3-N

Bear Creek is affected by AMD. PA Code 25 Chapter 95.5 states that only secondary treatment is required until the AMD problem is rectified. Therefore, for the Wiconisco Township's discharge with an annual average flow of 0.125 MGD, a monthly average limit of 25 mg/l is adequate to protect the water quality of the stream. A monthly monitoring of ammonia nitrogen will be required in the permit to collect data. This limit is consistent with the existing secondary treatment requirement in the permit. DMRs and inspection reports show that the STP has been complying with the limit. Therefore, a limit of 25mg/l monthly average with 40mg/l weekly average and 50 mg/l instantaneous maximum for CBOD5 and monitoring of ammonia nitrogen will be applied for this current permit cycle.

4.3.5 Dissolved Oxygen

The existing permit contains a limit of 5 mg/l for Dissolved Oxygen (DO). DEP's Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001, 10/97) suggests that either the adopted minimum stream D.O. criteria for the receiving stream or the effluent level determined through water quality modeling be used for the limit. No modelling was done for this discharge. The existing minimum D.O of 5mg/l will remain in the permit.

4.3.6 Total Suspended Solids (TSS)

In 1996, the facility was granted equivalent to secondary treatment limits for TSS as allowed under 40 CFR 133.105 and this limit has been retained in subsequent permit renewals. *Certain facilities are eligible for treatment equivalent to secondary treatment standards* if they meet eligibility criteria below:

(1) The BOD5 and SS effluent concentrations consistently achievable through proper operation and maintenance (§ 133.101(f)) of the treatment works exceed the minimum level of the effluent quality set forth in §§ 133.102(a) and 133.102(b),

(2) A trickling filter or waste stabilization pond is used as the principal process, and

(3) The treatment works provide significant biological treatment of municipal wastewater.

The facility utilizes waste stabilization pond for treatment of municipal wastewater and is unable to meet secondary treatment standards for TSS consistently with proper operation and maintenance of the facility. A review of the 15-month DMR data

show violations of the equivalent standards on few occasions. The facility is implementing a bioaugmentation program to enhanced settling and control algae. The facility is unable to meet secondary treatment standards for TSS and there is no apparent water quality impact from the discharge of the equivalent to secondary standard limits. Therefore, it is recommended to continue the equivalent to secondary limits in the existing permit (45 mg/l AML, 65mg/l AWL and 90mg/l IMAX) for the current renewal. The facility is meeting secondary treatment standard for CBOD5 in the permit. (25mg/l AML, 40 mg/l AWL and 50mg/l IMAX)

4.3.7 Total Residual Chlorine (TRC)

The Department's 2003 Implementation Guidance for Residual Chlorine (TRC) (ID # 391-2000-015) are used for developing chlorine limitations. The Guidance references Chapter 92a, Section 92a.48 (b) which establishes a standard BAT limit of 0.5 mg/l unless a facility-specific BAT has been developed. Due to the AMD impact to the stream, a technology limit of 0.5 mg/l and 1.63 mg/l IMAX would be required in the permit. The recommended limit is consistent with existing permit and the facility is meeting this limit consistently. Therefore, 0.5 mg/l on an average and 1.63 mg/l maximum is again recommended for the current permit renewal.

4.3.8 Chesapeake Bay Strategy:

The Department formulated 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). Sewage discharges have been prioritized based on their delivered TN and TP loadings to the Bay. The highest priority (Phases 1, 2, and 3) dischargers received annual loading caps 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 if approved by DEP. Phase 4 (0.2 - 0.4mgd) and Phase 5(below 0.2mdg) are required to monitor and report TN series and TP during permit renewal. Any facility in Phases 4 and 5 that undergoes expansion is subjected to cap load right away. This facility is, classified as a phase 5, and has been monitoring and will continue monitoring Nitrate-Nitrite as N, Total Kjeldahl Nitrogen, Total Nitrogen and Total Phosphorus semi-annually throughout the next permit cycle to collect data

4.3.9 Toxics

Due to AMD impact to the stream, a reasonable potential (RP) analysis was not done for pollutants submitted with the application. The metals addressed by the AMD TMDL will be monitored in the permit. See 303d listed stream section of this report for details.

4.3.10 Fecal Coliform and E. Coli

The existing Fecal Coliform limit is consistent with the technology limits recommended in 92a.47(a)(4) and (a)(5) and will remain in the permit. In March of 2021, EPA approved DEP's Triennial Review of Water Quality Standards, which included a new swimming season criterion for E. coli. As a result, DEP is including monitoring requirements for E. Coli in new and renewed sewage permits above 2000gpd. Monitoring frequency is based on annual average flow as follows: 1/month for design flows >= 1 MGD, 1/quarter for design flows >= 0.05 and < 1 MGD and 1/year for design flows of 0.002 and < 0.05 MGD. Your discharge of 0.125 MGD requires 1/quarter monitoring as included in the permit.

4.3.11 Influent BOD and TSS Monitoring

The permit will include influent BOD5 and TSS monitoring at the same frequency as is done for effluent in order to implement Chapter 94.12 and assess percent removal requirements.

4.3.12 Industrial Users

This Wastewater Treatment Plant does not receive wastewater from any significant industrial users.

4.3.13 Pretreatment Requirements

The design annual average flow of the treatment plant is .125MGD and the facility receives no flow from significant Industrial users. EPA does not require development of pretreatment program for facilities with design flow less than 5MGD. However, the permit contains standard conditions requiring the permittee to monitor and control industrial users if applicable.

5.0 Other Requirements

5.1 Anti-backsliding

Not applicable to this permit

5.2 Stormwater:

No storm water outfall is associated with this facility

5.3 Special Permit Conditions

The permit will contain the following special conditions:

1. Stormwater Prohibition. 2. Approval Contingencies, 3. Management of collected screenings, slurries, sludges and other solids 4. Restrictions on flow acceptance under certain conditions. 5. Chlorine minimization

5.4 Anti-Degradation (93.4)

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.

5.5 Class A Wild Trout Fisheries

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

5.6 303d Listed Streams

The discharge is located on a 303d listed stream segment as impacted by Acid Mine Drainage (AMD). A TMDL was developed and approved for Bear Creek Watershed which set allowable loadings for iron, manganese, aluminum and acidity in Bear Creek watershed. The TMDL does not allocate wasteload to point sources, only non-point sources were addressed. AMD type of impairment can only be mitigated under a mine drainage program therefore, no sewage treatment plants were included in the TMDL. This discharge does not appear to contribute to the impairment due to the non-significant metal discharges from the facility. The existing semi-annual monitoring of Total Aluminum, Total Iron and Total Manganese will continue in the permit to ensure to collect data for future analysis.

5.8 Basis for Effluent and Surface Water Monitoring

Section 308 of the CWA and federal regulation 40 CFR 122.44(i) require monitoring in permits to determine compliance with effluent limitations. Monitoring may also be required to gather effluent and surface water data to determine if additional effluent limitations are required and/or to monitor effluent impacts on receiving water quality. The permittee is responsible for conducting the monitoring and for reporting results on Discharge Monitoring Reports (DMRs).

5.9 Effluent Monitoring

Monitoring frequencies are based on the nature and effect of the pollutant, as well as a determination of the minimum sampling necessary to adequately monitor the facility's performance. Permittees have the option of taking more frequent samples than are required under the permit. These samples can be used for averaging if they are conducted using EPA-approved test methods (generally found in 40 CFR 136) and if the Method Detection Limits are less than the effluent limits. The sampling location must be after the last treatment unit and prior to discharge to the receiving water. If no discharge occurs during the reporting period, "no discharge" shall be reported on the DMR.

6.0 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	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.63	1/day	Grab
CBOD5	26	42	XXX	25	40	50	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	47	68	XXX	45	65	90	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-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
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
Nitrate-Nitrite	XXX	XXX	XXX	XXX	XXX	Report Daily Max	1/6 months	24-Hr Composite
Total Nitrogen	XXX	XXX	XXX	XXX	XXX	Report Daily Max	1/6 months	Calculation

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Ammonia	Report	XXX	XXX	Report	Report Daily Max	XXX	1/month	24-Hr Composite
TKN	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/6 months	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/6 months	24-Hr Composite
Total Aluminum	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/6 months	24-Hr Composite
Total Iron	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/6 months	24-Hr Composite
Total Manganese	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/6 months	24-Hr Composite

Compliance Sampling Location: At Outfall 001

7.0 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:

Attachments

A. Topographical Map