pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0088439**
Facility Type	**Non-Municipal**	APS ID	**966382**
Major / Minor	**Minor**	Authorization ID	**1225549**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**RET Developers, LLC**	Facility Name	**School House Village**
Applicant Address	347 Valley View Drive	Facility Address	Kennys Lane
	McConnellsburg, PA 17233		Harrisonville, PA 17228
Applicant Contact	Robert J Will	Facility Contact	Robert J Will
Applicant Phone	(724) 708-9456	Facility Phone	(724) 708-9456
Client ID	342513	Site ID	532866
Ch 94 Load Status	Not Overloaded	Municipality	Licking Creek Township
Connection Status	No Limitations	County	Fulton
Date Application Received	August 8, 2016	EPA Waived?	Yes
Date Application Accepted	September 19, 2016	If No, Reason	
Purpose of Application	NPDES permit renewal and transfer.		

Summary of Review

School House Village Wastewater Division had applied to the Pennsylvania Department of Environmental Protection (DEP or Department) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit for School House Village STP. This permit renewal application was received on August 8, 2016. The permit was last reissued on September 22, 2011, authorizing discharge of treated sewage from the existing treatment plant located in Licking Creek Township, Fulton County into Sindeldecker Branch in watershed 13-B. The permit was expired on September 30, 2016. The terms and conditions of the permit was administratively extended since the renewal application was not received at least 180 days prior to permit expiration date and no prior permission was secured to submit on a later date, per 25 Pa Code § 92a.7. Renewal NPDES permit applications under Clean Water program are not covered by DEP's PDG per 021-2100-001. On April 23, 2018, a permit transfer application was received to transfer the permit to RET Developers, LLC.

This fact sheet is prepared per 40 CFR 124.56

Changes in this renewal: Unit of Fecal Coliform will be changed from CFU/100 ml to No/100 ml. Quarterly monitoring requirement for TN species and TP will be added. NH_3-N limits with schedule will be added

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
√		Reza H. Chowdhury, E.I.T. / Environmental Engineering Specialist	May 7, 2018
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Clean Water Program Manager	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.01
Latitude	39º 59' 44.55"	Longitude	-78º 5' 43.59"
Quad Name	Meadow Grounds	Quad Code	1921
Wastewater Description:	Sewage Effluent		
Receiving Waters	Sindeldecker Branch	Stream Code	60751
NHD Com ID	49478724	RMI	3.26
Drainage Area	4.18 mi^2	Yield (cfs/mi^2)	0.018
Q_{7-10} Flow (cfs)	0.075	Q_{7-10} Basis	Please see below
Elevation (ft)	905.21	Slope (ft/ft)	
Watershed No.	13-B	Chapter 93 Class.	CWF, MF
Existing Use	**None**	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	N/A
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	**None proposed**	Name	**N/A**

Background/Ambient Data		Data Source
pH (SU)	7.0	Default per 391-2000-013
Temperature (°C)	20	Default per 391-2000-013
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake		Hagerstown, MD	
PWS Waters	Potomac River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	>75 miles

Changes Since Last Permit Issuance: Permit will be transferred to new owner

Other Comments: USGS' web based watershed delineation tool StreamStats V4 was utilized on May 2, 2018 to determine the drainage area and low flow statistics of the receiving stream at discharge point. The drainage area at the discharge point was found to be 4.18 mi^2 which is very close to previous fact sheet value of 4.3 mi^2. The Q_{7-10} was found to be 0.0768 cfs which is different than previous fact sheet value of 0.172 cfs. The reason is the previous fact sheet derived the yield from USGS Streamgage number 01613500, located in Sylvan, PA on Licking Creek and resulted a yield of 0.0.04 cfs/mi^2. This yield was then multiplied with the drainage area at the discharge point to calculate the Q_{7-10} value. That approach was acceptable in absence of site specific data. However, the distance from the discharge point to the streamgage is approximately 38 miles and the updated version of USGS StreamStats can now provide the Q_{7-10} value at the discharge point, the StreamStats data deemed to be more reasonable to use. The StreamStats uses regression analysis to calculate the Q_{7-10} which is valid only if the drainage area is within the range of 4.93 mi^2 to 1280 mi^2. Therefore, a secondary node was chosen at the confluence with Sindeldecker Branch and Sipes Branch at 0.0 RMI. The drainage area at this point is 5.4 mi^2 and Q_{7-10} value is 0.0948 cfs resulting a yield of 0.018 cfs/mi^2. This yield was utilized to calculate the corresponding low flow values as following:

$$\text{Yield} = 0.0948 \text{ cfs}/5.4 \text{ mi}^2 = 0.018 \text{ cfs/mi}^2$$
$$Q_{7-10} = 0.018 \text{ cfs/mi}^2 * 4.18 \text{ mi}^2 = 0.075 \text{ cfs}$$
$$Q_{30-10}: Q_{7-10} = 0.146/0.0948 = 1.54$$

The default ratio of Q_{1-10}: Q_{7-10} is 0.64 per 391-2000-007.

These values will be used in WQM modeling, if needed.

PWS Intake:
The nearest downstream public water supply is at Hagerstown, MD on Potomac River. It is approximately 75 miles downstream of the discharge. Due to the distance, dilution, and effluent limits the discharge is not expected to impact the water supply.

Wastewater Characteristics:
The median pH value of 7.7 S.U. was calculated from daily DMR during the period July-September 2016-2017 and a default temperature of 20^0C (1) will be used for modeling.

Background data:
There is no WQN stations near the discharge point. In absence of WQN station, default stream temperature of 20°C (1) and default pH of 7.0 (2) will be used to determine WQBELs, if needed.

2014 Integrated Report (IR)/303d Listed Streams:
The discharge from this facility is to Sindeldecker Branch which is not listed in 2014 Integrated Report (IR), formerly known as 303d listing.

Antidegradation (93.4):
The 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. No High-Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

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

Treatment Facility Summary

Treatment Facility Name: School House Village

WQM Permit No.	Issuance Date
2900401	Oct'25 2000
2900401 T-1	Mar'20 2008

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	Chlorine w/dechlorination	0.01

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.01		Not overloaded	Aerobic digestion	Other WWTP

Changes Since Last Permit Issuance: None

(1) Implementation Guidance of Section 93.7 Ammonia Criteria (391-2000-013) November 4, 1997 page 15
(2) Technical Reference Guide WQM 7.0 for Windows Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen V 1.0 (391-2000-007), June 26, 2004

Other Comments:
School House Village STP is a 0.01 MGD Minor Sewer Facility (MISF1) located in Licking Creek Township, Fulton County which discharges treated sewage through a closed conduit into Sindeldecker Branch in watershed 13-B. The WWTP serves a residential community and a picnic area. The original permit was issued to Beth M. Hess in 2000 and transferred to Mr. Lee Mummau in 2008. This renewal will also address a transfer of NPDES and WQM permits from Mr. Lee Mummau to RET Developers, LLC.

The average annual flow and hydraulic design capacity is 0.01 MGD. The NPDES permit application indicated the flows for the years 2013, 2014, and 2015 are 0.00143 MGD, 0.00384 MGD, and 0.00129 MGD with highest flow in 2015 was 0.00244 MGD in June. DEP's inspection report dated December 28, 2017 indicated the WWTP receives flows from only 6 homes that are currently connected and in general the flows are very low. Flow is sent manually to the treatment plant in batches from the EQ tank when the level is high enough in the EQ tank. Flow is automatic in case of high flow.

Per DEP's recent visit to the site on December 28, 2017, the treatment facility consists of the following units:

- One bar screen
- One equalization tank
- Two aeration tanks
- One clarifier
- One chlorine contact tank
- One dechlorination tank
- One post aeration tank
- One sludge holding tank
- Two blowers

The treatment plant was approved and designed for 22 single family residential units and a common picnic area, total of 25 EDUs, but the complete built-out never happened. Plant uses chlorine and dechlor tablets, and soda ash as needed.

Industrial/Commercial Users:
There are no industrial/commercial users contributing to this treatment plant.

Biosolids Management:
Liquid biosolids are hauled off site by County Septic.

Compliance History	
Summary of DMRs:	Please see at page 5
Summary of Inspections:	**12/28/17:** CEI conducted. No violation noted. Treatment plant appeared to be operating properly, effluent clear, field tests were within permit limits **12/23/16:** CEI conducted. No violation noted. Treatment plant appeared to be operating properly, effluent clear, field tests were within permit limits **12/18/15:** CEI conducted. No violation noted. Treatment plant appeared to be operating properly, effluent clear, field tests were within permit limits. Recommended to keep copies of sludge disposal receipts with other plant records **11/19/14:** CEI conducted. No violation noted. Couldn't identify the outfall location. **6/5/14:** CEI conducted. No violation noted. **5/13/13:** CEI conducted. No violations noted from lab results **5/12/12:** CEI conducted. No violation noted. Plant is operating properly

Other Comments: No violations noted from site inspections

Site Inspection Lab Test Results							
Parameters	**Date**						
	12/28/17	**12/23/16**	**12/18/15**	**11/19/14**	**6/5/14**	**5/13/13**	**5/12/12**
Flow (MGD)	0.0001	0.001				0.0006	0.0015
pH (SU)	7.88	6.8	7.64	7.47	7.85	7.41	7.27
DO (mg/l)	13.05	11.93	11.1	10.25	9.98	5.08	5.04
TRC (mg/l)	0.01	0.06	0.04	0.03			0.03
Temp (ºC)	4.2	6.8	9.4		18.3	14.2	15.8
Nitrite-N (mg/l)						0.33	1.16
Nitrate-N (mg/l)						12.57	24.5
NH3-N (mg/l)						18.44	16.18
TKN (mg/l)						19.16	20.65
CBOD5 (mg/l)						8.6	12.3
Alkalinity (mg/l)						179	93.8
TSS (mg/l)						6	7
TP (mg/l)						4.39	6.944
Fecal Coliform (#/100 ml)							140

Other comments: No violation noted from site inspection sample results.

Existing Effluent Limitations and Monitoring Requirements

The table below summarizes effluent limitations and monitoring requirements specified in the existing final NPDES permit for the period October 1, 2011 to September 30, 2016.

Parameter	**Effluent Limitations**						**Monitoring Requirements**	
	Mass Units (lbs/day)		**Concentrations (mg/L)**				**Minimum Measurement Frequency**	**Required Sample Type**
	Average Monthly	**Daily Maximum**	**Minimum**	**Average Monthly**	**Maximum**	**Instant. Maximum**		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	1.6	XXX	1/day	Grab
TSS	XXX	XXX	XXX	30	XXX	60	2/month	8-hr comp
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	8-hr comp
Fecal Coliform (CFU/100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab

Compliance History

DMR Data for Outfall 001 (from January 1, 2017 to December 31, 2017)

Parameter	Dec'17	Nov'17	Oct'17	Sep'17	Aug'17	Jul'17	Jun'17	May'17	Apr'17	Mar'17	Feb'17	Jan'17
Flow (MGD) Average Monthly	0.00125	0.00077	0.00123	0.00068	0.00117			0.002283	0.0011	0.00131	0.00101	0.001873
Flow (MGD) Daily Maximum	0.00355	0.00245	0.00266	0.00137	0.00244			0.00458	0.00314	0.00291	0.00222	0.00437
pH (S.U.) Minimum	7.2	7.1	7.4	7.3	7.5			6.6	7.1	7.2	7.1	7.2
pH (S.U.) Maximum	8.2	8.2	8.6	8.1	8.1			7.8	7.7	7.9	7.8	7.7
DO (mg/L) Minimum	7.1	5.6	5.1	5.1	5.2			5.4	5.3	5.2	5.5	5.5
TRC (mg/l) average monthly	0.06	0.13	0.16	0.22	0.17			0.13	0.1	0.09	0.06	0.08
TRC (mg/l) IMAX	0.15	0.45	0.39	0.39	0.28			0.22	0.24	0.12	0.11	0.13
CBOD5 (mg/L) Average Monthly	2	2	2.4	2	12			3	2.4	3	4	3
TSS (mg/L) Average Monthly	1	2	1.3	2	3			4	2.5	2	3	1
Fecal Coliform (CFU/100 ml) Geometric Mean	12	8	159	39	49			142	9	1	2	5
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	36	60	560	120	370			225	80	1	6	22

Other comments: No DMR violation noted for the DMR evaluation period of January – December 2017.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.01
Latitude 39º 59' 44.55" **Longitude** -78º 5' 43.59"
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

WQM 7.0:
The following data were used in the attached computer model (WQM 7.0) of the stream:

- Discharge pH 7.7 (median July- Sep, 2016-2017, DMR data)
- Discharge Temperature 20°C (Default per 391-2000-013)
- Stream pH 7.0 (391-2000-007)
- Stream Temperature 20°C (Default per 391-2000-013)

The following three nodes were used in modeling:

Node 1: Outfall 001 at Sindeldecker Branch (60751)
Elevation: 905.21 ft. (USGS National Map Advanced viewer, accessed 5/2/2018)
Drainage Area: 4.18 mi^2 (USGS StreamStats Version 4.1.8, 5/2/2018)
River Mile Index: 3.26 (PA DEP eMapPA)
Low Flow Yield: 0.018 cfs/mi^2 (calculated)
Discharge Flow: 0.01 MGD

Node 2: At the confluence with Sipes Branch (60753)
Elevation: 804.53 ft (USGS National Map Advanced viewer, accessed 5/2/2018)
Drainage Area: 5.4 mi^2 (StreamStat Version 4.1.8, 5/2/2018)
River Mile Index: 0.0 (PA DEP eMapPA)
Low Flow Yield: 0.018 cfs/mi^2
Discharge Flow: 0.00 MGD

Ammonia (NH_3-N), Carbonaceous Biochemical Oxygen Demand (CBOD5), & Dissolved Oxygen (DO):
WQM 7.0 version 1.0b is a water quality model designed to assist DEP to determine appropriate effluent limits for $CBOD_5$, NH_3-N and DO. The model simulates two basic processes. In the NH_3-N module, the model simulates the mixing and degradation of NH_3-N in the stream and compares calculated instream NH_3-N concentrations to NH_3-N water

quality criteria. In the D.O. module, the model simulates the mixing and consumption of D.O. in the stream due to the degradation of $CBOD_5$ and NH_3N and compares calculated instream D.O. concentrations to D.O. water quality criteria. The model is utilized for this permit renewal by using current Q_{7-10} and background water quality levels of the stream.

NH_3-N:
WQM 7.0 suggested NH_3-N limit of 15.87 mg/l as monthly average and 31.74 mg/l as instantaneous maximum limit for flow 0.01 MGD during summer to protect water quality standards. The existing permit doesn't have NH_3-N limits. Per DEP's Standard Operating Procedure titled "Establishing Effluent Limitations for Individual Sewage Permits" (document ID BPNPSM-PMT-033, revised August 23, 2013), NH_3-N limits are necessary to protect the aquatic life from toxicity effects. As no effluent data available to check the plant's performance regarding ammonia removal other than two site inspection data which resulted in an average of 17.31 mg/l and per the discussion with the plant operator Mr. John Mixell on May 7, 2018, a schedule of not more than 3 years seems necessary. Therefore, a schedule of 3 years from the permit effective date will be placed in the permit. Monitoring and reporting only requirement will be placed during the winter season. Monitoring and reporting requirement will be placed in the interim period. Final summer limit is rounded down to 15.0 mg/l per 362-0400-001. Minimum monitoring frequency will be 2/month and sampling type will be 8-hr composite.

$CBOD_5$:
The attached WQM 7.0 modeling results show that secondary treatment is adequate to protect the water quality of the stream. The WQM 7.0 model suggests a monthly average $CBOD_5$ limit may be 25 mg/l which is the same as in existing permit. The minimum monitoring frequency will remain the same as 2/month.

Dissolved Oxygen (DO):
A minimum of 5.0 mg/L for D.O. is an existing effluent limit and will remain unchanged in the draft permit as recommended by DEP's SOP. 5.0 mg/L is taken directly from 25 Pa. Code § 93.7(a) (i.e., water quality criteria) and it is also determined to be appropriate per water quality modeling.

Toxics:
There is no toxicity concern from this facility. Minor facilities are not required to report toxics if there is no industrial or commercial contribution per DEP's application form 3800-PM-BCW0342b revised 10/2017.

Best Professional Judgment (BPJ) Limitations

Total Phosphorus:
The receiving stream is in Potomac river basin, which is outside of Lower Susquehanna River Basin. Therefore, per DEP guidance (1), no local phosphorus limits will be applied to this facility at this time.

Additional Considerations

Total Suspended Solids (TSS):
There is no water quality criterion for TSS. The existing limits of 30 mg/L average monthly and 60 mg/L instantaneous maximum will remain in the permit based on the minimum level of effluent quality attainable by secondary treatment, 25 Pa. Code § 92a.47 and 40CFR 133.102(b.) The minimum monitoring frequency will remain the same as 2/month.

pH:
The effluent discharge pH should remain above 6 and below 9 standard units per 25 Pa. Code § 95.2(1) which is consistent with previous permit renewal.

Fecal Coliform:
The recent coliform guidance in 25 Pa. code § 92a.47.(a)(4) requires a summer technology limit of 200/100 ml as a geometric mean and an instantaneous maximum not greater than 1,000/100ml and § 92a.47.(a)(5) requires a winter limit of 2,000/100ml as a geometric mean and an instantaneous maximum not greater than 10,000/100ml. This requirement is consistent with the existing permit limit and will be carried over in this renewal. It is noteworthy that the unit for fecal coliform is changed from "CFU/100 ml" to "No/100 ml" to reflect current central office directive. Since the permittee will be using eDMR and eDMR may not be updated yet to report the new unit, the permittee may report as CFU/100 ml with a note that they are using the Colilert test and the results are in MPU/100 ml.

(1) Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams (391-2000-018)

Total Residual Chlorine (TRC):
The attached computer printout utilizes the equation and calculations as presented in the Department's 2003 Implementation Guidance for Total Residual Chlorine (TRC) (ID#391-2000-015) for developing chlorine limitations. The attached printout indicates that a water quality limit of 0.5 mg/l would be needed to prevent toxicity concerns at the receiving stream. The Instantaneous Maximum (IMAX) limit is 1.6 mg/l. These limits are the same as in existing permit and will be carried over. The minimum monitoring frequency is 1/day.

Monitoring Frequency and Sample Types:
Otherwise specified above, the monitoring frequency and sample type of compliance monitoring for existing parameters are recommended by DEP's SOP and Permit Writers Manual and/or on a case-by-case basis using best professional judgment (BPJ).

Chesapeake Bay Strategy:
Most of the Chesapeake Bay and many of its tidal tributaries have been listed as impaired under Section 303(d) of the federal Water Pollution Control Act ("Clean Water Act"), 33 U.S.C. § 1313(d). For example, Maryland's portion of the Bay was listed in 1996 and 1998.

In 2000, Pennsylvania, EPA and other states (and Washington D.C.) entered into a cooperative agreement on a strategy for restoring the Bay's water quality by 2010. They have been working very closely to implement that strategy since then.

A key element of the strategy was the need to focus on water quality criteria. Maryland and other states with Bay tidal waters refined their water quality standards, and promulgated criteria for dissolved oxygen, water clarity and chlorophyll-a. The Maryland standards were finalized in 2005, and can be found at Code of Maryland Regulations (COMAR) §2608.02.03-3.

These changes followed EPA Guidelines issued in 2003, the Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll-a for the Chesapeake Bay and its Tidal tributaries (EPA 903-R-03-002) and a subsequent Addendum (EPA 903-R-04-005). These were issued pursuant to Section 117(b) of the Clean Water Act, 33 U.S.C. §1317(b), and 40 CFR Part 131. The guidelines relied in large part on water quality modeling performed by EPA.

In accordance with the federal Clean Water Act and Pennsylvania regulations, Maryland's changes to its water quality standards trigger the need for nutrient reductions in Pennsylvania to comply with the new standards. These reductions need to come from both point sources (e.g., sewage treatment plants, industrial dischargers) and non-point sources (e.g., farms). To quantify the nutrient reduction needs, maximum nutrient and sediment loads ("cap loads") for each major watershed tributary to the Chesapeake Bay were established. This included allocation of cap loads for Total Nitrogen (TN) and Total Phosphorus (TP) in Pennsylvania for the Potomac and the Susquehanna watersheds. Pennsylvania's overall cap loads for TN and TP were further divided into cap loads for point and non-point sources.

DEP has developed a plan to meet these requirements. First, DEP issued its *Chesapeake Bay Tributary Strategy* in December 2004. This Strategy includes specific initiatives to address reductions from point sources and non-point sources. The Strategy does not prescribe mandatory requirements, but rather describes how the legal obligations can be met through a combination of actions, including changes to NPDES permits. The strategy describes the basis for calculating the total allowable loading from PA to the Chesapeake Bay.

Second, DEP conducted an extensive stakeholder process with sewage treatment plants in 2006, which led to the current method used to allocate the point source portion of the load. The workgroup recommendation made the allocation based on the design annual average daily flow, and concentrations of 6 mg/L total nitrogen and 0.8 mg/L total phosphorus (TP). The Department reviewed this recommendation and agrees that it meets the requirements described above.

When the *Chesapeake Bay Watershed Implementation Plan (WIP) – Phase 1* was developed to address the EPA's expectations for the Chesapeake Bay TMDL, several activities have occurred that have shifted the course of the development of the *Phase 2 Chesapeake Bay WIP*. As part of the Phase 2 WIP process, a *Supplement to the Phase 2 WIP* was developed on April 2, 2012 (revised on September 6, 2017). This document provides an update on TMDL implementation for point sources and a discussion of adjustments to the permitting strategy as a result of implementation experience.

This facility is considered a Non-significant minor sewage facility as the Average Annual Design flow is 0.01 MGD which falls under Phase 5 category (<0.2 MGD). The previous fact sheet indicated that the facility had monitored CB parameters for two years. However, per DEP's SOP titled "Establishing Effluent Limitations for Individual Sewage Permits" (document ID: BPNPSM-PMT-033) footnote 6 and 7 requires TN and TP monitoring with same frequency as for conventional

pollutants for nutrient-impaired waters, or a lesser frequency for non-nutrient-impaired waters. Since the receiving stream is not nutrient-impaired, a lesser frequency of 1/quarter is proposed for this renewal.

Flow Monitoring Requirement:

The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR § 122.44(i)(1)(ii).

Total Dissolved Solids (TDS):

Facilities with a design flow less than 0.1 MGD are not required to submit effluent result for TDS and associated parameters (Sulfate, Chloride, Bromide.) Therefore, no TDS limits/monitoring requirement will be placed in the permit.

WETT:

Minor facilities and facilities without a formal EPA approved pretreatment program are exempted from WETT.

Anti-Backsliding

The proposed limits are at least as stringent as are in existing permit; therefore, anti-backsliding is not applicable

Appendix

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: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
DO (mg/l)	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC (mg/l)	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50	2/month	8-Hr Composite
TSS	XXX	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
Ammonia-N (interim)	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Ammonia (final) Nov 1 - Apr 30	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Ammonia (final) May 1 - Oct 31	XXX	XXX	XXX	15.0	XXX	Report	2/month	8-Hr Composite

Compliance Sampling Location: At Outfall 001

Other Comments: None

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, to comply with Pennsylvania's Chesapeake Bay Tributary Strategy.

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Ammonia-N	Report	Report	XXX	Report	XXX	XXX	1/quarter	8-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	1/quarter	8-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	1/quarter	8-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	1/quarter	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	1/quarter	8-Hr Composite

Compliance Sampling Location: At Outfall 001

Other Comments: None

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	PENTOXSD for Windows Model (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☒	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 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, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 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, 391-2000-022, 3/1999.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: BPNPSM-PMT-033
☐	Other: