pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0060429**
Facility Type	**Non-Municipal**	APS ID	**985032**
Major / Minor	**Minor**	Authorization ID	**1259182**

Applicant and Facility Information

Applicant Name	**Philadelphia Freedom Valley YMCA**	Facility Name	**Camp Speers WWTP**
Applicant Address	143 Nichecronk Road	Facility Address	143 Nichecronk Road
	Dingmans Ferry, PA 18328		Dingmans Ferry, PA 18328
Applicant Contact	Dan Paola	Facility Contact	Dan Paola
Applicant Phone	(908) 337-3244	Facility Phone	(908) 337-3244
Client ID	310321	Site ID	4240
Ch 94 Load Status	N/A	Municipality	Delaware Township
Connection Status	N/A	County	Pike
Date Application Received	December 27, 2018	EPA Waived?	Yes
Date Application Accepted	January 11, 2019	If No, Reason	-

Purpose of Application: Renewal of NPDES permit to discharge treated sewage.

Summary of Review

The applicant is requesting renewal of their NPDES permit to discharge up to 0.004 MGD of treated sewage to an unnamed tributary to Dingmans Creek, a HQ-CWF/MF designated receiving water in state water plan basin 01-D (Shohola – Bushkill Creeks). As per the Department's current existing use list, the receiving stream does not have an existing use classification that is more protective than its designated use.

Previous permits and the 1985 Pollution Report show the discharge as flowing southward to Old Marcel Lake, then flowing into Dingmans Creek. The permit renewal application submitted in 2013 indicated the discharge flows northward through Nichecronk Pond, which then flows via Nichecronk Brook to Dingmans Creek. At the time of the last permit issuance, it was still unclear which direction the flow went. On September 12, 2019, DEP Aquatic Biologist Jeremy Miller and the permit reviewer confirmed that the facility discharges in the middle of wetlands that flow toward Old Marcel Lake.

Since there are no nearby representative gages to obtain flow data from and the drainage area at Outfall 001 is too small for USGS StreamStats to estimate accurate low flow values (see StreamStats Low Flow attachment), the default LFY of 0.1 cfs/mi^2 was chosen to model the discharge. For modeling inputs, RMI values were obtained using the "PA Historic Streams" feature of eMapPA as well as the "measure" tool. Drainage areas were delineated using USGS's StreamStats Interactive Map and elevations were obtained using the elevation profile feature of StreamStats (see Watershed Information attachment). This facility discharges into the middle of a wetland complex. For modeling, the discharge point was assumed to be at the furthest downstream end of the wetlands as shown on USGS's StreamStats "National" base map.

TRC limitations in the previously issued permit were old technology-based limitations (1.2 mg/L monthly average, 2.8 mg/L IMAX). The permittee now utilizes ultraviolet light for disinfection, but IMAX limitations are included in the permit in the event chlorine is used for backup disinfection or for cleaning purposes. A new technology-based IMAX limitation of 1.6 mg/L is applied to this permit renewal with a sampling frequency of "daily when discharging" (see Part C.I.E.).

Approve	Deny	Signatures	Date
X		/s/ Brian Burden, E.I.T. / Project Manager	December 24, 2019
X		/s/ Amy M. Bellanca, P.E. / Environmental Engineer Manager	December 24, 2019

Summary of Review

When modeling the discharge using the latest TRC calculation spreadsheet, a monthly average limitation of 0.24 mg/L and an IMAX of 0.80 mg/L were recommended. The water quality-based IMAX limitation will come into effect 4 years after the Permit Effective Date. The permittee may conduct site-specific studies to alter the new TRC IMAX limitation (see Part C.III). Several factors can change the recommended TRC limitation as calculated by the spreadsheet, such as: chlorine demand of stream, chlorine demand of discharge, and stream flow. Default values for chlorine demand were used to develop the limitations (0.3 mg/L for stream demand, 0 mg/L for discharge demand). The stream flow value was determined by multiplying the drainage area at the assumed discharge location (delineated using USGS's StreamStats) by the default LFY of 0.1 cfs/mi^2. Partial mixing factors were obtained from PENTOX (attached).

Limitations for $CBOD_5$, TSS, pH and Fecal Coliform are technology-based and carried over from the previous permit. The Dissolved Oxygen minimum is water quality-based and carried over from the previous permit. Water quality modeling (see WQM Modeling attachment) indicated that limitations are required for Ammonia-Nitrogen (5.4 mg/L average monthly; 10.8 mg/L IMAX). The standard 3x multiplier was used to develop the wintertime limitations (16.2 mg/L average monthly, 32.4 mg/L IMAX). The new limitations for Ammonia-Nitrogen will come into effect 4 years after the permit effective date. 1/month monitoring/reporting requirements are included until the limits become effective. Note that Ammonia-Nitrogen must be monitored 2/month when the limits become effective in accordance with guidance document 362-0400-001 (see document reference below).

Annual monitoring/reporting requirements for Total Phosphorus, Total Nitrogen, TKN and Nitrate-Nitrite as N are continued in this permit renewal.

There is no DRBC docket for this facility.

Due to issues at the WWTP, the facility had been pumping and hauling all generated wastewater from a temporary on-site frack tank beginning in Fall 2016. Water Quality Management permit 5217404 was issued on December 18, 2017 for the replacement of the WWTP. DMR review shows that this facility resumed discharging in May 2019. Since May 2019, the following exceedances were reported:

May 2019:

$CBOD_5$ – 40.7 mg/L monthly average (limit was 25.0 mg/L)

June 2019:

$CBOD_5$ – 65.9 mg/L monthly average (limit was 25.0 mg/L)
Fecal Coliform – >12000 CFU/100mL geometric mean (limit was 200 CFU/100mL)

July 2019:

$CBOD_5$ – 45.75 mg/L monthly average (limit was 25.0 mg/L)
Fecal Coliform – 10788.88 CFU/100mL geometric mean (limit was 200 CFU/100mL)
TSS – 34.65 mg/L monthly average (limit was 30.0 mg/L)

August 2019:

Fecal Coliform – 10733.13 CFU/100mL geometric mean (limit was 200 CFU/100mL)

There were no exceedances during September 2019 or October 2019.

Monitoring frequencies for all parameters with limitations have been updated to the recommended frequencies found in Table 6-3 of DEP's Technical Guidance for the Development and Specification of Effluent Limitations (doc. no. 362-0400-001).

Since the startup of the new WWTP, DMR records show there were no biosolids hauled off site. All flows collected in the on-site frack tank were disposed of by Koberlein.

Summary of Review

The previously issued permit expired on June 30, 2019 and the application for permit renewal was submitted on time. There are no open violations for the client that would warrant withholding the issuance of the final permit. EPA waiver is in effect.

WQM Modeling.pdf

TRC Calculation.pdf

Watershed Information.pdf

PENTOX.pdf

StreamStats Low Flow.pdf

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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.004
Latitude	41º 16' 3"	Longitude	-74º 56' 40.2"
Quad Name	Edgemere	Quad Code	0846
Wastewater Description:	Sewage Effluent		
Receiving Waters	UNT to Dingmans Creek (HQ-CWF/MF)	Stream Code	Unavailable
NHD Com ID	26143318	RMI	~0.89
Drainage Area	0.1 mi^2	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.01	Q_{7-10} Basis	Default LFY
Elevation (ft)	1276	Slope (ft/ft)	0.012
Watershed No.	1-D	Chapter 93 Class.	HQ-CWF/MF
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		Easton Area Water System	
PWS Waters	Delaware River	Flow at Intake (cfs)	1105
PWS RMI	109.8	Distance from Outfall (mi)	~63 ¼

Changes Since Last Permit Issuance: Issuance of WQM permit 5217404.

Treatment Facility Summary

Treatment Facility Name: Camp Speers WWTP

WQM Permit No.	Issuance Date
5217404	12/18/2017

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Media Filter	Ultraviolet Light	Not previously measured

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.004	16	Not Overloaded	Settled	Hauled

Changes Since Last Permit Issuance: Issuance of WQM permit 5217404.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.004
Latitude 41º 16' 3" **Longitude** -74º 56' 40.2"
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
$CBOD_5$	25.0	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	50.0	IMAX	-	-
Total Suspended Solids	30.0	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	60.0	IMAX	-	-
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)
	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)
	10,000 / 100 ml	IMAX	-	92a.47(a)(5)

Water Quality-Based Limitations

The following limitations were determined through water quality modeling:

Parameter	Limit (mg/l)	SBC	Model / Basis
Ammonia-Nitrogen (5/1 – 10/31)	5.4	Average Monthly	2019 WQM 7.0 Modeling
	10.8	IMAX	
Ammonia-Nitrogen (11/1 – 4/30)	16.2	Average Monthly	
	32.4	IMAX	
Total Residual Chlorine	0.80	IMAX	2019 TRC Calculation Spreadsheet
Dissolved Oxygen	7.0	Minimum	Previous Modeling

Comments: The water quality-based Total Residual Chlorine limitation will come into effect 4 years after the permit effective date. Until then, the technology-based IMAX limitation of 1.6 mg/L is in effect.