pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0029017**
Facility Type	**Municipal**	APS ID	**522318**
Major / Minor	**Major**	Authorization ID	**1449392**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Schuylkill Haven MA** **Schuylkill Haven Borough**	Facility Name	**Schuylkill Haven MA WWTP**
Applicant Address	333 Center Avenue Schuylkill Haven, PA 17972	Facility Address	Street Charles & Liberty Sts Schuylkill Haven, PA 17972
Applicant Contact	Jessica Seiders	Facility Contact	Zack Faust
Applicant Phone	(570) 385-2841 x108	Facility Phone	(570) 294-6973
Client ID	32776	Site ID	450085
Ch 94 Load Status	Not Overloaded	Municipality	Schuylkill Haven Borough
Connection Status	No Limitations	County	Schuylkill
Date Application Received	July 19, 2023	EPA Waived?	No
Date Application Accepted	July 19, 2023	If No, Reason	Major Facility

Purpose of Application: Renewal of NPDES permit.

Summary of Review

The applicant is requesting renewal of an NPDES permit to discharge 2.8 MGD of treated sewage to the Schuylkill River, a CWF/MF designated receiving stream in state water plan basin 03-A (Upper Schuylkill River). 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.

A Total Maximum Daily Load (TMDL) for the Upper Schuylkill River was prepared by PA DEP on March 28, 2007. The TMDL addresses metals (Iron, Manganese, and Aluminum) and depressed pH associated with acid mine drainage (AMD). The TMDL load allocations apply to nonpoint sources of pollution; there are no Waste Load Allocations (WLAs). Quarterly monitoring requirements for Total Iron, Total Manganese, and Total Aluminum continue in this renewal.

Another Total Maximum Daily Load (TMDL) for the Schuylkill River was approved by the EPA on April 7, 2007. The TMDL addresses polychlorinated biphenyls (PCBs). There are no Waste Load Allocations (WLAs) assigned to the facility. Since 1979, it's been illegal to manufacture, distribute or use PCBs (except under highly regulated scenarios). Implementation of the TMDL is completed in two phases. Phase I implementation of the TMDL requirements were included in the previously issued permit and required that the facility collect and analyze two samples (one during a wet weather flow period, the other during a dry weather flow period) for PCBs utilizing Method 1668A during the first 12 months of the renewed permit. Phase II implementation of the TMDL involved the development and implementation of a Pollution Minimization Plan (PMP) based on the PCB monitoring results.

A dry weather sample was obtained on July 2, 2019 and analyzed using Method E608 at a quantitation limit (QL) of 0.2 µg/L. All results were non-detect. For that method, the extract is separated using gas chromatography and then measure by an electron capture detector. Method 1668A is a high-resolution gas chromatography-mass spectrometry method for measuring PCBs. Since the QL utilized is less than DEP's target QL of 0.25 µg/L, additional dry weather results are not requested during this permit term and implementation of a PMP is not needed. A wet weather sample was obtained on October 8,

Approve	Deny	Signatures	Date
X		Brian Burden, E.I.T. / Project Manager	May 17, 2024
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Acting Engineer Manager	7-11-24

Summary of Review

2019 and analyzed using Method E608 at a quantitation limit (QL) of 5 µg/L. All results were non-detect. Since the requested method wasn't utilized and the QL didn't meet DEP's target QL, additional wet weather results are requested during this permit term. The QL used must meet DEP's target QL of 0.25 µg/L.

Water quality modeling inputs are carried over from the previous renewal. Data from downstream stream gage 01468500 (Schuylkill River at Landingville, PA) was used to model the discharge, resulting in a low flow yield (LFY) of 0.33 cfs/mi^2. The gage is approximately 3.5 miles downstream from Outfall 001. Flow data was obtained from USGS's Open-File Report 2011-1070. 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).

The pH, $CBOD_5$, TSS and Fecal Coliform limits are technology-based limits carried over from the previous permit. The water quality-based summertime Ammonia-Nitrogen limitations and wintertime monitoring requirements are carried over from the previous permit. WQM modeling (attached) did not recommend more stringent limitations. The water quality-based limitations for TRC are carried over from the previous permit.

Pollutant group sampling results submitted with the permit application and eDMR results from the previous permit term were modeled with the Toxics Management Spreadsheet (TMS). The following recommendations were made:

- Total Copper: 0.026 mg/L monthly average, 0.040 mg/L daily maximum limitations. Total Copper was monitored monthly during the previous permit term. A long-term average concentration of 0.039 mg/L was calculated by the TOXCONC spreadsheet to use in the TMS. Since it appears the permittee cannot consistently meet the new limitations, a requirement to complete a Toxics Reduction Evaluation for copper is included in Part C. Yearly milestones are included until the limitations come into effect three years from the permit effective date. Weekly monitoring/reporting requirements are included in the permit until the limitations come into effect. The permittee may also choose to perform site-specific studies to adjust the modeling inputs used to calculate the limitations.

- Total Thallium: 0.002 mg/L monthly average, 0.004 mg/L daily maximum limitations. All pollutant group sampling results were non-detect, however, the QL utilized (0.003 mg/L) didn't meet DEP's target QL of 0.002 mg/L. The permittee may collect additional samples and analyze for Total Thallium at or below DEP's target QL. Three samples taken at least one week apart are required to remodel the discharge. Otherwise, limitations for Total Thallium will come into effect upon final permit issuance.

- Total Zinc: Monitor/report. The highest value reported was 0.094 mg/L and the most stringent WQBEL is 0.226 mg/L. Quarterly monitoring/reporting is added to the permit.

- Bis(2-Ethylhexyl)Phthalate: 0.015 mg/L monthly average, 0.023 mg/L daily maximum limitations. The highest value reported was 0.0109 mg/L. It's common for this pollutant to contaminate a wastewater sample from plastic composite sampling tubes or plastic sampling containers. The permittee may choose to resample for this parameter using collection methods designed to reduce accidental contamination. Three samples taken at least one week apart would be required to remodel the discharge if the permittee chooses. Otherwise, the limitations will come into effect upon final permit issuance.

Monthly monitoring/reporting requirements for Total Phosphorus and Total Nitrogen (Total Kjeldahl Nitrogen & Nitrate+Nitrite as N) are continued in this renewal. Monthly influent monitoring for BOD_5 and TSS are also continued in this renewal.

Results for Whole Effluent Toxicity (WET) testing for the previous permit term showed no endpoint failures for chronic survival and reproduction data for *Ceriodaphnia dubia*, and chronic survival and growth data for *Pimephales promelas.* The standard Part C condition, Whole Effluent Toxicity – No Permit Limits, is carried over in this renewal. WET testing shall be conducted annually during the upcoming permit cycle, at a minimum. The permittee must generate chronic survival and reproduction data for *Ceriodaphnia dubia*, and chronic survival and growth data for *Pimephales promelas*. The permittee shall perform testing using the following dilution series: 4%, 9%, 30%, 60%, and 100% effluent, with a control, where 9% effluent is the facility-specific Target In-Stream Waste Concentration (TIWC).

The SHMA continues operation of the EPA-approved Municipal Industrial Pretreatment Program (MIPP). One significant Categorical Industrial User (CIU) is currently permitted under the MIPP:

Summary of Review

- Tuscan/Lehigh Valley Dairies, L.P., 110 Manheim Road, Schuylkill Haven, PA 17972. Subject to 40 CFR Part 405 (Dairy Products Processing Point Source Category). The facility discharges approximately 77,000 gpd of process water to the WWTP.

There are no current or projected overloads at the treatment plant as per the most recently submitted Chapter 94 report (received March 22, 2024). No antidegradation analysis is required since the watershed is not high quality or exceptional value. None of the existing effluent limitations have been made less stringent, therefore, the antibacksliding requirement has been met.

The monitoring frequencies for all parameters with limitations conform with the monitoring frequencies recommended in the Department's Technical Guidance for the Development and Specification of Effluent Limitations (doc. no. 362-0400-001).

There is no DRBC docket for this facility.

The previously issued permit expired on April 30, 2024 and the application for permit renewal was submitted on time. There are no open violations for this client that would warrant withholding the issuance of this permit.

Note: The outfall coordinates provided in the permit renewal application place Outfall 001 approximately 500 feet to the west of the Schuylkill River along SR 433. The actual SHMA WWTP outfall is located on the opposite side of the Schuylkill River approximately 0.4 miles to the southeast.

Sludge use and disposal description and location(s): The permit renewal application indicates 65.2 dry tons of biosolids were disposed of at North American Anthracite in the previous year. The March 2024 biosolids supplemental DMR report states the biosolids were hauled from the WWTP by Barakat.

Water Quality Management permit amendment 5489403 A-1 was issued August 10, 2020 for the following upgrades to the WWTP:

- Four new dry pit submersible pumps to convey influent to the influent channel.
- A new 6 mm automatic fine screen to replace the existing screen and comminutor.
- A new chain and flight sludge collection system and scum collection piping in the primary settling tanks.
- Four positive displacement blowers for the aeration tanks and fine bubble membrane diffusers to replace the existing ceramic diffusers.
- Two new dry pit RAS pumps.
- Three new positive displacement blowers for the two small aerobic digesters.
- A new screw press sludge dewatering system to replace the existing belt filter press.
- Installation of a SCADA system.


TMS PA0029017.pdf


WQM Modeling.pdf


TRC Calculation.pdf


TOXCONC.pdf


Watershed Information.pdf


Watershed Information WQM.p

Summary of Review
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)	2.8
Latitude	40º 37' 11.1"	Longitude	-76º 10' 16"
Quad Name	Friedensburg	Quad Code	1436
Wastewater Description:	Sewage Effluent		

Receiving Waters	Schuylkill River	Stream Code	833
NHD Com ID	25974700	RMI	117.8
Drainage Area	131 mi^2	Yield (cfs/mi^2)	0.33
Q_{7-10} Flow (cfs)	43.23	Q_{7-10} Basis	Gage 01468500
Elevation (ft)	495	Slope (ft/ft)	0.0012
Watershed No.	3-A	Chapter 93 Class.	CWF/MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, Other Habitat Alterations, PCBs, Siltation, Water/Flow Variability		
Source(s) of Impairment	Abandoned Mine Drainage, Channelization, Road Runoff, Source Unknown, Urban Runoff/Storm Sewers		
TMDL Status	Final (both)	Name	Schuylkill River PCB TMDL Upper Schuylkill River TMDL

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

Nearest Downstream Public Water Supply Intake		Pottstown Borough Water Authority	
PWS Waters	Schuylkill River	Flow at Intake (cfs)	346.5
PWS RMI	57	Distance from Outfall (mi)	~61

Treatment Facility Summary

Treatment Facility Name: Schuylkill Haven MA WWTP

WQM Permit No.	Issuance Date
5489403 A-1	8/10/2020

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Activated Sludge	Chlorine	2.8

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
2.8	5,204	Not Overloaded	Thickened/Digested	Agriculture Use

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 2.8
Latitude 40º 37' 11.1" **Longitude** -76º 10' 16.0"
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)
	40.0	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
	50.0	IMAX	-	-
Total Suspended Solids	30.0	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45.0	Average Weekly	133.102(b)(2)	92a.47(a)(2)
	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
Total Residual Chlorine	0.32	Average Monthly	2018 TRC Calculation Spreadsheet
	1.07	IMAX	
Ammonia-Nitrogen (5/1 – 10/31)	16.0	Average Monthly	Previous modeling
	32.0	IMAX	
Total Copper	0.026	Average Monthly	2024 TMS
	0.040	Daily Maximum	
Total Thallium	0.002	Average Monthly	2024 TMS
	0.004	Daily Maximum	
Bis(2-Ethylhexyl)Phthalate	0.015	Average Monthly	2024 TMS
	0.023	Daily Maximum	

Comments: The Total Copper limitations come into effect three years after the permit effective date.

Anti-Backsliding

No limitations were made less stringent or removed from the permit.

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DRAFT

Approve	Deny	Signatures	Date
X		Brian Burden, E.I.T. / Project Manager	May 17, 2024
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Acting Engineer Manager	7-11-24