

Application Type Renewal
Wastewater Type Sewage
Facility Type SRSTP

NPDES PERMIT FACT SHEET INDIVIDUAL SFTF/SRSTP

Application No. PA0057339
APS ID 1112890
Authorization ID 1483587

Applicant, Facility and Project Information

Applicant Name	<u>Brian & Cheryl Davidson</u>	Facility Name	<u>Davidson Properties</u>
Applicant Address	<u>209 Poplar Road</u> <u>Honey Brook, PA 19344-1349</u>	Facility Address	<u>209 Poplar Road</u> <u>Honey Brook, PA 19344-1349</u>
Applicant Contact	<u>Brian Davidson</u>	Facility Contact	<u>Brian Davidson</u>
Applicant Phone	<u>(610) 273-9285</u>	Facility Phone	<u>(610) 273-9285</u>
Client ID	<u>111194</u>	Site ID	<u>466303</u>
SIC Code	<u>8811</u>	Municipality	<u>Honey Brook Township</u>
SIC Description	<u>Services - Private Households</u>	County	<u>Chester</u>
Date Application Received	<u>May 1, 2024</u>	WQM Required	<u></u>
Date Application Accepted	<u></u>	WQM App. No.	<u></u>
Project Description	<u>.Permit renewal</u>		

Summary of Review

This application is for renewal of an Individual NPDES permit to discharge 500 gallons per day (gpd) of treated sewage from the Davidson Single Residence Sewer Treatment Plant (SRSTP) to West Branch Brandywine Creek, which is designated as High Quality – Trout Stocking Fishes (HQ-TSF), Migratory Fishes (MF) and is in the Brandywine watershed (3H).

The SRSTP is an existing Norweco Singulair Model 900 with pretreatment, aeration, final clarification, sand filter, and chlorination. Chlorination is via sodium hypochlorite solution dosed by a metering pump. The Water Quality Management Part II permit is permit number 1597416.

No changes to the effluent limitations are proposed for this renewal. Effluent limitations are based on Total Maximum Daily Loads, Antidegradation Best Available Control Technology, and Standard Operating Practices.

Per the inspection report from 6/23/2023, there is a violation on the site due to the failure to submit AMR. According to the homeowner, AMRs for 2022 and 2023 were submitted, but they weren't available on OnBase.

The provided sampling data for this renewal does not include flow, pH, DO, TN, Ammonia, and TP. The applicant was asked to provide the copy of the previous AMR submission to verify.

The SRSTP discharges into the West Branch Brandywine Creek which is designated as High Quality – Trout Stocking Fishes (HQ-TSF), Migratory Fishes (MF), and is part of the Christina River Basin for which a Total Maximum Daily Load (TMDL) exists. The effluent limitations from the previous NPDES permit for this facility, PA0057339 effective November 1, 2019, were retained for this renewal.

This facility is listed for Waste Load Allocations (WLA) for low flow (document: EPA, Total Maximum Daily Loads of Nutrients and Dissolved Oxygen Under Low-Flow Conditions in the Christina River Basin, Pennsylvania, Delaware and Maryland,

Approve	Deny	Signatures	Date
X		<i>Charley Yang</i> Charley Yang / Environmental Engineering Specialist	October 16, 2024
X		<i>Pravin Patel</i> Pravin C. Patel, P.E. / Environmental Engineer Manager	10/16/2024

Summary of Review

January 19, 2001; Revised October 2002; revised April 2006). The TMDLs are for nutrients and dissolved oxygen under low-flow conditions and are listed in Table 13: TMDL Summary for Brandywine Creek West Branch. The WLA found in Table 13 for CBOD5 and NH3-N are 25 mg/l and 30 mg/l, respectively. The TMDL did not require reductions to existing effluent limits for SRSTPs.

The facility is listed for WLA for high flow (document: EPA, Revisions to Total Maximum Daily Loads for Nutrient and Low Dissolved Oxygen Under High Flow Conditions Christina River Basin, Pennsylvania, Delaware, and Maryland, September 2006). The TMDL for nutrients and low dissolved oxygen under high-flow conditions in the Christina River Basin are found in Tables 1-5 and 2-2. The limitations are 25 mg/l for CBOD5, 10 mg/l for NH3-N and 10 mg/l for TP. The limit for DO is 6 mg/l as a daily average.

The Brandywine Creek is listed as HQ-TSF and as such the DEP's Antidegradation Policy is applicable to this site. The existing average monthly effluent limitations of CBOD5 (10 mg/l), NH3-N (1.5 mg/l) and DO (6.0 mg/l), with appropriate seasonal limitations, were based on Antidegradation Best Available Combination of Technologies (ABACT). The average monthly effluent limit for TSS is 20 mg/l per ABACT. The ABACT limitations are more stringent than the TMDL for CBOD5 and NH3N.

The existing limitations for CBOD5, NH3-N, and DO will remain in this permit renewal.

The current average monthly limits for TSS of 10 mg/l will remain in the permit for it is more stringent than the TMDL or the ABACT. The Fecal Coliform limit will remain the same in this permit renewal (200 cfu/100 ml). Both constituent limitations are consistent with the Standard Operating Procedure (SOP) for Clean Water Program New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications (SOP No. BCW-PMT-003), Final November 9, 2012; Revised May 17, 2019, Version 1.8, pages 7 to 8.

Existing effluent limits for pH (6 – 9 STD units) will continue in this permit renewal.

Monitoring for Total Nitrogen (TN) and Total Phosphorus (TP) was added to this permit in the 2014 renewal for data collection and future implementation of the TMDL WLA. The WLA for TN and TP are 40 mg/l and 10 mg/l, respectively. The same monitoring requirements for TN and TP will be retained for the renewed permit.

A limit of 1.0 mg/l for Total Residual Chlorine (TRC) was added to the 2014 permit with a monitoring frequency of once per month.

Minimum measuring frequency for all permit parameters, other than TRC, will be required once per year in accordance with the aforementioned SOP (No. BCW-PMT-003). The CBOD5 and NH3-N effluent limitations have seasonal limits. As the seasonal limits are more restrictive for the May 1 to Oct 31 sampling period, the sample must be taken during that time period. The monitoring frequency for the Nov 1 to Apr 30 remains as Upon Request.

Act 14 Notifications:

Chester County Commissioners - April 8, 2024
Honey Brook Township - April 9, 2024

The draft permit is being sent to the permittee.

Proposed Part C Conditions:

- A. AMR to DEP
- B. DMR to DEP if Attached
- C. 1/year Measure Depth of Septage and Scum
- D. Septic Tanks Pumped Once Every Three Years
- E. Total Residual Chlorine Requirement
- F. No Stormwater
- G. Necessary Property Rights
- H. Proper Sludge Disposal
- I. Abandon STP when Municipal Sewers Available

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 and Stream Data – 2 - Receiving Waters and PWS

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>001</u>	Design Flow (MGD)	<u>.0005</u>
Latitude	<u>40° 6' 28.17"</u>	Longitude	<u>-75° 54' 59.43"</u>
Quad Name	<u>Honey Brook</u>	Quad Code	<u>1838</u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>West Branch Brandywine Creek (HQ-TSF, MF)</u>	Stream Code	<u>00085</u>
NHD Com ID	<u>26091464</u>	RMI	<u>53.0400</u>
Drainage Area	<u>0.3</u>	Yield (cfs/mi ²)	<u>0.1</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.03</u>	Q ₇₋₁₀ Basis	<u>Pennsylvania Stream Stats</u>
Elevation (ft)	<u>851</u>	Slope (ft/ft)	<u>0.042</u>
Watershed No.	<u>3-H</u>	Chapter 93 Class.	<u>HQ-TSF, MF</u>
Existing Use	<u></u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u></u>	Exceptions to Criteria	<u></u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>NUTRIENTS, SILTATION</u>		
Source(s) of Impairment	<u>AGRICULTURE, AGRICULTURE</u>		
TMDL Status	<u>Final</u>	Name	<u>Christina River Basin</u>

Changes Since Last Permit Issuance:

Other Comments:

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) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Annual Average	Maximum	Instant. Maximum		
Flow (GPD)	Report Annl Avg	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
pH (S.U.)	XXX	XXX	6 Inst Min	XXX	XXX	9	1/year	Grab
DO	XXX	XXX	6.0 Inst Min	XXX	XXX	XXX	1/year	Grab
TRC	XXX	XXX	XXX	XXX	1.0 Daily Max	XXX	1/month	Grab
CBOD5 Nov 1 - Apr 30	XXX	XXX	XXX	20.0	XXX	40	Upon Request	Grab
CBOD5 May 1 - Oct 31	XXX	XXX	XXX	10.00	XXX	20	1/year	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	1000	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/year	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	4.5	XXX	9	Upon Request	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	1.5	XXX	3	1/year	Grab
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/year	Grab

Compliance Sampling Location:

Other Comments: