pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0244147**
Facility Type	**Municipal**	APS ID	**1040108**
Major / Minor	**Minor**	Authorization ID	**1356620**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Wrightstown Township Bucks County**	Facility Name	**Chapman Corners Wwtf(Hibbs Tract)**
Applicant Address	2203 Second Street Pike	Facility Address	Jane Chapman Drive East
	Wrightstown, PA 18940		Newtown, PA 18940
Applicant Contact	Joseph Pantano	Facility Contact	Mike Sullivan
Applicant Phone	(215) 598-3313	Facility Phone	(215) 766-2626
Client ID	115069	Site ID	596429
Ch 94 Load Status		Municipality	Wrightstown Township
Connection Status		County	Bucks
Date Application Received	June 2, 2021	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application .

Summary of Review

The applicant has submitted a renewal for individual NPDES permit to discharge treated sewage to unnamed tributary to Neshaminy Creek (WWF, MF) through Outfall 001 to a stormwater detention basin with constructed wetlands.

The facility serves Wrightstown Township and average annual design flow is 0.01545 MGD with organic design capacity of 38.61 lbs/day. It utilizes a Membrane bioreactor MBR activated sludge process. Wastewater enters the treatment process in anoxic zone, then flows to the aeration zone, then to membrane zone for decanting. UV is used for disinfection. Biosolids are disposed at Warminster NAWC WWTP.

DEP has conducted a site visit in December 2020. No violations were noted.

Review of the previous permit's factsheet revealed following:

By letter dated October 18, 2005, the Department provided the applicant with Preliminary Treatment Requirements, shown below:

CBOD5 and TSS = 5 mg/l
NH3-N (05/01-10/31) = 1.0 mg/l
NH3-N (11/01-04/30) = 2.0 mg/l
Total Phosphorus = 0.1 mg/l
(NO2+NO3)-N = 10 mg/l
Dissolved Oxygen = 6 mg/l, I-minimum
Fecal Coliform = 50 col/100 ml geometric mean and 1,000 col/100 ml I-max
TRC = Not Detectable if chlorine used for disinfection

Approve	Deny	Signatures	Date
X		Begay Omuralieva Begay Omuralieva / Environmental Engineering Specialist	November 17, 2021
X		Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	11/17/2021

Summary of Review

Limits are protective of 1) the dissolved oxygen standard and ammonia toxicity for aquatic life where there is zero dilution at the point of discharge, 2) drinking water, both in groundwater and the nearest downstream potable water supply intake, and 3) the nutrient impairment for Neshaminy Creek, although additional reductions may be required in the future based on any new TMDL. Most of the Neshaminy Creek basin is impaired for excessive nutrients. A TMDL was established in 2003. A draft revised TMDL for the Neshaminy Creek titled "Neshaminy Creek Total Maximum Daily Load (TMDL) Assessment for Point Sources", dated August 14, 2006, included a phosphorus limit of 0.23 mg/l for this discharge (and any new or expanding discharges). Since the PTR limit of 0.1 mg/l for the proposed discharge was more stringent than the limit in the draft revised TMDL, it was considered adequately protective of the stream. The Neshaminy TMDL was withdrawn August 18, 2007. The proposed treatment technology which served as the basis for the planning approval and Water Quality Management Permit 0906410 remains unchanged regardless of the withdrawal of the TMDL.

Per the SOP, "Establishing Effluent Limitations for Individual Sewage Permits", monitoring for Total Nitrogen and UV Transmittance are included in the draft permit. According to the permittee, chlorine is not utilized at the site. Additionally, influent monitoring for TSS and BOD5 are also included, per the SOP "New and Reissuance Sewage Individual NPDES Permit Applications".

There are no changes in quality or quantity of the discharge, therefore all previously established effluent limits and monitoring requirements are proposed in draft permit. See page 7 of this factsheet.

Sludge use and disposal description and location(s): sludge hauling to Warminster NAWC WWTP

Act 14 Notifications:
Wrightstown TWP and Bucks County Commisioners received a notification regarding the application on May 24, 2021.

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)	0.01545
Latitude	40º 15' 45"	Longitude	74º 58' 33"
Quad Name	Lambertville	Quad Code	1646
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed tributary to Neshaminy Creek via detention basin	Stream Code	02588
NHD Com ID	25480060	RMI	1.67
Drainage Area	0.07 mi2	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	Point of 1st use survey
Elevation (ft)	na	Slope (ft/ft)	na
Watershed No.	2-F	Chapter 93 Class.	WWF, MF
Existing Use	na	Existing Use Qualifier	na
Exceptions to Use	na	Exceptions to Criteria	na
Assessment Status	Impaired		
Cause(s) of Impairment	Nutrients, Organic Enrichment/Low DO, Siltation, Pathogens		
Source(s) of Impairment	Municipal point source, Other, Unknown		
TMDL Status	Withdrawn 8/18/07	Name	Neshaminy Creek TMDL
Nearest Downstream Public Water Supply Intake	Aqua PA		
PWS RMI	Neshaminy Creek	Distance from Outfall (mi)	12.7

Treatment Facility Summary

Treatment Facility Name: Chapman Corners WWTF

WQM Permit No.	Issuance Date
0906410	1/29/2007

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Oxidation Ditch	Ultraviolet	0.01545

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.01545	38.61	Not Overloaded	Hauling	Warminster NAWC WWTP

Changes Since Last Permit Issuance: none

Other Comments:

Compliance History

DMR Data for Outfall 001 (from October 1, 2020 to September 30, 2021)

Parameter	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20
Flow (MGD) Average Monthly	0.009	0.008	0.007	0.008	0.223	0.007	0.008	0.0077	0.008	0.008	0.008	0.007
Flow (MGD) Daily Maximum	0.022	0.012	0.01	0.012	0.013	0.015	0.011	0.013	0.013	0.012	0.012	0.011
pH (S.U.) Instantaneous Minimum	6.59	6.79	6.4	6.42	6.74	6.94	7.48	7.79	6.85	6.37	6.89	7.05
pH (S.U.) Instantaneous Maximum	7.76	8.24	8.51	7.89	8.25	8.47	8.28	8.57	8.82	8.48	8.62	8.32
DO (mg/L) Instantaneous Minimum	7.13	6.67	6.39	6.69	7.13	7.5	7.29	8.19	7.59	7.19	7.55	7.34
CBOD5 (lbs/day) Average Monthly	< 0.20	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.10	< 1.18	< 0.10
CBOD5 (lbs/day) Weekly Average	< 0.40	< 0.20	0.50	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	4.24	< 0.20
CBOD5 (mg/L) Average Monthly	< 2.0	< 2.0	< 2.8	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 14.2	< 2.1
CBOD5 (mg/L) Weekly Average	< 2.0	< 2.0	6.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	51.0	2.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	22	15	17	14	16	15	16	19	18	17	18	11
BOD5 (mg/L) Raw Sewage Influent Average Monthly	238	274	263	268	244	229	212	214	227	275	220	182
TSS (lbs/day) Average Monthly	< 0.10	< 0.10	< 0.07	< 0.07	< 0.07	< 0.40	< 0.08	< 0.10	< 0.08	< 0.20	< 0.08	< 0.30
TSS (lbs/day) Weekly Average	< 0.20	0.30	< 0.08	< 0.10	< 0.09	1.80	< 0.09	0.10	0.10	0.50	< 0.10	0.80
TSS (mg/L) Average Monthly	< 1.2	< 2.0	< 1.0	< 1.3	< 1.0	< 5.6	< 1.0	< 1.3	< 1.0	< 2.8	< 1.0	< 4.7

TSS (mg/L) Raw Sewage Influent Average Monthly	187	253	281	327	289	121	161	228	202	185	228	161
TSS (mg/L) Weekly Average	2.0	5.0	< 1.0	2.0	1.0	24.0	1.0	2.0	< 1.0	8.0	1.0	14.0
Fecal Coliform (No./100 ml) Geometric Mean	< 2	< 2	< 2	< 2	< 2	< 2	< 3	< 2	< 2	< 2	< 2	< 2
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 2	< 2	< 2	< 2	< 2	< 2	15	< 2	< 2	< 2	< 2	5
UV Transmittance (%) Minimum	100	100	100	100	100	100	100	100	100	100	100	100
Nitrate-Nitrite (lbs/day) Average Monthly	< 0.5	0.4	< 0.4	< 0.4	< 0.2	< 0.5	< 0.4	< 1.0	< 0.6	< 0.5	< 0.5	< 0.4
Nitrate-Nitrite (mg/L) Average Monthly	< 4.7	< 6.55	< 5.95	< 6.45	< 3.65	< 6.42	< 4.89	< 10.79	< 7.45	< 7.78	< 6.48	< 6.48
Total Nitrogen (lbs/day) Average Monthly	< 0.5	< 0.5	< 0.4	< 0.4	< 0.3	< 0.5	< 0.4	< 1	< 0.7	< 0.6	< 0.6	< 0.5
Total Nitrogen (mg/L) Average Monthly	< 5.29	< 7.1	< 6.61	< 7.24	< 4.23	< 7.03	< 5.32	< 11.55	< 7.95	< 9.39	< 7.28	< 7.87
Ammonia (lbs/day) Average Monthly	< 0.006	< 0.006	< 0.007	< 0.02	< 0.007	< 0.007	< 0.008	< 0.009	< 0.008	< 0.05	< 0.01	< 0.02
Ammonia (mg/L) Average Monthly	< 0.06	< 0.1	< 0.1	< 0.31	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1.13	< 0.13	< 0.34
Total Phosphorus (lbs/day) Average Monthly	< 0.001	< 0.0008	< 0.001	0.003	< 0.0007	< 0.005	0.006	< 0.009	< 0.004	< 0.02	< 0.005	< 0.006
Total Phosphorus (mg/L) Average Monthly	< 0.01	< 0.01	< 0.02	0.1	< 0.01	< 0.07	0.08	< 0.1	< 0.06	< 0.47	< 0.06	< 0.1

Compliance History

Effluent Violations for Outfall 001, from: November 1, 2020 To: September 30, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
CBOD5	11/30/20	Avg Mo	< 1.18	lbs/day	0.67	lbs/day
CBOD5	11/30/20	Wkly Avg	4.24	lbs/day	0.94	lbs/day
CBOD5	11/30/20	Avg Mo	< 14.2	mg/L	5.0	mg/L
CBOD5	11/30/20	Wkly Avg	51.0	mg/L	7.0	mg/L
TSS	04/30/21	Wkly Avg	1.80	lbs/day	0.94	lbs/day
TSS	04/30/21	Avg Mo	< 5.6	mg/L	5.0	mg/L
TSS	04/30/21	Wkly Avg	24.0	mg/L	7.0	mg/L
TSS	12/31/20	Wkly Avg	8.0	mg/L	7.0	mg/L
Nitrate-Nitrite	02/28/21	Avg Mo	< 10.79	mg/L	10.0	mg/L
Total Phosphorus	12/31/20	Avg Mo	< 0.02	lbs/day	0.01	lbs/day
Total Phosphorus	12/31/20	Avg Mo	< 0.47	mg/L	0.1	mg/L

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	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	6.0 Inst Min	XXX	XXX	XXX	1/day	Grab
CBOD5	0.67	0.94	XXX	5.0	7.0	10	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	0.67	0.94	XXX	5.0	7.0	10	1/week	24-Hr Composite
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	50 Geo Mean	XXX	1000	1/week	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Metered
Nitrate-Nitrite	1.3	XXX	XXX	10.0	XXX	20	1/week	24-Hr Composite
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Ammonia Nov 1 - Apr 30	0.26	XXX	XXX	2.0	XXX	4	1/week	24-Hr Composite
Ammonia May 1 - Oct 31	0.13	XXX	XXX	1.0	XXX	2	1/week	24-Hr Composite
Total Phosphorus	0.01	XXX	XXX	0.1	XXX	0.2	1/week	24-Hr Composite