



Application Type

Renewal

Facility Type

Non-Municipal

Major / Minor

Minor

Application No.

PA0044474

APS ID

1125166

Authorization ID

1505488

## NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

### Applicant and Facility Information

Applicant Name	<b>Brinton Manor Rehab &amp; Nursing Center LLC</b>	Facility Name	<b>Brinton Manor STP</b>
Applicant Address	549 Baltimore Pike	Facility Address	549 Baltimore Pike
	Glen Mills, PA 19342-1020		Glen Mills, PA 19342-1020
Applicant Contact	Brad Wise	Facility Contact	Brad Wise
Applicant Phone	(610) 358-6005	Facility Phone	(610) 358-6005
Client ID	42677	Site ID	197725
Ch 94 Load Status	Not Overloaded	Municipality	Concord Township
Connection Status		County	Delaware
Date Application Received	<u>October 21, 2024</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted		If No, Reason	
Purpose of Application	.		

### Summary of Review

The applicant requests approval for renewal of an NPDES permit to discharge 13,000 gpd of treated sewage from Brinton Manor STP to West Branch Chester Creek. The receiving stream is classified as TSF/MF.

The sewage treatment plant consists of a bar screen, comminutor, aeration tank, clarifier, sand filter, chlorine contact tank, and sludge holding tank. The treatment plant is permitted under WQM Permit No. 2371408.

No upgrades to treatment facilities are proposed at this time.

Sodium Hypochlorite and Aluminum Sulfite are listed as wastewater treatment chemicals.

Based on the DMRs review, there were few TRC and Fecal effluent limit violations in the year 2024. According to the consultant these were due to rain event / chemical feed problem and were resolved.

No comments received from Operations Section.

Because there are no changes in flow, treatment units, stream designation, influent characteristics, effluent quality, the current permit limits are recommended to carry over to the new permit.

Sludge use and disposal description and location(s): sludge is hauled away to DELCORA STP

Approve	Deny	Signatures	Date
X		<i>Sara Abraham</i> Sara Reji Abraham, E.I.T. / Project Manager	December 27 2024
X		<i>Pravin Patel</i> Pravin C. Patel, P.E. / Environmental Engineer Manager	12/30/2024

### 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.

#### Act 14 Notifications:

Concord Township	-	October 17, 2024
Delaware County	-	October 17, 2024

#### Permit Conditions:

- A. No Stormwater
- B. Acquire Necessary Property Rights
- C. Proper Sludge Disposal
- D. Abandon STP when Municipal Sewers Available
- E. Chlorine Optimization
- F. Operator Notification
- G. Fecal Coliform Reporting
- H. Solids Management

**Discharge, Receiving Waters and Water Supply Information**

Outfall No.	001	Design Flow (MGD)	.013
Latitude	39° 53' 21.34"	Longitude	-75° 30' 41.10"
Quad Name	West Chester	Quad Code	1941
Wastewater Description:	Treated Sewage Effluent		
Receiving Waters	West Branch Chester Creek (TSF, MF)	Stream Code	00542
NHD Com ID	25621448	RMI	5.9
Drainage Area	4.74 sq.mi.	Q <sub>7-10</sub> Basis	Previous record
Q <sub>7-10</sub> Flow (cfs)	0.854	Chapter 93 Class.	TSF, MF
Watershed No.	3-G		
Assessment Status	Impaired		
Cause(s) of Impairment	CAUSE UNKNOWN, FLOW REGIME MODIFICATION, HABITAT ALTERATIONS, SILTATION		
Source(s) of Impairment	HABITAT MODIFICATION - OTHER THAN HYDROMODIFICATION, URBAN RUNOFF/STORM SEWERS		

**Treatment Facility Summary**

**Treatment Facility Name:** Brinton Manor STP

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Extended Aeration With Solids Removal	Hypochlorite	0.013
<hr/>				
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.013		Not Overloaded		

Compliance History

DMR Data for Outfall 001 (from November 1, 2023 to October 31, 2024)

Parameter	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23
Flow (MGD) Average Monthly	0.0025	0.003	0.0041	0.0034	0.0028	0.0033	0.0045	0.0034	0.0031	0.0028	0.0029	0.0025
Flow (MGD) Daily Maximum	0.006	0.0048	0.007	0.0061	0.0042	0.0059	0.0078	0.0058	0.0051	0.0046	0.0048	0.0043
pH (S.U.) Instantaneous Minimum	6.9	7.2	6.8	7.1	6.8	6.3	6.2	6.1	6.9	6.9	6.7	6.8
pH (S.U.) Instantaneous Maximum	8.0	7.9	8.0	7.5	7.9	8.1	7.9	8.6	7.8	8.0	8.0	7.9
DO (mg/L) Instantaneous Minimum	6.9	5.4	5.7	6.4	6.5	4.7	6.3	6.6	7.8	7.8	7.2	7.4
TRC (mg/L) Average Monthly	0.3	0.3	0.3	0.4	0.2	0.2	0.1	0.4	0.3	0.4	0.3	0.3
TRC (mg/L) Instantaneous Maximum	0.5	0.98	0.77	1.0	0.3	0.5	0.9	1.6	0.5	0.7	1.0	0.5
CBOD5 (lbs/day) Average Monthly	< 0.050	< 0.06	0.10	< 0.08	< 0.06	< 0.05	0.07	0.10	< 0.04	< 0.06	< 0.05	< 0.05
CBOD5 (mg/L) Average Monthly	< 2.0	< 2.6	4.1	< 2.8	< 2.4	< 2.1	2.6	4.6	< 2.0	< 2.0	< 2.0	< 2.2
TSS (lbs/day) Average Monthly	0.09	0.10	0.20	< 0.04	0.06	0.05	0.30	< 0.03	0.05	< 0.05	< 0.06	0.02
TSS (mg/L) Average Monthly	4.0	6.0	5	< 1.5	2.5	2.3	10	< 1.0	2.5	< 2.0	< 2.5	1
Fecal Coliform (No./100 ml) Geometric Mean	< 2	8	< 5	1051	< 22	77	< 15	245	< 2	< 2	< 2	< 6
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 2	10	11	2300	240	520	118	2000	< 2	< 2	< 2	18
Total Nitrogen (mg/L) Average Monthly	< 28.2	< 22.9	< 18.5	< 29.4	< 26.4	< 19.8	< 15.2	< 21.6	< 20.7	< 23.1	< 21.79	27.28

Ammonia (lbs/day) Average Monthly	0.001	0.004	0.003	0.002	0.007	0.002	0.007	0.002	0.002	< 0.0008	0.001	0.002
Ammonia (mg/L) Average Monthly	0.1	0.1	0.1	0.1	0.3	0.1	0.3	0.1	0.1	0.03	0.1	0.1
Total Phosphorus (lbs/day) Average Monthly	0.004	0.01	0.03	0.02	0.01	0.004	0.007	0.007	0.008	0.003	0.005	0.005
Total Phosphorus (mg/L) Average Monthly	0.2	0.5	0.9	0.7	0.5	0.2	0.3	0.2	0.4	0.1	0.2	0.3

### Compliance History

#### Effluent Violations for Outfall 001, from: December 1, 2023 To: October 31, 2024

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TRC	03/31/24	IMAX	1.6	mg/L	1.2	mg/L
Fecal Coliform	03/31/24	Geo Mean	245	No./100 ml	200	No./100 ml
Fecal Coliform	07/31/24	Geo Mean	1051	No./100 ml	200	No./100 ml
Fecal Coliform	07/31/24	IMAX	2300	No./100 ml	1000	No./100 ml
Fecal Coliform	03/31/24	IMAX	2000	No./100 ml	1000	No./100 ml

Development of Effluent Limitations				
Outfall No.	001	Design Flow (MGD)	.013	
Latitude	39° 53' 21.94"	Longitude	-75° 30' 38.58"	
Wastewater Description:	Treated 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 <sub>5</sub>	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)

The following are the recommended effluent limitations for the draft permit:

Parameter	Limit (mg/l)	SBC	Basis
CBOD5	25	Average Monthly	Previous WQM Model
TSS	30	Average Monthly	DRBC
NH3 as N (5-1 to 10-31)	10	Average Monthly	Previous WQM Model
NH3 as N (11-1 to 4-30)	20	Average Monthly	Seasonal limits
Phosphorus (5-1 to 10-31)	1.0	Average Monthly	BPJ
Phosphorus (11-1 to 4-30)	2.0	Average Monthly	Seasonal limit
Dissolved Oxygen	4.0	Inst. Min.	BPJ/SOP
TRC	0.5	Average Monthly	BAT
Fecal Coliform (CFU/100ml)	200 /1000	Geo. Mean/Inst. Max.	Ch. 93/DRBC
pH	6.0 to 9.0 SU at all times		Ch. 93
Total Nitrogen	Report	Average Monthly	SOP/data Collection
E. Coli*	Report	Inst. Max.	Ch. 92.a.

All these above limits are carried over from the existing permit except E. Coli.

\*E. Coli monitoring is included in the draft permit according to the DEP SOP guidance (Chapter 92.a.61). This is a new requirement and is consistent with the requirements of other similar discharges in the area.

### Anti-Backsliding

N/A

**Proposed Effluent Limitations and Monitoring Requirements**

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> 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	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	1.2	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	2.71	XXX	XXX	25	XXX	50	2/month	24-Hr Composite
Total Suspended Solids	3.25	XXX	XXX	30	XXX	60	2/month	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	2.1	XXX	XXX	20	XXX	40	2/month	24-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	1.0	XXX	XXX	10	XXX	20	2/month	24-Hr Composite
Total Phosphorus Nov 1 - Apr 30	0.21	XXX	XXX	2.0	XXX	4	2/month	24-Hr Composite
Total Phosphorus May 1 - Oct 31	0.10	XXX	XXX	1.0	XXX	2	2/month	24-Hr Composite