

Application Type Renewal
Facility Type Municipal
Major / Minor Minor

Application No. PA0058343
APS ID 1116317
Authorization ID 1489600

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	<u>Bedminster Municipal Authority</u>	Facility Name	<u>Bedminster STP</u>
Applicant Address	<u>442 Elephant Road</u> <u>Perkasie, PA 18944-4163</u>	Facility Address	<u>442 Elephant Road</u> <u>Perkasie, PA 18944</u>
Applicant Contact	<u>John Scully</u>	Facility Contact	<u>John Scully</u>
Applicant Phone	<u>(215) 766-2626</u>	Facility Phone	<u>(215) 766-2626</u>
Client ID	<u>25898</u>	Site ID	<u>245441</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Bedminster Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Bucks</u>
Date Application Received	<u>June 19, 2024</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted		If No, Reason	
Purpose of Application	<u>Permit Renewal</u>		

Summary of Review

The applicant requests renewal of an NPDES permit to discharge treated sewage into an UNT to Deep Run from the sewage treatment plant serving Bedminster Township, Bucks County. The sewage treatment plant will continue to discharge treated effluent to an UNT to Deep run via outfall 001, within the drainage area of Lower Delaware River Special Protection Waters (SPW).

The sewage treatment plant consists of an influent pump station, a fine screen, 2 influent flow equalization tanks, 2 sequential batch reactors (SBRs), 2 effluent flow equalization tanks, filtration, an Ultraviolet (UV) disinfection unit, 2 aerobic digesters of waste sludge.

Aluminum Sulfate (coagulant/Phosphorus Removal) and Soda Ash (pH adjustment) are listed in the application as wastewater treatment chemicals.

No plant upgrades are proposed at this renewal.

No industrial/commercial contributors to the sewer system.

eDMR review shows that the discharge is in compliance with the effluent limitations in the permit. No comments received from Operations Section.

Approve	Deny	Signatures	Date
X		<i>Sara Abraham</i> Sara Reji Abraham, E.I.T. / Project Manager	August 1, 2024
X		<i>Pravin Patel</i> Pravin C. Patel, P.E. / Environmental Engineer Manager	08/05/2024

Summary of Review

Since there have been no changes to the receiving stream, discharge, influent characteristics etc. the existing limitations are carried over to the draft permit. The treatment plant discharges treated sewage into UNT to Deep Run which then goes into Deep Run. The Deep Run, downstream of the confluence of UNT to Deep Run is not achieving aquatic uses per 2013 Department's stream survey (Currently eMap shows the stream is impaired for nutrients). Phosphorus limit was tightened to 0.5 mg/l in the 2014 permit renewal and remains same in this renewal.

Sludge use and disposal description and location(s): Sludge is hauled away and disposed at other facilities.

Current influent monitoring for BOD5, CBOD5 and TSS are continued to be in the draft permit based on Chapter 94 requirement and to check compliance with the 85% removal requirement for secondary treatment.

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:

Bedminster Township - June 12, 2024
Bucks County - June 12, 2024

Permit Conditions:

- A. No stormwater
- B. Acquire Necessary Property Rights
- C. Proper Sludge Disposal
- D. Chlorine Optimization
- E. Dry Stream Discharge
- F. Wastewater Associated with Oil and Gas Extraction
- G. Operator Notification
- H. Operations and maintenance plan
- I. SPW Discharge
- J. Hauled - in Waste Restrictions
- K. Compliance with Part A, Additional Requirements

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.302525
Latitude	40° 23' 39.73"	Longitude	-75° 12' 27.63"
Quad Name	Bedminster	Quad Code	1544
Wastewater Description:	Treated Sewage Effluent		
Receiving Waters	Unnamed Tributary to Deep Run (WWF)	Stream Code	03131
NHD Com ID	26030580	RMI	1.1
Watershed No.	2-D	Chapter 93 Class.	WWF

Treatment Facility Summary

Treatment Facility Name: Bedminster STP

WQM Permit No.	Issuance Date
0914402	7/11/2014

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Sequencing Batch Reactor W/Sol Removal	Ultraviolet	0.302
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Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.436	746	Not Overloaded		

Compliance History

DMR Data for Outfall 001 (from May 1, 2023 to April 30, 2024)

Parameter	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23
Flow (MGD) Average Monthly	0.298	0.295	0.23	0.292	0.308	0.173	0.159	0.191	0.156	0.181	0.145	0.186
pH (S.U.) Instantaneous Minimum	7.91	7.15	7.7	7.79	7.31	7.83	7.78	7.55	7.51	7.49	7.54	7.43
pH (S.U.) Instantaneous Maximum	8.63	8.48	8.37	8.21	8.0	8.09	8.28	8.2	7.98	8.12	8.21	8.04
DO (mg/L) Instantaneous Minimum	6.11	6.55	6.92	7.2	6.91	7.03	6.45	6.54	6.49	5.98	6.0	6.12
CBOD5 (lbs/day) Average Monthly	< 5	< 4	< 4	< 4	< 5	< 3	< 3	< 3	< 2	< 3	< 3	< 3
CBOD5 (lbs/day) Raw Sewage Influent Average Monthly	< 194	262	263	346	288	290	230	154	169	197	193	174
CBOD5 (lbs/day) Raw Sewage Influent Weekly Average	337	310	398	456	423	530	387	202	231	276	262	197
CBOD5 (lbs/day) Weekly Average	< 8	< 6	< 5	< 7	< 9	< 6	< 3	< 3	< 3	< 3	< 3	3
CBOD5 (mg/L) Average Monthly	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
CBOD5 (mg/L) Raw Sewage Influent Average Monthly	< 84.9	127.2	133.1	161	136	192	185	115.2	141.4	135.9	160	133.3
CBOD5 (mg/L) Raw Sewage Influent Weekly Average	144	171	202	201	208	223	320	153	172	183	236	164
CBOD5 (mg/L) Weekly Average	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.0

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Bedminster STP

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BOD5 (lbs/day) Raw Sewage Influent Average Monthly	289	292	359	430	388	331	274	174	197	218	213	224
BOD5 (lbs/day) Raw Sewage Influent Weekly Average	413	405	601	556	633	625	492	192	237	254	234	309
BOD5 (mg/L) Raw Sewage Influent Average Monthly	134.5	140.7	180	202	163	218	221	132.3	168	150	176	173
BOD5 (mg/L) Raw Sewage Influent Weekly Average	209	182	237	266	213	293	407	187	229	168	193	257
TSS (lbs/day) Average Monthly	< 7	< 5	< 5	< 2	< 3	< 2	< 2	< 2	< 1	< 2	< 2	< 1
TSS (lbs/day) Raw Sewage Influent Average Monthly	228	228	320	301	173	98	184	58	67	56	78	82
TSS (lbs/day) Raw Sewage Influent Weekly Average	428	378	946	535	358	213	469	83	75	82	85	130
TSS (lbs/day) Weekly Average	12	16	13	< 3	6	3	4	2	3	2	3	< 2
TSS (mg/L) Average Monthly	< 3.3	< 2.0	< 2.8	< 1.0	< 1.5	< 1.4	< 1.5	< 1.3	< 1.2	< 1.3	< 1.8	1.0
TSS (mg/L) Raw Sewage Influent Average Monthly	94	118	145	141	78	60	148	43	56	39	64	61
TSS (mg/L) Raw Sewage Influent Weekly Average	168	222	373	230	176	72	388	60	66	54	68	86
TSS (mg/L) Weekly Average	6.0	5.0	8.0	1.0	3.0	3.0	3.0	2.0	2.0	2.0	< 2.0	1.0
Total Dissolved Solids (mg/L) Average Monthly		549.85			557.85			639.92			656.38	
Fecal Coliform (No./100 ml) Geometric Mean	< 3.0	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0

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Fecal Coliform (No./100 ml) Instantaneous Maximum	10.0	< 2.0	< 2.0	< 11.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
UV Intensity (mW/cm ²) Instantaneous Minimum	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59	31.59
Nitrate-Nitrite (lbs/day) Average Monthly	< 8	< 7	< 11	< 10	< 11	< 11	< 10	< 9	< 7	< 7	< 4	< 3
Nitrate-Nitrite (mg/L) Average Monthly	< 4.0	< 4.0	< 6.0	< 5.0	< 5.0	< 7.0	< 7.0	< 7.0	< 6.0	< 5.0	< 3.0	< 2.0
Total Nitrogen (mg/L) Average Monthly	< 4.1	< 4.1	< 6.4	< 5.5	< 5.6	< 7.8	< 8.0	< 7.3	< 6.1	< 5.6	< 3.9	< 61.7
Ammonia (lbs/day) Average Monthly	0.3	0.2	< 0.06	< 0.09	< 0.2	< 0.04	< 0.04	< 0.03	< 0.2	< 0.03	< 0.08	< 0.06
Ammonia (mg/L) Average Monthly	0.2	0.1	0.03	< 0.03	< 0.1	< 0.02	< 0.03	< 0.03	< 0.2	< 0.02	< 0.1	< 0.1
Total Phosphorus (lbs/day) Average Monthly	0.40	0.30	0.50	0.80	0.30	0.30	0.50	0.50	0.40	0.50	0.50	0.40
Total Phosphorus (mg/L) Average Monthly	0.2	0.2	0.3	0.3	0.2	0.2	0.4	0.4	0.3	0.3	0.4	0.3

Compliance History

Development of Effluent Limitations

Outfall No. 001
Latitude 40° 23' 39.00"
Wastewater Description: Treated Sewage Effluent

Design Flow (MGD) .302525
Longitude -75° 12' 28.00"

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	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)

Following are the existing effluent Limitations:

Parameter	Average Monthly Limits (mg/l)	Basis
CBOD5 (05-01 to 10-31)	10	Previous WQM*
CBOD5 (11-01 to 4-30)	20	Previous WQM (seasonal)
Total Suspended Solids	10	Chapter 92a
Ammonia as N (05-01 to 10-31)	1.0	Previous WQM*
Ammonia as N (11-1 to 4-30)	2.0	Previous WQM (seasonal)
Nitrate-Nitrite as N	10	Chapter 92a
Phosphorus (5-1 to 10-31)	0.5	Chapter 92a
Phosphorus (11-1 to 4-30)	0.6	Chapter 92a
Fecal Coliform	200#/100 ml	Chapter 92a
Dissolved Oxygen	5.0 (minimum)	Previous WQM*
pH	6.0 – 9.0 SU at all times	Chapter 92a
UV Intensity (mW/cm ²)	Report	Chapter 92a
Total Dissolved Solids	Report	DRBC
Total Nitrogen	Report	Chapter 92a

These existing limits are recommended to carry over to the draft permit.

*Unable to locate previous WQM reports.

Anti-Backsliding

N/A

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.

Based on the submitted sampling results there are no other parameters of concern.

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" (386-0400-001), 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	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
CBOD5 Nov 1 - Apr 30	50	76	XXX	20.0	30.0	40	1/week	24-Hr Composite
CBOD5 Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
CBOD5 May 1 - Oct 31	25	38	XXX	10.0	15.0	20	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
TSS	25	38	XXX	10.0	15.0	20	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	200.0 Geo Mean	XXX	1000.0	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200.0 Geo Mean	XXX	1000.0	1/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
UV Intensity (mW/cm ²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Metered

Outfall 001 , Continued (from 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	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Nitrate-Nitrite	25	XXX	XXX	10.0	XXX	20	1/week	24-Hr Composite
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Ammonia Nov 1 - Apr 30	5	XXX	XXX	2.0	XXX	4	1/week	24-Hr Composite
Ammonia May 1 - Oct 31	2.5	XXX	XXX	1.0	XXX	2	1/week	24-Hr Composite
Total Phosphorus Nov 1 - Apr 30	1.51	XXX	XXX	0.6	XXX	1.2	1/week	24-Hr Composite
Total Phosphorus May 1 - Oct 31	1.26	XXX	XXX	0.5	XXX	1	1/week	24-Hr Composite