

Application Type Renewal
 Facility Type Non-Municipal
 Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0058408
 APS ID 1072463
 Authorization ID 1412210

Applicant and Facility Information

Applicant Name	<u>Rivercrest Homeowners Association</u>	Facility Name	<u>Rivercrest STP</u>
Applicant Address	<u>100 Rivercrest Drive</u> <u>Phoenixville, PA 19460</u>	Facility Address	<u>100 Rivercrest Drive</u> <u>Phoenixville, PA 19460</u>
Applicant Contact	<u>Faith Rosa</u>	Facility Contact	<u>Matt Landis</u>
Applicant Phone	<u>(610) 376-9162</u>	Facility Phone	<u>(610) 376-9162</u>
Client ID	<u>228004</u>	Site ID	<u>520095</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Upper Providence Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Montgomery</u>
Date Application Received	<u>October 3, 2022</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u></u>	If No, Reason	<u></u>
Purpose of Application	<u>Permit Renewal</u>		

Summary of Review

The applicant requests renewal of an NPDES permit to discharge treated sewage from Rivercrest STP serving Rivercrest Housing Community and Golf Course.

There are two outfalls at the site. Outfall 001 is discharging to UNT to Schuylkill River when on-site pond servicing golf course is at full capacity. Outfall 002 is the overflow from the on-site pond to Doe run (tributary to Perkiomen). The effluent is discharged into pond for golf course irrigation purpose and shall be utilized when pond has capacity. For both outfalls the sampling is conducted at the same monitoring point MP 101 which is located just after the UV treatment as the effluent enters the outfall pipe that leads to the outfalls.

There is a monitoring Point MP 101 created in the system in the past at which limits are coded. Location information of Outfall 001 is used for MP 101 too.

The STP consists of a bar screen, a monoflow grinder, an equalization tank, two aeration tanks, two final settling tanks, a two-cell dual media filter, UV disinfection, an effluent storage pond, and an aerobic digestion tank.

No upgrades are proposed over the next five years.

Review of edmps, shows the discharge is in compliance with the effluent limitations. No violations are reported in the DEP inspection report.

Since there are no changes in the quality and quantity of wastewaters, treatment units, stream designation etc... all of the existing limits are recommended to continue in the draft permit.

Approve	Deny	Signatures	Date
X		<i>Sara Abraham</i> Sara Reji Abraham, E.I.T. / Project Manager	December 2, 2022
X		<i>Pravin Patel</i> Pravin C. Patel, P.E. / Environmental Engineer Manager	12/02/2022

Summary of Review

For TDS, discharge concentrations are reported as 739 mg/l maximum and 633.13 mg/l average in the application. A quarterly monitoring for TDS is included in the draft permit. Monitoring for Total Nitrogen, E-Coli, and UV intensity is included in the draft permit according to DEP SOP. These are new requirements.

Sludge use and disposal description and location(s): hauling away to Pottstown WWTP

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:

Upper Providence Township - July 28, 2022
Montgomery County - July 21, 2022

Permit Conditions:

- A. No Stormwater
- B. Acquire Necessary Property Rights
- C. Proper Sludge Disposal
- D. Abandon STP if Public Sewers Become Available
- E. Notification of Responsible Operator
- F. Discharge to the Pond
- G. Fecal Coliform Reporting
- H. Solids Management

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>001</u>	Design Flow (MGD)	<u>.112</u>
Latitude	<u>40° 8' 57.64"</u>	Longitude	<u>-75° 29' 41.05"</u>
Quad Name	<u>Collegeville</u>	Quad Code	<u>1742</u>
Wastewater Description: <u>Treated Sewage Effluent</u>			
Receiving Waters	<u>Unnamed Tributary to Schuylkill River (WWF, MF)</u>	Stream Code	<u>00833</u>
NHD Com ID	<u>25966104</u>	RMI	<u>37.0</u>
Watershed No.	<u>3-D</u>	Chapter 93 Class.	<u>WWF, MF</u>
Assessment Status	<u>Attaining Use(s)</u>		

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>002</u>	Design Flow (MGD)	<u>.112</u>
Latitude	<u>40° 10' 4.68"</u>	Longitude	<u>-75° 29' 10.10"</u>
Quad Name	<u>Collegeville</u>	Quad Code	<u>1742</u>
Wastewater Description: <u>Treated Sewage Effluent</u>			
Receiving Waters	<u>Doe Run (TSF, MF)</u>	Stream Code	<u>01122</u>
NHD Com ID	<u>25966146</u>	RMI	<u>1.8</u>
Watershed No.	<u>3-E</u>	Chapter 93 Class.	<u>TSF</u>
Assessment Status	<u>Attaining Use(s)</u>		

Treatment Facility Summary				
Treatment Facility Name: River Crest STP				
WQM Permit No.		Issuance Date		
4601410		02/10/2005		
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Extended Aeration with Solids Removal	Ultraviolet	0.1126
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.1126		Not Overloaded	Aerobic Digestion	Other WWTP

Compliance History

DMR Data for Outfall 101 (from October 1, 2021 to September 30, 2022)

Parameter	SEP-22	AUG-22	JUL-22	JUN-22	MAY-22	APR-22	MAR-22	FEB-22	JAN-22	DEC-21	NOV-21	OCT-21
Flow (MGD) Average Monthly	0.062	0.056	0.059	0.067	0.075	0.076	0.067	0.076	0.078	0.065	0.064	0.065
Flow (MGD) Daily Maximum	0.096	0.077	0.078	0.095	0.116	0.103	0.095	0.134	0.110	0.088	0.088	0.088
pH (S.U.) Minimum	7.0	7.1	7.0	6.3	6.8	6.5	6.6	6.9	6.7	6.8	6.9	7.0
pH (S.U.) Maximum	7.7	7.6	7.6	7.9	8.0	7.8	7.6	7.4	7.4	7.5	7.6	7.8
DO (mg/L) Minimum	7.0	6.6	6.2	6.1	6.3	6.2	7.4	7.3	8.1	7.4	7.4	7.4
CBOD5 (lbs/day) Average Monthly	< 1.2	< 1.0	< 1.0	< 2.0	< 1.4	< 1.5	< 1.1	1.8	< 1.5	< 1.3	< 1.1	< 1.2
CBOD5 (lbs/day) Weekly Average	< 1	< 1	< 1	5	2	< 2	< 2	2	< 2	2	< 1	< 1
CBOD5 (mg/L) Average Monthly	< 2	< 2	< 2	< 3	< 2	< 2	< 2	3	< 2	< 2	< 2	< 2
CBOD5 (mg/L) Weekly Average	< 2	< 2	< 2	8	3	< 2	< 2	3	3	3	2	< 2
TSS (lbs/day) Average Monthly	1.2	< 0.6	0.7	< 2.1	1.3	< 0.8	< 0.6	< 1.0	< 0.7	< 0.8	< 0.6	< 0.6
TSS (lbs/day) Weekly Average	2	1	1	7	2	< 1	1	1	< 1	1	1	< 1
TSS (mg/L) Average Monthly	2	< 1	1	< 3	2	< 1	< 1	< 2	< 1	< 1	< 1	< 1
TSS (mg/L) Weekly Average	3	2	2	11	3	1	2	2	1	1	1	< 1
Fecal Coliform (CFU/100 ml) Geometric Mean	< 7	< 1	< 1	14	< 1	< 1	< 1	< 1	< 1	< 3	< 1	< 1
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	59	< 1	3	128	3	1	1	1	2	60	2	4
Ammonia (lbs/day) Average Monthly	< 0.06	< 0.1	< 0.05	< 0.06	< 0.07	< 0.08	< 0.05	< 0.07	< 0.07	< 0.06	< 0.1	< 0.1

**NPDES Permit Fact Sheet
Rivercrest STP**

NPDES Permit No. PA0058408

Ammonia (mg/L) Average Monthly	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1
Total Phosphorus (lbs/day) Average Monthly	3.3	2.65	2.94	3.66	3.96	3.68	2.32	2.81	3.05	3.59	2.72	3.09
Total Phosphorus (mg/L) Average Monthly	5.39	5.06	5.63	5.75	6.17	4.84	4.11	4.14	4.50	5.88	4.84	5.33

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .112
Latitude 40° 9' 15.00" **Longitude** -75° 29' 42.00"

Outfall No. 002
Latitude 40° 9' 34.00"

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 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)

Comments: TRC limit is not required as the facility uses UV system for disinfection.

Water Quality-Based Limitations

Parameter	Limit (mg/l)	SBC	Basis
CBOD ₅	10	Average Monthly	Existing limit *
TSS	10	Average Monthly	Existing limit*
DO	5.0	Inst. Min.	Existing limit*
Ammonia-Nitrogen	3.0	Average Monthly	Existing limit*
Total Phosphorus	Report	Average Monthly	Existing limit/Data collection
Total Nitrogen	Report	Average Monthly	Data collection/SOP
Fecal Coliform	200/1000	Geo Mean/I Max	Chapter 92.a & DRBC
E-Coli	Report	I Max	Chapter 92.a**
TDS	Report	Daily Max	Data Collection
UV intensity	Report	Daily Min.	SOP
pH	6.0 to 9.0 Std units at all times		Chapter 93

* Both outfalls discharge into dry/intermittent swale (from past records) and these limits were established based on the previous document # 391-2000-014 "Implementation Guidance for Evaluating wastewater Discharges to Drainage Swales and Ditches". Recommended to continue in the draft permit.

**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 dischargers in the area.

Best Professional Judgment (BPJ) Limitations

N/A

Anti-Backsliding

N/A

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 101, 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	Daily 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	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
CBOD5	9.3	14	XXX	10	15	20	1/week	24-Hr Composite
TSS	9.3	14	XXX	10	15	20	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	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	Measured
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Ammonia	3.0	XXX	XXX	3.0	XXX	6	1/week	24-Hr Composite
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite