

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

**NPDES PERMIT FACT SHEET  
INDIVIDUAL SEWAGE**

Application No. PA0050920  
 APS ID 1058052  
 Authorization ID 1387165

**Applicant and Facility Information**

Applicant Name	<u>Home Properties William Henry LLC</u>	Facility Name	<u>William Henry Apt STP</u>
Applicant Address	<u>999 Waterside Dr, Suite 2300</u> <u>Norfolk, VA, 23510</u>	Facility Address	<u>1086 West King Road</u> <u>Malvern, PA 19355</u>
Applicant Contact	<u>Zachary Baker</u>	Facility Contact	<u>Lynn Brown</u>
Applicant Phone	<u>(757) 390-3211</u>	Facility Phone	<u>(610) 644-1155</u>
Client ID	<u></u>	Site ID	<u>452212</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>East Whiteland Township</u>
Connection Status	<u></u>	County	<u>Chester</u>
Date Application Received	<u>February 11, 2022</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u></u>	If No, Reason	<u></u>
Purpose of Application	<u>.</u>		

**Summary of Review**

Harbor Group Management Company is requesting approval for the renewal of a National Pollutant Discharge Elimination System (NPDES) individual permit to discharge 69,000 gallons per day (gpd) of treated sewage from William Henry Apartment Sewage Treatment Plant (STP) to an unnamed tributary to Ridley Creek a designated High Quality – Trout Stocking Fishes (HQ – TSF) under Chapter 93 in watershed 3-G.

The wastewater treatment process includes influent to bar screen to EQ tanks, pumps to splitter box to two parallel aeration basin and clarifiers, pumps to sand filter and flows to chlorination baffled tanks and then de-chlorination is added prior to discharge.

Sodium Hypochlorite liquid is the type of disinfection that is being used.

The total sewage sludge / biosolids production within the facility for the previous is is 12.1 Dry Tons.

The receiving stream is classified as high-quality trout stocking fisheries and is impaired from stormwater. A review of last two years DMRs show compliance with the permit limits for most of the times. There is no change in the flow, stream designation, and influent quality therefore previous permit effluent limitations are carried over to the new permit.

The most recent inspection was conducted on 9/8/2021 and there wasn't any violation reported.

Draft permit is being recommended for approval on 7/8/2022.

Act 14 Notifications:

Approve	Deny	Signatures	Date
X		<i>Charley Yang</i> Charley Yang / NPDES Permit Section	July 8, 2022
X		<i>Pravin Patel</i> Pravin C. Patel, P.E. Environmental Engineer Manager	07/11/2022

**Summary of Review**

East Whiteland Township - December 3, 2021  
Chester County Health Department - December 3, 2021

Proposed Part C Conditions:

- I. Other Requirements
  - A. No Stormwater
  - B. Acquire Necessary Property Rights
  - C. Proper Sludge Disposal
  - D. Abandon STP When Municipal Sewers Available
  - E. Chlorine Minimization
  - F. Chlorine for Backup Disinfection
  - G. Operator Notification
  - H. Remedial Measures if Unsatisfactory Effluent
  - I. I-Max Limits
  - J. 2/Month Sampling
  - K. Maybe Subject to DRBC Limit
  - L. Comply with DRCB Docket

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)	.069
Latitude	40° 1' 30.19"	Longitude	-75° 33' 33.57"
Quad Name	Malvern	Quad Code	1841
Wastewater Description: Sewage Effluent			
Receiving Waters	Unnamed Tributary of Ridley Creek (HQ-TSF, MF)	Stream Code	00685
NHD Com ID	25601995	RMI	0.6
Drainage Area	0.2 mi <sup>2</sup>	Yield (cfs/mi <sup>2</sup> )	0.201
Q <sub>7-10</sub> Flow (cfs)	0.0402	Q <sub>7-10</sub> Basis	Pennsylvania StreamStats
Elevation (ft)		Slope (ft/ft)	3
Watershed No.	3-G	Chapter 93 Class.	HQ-TSF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	CAUSE UNKNOWN, FLOW REGIME MODIFICATION, SILTATION		
Source(s) of Impairment	URBAN RUNOFF/STORM SEWERS, URBAN RUNOFF/STORM SEWERS, URBAN RUNOFF/STORM SEWERS		
TMDL Status		Name	

Changes Since Last Permit Issuance: N/A

Treatment Facility Summary				
Treatment Facility Name: William Henry Apt STP				
<b>WQM Permit No.</b>	<b>Issuance Date</b>			
1506419	July 27, 2007			
<b>Waste Type</b>	<b>Degree of Treatment</b>	<b>Process Type</b>	<b>Disinfection</b>	<b>Avg Annual Flow (MGD)</b>
Sewage	Tertiary		Gas Chlorine	
<b>Hydraulic Capacity (MGD)</b>	<b>Organic Capacity (lbs/day)</b>	<b>Load Status</b>	<b>Biosolids Treatment</b>	<b>Biosolids Use/Disposal</b>
0.069		Not Overloaded		

Changes Since Last Permit Issuance: N/A

Other Comments:

Compliance History

DMR Data for Outfall 001 (from June 1, 2021 to May 31, 2022)

Parameter	MAY-22	APR-22	MAR-22	FEB-22	JAN-22	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21
Flow (MGD) Average Monthly	0.043	0.043	0.045	0.046	0.044	0.041	0.044	0.044	0.048	0.046	0.044	0.044
Flow (MGD) Daily Maximum	0.071	0.061	0.066	0.055	0.067	0.054	0.071	0.057	0.09	0.059	0.061	0.058
pH (S.U.) Instantaneous Minimum	6.8	6.5	7.3	6.6	7.2	7.3	7.0	6.7	6.4	6.7	6.6	6.2
pH (S.U.) Instantaneous Maximum	8.5	8.5	8.5	8.4	8.7	9.0	8.2	8.2	8.1	8.5	7.8	7.7
DO (mg/L) Minimum	6.0	6.1	6.8	6.2	6.7	6.0	6.1	6.0	6.2	6.0	6.2	6.1
TRC (mg/L) Average Monthly	0.06	0.06	0.06	0.06	0.05	0.06	0.06	0.06	0.06	0.05	0.05	0.05
TRC (mg/L) Instantaneous Maximum	0.1	0.06	0.06	0.06	0.1	0.06	0.06	0.06	0.1	0.1	0.06	0.06
CBOD5 (lbs/day) Average Monthly	< 0.7	< 0.7	1.2	< 2.2	< 0.9	< 0.7	< 1.3	< 0.8	1.6	< 1.0	< 0.9	< 0.6
CBOD5 (mg/L) Average Monthly	< 2	< 2	4	< 7.6	< 3	< 2.2	< 3	< 2	4	< 3	< 2.2	< 2
BOD5 (lbs/day) Influent   Average Monthly	72	75	60	67	85	52	84	85	71	76	67	70
BOD5 (mg/L) Influent   Average Monthly	219	205	173	230	250	169	207	227	178	207	181	193
TSS (lbs/day) Average Monthly	< 0.3	< 0.4	< 1.9	< 0.6	0.7	0.9	1.8	< 1.3	1.8	4.1	< 0.4	1.3
TSS (lbs/day) Influent   Average Monthly	40	50	55	40	62	37	55	66	49	40	37	39
TSS (mg/L) Average Monthly	< 1	< 1	< 6	< 2	2	3	5	< 3	5	13	< 1	4

**NPDES Permit Fact Sheet  
William Henry Apt STP**

**NPDES Permit No. PA0050920**

TSS (mg/L) Influent   Average Monthly	122	137	155	138	181	120	136	161	121	112	100	108
Total Dissolved Solids (mg/L) Average Quarterly			696			661			684			646
Fecal Coliform (No./100 ml) Average Monthly	< 2	< 2	< 2	< 2	< 2	< 2	< 23	16	8	< 2	< 2	< 4
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 2	< 2	< 2	< 2	< 2	3	260	25	21	< 2	< 2	10
Total Nitrogen (lbs/day) Average Monthly	2	3	12	10	13	10	14	< 12	8	9	9	7
Total Nitrogen (mg/L) Average Monthly	6	7.2	34	33	39	33	35	< 31	21	24	22	22
Ammonia (lbs/day) Average Monthly	0.2	0.4	0.6	0.5	< 0.2	< 0.1	0.2	< 0.02	0.5	< 0.1	0.3	0.1
Ammonia (mg/L) Average Monthly	0.5	1.2	1.9	1.7	< 0.6	< 0.2	0.6	< 0.05	1.2	< 0.2	0.8	0.5
Total Phosphorus (lbs/day) Average Monthly	0.1	0.2	0.1	0.04	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Total Phosphorus (mg/L) Average Monthly	0.4	0.7	0.4	0.14	0.2	0.4	0.3	0.3	0.4	0.7	0.4	0.6

**Compliance History**

**Effluent Violations for Outfall 001, from: July 1, 2021 To: May 31, 2022**

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TSS	08/31/21	Avg Mo	13	mg/L	10	mg/L
Total Phosphorus	04/30/22	Avg Mo	0.7	mg/L	.5	mg/L
Total Phosphorus	08/31/21	Avg Mo	0.7	mg/L	.5	mg/L

Summary of Inspections: No violation

Other Comments:



**Development of Effluent Limitations**

Outfall No. 001 Design Flow (MGD) .069  
 Latitude 40° 1' 30.38" Longitude -75° 33' 33.38"  
 Wastewater Description: 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)

Comments: [REDACTED]

**Water Quality-Based Limitations**

A "Reasonable Potential Analysis" (Attachment [REDACTED]) determined the following parameters were candidates for limitations: [REDACTED]

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
NH <sub>3</sub> (5/1 – 10/31)	1.8	Average Monthly	Previous WQM Model.
NH <sub>3</sub> (11/1 – 4/30)	5.4	Average Monthly	
Dissolved Oxygen	6.0	Instantaneous Minimum	Previous WQM Model.
Total Residual Chlorine	0.06	Average Monthly	TRC Spreadsheet

Comments: [REDACTED]

**Additional Considerations**

Twice per month Reporting requirement for Total Nitrogen was added in this permit renewal per DEP guidance. Additional Influent Reporting of Twice per month for BOD<sub>5</sub> and Total Suspended Solids was added to quantify the wastewater treatment plant removal efficiency. Quarterly reporting requirement for Total Dissolved Solids was added to this permit renewal per DRBC Docket No. D-1968-092 CP-3 Approved on May 8, 2013.






**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) <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
DO	XXX	XXX	6.0 Min Mo Avg	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.06	XXX	0.2	1/day	Grab
CBOD5 Nov 1 - Apr 30	8.6	XXX	XXX	15	XXX	30	2/month	24-Hr Composite
CBOD5 May 1 - Oct 31	5.8	XXX	XXX	10	XXX	20	2/month	24-Hr Composite
TSS	5.8	XXX	XXX	10	XXX	20	2/month	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	XXX	1000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200	XXX	1000	2/month	Grab
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	2/month	24-Hr Composite
Ammonia Nov 1 - Apr 30	3.1	XXX	XXX	5.4	XXX	10.8	2/month	24-Hr Composite
Ammonia May 1 - Oct 31	1.0	XXX	XXX	1.8	XXX	3.6	2/month	24-Hr Composite
Total Phosphorus	0.3	XXX	XXX	0.5	XXX	1	2/month	24-Hr Composite

Compliance Sampling Location: Outfall 1

Other Comments: 

Tools and References Used to Develop Permit	
<input type="checkbox"/>	WQM for Windows Model (see Attachment [redacted])
<input type="checkbox"/>	Toxics Management Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	TRC Model Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	Temperature Model Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
<input type="checkbox"/>	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
<input type="checkbox"/>	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
<input type="checkbox"/>	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
<input type="checkbox"/>	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
<input type="checkbox"/>	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
<input type="checkbox"/>	Pennsylvania CSO Policy, 385-2000-011, 9/08.
<input type="checkbox"/>	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
<input type="checkbox"/>	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
<input type="checkbox"/>	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
<input type="checkbox"/>	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
<input type="checkbox"/>	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
<input type="checkbox"/>	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
<input type="checkbox"/>	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
<input type="checkbox"/>	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
<input type="checkbox"/>	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
<input type="checkbox"/>	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
<input type="checkbox"/>	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
<input type="checkbox"/>	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
<input type="checkbox"/>	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
<input type="checkbox"/>	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
<input type="checkbox"/>	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
<input type="checkbox"/>	Design Stream Flows, 391-2000-023, 9/98.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
<input type="checkbox"/>	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
<input type="checkbox"/>	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
<input type="checkbox"/>	SOP: [redacted]
<input type="checkbox"/>	Other: [redacted]