Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

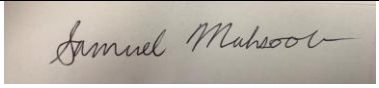
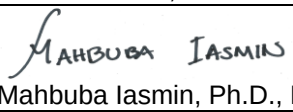
NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal and Transfer**	Application No.	**PA0094960**
Facility Type	**Non-Municipal**	APS ID	**1129085**
Major / Minor	**Minor**	Authorization ID	**1512706**

Applicant and Facility Information

Applicant Name	**Strabane Real Estate Holdings LLC**	Facility Name	**Barnes Apartments STP**
Applicant Contact	Christopher Cadez	Facility Address	Rte 519
Applicant Address	109 Cedar Lane		
	Houston, PA 15342-1201		
Applicant Phone	(724) 263-3197		Eighty Four, PA 15330
Client ID	396506	Facility Contact	
		Facility Phone	
Previous Client	Voislav Sajnoski		
Previous Client ID	307598	Site ID	248170
Previous Applicant Address	40 Van Winkle Avenue		
	Garfield, NJ 07026		
Ch 94 Load Status	Not Overloaded	Municipality	Somerset Township
Connection Status	No Limitations	County	Washington
Date Application Received	January 16, 2025	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Renewal and transfer for authorization of treated sewage discharge

Approve	Return	Deny	Signatures	Date
x			 Sam Mahsoob, EIT / Environmental Engineering Trainee	1/23/2026
x			 Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineer Manager	1/30/2026

Summary of Review

Overview

The previous permittee applied for renewal of the existing NPDES Permit, which was previously issued by the Department on 07/01/2020. The permit expired on 06/30/2025.

On 11/7/25, H&H applied to transfer the NDPES and WQM permits to Christopher Cadez of Strabane Real Estate Holdings LLC. The previous client has 3 open violations by client ID. The current permittee does not have any open violations by client ID.

This permit will be renewed and transferred in this cycle.

Facility

WQM Permit No. 6386414 approved construction of a STP with a design flow rate of 0.0023 MGD. The existing treatment process consists of an activated sludge plant followed by a settling tank, dosing tank, intermittent sand filtration, tablet chlorinator, and chlorine contact tank.

The receiving stream, Little Chartiers Creek, is classified as a High Quality – Warm Water Fishes (HQ-WWF), and is located in State Watershed No. 20-F.

The stream was designated as HQ in 1992, and the facility was constructed in 1986. Since the facility was constructed before the stream was designated as HQ, ABACT limits will not be imposed.

Compliance

Operations may seek a Corrective Enforcement Action for the facility. The facility has a history of non-compliance and many effluent violations reported in the DMRs.

As stated above, the previous client has 3 open violations by client ID. The current permittee does not have any open violations by client ID.

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)	.0023
Latitude	40º 10' 51.4"	Longitude	-80º 8' 9.2"
Quad Name	Washington East	Quad ID	40080B2
Wastewater Description:	Sewage Effluent		
Receiving Waters	Little Chartiers Creek (HQ-WWF)	Stream Code	36943
NHD Com ID	99424994	RMI	10.7
Drainage Area	21.9	Yield (cfs/mi^2)	.169
Q_{7-10} Flow (cfs)	.37	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	983	Slope (ft/ft)	.002
Watershed No.	19-B	Chapter 93 Class.	HQ-WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	**Chlordane, PCBs, Pesticides, Organics, Iron, Manganese, and Aluminum**		
Source(s) of Impairment	**Non-point sources and AMD**		
TMDL Status	**Final, Final**	Name	**Chartiers Creek, Chartiers Creek Watershed**

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake	WEST VIEW WATER AUTHORITY PWS ID: 5020043		
PWS Waters	Ohio River	Flow at Intake (cfs)	4730
PWS RMI	35	Distance from Outfall (mi)	40

Other Comments:

The discharge is to Little Chartiers Creek which flows into Chartiers Creek Watershed that has a Final TMDL and is impaired by PCB and Chlordane. No WLAs have been developed for this sewage discharge and they are not expected to contribute to the stream impairment for these pollutants.

The discharge is to UNT to Chartiers Creek which flows into the Chartiers Creek Watershed that has a Final TMDL and is impaired by metals and pH. This sewage discharge is not expected to contribute to stream impairment for which abandoned mine drainage is source of such impairment. No WLAs have been developed for this sewage discharge, and they are not expected to contribute to the stream impairment for these pollutants. eDMR data indicates in the past year that maximum concentration values for total aluminum, total iron, and total manganese were 0.04 mg/L, 0.25 mg/L, and 0.01 mg/L, which are below the criteria-based concentration values. 1/Year monitoring for these pollutants will be re-imposed and these pollutants will be re-evaluated at next renewal.

Treatment Facility Summary

Treatment Facility Name: Barnes Apartments STP

WQM Permit No.	Issuance Date
6386414	12/03/1986
6386414 T-1	10/04/2013

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary with NH3-N Removal	Activated Sludge	Tablet Chlorination	0.0023

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0023	4.379	Not Overloaded	N/A	Hauled to Monaca STP

Operations Compliance Check Summary Report

Facility: BARNES APTS STP
NPDES Permit No.: PA0094960
Compliance Review Period: 5/1/20-5/22/25
Inspection Summary:

INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC	INSPECTION COMMENT
09/26/2024	Compliance Evaluation	Violation(s) Noted	
08/08/2024	Compliance Evaluation	Violation(s) Noted	
08/07/2024	Administrative/File Review	No Violations Noted	An administrative file review from 10/31/21 to 8/1/24 revealed (28) effluent violations which will be notated on the 8.8.24 CEI report.
06/07/2022	Administrative/File Review	Violation(s) Noted	
02/02/2022	Administrative/File Review	Violation(s) Noted	
11/18/2021	Compliance Evaluation	Violation(s) Noted	
11/17/2021	Administrative/File Review	No Violations Noted	An administrative review from 6/30/21 to 11/17/21 revealed no effluent violations.
06/29/2021	Compliance Evaluation	Violation(s) Noted	
06/28/2021	Administrative/File Review	No Violations Noted	An administrative review revealed 5 effluent violations from 9/1/19 to 6/29/21 which have been notated on the 6.29.21 CEI report.

Violation Summary:

VIOLATION DATE	VIOLATION TYPE	VIOLATION TYPE DESC	RESOLVED DATE	VIOLATION COMMENT
09/26/2024	92A.44	NPDES - Violation of effluent limits in Part A of permit	05/22/2025	See comment section for detailed violations.
09/26/2024	92A.41(A)8	NPDES - Failure to provide information or records required by the permit or otherwise needed to determine compliance	05/22/2025	Copies of all paperwork should be emailed to owner or onsite operator and then placed into a binder so that they can be available during inspections to meet permit requirements. Upload lab analysis results (only pages with collection date and results). Bench sheets from onsite employee should also be placed in the binder to meet permit requirements.
09/26/2024	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	05/22/2025	Comminutor and sludge holding tank inoperable.
08/08/2024	92A.44	NPDES - Violation of effluent limits in Part A of permit	05/22/2025	See comment section for detailed violations.
08/08/2024	92A.41(A)8	NPDES - Failure to provide information or records required by the permit or otherwise needed to determine compliance	05/22/2025	Copies of all paperwork should be emailed to owner or onsite operator and then placed into a binder so that they can be available during inspections to meet permit requirements or upload the lab analysis results (only pages with collection date and results) as a minimum with the eDMR supplemental paperwork and everything will be in the DEP system for me to look at.
08/08/2024	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	05/22/2025	Comminutor inoperable.
06/07/2022	92A.62	NPDES - Failure to pay annual fee	09/12/2022	
02/02/2022	92A.44	NPDES - Violation of effluent limits in Part A of permit	02/02/2022	

11/18/2021	252.4(A)	NPDES - Failure to utilize an accredited environmental laboratory for testing or analysis of environmental samples	07/19/2022	On-site lab needs registered with the state since apartment maintenance worker takes daily pH, DO, and TRC readings. Calibration log needs to be maintained for these meters and kept in the blower room.
11/18/2021	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	07/19/2022	Comminutor inoperable.
06/29/2021	252.4(A)	NPDES - Failure to utilize an accredited environmental laboratory for testing or analysis of environmental samples	07/19/2022	On-site lab needs registered with the state since apartment maintenance worker takes daily pH, DO, and TRC readings. Calibration log needs to be maintained for these meters and kept in the blower room.
06/29/2021	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	07/19/2022	Comminutor inoperable, skimmer inoperable, and one of the sludge return lines inoperable.
06/29/2021	302.1201	Operator Certification - Operator failed to comply with the Act or Chapter 302 regulations	07/19/2022	There is no general work plan at the site.
06/29/2021	302.1201	Operator Certification - Operator failed to comply with the Act or Chapter 302 regulations	07/19/2022	There is no system specific management plan at the site.

Open Violations by Previous Client ID:

The previous client has 3 open violations.

Violation Summary:

VIOLATION DATE	VIOLATION TYPE	VIOLATION TYPE DESC
5/28/25	92A.44	NPDES - Violation of effluent limits in Part A of permit
5/28/25	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance
5/28/25	92A.41(A)5	Operator Certification - Operator failed to comply with the Act or Chapter 302 regulations

Enforcement Summary:

ENF TYPE	ENF TYPE DESC	EXECUTED DATE	VIOLATIONS	AMOUNT RECEIVED	ENF FINALSTATUS	ENF CLOSED DATE
NOV	Notice of Violation	11/04/2024	92A.41(A)5; 92A.41(A)8; 92A.44		Administrative Close Out	05/22/2025
NOV	Notice of Violation	08/12/2024	92A.41(A)5; 92A.41(A)8; 92A.44		Administrative Close Out	09/13/2024
NOV	Notice of Violation	09/07/2022	92A.62		Comply/Closed	09/12/2022

CACP	Consent Assessment of Civil Penalty	01/28/2022	92A.44	$8,000.00	Comply/Closed	02/02/2022

Effluent Violation Summary:

MON PD	PARAMETER	REPORTED VALUE	PERMIT LIMIT	UNIT	STAT_BASE_CODE	FACILITY COMMENTS
Mar-25	Ammonia-Nitrogen	29.6	9	mg/L	Average Monthly	
Mar-25	Ammonia-Nitrogen	30.2	18	mg/L	Instantaneous Maximum	
Mar-25	Total Phosphorus	8	6	mg/L	Average Monthly	
Feb-25	Ammonia-Nitrogen	18.8	9	mg/L	Average Monthly	
Feb-25	Ammonia-Nitrogen	19.9	18	mg/L	Instantaneous Maximum	
Feb-25	Carbonaceous Biochemical Oxygen Demand (CBOD5)	30.4	25	mg/L	Average Monthly	
Feb-25	Fecal Coliform	4815	2000	No./100 ml	Geometric Mean	
Feb-25	Total Suspended Solids	47	30	mg/L	Average Monthly	
Jan-25	Ammonia-Nitrogen	35.4	9	mg/L	Average Monthly	
Jan-25	Ammonia-Nitrogen	36.6	18	mg/L	Instantaneous Maximum	
Jan-25	Total Suspended Solids	34	30	mg/L	Average Monthly	
Jul-24	Ammonia-Nitrogen	28.4	3	mg/L	Average Monthly	
Jul-24	Ammonia-Nitrogen	41.2	6	mg/L	Instantaneous Maximum	
Jul-24	Fecal Coliform	17200	1000	No./100 ml	Instantaneous Maximum	
Jul-24	Fecal Coliform	2557	200	No./100 ml	Geometric Mean	
Jul-24	Total Phosphorus	17.2	6	mg/L	Average Monthly	
Jul-24	Total Phosphorus	20.6	12	mg/L	Instantaneous Maximum	
Jul-24	Total Suspended Solids	31	30	mg/L	Average Monthly	

Jun-24	Ammonia-Nitrogen	3.1	3	mg/L	Average Monthly	
Jun-24	Fecal Coliform	3666	200	No./100 ml	Geometric Mean	
Jun-24	Fecal Coliform	4800	1000	No./100 ml	Instantaneous Maximum	
Jun-24	Total Phosphorus	6.8	6	mg/L	Average Monthly	
May-24	Fecal Coliform	633	200	No./100 ml	Geometric Mean	Fecal coliform average exception due to chlorine tablet feeder malfunction, repairs are in progress.
Nov-23	Total Phosphorus	6.4	6	mg/L	Average Monthly	
Oct-23	Total Phosphorus	8.1	6	mg/L	Average Monthly	
Sep-23	Fecal Coliform	602	200	No./100 ml	Geometric Mean	
Sep-23	Total Phosphorus	11	6	mg/L	Average Monthly	
Sep-23	Total Phosphorus	12.6	12	mg/L	Instantaneous Maximum	
Aug-23	Ammonia-Nitrogen	3.2	3	mg/L	Average Monthly	
Aug-23	Total Phosphorus	11.1	6	mg/L	Average Monthly	
Aug-23	Total Phosphorus	12.6	12	mg/L	Instantaneous Maximum	
Jul-23	Ammonia-Nitrogen	3.6	3	mg/L	Average Monthly	
Jun-23	Fecal Coliform	1460	1000	No./100 ml	Instantaneous Maximum	
Jun-23	Fecal Coliform	529	200	No./100 ml	Geometric Mean	
Jun-23	Total Phosphorus	6.3	6	mg/L	Average Monthly	
May-23	Total Phosphorus	6.7	6	mg/L	Average Monthly	
Apr-23	Ammonia-Nitrogen	16.2	9	mg/L	Average Monthly	
May-22	Total Phosphorus	7.4	6	mg/L	Average Monthly	Phosphorus average exception due to influent BOD:NH3:Phos ratio (100:10:1) imbalance. Corrective measures are in progress to improve the ratio imbalance.
Apr-22	Ammonia-Nitrogen	22	9	mg/L	Average Monthly	Effluent exceptions due to a structural failure within the treatment plant. Corrective actions are in process.

Apr-22	Ammonia-Nitrogen	22.2	18	mg/L	Instantaneous Maximum	Effluent exceptions due to a structural failure within the treatment plant. Corrective actions are in process.
Apr-22	Fecal Coliform	5562	2000	No./100 ml	Geometric Mean	Effluent exceptions due to a structural failure within the treatment plant. Corrective actions are in process.
Apr-22	Total Suspended Solids	31.5	30	mg/L	Average Monthly	Effluent exceptions due to a structural failure within the treatment plant. Corrective actions are in process.
Mar-22	Ammonia-Nitrogen	16.6	9	mg/L	Average Monthly	Ammonia Nitrogen exceptions due to aeration blower malfunction and extreme weather resulting in freezing of the treatment units, corrective actions are in process.
Mar-22	Ammonia-Nitrogen	19.1	18	mg/L	Instantaneous Maximum	Ammonia Nitrogen exceptions due to aeration blower malfunction and extreme weather resulting in freezing of the treatment units, corrective actions are in process.
Feb-22	Ammonia-Nitrogen	21.5	9	mg/L	Average Monthly	Ammonia Nitrogen exceptions due to aeration blower malfunction and extreme weather resulting in freezing of the treatment units, corrective actions are in process.
Feb-22	Ammonia-Nitrogen	27.9	18	mg/L	Instantaneous Maximum	Ammonia Nitrogen exceptions due to aeration blower malfunction and extreme weather resulting in freezing of the treatment units, corrective actions are in process.
Apr-21	Total Phosphorus	6.2	6	mg/L	Average Monthly	Total Phosphorus exception due to influent BOD:NH3:Phos ratio (100:10:1) imbalance. Corrective measures are in progress to improve the ratio imbalance.
Feb-21	Ammonia-Nitrogen	11.1	9	mg/L	Average Monthly	TSS and Ammonia Nitrogen exceptions due to dosinging pump malfunction resulting from freezing temperatures. Repairs are in progress.
Feb-21	Total Suspended Solids	47	30	mg/L	Average Monthly	TSS and Ammonia Nitrogen exceptions due to dosinging pump malfunction resulting from freezing temperatures. Repairs are in progress.
Feb-21	Total Suspended Solids	62	60	mg/L	Instantaneous Maximum	TSS and Ammonia Nitrogen exceptions due to dosinging pump malfunction resulting from freezing temperatures. Repairs are in progress.

Compliance Status: The client has no open violations however enforcement is under evaluation for reoccurring effluent exceedances.
Completed by: Amanda Illar **Completed date:** 5/22/25

Compliance History

DMR Data for Outfall 001 (from March 1, 2024 to February 28, 2025)

Parameter	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24
Flow (MGD) Average Monthly	0.00007	0.00004	0.00004	0.00004	0.00004	0.00004	0.00003	0.00006	0.00007	0.00004	0.00007	0.00008
pH (S.U.) Instantaneous Minimum	7.3	7.3	7.3	7.1	7.1	7.2	7.2	7.2	7.1	7.1	7.0	6.3
pH (S.U.) Instantaneous Maximum	7.5	7.5	7.6	7.4	7.6	7.5	7.6	7.6	7.7	7.6	7.5	7.5
DO (mg/L) Instantaneous Minimum	5.3	5.3	5.0	5.4	5.4	5.3	5.2	5.1	5.1	5.1	5.1	5.0
TRC (mg/L) Average Monthly	0.5	0.5	0.5	0.5	0.46	0.41	0.45	0.49	0.46	0.45	0.48	0.46
TRC (mg/L) Instantaneous Maximum	0.6	0.6	0.6	0.6	0.60	0.49	0.58	0.61	0.59	0.57	0.57	0.59
CBOD5 (mg/L) Average Monthly	30.4	23.8	6.2	2.7	2.3	2.1	4.0	24.5	5.6	7.9	21.8	24.5
CBOD5 (mg/L) Instantaneous Maximum	32.1	34.1	6.8	2.8	2.6	2.1	6.0	42.7	6.0	11.3	46.1	36.2
TSS (mg/L) Average Monthly	47	34.0	5.0	5.0	5.0	6.5	15.0	31.0	7.5	25.5	23.0	18.5
TSS (mg/L) Instantaneous Maximum	60	60.0	5.0	5.0	5.0	8.0	25.0	44.0	9.0	46.0	28.0	25.0
Fecal Coliform (No./100 ml) Geometric Mean	4815	860	8	1	15	13	39	2557	3666	633	1163	551
Fecal Coliform (No./100 ml) Instantaneous Maximum	6100	4200	62	1	116	169	50	17200	4800	818	5200	2000
Total Nitrogen (mg/L) Daily Maximum			21.7									
Ammonia (mg/L) Average Monthly	18.8	35.4	8.8	4.7	0.8	1.3	3.0	28.4	3.1	2.3	8.6	2.5

Ammonia (mg/L) Instantaneous Maximum	19.9	36.6	10.5	9.0	0.9	1.8	4.8	41.2	4.5	2.7	15.0	3.7
Total Phosphorus (mg/L) Average Monthly	4.7	5.7	4.8	5.8	4.8	4.3	4.0	17.2	6.8	5.5	5.1	5.3
Total Phosphorus (mg/L) Instantaneous Maximum	4.9	6.1	5.0	6.9	6.4	7.4	4.2	20.6	7.5	6.2	6.9	5.4
Total Aluminum (mg/L) Daily Maximum			0.04									
Total Iron (mg/L) Daily Maximum			0.25									
Total Manganese (mg/L) Daily Maximum			0.01									

Compliance History

Effluent Violations for Outfall 001, from: April 1, 2024 To: February 28, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
CBOD5	02/28/25	Avg Mo	30.4	mg/L	25	mg/L
TSS	01/31/25	Avg Mo	34.0	mg/L	30	mg/L
TSS	07/31/24	Avg Mo	31.0	mg/L	30	mg/L
TSS	02/28/25	Avg Mo	47	mg/L	30	mg/L
Fecal Coliform	06/30/24	Geo Mean	3666	No./100 ml	200	No./100 ml
Fecal Coliform	07/31/24	Geo Mean	2557	No./100 ml	200	No./100 ml
Fecal Coliform	05/31/24	Geo Mean	633	No./100 ml	200	No./100 ml
Fecal Coliform	02/28/25	Geo Mean	4815	No./100 ml	2000	No./100 ml
Fecal Coliform	07/31/24	IMAX	17200	No./100 ml	1000	No./100 ml

Fecal Coliform	06/30/24	IMAX	4800	No./100 ml	1000	No./100 ml
Ammonia	02/28/25	Avg Mo	18.8	mg/L	9.0	mg/L
Ammonia	01/31/25	Avg Mo	35.4	mg/L	9.0	mg/L
Ammonia	07/31/24	Avg Mo	28.4	mg/L	3.0	mg/L
Ammonia	06/30/24	Avg Mo	3.1	mg/L	3.0	mg/L
Ammonia	01/31/25	IMAX	36.6	mg/L	18.0	mg/L
Ammonia	02/28/25	IMAX	19.9	mg/L	18.0	mg/L
Ammonia	07/31/24	IMAX	41.2	mg/L	6.0	mg/L
Total Phosphorus	06/30/24	Avg Mo	6.8	mg/L	6.0	mg/L
Total Phosphorus	07/31/24	Avg Mo	17.2	mg/L	6.0	mg/L
Total Phosphorus	07/31/24	IMAX	20.6	mg/L	12.0	mg/L

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .0023
Latitude 40º 10' 51.40" **Longitude** -80º 8' 9.20"
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
Flow	Report	Average Monthly	-	§§ 92a.27, 92a.61
Flow	Report	Max Daily	-	§§ 92a.27, 92a.61
$CBOD_5$	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)
Total Nitrogen	Report	Average Monthly	-	92a.61(7)
Total Phosphorus	Report	Average Monthly	-	92a.61(8)
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)
E. Coli (No./100 ml)	-	Report		93a.61(11)(12)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)
Total Residual Chlorine	1.6	IMAX	-	92a.47-48(3)(4)
Ammonia-Nitrogen	25	Average Monthly	-	BPJ (5)
Ammonia-Nitrogen	50	IMAX	-	BPJ (5)
Dissolved Oxygen	4.0	IMIN	-	BPJ (6)

Comments: The limits for CBOD5, TSS, pH, Total Nitrogen, and Fecal Coliform will be carried over from the previous permit.

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (See Attachments 4&5):

Parameter	Limit (mg/l)	SBC	Model
Ammonia-Nitrogen	25	Average Monthly	WQM 7.0
Ammonia-Nitrogen	50	IMAX	WQM 7.0
Dissolved Oxygen	4	IMIN	WQM 7.0
Total Residual Chlorine	0.500	Average Monthly	TRC_Calc
Total Residual Chlorine	1.635	IMAX	TRC_Calc

Comments: The limits for Ammonia-Nitrogen, Dissolved Oxygen, and Total Residual Chlorine will be carried over from the previous permit.

E. Coli

Sewage discharges will include monitoring, at a minimum, for *E. Coli*, in new and reissued permits, with a monitoring frequency of 1/year for design flows of 0.002 through 0.05 MGD.

(*Note 12 SOP-Establishing Effluent Limitations for Individual Sewage Permits Final November 9, 2012, Revised February 5, 2024, Version 2.0.* and *25 PA Code 92a.61(b).)*

Additional Considerations

Anti-Degradation

The receiving stream, Little Chartiers Creek, is classified as a High Quality – Warm Water Fishes (HQ-WWF), and is located in State Watershed No. 20-F.

The stream was designated as a HQ-WWF after the facility was constructed. Discharges in existence prior to the HQ or EV designation are "grandfathered" and considered to be part of the existing quality of the waterbody. "Grandfathered" flows are not subject to "the non-discharge alternatives/use of best technologies analysis" or SEJ (for HQ waters) in acknowledgment of the resources invested by municipal officials in planning for community sewage needs and corporate officials in equivalent planning to tailor treatment facilities to the wastewater volume and characteristics created by production/manufacturing processes

*391-0300-002, **"**Water Quality Antidegradation Implementation Guidance", November 29, 2003*

Phosphorous WLA

A Lake Phosphorus Study conducted by the Department in 1987 formed the basis for Canonsburg Lake appearing on Pennsylvania's 1996 303(d) list. The study was done to assess the potential effects of imposing Total Phosphorus (TP) effluent limits on phosphorus dischargers in the watershed. The study determined that Canonsburg Lake would realize

Table 8. WLAs for NPDES dischargers in Canonsburg Lake watershed

Permit #	Facility	Design Flow (mgd)	TMDL WLA (kg/yr)*
PA0030651	Canon-MacMillan School District	0.0088	97
PA0034818	Ametek, Inc	0.0015	17
PA0042579	Smith Machine STP	0.0015	17
PA0042587	MLM Enterprises STP	0.025	276
PA0091413	North Strabane Twp MSA/Eighty Four Industrial Park STP	0.035	387
PA0093262	Industrial Leasing Systems/BethEnergy Mines Division STP	0.002	22
PA0094960	William Barnes STP	0.0023	25
PA0097691	Lawrence and Brian Watson/Washington KOA Campgrounds STP	0.01	111
PA0098663	R.P. Woodhouse STP	0.009	100
PA0203955	84 Lumber Company STP	0.025	276
PA0203963	Washington Penn Plastics STP	0.0012	13
PA0217883	Encotech Incorporated STP	0.0003	3
TOTAL		0.1216	1,008

* Loads for dischargers assume TP concentration of 6 mg/l

only modest improvements in water quality with effluent limits because the overwhelming majority of the phosphorus load to the lake was delivered from nonpoint sourcesPermitted point source flows in the watershed have almost doubled since that time. A combined watershed modeling/lake water quality modeling approach was used to conduct a TMDL assessment for Canonsburg Lake in 2004. Barnes Apartments was assigned a total TMDL WLA of 25 kg/yr and a total phosphorous limit of 6 mg/L.

Total Maximum Daily Load (TMDL) Canonsburg Lake, Washington County, July 2004

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard of water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation. Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.

(40 CFR 122.44 (l)(2) Establishing limitations, standards, and other permit conditions., 40 CFR Ch. I (7-1-21 Edition))

No permits limits have been made less stringent in the renewal draft permit.

Effluent Multipliers

Section 2.C of the Permit Writers Manual contains the procedure for converting average monthly effluent limitations to average weekly, maximum daily, and instantaneous maximum effluent limitations. The average monthly limit is multiplied according to the following chart:

Discharge Solution	Parameters	Average Weekly	Maximum Daily	Instantaneous Maximum Multiplier
Sewage	All	1.5		2.0
Industrial	All		2.0	2.5*

(Department Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits, Updated June 28, 2023 (Document No. 362-0400-001))

Nutrient Monitoring

Nutrient monitoring is required by the SOP for Effluent Limitations for Individual Sewage Permits. Monitoring is included to establish the nutrient load from the wastewater treatment facility and the impacts that load may have on the quality of the receiving stream(s). The receiving stream is not listed as impaired for nutrients, therefore at the discretion of the application manager, a monitoring frequency less than the equivalent of conventional pollutants in Table 6-3 of the Permit Writer's Manual has been selected.

(*Section I.A, Note 7 & 8, SOP for Clean Water Program, Establishing Effluent Limitations for Individual Sewage Permits, Final November 9, 2012, Revised March 24, 2021, Version 1.9* and *25 PA Code 92a.61(b)*.)

Rounding Off

Section 5 C.2. of the Permit Writers Manual contains general guidelines for rounding conventional and toxic pollutants, with instructions to round down to the nearest decimal place indicated.

General Magnitude	Conventional Pollutants	Toxic Pollutants
<0.01	to nearest 0.001	to nearest 0.001
0.01 - 0.1	to nearest 0.01	to nearest 0.01
0.1 - 1.0	to nearest 0.1	to nearest 0.01
1.0 - 10.0	to nearest 0.5	to nearest 0.01
10.0 - 60.0	to nearest 1.0	to nearest 0.01
60.0 or greater	to nearest 5.0	to nearest 0.10

(Department Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits, Updated June 28, 2023 (Document No. 362-0400-001))

Table 6-3 – Self-Monitoring Requirements for SEWAGE Discharges

Plant Design Flow (MGD)	Flow Monitoring	C-BOD_5 or BOD_5	Suspended Solids	pH	Fecal Coliform	Chlorine Residual	NH_3-N	Phosphorus	DO	Toxics
Single Residence (Individual Permit)	2/year by estimate	2/year*	2/year*	1/month*	2/year*	1/month*	2/year*	2/year*	2/year*	N/A
.0005 to .002	weekly, using average pump rate or weir (a)	1/month*	1/month*	daily*	1/month*	daily*	1/month*	1/month*	daily*	N/A
.002 to .01	weekly, using average pump rate or weir (a)	2/month*	2/month*	daily*	2/month*	daily*	2/month*	2/month*	daily*	N/A
0.01 to 0.1	weekly, using average pump rate or weir (a)	2/month*	2/month*	daily*	2/month*	daily*	2/month*	2/month*	Daily*	1/week*
0.1 to 1.0	meter	1/week**	1/week**	daily*	1/week*	daily*	1/week**	1/week**	daily*	1/week****
1.0 to 5.0	meter	2/week***	2/week***	daily*	2/week*	daily*	2/week***	2/week***	daily*	1/week****
5.0 to 25.0	meter	daily***	daily***	daily*	daily*	1/shift*	daily***	daily***	daily*	1/week****
over 25.0	meter	daily***	daily***	1/shift*	daily*	1/shift*	1/shift***	1/shift***	1/shift*	1/week****

* Grab sample-these should be most representative of the effluent and are to be taken at a time when the normal daily maximum flow would reach the sampling point.

** 8-hour composite sample.

*** 24-hour composite sample.

**** Same sample type as for Industrial Process Wastewater (See Table 6-4).

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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	2/month	Measured
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
TRC	XXX	XXX	XXX	0.50	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	Grab
TSS	XXX	XXX	XXX	30	XXX	60	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	9.0	XXX	18.0	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	3.0	XXX	6.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	6.0	XXX	12.0	2/month	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Iron	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Total Manganese	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
E. Coli (No./100 mL)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab

Compliance Sampling Location: Outfall 001

Attachment 1 – TRC_Calc

TRC_CALC

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.0169	= Q stream (cfs)	0.5	= CV Daily
0.0023	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations		Reference	CFC Calculations	
TRC	1.3.2.iii	WLA afc =	1.534	1.3.2.iii	WLA cfc =	1.488
PENTOXSD TRG	5.1a	LTAMULT afc =	0.373	5.1c	LTAMULT cfc =	0.581
PENTOXSD TRG	5.1b	LTA_afc=	0.572	5.1d	LTA_cfc =	0.865

Source		Effluent Limit Calculations		
PENTOXSD TRG	5.1f	AML MULT =	1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) =	0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) =	1.635	

WLA afc	(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...
	...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...
	...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)

Attachment 2 – USGS StreamStats Report – Upstream

Attachment 3 – USGS StreamStats – Downstream

Attachment 4 – WQM 7.0 Model Summer

Attachment 5 – WQM 7.0 Model Winter