

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

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0094617 A-1
 APS ID 1055430
 Authorization ID 1382824

Applicant and Facility Information

Applicant Name	<u>Jones Estates Walnut Manor PA LLC</u>	Facility Name	<u>Walnut Manor MHP</u>
Applicant Address	<u>2310 S Miami Boulevard Suite 238 Durham, NC 27703-4900</u>	Facility Address	<u>State Road Lr26193 Smithfield, PA 15478</u>
Applicant Contact	<u>Kellen Buss</u>	Facility Contact	<u>John Foris</u>
Applicant Phone	<u>(419) 357-9091</u>	Facility Phone	<u>(412) 445-9145</u>
Client ID	<u>366823</u>	Site ID	<u>240011</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Georges Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Fayette</u>
Date Application Received	<u>November 15, 2021</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>February 24, 2022</u>	If No, Reason	<u></u>
Purpose of Application	<u>Application for Renewal and Transfer of an NPDES Permit for treated sewage.</u>		

Summary of Review

The permittee has applied for renewal of NPDES Permit No. PA0094617. NPDES Permit No. PA0094617 was previously issued by the PA Department of Environmental Protection on October 6, 2015 and expired October 31, 2020. A renewal application was submitted in a timely manner; therefore, the permit was granted an administrative extension. Since the renewal application was received, a transfer application was also received. The permit is being processed as a renewal and transfer.

This permit is being transferred from Mr. Timothy Strickland to Jones Estates Walnut Manor PA LLC. The associated WQM Permit No. 2684405 is also pending transfer upon approval from the department.

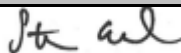
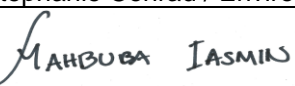
Sewage from this facility is treated by extended aeration, secondary clarification, and chlorine disinfection prior to discharge through Outfall 001 to Trib 41372 to York Run. The receiving stream is classified as a Warm Water Fishery (WWF) per Chapter 93 Designated Use.

The new permittee applied for eDMR registration along with the transfer application.

The applicant has complied with Act 14 Notifications and no comments were received.

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*,

Approve	Deny	Signatures	Date
X		 Stephanie Conrad / Environmental Engineering Specialist	March 14, 2022
x		 Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	May 2, 2022

Summary of Review

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.	<u>001</u>	Design Flow (MGD)	<u>.03</u>
Latitude	<u>39° 51' 3.4"</u>	Longitude	<u>-79° 49' 23.3"</u>
Quad Name	<u>Smithfield</u>	Quad Code	<u>2017</u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>Trib 41372 to York Run</u>	Stream Code	<u>41372</u>
NHD Com ID	<u>99416322</u>	RMI	<u>0.66</u>
Drainage Area	<u>0.16</u>	Yield (cfs/mi ²)	<u>0.0054</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.000864</u>	Q ₇₋₁₀ Basis	<u>USGS Stream Stats</u>
Elevation (ft)	<u></u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>19-G</u>	Chapter 93 Class.	<u>WWF</u>
Existing Use	<u></u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u></u>	Exceptions to Criteria	<u></u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>Metals</u>		
Source(s) of Impairment	<u>Acid Mine Drainage</u>		
TMDL Status	<u>Final</u>	Name	<u>York Run</u>
Background/Ambient Data		Data Source	
pH (SU)	<u></u>	<u></u>	
Temperature (°F)	<u></u>	<u></u>	
Hardness (mg/L)	<u></u>	<u></u>	
Other:	<u></u>	<u></u>	
Nearest Downstream Public Water Supply Intake	<u>Dunkard Valley JT Municipality Authorization</u>		
PWS Waters	<u>Monongahela</u>	Flow at Intake (MGD)	<u>0.25</u>
PWS RMI	<u>6.18</u>	Distance from Outfall (mi)	<u>15.42</u>

Changes Since Last Permit Issuance:

Other Comments:

Treatment Facility Summary				
Treatment Facility Name: Walnut Manor MHP WWTP				
WQM Permit No.		Issuance Date		
2684405		December 25, 1999		
2684405		January 16, 2009		
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Extended Aeration	Chlorine With Dechlorination	0.03
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.03	72.6	Not Overloaded	Dewatering	Other WWTP

Changes Since Last Permit Issuance: None

Other Comments:

Compliance History

Operations Compliance Check Summary Report

Facility: Strickland Estates STP

NPDES Permit No.: PA0094617

Compliance Review Period: 12/2016 – 12/2021

Inspection Summary:

INSP ID	INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC
3204808	06/11/2021	Compliance Evaluation	PA Dept of Environmental Protection	Pending
3185222	05/03/2021	Administrative/File Review	PA Dept of Environmental Protection	Administratively Closed
2583533	04/17/2017	Administrative/File Review	PA Dept of Environmental Protection	Violation(s) Noted
2610670	04/11/2017	Administrative/File Review	PA Dept of Environmental Protection	Violation(s) Noted

Violation Summary:

VIOL ID	VIOLATION DATE	VIOLATION TYPE	VIOLATION TYPE DESC	RESOLVED DATE
783263	04/17/2017	92A.41(A)12B	NPDES - Failure to submit monitoring report(s) or properly complete monitoring reports	04/18/2017
789649	04/11/2017	92A.61(G)	NPDES - Failure to use a format or process required by DEP for self-monitoring results	04/09/2018

Open Violations by Client ID:

No open violations for Client ID 64197

Enforcement Summary:

ENF ID	ENF TYPE	ENF TYPE DESC	ENF CREATION DATE	VIOLATIONS	ENF FINALSTATUS	ENF CLOSED DATE
356517	CACP	Consent Assessment of Civil Penalty	07/25/2017	92A.41(A)12B	Comply/Closed	07/20/2017
354801	NOV	Notice of Violation	07/05/2017	92A.61(G)	Comply/Closed	04/09/2018
352586	NOV	Notice of Violation	04/18/2017	92A.41(A)12B	Administrative Close Out	12/09/2019

DMR Violation Summary:

END_DATE	OF	PARAMETER	STAT_BASE_CODE	PERMIT VALUE	SAMPLE VALUE	UNIT OF MEASURE
11/30/2020	1	Carbonaceous Biochemical Oxygen Demand (CBOD5)	Average Monthly	10	14.4	mg/L
11/30/2020	1	Carbonaceous Biochemical Oxygen Demand (CBOD5)	Instantaneous Maximum	20	26.8	mg/L
4/30/2019	1	Ammonia-Nitrogen	Average Monthly	6	16.6	mg/L
4/30/2019	1	Ammonia-Nitrogen	Instantaneous Maximum	12	19.5	mg/L
4/30/2019	1	Fecal Coliform	Instantaneous Maximum	10000	164000	CFU/100 ml
4/30/2019	1	Fecal Coliform	Geometric Mean	2000	51861	CFU/100 ml

Compliance Status:

Permit issuance is suggested.

Completed by: John Murphy

Completed date: 12/22/2021

Compliance History

DMR Data for Outfall 001 (from December 1, 2020 to November 30, 2021)

Parameter	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20
Flow (MGD) Average Monthly			0.00100	0.00100	0.00100	0.00103	0.00090	0.00065	0.001	0.00090	0.00087	0.00080
pH (S.U.) Minimum			6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
pH (S.U.) Maximum			8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
DO (mg/L) Minimum			6.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	6.0
TRC (mg/L) Average Monthly			0.7	0.7	0.7	0.7	0.70	0.71	0.69	0.69	0.69	0.67
TRC (mg/L) Instantaneous Maximum			0.8	0.8	0.8	0.8	0.80	0.80	0.80	0.80	0.80	0.80
CBOD ₅ (mg/L) Average Monthly			2.0	2.5	2.0	2.4	2.0	2.0	2.0	4.1	2.0	2.0
CBOD ₅ (mg/L) Instantaneous Maximum			2.0	2.9	2.0	2.8	2.0	2.0	2.0	4.6	2.0	2.0
TSS (mg/L) Average Monthly			5.0	5.0	5.0	5.0	5.0	5.0	6.0	10.0	5.0	5.0
TSS (mg/L) Instantaneous Maximum			5.0	5.0	5.0	5.0	5.0	5.0	7.0	12.0	5.0	5.0
Fecal Coliform (CFU/100 ml) Geometric Mean			1	5	1	1	1	1	1	1	1	1
Fecal Coliform (CFU/100 ml) Instantaneous Maximum			2	26	2	1	1	1	1	1	2	2
Total Nitrogen (mg/L) Daily Maximum												4.69
Ammonia-Nitrogen (mg/L) Average Monthly			0.3	0.4	0.3	0.7	0.3	0.9	0.3	0.4	0.6	0.6
Ammonia-Nitrogen (mg/L) Instantaneous Maximum			0.3	0.6	0.4	0.9	0.3	1.1	0.5	0.7	0.7	0.7

Development of Effluent Limitations

Outfall No. <u>001</u>	Design Flow (MGD) <u>.03</u>
Latitude <u>39° 51' 5.94"</u>	Longitude <u>-79° 49' 19.90"</u>
Wastewater Description: <u>Sewage Effluent</u>	

Technology-Based Limitations (TBELs)

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)

Water Quality-Based Limitations (WQBELs)

Pursuant to EPA’s approval of Pennsylvania’s 2017 Triennial Review of Water Quality Standards and corresponding regulatory changes published in the *Pennsylvania Bulletin* on July 11, 2020 new water quality criteria for ammonia-nitrogen apply to waters of the commonwealth. Therefore, WQBELs for Outfall 001 are being re-evaluated even though there have been no changes to the STP.

The effluent was modeled using WQM 7.0 to evaluate the CBOD₅, ammonia-nitrogen, and Dissolved Oxygen (DO) parameters. Modeling confirmed that the previously imposed water quality based CBOD₅ limitations are appropriate. Modeling also determined that stricter ammonia-nitrogen limits are necessary to meet in-stream water quality criterion. WQM 7.0 output files are provided in Attachment A. In accordance with PADEP’s *Standard Operating Procedure (SOP) for the Clean Water Program-Establishing Effluent Limitations for Individual Sewage Permits* (SOP No. PCW-PMT-033, Version 1.0), winter ammonia-nitrogen limits are assessed by comparing the winter WQM 7.0 output value with one calculated from the summer limit using a seasonal multiplier of three. The more restrictive of the two values is then imposed. For this facility, the winter ammonia-nitrogen limit to be imposed is the value generated using WQM 7.0 modeling.

Total Residual Chlorine (TRC) was modeled with PADEP’s TRC Spreadsheet, and it was determined that a water quality based effluent limit is necessary to meet in-stream water quality criterion. The TRC Spreadsheet output file is provided in Attachment B.

The facility is receiving new, more restrictive TRC and ammonia-nitrogen limits. The facility as currently operating should be able to achieve the new, more restrictive ammonia-nitrogen limits. The facility as currently operating, however, is not able to meet the new, more restrictive TRC limit. Based on a compliance schedule provided by the permittee’s engineer, the facility is being given eighteen (18) months to comply with the new TRC limits. The compliance schedule provided by the facility’s engineer is included in Attachment D.

TRC modeling was conducted using default stream parameter values. Because of this, the permittee has the option to conduct a site-specific study in accordance with the Department’s guidance document *Implementation Guidance Total Residual Chlorine (TRC) Regulation*. If the permittee decides to conduct a site-specific study, then they shall notify DEP of

this within 60 days of permit issuance and submit the study results within 15 months of permit issuance. If the Department agrees that the study results in modification of the WQBELs, then the Department will initiate an amendment to the permit. Otherwise, the permittee must achieve compliance with the final TRC limits eighteen (18) months following the permit effective date.

Parameter	Limit (mg/l)	SBC	Model
Total Residual Chlorine	0.01	Average Monthly	TRC Spreadsheet
CBOD ₅	10.0	Average Monthly	WQM 7.0
Ammonia-Nitrogen November- April	3.0	Average Monthly	WQM 7.0
Ammonia-Nitrogen May- October	2.0	Average Monthly	WQM 7.0

York Run TMDL

Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's Water Quality Planning and Management Regulations (codified at Title 40 of the Code of Federal Regulations Part 130) require states to develop a TMDL for impaired water bodies. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding water quality criteria for the pollutant. TMDLs also provide a scientific basis for states to establish water quality-based controls for reducing pollution from both point and non-point sources in-order to restore and maintain the quality of the state's water resources (USEPA 1991a). Stream reaches within the York Run Watershed are included in the state's 2008 Section 303(d) because of metals impairment. A TMDL for this watershed was finalized on April 3, 2008 to address aluminum, iron, manganese, and pH associated with acid mine drainage and abandoned coal mines.

In accordance with 40 CFR § 122.44(d)(1)(vii)(B), when developing WQBELs, the permitting authority shall ensure that effluent limits are developed to protect a narrative water criteria, a numeric water quality criterion, or both, and are consistent with the assumptions and requirements of any available wasteload allocation (WLA) for the discharge.

The facility's original permit, PA0094617, pre-dates the finalization of the TMDL and was not identified in the TMDL nor assigned a WLA in the TMDL. The facility discharges treated sewage effluent which is not anticipated to contribute to the stream impairment and no limits or monitoring are being imposed because of this TMDL.

Best Professional Judgment (BPJ) Limitations

A Dissolved Oxygen minimum limitation of 4.0 mg/L will be implemented based on the standard in 25 PA Code Chapter 93 and best professional judgement.

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 40 CFR 122.44 **(I) Reissued permits. (1) Except as provided in paragraph (I)(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.**

The facility is not seeking to revise the previously permitted effluent limits.

Additional Considerations

Pursuant to EPA's approval of Pennsylvania's 2017 Triennial Review of Water Quality Standards and corresponding regulatory changes published in the *Pennsylvania Bulletin* on July 11, 2020, 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 – 0.05 MGD.

For pH, Dissolved Oxygen (DO), and TRC, a monitoring frequency of 1/day has been imposed.

Annual sampling for nitrogen and phosphorus will be imposed per 25 PA Code §92a.61.

Monitoring frequency for the proposed effluent limits are based upon Table 6-3, Self-Monitoring Requirements for Sewage Dischargers, from the Department's *Technical Guidance for the Development and Specification of Effluent Limitations*. Please note that no monitoring frequencies have changed from the previous permit.

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: Eighteen Months Following Permit Issuance 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		
TRC	XXX	XXX	XXX	0.01	XXX	0.03	1/day	Grab

Compliance Sampling Location: Outfall 001

Other Comments:

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the previous permit limits which are being reimposed during the compliance period that follows permit issuance. 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 Eighteen Months Following Permit Issuance.

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		
TRC	XXX	XXX	XXX	Report	XXX	Report	1/day	Grab

Compliance Sampling Location: Outfall 001

Other Comments:

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) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.03	XXX	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Avg Mo	XXX	XXX	XXX	1/day	Grab
CBOD ₅	XXX	XXX	XXX	10	XXX	20	2/month	Grab
TSS	XXX	XXX	XXX	25	XXX	50	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
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	3.0	XXX	6.0	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	2.0	XXX	4.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001

Other Comments:

ATTACHMENT A

WQM 7.0 Modeling Results

Permit No. PA0094617

Summer

Permit No. PA0094617

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19G	41372	Trib 41372 of York Run	0.660	1220.00	0.16	0.00000	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	Tributary		Stream	
	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	Temp (°C)	pH	Temp (°C)	pH
Q7-10	0.005	0.00	0.00	0.000	0.000	10.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Strickland Esta	PA0094617	0.0000	0.0300	0.0000	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	10.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	8.24	0.00	0.00
NH3-N	4.00	0.00	0.00	0.70

Permit No. PA0094617

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19G	41372	Trib 41372 of York Run	0.100	1040.00	0.59	0.00000	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary		Stream	
									Temp (°C)	pH	Temp (°C)	pH
Q7-10	0.005	0.00	0.00	0.000	0.000	10.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data							
Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00
Parameter Data							
Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)			
CBOD5	25.00	2.00	0.00	1.50			
Dissolved Oxygen	3.00	8.24	0.00	0.00			
NH3-N	25.00	0.00	0.00	0.70			

Permit No. PA0094617

WQM 7.0 Hydrodynamic Outputs

<u>SWP Basin</u>		<u>Stream Code</u>				<u>Stream Name</u>						
19G		41372				Trib 41372 of York Run						
RMI	Stream Flow	PWS With	Net Stream Flow	Disc Analysis Flow	Reach Slope	Depth	Width	W/D Ratio	Velocity	Reach Trav Time	Analysis Temp	Analysis pH
	(cfs)	(cfs)	(cfs)	(cfs)	(ft/ft)	(ft)	(ft)		(fps)	(days)	(°C)	
Q7-10 Flow												
0.660	0.00	0.00	0.00	.0464	0.06088	.34	1.99	5.85	0.07	0.489	20.09	7.00
Q1-10 Flow												
0.660	0.00	0.00	0.00	.0464	0.06088	NA	NA	NA	0.07	0.490	20.08	7.00
Q30-10 Flow												
0.660	0.00	0.00	0.00	.0464	0.06088	NA	NA	NA	0.07	0.487	20.12	7.00

Permit No. PA0094617

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	<input checked="" type="checkbox"/>
WLA Method	EMPR	Use Inputted W/D Ratio	<input type="checkbox"/>
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	<input type="checkbox"/>
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	<input checked="" type="checkbox"/>
D.O. Saturation	90.00%	Use Balanced Technology	<input checked="" type="checkbox"/>
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>	
19G	41372	Trib 41372 of York Run	

NH3-N Acute Allocations							
RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.660	Strickland Esta	16.68	8	16.68	8	0	0

NH3-N Chronic Allocations							
RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.660	Strickland Esta	1.87	1.92	1.87	1.92	0	0

Dissolved Oxygen Allocations									
RMI	Discharge Name	<u>CBOD5</u>		<u>NH3-N</u>		<u>Dissolved Oxygen</u>		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
0.66	Strickland Esta	10	10	1.92	1.92	5	5	0	0

Permit No. PA0094617

WQM 7.0 D.O.Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>		
19G	41372	Trib 41372 of York Run		
<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>	<u>Analysis pH</u>	
0.660	0.030	20.091	7.000	
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>	<u>Reach Velocity (fps)</u>	
1.987	0.340	5.849	0.070	
<u>Reach CBOD5 (mg/L)</u>	<u>Reach Kc (1/days)</u>	<u>Reach NH3-N (mg/L)</u>	<u>Reach Kn (1/days)</u>	
9.85	1.492	1.88	0.705	
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>	<u>Reach DO Goal (mg/L)</u>	
5.059	26.999	Owens	5	
<u>Reach Travel Time (days)</u>	<u>Subreach Results</u>			
0.489	<u>TravTime (days)</u>	<u>CBOD5 (mg/L)</u>	<u>NH3-N (mg/L)</u>	<u>D.O. (mg/L)</u>
	0.049	9.16	1.82	7.32
	0.098	8.51	1.76	7.96
	0.147	7.91	1.70	8.18
	0.195	7.35	1.64	8.23
	0.244	6.83	1.59	8.23
	0.293	6.35	1.53	8.23
	0.342	5.90	1.48	8.23
	0.391	5.49	1.43	8.23
	0.440	5.10	1.38	8.23
	0.489	4.74	1.34	8.23

Permit No. PA0094617

WQM 7.0 Effluent Limits

<u>SWP Basin</u>		<u>Stream Code</u>		<u>Stream Name</u>			
19G		41372		Trib 41372 of York Run			
RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Eff. Limit 30-day Ave. (mg/L)	Eff. Limit Maximum (mg/L)	Eff. Limit Minimum (mg/L)
0.660	Strickland Esta	PA0094617	0.000	CBOD5	10		
				NH3-N	1.92	3.84	
				Dissolved Oxygen			5

Permit No. PA0094617

Winter

Permit No. PA0094617

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19G	41372	Trib 41372 of York Run	0.660	1220.00	0.16	0.00000	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	Tributary		Stream	
	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	Temp (°C)	pH	Temp (°C)	pH
Q7-10	0.011	0.00	0.00	0.000	0.000	10.0	0.00	0.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data							
Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Strickland Esta	PA0094617	0.0000	0.0300	0.0000	0.000	15.00	7.00

Parameter Data					
Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)	
CBOD5	10.00	2.00	0.00	1.50	
Dissolved Oxygen	4.00	12.51	0.00	0.00	
NH3-N	4.00	0.00	0.00	0.70	

Permit No. PA0094617

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19G	41372	Trib 41372 of York Run	0.100	1040.00	0.59	0.00000	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	Tributary Temp	Tributary pH	Stream Temp	Stream pH
	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)	
Q7-10	0.011	0.00	0.00	0.000	0.000	10.0	0.00	0.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data							
Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00
Parameter Data							
Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)			
CBOD5	25.00	2.00	0.00	1.50			
Dissolved Oxygen	3.00	8.24	0.00	0.00			
NH3-N	25.00	0.00	0.00	0.70			

Permit No. PA0094617

WQM 7.0 Hydrodynamic Outputs

<u>SWP Basin</u>		<u>Stream Code</u>			<u>Stream Name</u>							
19G		41372			Trib 41372 of York Run							
RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
0.660	0.00	0.00	0.00	.0464	0.06088	.341	2	5.86	0.07	0.484	14.64	7.00
Q1-10 Flow												
0.660	0.00	0.00	0.00	.0464	0.06088	NA	NA	NA	0.07	0.487	14.77	7.00
Q30-10 Flow												
0.660	0.00	0.00	0.00	.0464	0.06088	NA	NA	NA	0.07	0.480	14.52	7.00

Permit No. PA0094617

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	<input checked="" type="checkbox"/>
WLA Method	EMPR	Use Inputted W/D Ratio	<input type="checkbox"/>
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	<input type="checkbox"/>
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	<input checked="" type="checkbox"/>
D.O. Saturation	90.00%	Use Balanced Technology	<input checked="" type="checkbox"/>
D.O. Goal	5		

Permit No. PA0094617

WQM 7.0 Wasteload Allocations

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>
19G	41372	Trib 41372 of York Run

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.660	Strickland Esta	24.1	8	24.1	8	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.660	Strickland Esta	2.69	2.82	2.69	2.82	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	<u>CBOD5</u>		<u>NH3-N</u>		<u>Dissolved Oxygen</u>		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
0.66	Strickland Esta	10	10	2.82	2.82	5	5	0	0

Permit No. PA0094617

WQM 7.0 D.O.Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>		
19G	41372	Trib 41372 of York Run		
<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>		<u>Analysis pH</u>
0.660	0.030	14.641		7.000
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>		<u>Reach Velocity (fps)</u>
1.996	0.341	5.857		0.071
<u>Reach CBOD5 (mg/L)</u>	<u>Reach Kc (1/days)</u>	<u>Reach NH3-N (mg/L)</u>		<u>Reach Kn (1/days)</u>
9.71	1.485	2.72		0.463
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>		<u>Reach UO Goal (mg/L)</u>
5.270	23.739	Owens		5
<u>Reach Travel Time (days)</u>	Subreach Results			
0.484	<u>TravTime (days)</u>	<u>CBOD5 (mg/L)</u>	<u>NH3-N (mg/L)</u>	<u>D.O. (mg/L)</u>
	0.048	9.18	2.66	7.99
	0.097	8.68	2.60	8.88
	0.145	8.21	2.54	9.16
	0.193	7.76	2.49	9.16
	0.242	7.34	2.43	9.16
	0.290	6.93	2.38	9.16
	0.339	6.56	2.33	9.16
	0.387	6.20	2.27	9.16
	0.435	5.86	2.22	9.16
	0.484	5.54	2.18	9.16

Permit No. PA0094617

WQM 7.0 Effluent Limits

<u>SWP Basin</u>		<u>Stream Code</u>	<u>Stream Name</u>				
19G		41372	Trib 41372 of York Run				
RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
0.660	Strickland Esta	PA0094617	0.000	CBOD5	10		
				NH3-N	2.62	5.64	
				Dissolved Oxygen			5

ATTACHMENT B

TRC Modeling Results

Permit No. PA0094617

TRC EVALUATION					
Input appropriate values in A3:A9 and D3:D9					
0.000864	= Q stream (cfs)		0.5	= CV Daily	
0.03	= 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/BJ 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 = 0.025		1.3.2.iii	WLA_cfc = 0.017
PENTOXSD TRG	5.1a	LTAMULT_afc = 0.373		5.1c	LTAMULT_cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc = 0.009		5.1d	LTA_cfc = 0.010
Source	Effluent Limit Calculations				
PENTOXSD TRG	5.1f	AML_MULT = 1.231			
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.011		AFC	
		INST MAX LIMIT (mg/l) = 0.037			
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 C

USGS Stream Stats Output

Permit No. PA0094617

Discharge Point

StreamStats Report

Region ID: PA
Workspace ID: PA20211025133719248000
Clicked Point (Latitude, Longitude): 39.85122, -79.82033
Time: 2021-10-25 09:37:47 -0400



Basin Characteristics			
Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.16	square miles
ELEV	Mean Basin Elevation	1218	feet
PRECIP	Mean Annual Precipitation	41	inches
FOREST	Percentage of area covered by forest	56.8671	percent
URBAN	Percentage of basin with urban development	0.2227	percent

Permit No. PA0094617

Low-Flow Statistics Disclaimers [Low Flow Region 4]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report [Low Flow Region 4]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.00352	ft ³ /s
30 Day 2 Year Low Flow	0.00741	ft ³ /s
7 Day 10 Year Low Flow	0.000864	ft ³ /s
30 Day 10 Year Low Flow	0.00213	ft ³ /s
90 Day 10 Year Low Flow	0.00477	ft ³ /s

Low-Flow Statistics Citations

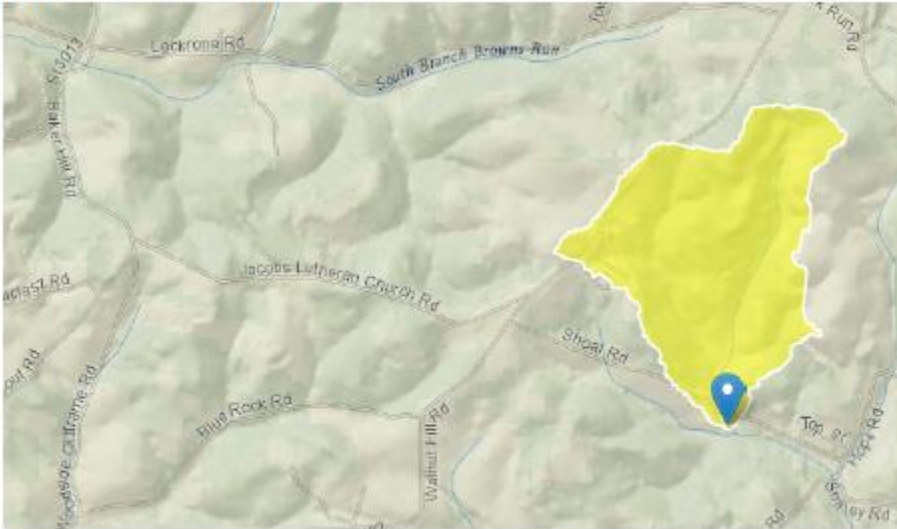
Stuckey, M.H., 2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (<http://pubs.usgs.gov/sir/2006/5130/>)

Permit No. PA0094617

Down Stream of Discharge

StreamStats Report

Region ID: PA
Workspace ID: PA20211025133927877000
Clicked Point (Latitude, Longitude): 39.84279, -79.81558
Time: 2021-10-25 09:39:47 -0400



Basin Characteristics			
Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.59	square miles
ELEV	Mean Basin Elevation	1185	feet

ATTACHMENT D

Proposed Compliance Schedule

Permit No. PA0094617

Walnut Manor STP, NPDES Permit No. PA0094617

Compliance Schedule

1.	<i>Feasibility study completion</i>	<i>May 31, 2023</i>
a		
2.	Final plan completion	June 30, 2023
a		
3.	Start construction	30-45 days from approval of final plan and dependent on delivery of equipment by manufacturer August 15, 2023
a		
4.	Construction progress report(s)	(August 31 st ,2023) See line 5
a		
5.	End construction	August 31 st , 2023
a		
6.	Compliance with effluent limitations	October 1 st ,2023