pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0080799**
Facility Type	**Municipal**	APS ID	**274650**
Major / Minor	**Minor**	Authorization ID	**1398166**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Newburg Hopewell Township Authority**	Facility Name	**Newburg Hopewell Township STP**
Applicant Address	PO Box 128	Facility Address	Reasner Lane
	Newburg, PA 17240-0128		Newburg, PA 17240
Applicant Contact	Michael Hensel	Facility Contact	Michael Hensel
Applicant Phone	(717) 423-6263	Facility Phone	(717) 423-6263
Client ID	40261	Site ID	251151
Ch 94 Load Status	Not Overloaded	Municipality	Hopewell Township
Connection Status	No Limitations	County	Cumberland
Date Application Received	June 1, 2022	EPA Waived?	No
Date Application Accepted	June 3, 2022	If No, Reason	, DEP Discretion
Purpose of Application	NPDES RENEWAL.		

Summary of Review

Newburg Hopewell Township Authority (NHTA) has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its NPDES permit. The permit was last reissued on October 5, 2017 and became effective on November 1, 2017. The permit expired on October 31, 2022.

Based on the review, it is recommended that the permit be drafted.

Sludge use and disposal description and location(s): Sludge is processed onsite prior to being land applied under PAG083598.

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.

Approve	Deny	Signatures	Date
X		Jinsu Kim Jinsu Kim / Environmental Engineering Specialist	August 9, 2023
X		Maria D. Bebenek for Daniel W. Martin, P.E. / Environmental Engineer Manager	September 11, 2023
X		Maria D. Bebenek Maria D. Bebenek, P.E. / Program Manager	September 11, 2023

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.072
Latitude	40º 8' 0.07"	Longitude	-77º 33' 18.10"
Quad Name	Newburg	Quad Code	1725
Wastewater Description:	Sewage Effluent		
Receiving Waters	Newburg Run (WWF)	Stream Code	10531
NHD Com ID	56408683	RMI	1.14
Drainage Area	4.94 sq.mi.	Yield (cfs/mi^2)	0.167
Q_{7-10} Flow (cfs)	0.825	Q_{7-10} Basis	USGS Gage 01570000
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-B	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	NUTRIENTS, SILTATION		
Source(s) of Impairment	AGRICULTURE, AGRICULTURE		
TMDL Status	Final	Name	Conodoguinet Creek Watershed
Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Drainage Area
The discharge is to Newburg Run at RM 1.14. A drainage area upstream of the discharge point is estimated to be 4.93 sq.mi. according to USGS StreamStats available at https://streamstats.usgs.gov/ss/.

Streamflow
USGS gage 01570000 on Conodoguinet Creek near Hogestown is located about 350' below the PA American Water Co. intake and is affected to some degree by the withdrawal. Recent stream flow retrievals resulted in a Q_{7-10} of 69.3 cfs at this gage for record period of 1971-2008. USGS split the record period to incorporate the PA American PWS intake. The average daily PWS withdrawal has been 6 MGD or 9.28 cfs according to Source Water Assessment Summary for Silver Spring Water Plant. This results in a total flow of 78.58 cfs at the gage after adjustment for the PWS intake.

Q_{7-10} runoff rate = (69.3 + 9.28)/470 = 0.167 cfs/mi^2.

Q_{30-10}:Q_{7-10} = 78.3/69.3 = 1.13:1

Q_{1-10}:Q_{7-10} = 63.1/69.3 = 0.91:1

Q_{7-10} = 0.167*4.94 = 0.825 cfs

Newburg Run
Under 25 Pa Code §93.9o, Newburg Run has a designated water use of warm water and migratory fishes (WWF, MF). No special protection water is therefore impacted by this discharge. The latest integrated water quality report finalized in 2020 shows that Newburg Run is impaired for nutrients and siltation as a result of agricultural activities. A TMDL was developed to address these impairments but no wasteload allocation (WLA) was assigned to this facility. Further details will be discussed later in this fact sheet.

Public Water Supply Intake
The fact sheet developed during the last permit renewal indicates that the nearest downstream PWS is Carlisle Borough in North Middleton Township at RMI 37.03, about 33 miles downstream of the discharge. The Q_{7-10} at the intake is about 62.47 cfs. The discharge will not impact the intake because of the distance, dilution, and effluent limits.

Treatment Facility Summary

Treatment Facility Name: Newburg Hopewell STP

WQM Permit No.	Issuance Date	Reason
2182405		New
2182405-04-1	11/19/2004	Construction of new influent pump station, distribution box, two 12-inch square steel clarifiers, and UV disinfection
2182405-06-1	03/21/2007	Organic rerate of the plant to 144 lbs BOD_5/day based on aeration capacity and the DWFM loading rate of 15 lbs BOD_5/day/1,000 cf of oxidation ditch volume. The chlorine contact tank was converted to aerobic digesters/bio-solids storage tank
2182405-09-1	03/23/2010	A rerate of the treatment plant to a design capacity of 0.072 MGD

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia And Phosphorus	Oxidation Ditch	Ultraviolet	0.072

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.072	144	Not Overloaded	Sludge Digester	Land Use

NHTA owns and operates a municipal wastewater treatment plant located at 2 Reasner Lane Newburg PA 17527 serving Newburg Borough and Hopewell Township. The facility is rated for 0.072 MGD as both annual average and hydraulic design capacity. The facility utilizes an oxidation ditch activated sludge treatment process consisting of influent pumping station, comminutor/bar screen unit, oxidation ditch, clarification, UV disinfection and outfall structure.

Sludge is processed through two (2) sludge holding tanks prior to being land applied under PAG083598.

Compliance History

Summary of DMRs:	A summary of past 12-month DMR is presented on the next page.
Summary of Inspections:	01/19/2022: Brandon Bettinger, DEP Water Quality Specialist, conducted an administrative inspection related to Chesapeake Bay nutrient monitoring. No violations noted. 12/09/2020: Michael Benham, former DEP Water Quality Specialist, conducted an administrative inspection related to Chesapeake Bay nutrient monitoring. No violations noted. 12/23/2019: Michael Benham conducted an administrative inspection related to Chesapeake Bay nutrient monitoring. The facility conducted sample collection less frequent than required by the permit. This was indicated as a violation. 11/27/2018: Michael Benham conducted a routine inspection and indicated that the permittee did not submit a sewage sludge management inventory as required by the permit. This was indicated as a violation.
Other Comments:	Since last reissuance, the facility had a number of permit violations. These violations are listed on page 7 of this fact sheet. DEP's database revealed that there is no open violation associated with this facility or permittee.

Effluent Data

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	0.086	0.0775	0.0722	0.0916	0.0635	0.0499	0.0647	0.0551	0.0881	0.0561	0.0590	0.0463
Flow (MGD) Daily Maximum	0.286	0.2107	0.1209	0.2449	0.1212	0.0705	0.2040	0.0984	0.2067	0.1936	0.1354	0.0593
pH (S.U.) Minimum	6.9	6.9	6.4	7.0	6.9	7.0	7.3	7.3	7.1	6.9	7.0	7.0
pH (S.U.) Maximum	7.8	7.6	7.5	7.7	7.7	8.0	7.7	8.0	7.9	7.8	7.5	8.0
DO (mg/L) Minimum	7.8	8.1	8.1	8.7	8.8	9.5	8.0	8.0	5.7	5.9	6.4	6.0
CBOD5 (lbs/day) Average Monthly	< 3	< 2	< 2	2	< 1	< 1	< 1.0	< 1	3	< 2	1	3
CBOD5 (lbs/day) Weekly Average	3	2	2	3	< 2	2	2.0	< 1	3	< 2	2	3
CBOD5 (mg/L) Average Monthly	< 4.8	< 3.6	< 3.0	5.0	< 3.0	< 3.8	< 3.2	< 3.0	5.4	< 3.3	3.5	6.8
CBOD5 (mg/L) Weekly Average	6.5	4.3	3.0	7	< 3.0	4.7	3.4	< 3.0	5.7	3.6	3.6	6.9
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	83	136	108	64	105	91	153	80	81	123	103	137
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	182	205	157	102	182	145	320	106	101	307	141	229
BOD5 (mg/L) Raw Sewage Influent Average Monthly	164	254	211	133	228	229	153.0	211	162	190	238	365
TSS (lbs/day) Average Monthly	< 1	< 2	< 1	4	1	3	1.0	0.9	3	2	4	2
TSS (lbs/day) Raw Sewage Influent Average Monthly	154	172	106	51	42	78	81	87	80	131	133	208
TSS (lbs/day) Raw Sewage Influent Daily Maximum	313	299	188	81	62	160	94	189	175	253	218	323
TSS (lbs/day) Weekly Average	2	3	1	5	1	5	1.0	1	3	2	5	3
TSS (mg/L) Average Monthly	< 2.0	3.4	< 2	8	2.0	7.6	3.1	2.4	5.8	3.3	10.2	6.7

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
TSS (mg/L) Raw Sewage Influent Average Monthly	308	312	213	106	90	190	81.0	229	169	226	302	556
TSS (mg/L) Weekly Average	2.4	5.2	2.4	13.2	2.0	11.6	3.2	3.2	7.2	4.0	15.2	8.8
Fecal Coliform (No./100 ml) Geometric Mean	< 10	< 10	< 10	< 20	< 10	< 10	< 10	< 18	< 10	< 10	< 10	< 10
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 10	< 10	< 10	41	< 10	< 10	< 10	31	< 10	< 10	10	< 10
UV Intensity (µw/cm²) Minimum	3.4	6.7	0.8	0.9	0.1	0.2	1.8	3.8	5.3	11.8	1.8	8.2
Nitrate-Nitrite (mg/L) Average Monthly	< 20.24	< 17.75	< 19.67	< 7.228	< 6.742	< 15.611	< 17.38	< 22.59	< 19.58	< 28.56	< 23.81	< 7.78
Nitrate-Nitrite (lbs) Total Monthly	< 360	< 11	< 321	< 102	< 99	< 6	< 239	< 275	< 275	< 412	< 284	< 94
Total Nitrogen (mg/L) Average Monthly	< 20.74	< 18.25	< 20.17	< 9.021	< 9.015	< 17.591	< 17.88	< 23.09	< 18.58	< 29.06	< 24.31	< 12.87
Total Nitrogen (lbs) Effluent Net Total Monthly	< 370	< 328	< 329	< 124	< 133	< 219	< 246	< 281	< 259	< 419	< 291	< 148
Total Nitrogen (lbs) Total Monthly	< 370	< 328	< 329	< 124	< 133	< 7	< 246	< 281	< 259	< 419	< 291	< 148
Total Nitrogen (lbs) Effluent Net Total Annual									< 3190			
Total Nitrogen (lbs) Total Annual									< 3190			
Ammonia (lbs/day) Average Monthly	< 0.06	< 0.06	< 0.05	< 0.5	0.9	0.7	< 0.05	< 0.04	< 0.05	< 0.05	< 0.04	1.7
Ammonia (mg/L) Average Monthly	< 0.1	< 0.10	< 0.1	< 1.1	1.9	1.9	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	4.7
Ammonia (lbs) Total Monthly	< 1.9	< 1.8	< 1.7	< 13	29.2	22.1	< 1.4	< 1.2	< 1.4	< 1.4	< 1.2	49.6
Ammonia (lbs) Total Annual									< 222			
TKN (mg/L) Average Monthly	< 0.5	< 0.5	< 0.5	< 1.793	2.273	< 1.98	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.14
TKN (lbs) Total Monthly	< 10	< 9	< 8	< 22	34	< 0.7	< 7.0	< 6	< 7	< 7	< 6	< 55

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
Total Phosphorus (lbs/day) Average Monthly	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.1
Total Phosphorus (mg/L) Average Monthly	0.5	0.4	0.4	0.3	0.2	0.5	0.5	0.8	0.6	0.8	1.0	0.4
Total Phosphorus (lbs) Effluent Net Total Monthly	9.4	6.9	6.1	4	3.1	6.6	7.0	9.7	8.9	12.5	13	3.9
Total Phosphorus (lbs) Total Monthly	9.4	6.9	6.1	4.0	3.1	6.6	7.0	9.7	8.9	12.5	13	3.9
Total Phosphorus (lbs) Effluent Net Total Annual									< 222			
Total Phosphorus (lbs) Total Annual									99			

Previous Effluent Violations Since October 2017

Date	Non Compliance Type	Description	PARAMETER	Sample Results	Limits	Units	SBC
1/24/2018	Sample collection less frequent than required	Other Violations	Total Nitrogen (Total Load, lbs)				
1/24/2018	Sample collection less frequent than required	Other Violations	Nitrate-Nitrite as N				
1/24/2018	Sample collection less frequent than required	Other Violations	Nitrate-Nitrite as N (Total Load, lbs)				
1/24/2018	Sample collection less frequent than required	Other Violations	Total Kjeldahl Nitrogen				
1/24/2018	Sample collection less frequent than required	Other Violations	Total Kjeldahl Nitrogen (Total Load, lbs)				
1/24/2018	Sample collection less frequent than required	Other Violations	Total Nitrogen				
1/24/2018	Sample collection less frequent than required	Other Violations	Total Nitrogen (Total Load, lbs)				
1/24/2018	Violation of permit condition	Effluent	Total Suspended Solids	34	30	mg/L	Average Monthly
3/28/2018	Late DMR Submission	Other Violations					
3/26/2018	Violation of permit condition	Effluent	Total Suspended Solids	25	18	lbs/day	Average Monthly
3/26/2018	Violation of permit condition	Effluent	Total Suspended Solids	30	27	lbs/day	Weekly Average
3/26/2018	Violation of permit condition	Effluent	Total Suspended Solids	32	30	mg/L	Average Monthly
5/23/2018	Violation of permit condition	Effluent	Total Phosphorus	1.1	.9	lbs/day	Average Monthly
5/23/2018	Violation of permit condition	Effluent	Total Suspended Solids	25	18	lbs/day	Average Monthly
5/23/2018	Violation of permit condition	Effluent	Total Suspended Solids	39	30	mg/L	Average Monthly
5/23/2018	Violation of permit condition	Effluent	Total Suspended Solids	40	27	lbs/day	Weekly Average
5/23/2018	Violation of permit condition	Effluent	Total Suspended Solids	50	45	mg/L	Weekly Average
6/25/2018	Violation of permit condition	Effluent	Total Suspended Solids	48	45	mg/L	Weekly Average
11/27/2019	Violation of permit condition	Effluent	Total Nitrogen (Total Load, lbs)	< 3410	3380	lbs	Total Annual
12/24/2018	Sample collection less frequent than required	Other Violations	Nitrate-Nitrite as N				
12/24/2018	Sample collection less frequent than required	Other Violations	Total Kjeldahl Nitrogen				
4/22/2019	Violation of permit condition	Effluent	Total Phosphorus	1.6	.9	lbs/day	Average Monthly
8/23/2019	Sample collection less frequent than required	Other Violations	Nitrate-Nitrite as N				
8/23/2019	Sample collection less frequent than required	Other Violations	Total Kjeldahl Nitrogen				
12/23/2019	Sample collection less frequent than required	Other Violations	Nitrate-Nitrite as N				
12/23/2019	Sample collection less frequent than required	Other Violations	Total Kjeldahl Nitrogen				
4/26/2021	Violation of permit condition	Effluent	Total Suspended Solids	143	27	lbs/day	Weekly Average
4/26/2021	Violation of permit condition	Effluent	Total Suspended Solids	166	30	mg/L	Average Monthly
4/26/2021	Violation of permit condition	Effluent	Total Suspended Solids	320	45	mg/L	Weekly Average
4/26/2021	Violation of permit condition	Effluent	Total Suspended Solids	78	18	lbs/day	Average Monthly
5/12/2022	Violation of permit condition	Other Violations					

Existing Effluent Limits and Monitoring Requirements

Tables below summarize effluent limits and monitoring requirements specified in the current permit.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	9.0 Max	XXX	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	15	24	XXX	25	40	50	2/month	8-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Suspended Solids	18	27	XXX	30	45	60	2/month	8-Hr Composite
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
Ultraviolet light intensity (µw/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
Ammonia-Nitrogen Nov 1 - Apr 30	10.8	XXX	XXX	18.0	XXX	XXX	2/month	8-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	3.6	XXX	XXX	6.0	XXX	12	2/month	8-Hr Composite
Total Phosphorus	0.9	XXX	XXX	2.0	XXX	4	2/month	8-Hr Composite

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs) [1]		Concentrations (mg/L)				Minimum [2] Measurement Frequency	Required Sample Type
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Net Total Nitrogen	Report	3380	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	325	XXX	XXX	XXX	XXX	1/month	Calculation

Development of Effluent Limitations and Monitoring Requirements

Outfall No. 001 **Design Flow (MGD)** .072
Latitude 40º 8' 0.08" **Longitude** -77º 33' 18.11"
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
$CBOD_5$	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)

Water Quality-Based Limitations

CBOD5, NH3-N and Dissolved Oxygen (DO)
WQM 7.0 version 1.0b is a water quality model designed to assist DEP to determine appropriate permit requirements for CBOD5, NH3-N and DO. DEP's technical guidance no. 391-2000-007 describes the technical methods contained in the model for conducting wasteload allocation analyses and for determining recommended limits for point source discharges. DEP recently updated this model (ver. 1.1) to include new ammonia criteria that has been approved by US EPA as part of the 2017 Triennial Review. The model was utilized, and the model output indicated that all existing requirements are still appropriate. Therefore, no changes are recommended.

Toxics
DEP's NPDES permit application for minor sewages (less than 1.0 MGD) requires samples of heavy metals including Total Copper, Total Lead, and Total Zinc when the facility receives industrial or commercial contributions. The application shows no sample results. Therefore, no toxic pollutants are determined to be pollutants of concern for this facility.

Best Professional Judgment (BPJ) Limitations

Dissolved Oxygen
A minimum of 5.0 mg/L for DO is an existing effluent limit and will remain unchanged in the draft permit as recommended by DEP's SOP. This requirement has also been assigned to other major sewage facilities in the region. 5.0 mg/L is taken directly from 25 Pa. Code § 93.7(a) and it is also determined to be appropriate according to water quality modeling.

Total Phosphorus
DEP's SOP no. BPNPSM-PMT-033 recommends monitoring requirements for Total Phosphorus all sewage facilities. In addition, this SOP also recommended an average monthly effluent limit of 2.0 mg/L if the receiving stream is impaired for nutrients. Therefore, the existing effluent limits of 2.0 mg/L (average monthly) and 4.0 mg/L (IMAX) will remain unchanged.

Additional Considerations

Flow Monitoring
The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR § 122.44(i)(1)(ii).

Influent BOD & TSS Monitoring
As a result of negotiation with EPA, the existing influent monitoring reporting requirement for TSS and BOD5 will be maintained in the draft permit. This requirement has been consistently assigned to all municipal wastewater treatment facilities.

Local Watershed TMDL
A TMDL was developed in December 2000 to address impairments identified within the Conodoguinet Creek watershed which includes the receiving stream, Newburg Run. The TMDL indicates that there is no WLA for this TMDL because there are no known point source(s). At this time, no WLA will be given to this facility. In case a TMDL is updated to establish a WLA for this facility, the permit will be reopened to include such WLA.

Chesapeake Bay TMDL
DEP's Phase III Watershed Implementation Plan (WIP) categorizes this facility as a phase 5 non-significant sewage facility that has a design flow less than 0.2 MGD but greater than 0.002 MGD. The current permit contains Cap Loads as the facility expansion (rerate) occurred from 0.055 MGD to 0.072 MGD. The current Supplement to Phase III WIP indicates that if phase 5 facilities choose to expand, the renewed or amended permits will contain Cap Loads based on the lesser of a) existing TN/TP concentrations at current design average annual flow or b) 7,306 lbs/yr TN and 974 lbs/yr TP. A review of previous records indicates that existing Cap Loads of 3,380 lbs/yr TN and 325 lbs/yr TP were developed based on the existing performance as shown below:

Total Nitrogen: Monthly average concentration: 25 mg/l, flow: 0.04445 MGD
Annual loading: 25 mg/l * 8.34 * 0.04445 MGD * 365 days/year = 3382.76 lbs/yr; rounded down to **3,380 lbs/year** per 362-0400-001 Chapter 5 Page 9

Total Phosphorus: Existing daily mass loading = 0.9 lbs/day
Annual cap load = 0.9 lbs/day * 365 days/yr = 328.5 lbs/year; rounded down to **325 lbs/yr** according to DEP's policy (362-0400-001).

The current Supplement to Phase III WIP includes these Cap Loads under "Non-Significant Dischargers with Cap Loads in NPDES Permits" table as shown below.

NPDES Permit No.	Facility	Latest Permit Issuance Date	Permit Expiration Date	Cap Load Compliance Start Date	TN Cap Load (lbs/yr)	TP Cap Load (lbs/yr)	TN Delivery Ratio	TP Delivery Ratio
PA0080799	Newburg Hopewell Joint Authority	10/5/2017	10/31/2022	11/1/2017	3380	325	0.951	0.436

These existing Cap Loads will therefore remain unchanged in the permit.

E. Coli Monitoring
DEP's SOP No. BCW-PMT-033 recommends under 25 Pa Code §92a.61 a routine monitoring for E. Coli in all new and reissued permits. Since the facility has now the annual average design flow of 0.072 MGD, a quarterly monitoring will be included in the permit.

Monitoring Frequency and Sample Type
Unless otherwise specified throughout this fact sheet, existing monitoring frequencies and sample types will remain unchanged in the permit.

Mass Loading Limitations
All effluent mass loading limits will be based on the formula: design flow x concentration limit x conversion factor of 8.34.

Antidegradation Requirements
All effluent limitations and monitoring requirements have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected.

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	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
CBOD5	15	24	XXX	25	40	50	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS	18	27	XXX	30	45	60	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
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
UV Intensity (µw/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
Ammonia Nov 1 - Apr 30	10.8	XXX	XXX	18.0	XXX	XXX	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	3.6	XXX	XXX	6.0	XXX	12	2/month	8-Hr Composite
Total Phosphorus	0.9	XXX	XXX	2.0	XXX	4	2/month	8-Hr Composite
E. Coli (No./100 mL)	XXX	XXX	XXX	XXX	XXX	Report	1/day	Grab

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, to comply with Pennsylvania's Chesapeake Bay Tributary Strategy.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Net Total Nitrogen	XXX	3380	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	XXX	325	XXX	XXX	XXX	XXX	1/month	Calculation

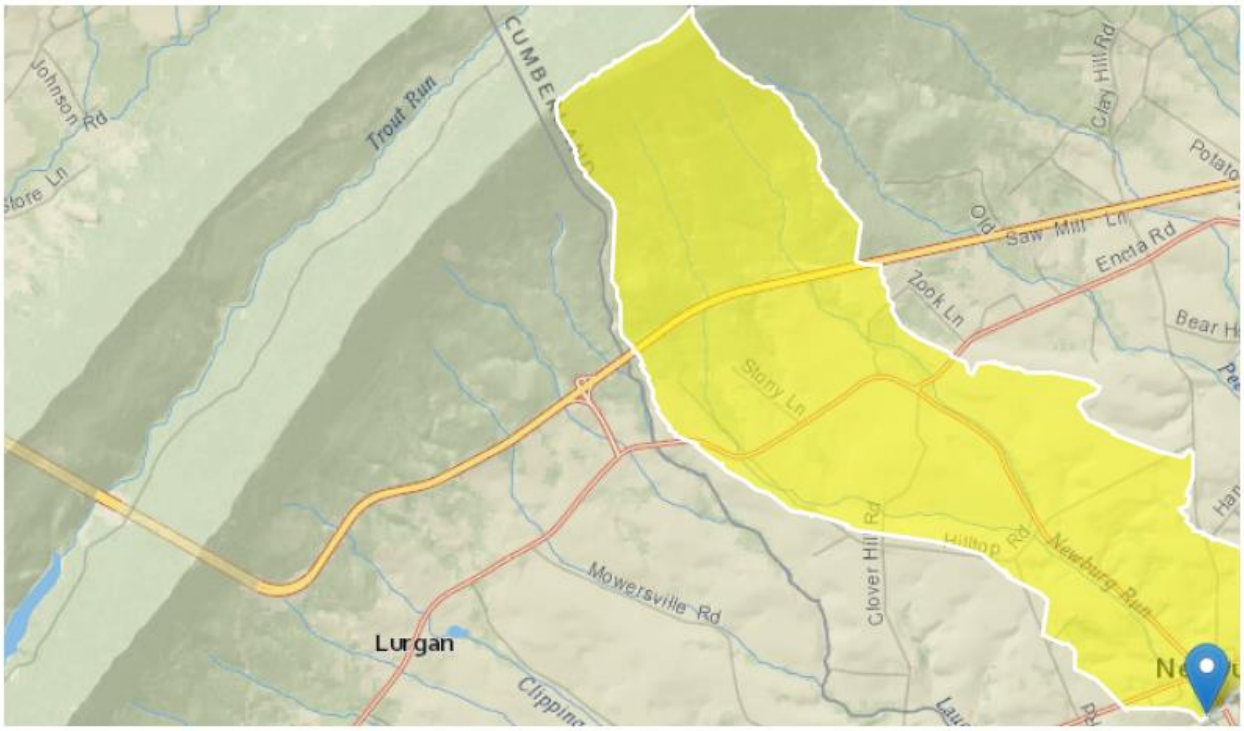
Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	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.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	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.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	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.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	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.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:

Attachments

1. StreamStats

StreamStats Report

Region ID: PA
Workspace ID: PA20220720132542268000
Clicked Point (Latitude, Longitude): 40.13381, -77.55627
Time: 2022-07-20 09:26:03 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	0	percent
DRNAREA	Area that drains to a point on a stream	4.93	square miles
PRECIP	Mean Annual Precipitation	39	inches
ROCKDEP	Depth to rock	3.7	feet
STRDEN	Stream Density -- total length of streams divided by drainage area	2.96	miles per square mile

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	4.93	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	39	inches	35	50.4
STRDEN	Stream Density	2.96	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	3.7	feet	3.32	5.65
CARBON	Percent Carbonate	0	percent	0	99

Low-Flow Statistics Flow Report [Low Flow Region 2]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	0.169	ft^3/s	38	38
30 Day 2 Year Low Flow	0.264	ft^3/s	33	33
7 Day 10 Year Low Flow	0.0545	ft^3/s	51	51
30 Day 10 Year Low Flow	0.0882	ft^3/s	46	46
90 Day 10 Year Low Flow	0.17	ft^3/s	36	36

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/)

2. WQM 7.0 ver. 1.1

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
	07B	10531	NEWBURG RUN	**1.140**	550.00	4.94	0.00000	0.00	☑

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 Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.167	0.00	0.00	0.000	0.000	0.0	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
Newburg STP	PA0080799	0.0720	0.0720	0.0720	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	5.00	8.24	0.00	0.00
NH3-N	6.00	0.00	0.00	0.70

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
07B	10531	NEWBURG RUN	**0.700**	538.00	5.26	0.00000	0.00	☑

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 Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.167	0.00	0.00	0.000	0.000	0.0	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

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
07B	10531	NEWBURG 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												
1.140	0.82	0.00	0.82	.1114	0.00517	.5	13.11	26.22	0.14	0.188	25.00	7.00
Q1-10 Flow												
1.140	0.75	0.00	0.75	.1114	0.00517	NA	NA	NA	0.14	0.197	25.00	7.00
Q30-10 Flow												
1.140	0.93	0.00	0.93	.1114	0.00517	NA	NA	NA	0.15	0.177	25.00	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.91	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.13	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
07B	10531	NEWBURG RUN

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
1.140	0.072	25.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
13.108	0.500	26.220	0.143
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
4.74	0.878	0.71	1.029
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.857	23.922	Owens	5
Reach Travel Time (days)			
0.188			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.019	4.64	0.70	7.54
0.038	4.54	0.69	7.54
0.056	4.45	0.67	7.54
0.075	4.36	0.66	7.54
0.094	4.27	0.65	7.54
0.113	4.18	0.64	7.54
0.132	4.09	0.62	7.54
0.151	4.01	0.61	7.54
0.169	3.93	0.60	7.54
0.188	3.85	0.59	7.54

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
07B	10531	NEWBURG 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
1.140	Newburg STP	11.07	12	11.07	12	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
1.140	Newburg STP	1.37	6	1.37	6	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
1.14	Newburg STP	25	25	6	6	5	5	0	0

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
07B	10531	NEWBURG 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)
1.140	Newburg STP	PA0080799	0.072	CBOD5	25		
				NH3-N	6	12	
				Dissolved Oxygen			5

3. Conodoguinet Creek Watershed TMDL

Total Maximum Daily Load
For the Conodoguinet Creek Watershed
Pennsylvania

Prepared for Pennsylvania
Department of Environmental Protection
and
EPA Region 3

Prepared by
Tetra Tech, Inc.
Fairfax, Virginia

December 2000

Executive Summary

The Conodoguinet Creek basin in Cumberland and Franklin counties in Pennsylvania is 507 square miles in size. The protected water uses of the watershed are water supply, recreation and aquatic life. The aquatic life uses for the western part of the main stem of Conodoguinet Creek (in Franklin County) are warm water fishes and cold water fishes. Many of the tributaries in the Conodoguinet Creek basin are specially designated for warm water fishes, cold water fishes, trout stocking, high-quality waters, and exceptional value waters.

Total Maximum Daily Loads (TMDLs) were developed for 16 named subwatersheds and 2 unnamed subwatersheds in the Conodoguinet Creek basin to address the impairments noted on Pennsylvania's 1996 and 1998 Clean Water Act section 303(d) lists. The segments were listed based on biological surveys of the aquatic life in the streams. The impairments are caused by excess nutrient and sediment loads from agriculture, construction, and urban runoff and storm sewers. The nutrient portion of the TMDLs focuses on control of phosphorus. Phosphorus is generally held to be the limiting nutrient in a waterbody when the nitrogen/phosphorus ratio exceeds 10 to 1. All the subwatersheds studied in the Conodoguinet Creek basin have nitrogen/phosphorus ratios far greater than 10 to 1.

Pennsylvania does not currently have numeric water quality criteria for sediment or phosphorus. For this reason, a reference watershed approach was developed to identify the TMDL endpoints or water quality objectives for phosphorus and sediment in the impaired segments of the Conodoguinet Creek basin. Through comparison of the impaired watersheds to similar nonimpaired watersheds, Pennsylvania estimated the amount of phosphorus and/or sediment loading that will meet the water quality objectives for subwatersheds in the Conodoguinet Creek basin, as shown in the table below.

The TMDLs are allocated to the agricultural and urban nonpoint sources, load allocations, or LAs, and 10 percent of the allowable loading is reserved as a margin of safety (MOS). There is only one wasteload allocation (WLA) for a point source in the Rowe Run watershed. The TMDLs cover a total of 119.21 miles of stream segments in the Conodoguinet Creek basin. The TMDLs establish a total reduction for phosphorus loading of 36 percent from the average yearly loading of 55,391 pounds and a total reduction in sediment loading of 32 percent from the average yearly loading of 64,178,593 pounds in the 18 subwatersheds.

TMDLs for Big Spring Creek and the main stem of Conodoguinet Creek were not included in this study. The Big Spring Creek watershed contains a fish hatchery (PA Fish Commission—Big Spring Hatchery [NPDES PA0009865]) that is a contributor of nutrients and oxygen demanding substances to the stream. The impairments in Big Spring Creek will first be addressed through changes to the fish hatchery's NPDES permit.

The TMDLs for Bulls Head Branch and Green Spring Creek pesticide listing and Trindle Spring Run priority organics listing were deferred until quantitative evidence of the presence of specific chemicals in the streams is available.

The TMDL for the main stem of Conodoguinet Creek will be developed at a later date, after further analysis of the point source contributions to the stream. Implementation of the proposed tributary watershed TMDLs will reduce phosphorus and sediment loads to the main stem by 9.8 percent and 11.3 percent, respectively.

TMDLs for Subwatersheds in the Conodoguinet Creek Basin

Listed Streams	Pollutant	TMDL (lb/yr)	LA (lb/yr)	WLA (lb/yr)	MOS (lb/yr)	Existing Load (lb/yr)	Load Reduction (lb/yr)	% Reduc-tion
Alexanders Spring Creek	Sediment	5,904,194	5,313,774	0	590,419	8,482,433	3,168,659	37%
Bulls Head Branch & Green Spring Creek*	Phosphorus	10,853	9,768	0	1,085	13,754	3,986	29%
	Sediment	8,279,005	7,451,105	0	827,901	9,314,545	1,863,440	20%
Center Creek & Back Creek*	Phosphorus	1,456	1,310	0	146	1,815	505	28%
	Sediment	1,059,531	953,578	0	105,953	1,370,464	416,886	30%
Clippingers Run	Phosphorus	1,026	923	0	103	1,395	472	34%
Hogestown Run	Phosphorus	7,133	6,419	0	713	9,855	3,436	35%
	Sediment	5,440,933	4,896,839	0	544,093	6,857,481	1,960,642	29%
Mains Run & Gum Run*	Sediment	1,705,742	1,535,168	0	170,574	2,124,970	589,802	28%
Middle Spring Creek	Sediment	2,532,681	2,279,413	0	253268	2,785,986	506,573	18%
Mount Rock Spring Creek	Phosphorus	9,953	8,958	0	995	14,673	5,715	39%
	Sediment	7,592,471	6,833,224	0	759,247	11,068,148	4,234,924	38%
Newburg Run	Phosphorus	1,315	1,183	0	131	1,523	340	22%
	Sediment	873,236	785,913	0	87,324	1,105,941	320,028	29%
Paxton Run	Sediment	1,179,690	1,061,721	0	117,969	1,554,607	492,886	32%
Rowe Run	Phosphorus	7,604	5,078	1,765	760	12,376	5,533	45%
	Sediment	5,800,318	5,220,286	0	580,032	8,283,209	3,062,923	37%
Trindle Spring Run	Sediment	5,377,457	4,839,711	0	537,746	5,890,754	1,051,043	18%
Wertz Run	Sediment	914,964	823,468	0	91,496	1,437,577	614,109	43%
Unnamed 970729-1605-JLR	Sediment	1,157,160	1,041,444	0	115,716	2,750,374	1,708,929	62%
Unnamed 7403	Sediment	655,966	590,369	0	65,597	1,152,104	561,735	49%
Total Phosphorus						**55,391**	**19,987**	**36%**
Total Sediment						**64,178,593**	**20,552,580**	**32%**

* Aggregated watershed

6.10 Proposed TMDLs for the Newburg Run Watershed

Newburg Run was listed on the 1998 303(d) list for nutrients and siltation. The total length of impaired stream segments was 5.24 miles. The location of the Newburg Run watershed is shown in Figure 2.1. Table 6.42 details the listed stream segments, miles degraded, sources, causes, and initial year listed.

Table 6.42 Year 1998 303(d) List: Newburg Run

Stream Code	Segment ID	Miles Degraded	Data Source	Source Code	Cause Code	Initial Year Listed
10531	970807-1115-JLR	5.24	Unassessed Project	Agriculture	Nutrients Siltation	1998

The sediment and nutrient TMDLs established for the Newburgh Run watershed consist of an LA and an MOS. There is no WLA for this TMDL because there are no known point source discharges in the watershed. The reference watershed for Newburg Run was Lehman Run. The TMDLs for the Newburg Run watershed are presented in Tables 6.43 through 6.45.

Table 6.43 TMDL computation for the Newburg Run watershed

Pollutant	Unit Area Loading Rate in Lehman Run (lb/ac/yr)	Total Watershed Area in Newburg Run (ac)	TMDL Value (lb/yr)
Phosphorus	0.36	3,635	1,315
Sediment	240.51	3,635	873,236

Table 6.44 Load allocation for the Newburg run watershed by land use/source

		Phosphorus				Sediment			
Source	Area (ac)	Unit Area Loading Rate (lb/ac/yr)	Annual average load (lb/yr)	LA (annual average) (lb/yr)	% Reduc-tion	Unit Area Loading Rate (lb/ac/yr)	Annual average load (lb/yr)	LA (annual average) (lb/yr)	% Reduct-ion
Hay/Past	1,216	0.18	224	177	21.0%	101.44	123,325	104,392.5	15.4%
Row Crops	1,203	0.79	954	662	30.5%	728.55	876,707	575,611.0	34.3%
Coniferous	5	0.00	0	0	0.0%	1.16	6	5.7	0.0%
Deciduous	1,151	0.08	94	94	0.0%	90.39	104,080	104,080.2	0.0%
Lo Int Dev	32	0.08	3	3	0.0%	38.91	1250	1,250.0	0.0%
Hi Int Dev	27	1.09	30	30	0.0%	21.09	573	573.0	0.0%
Groundwater			213	213					
Point Source			0	0					
Septic Systems			6	6					
Total	**3,635**	**0.42**	**1,523**	**1,183**	**22%**	**304.27**	**1,105,941**	**785,913**	**29%**

Table 6.45 TMDLs for the Newburg Run watershed

Pollutant	TMDL (lb/yr)	LA (lb/yr)	WLA (lb/yr)	MOS (lb/yr)
Phosphorus	1,315	1,183	0	131
Sediment	873,236	785,913	0	87,324