

Application Type Renewal Facility Type Municipal Major / Minor Minor

Purpose of Application

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application No.	PA0024651
APS ID	1029800
Authorization ID	1338542

Applicant and Facility Information

Applicant Name	Atglen Borough Sewer Authority Chester County	Facility Name	Atglen Borough Municipal Authority STP
Applicant Address	120 West Main Street P O Box 250	Facility Address	120 Main Street
	Atglen, PA 19310-0250		Atglen, PA 19310
Applicant Contact	Caren Andrews	Facility Contact	Bryan Umble
Applicant Phone	(610) 593-6854	Facility Phone	(610) 593-6854
Client ID	75317	Site ID	457781
Ch 94 Load Status	Not Overloaded	Municipality	Atglen Borough
Connection Status	No Limitations	County	Chester
Date Application Rece	eivedDecember 11, 2020	EPA Waived?	No
Date Application Acce	pted	If No, Reason	Chesapeake Bay TMDL – non-significant

Summary of Review

The permittee has submitted a renewal application for NPDES permit to discharge treated sewage from their facility to Valley Creek (TSF, MF) through Outfall 001.

The facility is serving Atglen Borough with population of 1.381 people. One industrial user is listed: Irving Textile which contributes sanitary wastewater.

Permit Renewal.

The flow is pumped to fine screen, then goes into 2 SBRs. UV is used as disinfection.

Listed annual ave. flow is 0.155 MGD, hydraulic capacity is 0.202 MGD and organic capacity is 520 lbs/day.

DEP has conducted a site visit on 07/14/2021. No issues in operation of the facility are noted.

On December 29, 2010, the U.S. Environmental Protection Agency established the Chesapeake Bay Total Maximum Daily Load (CB TMDL). The Appendix Q of the CB TMDL lists this facility as a non-significant discharger - Phase 5 sewage facility. According to CB Watershed Implementation Plan revised September 13, 2021: Cap Loads of 7,306 lbs/yr for Total Nitrogen (TN) and 974 lbs/yr for Total Phosphorous loadings are listed for this discharge

and they were established as limits in previous permits (see p. 7 of this factsheet - Development of Effluent Limitations).

<u>E,Coli</u> quarterly monitoring for is added for collecting data based on new PA requirements. PA Code § 92a.61 requires IMAX reporting of E. Coli. Per DEP's SOP No. BCW-PMT-033, sewage dischargers with a design flows >= 0.05 and < 1 MGD will include E. Coli monitoring with a frequency of 1/quarter. This parameter has been added to the renewal permit.

Therefore, previously established effluent limits and monitoring requirements are still in effect since there are no changes in effluent characteristics except monitoring for E.Coli. Outfall 001's proposed effluent limits are listed on p. 7.

Approve	Deny	Signatures	Date
х		Begay Gmuralieva Begay Omuralieva / Environmental Engineering Specialist	February 17, 2022
х		<i>Pravin Patel</i> Pravin C. Patel, P.E. / Environmental Engineer Manager	02/18/2022

Summary of Review

Sludge use and disposal description and location(s): Exeter WWTF & Coatesville WWTF

<u>Act 14 Notifications:</u> Chester County Planning Commission and Atglen Borough were notified with notes dated November 18, 2020.

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 Info	ormation	
Outfall No. 001		Design Flow (MGD)	.155
Latitude 39° 56	6' 34.32"	Longitude	-75 58' 17.58"
Quad Name Par	kesburg	Quad Code	1938
Wastewater Descrip	tion: Sewage Effluent	_	
Receiving Waters	Valley Creek (TSF, MF)	Stream Code	07131
NHD Com ID	57465301	RMI	0.8
Drainage Area	10.2	Yield (cfs/mi ²)	0.18
Q7-10 Flow (cfs)	0.9	Q ₇₋₁₀ Basis	USGS Streamstat
Elevation (ft)	445	Slope (ft/ft)	
Watershed No.	7-K	Chapter 93 Class.	TSF, MF
Existing Use	TSF, MF	Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairm	nent SILTATION		
Source(s) of Impairr	nent AGRICULTURE		
	Tentative/		eek Watershed TMDL/
TMDL Status	final	Name Chesapeake	Bay TMDL
Nevert			
	m Public Water Supply Intake	Chester Water Authority	
	Octorara Creek	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: no changes

	Tre	atment Facility Summa	ry	
reatment Facility Na	me: Atglen Borough STP			
WQM Permit No.	Issuance Date			
1512414	12/14/2012			
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
waste Type	Secondary With	The second secon	Disimection	
	Ammonia And	Sequencing Batch		
Sewage	Phosphorus	Reactor	Ultraviolet	0.155
Ocwage				
Ocwage	· · ·			
			· ·	
<u>v</u>	Organic Capacity			Biosolids
Hydraulic Capacity (MGD)	Organic Capacity (Ibs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposa

Changes Since Last Permit Issuance: none

Compliance History

Parameter DEC-21 NOV-21 SEP-21 JUL-21 **MAY-21** APR-21 **MAR-21 OCT-21** AUG-21 **JUN-21 FEB-21** JAN-21 Flow (MGD) Average Monthly 0.071 0.076 0.076 0.084 0.075 0.074 0.085 0.078 0.089 0.101 0.098 0.085 Flow (MGD) Daily Maximum 0.089 0.114 0.171 0.098 0.090 0.129 0.100 0.119 0.180 0.196 0.100 0.140 pH (S.U.) Instantaneous Minimum 7.6 7.6 7.8 7.9 7.8 7.7 7.4 7.5 7.6 7.3 7.3 7.4 pH (S.U.) Instantaneous 8.2 8.2 8.2 8.2 8.2 8.2 8.2 Maximum 8.2 8.2 8.0 8.0 7.9 DO (mg/L) Instantaneous Minimum 5.8 5.5 6.0 6.1 5.6 6.2 6.7 7.5 7.5 8.1 8.0 8.5 CBOD5 (lbs/day) Average Monthly 1.82 2.1 2.1 7.3 1.7 2.37 1.77 1.9 1.73 2.69 5.31 5.55 CBOD5 (lbs/day) 1.62 2.2 2.5 3.0 3.3 12.5 Weekly Average 2.1 5.35 2.54 4.49 7.97 13.2 CBOD5 (ma/L) Average Monthly 2.8 3.74 2.8 2.6 3.1 2.8 3.02 4.15 2.9 8.74 6.5 7.83 CBOD5 (mg/L) Weekly Average 3.7 9.3 3.5 2.7 3.9 4.1 4.3 6.5 4.2 19.1 11.8 20 BOD5 (lbs/dav) Raw Sewage Influent

 Average Monthly 192 153 157 114 170 110 132 179 174 131 189 114 BOD5 (mg/L) Raw Sewage Influent

 Average Monthly 325 242 248 163 271 179 275 234 231 186 156 161 TSS (lbs/day) 3.7 25 Average Monthly 3.4 7.16 3.42 3.1 4.9 6.9 5.82 4.0 19 12.3 TSS (lbs/day) Raw Sewage Influent
 Average 96 98 Monthly 158 127 130 122 56 94 130 102 130 66

DMR Data for Outfall 001 (from January 1, 2021 to December 31, 2021)

NPDES Permit Fact Sheet Atglen Borough Municipal Authority STP

TSS (lbs/day)												
Weekly Average	5.4	21.9	6.09	4.1	6.6	5.2	20	9.73	7.6	35	41	26
TSS (mg/L)												
Average Monthly	5.7	11.3	5.4	4.4	7.88	6.0	9.72	8.95	5.4	23.3	31	17.4
TSS (mg/L)												
Raw Sewage Influent												
 Average												
Monthly	267	201	205	174	153	91	133	200	137	116	159	93
TSS (mg/L)												
Weekly Average	8.8	38	8.4	5.6	11	8.5	29	14.4	9.6	51	61	32
Fecal Coliform												
(CFU/100 ml)												
Geometric Mean	2.45	3.63	1.57	1.32	1.93	1.41	1.72	1.44	1	3.59	3.55	1.82
Fecal Coliform												
(CFU/100 ml)												
Instantaneous			_	_			_					
Maximum	18	627	3	3	9	4	5	4.0	1	20	20	11
UV Transmittance (%)												
Minimum	2.2	2.1	3.0	2.9	3.0	2.8	2.9	3.4	3.7	3.8	3.9	3.0
Nitrate-Nitrite (mg/L)	0.00	0.54	0.47	5.00			5.0	4.00	- 4	7.0	5.0	
Average Monthly	2.92	3.54	3.47	5.66	4.47	5.7	5.9	4.88	5.1	7.0	5.0	5.59
Nitrate-Nitrite (lbs)	5.4	07	00	440	07	400	405	00		400	445	101
Total Monthly	54	67	68	119	87	108	125	98	114	183	115	124
Total Nitrogen (mg/L) Average Monthly	4.05	5.69	3.79	6.38	6.3	6.6	6.9	6.5	6.53	9.5	7.5	10
Total Nitrogen (lbs)	4.05	5.69	3.79	0.38	0.3	0.0	0.9	0.0	0.53	9.5	7.5	10
Effluent Net 												
Total Monthly	74	108	74	134	122	126	147	131	145	248	172	220
Total Nitrogen (lbs)	74	100	74	134	122	120	147	131	145	240	172	220
Total Monthly	74	108	74	134	122	126	147	131	145	248	172	220
Total Nitrogen (lbs)	/ 4	100	74	104	122	120	147	101	140	240	112	220
Effluent Net 												
Total Annual				1876								
Total Nitrogen (lbs)				1070								
Total Annual				1876								
Ammonia (lbs/day)												
Average Monthly	0.06	0.11	0.06	0.07	0.06	0.06	0.09	0.07	0.074	0.29	0.08	0.07
Ammonia (mg/L)												
Average Monthly	0.1	0.18	0.1	0.1	0.1	0.1	0.12	0.1	0.1	0.34	0.1	0.1
Ammonia (lbs)		-								-		
Total Monthly	1.86	3.42	1.96	2.1	1.94	1.9	2.55	2.02	2.27	8.88	2.29	2.20
Ammonia (lbs)												
Total Annual				35								

NPDES Permit Fact Sheet Atglen Borough Municipal Authority STP

TKN (mg/L) Average Monthly	1.13	2.15	0.7	0.72	1.83	1.0	1.1	1.62	1.43	2.57	2.5	4.46
TKN (lbs)	1.10	2.10	0.7	0.72	1.00	1.0	1.1	1.02	1.40	2.01	2.0	-1.40
Total Monthly	21	41	14	15	36	19	23.4	33	32	68	56	98
Total Phosphorus												
(lbs/day)												
Average Monthly	1.4	1.58	2.17	2.98	2.9	3.3	2.84	2.04	1.6	1.6	1.47	1.18
Total Phosphorus												
(mg/L)												
Average Monthly	2.43	2.5	3.42	4.26	4.6	5.3	85	3.13	2.11	1.92	1.8	1.67
Total Phosphorus (lbs)												
Effluent Net 												
Total Monthly	43	48	67	90	89	102	85	63	47	50	41	37
Total Phosphorus (lbs)												
Total Monthly	43	48	67	90	89	102	85	63	47	50	41	37
Total Phosphorus (lbs)												
Effluent Net 												
Total Annual				802								
Total Phosphorus (lbs)												
Total Annual				802								

Compliance History

Effluent Violations for Outfall 001, from: February 1, 2021 To: December 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TSS	02/28/21	Avg Mo	31	mg/L	30	mg/L
TSS	02/28/21	Wkly Avg	61	mg/L	45	mg/L
TSS	03/31/21	Wkly Avg	51	mg/L	45	mg/L

Corrective actions: Increased solids wasting rate (based on submitted non-compliance form)

Development of Effluent Limitations

Outfall No.	001	Design Flow (MGD)	.155
Latitude	39º 56' 35.00"	Longitude	-75º 58' 17.00"
Wastewater De	escription: 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	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
Solids	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
рН	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 Effluent Limitations

Octorara Creek Watershed TMDL:

The 2014 Pennsylvania Integrated Water Quality Monitoring and Assessment Report lists this stream in Category 5, impaired streams requiring a TMDL. This facility is listed in Octorara Creek Watershed TMDL tentative Report (March 31, 2013) with following WLA:

Nitrate Waste load Allocations									
Facility name	Monthly Ave. Allowable Conc. (mg/l)	Average flow (MGD)	Allowable load (lbs/day)						
Atglen Borough Sewer Authority	26.99	0.09	20.27						
Bulk Reserve			3.91						
Total			24.18						

At the time of this renewal, the Octorara TMDL is still in draft stage. Therefore, these values will not be included in the draft permit, which is consistent with how the proposed TMDL was handled previously. A re-opener clause will remain in the NPDES permit to allow DEP to modify the permit to include the WLAs once the TMDL is finalized.

Chesapeake Bay TMDL:

The facility's discharge is in final CB TMDL watershed area and classified as Phase 5 facility. According to CB TMDL Watershed Implementation Plan Phase 5 facilities will remain having Cap Loads for TN of 7,306 and for TP of 974 lb/year after their 2013 expansion (revised on September 13, 2021). EDMR data were evaluated and constant compliance with annual loads is noted below.

Parameters with CAP Load	2021	2020	2019	2018	2017
TN (7,306) lbs./year	1876	1868	1208	n/a	1009
TP (974) lbs./year	802	819	583	645	n/a

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

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

Parameter		Monitoring Requirements						
	Mass Units (Ibs/day) ⁽¹⁾			Concentratio	Minimum ⁽²⁾	Required		
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report Daily Max	xxx	XXX	xxx	xxx	Continuous	Metered
pH (S.U.)	ХХХ	ххх	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
CBOD5	32	52	XXX	25	40	50	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	xxx	XXX	Report	XXX	xxx	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	xxx	XXX	Report	XXX	xxx	1/week	24-Hr Composite
TSS	39	58	XXX	30	45	60	1/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	ххх	xxx	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
E.Coli (No./100 ml)	ххх	xxx	XXX	XXX	XXX	Report	1/quarter	Grab
UV Transmittance (%)	XXX	xxx	Report	XXX	XXX	XXX	1/day	Recorded
Nitrate-Nitrite	ххх	xxx	XXX	Report	XXX	ххх	1/week	24-Hr Composite
Nitrate-Nitrite (lbs)	Report Total Mo	XXX	XXX	xxx	XXX	ххх	1/month	Calculation

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter		Effluent Limitations						
	Mass Units	Mass Units (Ibs/day) ⁽¹⁾		Concentrations (mg/L)				Required
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum	Measurement Frequency	Sample Type
Total Nitrogen	xxx	XXX	xxx	Report	XXX	xxx	1/month	Calculation
Total Nitrogen (lbs) Effluent Net	Report Total Mo	XXX	XXX	XXX	XXX	xxx	1/month	Calculation
Total Nitrogen (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	xxx	1/month	Calculation
Ammonia	12.9	XXX	XXX	10.0	XXX	20	1/week	24-Hr Composite
Ammonia (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	xxx	1/week	Calculation
TKN	ХХХ	XXX	XXX	Report	XXX	xxx	1/week	24-Hr Composite
TKN (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	xxx	1/month	Calculation
Total Phosphorus	Report	XXX	XXX	Report	XXX	xxx	1/week	24-Hr Composite
Total Phosphorus (lbs) Effluent Net	Report Total Mo	XXX	XXX	XXX	XXX	xxx	1/month	Calculation
Total Phosphorus (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation

Compliance Sampling Location: Outfall 001

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						
	Mass Units (Ibs/day) ⁽¹⁾			Concentrat	Minimum ⁽²⁾	Required		
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum	Measurement Frequency	Sample Type
Total Nitrogen (lbs)		7306						
Effluent Net	XXX	Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
		Report						
Total Nitrogen (lbs)	XXX	Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
		Report						
Ammonia (Ibs)	XXX	Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
		Report						
Total Phosphorus (lbs)	XXX	Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus (lbs)		974						
Effluent Net	XXX	Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

Compliance Sampling Location: Outfall 001