pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0042722**
Facility Type	**Municipal**	APS ID	**1009219**
Major / Minor	**Minor**	Authorization ID	**1301520**

Applicant and Facility Information

Applicant Name	**Dushore Borough Sewer Authority**	Facility Name	**Dushore Sewer Authority STP**
Applicant Address	PO Box 248 Dushore Municipal Auth	Facility Address	224 Center Street
	Dushore, PA 18614--248		Dushore, PA 18614-0248
Applicant Contact	Joe Stabryla	Facility Contact	
Applicant Phone	(570) 928-8020	Facility Phone	
Client ID	44154	Site ID	251231
Ch 94 Load Status	Not Overloaded	Municipality	Dushore Borough
Connection Status	No Limitations	County	Sullivan
Date Application Received	January 10, 2020	EPA Waived?	Yes
Date Application Accepted	January 15, 2010	If No, Reason	

Purpose of Application: Renewal of Existing NPDES permit

Summary of Review

The above applicant has submitted a renewal application for the above existing NPDES permit for one discharge of treated sewage effluent from the existing Dushore sewage treatment plant (STP).

The facility has a design flow of 0.26 MGD and discharges to Little Loyalsock Creek. Treatment consists of a wet well, influent flow meter, influent screen/grit removal, aeration tanks (2), clarifiers (2), chlorinator (1), chlorine contact tanks (2), de-chlorination, post aeration tank, and an aerobic sludge digester. The treatment plant design is covered under Water Quality Management No. 5706401

Unless otherwise noted, the Department's standard operating procedures (SOPs) for reissuance of NPDES were followed during the review of this application.

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		Chad A Fabian Chad A. Fabian / Project Manager	May 22, 2020
X		*Nicholas W. Hartranft* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	May 28, 2020

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.26
Latitude	41° 31’ 17.70”	Longitude	76° 24’ 16.70”
Quad Name	Dushore	Quad Code	0634
Wastewater Description:	Sewage from Dushore Borough area		
Receiving Waters	Little Loyalsock Creek	Stream Code	20161
NHD Com ID	66905213	RMI	14
Drainage Area	9.63	Yield (cfs/mi^2)	0.026
Q_{7-10} Flow (cfs)	0.25	Q_{7-10} Basis	USGS Streamstats (Attached)
Elevation (ft)	1460	Slope (ft/ft)	n/a
Watershed No.	10-B	Chapter 93 Class.	CWF
Existing Use	EV	Existing Use Qualifier	RBP - Antidegradation
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	n/a		
Source(s) of Impairment	n/a		
TMDL Status	n/a	Name	n/a
Nearest Downstream Public Water Supply Intake	PA American Water Company near Milton, PA approximately 75 miles downstream on W. Br. Susquehanna River		

Changes Since Last Permit Issuance: None

Other Comments:

DEP has evaluated information indicating that the existing use of the receiving waters is different than the designated use under 25 Pa. Code § 93.9. In developing the draft NPDES permit, DEP is proposing to protect the existing use of the receiving waters. Following DEP's notice of the receipt of the application and the draft permit in the Pennsylvania Bulletin, DEP will accept written comments during the public comment period regarding DEP's tentative determination to protect the existing use. DEP will make a final determination on existing use protection for the receiving waters as part of the final permit action.

Compliance History	
Summary of DMRs:	The facility utilizes the Department's eDMR system. A review of the previous years effluent results show several ammonia violations and one CBOD5 violation. These violations are listed in a table on Pages 5 and 6 below.
Summary of Inspections:	The most recent inspection was a compliance evaluation inspection (CEI) performed on 8/31/2020. No violations were noted during the inspection.

Other Comments:

Even though the facility has had several effluent violations, the Department believes the permit should be renewed. Any compliance action should occur thru the Operations Sections.

Compliance History

DMR Data for Outfall 001 (from April 1, 2019 to March 31, 2020)

Parameter	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19
Flow (MGD) Average Monthly	0.122	0.177	0.140	0.147	0.126	0.081	0.054	0.101	0.094			
pH (S.U.) Minimum	7.2	7.2	7.2	7.1	7.0	7.0	7.1	7.0	7.0			
pH (S.U.) Maximum	7.8	7.8	7.7	7.7	7.5	7.5	7.5	7.4	8.0			
DO (mg/L) Instantaneous Minimum	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0			
TRC (mg/L) Average Monthly	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01			
TRC (mg/L) Instantaneous Maximum	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01			
CBOD5 (lbs/day) Average Monthly	5	19	14	8	4	5	3	6	14			
CBOD5 (lbs/day) Weekly Average	7	25	22	13	7	12	3	8	36			
CBOD5 (mg/L) Average Monthly	6	12	15	7	5	7	6	7	18			
CBOD5 (mg/L) Weekly Average	25	21	19	10	6	18	8	13	46			
BOD5 (mg/L) Influent Average Monthly	69	88	100	99	92	103	129	99	109			
TSS (lbs/day) Average Monthly	13	16	9	6	4	6	4	13	14			
TSS (lbs/day) Weekly Average	33	32	13	8	7	11	6	22	35			
TSS (mg/L) Average Monthly	15	9	9	5	5	7	9	15	19			
TSS (mg/L) Influent Average Monthly	28	40	47	79	35	97	76	91	70			
TSS (mg/L) Weekly Average	37	15	11	5	5	17	19	26	45			

Fecal Coliform (CFU/100 ml) Geometric Mean	1	7	1	5	1	1	7	2	1			
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	1	2420	20	548	1	1	17	18	1			
Total Nitrogen (lbs/day) Average Monthly	6.75	16	14.06	7.17	11.94	5.67	9.30	9.69	10			
Total Nitrogen (mg/L) Average Monthly	6.89	10.95	14.83	7.23	14.68	8.57	15.33	8.13	13.9			
Ammonia (lbs/day) Average Monthly	11	16	11	7	4	2.8	0.5	2.9	4.7			
Ammonia (lbs/day) Weekly Average	15	27	11	17	9	9.6	0.7	5.0	10.7			
Ammonia (mg/L) Average Monthly	11.4	10.0	11.2	5.8	5.1	3.8	0.9	3.3	6.1			
Ammonia (mg/L) Weekly Average	17	13	14.8	13	13	14.7	1.2	7.7	13.8			
Total Phosphorus (lbs/day) Average Monthly	0.80	2.17	1.90	1.20	1.72	1.35	0.8	2.13	1.39			
Total Phosphorus (mg/L) Average Monthly	0.42	1.20	1.85	1.20	2.10	2.00	1.77	1.65	1.79			

Compliance History

Effluent Violations for Outfall 001, from: May 1, 2019 To: March 31, 2020

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
CBOD5	07/31/19	Wkly Avg	46	mg/L	40	mg/L
Ammonia	07/31/19	Wkly Avg	10.7	lbs/day	9.3	lbs/day
Ammonia	10/31/19	Wkly Avg	9.6	lbs/day	9.3	lbs/day
Ammonia	07/31/19	Avg Mo	6.1	mg/L	2.9	mg/L
Ammonia	08/31/19	Avg Mo	3.3	mg/L	2.9	mg/L

Ammonia	02/29/20	Avg Mo	10.0	mg/L	8.7	mg/L
Ammonia	01/31/20	Avg Mo	11.2	mg/L	8.7	mg/L
Ammonia	03/31/20	Avg Mo	11.4	mg/L	8.7	mg/L
Ammonia	10/31/19	Avg Mo	3.8	mg/L	2.9	mg/L
Ammonia	03/31/20	Wkly Avg	17	mg/L	13	mg/L
Ammonia	10/31/19	Wkly Avg	14.7	mg/L	4.3	mg/L
Ammonia	11/30/19	Wkly Avg	13.2	mg/L	13	mg/L
Ammonia	01/31/20	Wkly Avg	14.8	mg/L	13	mg/L
Ammonia	07/31/19	Wkly Avg	13.8	mg/L	4.3	mg/L
Ammonia	08/31/19	Wkly Avg	7.7	mg/L	4.3	mg/L

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .26
Latitude 41º 31' 17.70" **Longitude** -76º 24' 16.70"
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)
Total Residual Chlorine	0.02	Average Monthly	-	93.4c

Comments: The existing TRC limitations noted above are due to an existing use of Exceptional Value (EV).

Water Quality-Based Limitations

No “Reasonable Potential Analysis” was performed for toxics since they are not expected to be present in the wastewater nor are they required to test for them in the renewal application since the facility does not serve any industrial users.

The Department’s WQM7.0 model allows the Department to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD ($CBOD_5$), and ammonia-nitrogen (NH_3-N) into free-flowing streams and rivers. To accomplish this, the model simulates two basic processes: the mixing and degradation of NH_3-N in the stream and the mixing and consumption of DO in the stream due to the degradation of $CBOD_5$ and NH_3-N. WQM7.0 modeling was performed during the last permit renewal cycle for the discharge to Little Loyalsock Creek. The modeling showed that ammonia limitations were required. All other existing limitations were protective of the water quality standards. Since no changes have occurred to the discharge or the receiving stream, per the Department’s SOP for reissuance of NPDES permits, additional modeling is not required at this time.

The chlorine demand spreadsheet did not need to be run since the stream is Exceptional Value according to the Department’s Chapter 93 regulations. Therefore, the permittee will be assigned a non-detection limit of 0.02 mg/l per the Department’s SOP for new and reissuance of sewage permits. Currently, de-chlorination is used at facility.

Chesapeake Bay Nutrient Monitoring

In accordance with the Department’s Chesapeake Bay Nutrient Monitoring Watershed Implementation Plan (WIP) the facility is classified as a Phase IV bay discharger. Therefore, they will need to monitor 1/month for total phosphorus and total nitrogen.

Anti-Degradation Analysis

All of the limitations proposed are the same as the existing limitations. There is no proposal to relax any limitation.

Existing and Proposed Effluent Limitations and Monitoring Requirements for Outfall 001

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.

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	XXX	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	5/week	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/week	Grab
TRC	XXX	XXX	XXX	0.02	XXX	0.05	1/day	Grab
CBOD5	54	87	XXX	25	40	50	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS	65	98	XXX	30	45	60	1/week	8-Hr Composite
TSS Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	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
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Ammonia Nov 1 - May 31	18	28	XXX	8.7	13	17	1/week	8-Hr Composite
Ammonia Jun 1 - Oct 31	6.9	9.3	XXX	2.9	4.3	5.8	1/week	8-Hr Composite
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	1/month	Calculation

There are no changes proposed to the existing effluent limitations. It is recommended the permit be drafted as described above.