pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0104141**
Facility Type	**Municipal**	APS ID	**988274**
Major / Minor	**Minor**	Authorization ID	**1264709**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Jay Township Authority**	Facility Name	**Jay Township Weedville STP**
Applicant Address	P.O. Box 186	Facility Address	1766 Redwood Avenue
	Weedville, PA 15868-0186		Weedville, PA 15868
Applicant Contact	Richard Filer	Facility Contact	Holly Martinchek, Plant Operator
Applicant Phone	(814) 787-7233	Facility Phone	(814) 787-7233
Client ID	78795	Site ID	457573
Ch 94 Load Status	Not Overloaded	Municipality	Jay Township
Connection Status	No Limitations	County	Elk
Date Application Received	February 19, 2019	EPA Waived?	Yes
Date Application Accepted	March 18, 2019	If No, Reason	

Purpose of Application: Renewal of a NPDES Permit for an existing discharge of treated sewage.

Summary of Review

This is a Phase 4 facility with a discharge to the Chesapeake Bay Watershed. See Page 7 of this Fact Sheet for further discussion.

No changes to discharge quantity or quality are being proposed as part of this permit renewal.

There are currently no open violations listed in EFACTS for this permittee (1/22/2020).

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.

Approve	Deny	Signatures	Date
X		Adam J. Pesek, E.I.T. / Environmental Engineering Specialist	
X		Justin C. Dickey, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.2
Latitude	41º 16' 26.7"	Longitude	-78º 29' 20.3"
Quad Name	Weedville	Quad Code	0818
Wastewater Description:	Sewage Effluent		
Receiving Waters	Bennett Branch Sinnemahoning Creek	Stream Code	24508
NHD Com ID	61431746	RMI	28.0
Drainage Area	93	Yield (cfs/mi^2)	0.02095
Q_{7-10} Flow (cfs)	1.9489	Q_{7-10} Basis	USGS #01543000 (1992-2012)
Elevation (ft)	1155	Slope (ft/ft)	0.00063
Watershed No.	8-A	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	METALS		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final, 04/08/2009	Name	Bennett Branch Sinnemahoning Creek

Background/Ambient Data		Data Source
pH (SU)	7.2	8/9/2017 sample taken upstream by Redwood Ave Bridge
Temperature (°C)	25	Default
Hardness (mg/L)		
Other: NH3-N (mg/l)	0.1	Default

Nearest Downstream Public Water Supply Intake		Keystone Water Company	
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	125

Changes Since Last Permit Issuance:

Other Comments: According to Department Biologists, the Bennett Branch continues to improve dramatically in water quality and habitat.

Treatment Facility Summary

Treatment Facility Name: Jay Township Weedville STP

WQM Permit No.	Issuance Date
2405401	8/02/2005
2498401	3/20/1998
2491402 A-1	8/27/1996

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Sequencing Batch Reactor	Ultraviolet	0.2

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.2	367	Not Overloaded	Aerobic Digestion	Landfill

Changes Since Last Permit Issuance: None

Other Comments:

Compliance History

DMR Data for Outfall 001 (from October 1, 2018 to September 30, 2019)

Parameter	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18
Flow (MGD) Average Monthly	0.0879	0.0868	0.0969	0.1316	0.1347	0.1344	0.1177	0.1512	0.112	0.1308	0.1446	0.1255
Flow (MGD) Daily Maximum	0.1479	0.1362	0.3009	0.3121	0.3352	0.2616	0.2405	0.4303	0.2485	0.3249	0.2097	0.3453
pH (S.U.) Minimum	6.5	6.3	6.5	6.6	6.3	6.2	6.4	6.2	6.6	6.3	6.9	6.7
pH (S.U.) Maximum	7.1	7.0	7.0	7.1	7.3	6.9	7.1	7.3	7.1	8.2	7.3	7.7
DO (mg/L) Minimum	4	4	3	3	4	6	6	6	4	4	4	5
CBOD5 (lbs/day) Average Monthly	1	2	1	1	1	2	2	2	2	2	1	1
CBOD5 (lbs/day) Weekly Average	1	3	3	2	2	2	3	2	3	4	2	2
CBOD5 (mg/L) Average Monthly	1	2	2	2	2	2	2	1	2	2	1	1
CBOD5 (mg/L) Weekly Average	2.0	3.0	3.0	3.0	2.0	3	2	2	2	4	2	2.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	67	78	62	88	69	116	103	155	86	54	81	65
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	79	106	147	142	93	150	227	396	227	70	109	94
BOD5 (mg/L) Raw Sewage Influent Average Monthly	112.2	101.8	95.1	118.5	87	129.9	101.9	120.7	70.5	65	77.4	76.9
TSS (lbs/day) Average Monthly	2	5	4	< 2	< 2	< 3	< 4	< 3	< 5	< 2	< 3	< 3
TSS (lbs/day) Raw Sewage Influent Average Monthly	19	45	20	21	34	22	52	26	31	16	31	20
TSS (lbs/day) Raw Sewage Influent Daily Maximum	23	81	34	26	51	35	121	35	60	25	61	31

TSS (lbs/day) Weekly Average	3	7	6	< 2	< 4	4	6	< 4	15	< 2	< 4	4
TSS (mg/L) Average Monthly	4	7	6	< 3	< 3	< 3	< 4	< 3	< 4	< 3	< 3	< 3
TSS (mg/L) Raw Sewage Influent Average Monthly	31	58	31.6	28.2	42	23.8	64	28	23	19	27	23
TSS (mg/L) Weekly Average	4	11	8.0	3	3	4	9	< 3	9	< 3	3	4
Fecal Coliform (CFU/100 ml) Geometric Mean	< 1	< 5	< 2	< 1	177	227	> 307	22	> 63	352	< 23	82
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	< 1	22	5	2	6212	1379	> 4839	65	> 2420	1986	228	1119
UV Transmittance (%) Average Monthly	74.6	72.1	69.8	74.7	74.4	75.3	75.4	78.4	77.2	79	80.2	73.7
Nitrate-Nitrite (mg/L) Average Monthly	6.35	6.54	2.34	3.52	9.54	6.13	8.36	7	4.8	11.3	6.85	9.13
Nitrate-Nitrite (lbs) Total Monthly	125	128	48	71	232	238	3	165	125	273	200	248
Total Nitrogen (mg/L) Average Monthly	8.27	8.9	4.2	5.07	9.95	6.906	9.35	7.7	5.548	12.044	7.93	9.922
Total Nitrogen (lbs) Total Monthly	163	174	87	102	242	269	370	181	145	291	231	269
Ammonia (lbs/day) Average Monthly	< 0.2	0.2	< 0.1	0.1	< 0.1	0.3	0.1	< 0.2	< 0.2	0.1	0.2	< 0.1
Ammonia (mg/L) Average Monthly	< 0.4	0.2	< 0.2	0.1	< 0.1	0.3	0.1	< 0.2	< 0.2	0.2	0.2	< 0.1
Ammonia (lbs) Total Monthly	< 6	5	< 4	2	< 3	8	3	< 7	< 7	4.3	6.3	< 3.1
TKN (mg/L) Average Monthly	1.92	2.36	1.86	1.55	0.412	0.776	0.988	0.7	0.748	0.744	1.08	0.792
TKN (lbs) Total Monthly	38	46	38	31	10	30	39	16	20	18	32	22
Total Phosphorus (mg/L) Average Monthly	5.6	6.21	6.02	4.48	2.17	1.61	2.18	2.3	3.36	2.88	2.59	3.22
Total Phosphorus (lbs) Total Monthly	110	122	125	90	53	63	86	54	88	70	76	87

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.2
Latitude 41º 16' 26.70" **Longitude** -78º 29' 20.30"
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	0.5	Average Monthly	-	92a.48(b)(2)

Comments: The TRC limit is not applicable because UV disinfection is utilized at the plant.

Water Quality-Based Limitations (WQBELs)

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
$CBOD_5$	15	Average Monthly	7.0 Ver. 1.0b
$CBOD_5$	22.5	Weekly Average	7.0 Ver. 1.0b
Ammonia Nitrogen (5/01 – 10/31)	2.0	Average Monthly	7.0 Ver. 1.0b
Ammonia Nitrogen (5/01 – 10/31)	4.0	IMAX	7.0 Ver. 1.0b
Ammonia Nitrogen (11/01 – 4/30)	6.0	Average Monthly	7.0 Ver. 1.0b
Ammonia Nitrogen (11/01 – 4/30)	12	IMAX	7.0 Ver. 1.0b

Comments: Limits for $CBOD_5$ no longer receive a seasonal multiplier Please also note that seasonal $CBOD_5$ limit, applied when water-quality based limits were determined to be necessary, was an old Department permitting practice. Since the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits" was developed, which does not suggest seasonal $CBOD_5$ limits, the practice of seasonal $CBOD_5$ limits is gradually being phased-out of NPDES permits as they are renewed. Based on a review of eDMR data, the permittee should consistently be able to meet the new, more-stringent wintertime WQBELs for $CBOD_5$.

Best Professional Judgment (BPJ) Limitations

Comments: A dissolved oxygen limit of a daily minimum of 4.0 mg/l and monitoring for UV transmittance, total nitrogen, and total phosphorus is being placed in the permit in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits."

Monitoring for influent BOD_5 and influent TSS is being placed in the permit in accordance with the Department's SOP entitled "New and Reissuance Sewage Individual NPDES Permit Applications."

This is a Phase 4 facility with a discharge with a discharge to the Chesapeake Bay Watershed. No cap loads are or will be assigned to the facility since it is not a new or expanding discharge. This strategy follows the standard procedure for Phase 4 facilities which is outlined in the Department's "Phase III Watershed Implementation Plan (WIP) for the Chesapeake Bay Watershed," which instructs sewage discharges to continue following guidance found in the document entitled "Supplement to Phase II (Now "III") Watershed Implementation Plan," last revised on December 17, 2019. Monitoring for Nitrate-Nitrite as N, Kjeldahl---N, total nitrogen and total phosphorus; calculation for these parameters as a total monthly load; and calculation for ammonia nitrogen, total nitrogen and total phosphorus as a total annual load was placed in the permit in accordance with the abovementioned documents.

Additional Considerations

The Bennett Branch Sinnemahoning Creek TMDL was issued without any Waste Load Allocations (WLA) given for this discharge. Three effluent samples were tested for aluminum, total iron, and manganese (TMDL parameters) during the permit renewal review. All of the results were significantly less than in-stream criteria, therefore no additional monitoring or waste load restrictions were added to the permit. Application data is summarized below.

	Aluminum	Iron (T)	Manganese
Effluent*	<0.1 mg/l	0.2 mg/l	< 0.02 mg/l
Effluent*	<0.1 mg/l	0.2 mg/l	< 0.02 mg/l
Effluent*	<0.1 mg/l	0.2 mg/l	< 0.02 mg/l
Criteria**	0.75 mg/l	1.5 mg/l	1 mg/l

*-- from renewal effluent sampling
** -- From Table 2 of Sinnemahoning Creek Watershed TMDL Report

Anti-Backsliding

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	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 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	4.0 Daily Min	XXX	XXX	XXX	1/day	Grab
CBOD5	25	37	XXX	15	22.5	30	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS	41	66	XXX	25	40	50	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	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
UV Transmittance (%)	XXX	XXX	XXX	Report	XXX	XXX	1/day	Metered
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Nitrate-Nitrite (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Nitrogen (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Ammonia Nov 1 - Apr 30	10	XXX	XXX	6.0	XXX	12	1/week	8-Hr Composite
Ammonia May 1 - Oct 31	3.3	XXX	XXX	2.0	XXX	4	1/week	8-Hr Composite
Ammonia (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
TKN	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
TKN (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Total Phosphorus (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation

Compliance Sampling Location: Outfall 001 (after disinfection)

Other Comments:

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/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Total Nitrogen (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Ammonia (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

Compliance Sampling Location: Outfall 001 (after disinfection).

Other Comments:

ATTACHMENT A

20200122112633040
.pdf

Figure 1 - WQM 7.0 Modeling