Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0042749**
Facility Type	**Municipal**	APS ID	**1117395**
Major / Minor	**Minor**	Authorization ID	**1491478**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Jenner Area Joint Sewer Authority**	Facility Name	**Jenner Area Joint Sewer Authority WWTP**
Applicant Address	PO Box 202 102 Saylor Street	Facility Address	176 Yula Drive
	Jennerstown, PA 15547-0202		Boswell, PA 15531
Applicant Contact	Mitzie Rice	Facility Contact	
Applicant Phone	(814) 629-6261	Facility Phone	
Client ID	44900	Site ID	238543
Ch 94 Load Status	Not Overloaded	Municipality	Boswell Borough
Connection Status	No Limitations	County	Somerset
Date Application Received	July 9, 2024	EPA Waived?	Yes
Date Application Accepted	July 10, 2024	If No, Reason	

Purpose of Application: Renewal application to discharge treated sewage

Summary of Review

This review is in response to a renewal application received on July 9, 2024. The Jenner Area Joint Sewer Authority (JAJSA) owns and operates a sewage treatment plant in Boswell Borough, Somerset County. Sewage from Jennerstown Borough, Jenner Township, and Boswell Borough is collected and treated with grit removal, comminution, extended aeration, settling, and chlorination/de-chlorination before discharging to Quemahoning Creek via outfall 001. This plant converted its contact stabilization system to an extended aeration system and added a 1.0 million gallons equalization tank at the plant for wet weather capture. The JAJSA uses aerobic digestion and a belt filter press to treat its sludge.

Sludge use and disposal description and location(s): disposed at Southern Alleghenies Landfill.

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		James Vanek James Vanek, P.E. / Environmental Engineer	April 23, 2025
X		Mahbuba Iasmin Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	April 28, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.9
Latitude	40º 9' 58.15"	Longitude	-79º 1' 20.88"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Quemahoning Creek (CWF)	Stream Code	45371
NHD Com ID	123715979	RMI	7.51
Drainage Area	58.68	Yield (cfs/mi^2)	0.043
Q_{7-10} Flow (cfs)	2.52	Q_{7-10} Basis	Previous fact sheet
Elevation (ft)	1770	Slope (ft/ft)	
Watershed No.	18-E	Chapter 93 Class.	CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	METALS, PH		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake	Cambria Somerset Authority		
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: JAJSA change the plant to an extended aeration process from a contact stabilization process.

Treatment Facility Summary

Treatment Facility Name: Jenner Area Joint Sewer Authority Boswell Plant

WQM Permit No.	Issuance Date
5672403	

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Activated Sludge	Chlorine With Dechlorination	0.9

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.9	1360	Not Overloaded	Aerobic Digestion/belt filter press	Landfill

Changes Since Last Permit Issuance: converted from a contact stabilization process to an extended aeration process.

Compliance History

DMR Data for Outfall 001 (from March 1, 2024 to February 28, 2025)

Parameter	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24
Flow (MGD) Average Monthly	0.742	0.262	0.432	0.3433	0.231	0.296	0.362	0.279	0.322	0.579	0.671	0.564
Flow (MGD) Daily Maximum	1.328	0.527	0.787	1.107	0.377	0.576	0.959	0.558	0.842	1.136	1.202	0.908
pH (S.U.) Instantaneous Minimum	6.7	7.1	7.0	6.6	6.7	7.2	6.9	6.9	7.1	6.9	6.7	6.7
pH (S.U.) Instantaneous Maximum	7.8	7.7	7.7	7.5	7.5	7.6	7.6	7.8	7.6	7.5	7.6	7.4
DO (mg/L) Instantaneous Minimum	6.8	7.6	7.5	5.5	5.6	5.6	6.9	5.6	5.2	6.5	6.1	6.4
TRC (mg/L) Average Monthly	0.19	0.19	0.19	0.01	0.16	0.06	0.01	0.01	0.20	0.02	0.01	0.11
TRC (mg/L) Instantaneous Maximum	0.36	0.36	0.37	0.29	0.40	0.30	0.21	0.14	0.52	0.31	0.41	0.40
CBOD5 (lbs/day) Average Monthly	41.3	15.0	20.4	18.8	14.8	11.8	18.8	7.9	17.6	< 13.0	< 23.2	19.2
CBOD5 (lbs/day) Weekly Average	67.8	23.2	40.0	33.8	24.8	20.8	25.6	11.5	28.1	19.3	60.2	38.7
CBOD5 (mg/L) Average Monthly	6.5	6.6	4.8	8.8	8.2	5.8	7.8	3.5	5.0	< 3.0	< 3.9	4.0
CBOD5 (mg/L) Weekly Average	10.0	8.0	8.0	16.0	14.0	10.0	16.0	4.0	9.0	4.0	8.0	6.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	< 295	409	322	448	303	201	261	265	420	176	< 208	249
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	603	719	415	920	557	274	532	399	597	216	433	287

BOD5 (mg/L) Raw Sewage Influent Average Monthly	< 46.9	190	93	200	168	97	83	115	121	39	< 51.7	67
BOD5 (mg/L) Raw Sewage Influent Weekly Average	89	362	158	436	305	132	101	139	170	46	90	135
TSS (lbs/day) Average Monthly	40.5	22.1	18.5	18.3	23.4	13.0	12.8	10.8	21.9	22.8	32.0	21.0
TSS (lbs/day) Raw Sewage Influent Average Monthly	245	399	273	219	273	330	425	470	336	1086	431	287
TSS (lbs/day) Raw Sewage Influent Daily Maximum	346	794	348	345	444	401	822	740	431	3739	587	344
TSS (lbs/day) Weekly Average	89.7	31.9	32.6	25.3	45.0	19.7	16.5	17.2	35.1	24.2	60.2	33.3
TSS (mg/L) Average Monthly	7.0	10.0	4.3	8.3	14.0	6.3	4.2	4.8	6.0	5.2	5.5	4.8
TSS (mg/L) Raw Sewage Influent Average Monthly	39	186	76	101	153	161	138	205	109	287	91	72
TSS (mg/L) Raw Sewage Influent Weekly Average	52	400	123	168	243	204	156	258	150	1070	128	121
TSS (mg/L) Weekly Average	14.0	12.0	6.0	14.0	30.0	9.0	6.0	6.0	8.0	6.0	8.0	6.0
Fecal Coliform (No./100 ml) Geometric Mean	331	30.1	41	12	< 4	8	13	10.0	18	9	2.0	< 42
Fecal Coliform (No./100 ml) Instantaneous Maximum	24155	1226.5	274.6	255.3	24.6	21.3	601.1	138.2	71.8	245.2	2.0	17481
Total Nitrogen (mg/L) Daily Maximum			< 1.0			18.07			28.9			10.21
Ammonia (lbs/day) Average Monthly	< 3.0	< 0.3	< 0.4	< 6.5	9.7	9.6	< 3.6	28.7	32.1	46.8	< 16.8	28.3
Ammonia (lbs/day) Weekly Average	9.6	0.7	< 0.5	23.3	20.9	33.6	12.1	43.3	42.5	65.8	27.8	36.1
Ammonia (mg/L) Average Monthly	< 0.4	< 0.1	< 0.1	< 4.2	6.0	4.6	< 0.8	15.6	10.1	10.5	< 3.9	5.9

Ammonia (mg/L) Weekly Average	1.4	0.2	< 0.1	15.6	13.7	16.2	2.3	16.0	18.4	13.6	8.3	7.8
Total Phosphorus (mg/L) Daily Maximum			1.43			3.11			2.48			0.20
Total Aluminum (mg/L) Daily Maximum			< 0.1			< 0.1			< 0.1			< 0.1
Total Iron (mg/L) Daily Maximum			0.45			0.27			0.38			0.10
Total Manganese (mg/L) Daily Maximum			0.19			0.21			0.36			0.15

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .9
Latitude 40º 9' 58.00" **Longitude** -79º 1' 21.00"
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)
	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
Total Suspended Solids	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

Modeling was performed on this discharge for an amendment that was issued on December 15, 2017. The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
NH_3N	5.5	Average Monthly	WQM7.0
TRC	0.27	Average Monthly	TRC Spreadsheet

Comments: The authority has changed its treatment plant from a contact stabilization process to an extended aeration process. The extended aeration process should help the plant achieve its limits for NH_3N.

The modeling results from WQM7.0 and the TRC spreadsheet are attached at the end of this report.

Best Professional Judgment (BPJ) Limitations

Dissolved oxygen will remain at monitor and report for an interim period of two years as was stated in the permit amendment that was issued on December 15, 2017. For the last three years of the permit cycle the dissolved oxygen will be limited at 4.0 mg/l.

Anti-Backsliding

Anti-backsliding was not used for this permit renewal.

MASS LOADINGS

Mass loading limits are applicable for publicly owned treatment works. Current policy requires average monthly mass loading limits be established for CBOD5 and TSS, and average weekly mass loading limits be established for CBOD5 and TSS.

Average mass loading limits (lbs/day) are based on the formula: design flow (MGD) x concentration limit (mg/L) x conversion factor (8.34).

TN and TP MONITORING

Nutrient monitoring is required to establish the nutrient load from the wastewater treatment facility and the impacts that load may have on the quality of the receiving stream(s). Sewage discharges with design flows > 2,000 gpd require monitoring for Total Nitrogen and Total Phosphorus in new and reissued permits. Quarterly monitoring has been imposed.

Kiskiminetas River Basin

There is a TMDL for metals in the Kiskiminetas River watershed. The contribution for metals from a sewage plant of this nature is expected to be less than water quality criteria and therefore not contributing to stream impairment. Quarterly monitoring for iron, aluminum and manganese has been imposed. Monitoring is required to establish data to ensure there are no impacts on the quality of the receiving stream.

Influent Monitoring

For POTWs with design flows greater than 2,000 GPD, influent BOD_5 and TSS monitoring must be established in the permit, and the monitoring should be consistent with the same frequency and sample type as is used for other effluent parameters.

Sample Types

The sample types and monitoring frequencies conform with Table 6.3 of the DEP's Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits.

Industrial Contributors

The authority listed 134 commercial establishments as customers that send sewage to the sewage treatment plant with an equivalent flow of 237 EDU's. The application does not require the applicant to list the non-sewage flows from these commercial customers. The sewage treatment plant does not have an EPA-approved pretreatment program. The average daily flow is less than 5 MGD so the applicant is not required to get a pretreatment program.

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" (386-0400-001), 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	Recorded
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.27	XXX	0.89	1/day	Grab
CBOD5	187.6	285.2	XXX	25.0	38.0	50	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	Report	XXX	1/week	8-Hr Composite
TSS	225.2	337.8	XXX	30.0	45.0	60	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	Report	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
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/month	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite

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-Nitrogen Nov 1 - Apr 30	124	188	XXX	16.5	25.0	33	1/week	8-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	41	62	XXX	5.5	8.3	11	1/week	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Total Aluminum	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Total Iron	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Total Manganese	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite

Compliance Sampling Location: outfall 001

REFERENCES

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
18E	45371	QUEMAHONING CREEK	**7.510**	1770.00	58.68	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	0.043	0.00	0.00	0.000	0.000	10.0	0.00	0.00	20.00	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
JAJSA STP	PA0042749	0.9000	0.9000	0.9000	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	4.00	8.24	0.00	0.00
NH3-N	25.00	0.10	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
18E	45371	QUEMAHONING CREEK	**5.510**	1640.00	68.68	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	0.043	0.00	0.00	0.000	0.000	10.0	0.00	0.00	20.00	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

Winter WQM7.0

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
18E	45371	QUEMAHONING CREEK	**7.510**	1770.00	58.68	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	0.086	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
JAJSA STP	PA0042749	0.9000	0.9000	0.9000	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	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	8.24	0.00	0.00
NH3-N	25.00	0.10	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
18E	45371	QUEMAHONING CREEK	**5.510**	1640.00	68.68	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	0.086	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