pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0266566**
Facility Type	**Municipal**	APS ID	**943437**
Major / Minor	**Minor**	Authorization ID	**1398175**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Jackson Township Sewer Authority**	Facility Name	**Jackson Township STP**
Applicant Address	439 Roth Church Road	Facility Address	Hershey Road
	Spring Grove, PA 17362-8872		Spring Grove, PA 17362
Applicant Contact	Matt Bollinger	Facility Contact	Matt Bollinger
Applicant Phone	(717) 225-5661	Facility Phone	(717) 225-5661
Client ID	94259	Site ID	823388
Ch 94 Load Status	Existing Organic Overload	Municipality	Jackson Township
Connection Status	No Limitations	County	York
Date Application Received	May 31, 2022	EPA Waived?	No
Date Application Accepted	June 16, 2022	If No, Reason	Significant CB Discharge
Purpose of Application	Renewal of existing NPDES permit		

Summary of Review

The Jackson Township Sewer Authority (JTSA) has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of a NPDES permit for the Jackson Township STP. The permit was last reissued to JTSA on January 19, 2018. The permit expired on January 31, 2023 but the terms and conditions of the permit have been administratively extended since that time.

Based on the review outlined in this fact sheet, it is recommended that the permit be drafted and a notice of the draft permit be published in the *Pennsylvania Bulletin* for public comments for 30 days. A file review of documents associated with the discharge or permittee may be available at the PA DEP southcentral regional office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file reviews, contact the SCRO file review coordinator at 717.705.4700.

Sludge use and disposal description and location(s): Land application via Smith's Disposal Facility (Adams County).

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		*Aaron Baar* Aaron Baar / Permits Section	March 5, 2024
x		*Daniel W. Martin* Daniel W. Martin, P.E. / Environmental Engineer Manager	March 15, 2024

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	.776
Latitude	39º 52' 41.87"	Longitude	-76º 51' 18.91"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Codorus Creek (WWF, MF)	Stream Code	008032
NHD Com ID	57471697	RMI	25.57
Drainage Area	75.3 mi^2	Yield (cfs/mi^2)	0.1146
Q_{7-10} Flow (cfs)	8.63 cfs	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	430	Slope (ft/ft)	
Watershed No.	7-H	Chapter 93 Class.	WWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	THERMAL MODIFICATIONS		
Source(s) of Impairment	INDUSTRIAL POINT SOURCE DISCHARGE		
TMDL Status	Name		
Nearest Downstream Public Water Supply Intake	York Water Company – Brillhart PS		
PWS Waters	South Branch Codorus Creek	Flow at Intake (cfs)	
PWS RMI	0.27	Distance from Outfall (mi)	25.82

Changes Since Last Permit Issuance: Jackson Township STP discharges effluent into PH Glatfelter Company's industrial Wastewater Treatment Facility (PA0008869). Glatfelter uses the effluent as a nutrient source for its treatment processes. Glatfelter previously notified Jackson that they must remove their discharges to Glatfelter's facility; however, the Department was informed that Glatfelter has changed course and Glatfelter's existing arrangement will continue unchanged. This will have no bearing on the development of the proposed limits.

Drainage Area

The discharge is Codorus Creek at RMI 25.57. A drainage area upstream of the discharge is determined to be 75.3 sq.mi. according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Stream Flow

According to StreamStats, the watershed has a Q_{7-10} of 8.63 cfs. This information was used to obtain a LFY, a chronic 30-day (Q_{30-10}) and acute (Q_{1-10}) exposure stream flows for the discharge point as follows (Guidance No. 391-2000-023).

Q_{7-10} = 8.63 cfs
Q_{30-10} = 1.36 * 8.63 cfs = 11.7368 cfs
Q_{1-10} = 0.64 * 8.63 cfs = 5.5232 cfs
LFY = 8.63 cfs/75.3 mi^2 = 0.0491 cfs/mi^2

Codorus Creek

25 Pa Code §93.9 classifies the receiving water, Codorus Creek, with a WWF/MF Existing Use designation. Effluent limits for this discharge have been developed to ensure that existing in-stream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. The discharge is in a stream segment listed as not attaining use; the cause of the impairment has been identified as thermal modifications due to an industrial point source discharge (see *Local Watershed TMDL* below).

Local Watershed Total Maximum Daily Loads (TMDLs)

According to PA's 2022 integrated water quality monitoring and assessment report, Codorus Creek in the vicinity of the proposed point of discharge is impaired for thermal modifications as a result of point source discharges. Thermal modification is an increase/change in natural water temperatures from heated wastewater sources. The Jackson Township WWTP is not expected to significantly contribute to this impairment. The impairment is listed as Category 4b in the 2022 integrated report; indicating that no TMDL is needed as it is expected to meet designated uses in a reasonable amount of time. No local watershed TMDL has therefore been taken into consideration during this review.

Public Water Supply Intake

The nearest downstream public water supply intake is the York Water Company intake on the South Branch Codorus Creek. Considering the distance and nature, the discharge is not expected to affect the water supply.

Class A Wild Trout Streams

The receiving stream is not a Class A Wild Trout stream; therefore, no Class A Wild Trout Fishery is impacted by this discharge.

Treatment Facility Summary

Treatment Facility Name: Jackson Township STP

WQM Permit No.	Issuance Date
6797407 A-6	April 21, 2022

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Activated Sludge	Ultraviolet	0.776

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.8	1668	Existing Organic Overload	Aerobic Digestion	Other WWTP

Changes Since Last Permit Issuance: Since the last issuance of the JTSA's NPDES permit, the facility has added a mechanical fine screen at the headworks (2021) and a sludge storage pad for biosolids (2022)

Other Comments: JTSA owns and operates the sanitary wastewater treatment facility located in Spring Grove, York County. The facility only serves portions of Jackson Township; wastes are generally residential in nature, and all sewer systems are 100% separated. With an annual average design flow of 0.80 MGD and a hydraulic design capacity of 0.80 MGD, the existing facility consists of a Influent Pumping Station, mechanical fine sceen (headworks), Aeration Basins (4), Secondary Clarifiers (4), and Ultraviolet Disinfection System. Solids are processed in two aerobic digesters and a gravity thickener. Chemical amendments include only aluminum sulfate (coagulation),

Compliance History	
Summary of DMRs:	DMR results for the past year are presented below.
Summary of Inspections:	Since the last renewal of the facility's NPDES permit, the following inspections have been logged: January 31, 2021: A routine annual inspection was conducted by Heather Dock. It was noted that the facility was incorrectly adding ammonia values to the Total Nitrogen calculation when it is already accounted for in the TKN measurements. 6 other anomalous data records were also noted. June 25, 2020: A routine annual inspection was conducted by Austen Randecker. No violations were noted. November 15, 2019: A inspection was conducted by Austen Randecker following a report of sewage overflows from MH NPS13. A violation was issued. October 24, 2019: A routine annual inspection was conducted by Austen Randecker. No violations were noted.

Other Comments: As of March 5, 2024, there are no open violations associated with this facility.

Existing Effluent Limitations and Monitoring Requirements

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) Effluent Net	XXX	10958 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
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) Effluent Net	XXX	1461 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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instantaneous 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	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
CBOD5	142	226	XXX	22.0	35.0	44.0	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	194	291	XXX	30.0	45.0	XXX	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
UV Intensity (µw/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	2/week	24-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
Total Nitrogen (lbs) Effluent Net	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Ammonia Nov 1 - Apr 30	155.0	XXX	XXX	24.0	XXX	XXX	2/week	24-Hr Composite
Ammonia May 1 - Oct 31	51.0	XXX	XXX	8.0	XXX	16.0	2/week	24-Hr Composite
Ammonia (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
TKN	XXX	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
TKN (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus	12	XXX	XXX	2.0	XXX	4	2/week	24-Hr Composite
Total Phosphorus (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus (lbs) Effluent Net	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation

Compliance Sampling Location: Outfall 001

Compliance History

DMR Data for Outfall 001 (from November 1, 2022 to October 31, 2023)

Parameter	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22
Flow (MGD) Average Monthly	0.287	0.279	0.28	0.291	0.261	0.297	0.292	0.288	0.283	0.29	0.278	0.255
Flow (MGD) Daily Maximum	0.43	0.442	0.374	0.427	0.393	0.451	0.631	0.363	0.32	0.38	0.402	0.305
pH (S.U.) Minimum	7.6	7.65	7.59	7.58	7.31	7.1	7.12	7.49	7.63	7.43	7.07	7.16
pH (S.U.) Instantaneous Maximum	7.99	7.9	7.82	7.78	7.72	7.76	7.85	7.83	7.95	7.78	7.81	7.64
DO (mg/L) Minimum	7.59	7.39	7.49	7.15	7.66	6.89	7.23	8.06	8.68	8.95	8.6	7.04
CBOD5 (lbs/day) Average Monthly	< 6	< 5	< 6	< 5	< 5	< 9	< 5	< 5	< 5	< 6	< 5	< 5
CBOD5 (lbs/day) Weekly Average	< 6	< 6	< 7	< 6	< 6	15	< 6	< 6	< 6	< 6	6	< 5
CBOD5 (mg/L) Average Monthly	< 2.5	< 2.4	< 2.4	< 2.4	< 2.4	< 3.3	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4
CBOD5 (mg/L) Weekly Average	2.6	2.4	< 2.4	< 2.4	< 2.4	6.1	< 2.4	< 2.4	< 2.4	< 2.4	2.4	< 2.4
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	540	843	494	500	639	415	527	808	1141	913	645	367
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	718	1372	613	683	1121	588	837	1658	1595	1599	1155	425
BOD5 (mg/L) Raw Sewage Influent Average Monthly	229	390	213	223	300	157	234	353	513	399	292	182
TSS (lbs/day) Average Monthly	9	4	5	5	4	6	3	5	3	3	6	5
TSS (lbs/day) Raw Sewage Influent Average Monthly	380	481	555	817	453	659	818	449	927	714	574	614

TSS (lbs/day) Raw Sewage Influent Daily Maximum	519	661	712	1223	640	754	956	551	1917	809	1042	742
TSS (lbs/day) Weekly Average	15	11	9	5	5	8	7	7	4	5	14	6
TSS (mg/L) Average Monthly	3.8	2.0	2.0	2.0	1.8	2.2	1.5	2.3	1.3	1.2	2.8	2.3
TSS (mg/L) Raw Sewage Influent Average Monthly	163	222	250	363	209	254	359	198	409	309	266	306
TSS (mg/L) Weekly Average	7.0	5.0	4.0	2.0	2.0	3.0	3.0	3.0	2.0	2.0	7.0	3.0
Fecal Coliform (CFU/100 ml) Geometric Mean	5	7	< 2	3	4	4	< 4	2	< 2	< 2	< 1	< 2
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	12	13	8	4	19	146	14	3	3	4	1	4
UV Intensity (µw/cm²) Minimum	1623	1575	1603	1566	1609	1761	1814	1752	1805	1739	1857	1855
Nitrate-Nitrite (mg/L) Average Monthly	< 1.14	< 1.0	< 1.23	< 1.31	< 1.51	< 2.2	< 8.73	< 2.54	< 1.67	< 1.78	< 3.46	< 4.16
Nitrate-Nitrite (lbs) Total Monthly	< 83	< 71	< 87	< 97	< 93	< 207	< 705	193	< 112	< 132	< 250	< 258
Total Nitrogen (mg/L) Average Monthly	< 3.57	< 2.48	< 2.96	< 3.14	< 3.23	< 4.07	< 10.33	< 4.95	< 3.77	< 4.05	< 5.13	< 5.95
Total Nitrogen (lbs) Effluent Net Total Monthly	< 262	< 175	< 210	< 235	< 199	< 353	< 827	< 379	< 251	< 302	< 368	< 371
Total Nitrogen (lbs) Total Monthly	< 262	< 175	< 210	< 235	< 199	< 353	< 827	< 379	< 251	< 302	< 368	< 371
Total Nitrogen (lbs) Effluent Net Total Annual		< 3819										
Total Nitrogen (lbs) Total Annual		< 4359										
Ammonia (lbs/day) Average Monthly	< 0.8	< 0.4	< 0.4	< 0.3	0.4	0.9	< 2	1	1	0.9	< 0.8	2
Ammonia (mg/L) Average Monthly	< 0.3	< 0.2	< 0.2	< 0.1	0.2	0.3	< 0.6	0.5	0.5	0.4	< 0.3	0.9
Ammonia (lbs) Total Monthly	< 24	< 11	< 11	< 11	12	28	< 53	36	30	28	< 24	54

Ammonia (lbs) Total Annual		< 336										
TKN (mg/L) Average Monthly	2.4	1.5	1.73	1.8	1.7	1.87	< 1.6	2.4	2.1	2.3	1.67	1.79
TKN (lbs) Total Monthly	178	103	123	137	106	145	< 122	186	139	170	118	113
Total Phosphorus (lbs/day) Average Monthly	< 1	1	1	2	2.0	< 2	< 4	< 0.3	< 0.4	< 1	< 2	1
Total Phosphorus (mg/L) Average Monthly	< 0.5	0.6	0.6	0.6	1.0	0.6	< 1.3	< 0.1	< 0.2	0.5	< 0.8	0.6
Total Phosphorus (lbs) Effluent Net Total Monthly	< 37	< 42	39	47	60	< 57	< 112	< 10	< 11	< 37	< 53	37
Total Phosphorus (lbs) Total Monthly	< 37	42	39	47	60	< 57	< 112	< 10	< 11	< 37	< 53	37
Total Phosphorus (lbs) Effluent Net Total Annual		< 655										
Total Phosphorus (lbs) Total Annual		< 655										

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.8 mgd
Latitude 39º 52' 44.00" **Longitude** -76º 51' 12.00"
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)
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: These standards apply, subject to water quality analysis and BPJ where applicable.

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 guidance no. 391-2000-007 provides the technical methods contained in WQM 7.0 for conducting wasteload allocation and for determining recommended NPDES effluent limits for point source discharges. The model was utilized using data derived by USGS StreamStats and the model output indicated that existing WQBEL of 8.0 mg/L for ammonia (summer) and CBOD5 of 22.0 mg/L are no longer protective of water quality. A new WQBEL of 4.5 mg/L for ammonia (summer) and 15.0 mg/L for CBOD5 are proposed in this permit. Instantaneous limits for ammonia and CBOD5 were updated with the Department's standard 2.0x multiplier. Updated maximum weekly limits for ammonia and CBOD5 were updated with the Department's standard 1.5x multiplier. Updated winter limits were calculated with the Department's standard 3.0x multiplier for ammonia.

Based on the facility's DMR data, the facility is already constructed and configured to meet the proposed ammonia and CBOD5 limits.

Toxics

A reasonable potential (RP) analysis was done for Group 1 parameters, Copper, Lead and Zinc using the sampling results provided with the application. The Department's Toxics Management Spreadsheet (Version 1.3) was used to perform the RP analysis for these parameters at a pH of 7.0 and a discharge hardness of 100 mg/L. The analysis indicates that limits for Total Copper and Total Zinc are needed to be protective of water quality.

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

Pollutants	*Mass Limits* AML (lbs/day)	*Mass Limits* MDL (lbs/day)	*Concentration Limits* AML	*Concentration Limits* MDL	*Concentration Limits* IMAX	*Concentration Limits* Units	Governing WQBEL	WQBEL Basis	Comments
Total Copper	0.22	0.34	32.6	50.9	81.5	µg/L	32.6	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	1.86	2.9	279	435	697	µg/L	279	AFC	Discharge Conc ≥ 50% WQBEL (RP)

However, given that only one sample was tested by the permittee for these parameters, the Department proposes monitoring and reporting limits for both Total Copper and Total Zinc to determine if limits are truly needed or not. In conformity with DEP's Technical Guidance for the Development and Specification of Effluent Limitations (PA Doc. No. 362-0400-001), Table 6-3, the sampling frequency for Total Copper and Total Zinc is proposed at 1/week with 24-hour composite sampling (plant design flow = 0.8 mgd, *Toxics*).

E. Coli Monitoring

In conformity with the Department's *Establishing Effluent Limitations for Individual Sewage Permits* (SOP No. BCW-PMT-033) and as authorized by § 92a.61 of the PA Code, quarterly E. Coli monitoring has been proposed in this permit. The collection method will be via grab sample.

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 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.

Ultraviolet Disinfection

Based on inspection reports, it appears that the existing UV system is equipped with an intensity sensor; therefore, UV intensity is proposed to be continued as the monitoring parameter for the UV system in the renewed permit.

Total Phosphorus & Total Nitrogen

DEP's SOP no. BPNPSM-PMT-033 recommends monitoring requirements for Total Phosphorus and Total Nitrogen for all sewage facilities. Therefore, a routine monitoring for TKN, Nitrate-Nitrite, and TN are recommended to be continued in this permit as previously permitted.

The existing requirement to report Effluent Net (Total Month) for Total Phosphorus was removed from the permit at the direction of the SCRO Clean Water Permits Chief.

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).

Chesapeake Bay TMDL

The Department formulated a strategy in April 2007, to comply with the EPA's and Chesapeake Bay Foundation's requirements to reduce point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP) to the Bay. In the Strategy, sewage dischargers have been prioritized by Central Office based on their delivered TN loadings to the Bay. The highest priority (Phases 1, 2, and 3) dischargers received annual loading caps based on their design flow on August 29, 2005 and concentrations of 6 mg/l TN and 0.8 mg/l TP. Phase 4 (0.2 -0.4mgd) and Phase 5 (below 0.2mdg) facilities were required to monitor and report TN and TP during permit renewal at a monitoring frequency following Table 6-3 of DEP's Technical Guidance for Development and Specification of effluent Limitations (No. 362-0400-001).

EPA published the Chesapeake Bay Total Maximum Daily Load (TMDL) in December of 2010. Despite extensive restoration efforts during the past 25 years, the TMDL was prompted by insufficient progress and continued poor water quality in the Chesapeake Bay and its tidal tributaries.

In order to address the TMDL, Pennsylvania developed, in addition to the Bay Strategy, a Chesapeake Watershed Implementation Plan (WIP) Phase 1 in January 2011, Phase 2 in March 2012 and Phase 3 in December 2019. In accordance with the Phase 3 WIP, re-issuing permits for significant dischargers follow the same phased approach formulated in the original Bay strategy, whilst Phase 4 and Phase 5 will be required to monitor and report TN and TP during permit renewal.

The Phase 3 WIP categorizes this facility as a phase 3 significant sewage facility and provides the following table:

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)
PA0266566	Jackson Township STP	1/19/2018	1/31/2023	2/1/2018	10,958	1,461

Monitoring Frequency and Sample Type

Unless discussed otherwise above, the permit's monitoring frequency and sample type for all parameters will remain unchanged from the last permit renewal.

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.

Anti-backsliding Requirement

All effluent limits proposed in this fact sheet are as stringent as effluent limits specified in the existing permit renewal. This approach is in accordance with 40 CFR §122.44(l(1).

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.

Annual Fees

An annual fee clause was added to the permit in accordance with 25 Pa. Code § 92a.62. The facility covered by the permit is classified in the Minor Sewage Facility >=0.05 and <1 MGD fee category, which has an annual fee of $1,000.

Other Permit Requirements

The Jackson Township STP is identified as organically overloaded in the application . As such, the following permit condition has been added to Part C(III) of the permit (in addition to the same clauses that were included in the previous renewal):

D. The permittee shall not accept hauled-in wastes at the treatment facility under the following conditions, unless otherwise approved by DEP in writing:

- When acceptance of hauled-in wastes would cause a hydraulic or organic overload as defined in Chapter 94.1 of the DEP's regulations.
- When the treatment facility is considered to be in an existing hydraulic or organic overload condition, as determined by the permittee or DEP, as defined in Chapter 94.1 of the DEP's regulations.
- When the instantaneous flow at the treatment facility exceeds 2.4 MGD (the Chapter 94 hydraulic design capacity of the facility multiplied by a peaking factor of three), and for 24 hours following exceedance of this threshold.

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
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Total Nitrogen (lbs) Effluent Net	XXX	10958 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
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) Effluent Net	XXX	1461 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

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	Instantaneous 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	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
CBOD5	100	155	XXX	15.0	23.0	30	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	194	291	XXX	30.0	45.0	XXX	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-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/quarter	Grab
UV Intensity (µw/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	2/week	24-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

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	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Nitrogen (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Nitrogen (lbs) Effluent Net	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Ammonia Nov 1 - Apr 30	90.0	XXX	XXX	13.5	XXX	27	2/week	24-Hr Composite
Ammonia May 1 - Oct 31	30.0	XXX	XXX	4.5	XXX	9	2/week	24-Hr Composite
Ammonia (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
TKN	XXX	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
TKN (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus	12	XXX	XXX	2.0	XXX	4	2/week	24-Hr Composite
Total Phosphorus (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Copper (ug/L)	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Zinc (ug/L)	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite

Compliance Sampling Location: Outfall 001


403932 - DISCHARGE POINT
Martin
Spring Grove
Sprenkle Rd
Martin Rd
Stoverstown Branch
Maryland & Pennsylvania
Hershey Rd
Yorktail
Pine Ln
Lehman Rd
Cedar Dr
Cedar Hill Rd
Henry Ln
Rockery Rd
Hershey Rd
Lehman Rd
Hickory Heights Golf Club
Spring Grove Borough Park
Codorus Creek
Roth Church Rd
Village Dr
Seneca Way
Conestoga Ln
Monocacy Trl
Glenview Rd
Hamlet Dr W
Spring Forge Dr
N Main St
Campus Ave
W Hanover St
Cherry Aly
W Hoke St
E 3rd Ave
E 2nd Ave
N Manheim St
N Elm Ave
N Pine Ave
N East St
York Ave
N High St
Ruth Ave
Oak Ave
N Water St
W Constitution Ave
S Water St
S Elm Ave
S Main St
E Railroad St
Hosiery Alley
Lehman

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, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 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, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 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, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:

Hydrodynamics | NH3-N Allocations | D.O. Allocations | D.O. Simulation | Effluent Limitations

Design Condition: (•) Q7-10 ( ) Q1-10 ( ) Q30-10

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 (ºC)	Analysis pH
26.140	8.49	0.00	8.49	.5105	0.00133	.762	47.25	61.98	0.250	0.139	19.34	7.19
25.570	8.63	0.00	8.63	1.7481	0.00122	.776	49.93	64.32	0.268	0.071	20.01	7.16
25.260	8.69	0.00	8.69	22.942	0.00125	.862	73.4	85.19	0.500	0.166	28.71	7.25
23.900	8.74	0.00	8.74	22.942	0.00072	.877	75.67	86.25	0.477	0.371	28.70	7.25
21.000	9.58	0.00	9.58	23.0518	0.00095	.875	76.61	87.51	0.487	0.050	28.43	7.25

Record: 1 of 5 No Filter Search

Hydrodynamics | NH3-N Allocations | D.O. Allocations | D.O. Simulation | Effluent Limitations

Criterion: (•) Acute ( ) Chronic

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
26.140	SpringGrove STP	14.62	15	14.62	15	0	0
25.570	JTSA STP	14.28	16	14.08	16	0	0
25.260	Glatfelter IWTP	5.43	3	5.73	3	0	0
23.900	Confluence Stov	NA	NA	5.73	NA	NA	NA
21.000	BAE IWTP	14.85	46	5.85	46	0	0

Record: 1 of 5 No Filter Search

Hydrodynamics | NH3-N Allocations | D.O. Allocations | D.O. Simulation | Effluent Limitations

RMI	Discharge Name	CBOD5 Baseline (mg/L)	CBOD5 Multiple (mg/L)	NH3-N Baseline (mg/L)	NH3-N Multiple (mg/L)	Dissolved Oxygen Baseline (mg/L)	Dissolved Oxygen Multiple mg/L)	Critical Reach	Percent Reduction
26.14	SpringGrove STP	21	14.43	5.91	4.2	5	5	4	30
25.57	JTSA STP	22	15.04	6.3	4.51	5	5	4	30
25.26	Glatfelter IWTP	3.3	2.3	.99	.69	6	6	4	30
23.90	Confluence Stov	NA	NA	NA	NA	NA	NA	NA	NA
21.00	BAE IWTP	25	25	23	23	5	5	0	0

Record: 1 of 5 | No Filter | Search

Hydrodynamics | NH3-N Allocations | D.O. Allocations | D.O. Simulation | Effluent Limitations

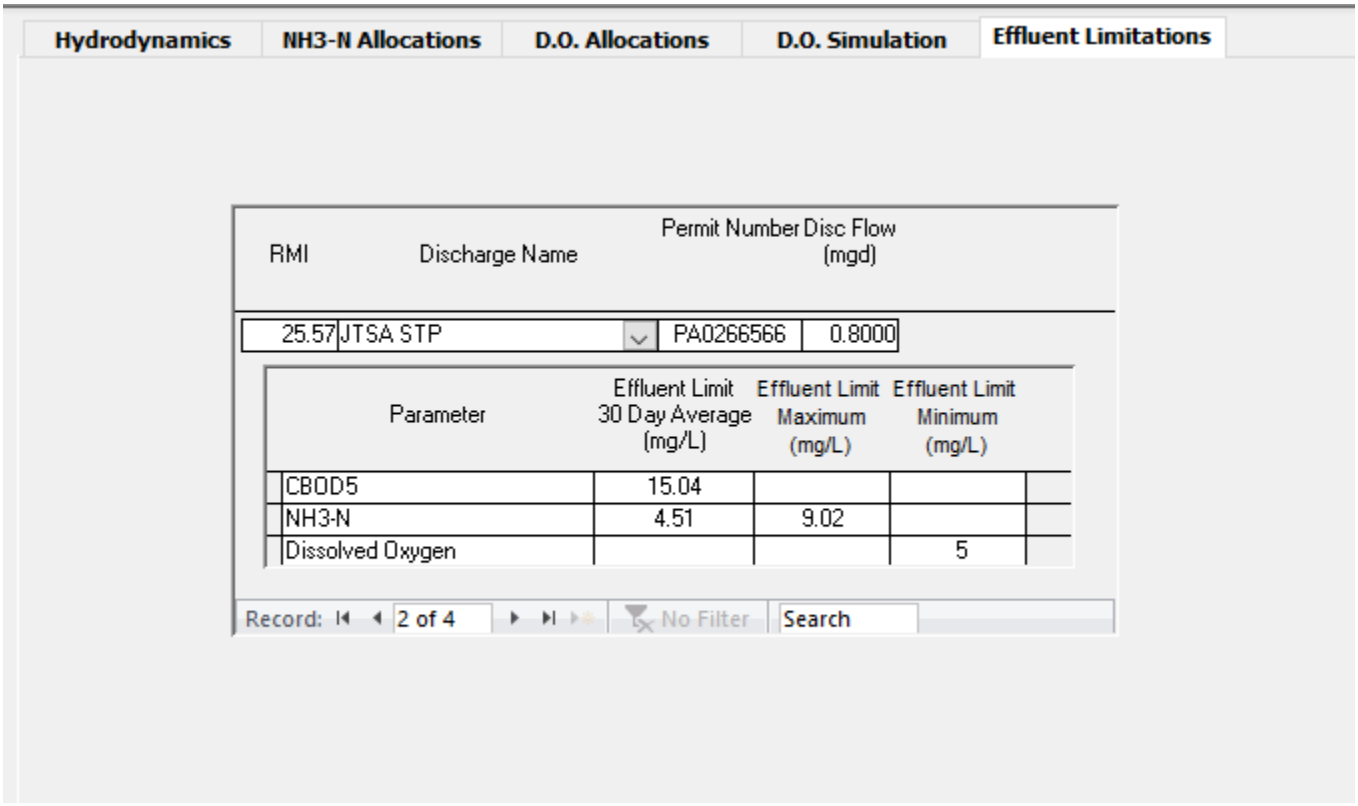
RMI	Total Discharge Flow (mgd)	Analysis Temperature (ºC)	Analysis pH
26.140	0.330	19.340	7.186
Reach Width (ft)	**Reach Depth (ft)**	**Reach WD Ratio**	**Reach Velocity (fps)**
47.252	0.762	61.975	0.250
Reach C-BOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.71	0.297	0.24	0.665
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.059	3.107	Tsivoglou	6

Reach Travel Time (days): 0.139

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.014	2.69	0.24	8.08
0.028	2.68	0.23	8.11
0.042	2.67	0.23	8.13
0.056	2.66	0.23	8.16
0.070	2.65	0.23	8.18
0.084	2.64	0.23	8.20
0.098	2.63	0.22	8.22
0.112	2.62	0.22	8.24
0.125	2.61	0.22	8.24
0.139	2.60	0.22	8.24

Record: 1 of 5 | No Filter | Search



Hydrodynamics | NH3-N Allocations | D.O. Allocations | D.O. Simulation | Effluent Limitations

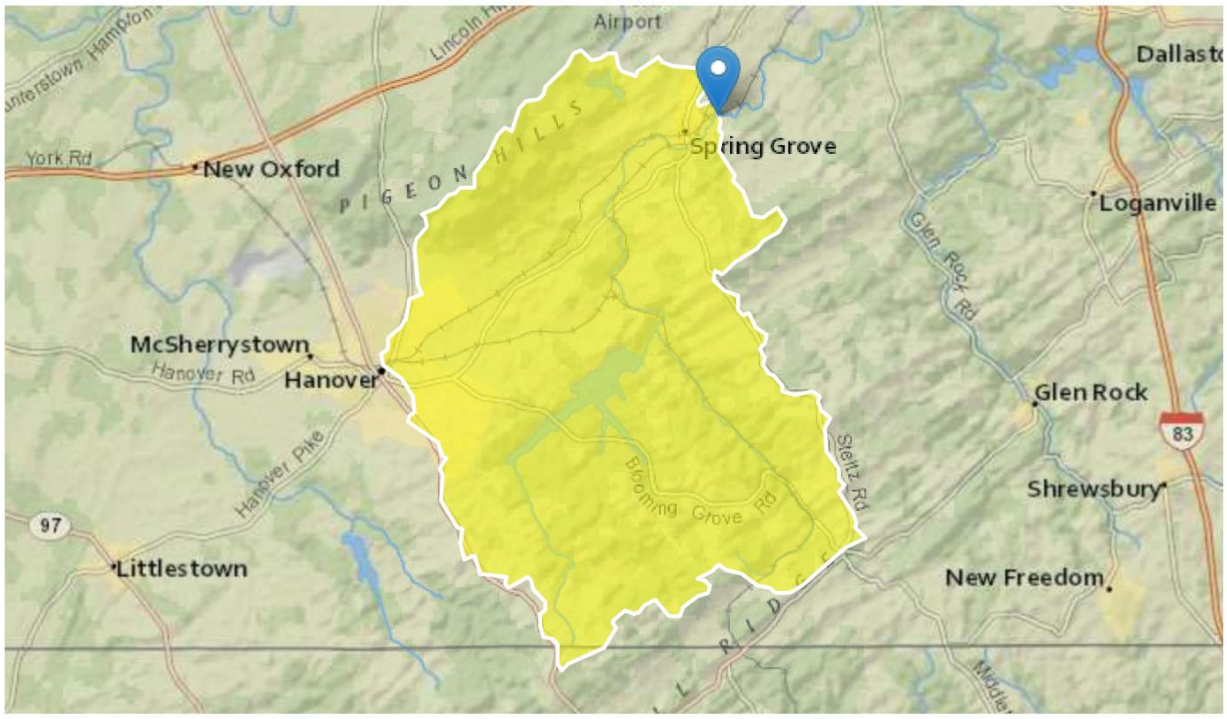
RMI	Discharge Name	Permit Number	Disc Flow (mgd)
25.57	JTSA STP	PA0266566	0.8000

Parameter	Effluent Limit 30 Day Average (mg/L)	Effluent Limit Maximum (mg/L)	Effluent Limit Minimum (mg/L)
CBOD5	15.04		
NH3-N	4.51	9.02	
Dissolved Oxygen			5

Record: 2 of 4 | No Filter | Search

StreamStats Report

Region ID: PA
Workspace ID: PA20231218124209360000
Clicked Point (Latitude, Longitude): 39.87887, -76.85333
Time: 2023-12-18 07:42:33 -0500



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	5.617	degrees
DRNAREA	Area that drains to a point on a stream	75.3	square miles
ROCKDEP	Depth to rock	4.5	feet
URBAN	Percentage of basin with urban development	3.7065	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	75.3	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	5.617	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.5	feet	4.13	5.21
URBAN	Percent Urban	3.7065	percent	0	89

Low-Flow Statistics Flow Report [Low Flow Region 1]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

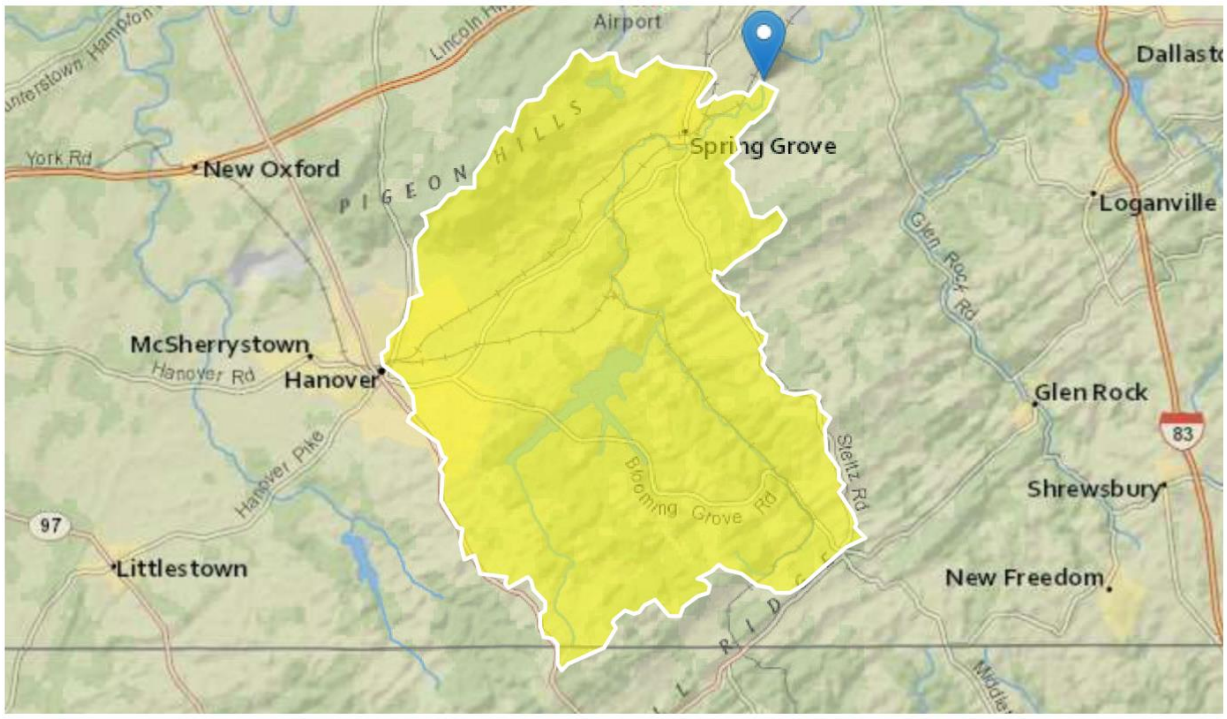
Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	16.4	ft^3/s	46	46
30 Day 2 Year Low Flow	20.7	ft^3/s	38	38
7 Day 10 Year Low Flow	8.63	ft^3/s	51	51
30 Day 10 Year Low Flow	11	ft^3/s	46	46
90 Day 10 Year Low Flow	15.5	ft^3/s	41	41

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/)

StreamStats Report

Region ID: PA
Workspace ID: PA20231218125859541000
Clicked Point (Latitude, Longitude): 39.88932, -76.83544
Time: 2023-12-18 07:59:20 -0500



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	5.6205	degrees
DRNAREA	Area that drains to a point on a stream	76.3	square miles
ROCKDEP	Depth to rock	4.5	feet
URBAN	Percentage of basin with urban development	3.7072	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	76.3	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	5.6205	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.5	feet	4.13	5.21
URBAN	Percent Urban	3.7072	percent	0	89

Low-Flow Statistics Flow Report [Low Flow Region 1]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	16.6	ft^3/s	46	46
30 Day 2 Year Low Flow	21	ft^3/s	38	38
7 Day 10 Year Low Flow	8.76	ft^3/s	51	51
30 Day 10 Year Low Flow	11.2	ft^3/s	46	46
90 Day 10 Year Low Flow	15.8	ft^3/s	41	41

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/)

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Application Version: 4.19.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.3.2

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **Jackson Township Sewer Authority** NPDES Permit No.: **PA0266566** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Domestic Sewage**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
0.8	100	7						

					0 if left blank		*0.5 if left blank*		*0 if left blank*			*1 if left blank*	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		376									
	Chloride (PWS)	mg/L		100									
	Bromide	mg/L	<	0.5									
	Sulfate (PWS)	mg/L		80									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L											
	Total Antimony	µg/L											
	Total Arsenic	µg/L											
	Total Barium	µg/L											
	Total Beryllium	µg/L											
	Total Boron	µg/L											
	Total Cadmium	µg/L											
	Total Chromium (III)	µg/L											
	Hexavalent Chromium	µg/L											
	Total Cobalt	µg/L											
	Total Copper	µg/L		20									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L											
	Dissolved Iron	µg/L											
	Total Iron	µg/L											
	Total Lead	µg/L	<	1									
	Total Manganese	µg/L											
	Total Mercury	µg/L											
	Total Nickel	µg/L											
	Total Phenols (Phenolics) (PWS)	µg/L											
	Total Selenium	µg/L											
	Total Silver	µg/L											
	Total Thallium	µg/L											
	Total Zinc	µg/L		170									
	Total Molybdenum	µg/L											
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										

Group 3	Carbon Tetrachloride	µg/L	<										
	Chlorobenzene	µg/L											
	Chlorodibromomethane	µg/L	<										
	Chloroethane	µg/L	<										
	2-Chloroethyl Vinyl Ether	µg/L	<										
	Chloroform	µg/L	<										
	Dichlorobromomethane	µg/L	<										
	1,1-Dichloroethane	µg/L	<										
	1,2-Dichloroethane	µg/L	<										
	1,1-Dichloroethylene	µg/L	<										
	1,2-Dichloropropane	µg/L	<										
	1,3-Dichloropropylene	µg/L	<										
	1,4-Dioxane	µg/L	<										
	Ethylbenzene	µg/L	<										
	Methyl Bromide	µg/L	<										
	Methyl Chloride	µg/L	<										
	Methylene Chloride	µg/L	<										
	1,1,2,2-Tetrachloroethane	µg/L	<										
	Tetrachloroethylene	µg/L	<										
	Toluene	µg/L	<										
	1,2-trans-Dichloroethylene	µg/L	<										
	1,1,1-Trichloroethane	µg/L	<										
	1,1,2-Trichloroethane	µg/L	<										
	Trichloroethylene	µg/L	<										
	Vinyl Chloride	µg/L	<										
Group 4	2-Chlorophenol	µg/L	<										
	2,4-Dichlorophenol	µg/L	<										
	2,4-Dimethylphenol	µg/L	<										
	4,6-Dinitro-o-Cresol	µg/L	<										
	2,4-Dinitrophenol	µg/L	<										
	2-Nitrophenol	µg/L	<										
	4-Nitrophenol	µg/L	<										
	p-Chloro-m-Cresol	µg/L	<										
	Pentachlorophenol	µg/L	<										
	Phenol	µg/L	<										
	2,4,6-Trichlorophenol	µg/L	<										
Group 5	Acenaphthene	µg/L	<										
	Acenaphthylene	µg/L	<										
	Anthracene	µg/L	<										
	Benzidine	µg/L	<										
	Benzo(a)Anthracene	µg/L	<										
	Benzo(a)Pyrene	µg/L	<										
	3,4-Benzofluoranthene	µg/L	<										
	Benzo(ghi)Perylene	µg/L	<										
	Benzo(k)Fluoranthene	µg/L	<										
	Bis(2-Chloroethoxy)Methane	µg/L	<										
	Bis(2-Chloroethyl)Ether	µg/L	<										
	Bis(2-Chloroisopropyl)Ether	µg/L	<										
	Bis(2-Ethylhexyl)Phthalate	µg/L	<										
	4-Bromophenyl Phenyl Ether	µg/L	<										
	Butyl Benzyl Phthalate	µg/L	<										
	2-Chloronaphthalene	µg/L	<										
	4-Chlorophenyl Phenyl Ether	µg/L	<										
	Chrysene	µg/L	<										
	Dibenzo(a,h)Anthrancene	µg/L	<										
	1,2-Dichlorobenzene	µg/L	<										
	1,3-Dichlorobenzene	µg/L	<										
	1,4-Dichlorobenzene	µg/L	<										
	3,3-Dichlorobenzidine	µg/L	<										
	Diethyl Phthalate	µg/L	<										
	Dimethyl Phthalate	µg/L	<										
	Di-n-Butyl Phthalate	µg/L	<										
	2,4-Dinitrotoluene	µg/L	<										

	2,6-Dinitrotoluene	µg/L	<										
	Di-n-Octyl Phthalate	µg/L	<										
	1,2-Diphenylhydrazine	µg/L	<										
	Fluoranthene	µg/L	<										
	Fluorene	µg/L	<										
	Hexachlorobenzene	µg/L	<										
	Hexachlorobutadiene	µg/L	<										
	Hexachlorocyclopentadiene	µg/L	<										
	Hexachloroethane	µg/L	<										
	Indeno(1,2,3-cd)Pyrene	µg/L	<										
	Isophorone	µg/L	<										
	Naphthalene	µg/L	<										
	Nitrobenzene	µg/L	<										
	n-Nitrosodimethylamine	µg/L	<										
	n-Nitrosodi-n-Propylamine	µg/L	<										
	n-Nitrosodiphenylamine	µg/L	<										
	Phenanthrene	µg/L	<										
	Pyrene	µg/L	<										
	1,2,4-Trichlorobenzene	µg/L	<										
Group 6	Aldrin	µg/L	<										
	alpha-BHC	µg/L	<										
	beta-BHC	µg/L	<										
	gamma-BHC	µg/L	<										
	delta BHC	µg/L	<										
	Chlordane	µg/L	<										
	4,4-DDT	µg/L	<										
	4,4-DDE	µg/L	<										
	4,4-DDD	µg/L	<										
	Dieldrin	µg/L	<										
	alpha-Endosulfan	µg/L	<										
	beta-Endosulfan	µg/L	<										
	Endosulfan Sulfate	µg/L	<										
	Endrin	µg/L	<										
	Endrin Aldehyde	µg/L	<										
	Heptachlor	µg/L	<										
	Heptachlor Epoxide	µg/L	<										
	PCB-1016	µg/L	<										
	PCB-1221	µg/L	<										
	PCB-1232	µg/L	<										
	PCB-1242	µg/L	<										
	PCB-1248	µg/L	<										
	PCB-1254	µg/L	<										
	PCB-1260	µg/L	<										
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<										
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

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Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Jackson Township Sewer Authority, NPDES Permit No. PA0266566, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: _____ No. Reaches to Model: 1

- (●) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	008032	25.57	430	75.3			Yes
End of Reach 1	008032	23.9	419	76.3			Yes

$Q_{7\text{-}10}$

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	25.57	0.1	8.63									100	7		
End of Reach 1	23.9	0.1	8.76												

Q_h

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	25.57														
End of Reach 1	23.9														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Jackson Township Sewer Authority, NPDES Permit No. PA0266566, Outfall 001

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | (•) All ( ) Inputs ( ) Results ( ) Limits

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.378 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	13.439	14.0	50.9	Chem Translator of 0.96 applied
Total Lead	0	0		0	64.581	81.6	297	Chem Translator of 0.791 applied
Total Zinc	0	0		0	117.180	120	435	Chem Translator of 0.978 applied

☑ ***CFC*** CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	8.956	9.33	74.4	Chem Translator of 0.96 applied
Total Lead	0	0		0	2.517	3.18	25.4	Chem Translator of 0.791 applied
Total Zinc	0	0		0	118.139	120	955	Chem Translator of 0.986 applied

☑ ***THH*** CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	

Total Copper	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): 44.779 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Copper	0.22	0.34	32.6	50.9	81.5	µg/L	32.6	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	1.86	2.9	279	435	697	µg/L	279	AFC	Discharge Conc ≥ 50% WQBEL (RP)

☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Lead	N/A	N/A	Discharge Conc < TQL