

Application Type Renewal  
Facility Type Municipal  
Major / Minor Minor

**NPDES PERMIT FACT SHEET  
INDIVIDUAL SEWAGE**

Application No. PA0239518  
APS ID 981031  
Authorization ID 1252133

**Applicant and Facility Information**

Applicant Name	<u>Forward Township Sewer Authority</u>	Facility Name	<u>Meadow Ridge STP</u>
Applicant Address	<u>P.O. Box 436</u> <u>Evans City, PA 16033</u>	Facility Address	<u>Rt 68 &amp; Buhl Hill Road</u> <u>Evans City, PA 16033</u>
Applicant Contact	<u>Steve Buehler</u>	Facility Contact	<u></u>
Applicant Phone	<u>(412) 337-1270</u>	Facility Phone	<u></u>
Client ID	<u>340076</u>	Site ID	<u>627122</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Forward Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Butler</u>
Date Application Received	<u>October 31, 2018</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>November 11, 2018</u>	If No, Reason	<u></u>
Purpose of Application	<u>Renewal of a NPDES Permit for an existing discharge of treated sewage from a POTW</u>		

**Summary of Review**

The permit was transferred on May 21, 2018 from Joanne L. Lisk & Steven Victor d/b/a Meadow Ridge Partners to Forward Township Sewer Authority. Since the ownership went from a private party to a municipal entity, the permit classification is changing from "Non-Municipal" to Publicly Operated Treatment Works (POTW). With this change, the proposed renewed permit will have additional requirements such as influent monitoring, weekly average limits for CBOD<sub>5</sub> and TSS, and submission of annual Chapter 94 reports.

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

Last site inspection was conducted January 23, 2018. No issues were documented.

There are currently no open violations listed in EFACTS as part of this permit renewal (9/16/2019).

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.	<u>001</u>	Design Flow (MGD)	<u>0.035</u>
Latitude	<u>40° 48' 14"</u>	Longitude	<u>-80° 1' 8"</u>
Quad Name	<u>Evans City</u>	Quad Code	<u>01205</u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>Unnamed Tributary to Connoquenessing Creek</u>	Stream Code	<u>35093</u>
NHD Com ID	<u>126218479</u>	RMI	<u>1.7</u>
Drainage Area	<u>0.14</u>	Yield (cfs/mi <sup>2</sup> )	<u>0.0428</u>
Q <sub>7-10</sub> Flow (cfs)	<u>0.006</u>	Q <sub>7-10</sub> Basis	<u>Buffalo Crk @ Freeport ('77 - '11)</u>
Elevation (ft)	<u>1160</u>	Slope (ft/ft)	<u>0.052</u>
Watershed No.	<u>20-C</u>	Chapter 93 Class.	<u>WWF</u>
Existing Use	<u></u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u></u>	Exceptions to Criteria	<u></u>
Assessment Status	<u>Attaining Use(s)</u>		
Cause(s) of Impairment	<u></u>		
Source(s) of Impairment	<u></u>		
TMDL Status	<u></u>	Name	<u></u>
Background/Ambient Data		Data Source	
pH (SU)	<u>6.2</u>		<u>1986 Connoquenessing Crk PWB Survey</u>
Temperature (°C)	<u>25</u>		<u>Default (WWF)</u>
Hardness (mg/L)	<u></u>		<u></u>
Other: NH <sub>3</sub> -N (mg/l)	<u>0.06</u>		<u>WQN 917 (2002-2016)(Median)</u>
Nearest Downstream Public Water Supply Intake	<u>PA American Water Co., Ellwood District</u>		
PWS Waters	<u>Connoquenessing Creek</u>	Flow at Intake (cfs)	<u>67</u>
PWS RMI	<u>0.2</u>	Distance from Outfall (mi)	<u>32.3</u>

Changes Since Last Permit Issuance: A new, closer-downstream public water supply was constructed.

Other Comments:

Treatment Facility Summary				
<b>Treatment Facility Name:</b> Meadow Ridge STP				
<b>WQM Permit No.</b>		<b>Issuance Date</b>		
1004405		2/15/2005		
<b>Waste Type</b>	<b>Degree of Treatment</b>	<b>Process Type</b>	<b>Disinfection</b>	<b>Avg Annual Flow (MGD)</b>
Sewage	Secondary	Activated Sludge	Ultraviolet	0.035
<b>Hydraulic Capacity (MGD)</b>	<b>Organic Capacity (lbs/day)</b>	<b>Load Status</b>	<b>Biosolids Treatment</b>	<b>Biosolids Use/Disposal</b>
0.035	70	Not Overloaded		Other STP

Changes Since Last Permit Issuance:

Other Comments: Permit was transferred on 5/24/2018.

Compliance History

DMR Data for Outfall 001 (from August 1, 2018 to July 31, 2019)

Parameter	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18
Flow (MGD) Average Monthly	0.0155	0.0187	0.0141	0.0138	0.0125	0.0171	0.0153	0.0156	0.0181	0.0108	0.0155	0.0061
pH (S.U.) Instantaneous Minimum	6.9	6.7	6.7	6.5	7.0	7.0	7.0	7.2	7.3	7.5	7.5	7.4
pH (S.U.) Instantaneous Maximum	7.3	6.9	7.1	7.3	7.2	7.0	7.2	7.5	7.6	7.6	7.6	7.7
DO (mg/L) Instantaneous Minimum	5.0	5.4	6.0	6.1	8.0	6.0	6.0	10.0	9.0	9.0	8.0	8.0
CBOD5 (mg/L) Average Monthly	4.65	4.8	3.0	7.4	3.0	3.4	4.1	3.85	3.0	3.0	3.2	3.0
TSS (mg/L) Average Monthly	5.0	5.0	9.0	11.0	8.5	10.0	13.5	11.5	3.0	6.5	6.5	3.0
Fecal Coliform (No./100 ml) Geometric Mean	7.35	6.7	4.2	5.29	1	1.4	7	2.83	2	1.4	6.3	18.1
Fecal Coliform (No./100 ml) Instantaneous Maximum	9.0	15	6	28	1	2.0	9	4	4	2	8	41
UV Intensity ( $\mu\text{w}/\text{cm}^2$ ) Average Monthly	12.8	13.5	11.9	11.3	10.1	11.2	11.02	11.0	11.4	11.7	11.15	11.6
Total Nitrogen (mg/L) Average Monthly	5.52	4.88	5.8	6.9	6.87	7.41	7.84	18.9	7.54	12.6	9.2	4.35
Ammonia (mg/L) Average Monthly	0.36	0.27	0.245	1.04	0.18	0.38	0.22	0.20	0.17	0.245	0.25	0.225
Total Phosphorus (mg/L) Average Monthly	0.29	0.56	1.10	0.59	0.46	0.54	1.10	0.735	0.77	1.0	0.675	0.435

**Development of Effluent Limitations**

<b>Outfall No.</b> <u>001</u>	<b>Design Flow (MGD)</b> <u>0.035</u>
<b>Latitude</b> <u>40° 48' 14.00"</u>	<b>Longitude</b> <u>-80° 1' 8.00"</u>
<b>Wastewater Description:</b> <u>Sewage Effluent</u>	

**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 <sub>5</sub>	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 necessary because UV disinfection is utilized.

**Water Quality-Based Limitations**

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

Parameter	Limit (mg/l)	SBC	Model
Ammonia Nitrogen (5/01 – 10/31)	2.0	Average Monthly	WQM 7.0 Ver 1.0b
Ammonia Nitrogen (11/01 – 4/30)	6.0	Average Monthly	WQM 7.0 Ver 1.0b
Dissolved Oxygen	5.0	Daily Minimum	WQM 7.0 Ver 1.0b

Comments: A season multiplier of three (3) is applied for ammonia nitrogen.

**Best Professional Judgment (BPJ) Limitations**

Comments: The total phosphorus limit is a basin-wide limit for sewage discharges to Connoquenessing Creek and its tributaries above the confluence with Slippery Rock Creek. Total nitrogen and UV Intensity monitoring is being placed in the permit in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits." Influent BOD<sub>5</sub> and TSS monitoring will be placed in the permit in accordance with the Department's SOP entitled "New and Reissuance Sewage Individual NPDES Permit Applications."

**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) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> 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	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
CBOD5	7.2	11.6	XXX	25.0	40.0	50	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS	8.7	13.1	XXX	30.0	45.0	60	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
UV Intensity (µw/cm <sup>2</sup> )	XXX	XXX	XXX	Report	XXX	XXX	1/day	Recorded
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Ammonia Nov 1 - Apr 30	1.7 Wkly Avg	XXX	XXX	6.0	XXX	12	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	0.58	XXX	XXX	2.0	XXX	4	2/month	8-Hr Composite

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Phosphorus	0.58	XXX	XXX	2.0	XXX	4	2/month	8-Hr Composite

Compliance Sampling Location: Outfall 001 (after disinfection)

Other Comments: Weekly Average concentration limits, as well as mass limits, were placed in the draft permit, due to the discharge now being a POTW.

ATTACHMENT A



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*Figure 1 - WQM 7.0 Modeling*



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*Figure 2 - Discharge pH*