

Application Type Renewal
Wastewater Type Sewage
Facility Type SFTF

**NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP**

Application No. PA0217832
APS ID 990972
Authorization ID 1269336

Applicant, Facility and Project Information

Applicant Name	<u>Pugliano 66 Assocs</u>	Facility Name	<u>Perrine Bldg</u>
Applicant Address	<u>3676 Logans Ferry Road</u> <u>Monroeville, PA 15146</u>	Facility Address	<u>112 Pfeffer Road</u> <u>Export, PA 15632</u>
Applicant Contact	<u>Gary Pugliano</u>	Facility Contact	<u>Gary Mille</u>
Applicant Phone	<u>(412) 736-7727</u>	Facility Phone	<u>724-568-3623</u>
Client ID	<u>305657</u>	Site ID	<u>484011</u>
SIC Code	<u>6512</u>	Municipality	<u>Washington Township</u>
SIC Description	<u>Fin, Ins & Real Est - Nonresidential</u> <u>Building Operators</u>	County	<u>Westmoreland</u>
Date Application Received	<u>April 10, 2019</u>	WQM Required	<u>No</u>
Date Application Accepted	<u>April 16, 2019</u>	WQM App. No.	<u>NA</u>
Project Description	<u>See below.</u>		

Summary of Review

The permittee has applied for a renewal of NPDES Permit No. PA0217832. NPDES Permit No. PA0217832 was previously issued by the PA Department of Environmental Protection (DEP) on October 6, 2014. That permit expired on October 31, 2019.

This draft permit is approved during the Coronavirus pandemic requiring DEP employees to telework. Electronic signatures are considered appropriate for the draft permit documents. An electronic copy of the communication that transmitted approval of the draft permit documents has been saved and is included with the file.

The permittee was asked by way of the draft permit cover letter to confirm if it was acceptable to electronically submit the final permit documents in case the office is still closed at that time. If they respond it is not acceptable, then DEP will have to arrange to mail the final permit documents via the US Postal Service.

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		David R. Ponchione David R. Ponchione / Project Manager	June 30, 2020
x		Donald J. Leone Donald J. Leone, P.E. / Environmental Engineer Manager	July 1, 2020

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	.001
Latitude	40° 28' 8.0"	Longitude	-79° 35' 31"
Quad Name	Slickville, A	Quad Code	1509
Wastewater Description: Sewage Effluent			
Receiving Waters	Unnamed Tributary to Thorn Run (HQ-CWF)	Stream Code	42979
NHD Com ID	125291792	RMI	0.42
Drainage Area	0.769	Yield (cfs/mi ²)	0.16
Q ₇₋₁₀ Flow (cfs)	0.012	Q ₇₋₁₀ Basis	Station #03048300 Bulletin 12
Elevation (ft)	1080	Slope (ft/ft)	0.0105
Watershed No.	18B	Chapter 93 Class.	High Quality Waters - Cold Water Fishes
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Changes Since Last Permit Issuance: None

Comment: This writer reviewed Title 25, Chapter 93 to determine if the receiving stream is still designated as a HQ-CWF. The only Thorn Run listed in Chapter 93 is a stream located in Allegheny County which is designated as a WWF. Review of the USGS topographic map however, does show a Thorn Run that exists in the Beaver Run Basin. Thorn Run is a tributary of Beaver Run. Beaver Run from its source to the Beaver Run Reservoir Dam is listed as a HQ-CWF.

Treatment Facility Summary

Treatment Facility Name: Perrine Building STP

WQM Permit No.	Issuance Date
6598406	Sept. 15, 1998
6598406-A1	July 2, 2004

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Cromaglass Unit	Chlorine	0.001000

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.001035	12.00	N.A.	Other WWTP	Combination of methods

The treatment process consists of flow equalization, a Cromaglass CA-15 treatment unit, final clarification, sand filtration and chlorination. Alum is added to aid in phosphorus removal. Cascade aeration is provided in order to achieve the D.O. limit.

This type of system is not in DEP 's Small Flow Sewage Treatment Plant Design Manual and is thus not eligible for a general NPDES permit.

Compliance History

John Murphy Water Quality Specialist Supervisor on June 11, 2020 informed this writer by way of email that permit issuance is recommended and provided the below Operations Compliance Check Summary Report.

Facility: Perrine Bldg STP

NPDES Permit No.: PA0217832

Compliance Review Period: 6/2015 – 6/2020

Inspection Summary:

INSP ID	INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC	# OF VIOLATIONS
2491375	02/29/2016	Administrative/File Review	PA Dept of Environmental Protection	Violation(s) Noted	1
2421070	10/21/2015	Routine/Partial Inspection	PA Dept of Environmental Protection	Outstanding Violations - No Viols Req'd	0

Violation Summary:

VIOL ID	VIOLATION DATE	VIOLATION TYPE	VIOLATION TYPE DESC	RESOLVED DATE
761028	02/29/2016	92A.44	NPDES - Violation of effluent limits in Part A of permit	06/06/2016

Open Violations by Client ID:

No open violations for client ID 305657

Enforcement Summary:

ENF ID	ENF TYPE	ENF CREATION DATE	VIOLATIONS	PENALTY AMOUNT	AMOUNT RECEIVED	ENF FINALSTATUS	ENF CLOSED DATE
343686	CACP	06/09/2016	92A.44	\$2,500.00	\$2,500.00	Comply/Closed	06/06/2016

DMR Violation Summary:

MONITORING START DATE	MONITORING END DATE	NON COMPLIANCE TYPE	PARAMETER	SAMPLE VALUE	PERMIT VALUE	UNIT OF MEASURE	STATISTICAL BASE CODE
05/01/2018	05/31/2018	Violation of permit condition	Dissolved Oxygen	6.7	7.0	mg/L	Daily Minimum
02/01/2019	02/28/2019	Violation of permit condition	Ammonia-Nitrogen	6.5	4.5	mg/L	Average Monthly
02/01/2019	02/28/2019	Violation of permit condition	Ammonia-Nitrogen	12.2	9.0	mg/L	Instantaneous Maximum

**NPDES Permit Fact Sheet
Perrine Bldg**

NPDES Permit No. PA0217832

11/01/2019	11/30/2019	Violation of permit condition	Total Suspended Solids	38	20	mg/L	Instantaneous Maximum
11/01/2019	11/30/2019	Violation of permit condition	Total Suspended Solids	22	10	mg/L	Average Monthly

Compliance Status:

Permittee in compliance.

Completed by: John Murphy

Completed date: 6/11/20

Development of Effluent Limitations

Outfall No. <u>001</u>	Design Flow (MGD) <u>0.001</u>
Latitude <u>40° 28' 8.00"</u>	Longitude <u>79° 35' 31.00"</u>
Wastewater Description: <u>Treated Sewage</u>	

The existing plant is considered a Small Flow Treatment Facility (SFTF) because it was designed to treat an influent flow of 2,000 gpd or less. The design capacity of the SFTF is 1,035 gpd.

DEP's Standard Operating Procedure (SOP) for Clean Water Program New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications - Final, November 9, 2012 Revised, May 17, 2019 Version 1.8, contains the following effluent requirements for a SFTF:

Parameter	Avg	IMAX	Sample Type	Frequency: SFTFs
Flow (GPD)	Report	XXX	Measured	1/month
BOD5 (mg/L)	10	20	Grab	1/month
TSS (mg/L)	10	20	Grab	1/month
TRC (mg/L)	<i>Use TRC Spreadsheet to determine WQBELs or 0.02 mg/L AML for SFTFs</i>		Grab	1/month
Fecal Coliform (No./100 ml)	200 Geometric Mean		Grab	1/month

The above effluent requirements are to be established in all new and renewed permits as a minimum. This permit will continue to require limits for additional parameters as well as additional monitoring to comply with anti-backsliding regulations. Also, the discharge is in a HQ watershed and the plant has experienced effluent violations in the past, thus re-imposing the same effluent requirements will better ensure the HQ waters are protected.

This permit writer is also taking into account the discharge is to a HQ stream. According to the Water Quality Antidegradation Implementation Guidance that became effective November 29, 2003, ABACT requirements, such as those defined below for sewage discharges, are designed to help maintain existing water quality. All treatment facilities must be enhanced with pollution prevention technologies to meet the requirements.

ABACT for municipal, non-municipal, and small flow sewage discharges is defined below.

Parameter Treatment Process Performance Expectations (Average monthly limits - mg/l) for plants rated 2,000 to <2,000 gpd:

CBOD5 (May 1, - Oct. 31)	10
CBOD5 (Nov. 1, - Apr. 30)	20
Suspended Solids	20
NH3-N (May 1 - Oct. 31)	5.0
NH3-N (Nov. 1 - Apr. 30)	15.0

Disinfection should be accomplished using a method that leaves no detectable residual. Disinfection using ultra-violet light or other non-chlorine based systems is encouraged and must be considered. The existing plant uses chlorine tablets for disinfection.

The existing CBOD5, NH3-N, and TSS effluent limitations were based on the Special Protection Water Implementation Handbook which called for the more restrictive of water quality based effluent limits or anti-degradation BAT limits because a Social and Economic Justification was approved. Water Quality Analysis Model 63 was used and confirmed anti-degradation BAT CBOD5-10 mg/l and NH3-N-1.5 mg/l did not become more stringent to meet water quality criterion, however a Dissolved Oxygen limit of 7.0 mg/l is necessary. The model does not evaluate TSS.

A phosphorus limit of 2 mg/l was previously imposed based on DEP's Lake Study on Beaver Run Reservoir during the spring and summer of 1985. The DEP biologist used an Oxic Lake model to evaluate discharges to the lake. The model indicated that a phosphorus limit of 2 mg/l should be imposed on all discharges tributary to this reservoir.

The TRC_Calc spreadsheet was originally used to evaluate Total Residual Chlorine. The results of the analysis indicated a minimum limit of 1.7 mg/l is necessary to maintain water quality standards. A BAT TRC limit of 0.5 was imposed in the permit at that time and rolled over for subsequent permits. For this renewal, a more stringent TRC average monthly limit of 0.02 mg/l is being imposed, and will go into effect on January 1, 2022. This will give the permittee time to install a tablet dechlorinator, or another means that will leave no detectable residual, consistent with the Water Quality Antidegradation Implementation Guidance requirement. A schedule was incorporated in the permit. A WQM permit amendment application is due by July 1, 2021. To give DEP time to review and approve the permit application, construction is to begin by December 1, 2021 and completed by December 31, 2021.

Since there have been no changes to the receiving stream, the discharge, and because the WQAM63 model computes the same results as the current WQM7.0 model, the limitations computed by this model are based on the previously approved pollution report (copy below as a pdf file).



Pollution Report

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
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)
Total Residual Chlorine (permit effective date – December 31, 2021)	0.5	Average Monthly	-	92a.48(b)(2)

The above effluent limitations are consistent with the previous NPDES permit.

Water Quality-Based Limitations

The following limitation was determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
D.O.	7.0	Minimum	WQAM63

The above effluent limitation is consistent with the previous NPDES permit.

Special Protection Anti-Degradation BAT Limits

Parameter	Limit (mg/l)	SBC	Basis
NH3-N (summer)	1.5	Average Monthly	Special Protection Water Implementation Handbook
NH3-N (winter)	3.0	Average Monthly	Special Protection Water Implementation Handbook
CBOD5 (now BOD5 to be consistent with SOP)	10.0	Average Monthly	Special Protection Water Implementation Handbook

The above effluent values are consistent with the previous NPDES permit.

Special Protection ABACT Limits

Parameter	Limit (mg/l)	SBC	Basis
Total Residual Chlorine (January 1, 2022 – Permit Expiration Date)	0.02	Average Monthly	Water Quality Antidegradation Implementation Guidance

The Water Quality Antidegradation Implementation Guidance requires no detectable residual. The above effluent limitations are more stringent than the previous permit and a schedule will be implemented to give the permittee time to comply with the new limits.

Best Professional Judgement (BPJ) Limitations

Comments: Re-impose phosphorus limits. Based on study of Beaver Run Reservoir. See pollution report.

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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.001	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/week	Grab
DO	XXX	XXX	7.0 Inst Min	XXX	XXX	XXX	1/week	Grab
TRC (Permit effect date to 12/31/21)	XXX	XXX	XXX	0.5	XXX	1.6	1/week	Grab
TRC (1/1/22 to permit expiration)	XXX	XXX	XXX	0.02	XXX	0.04	1/week	Grab
BOD5	XXX	XXX	XXX	10.0	XXX	20.0	2/month	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20.0	2/month	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	XXX	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	4.5	XXX	9.0	2/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	1.5	XXX	3.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4.0	2/month	Grab

Compliance Sampling Location: Outfall 001

Other Comments:

The following modifications have been made to be consistent with current DEP policy:

- Effluent limitations for pH and DO are to be reported as “Instantaneous Minimum” in lieu of “Minimum”.
- The units for Fecal Coliform are now “No./100 ml” in lieu of “CFU/100 ml”.
- Seasonal limits for Fecal Coliform are no longer applicable per the SOP.
- A once per year Monitor and Report requirement for Total N was incorporated into the previous permit and will be continued. However, the reporting requirement for Total Nitrogen was changed from Average Monthly to Daily Maximum.
- The previous CBOD5 parameter was changed to BOD5 to be consistent with the SOP.