

Application Type Renewal
Wastewater Type Sewage
Facility Type SFTF

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

Application No. PA0217999
APS ID 1104807
Authorization ID 1469255

Applicant, Facility and Project Information

Applicant Name	<u>Wallace Run Rd LLC</u>	Facility Name	<u>Jacks Independent Service</u>
Applicant Address	<u>1121 Wallace Run Road</u> <u>Darlington, PA 16115-2701</u>	Facility Address	<u>1121 Wallace Run Road</u> <u>Darlington, PA 16115-2701</u>
Applicant Contact	<u>Vishal Patel</u>	Facility Contact	<u>Gary Gailey</u>
Applicant Phone	<u>(724) 827-2132</u>	Facility Phone	<u>724-827-2132</u>
Client ID	<u>346821</u>	Site ID	<u>563893</u>
SIC Code	<u>4952</u>	Municipality	<u>South Beaver Township</u>
SIC Description	<u>Trans. & Utilities - Sewerage Systems</u>	County	<u>Beaver</u>
Date Application Received	<u>January 16, 2024</u>	WQM Required	<u>No</u>
Date Application Accepted	<u></u>	WQM App. No.	<u>0498405</u>
Project Description	<u>Application for renewal of a NPDES Permit for treated sewage.</u>		

Summary of Review

Wallace Run Rd LLC has applied for a renewal of NPDES Permit No. PA0217999. PA0217999 was previously issued by the Pennsylvania Department of Environmental Protection (DEP) on August 8, 2017 and was transferred on April 12, 2019. The permit expired August 31, 2022.

Jacks Independence Service is a small flow treatment facility (SFTF) that treats sewage using a Chromoglass aerobic treatment plant, sand filtration, chlorine disinfection, and dechlorination before discharging to North Fork Little Beaver Creek (Stream Code 33396), which is classified as a high-quality cold-water fishery (HQ-CWF) in State Watershed No. 20-B.

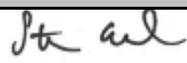
Biosolids at this facility are pumped out and hauled by Dalton Sanitation.

The permittee has complied with Act 14 notifications as evidenced by undated letters sent to South Beaver Township and Beaver County.

Although not required for SFTFs, Wallace Run LLC is currently enrolled in and will continue to use eDMR.

The following permit changes are being made during this permit cycle:

- The dissolved oxygen average monthly effluent limitation was reduced to 6.0 mg/L in accordance with DEP's 1992 *Special Protection Waters Implementation Handbook*.
- The total residual chlorine (TRC) average monthly and instantaneous maximum effluent limitations were reduced to 0.02 mg/L in accordance with DEP's *Water Quality Antidegradation Implementation Guidance* [Doc. No. 391-0300-002].
- A two-year compliance period for TRC was written into Part I.A., I.B., and Part C.III. of the permit.

Approve	Deny	Signatures	Date
X		 Stephanie Conrad / Environmental Engineering Specialist	January 23, 2025
X		 Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	January 24, 2025

Summary of Review

- The winter fecal coliform limit previously imposed is being removed and a year-round fecal coliform limit of 200 cfu/100 mL is being imposed in accordance with DEP's SOP for *New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Application*

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard of water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 ***(I) Reissued permits. (1) Except as provided in paragraph (1)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.***

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.

Discharge and Stream Data – 2 - Receiving Waters and PWS

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>001</u>	Design Flow (MGD)	<u>.00136</u>
Latitude	<u>40° 48' 14"</u>	Longitude	<u>-80° 25' 18"</u>
Quad Name	<u>New Galilee</u>	Quad Code	<u>1202</u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>Tributary 33396 of North Fork Little Beaver Creek (HQ-CWF)</u>	Stream Code	<u>33396</u>
NHD Com ID	<u>99676678</u>	RMI	<u>0.095</u>
Drainage Area	<u>4.5</u>	Yield (cfs/mi ²)	<u>0.0122</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.0506</u>	Q ₇₋₁₀ Basis	<u>USGS Stream Stats</u>
Elevation (ft)	<u>900</u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>20-B</u>	Chapter 93 Class.	<u>HQ-CWF</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></u>		<u></u>
Temperature (°F)	<u></u>		<u></u>
Hardness (mg/L)	<u></u>		<u></u>
Other:	<u></u>		<u></u>
Nearest Downstream Public Water Supply Intake	<u>City of East Liverpool, Ohio</u>		

Changes Since Last Permit Issuance: None

Other Comments: None

Treatment Facility Summary				
Treatment Facility Name: Wallace Run Rd LLC				
WQM Permit No.	Issuance Date	Purpose		
0498405	February 2, 1999	Permit approving a minor stp consisting of: <ul style="list-style-type: none"> • One 3,000-gallon Chromoglass Model CA-30 aerobic treatment plant. <ul style="list-style-type: none"> • Dosing tank with pump • One 2,176 ft² sand filter <ul style="list-style-type: none"> • Tablet chlorination • One 3000-gallon chlorine contact tank 		
0498405 T-1	April 12, 2019	Permit issued by DEP approving the transfer from John Gishbaugher to Jack's Independent Service, inc.		
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Activated Sludge With Solids Removal	Chlorine With Dechlorination	0.009
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.00136	5.28	Not Overloaded	None	Pumped and Hauled

Changes Since Last Permit Issuance:

Other Comments:

Compliance History

Operations Compliance Check Summary Report

Facility: WALLACE RUN RD LLC (formerly Jack's Independent)

NPDES Permit No.: PA0217999

Compliance Review Period: 1/1/20-1/13/25

Inspection Summary:

INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC
05/16/2023	Compliance Evaluation	PA Dept of Environmental Protection	Violation(s) Noted

Violation Summary:

VIOLATION DATE	VIOLATION TYPE	VIOLATION TYPE DESC	RESOLVED DATE
05/16/2023	92A.44	NPDES - Violation of effluent limits in Part A of permit	11/28/2023

Open Violations by Client ID:

No open violations for Client ID 346821

Enforcement Summary:

ENF TYPE	ENF TYPE DESC	EXECUTED DATE	VIOLATIONS	ENF FINAL STATUS	ENF CLOSED DATE
NOV	Notice of Violation	06/15/2023	92A.44	Administrative Close Out	09/20/2024

Effluent Violation Summary:

MON PD	PARAMETER	REPORTED VALUE	PERMIT LIMIT	UNIT	STAT BASE CODE	FACILITY COMMENTS
Dec-24	Dissolved Oxygen	6.8	7	mg/L	Instantaneous Minimum	Only possible reason is low flow.
Dec-24	Total Residual Chlorine (TRC)	< 0.10	0.08	mg/L	Average Monthly	Lab Chlorine meter only reports to 0.10. Plan to self-analyze in future. To order equipment.
Nov-24	Dissolved Oxygen	6.8	7	mg/L	Instantaneous Minimum	low volume and no flow past months.
Nov-24	Total Residual Chlorine (TRC)	< 0.10	0.08	mg/L	Average Monthly	Laboratory testing only achieves 0.1. Owner needs to do self-monitoring of chlorine with chlorine meter that can reach low levels.
Oct-24	Carbonaceous Biochemical Oxygen Demand (CBOD5)	25	10	mg/L	Average Monthly	low or no flow for months. seasonally dry
Oct-24	Carbonaceous Biochemical Oxygen Demand (CBOD5)	25	20	mg/L	Instantaneous Maximum	low or no flow for months. seasonally dry
Oct-24	Dissolved Oxygen	2.6	7	mg/L	Instantaneous Minimum	low or no flow for months. seasonally dry
Oct-24	Total Residual Chlorine (TRC)	< 0.10	0.08	mg/L	Average Monthly	laboratory reading only has Reporting level to 0.10 mg/l
Oct-24	Total Suspended Solids	25	10	mg/L	Average Monthly	low or no flow for months. seasonally dry.
Oct-24	Total Suspended Solids	25	20	mg/L	Instantaneous Maximum	low or no flow for months. seasonally dry
Aug-24	Total Residual Chlorine (TRC)	< 0.10	0.08	mg/L	Average Monthly	Laboratory only goes to 0.10 mg/L
Jun-24	Total Residual Chlorine (TRC)	< 0.10	0.08	mg/L	Average Monthly	The lab only can go to 0.1 mg/l for Cl2 readings. They report <0.1
May-24	Total Residual Chlorine (TRC)	< 0.10	0.08	mg/L	Average Monthly	Lab did not use lower detection limit. They only used <0.1. Only one analysis per month.
Apr-24	Total Residual Chlorine (TRC)	< 0.10	0.08	mg/L	Average Monthly	See Lab report. RL 0.1 per analysis
Mar-24	Total Residual Chlorine (TRC)	< 0.10	0.08	mg/L	Average Monthly	See lab report. They had reporting level at 0.1. Will discuss with lab.
Jan-24	Flow	0.0023	0.00136	MGD	Average Monthly	Rain fall was up during this period. Prior months were low or no flow. Will continue to monitor on monthly basis.
Jan-24	Total Residual Chlorine (TRC)	< 0.10	0.08	mg/L	Average Monthly	Lab completed dilution based on color or sample. Also had RL to high. Instructed lab to not dilute and to achieve a lower reading.
Dec-23	Total Residual Chlorine (TRC)	< 0.10	0.08	mg/L	Average Monthly	Lab completed dilution on sample based on cloudy/color to eliminate interference with spectrophotometer.
Nov-23	Total Residual Chlorine (TRC)	< 0.20	0.08	mg/L	Average Monthly	Lab not performing lower limits on method. Calling lab to request change in method.

**NPDES Permit Fact Sheet
Jacks Independent Service**

NPDES Permit No. PA0217999

Nov-23	Total Residual Chlorine (TRC)	< 0.20	0.19	mg/L	Instantaneous Maximum	Lab not performing lower limits on method. Calling lab to request change in method.
Aug-23	Total Residual Chlorine (TRC)	0.23	0.08	mg/L	Average Monthly	Tablets added to take away chlorine.
Aug-23	Total Residual Chlorine (TRC)	0.23	0.19	mg/L	Instantaneous Maximum	Added tablets to take away chlorine
Feb-23	Total Suspended Solids	15	10	mg/L	Average Monthly	one sample. OK with max.
Jan-23	Carbonaceous Biochemical Oxygen Demand (CBOD5)	14.1	10	mg/L	Average Monthly	
Sep-22	Fecal Coliform	1428	1000	No./100 ml	Instantaneous Maximum	
Sep-22	Fecal Coliform	1428	200	No./100 ml	Geometric Mean	
Aug-22	Ammonia-Nitrogen	1.91	1.5	mg/L	Average Monthly	low solids
Jul-22	Carbonaceous Biochemical Oxygen Demand (CBOD5)	12.3	10	mg/L	Average Monthly	Chlorine Feeding tube not meeting low flow
Jul-22	Fecal Coliform	1100	1000	No./100 ml	Instantaneous Maximum	Chlorine Feeding tube not meeting low flow
Jul-22	Fecal Coliform	593	200	No./100 ml	Geometric Mean	Chlorine Feeding tube not meeting low flow
Jun-22	Ammonia-Nitrogen	3.44	1.5	mg/L	Average Monthly	
Jun-22	Ammonia-Nitrogen	3.44	3	mg/L	Instantaneous Maximum	
Jun-22	Fecal Coliform	1560	1000	No./100 ml	Instantaneous Maximum	
Jun-22	Fecal Coliform	1560	200	No./100 ml	Geometric Mean	
Feb-22	Ammonia-Nitrogen	5.42	4.5	mg/L	Average Monthly	
Jan-22	Ammonia-Nitrogen	5.4	4.5	mg/L	Average Monthly	Over on Average not Maximum. One Sample for month
Jan-22	Fecal Coliform	4110	2000	No./100 ml	Geometric Mean	Unfroze contact tank area for more exposure time with Chlorine
Sep-21	Fecal Coliform	214	200	No./100 ml	Geometric Mean	
Jul-21	Fecal Coliform	212	200	No./100 ml	Geometric Mean	Plants permit only requires one sample per month. No Geo Mean can be calculated to complete an avg.
Jun-21	Ammonia-Nitrogen	3.3	1.5	mg/L	Average Monthly	low volume of waste
Jun-21	Ammonia-Nitrogen	3.3	3	mg/L	Instantaneous Maximum	low volume of waste
May-21	Flow	0.0017136	0.00136	MGD	Average Monthly	Unexpected flow. All past flows are low. Will review and monitor. June flow is 0.0000288 MGD
Apr-21	Ammonia-Nitrogen	7.24	4.5	mg/L	Average Monthly	Fecal also High but not an exception. Chemical Feed of Chlorine needs adjusted.
Apr-21	Carbonaceous Biochemical Oxygen Demand (CBOD5)	13.9	10	mg/L	Average Monthly	Fecal also High but not an exception. Chemical Feed of Chlorine needs adjusted.
Mar-21	Carbonaceous Biochemical Oxygen Demand (CBOD5)	13.4	10	mg/L	Average Monthly	System requires waste removal
Nov-20	Ammonia-Nitrogen	5.87	4.5	mg/L	Average Monthly	Not enough solids to absorb Amm. Nitrogen. NOTE: only one sample drawn a month. No average to calculate
Nov-20	Carbonaceous Biochemical Oxygen Demand (CBOD5)	12.2	10	mg/L	Average Monthly	Not enough solids to create active organism involvement to help. NOTE: only one sample drawn a month. No average to calculate
Aug-20	Ammonia-Nitrogen	1.76	1.5	mg/L	Average Monthly	Annual Solids removal before sampling. Decreased active sludge/solids to absorb and decrease ammonia nitrogen in outfall.
Jul-20	Dissolved Oxygen	6.2	7	mg/L	Instantaneous Minimum	Chlorine treatment low. Ordered new supply
Jul-20	Fecal Coliform	231	200	No./100 ml	Geometric Mean	Sludge removal completed and chlorine added Discharge set to high and less frequent
Jul-20	Flow	0.00142	0.00136	MGD	Average Monthly	Increased frequency with less discharge flow

Compliance Status: Facility has no open violations. CACP is in draft for reoccurring effluent exceedances.

Completed by: Amanda Illar **Completed date:** 1/17/25

Compliance History

DMR Data for Outfall 001 (from November 1, 2023 to October 31, 2024)

Parameter	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23
Flow (MGD) Average Monthly	0.00007		0.00006 6		0.00002 8	0.00004	0.00054 7	0.00019	0.00004	0.00230	0.00015 8	0.00014 4
pH (S.U.) Instantaneous Minimum	8.2		8.1		8.1	7.3	7.7	7.9	8.2	7.8	8.2	8.1
pH (S.U.) Instantaneous Maximum	8.2		8.1		8.1	7.3	7.7	7.9	8.2	7.8	8.2	8.1
DO (mg/L) Instantaneous Minimum	2.6		8.1		7.9	9.7	8.6	10.7	11.4	10.4	9.1	9.7
TRC (mg/L) Average Monthly	< 0.10		< 0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.01	< 0.10	< 0.10	< 0.20
TRC (mg/L) Instantaneous Maximum	< 0.10		< 0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.01	< 0.10	< 0.10	< 0.20
CBOD5 (mg/L) Average Monthly	25.0		< 3.0		8.6	< 4.8	< 4.8	< 4.8	< 4.0	< 4.0	< 4.0	< 4.0
CBOD5 (mg/L) Instantaneous Maximum	25.0		< 3.0		8.6	< 4.8	< 4.8	< 4.8	< 4.0	< 4.0	< 4.0	< 4.0
TSS (mg/L) Average Monthly	25.0		< 5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
TSS (mg/L) Instantaneous Maximum	25.0		< 5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Fecal Coliform (No./100 ml) Geometric Mean	2		50		3	< 1	< 1	1	2	1	< 1	< 1.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	2		50		3	< 1	< 1	1	2	1	< 1	< 1.0
Ammonia (mg/L) Average Monthly	< 0.30		< 0.30		< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Ammonia (mg/L) Instantaneous Maximum	< 0.30		< 0.30		< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30

Compliance History

Effluent Violations for Outfall 001, from: December 1, 2023 To: October 31, 2024

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Flow	01/31/24	Avg Mo	0.00230	MGD	.00136	MGD
DO	10/31/24	Inst Min	2.6	mg/L	7.0	mg/L
TRC	01/31/24	Avg Mo	< 0.10	mg/L	.08	mg/L
TRC	05/31/24	Avg Mo	< 0.10	mg/L	.08	mg/L
TRC	03/31/24	Avg Mo	< 0.10	mg/L	.08	mg/L
TRC	08/31/24	Avg Mo	< 0.10	mg/L	.08	mg/L
TRC	12/31/23	Avg Mo	< 0.10	mg/L	.08	mg/L
TRC	06/30/24	Avg Mo	< 0.10	mg/L	.08	mg/L
TRC	04/30/24	Avg Mo	< 0.10	mg/L	.08	mg/L
TRC	10/31/24	Avg Mo	< 0.10	mg/L	.08	mg/L
CBOD5	10/31/24	Avg Mo	25.0	mg/L	10.0	mg/L
CBOD5	10/31/24	IMAX	25.0	mg/L	20.0	mg/L
TSS	10/31/24	Avg Mo	25.0	mg/L	10.0	mg/L
TSS	10/31/24	IMAX	25.0	mg/L	20.0	mg/L

Development of Effluent Limitations

Outfall No. <u>001</u>	Design Flow (MGD) <u>0.00136</u>
Latitude <u>40° 48' 14.00"</u>	Longitude <u>-80° 25' 18.00"</u>
Wastewater Description: <u>Sewage Effluent</u>	

Technology-Based Limitations (TBELs)

The following effluent limitations and monitoring requirements, at a minimum, will be established in all new and renewed SFTF permits based on the requirements of DEP's Standard Operating Procedure (SOP) for *New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Application* [SOP No. BCW-PMT-003 Version 1.8].

Parameter	Avg	IMAX	Sample Type	Frequency: SFTFs	Frequency: SRSTPs
Flow (GPD)	Report	XXX	Estimate (SRSTPs) Measured (SFTFs)	1/month	1/year
BOD5 (mg/L)	10	20	Grab	1/month	1/year
TSS (mg/L)	10	20	Grab	1/month	1/year
pH*	6.0 S.U. Inst. Min.	9.0 S.U.	Grab	1/month	1/year
TRC (mg/L)	Report for SRSTPs; Use TRC Spreadsheet to determine WQBELs or 0.02 mg/L for SFTFs		Grab	1/month	1/month
Fecal Coliform (No./100 ml)	200 Geometric Mean (SFTFs) / Average (SRSTPs)		Grab	1/month	1/year

* Technology-Based effluent limits for pH will be imposed based upon Federal Regulation 133.102(c) and State Regulation 95.2(1).

Please note that the winter fecal coliform limit previously imposed is being removed and a year-round fecal coliform limit of 200 cfu/100 mL is being imposed in accordance with DEP's SOP for *New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Application* [SOP No. BCW-PMT-003 Version 1.8].

Antidegradation Considerations:

Outfall 001 discharges to Tributary 33396 of North Fork Little Beaver Creek, which is a HQ-CWF.

The following Antidegradation Best Available Technologies (BAT) effluent limits at a minimum, will be established based on the requirements of DEP's 1992 *Special Protection Waters Implementation Handbook*:

Parameter	Best Available Technology Effluent Limits
	Average Monthly (mg/L)
CBOD ₅	10.0
DO (instantaneous minimum)	5.0 to 6.0
Suspended Solids	10
NH ₃ -N (May 1 – Oct. 31)	1.5
NH ₃ -N (Nov. 1 – Apr. 30)	4.5

The following Antidegradation Best Available Combination of Technologies (ABACT) effluent limits, at a minimum, will be established based on the requirements of DEP's *Water Quality Antidegradation Implementation Guidance* [Doc. No. 391-0300-002].

Parameter	Treatment Process Performance Expectations (mg/L)		
	<2,000 gpd	2,000-50,000 gpd	>50,000 gpd
CBOD ₅ (May 1 – Oct. 31)	10	10	10

CBOD ₅ (Nov. 1 – Apr. 30)	20	20	10
Suspended Solids	20	10	10
NH ₃ -N (May 1 – Oct. 31)	5.0	3.0	1.5
NH ₃ -N (Nov. 1 – Apr. 30)	15.0	9.0	4.5
Effective disinfection	Disinfection should be accomplished using a method that leaves no detectable residual. Disinfection using ultra-violet light or other non-chlorine based systems is encourage and must be considered.		
Other parameters, as needed	<i>Determined by the size and characteristics of the proposed discharge, may include – NO₂/NO₃-N, Total Phosphorus, Copper, Lead, Zinc</i>		

Water Quality-Based Effluent Limitations (WQBELs)

Dissolved Oxygen

Previous permits have imposed an instantaneous DO limit of 7 mg/L based on a mass balance assuming that the DO concentration down stream of mixing would be a function of upstream flow and DO concentration and effluent flow and DO concentration. The equation used was correct, but three incorrect assumptions led to an incorrect DO limit of 7 mg/L. The first incorrect assumption was that the upstream drainage area of Tributary 33396 of North Fork Little Beaver Creek. Based on PA Bulletin 12, the instream flow at the discharge point was assumed to be 0.0027 cfs. USGS Stream stats, however, calculates the instream flow to be 0.0506 cfs. The second incorrect assumption was that the upstream flow wasn't completely saturated with DO. The calculation used an upstream concentration of 8.253 mg/L DO whereas modeling should assume complete saturation with CWFs having an instream DO concentration of 9.01 mg/L. The final incorrect assumption was that the instream criteria for CWFs was 7.0 mg/L. 25 PA Code § 93; however, defines the instream 7-day average criteria to be 6 mg/L.

In accordance with 40 CFR 122.44.1.2.i.B.2, an exception can be made to antibacksliding if “the Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit.” The Department asserts that because a criteria greater than that defined by law was used in the DO limit calculation, backsliding is justified in accordance with the federal code. A DO instantaneous minimum limit of 6 will be imposed for this permit in accordance with DEP’s 1992 *Special Protection Waters Implementation Handbook*.

Total Residual Chlorine

DEP’s Total Residual Chlorine (TRC) Spreadsheet is a Microsoft Excel ® Program used to evaluate WQBELs for TRC using a mass balance. In accordance with the Department’s SOP for *Establishing Effluent Limitations for Individual Sewage Permits* [SOP No. BCW-PMT-033 Version 1.9], default values of 0.3 mg/L and 0 mg/L for in-stream and discharge chlorine demand were used. Additionally, a discharge flow of 0.00136 MGD and Q₇₋₁₀ flow of 0.0506 cfs were used.

TRC was modeled with the TRC Spreadsheet and it was determined that a technology based effluent limit would be appropriate for TRC. The TRC Spreadsheet Output Files are attached in Appendix B.

Permit Limits

The limits to be imposed, which are provided below, represent the most stringent limitations between the TBELs, WQBELs, BAT, and ABACT limits.

Parameter	Limit (mg/l)	SBC	Model	Basis
Fecal Coliform	200	Average	N/A	TBEL
CBOD ₅	10	Average	N/A	BAT
Dissolved Oxygen	6.0	Instantaneous Minimum	N/A	BAT
TSS	10	Average	N/A	BAT
Ammonia-Nitrogen Nov 1 - Apr 30	3.5	Average Monthly	N/A	BAT

Ammonia-Nitrogen May 1 - Oct 31	1.5	Average Monthly	N/A	BAT
TRC	0.02	Average Monthly	N/A	ABACT
Total Phosphorus	1.0	Average Monthly	N/A	BAT

Please note that the TRC limit is being reduced to 0.02 mg/L in accordance with DEP's *Water Quality Antidegradation Implementation Guidance* [Doc. No. 391-0300-002]. Based on eDMR data, the facility as currently operating is not able to meet the new, more restrictive limit. Because of this, a two-year compliance period has been included in Part A.I.A and A.I.B of the permit. Additionally, Part C.III has been added to the permit imposing interim construction milestones. Part C.II has also been added to the permit because the imposed effluent limitations are below the Quantitation Limit (QL), as defined in 25 Pa. Code § 252.1, of the most sensitive existing EPA-approved test method.

Additional Considerations

In accordance with the Department's SOP for *Establishing Effluent Limitations for Individual Sewage Permits* [SOP No. BCW-PMT-033 Version 1.9], SRSTPs are not required to monitor for Total Nitrogen or Total Phosphorus in new and reissued permits.

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: Two Years Following 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		
TRC	XXX	XXX	XXX	0.02	XXX	0.02	1/day	Grab

Compliance Sampling Location: Outfall 001

Other Comments: None

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 Two Years Following Permit Effective 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		
TRC	XXX	XXX	XXX	0.08	XXX	0.19	1/day	Grab

Compliance Sampling Location: Outfall 001

Other Comments: None

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	Average Weekly	Average Monthly	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.00136	XXX	XXX	XXX	XXX	XXX	1/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Grab
DO	XXX	XXX	6.0 Inst Min	XXX	XXX	XXX	1/month	Grab
CBOD ₅	XXX	XXX	10.0	XXX	XXX	20.0	1/month	Grab
TSS	XXX	XXX	10.0	XXX	XXX	20.0	1/month	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/month	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	4.5	XXX	XXX	9.0	1/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	1.5	XXX	XXX	3.0	1/month	Grab

Compliance Sampling Location: Outfall 001

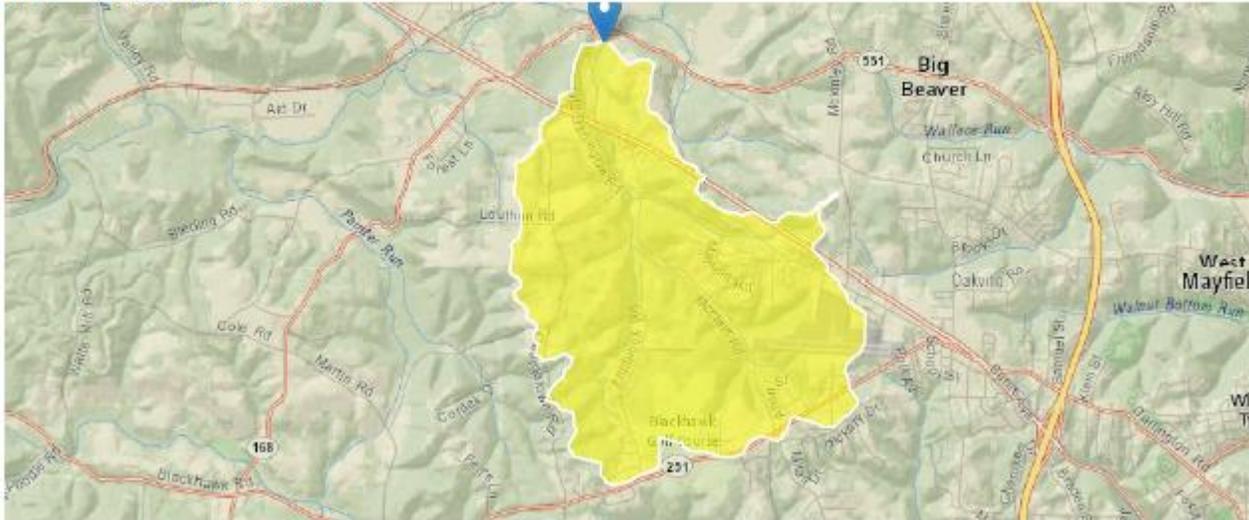
Other Comments: None

ATTACHMENT A

USGS Stream Stats Output

StreamStats Report

Region ID: PA
 Workspace ID: PA20250110134535486000
 Clicked Point (Latitude, Longitude): 40.80316, -80.42138
 Time: 2025-01-10 08:45:56 -0500



► Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	4.5	square miles	2.26	1400
ELEV	Mean Basin Elevation	1124	feet	1050	2580

Low-Flow Statistics Flow Report [Low Flow Region 4]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	0.148	ft ³ /s	43	43
30 Day 2 Year Low Flow	0.264	ft ³ /s	38	38
7 Day 10 Year Low Flow	0.0506	ft ³ /s	66	66
30 Day 10 Year Low Flow	0.0962	ft ³ /s	54	54

Statistic	Value	Unit	SE	ASEp
90 Day 10 Year Low Flow	0.18	ft ³ /s	41	41
<i>Low-Flow Statistics Citations</i>				
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: 4.25.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

ATTACHMENT B

Total Residual Chlorine Spreadsheet Output File

TRC EVALUATION				
Input appropriate values in A3:A9 and D3:D9				
0.0506	= Q stream (cfs)		0.5	= CV Daily
0.00136	= Q discharge (MGD)		0.5	= CV Hourly
30	= no. samples		1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream		1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge		15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value		720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)			=Decay Coefficient (K)
Source	Reference	AFC Calculations		Reference
TRC	1.3.2.iii	WLA_afc = 7.691		1.3.2.iii
PENTOXSD TRG	5.1a	LTAMULT_afc = 0.373		5.1c
PENTOXSD TRG	5.1b	LTA_afc = 2.866		5.1d
				WLA_cfc = 7.491
				LTAMULT_cfc = 0.581
				LTA_cfc = 4.355
Source	Effluent Limit Calculations			
PENTOXSD TRG	5.1f	AML_MULT = 1.231		
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500		BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.635		
WLA_afc	(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))... ...+Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)			
LTAMULT_afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)			
LTA_afc	wla_afc*LTAMULT_afc			
WLA_cfc	(.011/e(-k*CFC_tc)) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))... ...+Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)			
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)			
LTA_cfc	wla_cfc*LTAMULT_cfc			
AML_MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))			
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)			
INST MAX LIMIT	1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)			