

Application Type Renewal
 Facility Type Municipal
 Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0020613
 APS ID 686337
 Authorization ID 1206525

Applicant and Facility Information

Applicant Name	<u>Waynesburg Borough Greene County</u>	Facility Name	<u>Waynesburg STP</u>
Applicant Address	<u>90 E High Street</u> <u>Waynesburg, PA 15370-1817</u>	Facility Address	<u>Meadowlark Lane</u> <u>Waynesburg, PA 15370</u>
Applicant Contact	<u>Michael Simms</u>	Facility Contact	<u>Same as Applicant</u>
Applicant Phone	<u>(724) 627-8111</u>	Facility Phone	<u>Same as Applicant</u>
Client ID	<u>7831</u>	Site ID	<u>253736</u>
Ch 94 Load Status	<u>Existing Hydraulic and Organic Overload</u>	Municipality	<u>Franklin Township</u>
Connection Status	<u>Self Imposed Connection Prohibition</u>	County	<u>Greene</u>
Date Application Received	<u>August 31, 2017</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>November 14, 2017</u>	If No, Reason	<u></u>
Purpose of Application	<u>Renewal of NPDES Sewage Permit.</u>		

Summary of Review

Introduction

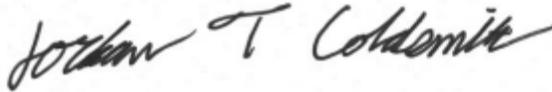
The Authority has applied for the renewal of existing NPDES Permit No. PA0020613, which was previously issued on March 1, 2013 and expired on February 28, 2018

Facility Overview

WQM Permit No. 3087402 authorized plant construction with a rated annual average design flow & design hydraulic capacity of 0.8 MGD, and a design organic capacity of 1337 lbs./day. Sewage from this plant is treated through flow equalization, primary clarification, trickling filtration, nitrification biotower, final clarification, chlorination and dechlorination and discharges to the South Fork Tenmile Creek which is designated as a Warm Water Fishery (WWF) per 25 Pa. Chapter 93 Designated Use and is located in State Watershed 19-B. A comprehensive listing of outfalls can be found below.

001	-	Treated Sewage
002	Purman Run By-Pass	CSO
003	Morgan Street By-Pass	CSO

Combined Sewer Overflow (CSO) Outfalls 002 and 003 will again be permitted. These outfalls serve as CSOs necessitated by stormwater entering the sewer system and exceeding the hydraulic capacity of the sewers and/or the treatment plant and are permitted to discharge only for this reason. Part C.II, Combined Sewer Overflows, has been incorporated into the permit

Approve	Deny	Signatures	Date
X		 Jordan Coldsmith / Environmental Engineering Specialist	February 18, 2025
X		 Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	June 18, 2025

Summary of Review

Combined Sewer Overflows

Part C requires the permittee to continue implementation of the NMCs and demonstrate system-wide compliance with the NMCs. Site specific O&M obligations were taken from the NMC Plan, received December 27, 1996. A Department NMC inspection will occur after permit issuance to ensure continued compliance.

Part C requires the permittee to implement the LTCP, dated February 2003, and later updated in 2019 & 2025. The LTCP complies with the EPA CSO Policy's Presumption Approach criteria to meet receiving Water Quality Standards (WQS) by capturing no less than at least 85% of the system-wide combined sewage volume collected in the combined sewer system during precipitation events under design conditions. The Department approved the LTCP on May 22, 2008. On November 21, 2019, Gannett Fleming submitted an amended Long-Term Control Plan (LTCP) that contained an updated LTCP schedule as part of the NPDES renewal process. On February 20, 2025, the Department requested that the submitted 2019 LTCP Schedule be updated to show any changes in the schedule since the 2019 submission. The Department received the updated schedule on April 15, 2025. The compliance dates in the current NPDES permit and Gannett Fleming's proposed revisions are summarized in the table below. The proposed revised compliance dates are about five to twelve years later than those requested by Gannett Fleming in its November 21, 2019 LTCP submission. The Department approved the LTCP updated schedule on June 26, 2025.

Task	Compliance Date in the Current 2005 LTCP	Compliance Date Requested in the December 2019 LTCP	Proposed Revised Compliance Date in 2025 Amended LTCP
Supplemental Flow Monitoring	N/A	2019-2020	Completed 2020
Lining of Three Interceptor Segments	N/A	2019	Completed 2019
CCTV Woodland Avenue	N/A	2019	Completed 2019
2019 Sewer Rehabilitation	N/A	2019	Completed 2020
Lining of Remaining Interceptor Segments	N/A	2020	Completed 2023
CCTV and Clean Subsystem 2A	N/A	2020	Completed 2024
Design of WWTP Upgrades and EQ Tank	N/A	2020	2025
Lining/Replacement Sewers Woodland Avenue	N/A	2002	2026
Start Construction of WWTP Upgrades and EQ Tank	N/A	2021	2026
Complete Construction of WWTP Upgrades and EQ Tank	N/A	2021	2027
CCTV and Clean Subsystem 2B	N/A	2021	2028
Replace/Line Sewers Subsystem 2A	N/A	2022	2030
Replace/Line Sewers Subsystem 2B	N/A	2022	2032
CCTV and Clean Subsystem 3 & 4	N/A	2022	2033
Replace/Line Sewers Subsystem 3 & 4	N/A	2023	2035
Post Construction Flow Monitoring	N/A	2024	2036

Summary of Review

All planned CSO Control Measures discussed in the LTCP will not be completed by the end of this permit. A consent order agreement is currently being worked on.

The permittee does not yet have an approved Post-Construction Compliance Monitoring (PCCM) Plan, which is part of the LTCP and is designed to verify compliance with water quality standards and the effectiveness of LTCP implementation. Following language has been added to the June 26, 2025 letter to state a PCCM Plan submission is required to be submitted in future:

“a Post Construction Compliance Monitoring Plan (PCCMP) must be submitted for Department’s review and approval at least two years prior to the PCCMP task in the LTCP. The PCCMP should be developed in accordance with the Department’s *Water Quality Monitoring Protocols for Surface Waters* (referred to as the “Monitoring Book”) and EPA’s *CSO Post Construction Compliance Monitoring Guidance (May 2012)*, EPA- 833-K-11-001.”

Summary of Changes Since Last Permit Issuance

- E. Coli monitoring added
- Revised Part C, Combined Sewer Overflow, language revised

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, Receiving Waters and Water Supply Information			
Outfall No.	<u>001</u>	Design Flow (MGD)	<u>0.8</u>
Latitude	<u>39° 53' 50.20"</u>	Longitude	<u>-80° 9' 52.82"</u>
Quad Name	<u>Waynesburg</u>	Quad Code	<u>39080H2</u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>South Fork Tenmile Creek (WWF)</u>	Stream Code	<u>40293</u>
NHD Com ID	<u>99416140</u>	RMI	<u>17.3</u>
Drainage Area	<u>133</u>	Yield (cfs/mi ²)	<u>0.03</u>
Q ₇₋₁₀ Flow (cfs)	<u>3.47</u>	Q ₇₋₁₀ Basis	<u>USGS Stream Stat</u>
Elevation (ft)	<u>1229</u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>19-B</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>Impaired</u>		
Cause(s) of Impairment	<u>CAUSE UNKNOWN, CAUSE UNKNOWN</u>		
Source(s) of Impairment	<u>SOURCE UNKNOWN, SOURCE UNKNOWN</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>TRI CNTY JT MUNI AUTH</u>		
PWS Waters	<u>Monongahela River (WWF)</u>	Flow at Intake (cfs)	<u></u>
PWS RMI	<u></u>	Distance from Outfall (mi)	<u>21.3</u>

Changes Since Last Permit Issuance: None

Other Comments: N/A

Treatment Facility Summary				
Treatment Facility Name: Waynesburg STP				
WQM Permit No.		Issuance Date		
3087402		11/15/1989		
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage			Gas Chlorine	0.8
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.8		Existing Hydraulic and Organic Overload		

Changes Since Last Permit Issuance: None

Other Comments: The Treatment facility consists of:

- flow equalization
- primary clarification
- trickling filtration
- nitrification biotower
- final clarification
- chlorination
- dechlorination

Compliance History

Operations Compliance Check Summary Report

Facility: Waynesburg STP

NPDES Permit No.: PA0020613

Compliance Review Period: 8/2017-8/2022

Inspection Summary:

INSP ID	INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC
3210424	06/24/2021	Administrative/File Review	PA Dept of Environmental Protection	No Violations Noted
3210422	04/30/2021	Combined Sewer Overflow-Non-Sampling	PA Dept of Environmental Protection	No Violations Noted
3080670	09/16/2020	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted
3080773	09/16/2020	Combined Sewer Overflow-Non-Sampling	PA Dept of Environmental Protection	No Violations Noted
3057671	07/21/2020	Administrative/File Review	PA Dept of Environmental Protection	No Violations Noted
2679340	10/11/2017	Chapter 94 Inspection	PA Dept of Environmental Protection	No Violations Noted
2749341	09/08/2017	Follow-up Inspection	PA Dept of Environmental Protection	Administratively Closed
2749335	08/29/2017	Follow-up Inspection	PA Dept of Environmental Protection	Administratively Closed

Violation Summary:

No violations noted

Open Violations by Client ID:

No open violations for Client ID 7831

Enforcement Summary:

No enforcements executed during review period

Effluent Violation Summary:

Mon Pd End	OUTFALL	PARAMETER	SAMPLE	PERMIT	UNIT	STAT_BASE_CODE
10/31/21	1	Ammonia-Nitrogen	26	13.3	lbs/day	Average Monthly
10/31/21	1	Ammonia-Nitrogen	26	20	lbs/day	Weekly Average
10/31/21	1	Ammonia-Nitrogen	7	2	mg/L	Average Monthly
10/31/21	1	Ammonia-Nitrogen	7	3	mg/L	Weekly Average
9/30/21	1	Ammonia-Nitrogen	26	13.3	lbs/day	Average Monthly
9/30/21	1	Ammonia-Nitrogen	26	20	lbs/day	Weekly Average
9/30/21	1	Ammonia-Nitrogen	6.3	2	mg/L	Average Monthly
9/30/21	1	Ammonia-Nitrogen	6.3	3	mg/L	Weekly Average
5/31/20	1	Fecal Coliform	1780	1000	CFU/100 ml	Instantaneous Maximum
9/30/18	1	Fecal Coliform	1030	1000	CFU/100 ml	Instantaneous Maximum

Compliance Status: Facility is currently in compliance with no enforcements pending. It is anticipated that more recent effluent exceedances will be addressed at the time of the next Compliance Evaluation Inspection.

Completed by: Amanda Schmidt

Completed date: 9/9/22

Compliance History

DMR Data for Outfall 001 (from January 1, 2024 to December 31, 2024)

Parameter	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24
Flow (MGD) Average Monthly	0.505	0.479	0.324	0.0330	0.405	0.420	0.380	0.540	0.750	0.768	0.665	0.906
Flow (MGD) Daily Maximum	0.860	1.050	0.370	0.570	0.540	0.980	0.610	1.010	0.1450	1420	1.5	1.6
pH (S.U.) Minimum	6.4	6.6	6.3	6.3	6.5	6.5	6.4	6.3	6.3	6.6	6.4	6.6
pH (S.U.) Maximum	6.8	7.1	6.9	6.7	7.1	6.7	6.8	7.1	7.1	4.9	7.0	7.2
DO (mg/L) Minimum	8.7	8.7	7.9	8.0	7.8	6.5	7.9	7.6	7.6	10.0	10.1	10.6
TRC (mg/L) Average Monthly	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
TRC (mg/L) Instantaneous Maximum	0.05	0.04	0.06	0.04	0.06	0.11	0.07	0.04	0.04	0.06	0.03	0.03
CBOD5 (lbs/day) Average Monthly	< 12.2	< 9.6	< 6.2	< 6.9	8.8	15.3	< 10.2	26.0	35.0	24.1	< 14.8	34.0
CBOD5 (lbs/day) Weekly Average	< 12.2	< 9.6	< 6.2	< 6.9	8.8	15.3	< 10.2	26.0	35.0	24.1	< 14.8	34.0
CBOD5 (mg/L) Average Monthly	< 2.4	< 3.3	< 2.4	< 3.5	2.7	3.4	< 4	5	6	4.2	< 3.0	4.9
CBOD5 (mg/L) Weekly Average	< 2.4	< 3.3	< 2.4	< 3.5	2.7	3.4	< 4	5	6	4.2	< 3.0	4.9
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	332	328	226	274	344	260	187	229	273	277	299	319
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	427	395	325	307	423	511	213	284	364	355	398	427
BOD5 (mg/L) Raw Sewage Influent Average Monthly	69	102	86	107	107	68	65	52.9	54.7	50.2	62	51
TSS (lbs/day) Average Monthly	< 26.5	< 18.1	< 16.1	< 12.8	< 18.5	< 19.4	< 22.6	< 46.8	< 28.2	< 39.4	< 33.4	< 85.0

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TSS (lbs/day) Raw Sewage Influent Average Monthly	628	386	248	251	336	360	281	315	451	328	552	245
TSS (lbs/day) Raw Sewage Influent Daily Maximum	1175	439	296	534	475	804	380	392	794	410	997	369
TSS (lbs/day) Weekly Average	< 26.5	< 18.0	< 16.1	< 12.8	< 18.5	< 19.4	< 22.6	< 46.8	< 28.2	< 39.4	< 33.4	< 85.0
TSS (mg/L) Average Monthly	< 5.2	< 6	< 6.0	< 5.0	< 6	< 4.0	< 8	< 10	< 5	< 7	< 7	< 11.0
TSS (mg/L) Raw Sewage Influent Average Monthly	118	119	94	98	105	96	80	72	86	60	113	48
TSS (mg/L) Weekly Average	5.2	< 6	< 6.0	< 5.0	< 6	< 4.0	< 8	< 10	< 5	< 7	< 7	< 11.0
Fecal Coliform (CFU/100 ml) Geometric Mean	85	44	3.7	46	23	8	2	110	537	261	274	156
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	560	172	81	237	74	136	2	220	1970	670	560	277
Ammonia (lbs/day) Average Monthly	1.2	< 0.5	< 0.4	3.8	< 0.3	< 3.4	< 0.3	0.9	< 0.6	< 0.6	1.1	< 1.1
Ammonia (lbs/day) Weekly Average	1.2	< 0.5	< 0.4	3.8	< 0.3	< 3.4	< 0.3	0.9	< 0.6	< 0.6	1.1	< 1.1
Ammonia (mg/L) Average Monthly	0.2	< 0.1	< 0.1	1.4	< 0.1	< 1.0	< 0.1	0.2	< 0.1	< 0.1	0.2	< 0.2
Ammonia (mg/L) Weekly Average	0.2	< 0.1	< 0.1	1.4	< 0.1	< 1.0	< 0.1	0.2	< 0.1	< 0.1	0.2	< 0.2

Development of Effluent Limitations

Outfall No. <u>001</u>	Design Flow (MGD) <u>0.8</u>
Latitude <u>39° 53' 48.00"</u>	Longitude <u>-80° 9' 53.00"</u>
Wastewater Description: <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 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)

Water Quality-Based Limitations

The discharge was evaluated using WQM7.0 to determine the CBOD₅, ammonia nitrogen, and dissolved oxygen parameters. The model results show slightly more restrictive limits for CBOD₅. The limits evaluated for DO and ammonia-nitrogen are less restrictive than limits previously imposed.

TRC limits were determined using the DEP TRC Spreadsheet. The TRC Spreadsheet showed less restrictive limits for TRC.

To comply with anti-backsliding regulations, the previous, more restrictive limits for TRC, DO and ammonia-nitrogen, will again be imposed for the facility.

Parameter	Limit (mg/l)	SBC	Model
CBOD ₅ (Nov 1 – Apr 30)	19.93	Average Monthly	WQM7.0
	39.86	IMAX	
CBOD ₅ (May 1 – Oct 31)	9.64	Average Monthly	WQM7.0
	19.28	IMAX	
Dissolved Oxygen	4	Minimum	WQM7.0
Ammonia Nitrogen (Nov 1 – Apr 30)	6.94	Average Monthly	WQM7.0
	13.88	IMAX	
Ammonia Nitrogen (May 1 – Oct 31)	2.89	Average Monthly	WQM7.0
	5.78	IMAX	
TRC	0.4	Average Monthly	TRC Spreadsheet
	1.37	IMAX	

Based off the current submitted eDMRs, the facility is capable of meeting these new restrictive limits for CBOD₅. Therefore, the facility will not receive a compliance schedule for these limits.

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 (I)(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.

The facility is not seeking to revise the previously permitted effluent limits.

Mass Loading Limitations

Per Department SOP “Establishing Effluent Limitations for Individual Sewage Permits” (BCW-PMT-033), mass loading limits will be established for POTWs for CBOD₅, TSS, ammonia nitrogen. Average monthly mass loading limits will be established for CBOD₅, TSS, and ammonia nitrogen. Average weekly mass loading limits will be established for CBOD₅ and TSS. Mass loading limits will be calculated according to the formula below:

$$\text{average annual design flow (MGD)} \times \text{concentration limit} \left(\frac{\text{mg}}{\text{L}}\right) \times 8.34 \text{ (conversion factor)}$$

$$= \text{mass loading limit} \left(\frac{\text{lbs}}{\text{day}}\right)$$

Please note that the hydraulic capacity of the facility is used for the average annual design flow number for the purposes of the calculations

The following mass loading limitations were calculated:

Parameter	Average Monthly (lbs/day)	Average Weekly (lbs/day)
CBOD ₅ (Nov 1 – Apr 30)	132.97	199.455
CBOD ₅ (May 1 – Oct 31)	64.318	127.6
TSS	150.12	225.18
Ammonia Nitrogen (May 1 – Oct 31)	26.688	40.03
Ammonia Nitrogen (Nov 1 – Apr 30)	13.3	20.016

Influent Monitoring

Per Department SOP “New and Reissuance Sewage Individual NPDES Permit Applications” (BCW-PMT-002), POTWs with design flows greater than 2,000 GPD, influent BOD₅ and TSS monitoring will again be included in the permit. The influent monitoring will be established with the same frequency and sample type as the effluent sampling.

Additional Considerations

Sewage discharges will include monitoring, at a minimum, for *E. coli*, in new and reissued permits, with a monitoring frequency of 1/quarter for design flows >= 0.05 and < 1 MGD.

Monitoring frequency for the proposed effluent limits are based upon Table 6-3, Self-Monitoring Requirements for Sewage Dischargers, from the Department’s “Technical Guidance for the Development and Specification of Effluent Limitations”.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/week	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/week	Grab
TRC	XXX	XXX	XXX	0.15	XXX	0.50	Daily when Discharging	Grab
CBOD5 Nov 1 - Apr 30	132.97	199.45	XXX	19.93	29.89	39.86	1/week	8-Hr Composite
CBOD5 May 1 - Oct 31	64.31	127.6	XXX	9.64	14.46	19.28	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS	200.2	300.2	XXX	30	45	60	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	26.7	40.0	XXX	4.0	6.0	8	1/week	8-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	13.3	20.0	XXX	2.0	3.0	4	1/week	8-Hr Composite
E. Coli	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab

**NPDES Permit Fact Sheet
Waynesburg STP**

NPDES Permit No. PA0020613

Compliance Sampling Location: Outfall 001

Other Comments: N/A

Attachment 1
USGS StreamStat Outfall Results

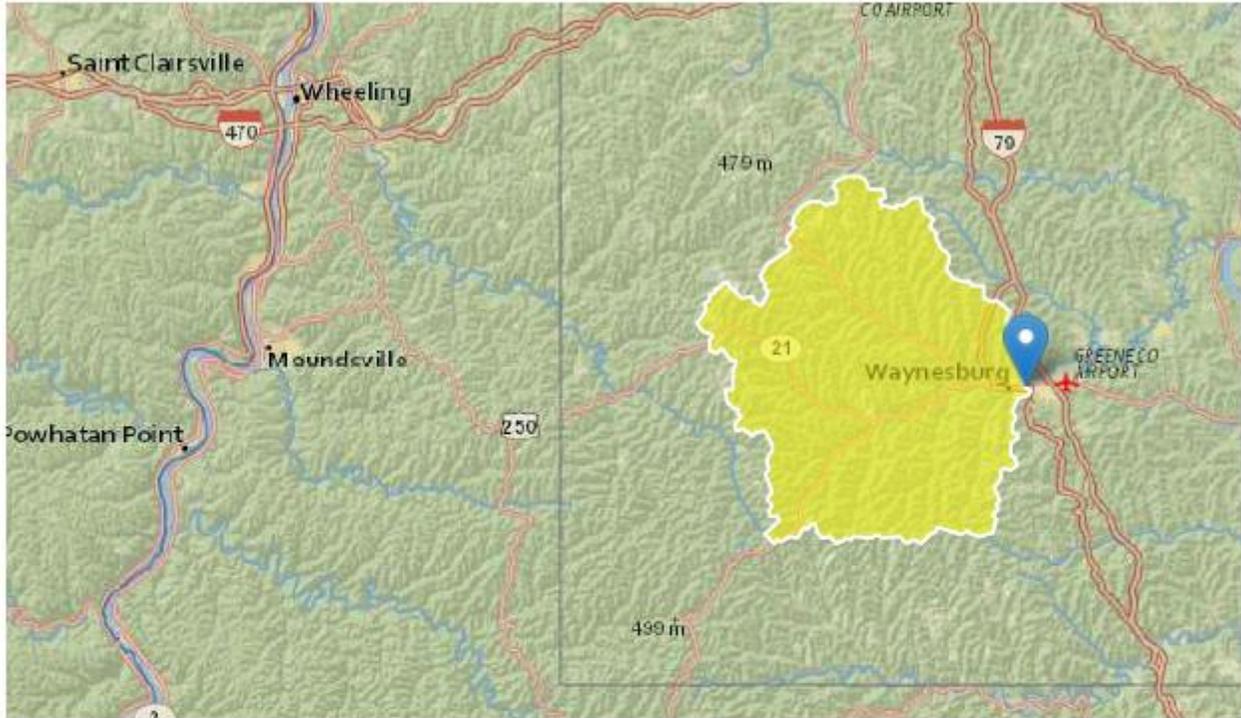
StreamStats Report

Region ID: PA

Workspace ID: PA20220519121635354000

Clicked Point (Latitude, Longitude): 39.89731, -80.16473

Time: 2022-05-19 08:16:56 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	133	square miles
ELEV	Mean Basin Elevation	1229	feet

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	133	square miles	2.26	1400

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
ELEV	Mean Basin Elevation	1229	feet	1050	2580

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

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	7.53	ft ³ /s	43	43
30 Day 2 Year Low Flow	11.6	ft ³ /s	38	38
7 Day 10 Year Low Flow	3.47	ft ³ /s	66	66
30 Day 10 Year Low Flow	5.15	ft ³ /s	54	54
90 Day 10 Year Low Flow	8.35	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/>)

Attachment 2
USGS StreamStat Downstream Results

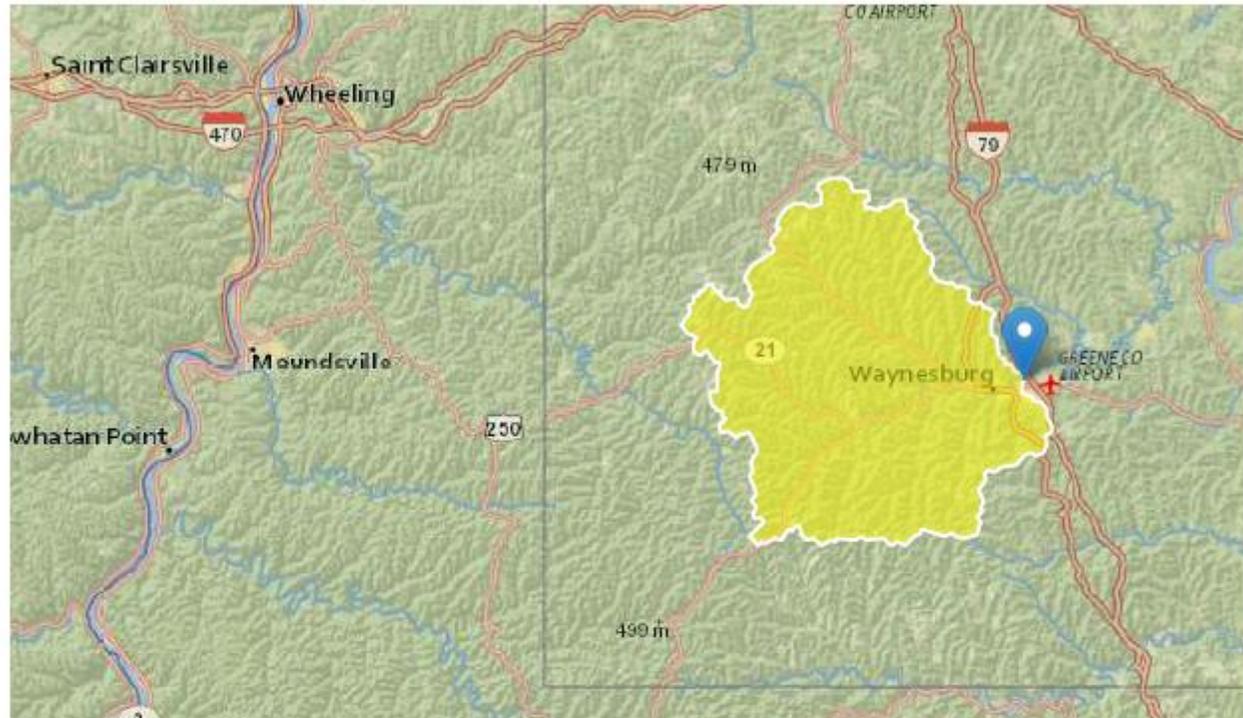
StreamStats Report

Region ID: PA

Workspace ID: PA20220519123909492000

Clicked Point (Latitude, Longitude): 39.90200, -80.15316

Time: 2022-05-19 08:39:30 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	138	square miles
ELEV	Mean Basin Elevation	1227	feet

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	138	square miles	2.26	1400

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
ELEV	Mean Basin Elevation	1227	feet	1050	2580

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

PIl: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	7.84	ft ³ /s	43	43
30 Day 2 Year Low Flow	12	ft ³ /s	38	38
7 Day 10 Year Low Flow	3.62	ft ³ /s	66	66
30 Day 10 Year Low Flow	5.37	ft ³ /s	54	54
90 Day 10 Year Low Flow	8.68	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/>)

Attachment 3
WQM7 Summer Results

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19B	40293	SOUTH FORK TENMILE CREEK	17.300	1229.00	133.00	0.00000	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	Tributary Temp	Tributary pH	Stream Temp	Stream pH
	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)	
Q7-10	0.026	3.47	0.00	0.000	0.000	10.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data							
Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Waynesburg STP	PA0020613	0.8000	0.0000	0.0000	0.000	20.00	7.00

Parameter Data				
Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name										
19B	40293	SOUTH FORK TENMILE CREEK										
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 (°C)	Analysis pH
Q7-10 Flow												
17.300	3.47	0.00	3.47	1.2376	0.00034	.779	44.29	56.88	0.14	4.477	23.69	7.00
Q1-10 Flow												
17.300	2.22	0.00	2.22	1.2376	0.00034	NA	NA	NA	0.11	5.321	23.21	7.00
Q30-10 Flow												
17.300	4.72	0.00	4.72	1.2376	0.00034	NA	NA	NA	0.16	3.924	23.96	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	<input checked="" type="checkbox"/>
WLA Method	EMPR	Use Inputted W/D Ratio	<input type="checkbox"/>
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	<input type="checkbox"/>
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	<input checked="" type="checkbox"/>
D.O. Saturation	90.00%	Use Balanced Technology	<input checked="" type="checkbox"/>
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>
19B	40293	SOUTH FORK TENMILE CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
17.300	Waynesburg STP	12.84	35.89	12.84	35.89	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
17.300	Waynesburg STP	1.46	7.04	1.46	7.04	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	<u>CBOD5</u>		<u>NH3-N</u>		<u>Dissolved Oxygen</u>		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
17.30	Waynesburg STP	9.64	9.64	2.89	2.89	4	4	0	0

WQM 7.0 D.O. Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>		
19B	40293	SOUTH FORK TENMILE CREEK		
<hr/>				
<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>	<u>Analysis pH</u>	
17.300	0.800	23.686	7.000	
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>	<u>Reach Velocity (fps)</u>	
44.291	0.779	56.881	0.136	
<u>Reach CBOD5 (mg/L)</u>	<u>Reach Kc (1/days)</u>	<u>Reach NH3-N (mg/L)</u>	<u>Reach Kn (1/days)</u>	
4.01	0.131	0.76	0.930	
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>	<u>Reach DO Goal (mg/L)</u>	
7.128	0.483	Tsivoglou	5	
<u>Reach Travel Time (days)</u>				
4.477				
	Subreach Results			
	<u>TravTime (days)</u>	<u>CBOD5 (mg/L)</u>	<u>NH3-N (mg/L)</u>	<u>D.O. (mg/L)</u>
	0.448	3.74	0.50	5.99
	0.895	3.49	0.33	5.46
	1.343	3.25	0.22	5.29
	1.791	3.03	0.14	5.33
	2.239	2.83	0.09	5.48
	2.686	2.64	0.06	5.69
	3.134	2.46	0.04	5.93
	3.582	2.30	0.03	6.16
	4.029	2.14	0.02	6.38
	4.477	2.00	0.01	6.59

WQM 7.0 Effluent Limits

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>					
19B	40293	SOUTH FORK TENMILE CREEK					
<hr/>							
RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
17.300	Waynesburg STP	PA0020613	0.800	CBOD5	9.64		
				NH3-N	2.89	5.78	
				Dissolved Oxygen			4

**Attachment 4
WQM7 Winter Results**

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19B	40293	SOUTH FORK TENMILE CREEK	17.300	1229.00	133.00	0.00000	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	Tributary Temp	Tributary pH	Stream Temp	Stream pH
	(cfs)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)	
Q7-10	0.052	3.47	0.00	0.000	0.000	10.0	0.00	0.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data							
Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Waynesburg STP	PA0020613	0.8000	0.0000	0.0000	0.000	15.00	7.00

Parameter Data				
Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	12.51	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name										
19B	40293	SOUTH FORK TENMILE CREEK										
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 (°C)	Analysis pH
Q7-10 Flow												
17.300	3.47	0.00	3.47	1.2376	0.00034	.779	44.29	56.88	0.14	4.477	7.63	7.00
Q1-10 Flow												
17.300	2.22	0.00	2.22	1.2376	0.00034	NA	NA	NA	0.11	5.321	8.58	7.00
Q30-10 Flow												
17.300	4.72	0.00	4.72	1.2376	0.00034	NA	NA	NA	0.16	3.924	7.08	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	<input checked="" type="checkbox"/>
WLA Method	EMPR	Use Inputted W/D Ratio	<input type="checkbox"/>
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	<input type="checkbox"/>
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	<input checked="" type="checkbox"/>
D.O. Saturation	90.00%	Use Balanced Technology	<input checked="" type="checkbox"/>
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>
19B	40293	SOUTH FORK TENMILE CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
17.300	Waynesburg STP	24.1	50	24.1	50	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
17.300	Waynesburg STP	4.34	20.89	4.34	20.89	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	<u>CBOD5</u>		<u>NH3-N</u>		<u>Dissolved Oxygen</u>		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
17.30	Waynesburg STP	19.93	19.93	6.94	6.94	4	4	0	0

WQM 7.0 D.O. Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>		
19B	40293	SOUTH FORK TENMILE CREEK		
<hr/>				
<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>	<u>Analysis pH</u>	
17.300	0.800	7.629	7.000	
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>	<u>Reach Velocity (fps)</u>	
44.291	0.779	56.881	0.136	
<u>Reach CBOD5 (mg/L)</u>	<u>Reach Kc (1/days)</u>	<u>Reach NH3-N (mg/L)</u>	<u>Reach Kn (1/days)</u>	
6.71	0.477	1.82	0.270	
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>	<u>Reach DO Goal (mg/L)</u>	
10.273	0.330	Tsivoglou	5	
<u>Reach Travel Time (days)</u>				
4.477				
	Subreach Results			
	<u>TravTime (days)</u>	<u>CBOD5 (mg/L)</u>	<u>NH3-N (mg/L)</u>	<u>D.O. (mg/L)</u>
	0.448	5.95	1.62	8.55
	0.895	5.27	1.43	7.29
	1.343	4.67	1.27	6.39
	1.791	4.14	1.12	5.79
	2.239	3.66	1.00	5.43
	2.686	3.25	0.88	5.26
	3.134	2.88	0.78	5.23
	3.582	2.55	0.69	5.31
	4.029	2.26	0.61	5.48
	4.477	2.00	0.54	5.71

WQM 7.0 Effluent Limits

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>					
19B	40293	SOUTH FORK TENMILE CREEK					
<hr/>							
RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
17.300	Waynesburg STP	PA0020613	0.800	CBOD5	19.93		
				NH3-N	6.94	13.88	
				Dissolved Oxygen			4

**Attachment 5
TRC Results**

TRC EVALUATION					
Input appropriate values in A3:A9 and D3:D9					
3.47	= Q stream (cfs)			0.5	= CV Daily
0.8	= 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	CFC Calculations
TRC	1.3.2.iii	WLA_afc = 0.913		1.3.2.iii	WLA_cfc = 0.883
PENTOXSD TRG	5.1a	LTAMULT_afc = 0.373		5.1c	LTAMULT_cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc = 0.340		5.1d	LTA_cfc = 0.513
Source	Effluent Limit Calculations				
PENTOXSD TRG	5.1f	AML_MULT = 1.231			
PENTOXSD TRG	5.1g	AVG_MON_LIMIT (mg/l) = 0.419		AFC	
		INST_MAX_LIMIT (mg/l) = 1.370			
WLA_afc	$(.019/e^{-k \cdot AFC_tc}) + [(AFC_Yc \cdot Qs \cdot .019 / Qd \cdot e^{-k \cdot AFC_tc}) \dots + Xd + (AFC_Yc \cdot Qs \cdot Xs / Qd)] \cdot (1 - FOS / 100)$				
LTAMULT_afc	$EXP((0.5 \cdot LN(cvh^2 + 1)) - 2.326 \cdot LN(cvh^2 + 1)^{0.5})$				
LTA_afc	wla_afc * LTAMULT_afc				
WLA_cfc	$(.011/e^{-k \cdot CFC_tc}) + [(CFC_Yc \cdot Qs \cdot .011 / Qd \cdot e^{-k \cdot CFC_tc}) \dots + Xd + (CFC_Yc \cdot Qs \cdot Xs / Qd)] \cdot (1 - FOS / 100)$				
LTAMULT_cfc	$EXP((0.5 \cdot LN(cvd^2 / no_samples + 1)) - 2.326 \cdot LN(cvd^2 / no_samples + 1)^{0.5})$				
LTA_cfc	wla_cfc * LTAMULT_cfc				
AML_MULT	$EXP(2.326 \cdot LN((cvd^2 / no_samples + 1)^{0.5}) - 0.5 \cdot LN(cvd^2 / no_samples + 1))$				
AVG_MON_LIMIT	MIN(BAT_BPJ, MIN(LTA_afc, LTA_cfc) * AML_MULT)				
INST_MAX_LIMIT	$1.5 \cdot ((av_mon_limit / AML_MULT) / LTAMULT_afc)$				