

Application Type Renewal
Facility Type Industrial
Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL INDUSTRIAL WASTE (IW)
AND IW STORMWATER**

Application No. PA0035254
APS ID 1110563
Authorization ID 1478853

Applicant and Facility Information

Applicant Name	<u>The Municipal Authority of the Borough of Somerset</u>	Facility Name	<u>Laurel Hill Filtration Plant</u>
Applicant Address	<u>347 W Union Street PO Box 71 Somerset, PA 15501-1543</u>	Facility Address	<u>278 Beck Road Somerset, PA 15501-6207</u>
Applicant Contact	<u>Jessica Sizemore</u>	Facility Contact	<u>Bradley Lawrence</u>
Applicant Phone	<u>(814) 443-2661</u>	Facility Phone	<u>n/a</u>
Client ID	<u>64334</u>	Site ID	<u>3805</u>
SIC Code	<u>4941</u>	Municipality	<u>Jefferson Township</u>
SIC Description	<u>Trans. & Utilities - Water Supply</u>	County	<u>Somerset</u>
Date Application Received	<u>March 29, 2024</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>April 2, 2024</u>	If No, Reason	<u></u>
Purpose of Application	<u>Renewal of NPDES permit</u>		

Summary of Review

The Department received a NPDES permit application from The Municipal Authority of the Borough of Somerset for renewal coverage of the Laurel Hill Filtration Plant on 3/29/2024. The prior permit was issued on 2/16/2017 with an effective date of 3/1/2017 and an expiration date of 2/28/2022. The permittee allowed the permit to expire since the plant was planned to be demolished, but a compliance evaluation inspection on 1/12/2024 by Lisa Milsop required that a renewal application be submitted. A renewal application was received on 3/29/2024 and the previous permit has been administratively extended until renewal.

Stated in the renewal application, the plant was scheduled to be demolished by 12/31/2024. There is an ongoing discussion between the reviewer and Jake Bolby, Project Engineer of The EADS Group, Inc., providing context and updates for the project. Information from correspondence is summarized in the following sentences. Laurel Hill Filtration Plant previously sourced water from wells and the adjacent Laurel Hill Creek Reservoir, but an offsite well source superseded the reservoir completely. The well source is pure, requiring no clarification or filtration, and the existing water treatment plant is currently only used for chlorination before distribution. Following delays, technical malfunctions, and supply chain issues delaying arrival of needed parts, all equipment was installed at the offsite well source by late December 2024. Upon final approval of operation by the Safe Drinking Water program, chlorination and other associated potable water processes will begin at the offsite well source and the Laurel Hill Filtration Plant will be bypassed & demolished. Current site layout and site layout following demolition are shown in Attachment A. Demolition is now estimated to begin around the end of March 2025, weather depending. Stormwater discharges associated with plant demolition are covered under NPDES Permit # PAD560006.

Approve	Deny	Signatures	Date
X		 Jace William Marsh / Environmental Engineering Specialist	March 6, 2025
X		 Michael E. Fifth, P.E. / Environmental Engineer Manager	March 10, 2025

Summary of Review

Since the well source is in use, clarifier sludge and filter backwash are no longer produced; the only water discharged from within the facility is the continuous chlorine analyzer for treated potable water which discharges at a rate of about 100 mL/min or about 38 gallons/day. The potable water discharges to one of the lagoons, but it was not stated which one so it will be assumed that both contain it. There are four outfalls in total all which discharge to Laurel Hill Creek. Laurel Hill Creek has a 25 PA Code Chapter 93 High-Quality Cold Water Fishes designation and is impaired for siltation from grazing in riparian or shoreline zones and organic enrichment from crop production (crop land or dry land) and agriculture. Outfall 001 is the discharge of the former backwash lagoon which now only contains stormwater, infiltrated groundwater, and potable water. Outfall 002 is the discharge of the former sludge lagoon which also now only contains stormwater, infiltrated groundwater, and potable water. Outfall 003 discharges mainly stormwater from downspouts but can also discharge raw water and clearwell overflow. The plant operator stated that a potable water overflow from Outfall 003 has not been observed for at least 20 years. Outfall 004 discharges stormwater from yard drains.

The permittee has no open violations; the most recent NPDES compliance evaluation inspection was performed by Lisa Milsop on 3/5/2025 with no violations noted. The past year of monitoring data is shown on Pages 3-5 of this Draft fact sheet and demonstrates compliance with existing limits. No discharge was reported from Outfall 001 or Outfall 002 for March 2024-December 2024, but discharge data for both Outfalls were reported for January and February 2025. Discharge data for Outfall 003 has been consistently reported. Outfall 004 has no monitoring requirements.

Draft Permit issuance is recommended. Proposed effluent limitations for Outfalls 001, 002, and 003 originate from Total Residual Chlorine limits in the prior permit since that is the only remaining pollutant of concern at the outfalls. No monitoring is proposed at Outfall 004, consistent with the previous permit. A Notice of Termination form may be submitted for NPDES permit coverage upon demolition of the Laurel Hill Filtration Plant.

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.

Compliance History

DMR Data for Outfall 001 (from March 1, 2024 to February 28, 2025)

Parameter	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24
Flow (MGD) Average Monthly	0.0003	GG										
Flow (MGD) Daily Maximum	0.0002	0.0002										
pH (S.U.) Minimum	7.16	GG										
pH (S.U.) Maximum	7.36	7.51										
TRC (mg/L) Average Monthly	0.06	GG										
TRC (mg/L) Instantaneous Maximum	0.03	0.09										
TSS (mg/L) Average Monthly	<2.0	GG										
TSS (mg/L) Instantaneous Maximum	<2.0	< 2										
Total Aluminum (mg/L) Average Monthly	<0.1	GG										
Total Aluminum (mg/L) Instantaneous Maximum	<0.1	< 0.1										
Total Iron (mg/L) Average Monthly	0.07	GG										
Total Iron (mg/L) Instantaneous Maximum	0.09	< 0.05										
Total Manganese (mg/L) Average Monthly	0.39	GG										
Total Manganese (mg/L) Instantaneous Maximum	0.43	0.05										

DMR Data for Outfall 002 (from March 1, 2024 to February 28, 2025)

Parameter	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24
Flow (MGD) Average Monthly	0.0007											
Flow (MGD) Daily Maximum	GG											
pH (S.U.) Minimum	7.45											
pH (S.U.) Maximum	GG											
TRC (mg/L) Average Monthly	0.02											
TRC (mg/L) Instantaneous Maximum	GG											
TSS (mg/L) Average Monthly	<2.0											
TSS (mg/L) Instantaneous Maximum	GG											
Total Aluminum (mg/L) Average Monthly	0.2											
Total Aluminum (mg/L) Instantaneous Maximum	GG											
Total Iron (mg/L) Average Monthly	0.16											
Total Iron (mg/L) Instantaneous Maximum	GG											
Total Manganese (mg/L) Average Monthly	0.02											
Total Manganese (mg/L) Instantaneous Maximum	GG											

DMR Data for Outfall 003 (from March 1, 2024 to February 28, 2025)

Parameter	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24
Flow (MGD) Average Monthly	0.0126	0.0002	0.0003							0.0001	0.0008	0.0005
Flow (MGD) Daily Maximum	0.0019	0.0024	0.0004							0.0001	0.0052	0.0005
pH (S.U.) Instantaneous Minimum	7.64	7.88	8.07							8.21	7.36	7.68
pH (S.U.) Instantaneous Maximum	7.67	7.98	7.66							7.99	7.92	7.80
TRC (mg/L) Average Monthly	0.05	0.04	0.06							0.01	0.05	0.03
TRC (mg/L) Instantaneous Maximum	0.02	0.04	0.03							0.01	0.03	0.03
TSS (mg/L) Average Monthly	<2.0	3.0	< 2.0							< 2.0	22.0	< 2.0
TSS (mg/L) Instantaneous Maximum	<2.0	< 2.0	3.0							< 2.0	< 2.0	< 2.0

Discharge, Receiving Waters and Water Supply Information

Outfall No.	<u>001</u>	Design Flow (MGD)	<u>0.05</u>
Latitude	<u>40° 02' 37"</u>	Longitude	<u>-79° 12' 12"</u>
Quad Name	<u>Bakersville</u>	Quad Code	<u>1812</u>
Wastewater Description: <u>Stormwater, groundwater, and potable water from former backwash lagoon</u>			
Receiving Waters	<u>Laurel Hill Creek (HQ-CWF)</u>	Stream Code	<u>38580</u>
NHD Com ID	<u>69915733</u>	RMI	<u>28.6</u>
Drainage Area	<u>26.3 mi²</u>	Yield (cfs/mi ²)	<u>0.0252</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.664</u>	Q ₇₋₁₀ Basis	<u>USGS StreamStats</u>
Elevation (ft)	<u>1980</u>	Slope (ft/ft)	<u>0.112 (mean basin slope)</u>
Watershed No.	<u>19-E</u>	Chapter 93 Class.	<u>HQ-CWF</u>
Existing Use	<u>n/a</u>	Existing Use Qualifier	<u>n/a</u>
Exceptions to Use	<u>n/a</u>	Exceptions to Criteria	<u>n/a</u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>Organic Enrichment, Siltation</u>		
Source(s) of Impairment	<u>Agriculture, Crop Production (Crop Land or Dry Land), Grazing in Riparian or Shoreline Zones</u>		
TMDL Status	<u>Tentative</u>	Name	<u>Laurel Hill Creek TMDL</u>
Nearest Downstream Public Water Supply Intake	<u>Indian Creek Valley Water Authority</u>		
PWS Waters	<u>Youghiogheny River</u>	Flow at Intake (cfs)	<u>460</u>
PWS RMI	<u>62.8</u>	Distance from Outfall (mi)	<u>~36</u>

Changes Since Last Permit Issuance: Since all outfalls are located very close to one another—within 0.1 miles—the receiving water and water supply information analysis for Outfall 001 was used for all outfalls.

Other Comments:

Discharge, Receiving Waters and Water Supply Information

Outfall No.	<u>002</u>	Design Flow (MGD)	<u>0.035</u>
Latitude	<u>40° 02' 36"</u>	Longitude	<u>-79° 12' 14"</u>
Quad Name	<u>Bakersville</u>	Quad Code	<u>1812</u>
Wastewater Description: <u>Stormwater, groundwater, and potable water from former sludge lagoon</u>			
Receiving Waters	<u>Laurel Hill Creek (HQ-CWF)</u>	Stream Code	<u>38580</u>
NHD Com ID	<u>69915733</u>	RMI	<u>28.6</u>
Drainage Area	<u>26.3 mi²</u>	Yield (cfs/mi ²)	<u>0.0252</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.664</u>	Q ₇₋₁₀ Basis	<u>USGS StreamStats</u>
Elevation (ft)	<u>1980</u>	Slope (ft/ft)	<u>0.112 (mean basin slope)</u>
Watershed No.	<u>19-E</u>	Chapter 93 Class.	<u>HQ-CWF</u>
Existing Use	<u>n/a</u>	Existing Use Qualifier	<u>n/a</u>
Exceptions to Use	<u>n/a</u>	Exceptions to Criteria	<u>n/a</u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>Organic Enrichment, Siltation</u>		
Source(s) of Impairment	<u>Agriculture, Crop Production (Crop Land or Dry Land), Grazing in Riparian or Shoreline Zones</u>		
TMDL Status	<u>Tentative</u>	Name	<u>Laurel Hill Creek TMDL</u>
Nearest Downstream Public Water Supply Intake	<u>Indian Creek Valley Water Authority</u>		
PWS Waters	<u>Youghiogheny River</u>	Flow at Intake (cfs)	<u>460</u>
PWS RMI	<u>62.8</u>	Distance from Outfall (mi)	<u>~36</u>

Changes Since Last Permit Issuance:

Other Comments:

Discharge, Receiving Waters and Water Supply Information

Outfall No.	<u>003</u>	Design Flow (MGD)	<u>0</u>
Latitude	<u>40° 02' 35"</u>	Longitude	<u>-79° 12' 15"</u>
Quad Name	<u>Bakersville</u>	Quad Code	<u>1812</u>
Wastewater Description:	<u>Mainly stormwater from roof downspouts but can discharge clearwell overflow and raw water</u>		
Receiving Waters	<u>Laurel Hill Creek (HQ-CWF)</u>	Stream Code	<u>38580</u>
NHD Com ID	<u>69915733</u>	RMI	<u>28.6</u>
Drainage Area	<u>26.3 mi²</u>	Yield (cfs/mi ²)	<u>0.0252</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.664</u>	Q ₇₋₁₀ Basis	<u>USGS StreamStats</u>
Elevation (ft)	<u>1980</u>	Slope (ft/ft)	<u>0.112 (mean basin slope)</u>
Watershed No.	<u>19-E</u>	Chapter 93 Class.	<u>HQ-CWF</u>
Existing Use	<u>n/a</u>	Existing Use Qualifier	<u>n/a</u>
Exceptions to Use	<u>n/a</u>	Exceptions to Criteria	<u>n/a</u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>Organic Enrichment, Siltation</u>		
Source(s) of Impairment	<u>Agriculture, Crop Production (Crop Land or Dry Land), Grazing in Riparian or Shoreline Zones</u>		
TMDL Status	<u>Tentative</u>	Name	<u>Laurel Hill Creek TMDL</u>
Nearest Downstream Public Water Supply Intake	<u>Indian Creek Valley Water Authority</u>		
PWS Waters	<u>Youghiogheny River</u>	Flow at Intake (cfs)	<u>460</u>
PWS RMI	<u>62.8</u>	Distance from Outfall (mi)	<u>~36</u>

Changes Since Last Permit Issuance:

Other Comments:

Discharge, Receiving Waters and Water Supply Information

Outfall No.	<u>004</u>	Design Flow (MGD)	<u>0</u>
Latitude	<u>40° 02' 36"</u>	Longitude	<u>-79° 12' 10"</u>
Quad Name	<u>Bakersville</u>	Quad Code	<u>1812</u>
Wastewater Description: <u>Stormwater from yard drain</u>			
Receiving Waters	<u>Laurel Hill Creek (HQ-CWF)</u>	Stream Code	<u>38580</u>
NHD Com ID	<u>69915733</u>	RMI	<u>28.6</u>
Drainage Area	<u>26.3 mi²</u>	Yield (cfs/mi ²)	<u>0.0252</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.664</u>	Q ₇₋₁₀ Basis	<u>USGS StreamStats</u>
Elevation (ft)	<u>1980</u>	Slope (ft/ft)	<u>0.112 (mean basin slope)</u>
Watershed No.	<u>19-E</u>	Chapter 93 Class.	<u>HQ-CWF</u>
Existing Use	<u>n/a</u>	Existing Use Qualifier	<u>n/a</u>
Exceptions to Use	<u>n/a</u>	Exceptions to Criteria	<u>n/a</u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>Organic Enrichment, Siltation</u>		
Source(s) of Impairment	<u>Agriculture, Crop Production (Crop Land or Dry Land), Grazing in Riparian or Shoreline Zones</u>		
TMDL Status	<u>Tentative</u>	Name	<u>Laurel Hill Creek TMDL</u>
Nearest Downstream Public Water Supply Intake	<u>Indian Creek Valley Water Authority</u>		
PWS Waters	<u>Youghiogheny River</u>	Flow at Intake (cfs)	<u>460</u>
PWS RMI	<u>62.8</u>	Distance from Outfall (mi)	<u>~36</u>

Changes Since Last Permit Issuance:

Other Comments:

Development of Effluent Limitations

Outfall No. 001 Design Flow (MGD) 0.05
 Latitude 40° 02' 37" Longitude -79° 12' 12"
 Wastewater Description: Stormwater, groundwater, and potable water from former backwash lagoon

Outfall No. 002 Design Flow (MGD) 0.035
 Latitude 40° 02' 36" Longitude -79° 12' 14"
 Wastewater Description: Stormwater, groundwater, and potable water from former sludge lagoon

Since both lagoons now only discharge stormwater that falls directly on their surface, infiltrated groundwater from piping, and potable water from the chlorine analyzer, the only pollutant of concern should now be Total Residual Chlorine (TRC). DEP allows unpermitted discharges of potable water if TRC is below detectable levels, but for this case limits will be derived since these discharges demonstrate TRC concentrations at or above the DEP quantitation limit of 0.02 mg/L.

Technology-Based Effluent Limitations (TBEL)

Regulatory Effluent Standards and Monitoring Requirements

Flow monitoring is required pursuant to 25 Pa. Code § 92a.61(d)(1) as indicated in Table 1 below.

Pursuant to 25 Pa. Code § 92a.48(b) the imposition of technology-based Total Residual Chlorine (TRC) limits for facilities that use chlorination and that are not already subject to TRC limits based on applicable federal ELG's or a facility specific BPJ evaluation as indicated in Table 1 below.

Table 1. Regulatory Effluent Standards

Parameter	Monthly Avg (mg/L)	Daily Max (mg/L)	Instantaneous Max (mg/L)
Flow (MGD)	Monitor	Monitor	----
Total Residual Chlorine	0.5	----	1.6

Water Quality-Based Effluent Limitations (WQBEL)

Antidegradation

No antidegradation analysis was performed for these outfalls during prior permit renewals. Laurel Hill Creek has a 25 PA Code Chapter 93 High-Quality Cold Water Fishes designation which would normally trigger an antidegradation analysis for non-degrading effluent limits. Since the nature of the discharge has changed, this will not be considered. TRC limits are not typically included for antidegradation analysis.

Total Residual Chlorine Model Spreadsheet

To determine if WQBELs are required for discharges containing total residual chlorine (TRC), a discharge evaluation is performed using a DEP program called TRC_CALC created with Microsoft Excel for Windows. TRC_CALC calculates TRC Waste Load Allocations (WLAs) through the application of a mass balance model which considers TRC losses due to stream and discharge chlorine demands and first-order chlorine decay. Input values for the program include flow rates and discharge chlorine demands for the receiving stream, the number of samples taken per month, coefficients of TRC variability, partial mix factors, and an optional factor of safety. The mass balance model calculates WLAs for acute and chronic criteria that are then converted to long term averages using calculated multipliers. The multipliers are functions of the number of samples taken per month and the TRC variability coefficients (normally kept at default values unless site specific information is available). The most stringent limitation between the acute and chronic long-term averages is converted to an average monthly limit for comparison to the BAT average monthly limit of 0.5 mg/L from 25 Pa. Code § 92a.48(b)(2). The more stringent of these average monthly TRC limitations is then proposed. The results of the modeling, included in Attachment C, indicate that average monthly limits of 0.5 mg/L and daily maximum limits of 1.17 mg/L are required for TRC.

Table 2. TRC limits from TRC_CALC

Parameter	Monthly Average (mg/L)	Daily Max (mg/L)
Total Residual Chlorine	0.5	1.17

Anti-Backsliding

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l), and are displayed below in Table 3. Since the lagoons no longer treat clarifier sludge or filter backwash, only the previous TRC limit will be used.

Table 3. Effluent limitations from previous permit for Outfall 001 and Outfall 002

Parameter	Mass (pounds)		Concentration (mg/L)			Samples	
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	IMAX	Frequency	Sample Type
Flow (MGD)	Report	Report	—	—	—	Daily	Measure
Total Residual Chlorine	—	—	0.5	1.0	—	2/month	Grab
Total Suspended Solids	—	—	30.0	60.0	—	2/month	Grab
Total Iron	—	—	2.0	4.0	—	2/month	Grab
Total Aluminum	—	—	2.5	5.0	—	2/month	Grab
Total Manganese	—	—	1.0	2.0	—	2/month	Grab
pH (S.U.)	—	—	6.0-9.0			2/month	Grab

Proposed Effluent Limitations and Monitoring Requirements

Effluent limits applicable at Outfall 001 and Outfall 002 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements as summarized in Table 4. Flow measurement was adjusted to 2/month.

Table 4. Effluent limits and monitoring requirements for Outfall 001 and Outfall 002

Parameter	Mass (pounds)		Concentration (mg/L)		Samples	
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Frequency	Sample Type
Flow (MGD)	Report	Report	—	—	2/month	Measure
Total Residual Chlorine	—	—	0.5	1.0	2/month	Grab

Development of Effluent Limitations

Outfall No. 003 Design Flow (MGD) 0
 Latitude 40° 02' 35" Longitude -79° 12' 15"
 Wastewater Description: Mainly stormwater from roof downspouts but can discharge clearwell overflow and raw water

A significant clearwell overflow has not been observed by the operator in at least the past 20 years, but since TRC concentrations reported through eDMR are above the DEP quantitation limit of 0.02 mg/L it is assumed there is some minor source of potable water entering this combined stormwater outfall.

Technology-Based Limitations

PAG-03 General Stormwater Permit

Industrial stormwater is usually subject to current PAG-03 General Stormwater permit conditions as a minimum requirement, but roof drains from a water treatment plant are not considered industrial stormwater in this case. As such, PAG-03 General Stormwater permit conditions are not applied.

Regulatory Effluent Standards and Monitoring Requirements

Flow monitoring is required pursuant to 25 Pa. Code § 92a.61(d)(1) as indicated in Table 5 below.

Pursuant to 25 Pa. Code § 92a.48(b) the imposition of technology-based Total Residual Chlorine (TRC) limits for facilities that use chlorination and that are not already subject to TRC limits based on applicable federal ELG's or a facility specific BPJ evaluation as indicated in Table 5 below.

Table 5. Regulatory Effluent Standards

Parameter	Monthly Avg (mg/L)	Daily Max (mg/L)	Instantaneous Max (mg/L)
Flow (MGD)	Monitor	Monitor	----
Total Residual Chlorine	0.5	----	1.6

Water Quality-Based Limitations

Total Residual Chlorine Model Spreadsheet

See the Development of Effluent Limitations section for Outfalls 001 and 002 for an explanation of the TRC_CALC model. The results of the modeling, included in Attachment C, indicate that average monthly limits of 0.5 mg/L and daily maximum limits of 1.17 mg/L are required for TRC.

Table 6. TRC limits from TRC_CALC

Parameter	Monthly Average (mg/L)	Daily Max (mg/L)
Total Residual Chlorine	0.5	1.17

Antidegradation

No antidegradation analysis was performed for this outfall during prior permit renewals. Laurel Hill Creek has a 25 PA Code Chapter 93 High-Quality Cold Water Fishes designation which would normally result in PAG-03 No Exposure conditions applied to industrial stormwater discharges. Like the above reasoning, roof drains from a water treatment plant are not considered industrial stormwater in this case. Regarding the potential TRC impact from potable water to this outfall, TRC limits are not typically considered for antidegradation analysis.

Anti-Backsliding

Previous limits in Table 7 can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l). Since the stormwater component of this discharge is only from a roof drain which should, and has been shown to through eDMRs,

have minimal contribution of TSS, TSS will not be considered for Draft effluent limitations. Since stormwater comingles with potable water, only the previous TRC limit will be considered.

Table 7. Effluent limitations from previous permit for Outfall 003

Parameter	Mass (pounds)		Concentration (mg/L)			Samples	
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	IMAX	Frequency	Sample Type
Flow (MGD)	Report	Report	—	—	—	1/discharge	Measure
Total Residual Chlorine	—	—	0.5	1.0	—	1/discharge	Grab
Total Suspended Solids	—	—	30.0	60.0	—	1/discharge	Grab
pH (S.U.)	—	—	6.0-9.0			1/discharge	Grab

Proposed Effluent Limitations and Monitoring Requirements

Effluent limits imposed at Outfall 003 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements as summarized in Table 8. Sampling has been adjusted to 2/month to avoid an unreasonable sampling burden from frequent roof downspout stormwater.

Table 8. Proposed effluent limitations at Outfall 003

Parameter	Mass (pounds)		Concentration (mg/L)			Samples	
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	IMAX	Frequency	Sample Type
Flow (MGD)	Report	Report	—	—	—	2/month	Calculation
Total Residual Chlorine	—	—	0.5	1.0	—	2/month	Grab

Development of Effluent Limitations

Outfall No.	<u>004</u>	Design Flow (MGD)	<u>0</u>
Latitude	<u>40° 02' 36"</u>	Longitude	<u>-79° 12' 10"</u>
Wastewater Description:	<u>Stormwater from yard drain</u>		

No stormwater sample data was submitted with the renewal application for Outfall 004.

Technology-Based Limitations

PAG-03 General Stormwater Permit

Industrial stormwater is usually subject to current PAG-03 General Stormwater permit conditions as a minimum requirement. Conditions visible from satellite imagery in Figure 1 show no evidence of industrial operations exposed to stormwater in the yard, only gravel and green space. As such, PAG-03 General Stormwater permit conditions are not applied.

Water Quality-Based Limitations

Antidegradation

Laurel Hill Creek has a 25 PA Code Chapter 93 High-Quality Cold Water Fishes designation, which would normally result in PAG-03 No Exposure conditions applied to industrial stormwater discharges. Like the above reasoning, gravel and green space do not constitute industrial stormwater in this case. As such, stormwater runoff from Outfall 004 for current plant operations will continue to be considered uncontaminated stormwater that has minimal impact on Laurel Hill Creek. During the demolition project, NPDES Permit # PAD560006 will ensure protection of Laurel Hill Creek through best management practices in the drainage area of the yard drain to Outfall 004.

Anti-Backsliding

Outfall 004 did not have any effluent limitations or monitoring requirements in the prior permit since it was considered uncontaminated stormwater.

Proposed Effluent Limitations and Monitoring Requirements

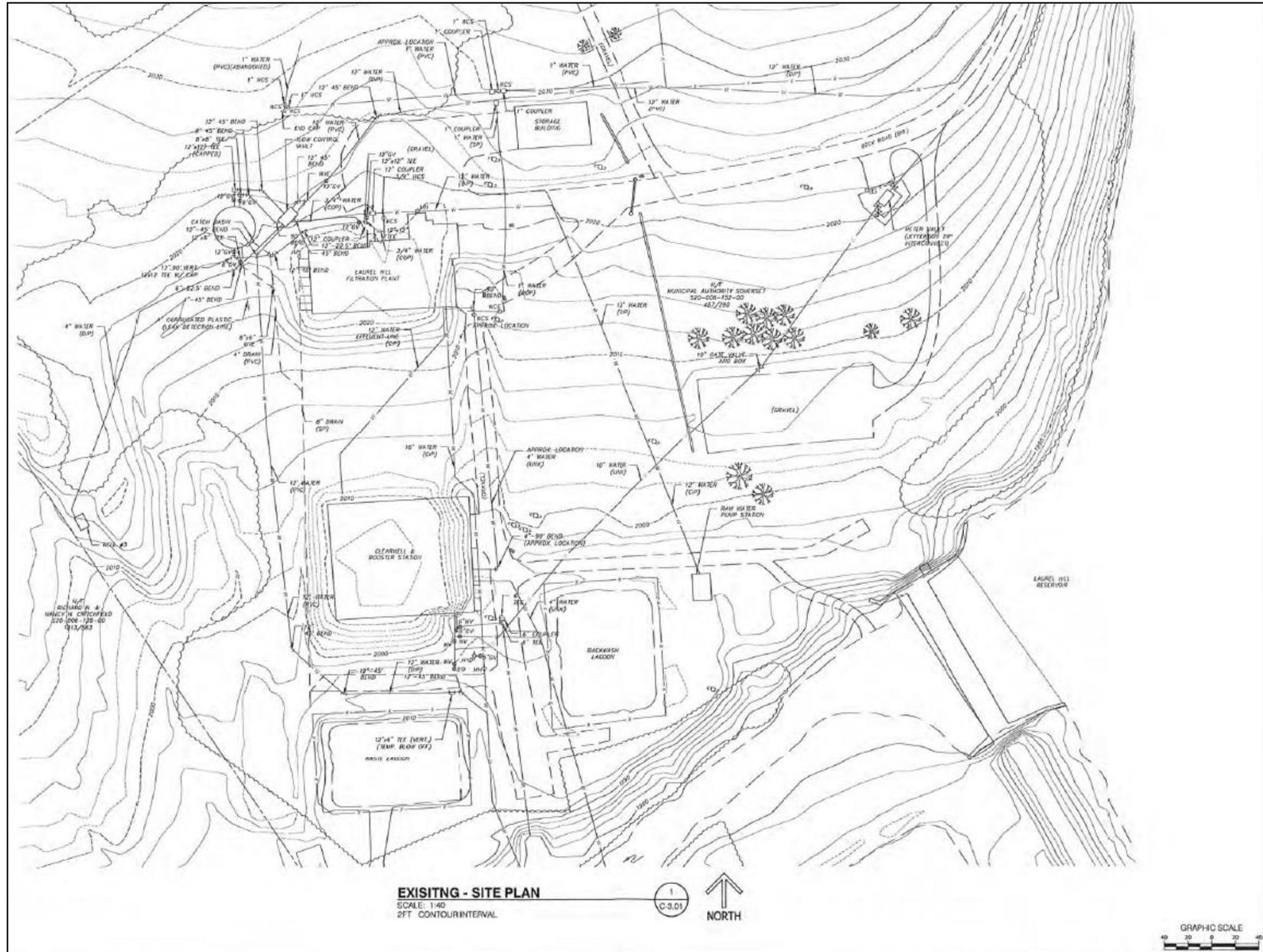
No effluent limitation or monitoring requirements are required in the Draft permit for Outfall 004. An annual stormwater report is required as a Part C condition in the Draft permit in lieu of monitoring.

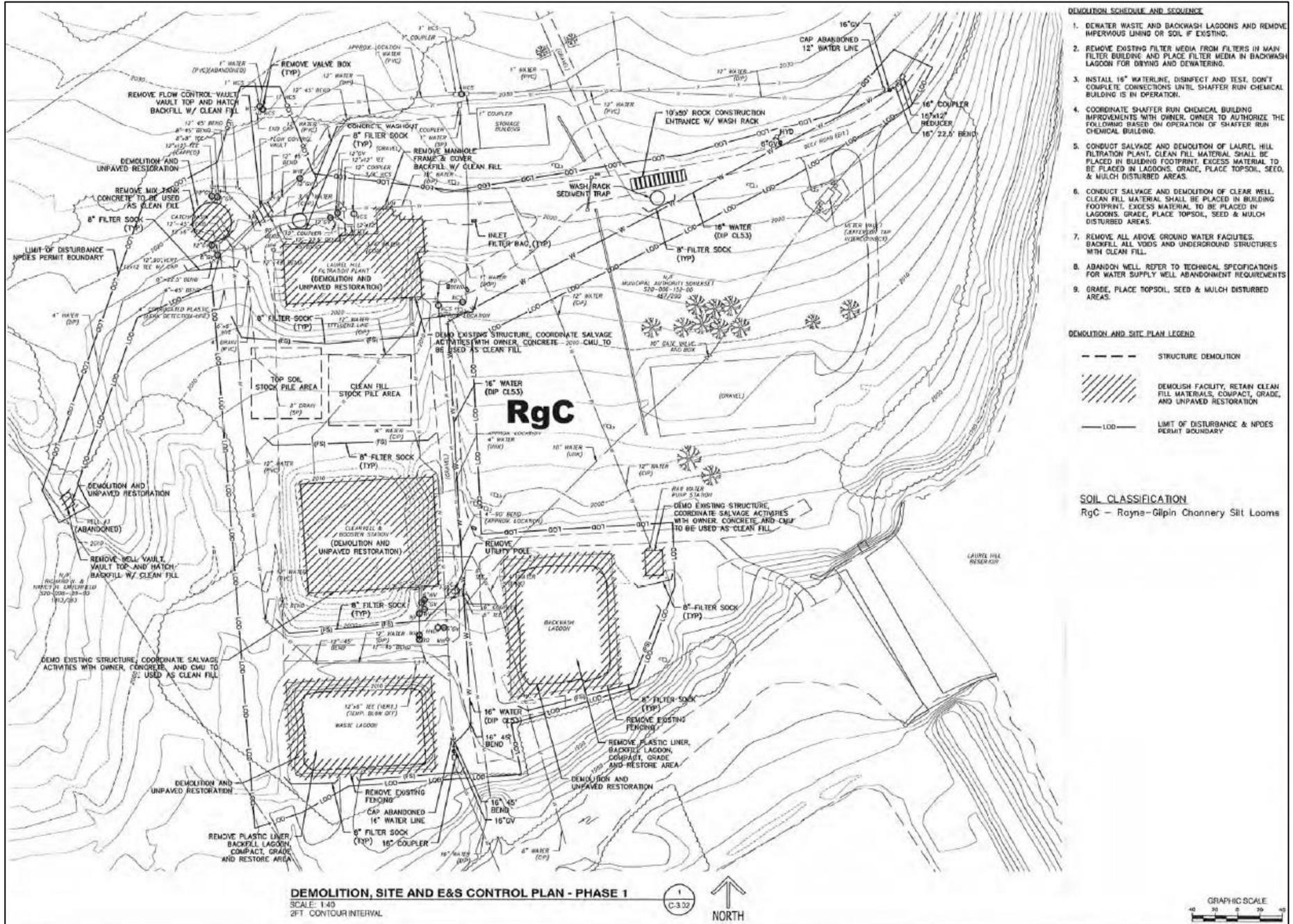


Figure 1. Satellite imagery of the Laurel Hill Filtration Plant

Tools and References Used to Develop Permit	
<input type="checkbox"/>	WQM for Windows Model (see Attachment [REDACTED])
<input type="checkbox"/>	Toxics Management Spreadsheet (see Attachment [REDACTED])
<input checked="" type="checkbox"/>	TRC Model Spreadsheet (see Attachment C)
<input type="checkbox"/>	Temperature Model Spreadsheet (see Attachment [REDACTED])
<input type="checkbox"/>	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
<input type="checkbox"/>	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
<input type="checkbox"/>	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
<input type="checkbox"/>	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
<input type="checkbox"/>	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
<input type="checkbox"/>	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
<input type="checkbox"/>	Pennsylvania CSO Policy, 386-2000-002, 9/08.
<input type="checkbox"/>	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
<input type="checkbox"/>	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
<input type="checkbox"/>	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
<input type="checkbox"/>	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
<input type="checkbox"/>	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
<input type="checkbox"/>	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
<input type="checkbox"/>	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
<input type="checkbox"/>	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
<input type="checkbox"/>	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
<input type="checkbox"/>	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
<input type="checkbox"/>	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
<input type="checkbox"/>	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
<input type="checkbox"/>	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
<input type="checkbox"/>	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
<input type="checkbox"/>	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
<input type="checkbox"/>	Design Stream Flows, 386-2000-003, 9/98.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
<input type="checkbox"/>	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
<input type="checkbox"/>	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
<input type="checkbox"/>	SOP: Establishing Effluent Limits for Individual Industrial Permits (BCW-PMT-032)
<input checked="" type="checkbox"/>	Other: USGS StreamStats (see Attachment B)

Attachment A:
Pre-demolition and Post-demolition Facility Layout

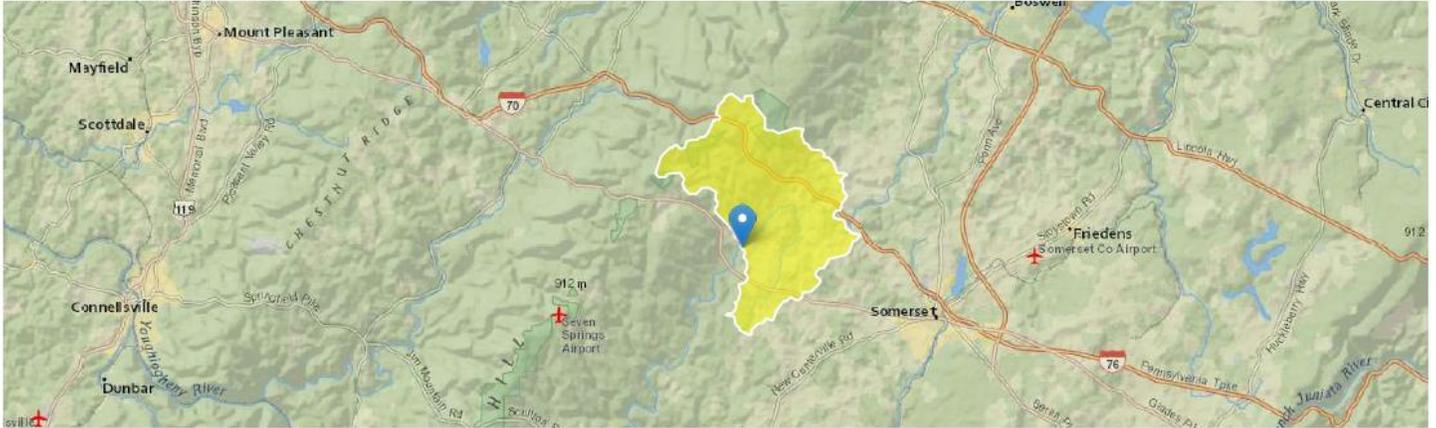




Attachment B: USGS StreamStats at Point of Discharge

StreamStats Report

Region ID: PA
 Workspace ID: PA20250305155323187000
 Clicked Point (Latitude, Longitude): 40.04340, -79.20413
 Time: 2025-03-05 10:54:04 -0500



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	6.3892	degrees
DRNAREA	Area that drains to a point on a stream	26.3	square miles
ELEV	Mean Basin Elevation	2279	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	26.3	square miles	2.26	1400
ELEV	Mean Basin Elevation	2279	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	1.99	ft ³ /s	43	43
30 Day 2 Year Low Flow	3.42	ft ³ /s	38	38
7 Day 10 Year Low Flow	0.664	ft ³ /s	66	66
30 Day 10 Year Low Flow	1.18	ft ³ /s	54	54
90 Day 10 Year Low Flow	2.38	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 C:
 TRC Model Spreadsheet

TRC EVALUATION				
Input appropriate values in A3:A9 and D3:D9				
0.664	= Q stream (cfs)	0.5	= CV Daily	
0.0126	= Q discharge (MGD)	0.5	= CV Hourly	
4	= 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 = 10.886		1.3.2.iii
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373		5.1c
PENTOXSD TRG	5.1b	LTA_afc = 4.056		5.1d
				WLA cfc = 10.605
				LTAMULT cfc = 0.581
				LTA_cfc = 6.165
Source	Effluent Limit Calculations			
PENTOXSD TRG	5.1f	AML MULT = 1.720		
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500		BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.170		
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	$1.5 \cdot ((av_mon_limit / AML_MULT) / LTAMULT_afc)$			