

Application Type Renewal  
 Facility Type Non-Municipal  
 Major / Minor Minor

**NPDES PERMIT FACT SHEET  
INDIVIDUAL SEWAGE**

Application No. PA0102610  
 APS ID 1114665  
 Authorization ID 1486745

**Applicant and Facility Information**

Applicant Name	<u>Joseph E. Thrower</u>	Facility Name	<u>Villa Vista Estates</u>
Applicant Address	<u>133 Terra Drive</u> <u>Valencia, PA 16059-2637</u>	Facility Address	<u>159 Terra Drive</u> <u>Valencia, PA 16059-2637</u>
Applicant Contact	<u>Joseph Thrower</u>	Facility Contact	<u>Joseph Thrower</u>
Applicant Phone	<u>(724) 898-2520</u>	Facility Phone	<u>(724) 898-2520</u>
Client ID	<u>143138</u>	Site ID	<u>262939</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Middlesex Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Butler</u>
Date Application Received	<u>May 9, 2024</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>June 11, 2024</u>	If No, Reason	<u>-</u>
Purpose of Application	<u>Renewal of a NPDES Permit for an existing discharge of treated sewage.</u>		

**Summary of Review**

An application was received on May 9, 2024, for the renewal of NPDES Permit No. PA0102610. The permit is set to expire on March 31, 2025. Villa Vista Estates is a Mobile Home Park located in Valencia, PA. It was built in 1970 and currently has 108 sites. No changes to discharge quantity or quality were proposed as part of this permit renewal. There is one outfall (Outfall 001) that discharges to an Unnamed Tributary to Glade Run.

Act 14 notifications were submitted and received.

The facility is currently in the eDMR system.

The last inspection occurred on October 23, 2025. Violations were noted. There are currently 6 open violations in WMS for the subject Client ID (143138) as of April 2, 2026.

Proposed Changes:

- Implementation of Advanced Treatment Requirements for dry and intermittent streams
  - More stringent DO, Total N, and Total P limits
- Addition of E. Coli monitoring
- More stringent TRC limits
- More stringent ammonia-nitrogen limits

Approve	Deny	Signatures	Date
X		Carlee Wilson Carlee Wilson / Environmental Engineering Specialist	April 7, 2026
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	April 8, 2026



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.

Treatment Facility Summary				
<b>Treatment Facility Name:</b> Villa Vista Estates				
<b>WQM Permit No.</b>		<b>Issuance Date</b>		
1073417 T-1		9/05/2006		
<b>Waste Type</b>	<b>Degree of Treatment</b>	<b>Process Type</b>	<b>Disinfection</b>	<b>Avg Annual Flow (MGD)</b>
Sewage	Secondary With Ammonia Reduction	Activated Sludge	Hypochlorite	0.0125
<b>Hydraulic Capacity (MGD)</b>	<b>Organic Capacity (lbs/day)</b>	<b>Load Status</b>	<b>Biosolids Treatment</b>	<b>Biosolids Use/Disposal</b>
0.0125	50	Not Overloaded	Aerobic Digestion	Other WWTP

Changes Since Last Permit Issuance: None

Other Comments: Treatment consists of chemical addition, aeration, settling, intermittent sand filtration, chlorine disinfection and aerated sludge holding.

Sludge use and disposal description and location(s): Sludge is hauled offsite by Economy Septic and sent to Harmarville, PA for further processing.

Compliance History

DMR Data for Outfall 001 (from March 1, 2025, to February 28, 2026)

Parameter	FEB-26	JAN-26	DEC-25	NOV-25	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25
Flow (MGD) Average Monthly	0.0117	0.0115	0.0087	0.00814	0.0085	0.0082	0.0091	0.0123	0.0088	0.0089	0.0087	0.0102
Flow (MGD) Daily Maximum	0.02640	0.0308	0.011	0.105	0.0119	0.0142	0.0142	0.0134	0.0142	0.0108	0.12200	0.0140
pH (S.U.) Daily Minimum	7.6	7.7	7.2	7.2	7.2	7.2	7.4	7.2	7.0	6.9	7.0	6.4
pH (S.U.) Daily Maximum	7.6	7.7	7.2	7.2	7.2	7.2	7.4	7.2	7.0	6.9	7.0	6.4
DO (mg/L) Daily Minimum	9.0	8.5	9.1	9.1	9.1	9.0	8.1	9.5	8.4	8.1	7.9	7.5
TRC (mg/L) Average Monthly	0.51	0.50	0.51	0.70	0.71	0.71	0.72	0.69	0.64	0.706	0.72	0.70
TRC (mg/L) Instantaneous Maximum	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.9
CBOD5 (mg/L) Average Monthly	24.95	7.65	2.935	24.34	5.64	6.245	5.24	2.245	9.575	3.225	21.5	19.05
TSS (mg/L) Average Monthly	6.0	5.0	< 5.0	8.5	14.5	5.0	8.0	< 5.0	6.5	< 5.0	5.0	20.0
Fecal Coliform (No./100 ml) Geometric Mean	7.93	1	< 1	2.23	< 1	2.64	2	14.28	2.82	< 1	< 1	< 1
Fecal Coliform (No./100 ml) Instantaneous Maximum	63	1	< 1	5	< 1	7	4	68	7	< 1	< 1	< 1
Total Nitrogen (mg/L) Average Monthly	10.9	14.6	11.9	19.2	22.3	29.5	22.2	17.4	22.1	21.8	16.0	19.50
Ammonia (mg/L) Average Monthly	< 0.150	< 0.150	< 0.150	< 0.150	< 0.150	< 0.150	< 0.150	< 0.150	0.1645	1.03	< 0.150	< 0.150
Total Phosphorus (mg/L) Average Monthly	1.885	1.805	3.39	5.18	11.16	7.62	6.56	9.645	8.38	5.645	6.385	4.285

Compliance History

Effluent Violations for Outfall 001, from: April 1, 2025, To: February 28, 2026

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TRC	06/30/25	Avg Mo	0.64	mg/L	.5	mg/L
TRC	08/31/25	Avg Mo	0.72	mg/L	.5	mg/L
TRC	07/31/25	Avg Mo	0.69	mg/L	.5	mg/L
TRC	05/31/25	Avg Mo	0.706	mg/L	.5	mg/L
TRC	12/31/25	Avg Mo	0.51	mg/L	.5	mg/L
TRC	11/30/25	Avg Mo	0.70	mg/L	.5	mg/L
TRC	02/28/26	Avg Mo	0.51	mg/L	.5	mg/L
TRC	09/30/25	Avg Mo	0.71	mg/L	.5	mg/L
TRC	10/31/25	Avg Mo	0.71	mg/L	.5	mg/L
TRC	04/30/25	Avg Mo	0.72	mg/L	.5	mg/L
CBOD5	11/30/25	Avg Mo	24.34	mg/L	10.0	mg/L
CBOD5	02/28/26	Avg Mo	24.95	mg/L	10.0	mg/L
CBOD5	04/30/25	Avg Mo	21.5	mg/L	10.0	mg/L
TSS	10/31/25	Avg Mo	14.5	mg/L	10.0	mg/L
Total Phosphorus	11/30/25	Avg Mo	5.18	mg/L	2.0	mg/L
Total Phosphorus	04/30/25	Avg Mo	6.385	mg/L	2.0	mg/L
Total Phosphorus	07/31/25	Avg Mo	9.645	mg/L	2.0	mg/L
Total Phosphorus	08/31/25	Avg Mo	6.56	mg/L	2.0	mg/L
Total Phosphorus	06/30/25	Avg Mo	8.38	mg/L	2.0	mg/L
Total Phosphorus	09/30/25	Avg Mo	7.62	mg/L	2.0	mg/L
Total Phosphorus	12/31/25	Avg Mo	3.39	mg/L	2.0	mg/L
Total Phosphorus	05/31/25	Avg Mo	5.645	mg/L	2.0	mg/L
Total Phosphorus	10/31/25	Avg Mo	11.16	mg/L	2.0	mg/L

Comments: Effluent violations are considered chronic and significant.

**Table 1. Open Violations in WMS**

<b>Facility</b>	<b>Inspection Program</b>	<b>Violation Date</b>	<b>Violation</b>
VILLA VISTA ESTATES	WPC NPDES	12/11/2024	NPDES - Failure to monitor pollutants as required by the NPDES permit
VILLA VISTA ESTATES	WPC NPDES	12/11/2024	NPDES - Failure to properly document monitoring activities and results
VILLA VISTA ESTATES	WPC NPDES	12/11/2024	NPDES - Failure to properly document monitoring activities and results
VILLA VISTA ESTATES	WPC NPDES	12/11/2024	NPDES - Failure to submit monitoring report(s) or properly complete monitoring reports
VILLA VISTA ESTATES	WPC NPDES	12/11/2024	NPDES - Failure to submit monitoring report(s) or properly complete monitoring reports
VILLA VISTA ESTATES	WPC NPDES	10/23/2025	NPDES - Violation of effluent limits in Part A of permit

**Table 2. 5-Year Inspection History**

<b>Site Name</b>	<b>Inspected Date</b>	<b>Inspection Type</b>	<b>Inspection Result</b>	<b>Inspector</b>
VILLA VISTA ESTATES	12/11/2024	Compliance Evaluation	Violation(s) Noted	MARRIOTTI, JASON
VILLA VISTA ESTATES	10/23/2025	Administrative/File Review	Violation(s) Noted	SINGER, SEAN
VILLA VISTA ESTATES	01/09/2025	Administrative/File Review	Violation(s) Noted	KING, WILLIAM

**Development of Effluent Limitations**

<b>Outfall No.</b> <u>001</u>	<b>Design Flow (MGD)</b> <u>0.0125</u>
<b>Latitude</b> <u>40° 41' 11.00"</u>	<b>Longitude</b> <u>-79° 55' 3.40"</u>
<b>Wastewater Description:</b> <u>Sewage Effluent</u>	

**Technology-Based Limitations**

**Table 3. Minimum Technology-Based and BPJ Standards for Individual Sewage Permits**

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
CBOD <sub>5</sub>	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)
Total Phosphorous	Report	Average Monthly	-	92a.61
Total Nitrogen	Report	Average Monthly	-	92a.61
E. Coli	Report	IMAX	-	92a.61

The above limits are minimum technology-based and BPJ standards for individual sewage permits which are found in the Department's "Establishing Effluent Limitations for Individual Sewage Permits" document (SOP. No. BCW-PMT-033). The limits for pH are technology-based on Chapter 93.7. The limits for Total Suspended Solids and Fecal Coliforms are technology-based on Chapter 92a.47. Monitoring for E. Coli, Total Nitrogen, and Total Phosphorus are based on Chapter 92a.61.

E. Coli monitoring is established at 1/year as stated in the SOP for facilities with design flows between 0.002 and 0.5 MGD in this renewal.

**Water Quality-Based Limitations**

**Table 4. WQM 7 Inputs**

<b>Outfall 001</b>	River Mile Index (RMI)	1.1
	Elevation (ft)	1191
	Drainage Area (mi <sup>2</sup> )	0.04
	LFY (cfs/mi <sup>2</sup> )	0.004
	Q <sub>7-10</sub> Flow (cfs)	0.00016
<b>Endpoint</b>	River Mile Index (RMI)	0
	Elevation (ft)	1070
	Drainage Area (mi <sup>2</sup> )	0.6
	LFY (cfs/mi <sup>2</sup> )	0.0073
	Q <sub>7-10</sub> Flow (cfs)	0.00438

**Table 5. Modeling Results**

Parameter	Limit (mg/l)	SBC	Model
CBOD5	10	Average Monthly	WQM 7
	20	IMAX	
NH3 - N	1.39	Average Monthly	
	2.78	Instantaneous Maximum	
DO	6.0	Daily Minimum	
TRC	0.01	Average Monthly	TRC Spreadsheet
	0.032	IMAX	

**Table 6. Advanced Treatment Requirements for Intermittent and Ephemeral Streams**

Parameter	Limit (mg/l)	SBC
CBOD5	10	Average Monthly
TSS	10	Average Monthly
Total N	5	Average Monthly
DO	6	Daily Minimum
Phosphorous	0.5	Average Monthly

The parameters in Table 4 were found using Google Earth, StreamStats, and eMapPA. These parameters are used in the Department's Water Quality Modeling program (WQM 7) and TRC Spreadsheet to determine limits for CBOD5, NH3-N, Dissolved Oxygen, and TRC. Table 5 displays the results of these evaluations.

**CBOD5**

The attached results of the WQM 7.0 stream model (Attachment 5) indicate that a monthly average limit (AML) of 10 mg/L CBOD5 for summer months is required to protect the water quality of the stream. The recommended limits are consistent with the existing permit limits and will be retained in this renewal.

**NH3-N**

The attached results of the WQM 7.0 stream model (Attachment 5) are displayed above in Table 5. As per the Department's Permit Writer's Manual, rounding guidelines for conventional pollutants between 1.0 and 10.0 shall be rounded down to the nearest 0.5. Therefore, an average monthly limit (AML) of 1.0 mg/l and an IMAX limit of 2.5 mg/l are proposed in this renewal. A seasonal multiplier of 3 is applied to find a winter AML of 3.0 mg/L and an IMAX of 7.5 mg/L for the months of November through April. These limits are more stringent than the existing limits. According to the DMR data, the facility can meet these new limits consistently.

**DO**

The attached results of the WQM 7.0 stream model (Attachment 5) indicate that a minimum concentration of DO of 6 mg/l is required to protect water quality. The recommended limit is consistent with the Advanced Treatment Requirements for Intermittent and Ephemeral Streams. According to the DMR data, the facility can meet these new limits consistently.

### **TRC**

The results of the TRC Spreadsheet are presented in Attachment 6 which indicate an AML of 0.010 mg/l and an IMAX limit of 0.032 mg/l. As per the Department's Permit Writer's Manual, rounding guidelines for pollutants between 0.01 and 0.1 shall be rounded down to the nearest 0.01. Therefore, an AML of 0.01 mg/l and an IMAX limit of 0.03 mg/l are proposed in this renewal. These limits are more stringent than the current permit limits (Table 6) and since the permittee does not demonstrate its ability to achieve these new limits a 3-year compliance schedule has been implemented into the permit.

These proposed AML is lower than the Quantitation Limit (QL), as defined in 25 Pa. Code § 252.1, of the most sensitive existing EPA-approved (40 CFR Part 136) test method or other DEP-approved method. A Part C condition has been added into the permit where if the sensitivity of the specified method improves or a more sensitive test method becomes available, DEP may modify the permit to require use of the more sensitive method. For the purpose of compliance, a statistical value reported on the DMR that is less than the QL (0.02 mg/l) will be considered to be in compliance.

### **Total Phosphorous**

The previous Total Phosphorus limit was derived from the watershed implementation plan for Connoquenessing Creek before the confluence of Slippery Rock Creek. Due to the ratio of streamflow to wastewater flow being less than 3, and the stream being impaired, a limit of 0.5 mg/l for Total Phosphorous is proposed. Since the permittee does not demonstrate its ability to achieve this new limit, a 3-year compliance schedule has been implemented into the permit.

### **Total Nitrogen**

Currently, Total Nitrogen is only required to be monitored and reported. However, due to the streamflow to wastewater flow ratio being less than 3, and the stream being impaired, a limit of 5 mg/l is proposed into this renewal. Since the permittee does not demonstrate its ability to achieve this new limit, a 3-year compliance schedule has been implemented into the permit.

Anti-Backsliding

**Table 6. Current Effluent Limitations for Outfall 001**

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
Dissolved Oxygen	XXX	XXX	4.0 Daily Min	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	0.8	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
Total Suspended Solids	XXX	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	7.5	XXX	15	2/month	8-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	2.5	XXX	5	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4	2/month	8-Hr Composite

Comments: More stringent limits are proposed for the highlighted items above. All other permit limitations, monitoring requirements, and conditions will be retained in the next permit with the addition of E. Coli monitoring.

**Proposed Effluent Limitations and Monitoring Requirements**

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

**Outfall 001, Effective Period: Permit Effective Date through Three Years After Effective Date.**

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
Dissolved Oxygen	XXX	XXX	6.0 Daily Min	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	0.8	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
Total Suspended Solids	XXX	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	3.0	XXX	7.5	2/month	8-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	1.0	XXX	2.5	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4	2/month	8-Hr Composite
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab

Compliance Sampling Location: Outfall 001, after disinfection

**Proposed Effluent Limitations and Monitoring Requirements**

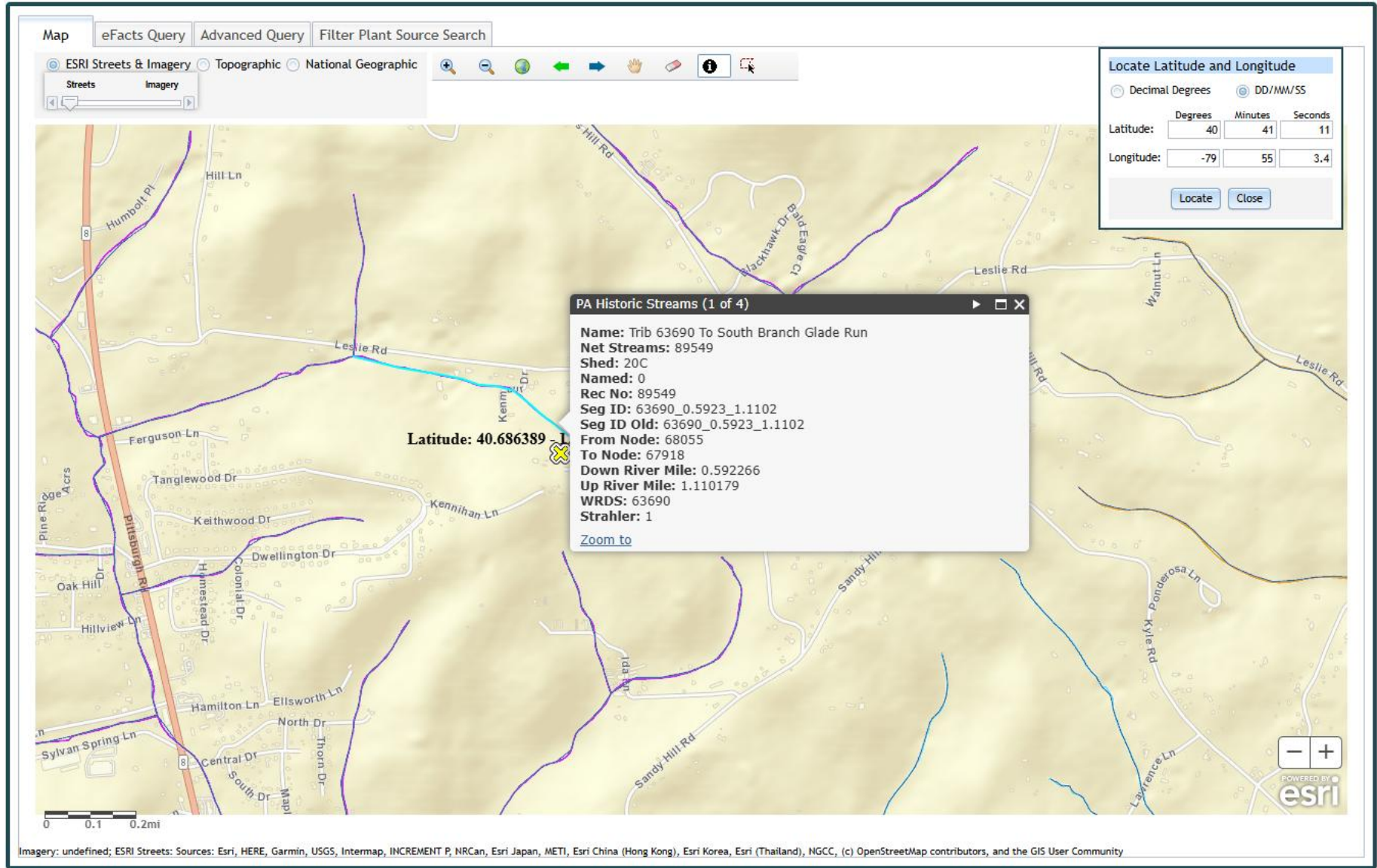
The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

**Outfall 001, Effective Period: Three Years After Effective Date through Permit Expiration Date.**

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
Dissolved Oxygen	XXX	XXX	6.0 Daily Min	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.01	XXX	0.03	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
Total Suspended Solids	XXX	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	5.0	XXX	10.0	1/month	8-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	3.0	XXX	7.5	2/month	8-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	1.0	XXX	2.5	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	0.5	XXX	1.0	2/month	8-Hr Composite
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab

Compliance Sampling Location: Outfall 001, after disinfection

Attachment 1  
Receiving Stream - eMapPA



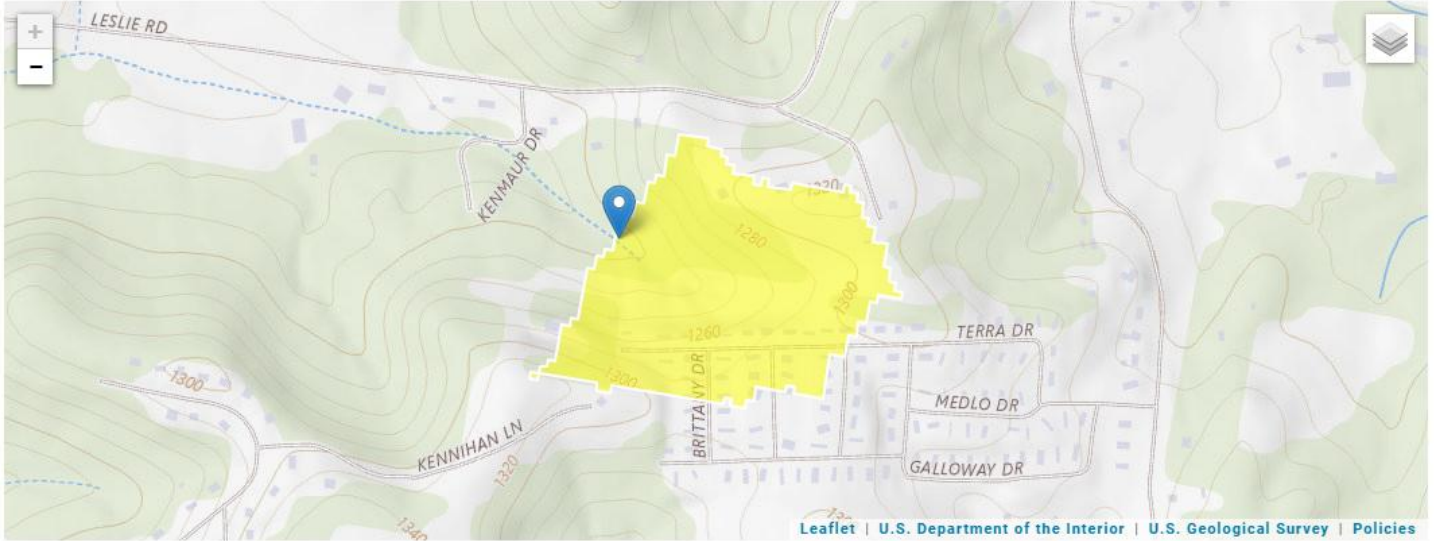
Attachment 2  
Aerial Site View – Google Earth



**Attachment 3**  
**StreamStats Report – Outfall 001**

StreamStats Report

Region ID: PA  
 Clicked Point (Latitude, Longitude): 40.68726, -79.91773  
 Time: 2026-04-02 14:28:49 -0400



Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.04	square miles	2.26	1400
ELEV	Mean Basin Elevation	1274.5	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

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

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.000754	ft <sup>3</sup> /s
30 Day 2 Year Low Flow	0.0017	ft <sup>3</sup> /s
7 Day 10 Year Low Flow	0.00016	ft <sup>3</sup> /s
30 Day 10 Year Low Flow	0.00044	ft <sup>3</sup> /s
90 Day 10 Year Low Flow	0.00107	ft <sup>3</sup> /s

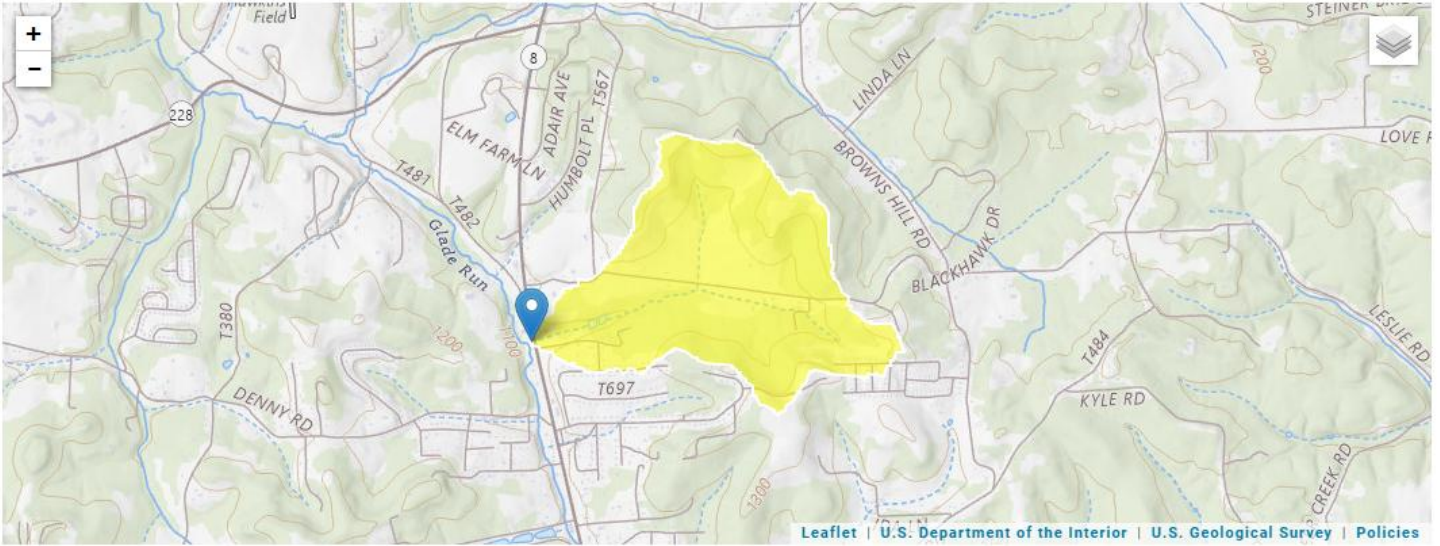
Low-Flow Statistics Citations

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.

**Attachment 4**  
**StreamStats Report – Endpoint**

StreamStats Report

Region ID: PA  
 Clicked Point (Latitude, Longitude): 40.68698, -79.93691  
 Time: 2026-04-02 14:32:51 -0400



Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.6	square miles	2.26	1400
ELEV	Mean Basin Elevation	1202.5	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

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

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0157	ft <sup>3</sup> /s
30 Day 2 Year Low Flow	0.0311	ft <sup>3</sup> /s
7 Day 10 Year Low Flow	0.00438	ft <sup>3</sup> /s
30 Day 10 Year Low Flow	0.00975	ft <sup>3</sup> /s
90 Day 10 Year Low Flow	0.0205	ft <sup>3</sup> /s

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.

**Attachment 5  
WQM 7**

**WQM 7.0 Effluent Limits**

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>					
20C	63690	Trib 63690 to South Branch Glade Rn					
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)
1.100	Villa Vista	PA102610	0.013	CBOD5	10		
				NH3-N	1.39	2.78	
				Dissolved Oxygen			6

**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
20C	63690	Trib 63690 to South Branch Glade Rn	<b>1.100</b>	1191.00	0.04	0.00000	0.00	<input checked="" type="checkbox"/>

**Stream Data**

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary		Stream	
									Temp (°C)	pH	Temp (°C)	pH
Q7-10	0.004	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	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	
Villa Vista	PA102610	0.0125	0.0125	0.0125	0.000	25.00	7.00	
Parameter Data								
Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)				
CBOD5	10.00	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				

**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
20C	63690	Trib 63690 to South Branch Glade Rn	0.000	1070.00	0.60	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	0.007	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	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
		0.0000	0.0000	0.0000	0.000	25.00	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	3.00	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										
20C	63690	Trib 63690 to South Branch Glade Rn										
RMI	Stream Flow	PWS With	Net Stream Flow	Disc Analysis Flow	Reach Slope	Depth	Width	W/D Ratio	Velocity	Reach Trav Time	Analysis Temp	Analysis pH
	(cfs)	(cfs)	(cfs)	(cfs)	(ft/ft)	(ft)	(ft)		(fps)	(days)	(°C)	
<b>Q7-10 Flow</b>												
1.100	0.00	0.00	0.00	.0193	0.02083	.307	1.2	3.91	0.05	1.270	24.96	7.00
<b>Q1-10 Flow</b>												
1.100	0.00	0.00	0.00	.0193	0.02083	NA	NA	NA	0.05	1.272	24.97	7.00
<b>Q30-10 Flow</b>												
1.100	0.00	0.00	0.00	.0193	0.02083	NA	NA	NA	0.05	1.268	24.94	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	6		

### WQM 7.0 Wasteload Allocations

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>
20C	63690	Trib 63690 to South Branch Glade Rn

#### 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
1.100	Villa Vista	11.1	11.16	11.1	11.16	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
1.100	Villa Vista	1.37	1.39	1.37	1.39	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)		
1.10	Villa Vista	10	10	1.39	1.39	6	6	0	0

### WQM 7.0 D.O.Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>
20C	63690	Trib 63690 to South Branch Glade Rn

<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>	<u>Analysis pH</u>
1.100	0.012	24.959	7.000
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>	<u>Reach Velocity (fps)</u>
1.200	0.307	3.913	0.053
<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>
9.93	1.005	1.38	1.025
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>	<u>Reach DO Goal (mg/L)</u>
6.018	30.328	Owens	6
<u>Reach Travel Time (days)</u>	<b>Subreach Results</b>		
1.270	<u>TravTime (days)</u>	<u>CBOD5 (mg/L)</u>	<u>NH3-N (mg/L)</u>
			<u>D.O. (mg/L)</u>
	0.127	8.46	1.21
	0.254	7.21	1.06
	0.381	6.14	0.93
	0.508	5.23	0.82
	0.635	4.46	0.72
	0.762	3.80	0.63
	0.889	3.23	0.55
	1.016	2.76	0.49
	1.143	2.35	0.43
	1.270	2.00	0.37

**Attachment 6  
TRC Spreadsheet**

<b>TRC EVALUATION</b>				
0.00016	= Q stream (cfs)		0.5	= CV Daily
0.0125	= 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)
	= % Factor of Safety (FOS)			= Decay Coefficient (K)
Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 0.022	1.3.2.iii	WLA cfc = 0.014
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.008	5.1d	LTA_cfc = 0.008
Source	Effluent Limit Calculations			
PENTOXSD TRG	5.1f	AML MULT = 1.231		
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.010		CFC
		INST MAX LIMIT (mg/l) = 0.032		
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 * (av_mon_limit / AML_MULT) / LTAMULT_afc			