

Application Type Renewal  
 Facility Type Municipal  
 Major / Minor Minor

**NPDES PERMIT FACT SHEET  
 INDIVIDUAL SEWAGE**

Application No. PA0045993  
 APS ID 1127056  
 Authorization ID 1508890

**Applicant and Facility Information**

Applicant Name	<u><b>Ulysses Borough Municipal Authority</b></u>	Facility Name	<u><b>Ulysses Municipal Wastewater Treatment Facility</b></u>
Applicant Address	<u>518 Main Street</u> <u>Ulysses, PA 16948</u>	Facility Address	<u>508 West Street</u> <u>Ulysses, PA 16948</u>
Applicant Contact	<u>Kirsten Williams</u>	Facility Contact	<u>Kirsten Williams</u>
Applicant Phone	<u>(814) 848-7551</u>	Facility Phone	<u>(814) 848-7551</u>
Client ID	<u>73593</u>	Site ID	<u>485068</u>
Ch 94 Load Status	<u>Projected Organic Overload</u>	Municipality	<u>Ulysses Borough</u>
Connection Status	<u>Self-Imposed Connection Prohibition</u>	County	<u>Potter</u>
Date Application Received	<u>December 6, 2024</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>December 20, 2024</u>	If No, Reason	<u></u>
Purpose of Application	<u>Renewal of an existing NPDES permit for the discharge of treated sewage.</u>		

**Public Participation**

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		 Derek S. Garner / Project Manager	January 21, 2026
X		 Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	January 21, 2026

**Discharge, Receiving Waters and Water Supply Information**

Outfall No.	<u>001</u>	Design Flow (MGD)	<u>0.15</u>
Latitude	<u>41° 54' 27.94"</u>	Longitude	<u>-77° 46' 21.00"</u>
Quad Name	<u>Ulysses</u>	Quad Code	<u>0323</u>

Wastewater Description: Sewage Effluent

Receiving Waters	<u>Genesee River</u>	Stream Code	<u>62954</u>
NHD Com ID	<u>84197857</u>	RMI	<u>2.1</u>
Drainage Area (mi <sup>2</sup> )	<u>2.19</u>	Yield (cfs/mi <sup>2</sup> )	<u>0.0597</u>
Q <sub>7-10</sub> Flow (cfs)	<u>0.13</u>	Q <sub>7-10</sub> Basis	<u>Streamgage No. 04221000</u>
Elevation (ft)	<u>2,021</u>	Slope (ft/ft)	<u>0.00631</u>
Watershed No.	<u>14-A</u>	Chapter 93 Class.	<u>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 Impaired

Cause(s) of Impairment Pathogens, Organic Enrichment, Siltation

Source(s) of Impairment Unknown Sources, Municipal Point Source Discharges, Agriculture

TMDL Status n/a Name n/a

Nearest Downstream Public Water Supply Intake	<u>PA/NY State Line</u>		
PWS Waters	<u>Genesee River</u>	Flow at Intake (cfs)	<u>n/a</u>
PWS RMI	<u>n/a</u>	Distance from Outfall (mi)	<u>0.5</u>

### Treatment Facility Summary

The Ulysses Municipal Authority (“UMA”) Wastewater Treatment Facility (“WWTF”) was constructed and operates under WQM Permit No. 5399401, originally issued January 11, 2000 and amended on May 22, 2019.

The UMA WWTF is an extended aeration facility with an average annual flow and hydraulic capacity of 0.15 MGD and an organic capacity of 300 lb/day. Treatment at the facility generally consists of:

- One (1) manual bar screen
- Two (2) equalization lagoons
- Two (2) flow equalization tanks
- Two (2) extended aeration tanks
- Two (2) clarifiers
- One (1) chlorine contact tank
- One (1) dechlorination system

The dechlorinated effluent is ultimately discharged via Outfall 001 to the Genesee River.

Sludge is wasted to two (2) aerobic digesters and disposed of in two (2) sludge or “reed” beds. The permittee has not accepted any trucked-in waste in the last three years and does not anticipate receiving any over the next permit term.

A letter from DEP dated December 16, 2025, regarding the facility’s 2024 Annual Wasteload Management (Chapter 94) Report, states that the facility was not hydraulically or organically overloaded in 2024, but an organic overload is projected.

**Compliance History**

The facility was most recently inspected by DEP on June 27, 2025. The inspection report notes numerous effluent violations and makes several recommendations regarding facility upkeep and upgrades.

There were 109 effluent violations that occurred during the existing permit's term. The violations are attached to this fact sheet.

UMA entered into a Consent Order and Agreement ("CO&A") with DEP on October 19, 2023. The CO&A addressed violations dating back to 2017, including chronic effluent violations, failure to properly operate and maintain treatment units, and failure to employ operators with valid operator certifications.

The Ulysses Municipal Authority has one open violation associated with the Safe Drinking Water Program for a failure to provide the level of treatment approved in its permit:

<b>Program Specific ID</b>	<b>Inspection ID</b>	<b>Violation ID</b>	<b>Violation Date</b>	<b>Violation Code</b>
6530006	3175852	913546	4/9/2021	C3B

**Development of Effluent Limitations**

Outfall No. 001  
Latitude 41° 54' 28.50"  
Wastewater Description: Sewage Effluent

Design Flow (MGD) 0.15  
Longitude -77° 46' 20.30"

**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 <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)

**Water Quality-Based Limitations**

The following limitations were determined through water quality modeling (output file attached):

Parameter	Average Monthly	Daily Maximum	Minimum
CBOD <sub>5</sub>	10	---	---
Ammonia-N	2.67	5.34	---
Dissolved Oxygen	---	---	5

As indicated by the results above, the existing requirements for CBOD<sub>5</sub> and dissolved oxygen are protective of the Genesee River. However, a slightly more stringent effluent limit for ammonia-n is recommended (2.67 mg/l vs. 3 mg/l).

The existing water quality-based total residual chlorine effluent limitations were reevaluated using the TRC Evaluation spreadsheet (output file attached). The evaluation recommends slightly more stringent residual chlorine limitations. The proposed limits vs existing limits are summarized as follows:

TRC	Average Monthly	IMAX
Existing	0.11	0.36
Proposed	0.09	0.30

A review of the most recent 12-months of DMR data demonstrates the permittee would have had 100% compliance with the more stringent proposed effluent limits for ammonia-n and TRC. Accordingly, no compliance schedule is proposed in the permit.

**Best Professional Judgment (BPJ) Limitations**

Due to the impairment of the Genesee River from organic enrichment and siltation, the facility has historically been assigned average monthly limits of 10 mg/l for CBOD<sub>5</sub> and TSS. DEP is unaware of any significant changes to the discharge or the watershed that would necessitate modifying these limits. Accordingly, DEP proposes to retain the existing CBOD<sub>5</sub> and TSS limits based on BPJ as follows:

Parameter	Average Monthly	Weekly Average	Instant. Maximum
CBOD5	10	15	20
TSS	10	15	20

DEP generally assigns a seasonal multiplier of three to water quality-based effluent limits for ammonia-n based on reduced biological treatment efficiencies and higher in-stream dilution available during cold water months. Accordingly, DEP recommends the following ammonia-n limits are established in the permit:

Parameter	Average Monthly	Weekly Average	Instant. Maximum
Ammonia Nov 1 - Apr 30	8.1	12.0	16.2
Ammonia May 1 - Oct 31	2.7	4.0	5.4

DEP recommends that influent monitoring for BOD5 and TSS remain in the permit to continue to characterize the wastewater.

DEP recommends quarterly E. Coli reporting per the 2017 Triennial Review of Water Quality Standards, published in the PA Bulletin on July 11, 2020.

**Anti-Backsliding**

No limits or monitoring requirements are proposed to be made less stringent than the existing permit's requirements. Accordingly, anti-backsliding does not impact the permit.

**Existing Effluent Limitations and Monitoring Requirements**

The existing effluent limitations and monitoring requirements are as follows:

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum 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	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.11	XXX	0.36	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	12	18	XXX	10	15	20	2/month	8-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Suspended Solids	12	18	XXX	10	15	20	2/month	8-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	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
Ammonia-Nitrogen Nov 1 - Apr 30	11	16	XXX	9.0	13	18	2/month	8-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	3.8	5.6	XXX	3.0	4.5	6	2/month	8-Hr Composite

Compliance Sampling Location: Outfall 001

**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)		Concentrations (mg/L)				Minimum 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	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.09	XXX	0.30	1/day	Grab
CBOD5	12	18	XXX	10	15	20	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS	12	18	XXX	10	15	20	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	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
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
Ammonia Nov 1 - Apr 30	10.1	15.0	XXX	8.1	12.0	16.2	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	3.4	5.0	XXX	2.7	4.0	5.4	2/month	8-Hr Composite

Compliance Sampling Location: Outfall 001

Monitoring Period Begin Date	Monitoring Period End Date	Submission Date	Noncompliance Date	Noncompliance Description	Parameter	Sample Value	Violation Condition	Permit Value	Unit	SBC
6/1/2020	6/30/2020	7/25/2020	7/25/2020	Violation of permit condition	Fecal Coliform	> 2419	>	1000	No./100 ml	Instantaneous Maximum
8/1/2020	8/31/2020	9/24/2020	9/24/2020	Violation of permit condition	Fecal Coliform	> 2419.6	>	1000	No./100 ml	Instantaneous Maximum
1/1/2021	1/31/2021	2/15/2021	2/15/2021	Sample collection less frequent than required						
1/1/2021	1/31/2021	2/15/2021	2/15/2021	Violation of permit condition	Fecal Coliform	2048	>	2000	No./100 ml	Geometric Mean
1/1/2021	1/31/2021	2/15/2021	2/15/2021	Violation of permit condition	pH	5.86	<	6	S.U.	Instantaneous Minimum
2/1/2021	2/28/2021	3/28/2021	3/28/2021	Violation of permit condition	Fecal Coliform	> 1493	>	2000	No./100 ml	Geometric Mean
2/1/2021	2/28/2021	3/28/2021	3/28/2021	Violation of permit condition	pH	5.71	<	6	S.U.	Instantaneous Minimum
2/1/2021	2/28/2021	3/28/2021	3/28/2021	Violation of permit condition	Total Suspended Solids	16	>	10	mg/L	Average Monthly
2/1/2021	2/28/2021	3/28/2021	3/28/2021	Violation of permit condition	Total Suspended Solids	21	>	15	mg/L	Weekly Average
5/1/2021	5/31/2021	6/28/2021	6/28/2021	Violation of permit condition	Fecal Coliform	> 123	>	200	No./100 ml	Geometric Mean
5/1/2021	5/31/2021	6/28/2021	6/28/2021	Violation of permit condition	Fecal Coliform	> 2419.6	>	1000	No./100 ml	Instantaneous Maximum
5/1/2021	5/31/2021	6/28/2021	6/28/2021	Violation of permit condition	Total Residual Chlorine (TRC)	0.88	>	0.36	mg/L	Instantaneous Maximum
6/1/2021	6/30/2021	7/28/2021	7/28/2021	Violation of permit condition	Ammonia-Nitrogen	7	>	4.5	mg/L	Weekly Average
6/1/2021	6/30/2021	7/28/2021	7/28/2021	Violation of permit condition	pH	5.98	<	6	S.U.	Instantaneous Minimum
7/1/2021	7/31/2021	8/28/2021	8/28/2021	Violation of permit condition	Fecal Coliform	203	>	200	No./100 ml	Geometric Mean
8/1/2021	8/31/2021	9/26/2021	9/26/2021	Violation of permit condition	Fecal Coliform	> 2419.6	>	1000	No./100 ml	Instantaneous Maximum
8/1/2021	8/31/2021	9/26/2021	9/26/2021	Violation of permit condition	Fecal Coliform	> 415	>	200	No./100 ml	Geometric Mean
8/1/2021	8/31/2021	9/26/2021	9/26/2021	Violation of permit condition	pH	5.72	<	6	S.U.	Instantaneous Minimum
8/1/2021	8/31/2021	9/26/2021	9/26/2021	Violation of permit condition	Total Residual Chlorine (TRC)	0.13	>	0.11	mg/L	Average Monthly
9/1/2021	9/30/2021	10/25/2021	10/25/2021	Violation of permit condition	Fecal Coliform	> 2419.6	>	1000	No./100 ml	Instantaneous Maximum
9/1/2021	9/30/2021	10/25/2021	10/25/2021	Violation of permit condition	Fecal Coliform	> 306	>	200	No./100 ml	Geometric Mean
9/1/2021	9/30/2021	10/25/2021	10/25/2021	Violation of permit condition	pH	5.9	<	6	S.U.	Instantaneous Minimum
9/1/2021	9/30/2021	10/25/2021	10/25/2021	Violation of permit condition	Total Residual Chlorine (TRC)	0.13	>	0.11	mg/L	Average Monthly
10/1/2021	10/31/2021	11/29/2021	11/29/2021	Late DMR Submission						
10/1/2021	10/31/2021	11/29/2021	11/29/2021	Violation of permit condition	Total Residual Chlorine (TRC)	0.13	>	0.11	mg/L	Average Monthly
11/1/2021	11/30/2021	12/26/2021	12/26/2021	Sample collection less frequent than required						
11/1/2021	11/30/2021	12/26/2021	12/26/2021	Violation of permit condition	Fecal Coliform	> 2419.6	>	10000	No./100 ml	Instantaneous Maximum
11/1/2021	11/30/2021	12/26/2021	12/26/2021	Violation of permit condition	Fecal Coliform	> 2420	>	2000	No./100 ml	Geometric Mean
12/1/2021	12/31/2021	1/9/2022	1/9/2022	Violation of permit condition	Fecal Coliform	> 1773	>	2000	No./100 ml	Geometric Mean
12/1/2021	12/31/2021	1/9/2022	1/9/2022	Violation of permit condition	Fecal Coliform	> 2419.6	>	10000	No./100 ml	Instantaneous Maximum
3/1/2022	3/31/2022	4/19/2022	4/19/2022	Violation of permit condition	Fecal Coliform	> 1646	>	2000	No./100 ml	Geometric Mean
3/1/2022	3/31/2022	4/19/2022	4/19/2022	Violation of permit condition	Fecal Coliform	> 2419.6	>	10000	No./100 ml	Instantaneous Maximum
3/1/2022	3/31/2022	4/19/2022	4/19/2022	Violation of permit condition	Total Suspended Solids	15	>	10	mg/L	Average Monthly
3/1/2022	3/31/2022	4/19/2022	4/19/2022	Violation of permit condition	Total Suspended Solids	19	>	15	mg/L	Weekly Average
3/1/2022	3/31/2022	4/19/2022	4/19/2022	Violation of permit condition	Total Suspended Solids	22	>	12	lbs/day	Average Monthly
3/1/2022	3/31/2022	4/19/2022	4/19/2022	Violation of permit condition	Total Suspended Solids	36	>	18	lbs/day	Weekly Average
5/1/2022	5/31/2022	6/27/2022	6/27/2022	Violation of permit condition	Fecal Coliform	325	>	200	No./100 ml	Geometric Mean
5/1/2022	5/31/2022	6/27/2022	6/27/2022	Violation of permit condition	pH	5.82	<	6	S.U.	Instantaneous Minimum
6/1/2022	6/30/2022	7/25/2022	7/25/2022	Violation of permit condition	Fecal Coliform	> 2419.6	>	1000	No./100 ml	Instantaneous Maximum
6/1/2022	6/30/2022	7/25/2022	7/25/2022	Violation of permit condition	Fecal Coliform	> 646	>	200	No./100 ml	Geometric Mean
6/1/2022	6/30/2022	7/25/2022	7/25/2022	Violation of permit condition	pH	5.21	<	6	S.U.	Instantaneous Minimum
6/1/2022	6/30/2022	7/25/2022	7/25/2022	Violation of permit condition	Total Suspended Solids	12	>	10	mg/L	Average Monthly
6/1/2022	6/30/2022	7/25/2022	7/25/2022	Violation of permit condition	Total Suspended Solids	23	>	15	mg/L	Weekly Average
7/1/2022	7/31/2022	8/25/2022	8/25/2022	Violation of permit condition	Fecal Coliform	> 2166	>	200	No./100 ml	Geometric Mean
7/1/2022	7/31/2022	8/25/2022	8/25/2022	Violation of permit condition	Fecal Coliform	> 2419.6	>	1000	No./100 ml	Instantaneous Maximum
7/1/2022	7/31/2022	8/25/2022	8/25/2022	Violation of permit condition	pH	4.09	<	6	S.U.	Instantaneous Minimum
8/1/2022	8/31/2022	9/27/2022	9/27/2022	Violation of permit condition	Fecal Coliform	> 2419.6	>	1000	No./100 ml	Instantaneous Maximum
8/1/2022	8/31/2022	9/27/2022	9/27/2022	Violation of permit condition	Fecal Coliform	> 309	>	200	No./100 ml	Geometric Mean
10/1/2022	10/31/2022	11/25/2022	11/25/2022	Violation of permit condition	Fecal Coliform	> 2419.6	>	10000	No./100 ml	Instantaneous Maximum
10/1/2022	10/31/2022	11/25/2022	11/25/2022	Violation of permit condition	Fecal Coliform	> 328	>	2000	No./100 ml	Geometric Mean
10/1/2022	10/31/2022	11/25/2022	11/25/2022	Violation of permit condition	Total Suspended Solids	20	>	15	mg/L	Weekly Average
3/1/2023	3/31/2023	4/27/2023	4/27/2023	Violation of permit condition	Total Suspended Solids	11	>	10	mg/L	Average Monthly
4/1/2023	4/30/2023	5/24/2023	5/24/2023	Violation of permit condition	Fecal Coliform	> 2419.6	>	10000	No./100 ml	Instantaneous Maximum
4/1/2023	4/30/2023	5/24/2023	5/24/2023	Violation of permit condition	Total Suspended Solids	13	>	10	mg/L	Average Monthly
4/1/2023	4/30/2023	5/24/2023	5/24/2023	Violation of permit condition	Total Suspended Solids	16	>	15	mg/L	Weekly Average
5/1/2023	5/31/2023	6/26/2023	6/26/2023	Violation of permit condition	pH	5.61	<	6	S.U.	Instantaneous Minimum
6/1/2023	6/30/2023	7/31/2023	7/31/2023	Late DMR Submission						
6/1/2023	6/30/2023	7/31/2023	7/31/2023	Violation of permit condition	Dissolved Oxygen	4.84	<	5	mg/L	Instantaneous Minimum
6/1/2023	6/30/2023	7/31/2023	7/31/2023	Violation of permit condition	pH	5.6	<	6	S.U.	Instantaneous Minimum
6/1/2023	6/30/2023	7/31/2023	7/31/2023	Violation of permit condition	Total Residual Chlorine (TRC)	0.39	>	0.36	mg/L	Instantaneous Maximum
6/1/2023	6/30/2023	7/31/2023	7/31/2023	Violation of permit condition	Total Suspended Solids	12	>	10	mg/L	Average Monthly
7/1/2023	7/31/2023	8/21/2023	8/21/2023	Violation of permit condition	Dissolved Oxygen	4.86	<	5	mg/L	Instantaneous Minimum

Monitoring Period Begin Date	Monitoring Period End Date	Submission Date	Noncompliance Date	Noncompliance Description	Parameter	Sample Value	Violation Condition	Permit Value	Unit	SBC
8/1/2023	8/31/2023	9/27/2023	9/27/2023	Violation of permit condition	Fecal Coliform	> 153	>	200	No./100 ml	Geometric Mean
8/1/2023	8/31/2023	9/27/2023	9/27/2023	Violation of permit condition	Fecal Coliform	> 2419.6	>	1000	No./100 ml	Instantaneous Maximum
9/1/2023	9/30/2023	10/27/2023	10/27/2023	Violation of permit condition	Fecal Coliform	1046.2	>	1000	No./100 ml	Instantaneous Maximum
9/1/2023	9/30/2023	10/27/2023	10/27/2023	Violation of permit condition	Fecal Coliform	209	>	200	No./100 ml	Geometric Mean
1/1/2024	1/31/2024	2/23/2024	2/23/2024	Violation of permit condition	Fecal Coliform	> 2419.6	>	10000	No./100 ml	Instantaneous Maximum
1/1/2024	1/31/2024	2/23/2024	2/23/2024	Violation of permit condition	Fecal Coliform	> 577	>	2000	No./100 ml	Geometric Mean
1/1/2024	1/31/2024	2/23/2024	2/23/2024	Violation of permit condition	Total Suspended Solids	12	>	10	mg/L	Average Monthly
2/1/2024	2/29/2024	3/25/2024	3/25/2024	Violation of permit condition	Fecal Coliform	> 2419.6	>	10000	No./100 ml	Instantaneous Maximum
2/1/2024	2/29/2024	3/25/2024	3/25/2024	Violation of permit condition	Fecal Coliform	> 2420	>	2000	No./100 ml	Geometric Mean
2/1/2024	2/29/2024	3/25/2024	3/25/2024	Violation of permit condition	Total Suspended Solids	13	>	10	mg/L	Average Monthly
2/1/2024	2/29/2024	3/25/2024	3/25/2024	Violation of permit condition	Total Suspended Solids	19	>	15	mg/L	Weekly Average
3/1/2024	3/31/2024	4/21/2024	4/21/2024	Violation of permit condition	Fecal Coliform	> 2419.6	>	10000	No./100 ml	Instantaneous Maximum
3/1/2024	3/31/2024	4/21/2024	4/21/2024	Violation of permit condition	Fecal Coliform	> 829	>	2000	No./100 ml	Geometric Mean
3/1/2024	3/31/2024	4/21/2024	4/21/2024	Violation of permit condition	Total Suspended Solids	12	>	10	mg/L	Average Monthly
5/1/2024	5/31/2024	6/30/2024	6/30/2024	Violation of permit condition	Fecal Coliform	258	>	200	No./100 ml	Geometric Mean
5/1/2024	5/31/2024	6/30/2024	6/30/2024	Violation of permit condition	pH	5.94	<	6	S.U.	Instantaneous Minimum
5/1/2024	5/31/2024	6/30/2024	6/30/2024	Violation of permit condition	Total Suspended Solids	< 13	>	10	mg/L	Average Monthly
5/1/2024	5/31/2024	6/30/2024	6/30/2024	Violation of permit condition	Total Suspended Solids	22	>	15	mg/L	Weekly Average
8/1/2024	8/31/2024	9/23/2024	9/23/2024	Violation of permit condition	Fecal Coliform	> 2419.6	>	1000	No./100 ml	Instantaneous Maximum
8/1/2024	8/31/2024	9/23/2024	9/23/2024	Violation of permit condition	Fecal Coliform	> 590	>	200	No./100 ml	Geometric Mean
9/1/2024	9/30/2024	10/30/2024	10/30/2024	Late DMR Submission						
9/1/2024	9/30/2024	10/30/2024	10/30/2024	Sample collection less frequent than required	Ammonia-Nitrogen					
9/1/2024	9/30/2024	10/30/2024	10/30/2024	Sample collection less frequent than required	Carbonaceous Biochemical Oxygen Demand (CBOD5)					
9/1/2024	9/30/2024	10/30/2024	10/30/2024	Sample collection less frequent than required	Fecal Coliform					
9/1/2024	9/30/2024	10/30/2024	10/30/2024	Sample collection less frequent than required	Total Suspended Solids					
9/1/2024	9/30/2024	10/30/2024	10/30/2024	Violation of permit condition	Fecal Coliform	> 2419.6	>	1000	No./100 ml	Instantaneous Maximum
9/1/2024	9/30/2024	10/30/2024	10/30/2024	Violation of permit condition	Fecal Coliform	> 2420	>	200	No./100 ml	Geometric Mean
9/1/2024	9/30/2024	10/30/2024	10/30/2024	Sample collection less frequent than required	Total Suspended Solids					
10/1/2024	10/31/2024	11/24/2024	11/24/2024	Sample collection less frequent than required						
10/1/2024	10/31/2024	11/24/2024	11/24/2024	Violation of permit condition	pH	5.94	<	6	S.U.	Instantaneous Minimum
11/1/2024	11/30/2024	11/9/2025	2/9/2025	Late DMR Submission						
12/1/2024	12/31/2024	11/9/2025	2/9/2025	Late DMR Submission						
4/1/2025	4/30/2025	11/9/2025	11/9/2025	Sample collection less frequent than required	Ammonia-Nitrogen					
4/1/2025	4/30/2025	11/9/2025	11/9/2025	Sample collection less frequent than required	Carbonaceous Biochemical Oxygen Demand (CBOD5)					
4/1/2025	4/30/2025	11/9/2025	11/9/2025	Sample collection less frequent than required	Total Suspended Solids					
4/1/2025	4/30/2025	11/9/2025	11/9/2025	Violation of permit condition	Total Suspended Solids	12	>	10	mg/L	Average Monthly
4/1/2025	4/30/2025	11/9/2025	11/9/2025	Sample collection less frequent than required	Biochemical Oxygen Demand (BOD5)					
4/1/2025	4/30/2025	11/9/2025	11/9/2025	Sample collection less frequent than required	Total Suspended Solids					
5/1/2025	5/31/2025	6/25/2025	6/25/2025	Violation of permit condition	Total Suspended Solids	11	>	10	mg/L	Average Monthly
5/1/2025	5/31/2025	6/25/2025	6/25/2025	Violation of permit condition	Total Suspended Solids	19	>	12	lbs/day	Average Monthly
5/1/2025	5/31/2025	6/25/2025	6/25/2025	Violation of permit condition	Total Suspended Solids	31	>	18	lbs/day	Weekly Average
6/1/2025	6/30/2025	7/28/2025	7/28/2025	Violation of permit condition	Fecal Coliform	1990	>	1000	No./100 ml	Instantaneous Maximum
6/1/2025	6/30/2025	7/28/2025	7/28/2025	Violation of permit condition	Fecal Coliform	805	>	200	No./100 ml	Geometric Mean
8/1/2025	8/31/2025	9/28/2025	9/28/2025	Violation of permit condition	pH	5.94	<	6	S.U.	Instantaneous Minimum
9/1/2025	9/30/2025	10/28/2025	10/28/2025	Violation of permit condition	pH	5.89	<	6	S.U.	Instantaneous Minimum
10/1/2025	10/31/2025	11/28/2025	11/28/2025	Violation of permit condition	Fecal Coliform	< 2194	>	2000	No./100 ml	Geometric Mean
10/1/2025	10/31/2025	11/28/2025	11/28/2025	Violation of permit condition	Fecal Coliform	> 2420	>	10000	No./100 ml	Instantaneous Maximum

Prepared in cooperation with the Pennsylvania Department of Environmental Protection

## Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania



Open-File Report 2011-1070

**Table 1.** List of U.S. Geological Survey streamgage locations in and near Pennsylvania with updated streamflow statistics.—Continued[Latitude and Longitude in decimal degrees; mi<sup>2</sup>, square miles]

Streamgage number	Streamgage name	Latitude	Longitude	Drainage area (mi <sup>2</sup> )	Regulated <sup>1</sup>
03102500	Little Shenango River at Greenville, Pa.	41.422	-80.376	104	N
03102850	Shenango River near Transfer, Pa.	41.354	-80.398	337	Y
03102950	Pymatuning Creek at Kinsman, Ohio	41.443	-80.588	96.7	N
03103000	Pymatuning Creek near Orangeville, Pa.	41.311	-80.478	169	N
03103500	Shenango River at Sharpsville, Pa.	41.266	-80.473	584	Y
03104000	Shenango River at Sharon, Pa.	41.232	-80.510	608	N
03104500	Shenango River at New Castle, Pa.	41.000	-80.356	792	Y
03104760	Harthegig Run near Greenfield, Pa.	41.186	-80.327	2.26	N
03105500	Beaver River at Wampum, Pa.	40.889	-80.337	2,235	Y
03106000	Connoquenessing Creek near Zelienople, Pa.	40.817	-80.242	356	N
03106300	Muddy Creek near Portersville, Pa.	40.963	-80.125	51.2	Y
03106500	Slippery Rock Creek at Wurtemberg, Pa.	40.884	-80.234	398	Y
03107500	Beaver River at Beaver Falls, Pa.	40.763	-80.315	3,106	Y
03108000	Raccoon Creek at Moffatts Mill, Pa.	40.628	-80.338	178	LF
03109500	Little Beaver Creek near East Liverpool, Ohio	40.676	-80.541	496	N
03110000	Yellow Creek near Hammondsville, Ohio	40.538	-80.725	147	N
03111150	Brush Run near Buffalo, Pa.	40.198	-80.408	10.3	N
03111500	Short Creek near Dillonvale, Ohio	40.193	-80.734	123	N
03111534	Ohio River at Martins Ferry, Ohio	40.105	-80.708	24,620	N
03111548	Wheeling Creek below Blaine, Ohio	40.067	-80.808	97.7	N
03112000	Wheeling Creek at Elm Grove, W.Va.	40.045	-80.661	281	Y
03114000	Captina Creek at Armstrongs Mills, Ohio	39.909	-80.924	134	N
04209000	Chagrin River at Willoughby, Ohio	41.631	-81.403	246	N
04212500	Ashtabula River near Ashtabula, Ohio	41.856	-80.762	121	N
04213000	Conneaut Creek at Conneaut, Ohio	41.927	-80.604	175	N
04213040	Raccoon Creek near West Springfield, Pa.	41.945	-80.447	2.53	N
04213075	Brandy Run near Girard, Pa.	41.992	-80.291	4.45	N
04221000	Genesee River at Wellsville, N.Y.	42.122	-77.957	288	N
04223000	Genesee River at Portageville, N.Y.	42.570	-78.042	984	N
04224775	Canaseraga Creek above Dansville, N.Y.	42.536	-77.704	88.9	N
04227000	Canaseraga Creek at Shakers Crossing, N.Y.	42.737	-77.841	335	N

<sup>1</sup>Refers to regulation of streamflow during period of record of streamgage; N, no regulation during period of record; Y, regulation during period of record; LF, regulation for low flows during period of record.

**Table 2.** Selected low-flow statistics for streamgage locations in and near Pennsylvania.—Continued[ft<sup>3</sup>/s; cubic feet per second; —, statistic not computed; <, less than]

Streamgage number	Period of record used in analysis <sup>1</sup>	Number of years used in analysis	1-day, 10-year (ft <sup>3</sup> /s)	7-day, 10-year (ft <sup>3</sup> /s)	7-day, 2-year (ft <sup>3</sup> /s)	30-day, 10-year (ft <sup>3</sup> /s)	30-day, 2-year (ft <sup>3</sup> /s)	90-day, 10-year (ft <sup>3</sup> /s)
04209000	1927–2008	68	11.3	14.3	30.8	21.7	45.1	30.0
04212500	1926–1979	47	0	0	0	0	.4	.2
04213000	1924–2008	70	1.6	2.4	7.4	4.4	12.4	7.4
04213040	1971–1996	26	0	0	.1	<.1	.1	.1
04213075	1988–2008	21	.3	.3	.7	.5	1.0	.8
04221000	1957–2008	37	15.6	17.2	30.7	21.6	41.0	29.8
04223000	1910–2008	99	46.2	57.8	102	74.6	137	110
04224775	1976–2008	33	7.2	7.6	11.5	8.4	14.6	10.4
04227000	1960–2008	44	19.6	21.8	37.0	25.7	45.6	30.3

<sup>1</sup>Climatic year is defined as 12-month period beginning April 1 and ending March 31. The climatic year is designated by the calendar year in which it ends.<sup>2</sup>Period of record for post-regulation period.<sup>3</sup>Period of record for pre-regulation period.<sup>4</sup>Low-flow statistics also presented in Doheny and Banks (2010).<sup>5</sup>Low-flow statistics computed from a common period of record can be found in Wiley (2006).

StreamStats Output Report

State/Region ID PA  
 Latitude 41.90782  
 Longitude -77.77254  
 Time 1/15/2026 8:29:48 AM  
 NHD Stream GNIS ID 00970162  
 NHD Stream GNIS Name Genesee River

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	5.023	degrees
BSLOPDRAW	Unadjusted basin slope, in degrees	5.2279	degrees
BSLPDRPA20	Unadjusted basin slope, in degrees, from PA v1	5.1481	degrees
CARBON	Percentage of area of carbonate rock	0	percent
CENTROXA83	X coordinate of the centroid, in NAD_1983_Albers, meters	20509.9753	meters
CENTROYA83	Basin centroid horizontal (y) location in NAD 1983 Albers	321691.2571	meters
DRN	Drainage quality index from STATSGO	3.4	dimensionless
DRNAREA	Area that drains to a point on a stream	2.19	square miles
ELEV	Mean Basin Elevation	2222.1	feet
ELEVMAX	Maximum basin elevation	2525.9	feet
FOREST	Percentage of area covered by forest	49.8728	percent
GLACIATED	Percentage of basin area that was historically covered by glaciers	100	percent
IMPNLCD01	Percentage of impervious area determined from NLCD 2001 impervious dataset	1.9106	percent
LC01DEV	Percentage of land-use from NLCD 2001 classes 21-24	12.353	percent
LC11DEV	Percentage of developed (urban) land from NLCD 2011 classes 21-24	12.6073	percent
LC11IMP	Average percentage of impervious area determined from NLCD 2011 impervious dataset	1.9726	percent
LONG_OUT	Longitude of Basin Outlet	-77.7725159	decimal degrees
MAXTEMP	Mean annual maximum air temperature over basin area from PRISM 1971-2000 800-m grid	54.56	degrees F
OUTLETXA83	X coordinate of the outlet, in NAD_1983_Albers, meters	18873.8664	meters
OUTLETYA83	Y coordinate of the outlet, in NAD_1983_Albers, meters	322921.5268	meters
PRECIP	Mean Annual Precipitation	37.9	inches
ROCKDEP	Depth to rock	4.6	feet
STORAGE	Percentage of area of storage (lakes ponds reservoirs wetlands)	0.57	percent
STRDEN	Stream Density -- total length of streams divided by drainage area	1.527	miles per square mile
STRMTOT	total length of all mapped streams (1:24,000-scale) in the basin	3.344	miles
URBAN	Percentage of basin with urban development	6.9783	percent

### Low-Flow (Q<sub>7-10</sub>) Calculation

Facility: **Ulysses Municipal Authority WWTF**  
NPDES Permit No. **PA0045993**

#### Gage Information

Drainage Area: **288** mi<sup>2</sup>  
Q<sub>7-10</sub>: **17.2** cfs  
LFY: **0.0597** cfsm

#### Outfall Information

Drainage Area: **2.19** mi<sup>2</sup>  
Q<sub>7-10</sub>: **0.13** cfs

#### Downstream Locations

RMI: **0**  
Drainage Area: **3.46** mi<sup>2</sup>  
Q<sub>7-10</sub>: **0.207** cfs

RMI: **\_\_\_\_\_**  
Drainage Area: **\_\_\_\_\_** mi<sup>2</sup>  
Q<sub>7-10</sub>: **\_\_\_\_\_** cfs

RMI: **\_\_\_\_\_**  
Drainage Area: **\_\_\_\_\_** mi<sup>2</sup>  
Q<sub>7-10</sub>: **\_\_\_\_\_** cfs

RMI: **\_\_\_\_\_**  
Drainage Area: **\_\_\_\_\_** mi<sup>2</sup>  
Q<sub>7-10</sub>: **\_\_\_\_\_** cfs

RMI: **\_\_\_\_\_**  
Drainage Area: **\_\_\_\_\_** mi<sup>2</sup>  
Q<sub>7-10</sub>: **\_\_\_\_\_** cfs

RMI: **\_\_\_\_\_**  
Drainage Area: **\_\_\_\_\_** mi<sup>2</sup>  
Q<sub>7-10</sub>: **\_\_\_\_\_** cfs

RMI: **\_\_\_\_\_**  
Drainage Area: **\_\_\_\_\_** mi<sup>2</sup>  
Q<sub>7-10</sub>: **\_\_\_\_\_** cfs

RMI: **\_\_\_\_\_**  
Drainage Area: **\_\_\_\_\_** mi<sup>2</sup>  
Q<sub>7-10</sub>: **\_\_\_\_\_** cfs

## 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
14	62954	Trib 62954 to Genesee River	<b>2.100</b>	2021.00	2.19	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 Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
	<b>Q7-10</b>	0.060	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00
<b>Q1-10</b>		0.00	0.00	0.000	0.000							
<b>Q30-10</b>		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
UMA WWTF	PA0045993	0.1500	0.1500	0.1500	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	3.00	8.24	0.00	0.00
NH3-N	3.00	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
14	62954	Trib 62954 to Genesee River	<b>0.000</b>	1613.00	3.46	0.00000	0.00	<input checked="" type="checkbox"/>

### Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	pH	Stream Temp (°C)	pH
	(cfsm)	(cfs)	(cfs)									
<b>Q7-10</b>	0.060	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
<b>Q1-10</b>		0.00	0.00	0.000	0.000							
<b>Q30-10</b>		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

<u>SWP Basin</u>		<u>Stream Code</u>				<u>Stream Name</u>						
14		62954				Trib 62954 to Genesee River						
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>												
2.100	0.13	0.00	0.13	.2321	0.03680	.453	6.77	14.95	0.12	1.085	23.20	7.00
<b>Q1-10 Flow</b>												
2.100	0.12	0.00	0.12	.2321	0.03680	NA	NA	NA	0.12	1.106	23.31	7.00
<b>Q30-10 Flow</b>												
2.100	0.16	0.00	0.16	.2321	0.03680	NA	NA	NA	0.12	1.033	22.93	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	0.907	Use Inputted Reach Travel Times	<input type="checkbox"/>
Q30-10/Q7-10 Ratio	1.256	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>
14	62954	Trib 62954 to Genesee River

### 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
2.100	UMA WWTF	12.74	6	12.74	6	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
2.100	UMA WWTF	1.56	2.67	1.56	2.67	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)		
2.10	UMA WWTF	10	10	2.67	2.67	5	5	0	0

## WQM 7.0 D.O. Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>		
14	62954	Trib 62954 to Genesee River		
<hr/>				
<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>		<u>Analysis pH</u>
2.100	0.150	23.198		7.000
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>		<u>Reach Velocity (fps)</u>
6.773	0.453	14.955		0.118
<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>
7.12	1.010	1.71		0.895
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>		<u>Reach DO Goal (mg/L)</u>
6.169	24.245	Owens		6
<u>Reach Travel Time (days)</u>	<b>Subreach Results</b>			
1.085	<u>TravTime</u>	<u>CBOD5</u>	<u>NH3-N</u>	<u>D.O.</u>
	(days)	(mg/L)	(mg/L)	(mg/L)
	0.109	6.27	1.55	7.78
	0.217	5.52	1.41	7.78
	0.326	4.86	1.28	7.78
	0.434	4.28	1.16	7.78
	0.543	3.77	1.05	7.78
	0.651	3.32	0.95	7.78
	0.760	2.93	0.86	7.78
	0.868	2.58	0.78	7.78
	0.977	2.27	0.71	7.78
	1.085	2.00	0.65	7.78

## WQM 7.0 Effluent Limits

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>					
14	62954	Trib 62954 to Genesee River					
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)
2.100	UMA WWTF	PA0045993	0.150	CBOD5	10		
				NH3-N	2.67	5.34	
				Dissolved Oxygen			5

1A	B	C	D	E	F	G
2	<b>TRC EVALUATION</b>					
3	Input appropriate values in B4:B8 and E4:E7					
4	0.13	= Q stream (cfs)		0.5	= CV Daily	
5	0.15	= Q discharge (MGD)		0.5	= CV Hourly	
6	30	= no. samples		1	= AFC_Partial Mix Factor	
7	0.3	= Chlorine Demand of Stream		1	= CFC_Partial Mix Factor	
8	0	= Chlorine Demand of Discharge		15	= AFC_Criteria Compliance Time (min)	
9	0.5	= BAT/BPJ Value		720	= CFC_Criteria Compliance Time (min)	
	0	= % Factor of Safety (FOS)		0	=Decay Coefficient (K)	
10	Source	Reference	AFC Calculations	Reference	CFC Calculations	
11	TRC	1.3.2.iii	WLA_afc = 0.198	1.3.2.iii	WLA_cfc = 0.185	
12	PENTOXSD TRG	5.1a	LTAMULT_afc = 0.373	5.1c	LTAMULT_cfc = 0.581	
13	PENTOXSD TRG	5.1b	LTA_afc = 0.074	5.1d	LTA_cfc = 0.108	
14						
15	Source	Effluent Limit Calculations				
16	PENTOXSD TRG	5.1f	AML_MULT = 1.231			
17	PENTOXSD TRG	5.1g	AVG_MON_LIMIT (mg/l) = 0.091	AFC		
18			INST_MAX_LIMIT (mg/l) = 0.297			
	WLA_afc	$(.019/e^{-k \cdot AFC_{tc}}) + [(AFC_{Yc} \cdot Q_s \cdot 0.019 / Q_d \cdot e^{-k \cdot AFC_{tc}}) \dots + X_d + (AFC_{Yc} \cdot Q_s \cdot X_s / Q_d)] \cdot (1 - FOS / 100)$				
	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	$(.011/e^{-k \cdot CFC_{tc}}) + [(CFC_{Yc} \cdot Q_s \cdot 0.011 / Q_d \cdot e^{-k \cdot CFC_{tc}}) \dots + X_d + (CFC_{Yc} \cdot Q_s \cdot X_s / Q_d)] \cdot (1 - FOS / 100)$				
	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				