Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0035289**
Facility Type	**Non-Municipal**	APS ID	**1141437**
Major / Minor	**Minor**	Authorization ID	**1534000**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Jones Estates Glen Lake PA LLC**	Facility Name	**Glen Lake Estates MHP**
Applicant Address	2310 S Miami Boulevard Suite 234	Facility Address	1037 Barkeyville Road
	Durham, NC 27703-4900		Grove City, PA 16127
Applicant Contact	Kellen Buss	Facility Contact	Kellen Buss
Applicant Phone	(419) 357-9091	Facility Phone	(419) 357-9091
Client ID	376251	Site ID	244055
Ch 94 Load Status	Not Overloaded	Municipality	Pine Township
Connection Status		County	Mercer
Date Application Received	July 15, 2025	EPA Waived?	Yes
Date Application Accepted		If No, Reason	---

Purpose of Application: Renewal application for Individual NPDES permit for a minor sewage facility

Summary of Review

On July 15, 2025, the Department received a renewal application for Individual Permit No. PA0035289 which expired on May 31, 2025. Glen Lakes Estates Mobile Home Park is a multi-family property with 56 units. The community was built in 1998 and has been transferred twice since then. There is one outfall (Outfall 001) which discharges into Tributary 34327 to Wolf Creek (CWF).

Act 14 notifications were submitted and received.

The facility is currently using the eDMR system.

The facility was last inspected on June 17, 2025, and 1 violation was noted (Table 1).

There are 34 open violations in WMS for the subject Client ID (376251) as of August 6, 2025 (Table 1). All 34 violations are with the Clean Water Program.

Proposed changes since last permit:

- More stringent Ammonia-Nitrogen (NH3-N) limits
- More stringent Dissolved Oxygen (D.O) limit
- More stringent Total Residual Chlorine (TRC) limits
- Addition of E. Coli monitoring
- Increase in monitoring frequency from 3/week to 1/day for pH, Dissolved Oxygen, and TRC

Approve	Deny	Signatures	Date
X		Carlee Wilson Carlee Wilson / Environmental Engineering Trainee	August 7, 2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	August 28, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.0145
Latitude	41º 10' 54.78"	Longitude	-80º 2' 0.61"
Quad Name	-	Quad Code	-
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Wolf Creek (CWF)	Stream Code	34327
NHD Com ID	126219179	RMI	2.6
Drainage Area	1.24	Yield (cfs/mi^2)	0.01
Q_{7-10} Flow (cfs)	0.0114	Q_{7-10} Basis	USGS - StreamStats
Elevation (ft)	1282	Slope (ft/ft)	-
Watershed No.	20-C	Chapter 93 Class.	CWF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	-		
Source(s) of Impairment	-		
TMDL Status	-	Name	-

Background/Ambient Data		Data Source
pH (SU)	7	default
Temperature (°F)	68	default
Hardness (mg/L)	100	default
Other:	-	-

Nearest Downstream Public Water Supply Intake	Pennsylvania American Water Company – Ellwood City		
PWS Waters	Slippery Rock Creek	Flow at Intake (cfs)	53.1
PWS RMI	0.1	Distance from Outfall (mi)	27.0

Changes Since Last Permit Issuance:

Drainage Area and Q_{7-10} Flow were revised using newer StreamStats data from USGS. Elevation was revised using Google Earth.

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

Treatment Facility Name: Glen Lake Estates MHP

WQM Permit No.	Issuance Date
4398409 T-2	11/14/2023
4398409 T-1	10/24/2014
4398409	6/08/1998

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	Chlorine With Dechlorination	0.005

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0145		Not Overloaded		

Changes Since Last Permit Issuance: None

WQM Permit 4398409 T-2:

A 4,000-gallon aerated flow equalization tank with two grinder pumps, a 19,750-gallon aeration tank, alum addition for phosphorus removal, a 2,334-gallon clarifier with an inverted pyramidal hopper bottom, two 1,615-gallon dosing tanks that dose two intermittent 900 square foot (30’ x 30’) surface sand filters, liquid chlorine disinfection with a 292-gallon contact chamber, and 2,500-gallon aerated sludge holding tank.

Compliance History – DMR Data

DMR Data for Outfall 001 (from July 1, 2024, to June 30, 2025)

Parameter	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24
Flow (MGD) Average Monthly	0.0079	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.0043	0.0044	0.007
Flow (MGD) Daily Maximum	0.0085	0.009	0.008	0.0078	0.0075	0.0073	0.0075	0.0075	0.009	0.007	0.007	0.007
pH (S.U.) Instantaneous Minimum	6.12	6.15	6.35	6.23	7.05	7.05	6.92	6.85	6.91	6.49	6.78	6.78
pH (S.U.) Instantaneous Maximum	6.69	6.58	6.57	7.25	7.35	7.35	7.5	7.34	7.28	8.96	7.17	7.17
DO (mg/L) Instantaneous Minimum	4.91	6.0	5.0	5.97	5.87	6.0	6.2	4.01	6.49	6.49	6.11	6.11
TRC (mg/L) Average Monthly	0.19	0.25	0.17	0.19	0.12	0.1	0.11	0.12	0.50	0.513	0.2	0.16
TRC (mg/L) Instantaneous Maximum	0.33	0.49	0.25	0.43	0.19	0.11	0.13	0.13	0.53	0.519	0.3	0.30
CBOD5 (mg/L) Average Monthly	3.39	2.28	< 2.0	2.0	2.45	2.0	9.65	2.0	5.06	< 2	< 2.0	2.0
TSS (mg/L) Average Monthly	< 5.0	< 5.0	< 5.0	5.0	< 5.0	5.0	5.0	5.0	5.0	5.0	< 5.0	5.0
Fecal Coliform (No./100 ml) Geometric Mean	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.0	1.41	49.19	19.67	< 1.0	< 1.0	1.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.0	2.0	2420	387	< 1.0	173	1.0
Total Nitrogen (mg/L) Average Quarterly	8.61			10.2			0.40			8.092		
Ammonia (mg/L) Average Monthly	< 0.15	0.3055	< 0.15	0.325	< 0.15	0.2285	0.125	0.10	0.118	< 1.0	< 0.1	0.1
Total Phosphorus (mg/L) Average Quarterly	0.37			0.546			2.3			1.4		

Compliance History – Inspections and Violations

Effluent Violations for Outfall 001, from: August 1, 2024, To: June 30, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TRC	09/30/24	Avg Mo	0.513	mg/L	.5	mg/L

Table 1. Inspection History of Glen Lake Estates MHP

Inspected Date	*Inspection Type*	*Inspection Result*
07/11/2023	Routine/Partial Inspection	Violation(s) Noted
09/06/2023	Administrative/File Review	Violation(s) Noted
10/03/2023	Routine/Partial Inspection	No Violations Noted
08/14/2023	Routine/Partial Inspection	No Violations Noted
07/22/2024	Compliance Evaluation	Violation(s) Noted
06/27/2025	Administrative/File Review	Violation(s) Noted
12/28/2023	Administrative/File Review	Violation(s) Noted
07/11/2023	Routine/Partial Inspection	Violation(s) Noted
11/16/2023	Routine/Partial Inspection	No Violations Noted
07/26/2023	Routine/Partial Inspection	No Violations Noted
07/18/2023	Compliance Evaluation	Violation(s) Noted
08/30/2021	Compliance Evaluation	No Violations Noted
10/24/2022	Routine/Partial Inspection	No Violations Noted

Table 2. Open Violations for the Subject Client ID (376251)

Inspection Program	*Violation Date*	*Violation*
WPC NPDES	07/18/2023	NPDES - Failure to monitor pollutants as required by the NPDES permit
WPC NPDES	07/18/2023	NPDES - Failure to collect representative samples
WPC NPDES	07/18/2023	NPDES - Failure to monitor pollutants as required by the NPDES permit
WPC NPDES	07/18/2023	NPDES - Failure to monitor pollutants as required by the NPDES permit
WPC NPDES	07/18/2023	NPDES - Failure to utilize approved analytical methods
WPC NPDES	07/18/2023	NPDES - Failure to utilize approved analytical methods
WPC NPDES	07/18/2023	NPDES - Failure to utilize approved analytical methods
WPC NPDES	07/18/2023	NPDES - Failure to utilize approved analytical methods
WPC NPDES	07/18/2023	NPDES - Failure to utilize approved analytical methods
WPC NPDES	07/18/2023	NPDES - Failure to provide information or records required by the permit or otherwise needed to determine compliance
WPC NPDES	07/18/2023	NPDES - Failure to properly document monitoring activities and results
WPC NPDES	07/18/2023	NPDES - Failure to properly document monitoring activities and results
WPC NPDES	07/18/2023	NPDES - Failure to maintain records for at least 3 years
WPC NPDES	07/18/2023	Biosolids - Permittee violated the record keeping requirements
WPC NPDES	07/18/2023	NPDES - Failure to provide access to permittee's facility or records
WPC NPDES	07/18/2023	NPDES - Failure to properly document monitoring activities and results
WPC NPDES	07/18/2023	NPDES - Failure to properly document monitoring activities and results
WPC NPDES	07/18/2023	NPDES - Failure to submit monitoring report(s) or properly complete monitoring reports
WPC NPDES	07/18/2023	NPDES - Failure to submit monitoring report(s) or properly complete monitoring reports
WPC NPDES	07/18/2023	CSL - Failure to comply with terms and conditions of a WQM permit
WPC NPDES	07/18/2023	CSL - Failure to comply with terms and conditions of a WQM permit
WPC NPDES	07/18/2023	Operator Certification - Owner failed to comply with the Act or Chapter 302 regulations
WPC NPDES	07/18/2023	Operator Certification - Operator failed to comply with the Act or Chapter 302 regulations
WPC NPDES	07/22/2024	NPDES - Failure to utilize approved analytical methods
WPC NPDES	07/22/2024	NPDES - Failure to utilize an accredited environmental laboratory for testing or analysis of environmental samples
WPC NPDES	07/22/2024	NPDES - Failure to utilize approved analytical methods
WPC NPDES	07/22/2024	NPDES - Failure to utilize approved analytical methods
WPC NPDES	07/22/2024	NPDES - Failure to provide information or records required by the permit or otherwise needed to determine compliance
WPC NPDES	07/22/2024	NPDES - Failure to properly document monitoring activities and results
WPC NPDES	07/22/2024	NPDES - Failure to properly document monitoring activities and results
WPC NPDES	07/22/2024	NPDES - Failure to properly document monitoring activities and results
WPC NPDES	07/22/2024	NPDES - Failure to properly document monitoring activities and results
WPC NPDES	07/22/2024	NPDES - Failure to submit monitoring report(s) or properly complete monitoring reports
WPC NPDES	07/22/2024	Operator Certification - Owner failed to comply with the Act or Chapter 302 regulations

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .0145
Latitude 41º 10' 55.00" **Longitude** -80º 2' 1.00"
Wastewater Description: Sewage Effluent

1. Technology-Based Limitations

Table 3. Minimum Technology and BPJ Standards

Pollutant	Limit (mg/l)	SBC
$CBOD_5$	25	Average Monthly
	40	Average Weekly
Total Suspended Solids	30	Average Monthly
	45	Average Weekly
pH	6.0 – 9.0 S.U.	Min – Max
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX
Total Residual Chlorine (TRC)	0.5	Average Monthly
E. Coli	Monitor	IMAX
Total Phosphorus	Report	Average Monthly
Total Nitrogen	Report	Average Monthly

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.

The current permit has sampling frequencies for pH, DO, and TRC as 3/week. However, as stated in Table 6-3 of the Department's "*Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits*" document (362-0400-001) the minimum monitoring frequencies for these parameters should be 1/day. It was acknowledged in the previous permit renewal that these sampling frequencies would increase with the next renewal - "Per current DEP policy, the monitoring frequency for TRC, pH, and Dissolved Oxygen can be set as 3/week, with the understanding that the testing frequency for TRC, pH, and Dissolved Oxygen is proposed to be collected at a frequency of 1/day in the next NPDES Permit renewal."

Total Residual Chlorine

Using the Department's Total Residual Chlorine (TRC) Spreadsheet, more stringent limits for TRC should be established in the permit (Attachment 5). Since the permittee does not demonstrate its ability to comply with these new limits at least 75% of the time, a compliance schedule has been implemented into the permit with a three-year timeline (SOP No. BCW-PMT-002).

2. Water Quality-Based Limitations

Table 4. WQM 7.0 Model Results

Parameter	Limit (mg/l)	SBC
CBOD5	25	Average Monthly
NH3-N	2.64	Average Monthly
	5.28	IMAX
Dissolved Oxygen	5.0	Daily Minimum

The Department's Toxics Management Spreadsheet was not used for this case since no sampling other than sewage-related parameters was performed for this facility with the renewal application. The above parameters were evaluated using water quality modeling (Attachment 6). This model is used to determine and/or establish WQBELs to protect water quality. In this evaluation, the model provided the above limits for CBOD5, Ammonia-Nitrogen and Dissolved Oxygen. More stringent limits than the current permit limits (Table 5) are suggested to be established for D.O. and NH3-N. The permit's writer manual states that for conventional pollutants with values between 1.0-10.0, will be rounded down to the nearest 0.5. Therefore, the Ammonia-Nitrogen limits for May 1- Oct 31 will be 2.5 mg/l (average monthly), and 5.0 mg/l (instantaneous maximum). Since the model outputs are for summer months, to find limits for Ammonia-Nitrogen during Nov 1-Apr 30 a seasonal multiplier of 3 is applied. According to historic DMR data, the permittee has demonstrated its ability to comply with the proposed limits for both D.O. and NH3-N, therefore, no compliance schedules will be implemented.

Anti-Backsliding

Table 5. Effluent Limitations in the Current Permit for Outfall 001

Parameters	Minimum	Average Monthly	Maximum	Instant. Maximum	Minimum Measurement Frequency
Flow (MGD)	XXX	Report	XXX	XXX	1/week
pH (S.U.)	6.0 Inst Min	XXX	XXX	9.0	3/week
DO	4.0 Inst Min	XXX	XXX	XXX	3/week
TRC	XXX	0.5	XXX	1.2	3/week
CBOD5	XXX	25.0	XXX	50	2/month
TSS	XXX	30.0	XXX	60	2/month
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	2000 Geo Mean	XXX	10000	2/month
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	200 Geo Mean	XXX	10000	2/month
Total Nitrogen	XXX	Report Avg Qrtly	XXX	XXX	1/quarter
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	25.0	XXX	50	2/month
Ammonia-Nitrogen May 1 - Oct 31	XXX	10.0	XXX	20	2/month
Total Phosphorus	XXX	Report Avg Qrtly	XXX	XXX	1/quarter

Comments: More stringent limits and monitoring frequencies are proposed for the items highlighted above. All other permit limitations, monitoring, requirements, and conditions will be retained into 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" (386-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through End of Interim Period 1.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
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	0.5	XXX	1.2	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30.0	XXX	60	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	10000	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	7.5	XXX	15	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	2.5	XXX	5	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite
E. Coli	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" (386-0400-001), SOPs and/or BPJ.

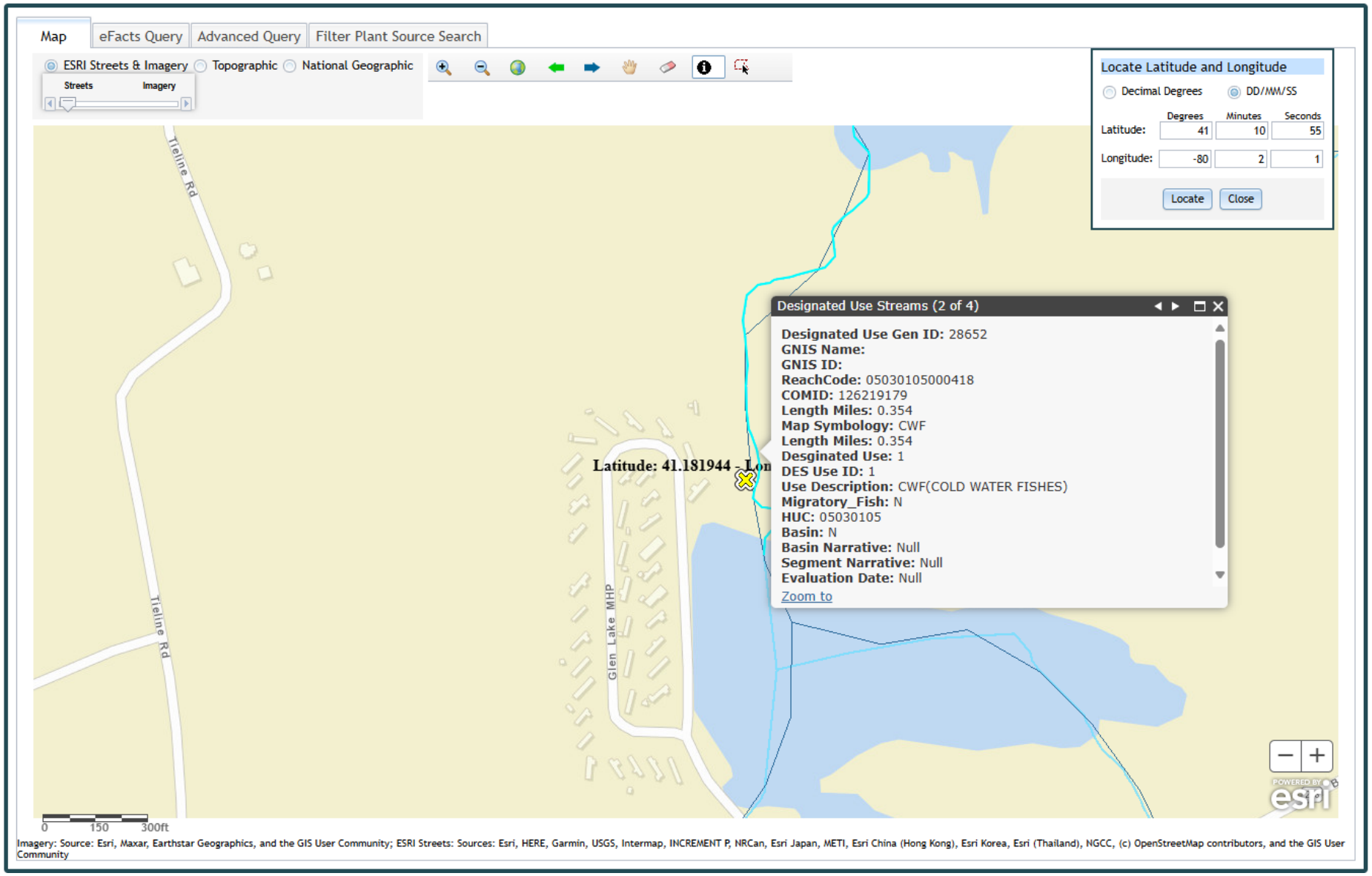
Outfall 001, Effective Period: End of Interim Period 1 through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report Inst Min	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
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	0.1	XXX	0.2	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30.0	XXX	60	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	10000	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	7.5	XXX	15	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	2.5	XXX	5	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite
E. Coli	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab

Compliance Sampling Location: Outfall 001 – after disinfection

Tools and References Used to Develop Permit	
☒	WQM 7.0 for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	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.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	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.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☐	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.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	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.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:

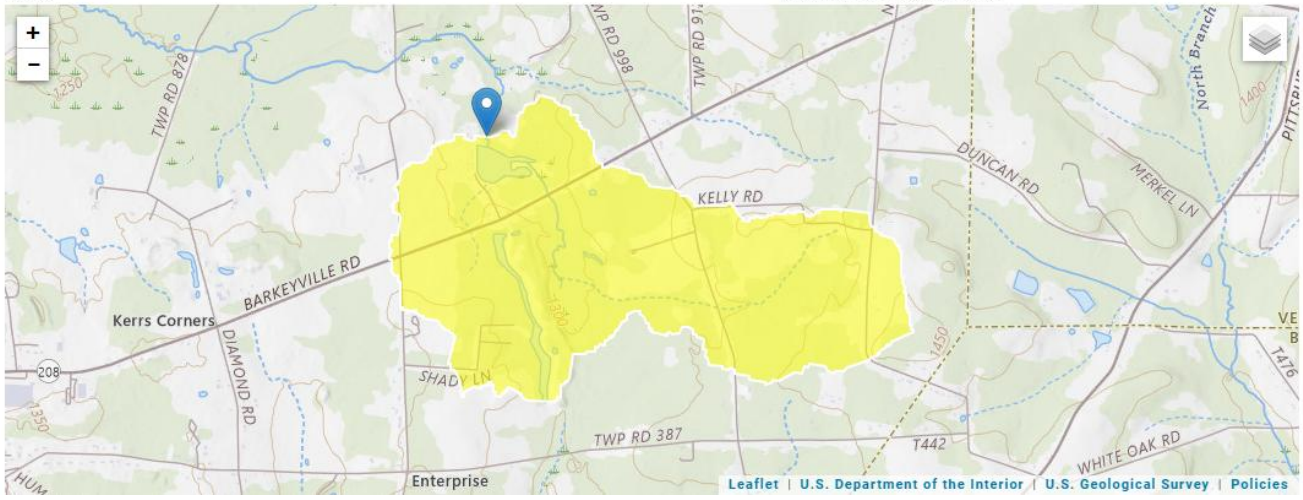
Attachment 1
eMapPA – Receiving Stream Designated Use



Attachment 2
USGS (StreamStats) – Outfall 001 Drainage Details

StreamStats Report

Region ID:	PA
Workspace ID:	PA20250806174455814000
Clicked Point (Latitude, Longitude):	41.18185, -80.03347
Time:	2025-08-06 13:45:18 -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	1.24	square miles	2.26	1400
ELEV	Mean Basin Elevation	1342	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	0.0394	ft^3/s
30 Day 2 Year Low Flow	0.0757	ft^3/s
7 Day 10 Year Low Flow	0.0114	ft^3/s
30 Day 10 Year Low Flow	0.0243	ft^3/s
90 Day 10 Year Low Flow	0.0504	ft^3/s

Low-Flow Statistics Citations

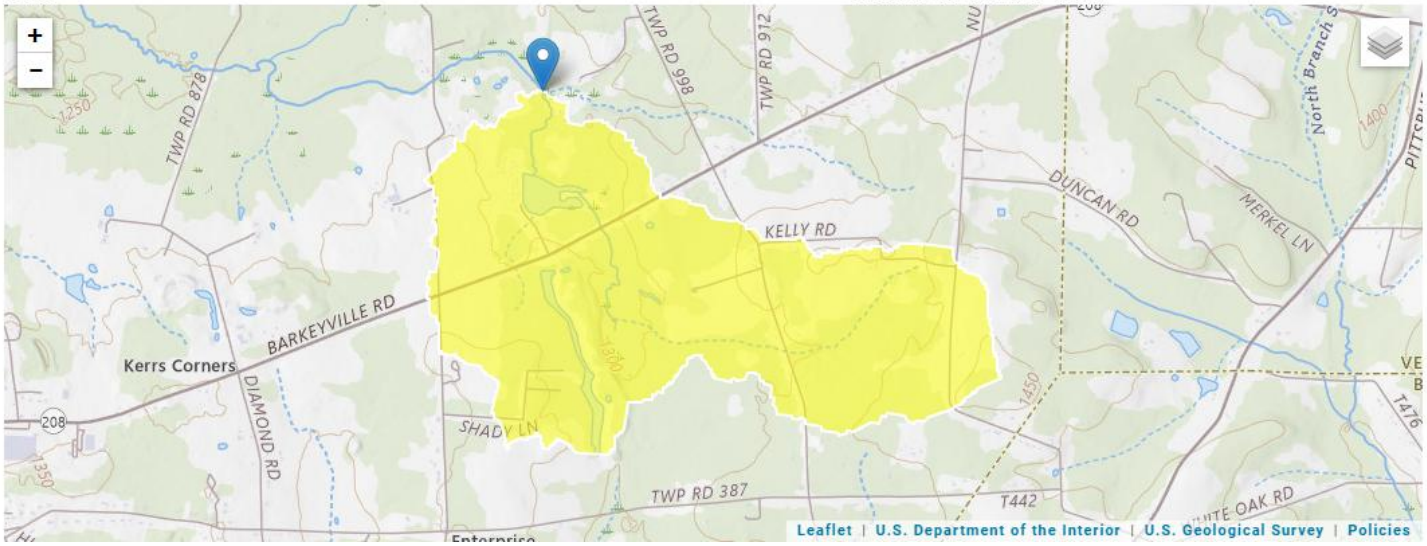
Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p.

Attachment 3

USGS (StreamStats) – Endpoint Drainage Details

StreamStats Report

Region ID:	PA
Workspace ID:	PA20250806175406729000
Clicked Point (Latitude, Longitude):	41.18532, -80.03289
Time:	2025-08-06 13:54:27 -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	1.32	square miles	2.26	1400
ELEV	Mean Basin Elevation	1339	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	0.0422	ft^3/s
30 Day 2 Year Low Flow	0.0809	ft^3/s
7 Day 10 Year Low Flow	0.0123	ft^3/s
30 Day 10 Year Low Flow	0.0261	ft^3/s
90 Day 10 Year Low Flow	0.0539	ft^3/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
Google Earth – Aerial Site View

Attachment 5
TRC Spreadsheet Results

TRC EVALUATION

0.0114	= Q stream (cfs)	0.5	= CV Daily
0.0145	= 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)
	= %Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations		Reference	CFC Calculations	
TRC	1.3.2.iii	WLA afc =	0.181	1.3.2.iii	WLA cfc =	0.169
PENTOXSD TRG	5.1a	LTAMULT afc =	0.373	5.1c	LTAMULT cfc =	0.581
PENTOXSD TRG	5.1b	LTA_afc=	0.067	5.1d	LTA_cfc =	0.098

Source		Effluent Limit Calculations		
PENTOXSD TRG	5.1f	AML MULT =	1.720	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) =	0.116	AFC
		INST MAX LIMIT (mg/l) =	0.272	

WLA afc	**(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...**
	...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	**(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...**
	...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	**1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)**

Attachment 6
WQM 7.0 Model

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	34327	Trib 34327 to Wolf Creek	**2.600**	1282.00	1.24	0.00000	0.00	☑

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
Q7-10	0.100	0.00	0.01	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
Glen Lakes MHP	PA0035289	0.0145	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	4.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
20C	34327	Trib 34327 to Wolf Creek

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
2.600	0.01	0.00	0.01	.0224	0.00246	.303	3.94	13	0.03	2.155	23.32	7.00
Q1-10 Flow												
2.600	0.01	0.00	0.01	.0224	0.00246	NA	NA	NA	0.03	2.316	23.77	7.00
Q30-10 Flow												
2.600	0.02	0.00	0.02	.0224	0.00246	NA	NA	NA	0.03	2.021	22.96	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	6		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
20C	34327	Trib 34327 to Wolf Creek

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
2.600	Glen Lakes MHP	12.26	16.25	12.26	16.25	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
2.600	Glen Lakes MHP	1.56	2.64	1.56	2.64	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
2.60	Glen Lakes MHP	25	25	2.64	2.64	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
20C	34327	Trib 34327 to Wolf Creek

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
2.600	0.015	23.315	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
3.938	0.303	13.004	0.028
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
17.25	0.859	1.75	0.903
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.093	19.663	Owens	6
Reach Travel Time (days)			
2.155			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.215	13.91	1.44	7.18
0.431	11.21	1.18	7.46
0.646	9.04	0.98	7.68
0.862	7.29	0.80	7.76
1.077	5.87	0.66	7.76
1.293	4.74	0.54	7.76
1.508	3.82	0.45	7.76
1.724	3.08	0.37	7.76
1.939	2.48	0.30	7.76
2.155	2.00	0.25	7.76

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
20C	34327	Trib 34327 to Wolf Creek

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)
2.600	Glen Lakes MHP	PA0035289	0.014	CBOD5	25		
				NH3-N	2.64	5.28	
				Dissolved Oxygen			5