pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0085278**
Facility Type	**Non-Municipal**	APS ID	**21253**
Major / Minor	**Minor**	Authorization ID	**1446052**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Deerwood Community HOA**	Facility Name	**Deerwood Community STP**
Applicant Address	11375 Lafayette Road	Facility Address	Corner & Shimpstown Rds
	Mercersburg, PA 17236-9772		Mercersburg, PA 17236
Applicant Contact	Nick Hodges	Facility Contact	Nick Hodges
Applicant Phone	(717) 328-5815	Facility Phone	(717) 328-5815
Client ID	44578	Site ID	640
Ch 94 Load Status	Not Overloaded	Municipality	Montgomery Township
Connection Status	No Limitations	County	Franklin
Date Application Received	July 3, 2023	EPA Waived?	Yes
Date Application Accepted	July 10, 2023	If No, Reason	

Purpose of Application: Part II Amendment for STP Design Change.

Summary of Review

Deerwood Community HOA has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its NPDES permit. The permit was last reissued on December 20, 2018 and became effective on January 1, 2019. The permit expired on December 31, 2023.

Based on the review, it is recommended that the permit be drafted.

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		*Jinsu Kim* Jinsu Kim / Environmental Engineering Specialist	May 22, 2024
X		Maria D. Bebenek for Daniel W. Martin, P.E. / Environmental Engineer Manager	May 24, 2024
X		Maria D. Bebenek Maria D. Bebenek, P.E. / Program Manager	May 24, 2024

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.018
Latitude	39º 46' 15"	Longitude	-77º 56' 28"
Quad Name	Mercersburg	Quad Code	2022
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Licking Creek (TSF, MF)	Stream Code	59477
NHD Com ID	49480654	RMI	0.36
Drainage Area	0.35	Yield (cfs/mi^2)	0.111
Q_{7-10} Flow (cfs)	0.03885	Q_{7-10} Basis	USGS gage 01614500
Elevation (ft)	590	Slope (ft/ft)	
Watershed No.	13-C	Chapter 93 Class.	TSF, MF
Existing Use	None	Existing Use Qualifier	None
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Hagerstown, MD		
PWS Waters	Potomac River	Flow at Intake (cfs)	Unknown
PWS RMI	Unknown	Distance from Outfall (mi)	+20

Drainage Area
The discharge is to Unnamed Tributary 59477 to Licking Creek at RMI 0.36. A drainage area upstream of the point of discharge is estimated to be 0.35 sq.mi. according to USGS StreamStats available at https://streamstats.usgs.gov/ss/.

Streamflow
USGS StreamStats produced a Q7-10 flow of 0.00213 cfs. However, the estimated drainage area is below the minimum value required to be used in regression equations to calculate this Q7-10 flow value. Therefore, the calculated Q7-10 may not be entirely accurate. As a result, the nearest downstream USGS gage no. 01614500 located on the Conococheague Creek at Fairview, MD was used to calculate the Q7-10 flow as follows:

$$\text{Low Flow Yield} = Q7\text{-}10_{gage} / \text{Drainage Area}_{gage} = 55 \text{ cfs} / 494 \text{ sq.mi.} = 0.111 \text{ cfs/sq.mi.}$$
$$Q7\text{-}10_{site} = \text{Low Flow Yield} * \text{Drainage Area}_{site} = 0.111 \text{ cfs/sq.mi.} * 0.35 \text{ sq.mi.} = 0.03885 \text{ cfs}$$
$$Q1\text{-}10/Q7\text{-}10 = 48.1 \text{ cfs} / 55 \text{ cfs} = 0.87:1$$
$$Q30\text{-}10/Q7\text{-}10 = 65.3 \text{ cfs} / 55 \text{ cfs} = 1.19:1$$

Unnamed Tributary to Licking Creek
The 1993 fact sheet explained that the stream is perennial above the point of discharge and is a losing stream in the near area as DEP biologist pointed out that a diverse aquatic life community is found but the 1993 site visit also indicated a dry stream at the point of discharge. Under 25 Pa Code §93.9z, Licking Creek, a tributary of West Branch Conococheague Creek, is designated as trout stocking and migratory fishes. No special protection water(s) is therefore impacted by this discharge. DEP's eMapPa provides that the receiving stream or its main stem is not a Class A Wild Trout Fishery stream; therefore no Class A Wild Trout Fishery is impacted by this discharge. DEP's 2024 integrated water quality report indicates that the discharge is located in a stream segment listed as attaining use(s).

Public Water Supply Intake
The nearest downstream public water supply intake is the Hagerstown water supply near Hagerstown, MD on the Potomac River. Given the distance, the discharge is not expected to impact the water supply.

Treatment Facility Summary				
Treatment Facility Name: Deerwood Community STP				
WQM Permit No.	**Issuance Date**			
2893404	1993, 2005, 2006			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Tertiary	Extended Aeration	Sodium Hypochlorite	0.018
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.018	35	Not Overloaded	Sludge Holding	Other WWTP

Deerwood Community STP utilizes an extended aeration activated sludge treatment process consisting of screening, equalization tank, aeration tanks (4), clarifier, filter including filter cells (2), mud well, and clear well, chlorination, post aeration and outfall structure. The facility is designed for 0.018 MGD, currently serving only 10 homes. In 2006, the permittee proposed an upgrade/expansion of the treatment plant to accommodate flows up to 0.395 MGD by utilizing Modified Ludzack-Ettinger activated sludge process (MLE). The WQM permit for this project was issued in 2006. The fact sheet prepared during the last permit renewal indicates that the expansion plant has not constructed, and the permittee was working with other developers and construction could take off; entirely dependent on economy. It is still unclear as to when the plant will be upgraded/expanded. Therefore, the requirements for the upcoming permit renewal will still be developed based on the existing capacity of 0.018 MGD. The proposed 0.395 MGD expansion plant will consist of comminutor, bar screen, 88,000-gallon aerated equalization tank, 52,348-gallon anoxic tanks (2; 1 per train), 40,957-gallon MLE process units (2, 1 per train), UV disinfection, 108,086-gallon sludge holding tank.

Currently, sodium hypochlorite is used for disinfection. A sludge holding tank is available for sludge treatment. Sludge is then hauled off site via a local septage hauler to another WWTP for ultimate disposal.

Compliance History	
Summary of DMRs:	A summary of past 12-month DMR is presented on the next page.
Summary of Inspections:	December 19, 2023 – DEP conducted a follow-up inspection on a few permit violations regarding record keeping. No issues were fond at the time of inspection. April 20, 2023 – DEP conducted a routine inspection and noted that the facility has failed to keep O&M records which are considered permit violations.
Other Comments:	DEP's database shows that there was one (1) permit violation occurred since the last permit reissuance that is associated with late DMR submission (March 2022). DEP's database also shows that there is no open violation associated with this permittee or facility.

Effluent Data

DMR Data for Outfall 001 (from April 1, 2023 to March 31, 2024)

Parameter	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23
Flow (MGD) Average Monthly	0.0015	0.0011	0.0011	0.0008	0.0009	0.0011	0.0015	0.0014	0.0014	0.0012	0.0008	0.0007
Flow (MGD) Daily Maximum	0.0028	0.0020	0.0025	0.0014	0.0015	0.0022	0.0028	0.0032	0.0028	0.0021	0.0013	0.0015
pH (S.U.) Daily Minimum	6.9	6.6	6.8	6.9	6.9	6.5	6.4	6.3	6.1	6.4	6.6	6.3
pH (S.U.) Daily Maximum	7.4	7.4	7.3	7.4	7.4	7.2	7.0	6.7	7.2	6.7	6.9	7.4
DO (mg/L) Daily Minimum	8.2	11.2	10.8	9.2	8.8	6.2	6.1	6.0	5.8	5.8	7.4	6.7
TRC (mg/L) Average Monthly	0.08	0.09	0.11	0.13	0.13	0.13	0.13	0.12	0.14	0.13	0.14	0.13
TRC (mg/L) Instantaneous Maximum	0.20	0.20	0.27	0.21	0.22	0.27	0.33	0.23	0.26	0.27	0.21	0.22
CBOD5 (mg/L) Average Monthly	3.2	2.4	2.0	2.0	2.0	2.2	3.5	2.0	2.0	2.0	3.6	2.9
TSS (mg/L) Average Monthly	1.3	1.3	1.3	2.5	1.5	4.3	9.0	1.3	6.5	1.8	1.8	1.0
Fecal Coliform (No./100 ml) Geometric Mean	3.7	38.8	4.5	2.5	10.4	1	6.5	2.2	5.1	1	2.5	2.6
Fecal Coliform (No./100 ml) Instantaneous Maximum	14	43	20	6	12	1	42	5	26	1	6	7
Nitrate-Nitrite (lbs/day) Annual Average				0.19								
Nitrate-Nitrite (mg/L) Annual Average				23.0								
Total Nitrogen (lbs/day) Annual Average				0.20								
Total Nitrogen (mg/L) Annual Average				23.5								
Ammonia (mg/L) Average Monthly	0.50	0.50	0.50	0.50	0.50	0.71	0.50	0.50	0.50	0.50	0.50	0.50
TKN (lbs/day) Annual Average				0.004								

Parameter	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23
TKN (mg/L) Annual Average				0.50								
Total Phosphorus (lbs/day) Annual Average				1.5								
Total Phosphorus (mg/L) Annual Average				4.7								

Existing Effluent Limits and Monitoring Requirements

The table below summarizes effluent limits and monitoring requirements specified in the existing permit.

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	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.21	XXX	0.69	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
Nitrate-Nitrite as N	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Total Nitrogen	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	Calculation
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	9.0	XXX	18	2/month	8-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	3.0	XXX	6	2/month	8-Hr Composite
Total Kjeldahl Nitrogen	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Total Phosphorus	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .395
Latitude 39º 46' 15.00" **Longitude** -77º 56' 28.00"
Wastewater Description: Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Water Quality-Based Limitations

CBOD5, NH3-N and Dissolved Oxygen (DO)
WQM 7.0 version 1.0b is a water quality model designed to assist DEP to determine appropriate permit requirements for CBOD5, NH3-N and DO. DEP's guidance no. 391-2000-007 provides the technical methods contained in WQM 7.0 for conducting wasteload allocation and for determining recommended NPDES effluent limits for point source discharges. The model was utilized and the model output indicated that existing effluent limits are still appropriate. No change is therefore recommended.

Total Residual Chlorine
Since sodium hypochlorite is used for chlorination, a reasonable potential analysis has been performed for Total Residual Chlorine. DEP's TRC_CALC worksheet indicates that the existing WQBELs are still protective of water quality. No change is therefore recommended.

Toxics
DEP's NPDES permit application for minor sewages less than 0.1 MGD does not require sampling of toxics pollutants. As a result, no reasonable potential analysis for toxics pollutants has been performed for the upcoming permit renewal.

Best Professional Judgment (BPJ) Limitations

Dissolved Oxygen
A minimum of 5.0 mg/L for DO is an existing effluent limit and will remain unchanged in the draft permit as recommended by DEP's SOP. This requirement has also been assigned to other sewage facilities in the region. 5.0 mg/L is taken directly from 25 Pa. Code § 93.7(a) and it is also determined to be appropriate according to water quality modeling.

Additional Considerations

Expansion of the treatment plant
As mentioned previously, because the expansion plant has not been constructed yet and it is unknown as to when it will be constructed, the upcoming permit renewal requirements are developed based on the 0.018 MGD. Since the WQM permit was issued and the planning was approved for the 0.395 MGD expansion, it is necessary to consider possible changes to these requirements, particularly effluent limits in case the NPDES permit is amended to reflect the increased design

capacity. As a result, another reasonable potential analysis was performed based on 0.395 MGD at the same discharge location:

Pollutants	**@0.018 MGD**	**@0.395 MGD**
CBOD5	10 mg/L	10 mg/L
Summer NH3-N Avg. Mon	3.0 mg/L	1.0 mg/L*
Summer NH3-N IMAX	6.0 mg/L	2.0 mg/L**
Winter NH3-N Avg. Mon	9.0 mg/L	3.0 mg/L**
Winter NH3-N IMAX	18 mg/L	9.0 mg/L**
Total Residual Chlorine Avg. Mon	0.21 mg/L	0.018 mg/L
Total Residual Chlorine IMAX	0.69 mg/L	0.059 mg/L

*1.44 mg/L was recommended by the model but was rounded down to the nearest 0.5 in accordance with DEP's technical guidance.
**Winter limits are typically set at three times the summer limits and a multiplier of 2 is typically used to calculate IMAX. These approaches are consistent with DEP's technical guidance.

All existing TBELs associated with pH, TSS and fecal coliform would remain the same as these effluent limits are not developed based on the flow.

It is not reasonable to include effluent limits for 0.395 MGD for the upcoming permit renewal when the schedule to meet these effluent limits is unknown. Once the permittee decides to expand the plant, the NPDES permit will be amended.

The existing permit contains the following Part C conditions:

1. The effluent limitations for Outfall 001 were determined using an effluent discharge rate of 0.018 MGD. If the permittee decides to upgrade (and/or expand) the existing treatment facility, the permittee shall notify DEP at least 180 days prior to the commencement of construction to determine if the amendment of the existing WQM permit and/or NPDES permit is necessary.
2. The facility is considered an existing facility with a design flow of 0.395 MGD for determining Chesapeake Bay Tributary cap loads for Total Nitrogen and Total Phosphorus because planning was approved prior to August 29, 2005.

These conditions were developed in case the upgrade occurs. These conditions will remain unchanged in the permit.

Flow Monitoring
The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR §122.44(i)(1)(ii).

E. Coli Monitoring Requirement
DEP's SOP no. BPNPSM-PMT-033 recommends an annual routine monitoring of E. Coli for all sewage facilities that have design flow less than 0.05 MGD but greater than 0.002 MGD. An annual monitoring for E. Coli will therefore be included in the permit.

Total Phosphorus & Total Nitrogen Monitoring Requirement
DEP's SOP no. BPNPSM-PMT-033 recommends monitoring requirements for Total Phosphorus and Total Nitrogen for all sewage facilities. Therefore, a continuation of a routine monitoring for Total Phosphorus and Total Nitrogen is recommended. Given the average volume receiving at this facility (consistently less than 0.005 MGD) and compliance history, the existing annual monitoring will remain unchanged in the permit.

Monitoring Frequency and Sample Type
Unless otherwise specified throughout this fact sheet, existing monitoring frequencies and sample types will remain unchanged in the permit.

Antidegradation Requirements
All effluent limitations and monitoring requirements have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected.

Proposed Effluent Limitations and Monitoring Requirements

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

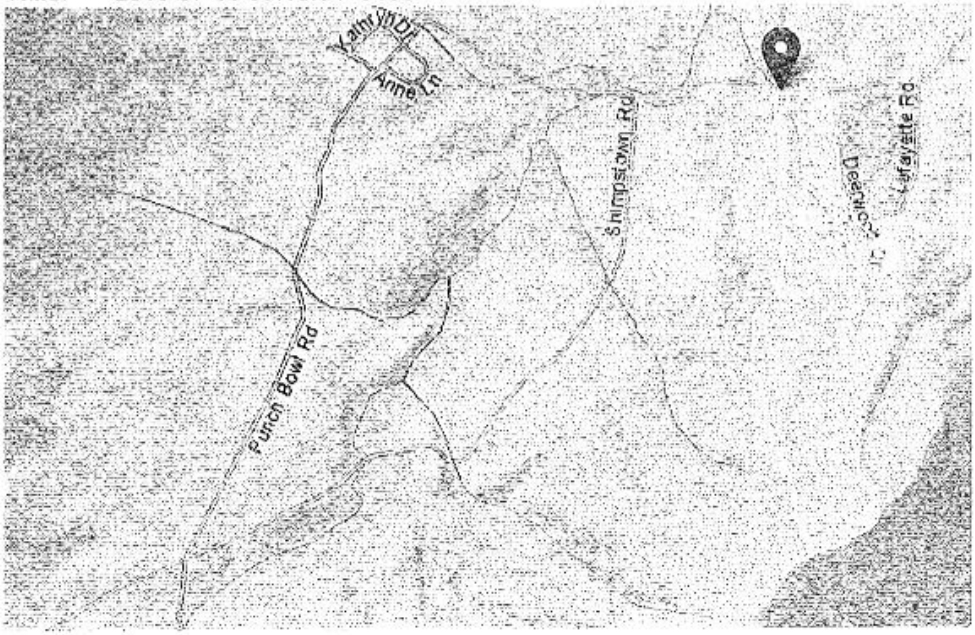
Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.21	XXX	0.69	1/day	Grab
CBOD5	XXX	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
TSS	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
Nitrate-Nitrite	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Total Nitrogen	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	Calculation
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	9.0	XXX	18	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	3.0	XXX	6	2/month	8-Hr Composite
TKN	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Total Phosphorus	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
E. Coli (no. / 100 mL)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab

Tools and References Used to Develop Permit	
☐	WQM 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:

StreamStats Report

Region ID: PA
Workspace ID: PA20180706131249199000
Clicked Point (Latitude, Longitude): 39.77098, -77.94109
Time: 2018-07-06 09:13:04 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.35	square miles
PRECIP	Mean Annual Precipitation	41	inches
STRDEN	Stream Density -- total length of streams divided by drainage area	4.24	miles per square mile
ROCKDEP	Depth to rock	3.7	feet
CARBON	Percentage of area of carbonate rock	0	percent

Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.35	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	41	inches	35	50.4
STRDEN	Stream Density	4.24	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	3.7	feet	3.32	5.65
CARBON	Percent Carbonate	0	percent	0	99

Low-Flow Statistics Disclaimers [Low Flow Region 2]

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 2]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.00795	ft^3/s
30 Day 2 Year Low Flow	0.0131	ft^3/s
7 Day 10 Year Low Flow	0.00213	ft^3/s
30 Day 10 Year Low Flow	0.00363	ft^3/s
90 Day 10 Year Low Flow	0.00739	ft^3/s

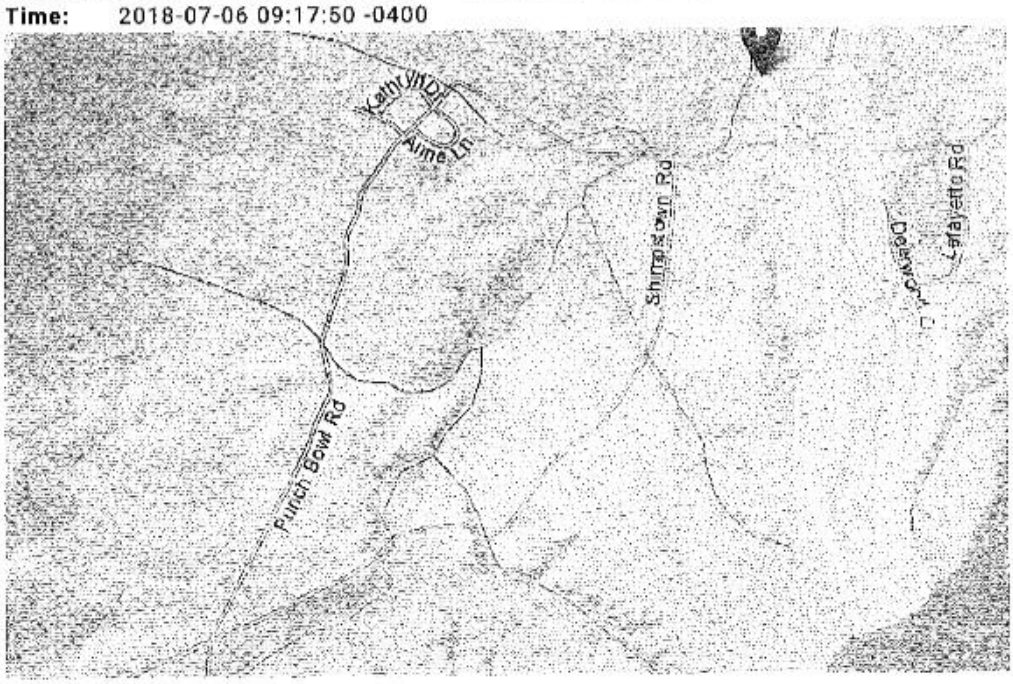
Low-Flow Statistics Citations

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. (http://pubs.usgs.gov/sir/2006/5130/)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and

StreamStats Report

Region ID: PA
Workspace ID: PA20180706131735379000
Clicked Point (Latitude, Longitude): 39.77411, -77.94450
Time: 2018-07-06 09:17:50 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.41	square miles
PRECIP	Mean Annual Precipitation	41	inches
STRDEN	Stream Density -- total length of streams divided by drainage area	4.34	miles per square mile
ROCKDEP	Depth to rock	3.7	feet
CARBON	Percentage of area of carbonate rock	0	percent

Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.41	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	41	inches	35	50.4
STRDEN	Stream Density	4.34	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	3.7	feet	3.32	5.65
CARBON	Percent Carbonate	0	percent	0	99

Low-Flow Statistics Disclaimers [Low Flow Region 2]

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 2]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.00927	ft^3/s
30 Day 2 Year Low Flow	0.0153	ft^3/s
7 Day 10 Year Low Flow	0.0025	ft^3/s
30 Day 10 Year Low Flow	0.00425	ft^3/s
90 Day 10 Year Low Flow	0.00862	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. (http://pubs.usgs.gov/sir/2006/5130/)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and

@ 0.018 MGD

TRC_CALC

1A	B	C	D	E	F	G
2	**TRC EVALUATION**					
3	Input appropriate values in B4:B8 and E4:E7					
4	0.038885	= Q stream (cfs)		0.6	= CV Daily	
5	0.018	= 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)			=Decay Coefficient (K)	
10	Source	Reference	AFC Calculations		Reference	CFC Calculations
11	TRC	1.3.2.iii	WLA afc = 0.464		1.3.2.iii	WLA cfc = 0.445
12	PENTOXSD TRG	5.1a	LTAMULT afc = 0.373		5.1c	LTAMULT cfc = 0.581
13	PENTOXSD TRG	5.1b	LTA_afc= 0.173		5.1d	LTA_cfc = 0.259
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) = 0.213		AFC	
18			INST MAX LIMIT (mg/l) = 0.697			

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)

@ 0.398 MGD

TRC_CALC

1A	B	C	D	E	F	G
2	**TRC EVALUATION**					
3	Input appropriate values in B4:B8 and E4:E7					
4	0.038885	= Q stream (cfs)		0.5	= CV Daily	
5	0.395	= 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)			=Decay Coefficient (K)	
10	Source	Reference	AFC Calculations		Reference	CFC Calculations
11	TRC	1.3.2.iii	WLA afc = 0.039		1.3.2.iii	WLA cfc = 0.031
12	PENTOXSD TRG	5.1a	LTAMULT afc = 0.373		5.1c	LTAMULT cfc = 0.581
13	PENTOXSD TRG	5.1b	LTA_afc= 0.015		5.1d	LTA_cfc = 0.018
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) = 0.018		AFC	
18			INST MAX LIMIT (mg/l) = 0.059			

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)

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WQM @ 0.018 MGD

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
13C	59477	Trib 59477 to Licking Creek	0.360	590.00	0.35	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	0.111	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Deerwood STP	PA0085278	0.0180	0.0180	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	10.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	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
13C	59477	Trib 59477 to Licking Creek	**0.000**	556.00	0.41	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	0.111	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		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 D.O.Simulation

SWP Basin	Stream Code	Stream Name
13C	59477	Trib 59477 to Licking Creek

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.360	0.018	25.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
3.102	0.333	9.321	0.065
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
5.34	1.081	1.25	1.029
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.889	29.827	Owens	5
Reach Travel Time (days)			
0.341			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.034	5.10	1.21	7.49
0.068	4.87	1.17	7.54
0.102	4.65	1.13	7.54
0.136	4.44	1.09	7.54
0.170	4.24	1.05	7.54
0.204	4.04	1.02	7.54
0.238	3.86	0.98	7.54
0.272	3.69	0.95	7.54
0.307	3.52	0.91	7.54
0.341	3.36	0.88	7.54

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
13C	59477	Trib 59477 to Licking 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												
0.360	0.04	0.00	0.04	.0278	0.01789	.333	3.1	9.32	0.06	0.341	25.00	7.00
Q1-10 Flow												
0.360	0.03	0.00	0.03	.0278	0.01789	NA	NA	NA	0.06	0.356	25.00	7.00
Q30-10 Flow												
0.360	0.05	0.00	0.05	.0278	0.01789	NA	NA	NA	0.07	0.321	25.00	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	0.87	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.19	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
13C	59477	Trib 59477 to Licking 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
0.360	Deerwood STP	11.07	6	11.07	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
0.360	Deerwood STP	1.37	3	1.37	3	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)		
0.36	Deerwood STP	10	10	3	3	5	5	0	0

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
13C	59477	Trib 59477 to Licking 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)
0.360	Deerwood STP	PA0085278	0.018	CBOD5	10		
				NH3-N	3	6	
				Dissolved Oxygen			5

WQM @0.395 MGD

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
13C	59477	Trib 59477 to Licking Creek	**0.360**	590.00	0.35	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	0.111	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Deerwood STP	PA0085278	0.3950	0.0180	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	10.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	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
13C	59477	Trib 59477 to Licking Creek	**0.000**	556.00	0.41	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	0.111	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		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 D.O.Simulation

SWP Basin	Stream Code	Stream Name
13C	59477	Trib 59477 to Licking Creek

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.360	0.395	25.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
5.670	0.496	11.433	0.231
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
9.52	1.479	1.38	1.029
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.194	33.514	Owens	5
Reach Travel Time (days)			
0.095			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.010	9.35	1.37	5.80
0.019	9.19	1.36	6.24
0.029	9.03	1.34	6.56
0.038	8.87	1.33	6.80
0.048	8.71	1.32	6.98
0.057	8.56	1.30	7.12
0.067	8.41	1.29	7.22
0.076	8.26	1.28	7.30
0.086	8.12	1.27	7.36
0.095	7.98	1.25	7.40

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
13C	59477	Trib 59477 to Licking 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												
0.360	0.04	0.00	0.04	.6111	0.01789	.496	5.67	11.43	0.23	0.095	25.00	7.00
Q1-10 Flow												
0.360	0.03	0.00	0.03	.6111	0.01789	NA	NA	NA	0.23	0.096	25.00	7.00
Q30-10 Flow												
0.360	0.05	0.00	0.05	.6111	0.01789	NA	NA	NA	0.23	0.095	25.00	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	0.87	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.19	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
13C	59477	Trib 59477 to Licking 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
0.360	Deerwood STP	11.07	6	11.07	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
0.360	Deerwood STP	1.37	1.47	1.37	1.47	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)		
0.36	Deerwood STP	10	10	1.47	1.47	5	5	0	0

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
13C	59477	Trib 59477 to Licking 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)
0.360	Deerwood STP	PA0085278	0.395	CBOD5	10		
				NH3-N	1.47	2.94	
				Dissolved Oxygen			5