pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0253961**
Facility Type	**Non-Municipal**	APS ID	**1056624**
Major / Minor	**Minor**	Authorization ID	**1384871**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Mahadevji, LLC**	Facility Name	**Holiday Inn Express & Suites Donegal WWTP**
Applicant Address	PO Box 287	Facility Address	3695 Route 31 East
	Donegal, PA 15628-0287		Donegal, PA 15628
Applicant Contact	Mayankkumar Petel	Facility Contact	Same as Applicant
Applicant Phone	(717) 330-5722	Facility Phone	Same as Applicant
Client ID	363938	Site ID	696465
Ch 94 Load Status	Not Overloaded	Municipality	Donegal Township
Connection Status	No Limitations	County	Westmoreland
Date Application Received	February 9, 2022	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Application for a renewal of an NPDES permit for discharge of treated Sewage

Summary of Review

The applicant has applied for a renewal of an existing NPDES Permit No. PA0253961, which was previously issued by the Department on August 30, 2017. That permit expired on August 31, 2022. Please note that the NPDES & WQM Permits were recently transferred from L & T Enterprises, LLC to Mahadevji, LLC on October 21, 2021.

WQM Permit No. 6509404, issued on December 09, 2009, authorized the construction of the plant to treat an annual average design flow of 0.02 MGD. The existing treatment process consists of Bio Wheel Package Plant and UV disinfection.

The receiving stream, Fourmile Run, is currently classified as a TSF and is located in State Watershed No. 18-C.

The applicant has complied with Act 14 Notifications and no comments were received.

Sludge use and disposal description and location(s): Sludge is hauled away by CWM Environmental and disposed of at the AVJSA WWTP, Cheswick, PA.

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*

Approve	Deny	Signatures	Date
X		William C. Mitchell, E.I.T. / Environmental Engineering Specialist	April 29, 2022
x		Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineer Manager	May 10, 2022

Summary of Review
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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.02
Latitude	40º 06' 19.33"	Longitude	-79º 22' 22.47"
Quad Name	Seven Springs	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Fourmile Run (TSF)	Stream Code	43542
NHD Com ID	125294338	RMI	16.30
Drainage Area	0.14	Yield (cfs/mi^2)	0.055
Q_{7-10} Flow (cfs)	0.0077	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1703	Slope (ft/ft)	0.06727
Watershed No.	18-C	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use	NONE	Exceptions to Criteria	NONE
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake		Latrobe Municipal Authority	
PWS Waters	Loyalhanna Creek	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: NONE

Other Comments: The discharge is to the Kiskiminetas-Conemaugh River Watersheds, which has a Final TMDL, and is impaired by sediment, metals, and pH. No WLAs have been developed, as verified in Appendix C & G of the TMDL, and this sewage discharge is not expected to contribute to the stream impairment for which abandoned mine drainage is source of such impairment. A 1/year monitoring requirement for Iron, Manganese, and Aluminum will again be imposed on this facility. Application data states that maximum concentration values for Iron, Manganese, and Aluminum is 0.04 mg/L, 0.02 mg/L, and 0.1 mg/L, which is below their criteria based concentration values.

Treatment Facility Summary

Treatment Facility Name: Holiday Inn Express & Suites STP

WQM Permit No.	Issuance Date
6509404	12/09/2009

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary with Ammonia Reduction	Rotating Biological Contactors (Bio Wheel Package Plant)	Ultraviolet	0.02

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.02		Not Overloaded	Holding Tank	Other WWTP

Changes Since Last Permit Issuance: NONE

Compliance History

Operations Compliance Check Summary Report

Facility: Mahadevji LLC Holiday Inn Express & Suites
NPDES Permit No.: PA0253961
Compliance Review Period: 4/2017 – 4/2022

Inspection Summary:

INSP ID	INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC
3118594	12/07/2020	Compliance Evaluation	PA Dept of Environmental Protection	Violation(s) Noted
2957246	11/12/2019	Compliance Evaluation	PA Dept of Environmental Protection	Violation(s) Noted
2677158	11/28/2017	Compliance Evaluation	PA Dept of Environmental Protection	Violation(s) Noted
2612693	07/06/2017	Administrative/File Review	PA Dept of Environmental Protection	Violation(s) Noted

Violation Summary:

VIOL ID	VIOLATION DATE	VIOLATION TYPE	VIOLATION TYPE DESC	RESOLVED DATE
901574	12/07/2020	92A.44	NPDES - Violation of effluent limits in Part A of permit	10/18/2021
901575	12/07/2020	92A.41(A)10A	NPDES - Failure to retain records required by the permit	10/18/2021
867777	11/12/2019	92A.44	NPDES - Violation of effluent limits in Part A of permit	11/12/2019
805063	11/28/2017	92A.61(C)	NPDES - Failure to monitor pollutants as required by the NPDES permit	01/03/2018
805064	11/28/2017	92A.44	NPDES - Violation of effluent limits in Part A of permit	01/03/2018
790948	07/06/2017	92A.62	NPDES - Failure to pay annual fee	08/01/2017

Open Violations by Client ID: No open violations for Client ID 268030

Enforcement Summary:

ENF ID	ENF TYPE	EXECUTED DATE	ENF FINALSTATUS	ENF CLOSED DATE
360581	NOV	01/03/2018	Administrative Close Out	08/30/2019
356039	NOV	07/06/2017	Comply/Closed	08/01/2017
380724	NOV	11/12/2019	Administrative Close Out	04/05/2022

DMR Violation Summary:

END	PARAMETER	STAT_BASE_CODE	PERMIT	SAMPLE	UNIT
8/31/20	pH	Minimum	6	3.8	S.U.
4/30/20	Total Suspended Solids	Average Monthly	30	35	mg/L
10/31/19	Dissolved Oxygen	Minimum	5	3.85	mg/L
9/30/19	Ammonia-Nitrogen	Average Monthly	2.5	27.4	mg/L
9/30/19	Ammonia-Nitrogen	Instantaneous Maximum	5	29.8	mg/L
9/30/19	Carbonaceous Biochemical Oxygen Demand (CBOD5)	Average Monthly	25	30	mg/L
9/30/19	Carbonaceous Biochemical Oxygen Demand (CBOD5)	Instantaneous Maximum	50	57	mg/L
9/30/19	Fecal Coliform	Geometric Mean	200	219229	No./100 ml
9/30/19	Fecal Coliform	Instantaneous Maximum	1000	24200	No./100 ml
9/30/19	Total Suspended Solids	Average Monthly	30	48	mg/L
9/30/19	Total Suspended Solids	Instantaneous Maximum	60	69	mg/L
8/31/18	pH	Minimum	6	5.3	S.U.
7/31/18	Fecal Coliform	Instantaneous Maximum	1000	2420	No./100 ml
6/30/18	Ammonia-Nitrogen	Average Monthly	2.5	13.1	mg/L
6/30/18	Ammonia-Nitrogen	Instantaneous Maximum	5	25.9	mg/L
6/30/18	Fecal Coliform	Instantaneous Maximum	1000	2420	No./100 ml
6/30/18	Fecal Coliform	Geometric Mean	200	334	No./100 ml

Compliance Status: In compliance.

Completed by: John Murphy

Completed date: 4/5/2022

Compliance History

DMR Data for Outfall 001 (from March 1, 2021 to February 28, 2022)

Parameter	FEB-22	JAN-22	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21
Flow (MGD) Average Monthly	0.0060	0.0020	0.0020	0.0060	0.005	0.0040	0.0050	0.0060	0.004	0.0040	0.0040	0.0046
pH (S.U.) Instantaneous Minimum	6.8	6.6	6.70	7.0	6.6							
pH (S.U.) Minimum						6.5	6.0	6.1	6.1	6.1	6.2	6.3
pH (S.U.) Instantaneous Maximum	7.6	7.8	7.9	8.4	7.6							
pH (S.U.) Maximum						8.1	8.3	7.9	8.3	8.3	8.2	8.5
DO (mg/L) Instantaneous Minimum	8.67	9.14	8.59	8.19	7.72							
DO (mg/L) Minimum						7.74	7.03	5.96	5.36	7.23	7.88	7.43
CBOD5 (mg/L) Average Monthly	3.0	5.0	5.0	3.0	22.00	24.0	3.0	3.0	3.0	3.0	3.0	3.0
CBOD5 (mg/L) Instantaneous Maximum	3.0	6.0	8.0	3.0	42.0	27.0	3.0	3.0	3.0	3.0	3.0	3.0
TSS (mg/L) Average Monthly	8.0	6	10.0	3.0	4.0	7.0	3.0	5.0	5.0	3.0	7.0	4.0
TSS (mg/L) Instantaneous Maximum	10.0	9	12.0	3.0	5.0	10.0	3.0	7.0	6.0	3.0	10.0	5.0
Fecal Coliform (No./100 ml) Geometric Mean	1.0	1.0	25	1.0	1.0	1.0	3.0	4	17	27	3	2
Fecal Coliform (No./100 ml) Instantaneous Maximum	1.0	1.0	614	1.0	1.0	1.0	6.0	5	20	687	6	2
UV Transmittance (%) Instantaneous Minimum	0.1	0.2	0.1	0.10	0.20							

UV Transmittance (%) Minimum						0.2	0.3	0.2	0.2	0.2	0.20	0.1
Total Nitrogen (mg/L) Daily Maximum			23.6									
Ammonia (mg/L) Average Monthly	0.20	0.18	0.20	0.13	0.16	0.22	0.21	0.03	0.19	0.11	0.14	0.10
Ammonia (mg/L) Instantaneous Maximum	0.26	0.25	0.28	0.16	0.16	0.25	0.22	0.05	0.24	0.11	0.18	0.10
Total Phosphorus (mg/L) Daily Maximum			3.23									
Total Aluminum (mg/L) Daily Maximum			< 0.10									
Total Iron (mg/L) Daily Maximum			0.03									
Total Manganese (mg/L) Daily Maximum			< 0.02									

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .02
Latitude 40º 06' 19.33" **Longitude** -79º 22' 22.47"
Wastewater Description: Sewage 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)

Comments: The proposed discharge was evaluated using WQM 7.0 to evaluate $CBOD_5$, Ammonia Nitrogen and Dissolved Oxygen parameters. The modeling results show technology based effluent limitations for $CBOD_5$ are appropriate.

Water Quality-Based Limitations

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

Parameter	Limit (mg/l)	SBC	Model
Ammonia-Nitrogen (May 1 to Oct 31)	2.3	Average Monthly	WQM 7.0 Version 1.1
Ammonia-Nitrogen (Nov 1 to Apr 30)	4.0	Average Monthly	WQM 7.0 Version 1.0
Dissolved Oxygen	6.0 (Minimum)	Average Monthly	WQM 7.0 Version 1.1

Comments: The previous permit established a colder period WQBEL for ammonia-nitrogen of 4.0 mg/L (WQM 7.0 Version 1.0), which will be re-imposed due to Anti-Backsliding. Please see the previous Fact Sheet for modeling information.

Best Professional Judgment (BPJ) Limitations

Comments: N/A

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard of water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 (l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards

or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.

The facility is not seeking to revise the previously permitted effluent limits.

Additional Considerations

Ultraviolet (UV) disinfection is used therefore Total Residual Chlorine (TRC) limits are not applicable. Routine monitoring of UV Transmittance will be at the same monitoring frequency that is used for TRC.

For pH, Dissolved Oxygen (DO) and UV Transmittance, a monitoring frequency 1/day has been imposed. In general, less frequent monitoring may be established only when the permittee demonstrates that there will be no discharge on days where monitoring is not required.

Sewage discharges will include monitoring, at a minimum, for *E. Coli*, in new and reissued permits, with a monitoring frequency of 1/year for facilities with a design flows of 0.02 – 0.05 MGD per Chapter 92.a.61.

Nutrient monitoring is required to establish the nutrient load from the wastewater treatment facility and the impacts that load may have on the quality of the receiving stream(s). A 1/year monitoring requirement for Total N & Total P has been added to the permit per Chapter 92.a.61.

Monitoring frequency for the proposed effluent limits are based upon Table 6-3, Self-Monitoring Requirements for Sewage Dischargers, from the Departments Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (362-0400-001).

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" (362-0400-001), 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	Instantaneous Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.02	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	6.0	XXX	XXX	XXX	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50.0	2/month	Grab
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	Grab
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/year	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	4.0	XXX	8.0	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	2.3	XXX	4.6	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Outfall 001, Continued (from 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	Instantaneous Minimum	Average Monthly	Maximum	Instant. Maximum		
Total Iron	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Manganese	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001

Attachment #1 – WQM 7.0 Version 1.1 – Warmer Period

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
18C	43542	FOURMILE RUN	16.300	1703.00	0.14	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	0.055	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
Holiday Inn STP	PA0253961	0.0200	0.0000	0.0000	0.000	20.00	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

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
18C	43542	FOURMILE RUN	16.010	1600.00	0.18	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	0.055	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 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
18C	43542	FOURMILE RUN

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												
16.300	0.01	0.00	0.01	.0309	0.06727	.332	1.79	5.4	0.06	0.273	21.00	7.00
Q1-10 Flow												
16.300	0.00	0.00	0.00	.0309	0.06727	NA	NA	NA	0.06	0.284	20.69	7.00
Q30-10 Flow												
16.300	0.01	0.00	0.01	.0309	0.06727	NA	NA	NA	0.07	0.262	21.26	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
18C	43542	FOURMILE RUN

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
16.300	Holiday Inn STP	15.83	18.35	15.83	18.35	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
16.300	Holiday Inn STP	1.74	2.33	1.74	2.33	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)		
16.30	Holiday Inn STP	25	25	2.33	2.33	6	6	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
18C	43542	FOURMILE RUN

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
16.300	0.020	20.996	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
1.792	0.332	5.400	0.065
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
20.42	1.464	1.86	0.756
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.447	26.741	Owens	6
Reach Travel Time (days)			
0.273			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.027	19.58	1.83	6.75
0.055	18.78	1.79	6.94
0.082	18.01	1.75	7.07
0.109	17.27	1.72	7.16
0.136	16.57	1.68	7.25
0.164	15.89	1.65	7.32
0.191	15.24	1.61	7.39
0.218	14.61	1.58	7.45
0.246	14.02	1.55	7.51
0.273	13.44	1.52	7.56

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
18C	43542	FOURMILE RUN

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)
16.300	Holiday Inn STP	PA0253961	0.020	CBOD5	25		
				NH3-N	2.33	4.66	
				Dissolved Oxygen			6

Attachment #2 – WQM 7.0 Version 1.1 – Colder Period

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
18C	43542	FOURMILE RUN	16.300	1703.00	0.14	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	0.110	0.00	0.00	0.000	0.000	0.0	0.00	0.00	5.00	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
Holiday Inn STP	PA0253961	0.0200	0.0000	0.0000	0.000	15.00	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	12.51	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18C	43542	FOURMILE RUN	16.010	1600.00	0.18	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	0.110	0.00	0.00	0.000	0.000	0.0	0.00	0.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
18C	43542	FOURMILE RUN

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												
16.300	0.02	0.00	0.02	.0309	0.06727	.343	1.88	5.46	0.07	0.246	11.68	7.00
Q1-10 Flow												
16.300	0.01	0.00	0.01	.0309	0.06727	NA	NA	NA	0.07	0.265	12.58	7.00
Q30-10 Flow												
16.300	0.02	0.00	0.02	.0309	0.06727	NA	NA	NA	0.08	0.231	10.96	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
18C	43542	FOURMILE RUN

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
16.300	Holiday Inn STP	24.1	31.78	24.1	31.78	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
16.300	Holiday Inn STP	3.38	5.67	3.38	5.67	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)		
16.30	Holiday Inn STP	25	25	5.67	5.67	3	3	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
18C	43542	FOURMILE RUN

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
16.300	0.020	11.677	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
1.876	0.343	5.464	0.072
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
17.36	1.435	3.78	0.369
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.160	26.878	Owens	6
Reach Travel Time (days)			
0.246			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.025	16.94	3.75	7.86
0.049	16.54	3.72	8.75
0.074	16.14	3.68	9.22
0.099	15.76	3.65	9.48
0.123	15.38	3.62	9.62
0.148	15.02	3.58	9.70
0.172	14.66	3.55	9.76
0.197	14.31	3.52	9.76
0.222	13.97	3.49	9.76
0.246	13.64	3.45	9.76

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
18C	43542	FOURMILE RUN

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)
16.300	Holiday Inn STP	PA0253961	0.020	CBOD5	25		
				NH3-N	5.67	11.34	
				Dissolved Oxygen			3