pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0085707**
Facility Type	**Industrial**	APS ID	**1014195**
Major / Minor	**Minor**	Authorization ID	**1310316**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Al Kawthar Poultry LLC**	Facility Name	**Al Kawthar Poultry LLC**
Applicant Address	2225 Hamilton Boulevard	Facility Address	1095 Mount Airy Road
	South Plainfield, NJ 07080		Stevens, PA 17578
Applicant Contact	Adel Saeed	Facility Contact	Zachary Saletan
Applicant Phone	(347) 237-7351	Facility Phone	(201) 600-1181
Client ID	355897	Site ID	452679
SIC Code	2015	Municipality	West Cocalico Township
SIC Description	Manufacturing - Poultry Slaughtering And Processing	County	Lancaster
Date Application Received	February 18, 2020	EPA Waived?	Yes
Date Application Accepted	April 20, 2020	If No, Reason	

Purpose of Application: NPDES Renewal/Transfer and WQM Transfer.

Summary of Review

Al Kawthar Poultry LLC has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit. The permit was issued on October 9, 2009, and became effective on November 1, 2009. The permit authorized discharge of industrial waste from the existing facility located in West Cocalico Township, Lancaster County into Unnamed Tributary to Indian Run. The existing permit expiration date was October 31, 2014. The NPDES has since expired, so this will be treated as a new permit.

This WWTP was previously owned by PA Farm Products. PA Farm Products ceased operations at the facility in 2014, and went bankrupt. AL Kawthar Poultry LLC purchased the site on January 31, 2018 with the intention of re-opening the poultry processing plant and operating the WWTP. This application also consists of the transfer applications for the NPDES and WQM permit from PA Farm Products to Al Kawthar Poultry LLC. Al Kawthar intends to process chickens only, using a halal process. The facility will operate at a lower rate, and eventually increase production to operate near the capacity of the 20,000 gallon per day (gpd) WWTP.

Changes in this renewal: A more stringent TRC limit has been added to the permit. A TN monitoring requirement has been added. Stormwater monitoring requirements have been updated.

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-

Approve	Deny	Signatures	Date
		Benjamin R. Lockwood / Environmental Engineering Specialist	May 6, 2020
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Program Manager	

Summary of Review

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.

Supplemental information is attached to this fact sheet.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.020
Latitude	40º 14' 42.23"	Longitude	76º 11' 18.74"
Quad Name		Quad Code	
Wastewater Description:	IW Process Effluent without ELG		
Receiving Waters	Unnamed Tributary to Indian Run (TSF)	Stream Code	07712
NHD Com ID	57461447	RMI	0.88
Drainage Area	0.37	Yield (cfs/mi^2)	0.12
Q_{7-10} Flow (cfs)	0.044	Q_{7-10} Basis	USGS Gage #01576500
Elevation (ft)	468	Slope (ft/ft)	
Watershed No.	7-J	Chapter 93 Class.	TSF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	N/A	Exceptions to Criteria	N/A
Assessment Status	Impaired		
Cause(s) of Impairment	Pathogens		
Source(s) of Impairment	Source Unknown		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	Lancaster City Water Bureau		
PWS Waters	Conestoga River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	25

Changes Since Last Permit Issuance: A drainage area of 0.37 mi^2 and a Q_{7-10} flow of 0.044 cubic feet per second (cfs) were determined by establishing a correlation to the yield of USGS Gage Station #01576500 on the Conestoga River. The Q_{7-10} and drainage area at the gage are 38.6 cfs and 324 mi^2, respectively. These values are taken from the USGS document "Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania". The Q_{7-10} runoff rate at the gage station was calculated as follows:

Yield = (38.6 cfs)/ 324 mi^2 = 0.12 cfs/mi^2

The drainage area at the discharge point, taken from USGS PA StreamStats = 0.37 mi^2

The Q_{7-10} at the discharge point = 0.37 mi^2 x 0.12 cfs/mi^2 = 0.044 cfs

Other Comments: The industrial wastewater treatment process consists of: Grease Trap and Bar Screen, Equalization Tanks, Aeration Tanks, Clarifier, Chlorination and Dechlorination, Final Clarifier, Post Aeration, Aerated Sludge Holding, Discharge to UNT to Indian Run via Outfall 001.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	Variable (stormwater)
Latitude	40º 14' 37"	Longitude	76º 11' 23"
Quad Name		Quad Code	
Wastewater Description:	Stormwater		
Receiving Waters	Unnamed Tributary to Indian Run (TSF)	Stream Code	07712
NHD Com ID	57461447	RMI	0.88
Drainage Area	0.37	Yield (cfs/mi^2)	0.12
Q_{7-10} Flow (cfs)	0.044	Q_{7-10} Basis	USGS Gage #01576500
Elevation (ft)	468	Slope (ft/ft)	
Watershed No.	7-J	Chapter 93 Class.	TSF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	N/A	Exceptions to Criteria	N/A
Assessment Status	Impaired		
Cause(s) of Impairment	Pathogens		
Source(s) of Impairment	Source Unknown		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	Lancaster City Water Bureau		
PWS Waters	Conestoga River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	25

Changes Since Last Permit Issuance: None

Other Comments: None

Treatment Facility Summary

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Industrial	Biological (Industrial Waste)	Extended Aeration w/ Fixed Film Media	Chlorine With Dechlorination	0.02

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.02	200	Not Overloaded	Aerobic Digestion	Other WWTP

Compliance History	
Summary of DMRs:	As the facility has not been active, there is no recent DMR data.
Summary of Inspections:	1/19/2016: An inspection was conducted by Sheena Ripple, DEP Water Quality Specialist. DEP had received a complaint that the EQ tank was near capacity and could overflow. All the WWTP units had frozen water in them. The frozen water in the EQ tank was 6 ft from the top of the tank. All the water appeared to be frozen and was not discharging. 2/29/2016: A follow up inspection was conducted by Sheena Ripple. The level in the EQ tank was low. The treatment units were covered. 8/23/2017: A Notice of Violation (NOV) was issued due to the expiration of the NPDES permit on October 31, 2014. The discharge had continued after the expiration of the permit, which is a violation. 10/27/2017: An inspection was conducted by Kevin Buss, DEP Water Quality Specialist. He noted that the factory did not appear to be operating. The EQ tank had approximately 4 ft of headspace. The treatment units were offline and contained standing water. Covers and tarps were not secured and had blown out of place. The chlorine contact tank was full to the level of the discharge pipe, but was not actively discharging. The outfall was observed, and there was a white film suspended in the stream directly in front of the outfall structure. The property around the treatment plant contained improperly stored residential and municipal waste. Labeled and unlabeled drums are uncovered without secondary treatment. 12/4/2018: An inspection was conducted by Tracy Tomtishen, DEP Water Quality Specialist. The factory and WWTP were not operating upon inspection. It was noted that the property had recently been purchased. The EQ tank was filled to capacity. Most tarps were no longer covering the tanks. Treatment units contained standing water. Drums have been relocated. 9/24/2019: An inspection was conducted by Tracy Tomtishen. Factory and WWTP units were not operating upon inspection. The treatment units appeared to be maintained. The EQ tank had approximately 8 ft of freeboard. All other onsite tanks were at a low level and contents were clean. The outfall pit was dry with no active discharge.

Other Comments: There are a number of open violations from 1/15/2014, 2/10/2014, 3/5/2014, 4/1/2014, 4/16/2014, 5/8/2014, 4/11/2017, 8/23/2017, 10/4/2018, 1/3/2019, and 1/3/2020. It will be noted in the draft cover letter that these violations need to be closed out prior to final permit issuance.

Existing Effluent Limitations and Monitoring Requirements

The tables below summarize the effluent limits and monitoring requirements implemented in the existing NPDES permit.

Outfall 001

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.38	XXX	1.2	1/day	Grab
CBOD5	4.2	8.4	XXX	25	50	62	2/month	8-Hr Composite
TSS	5.0	10	XXX	30	60	75	2/month	8-Hr Composite
Oil and Grease	Report	Report	XXX	15	XXX	30	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	XXX	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	XXX	2/month	Grab
Ammonia Nov 1 - Apr 30	1.5	3.0	XXX	9.0	18	22.5	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	0.5	1.0	XXX	3.0	6.0	7.5	2/month	8-Hr Composite
Total Phosphorus	0.3	0.7	XXX	2.0	4.0	5.0	2/month	8-Hr Composite

Compliance Sampling Location: Outfall 001

Outfall 002

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Daily Maximum	Maximum	Instant. Maximum		
$CBOD_5$	XXX	XXX	XXX	Report	XXX	XXX	1/year	Grab
COD	XXX	XXX	XXX	Report	XXX	XXX	1/year	Grab
TSS	XXX	XXX	XXX	Report	XXX	XXX	1/year	Grab
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/year	Grab
TKN	XXX	XXX	XXX	Report	XXX	XXX	1/year	Grab
Dissolved Iron	XXX	XXX	XXX	Report	XXX	XXX	1/year	Grab
Oil and Grease	XXX	XXX	XXX	Report	XXX	XXX	1/year	Grab
pH (S.U.)	XXX	XXX	XXX	Report	XXX	XXX	1/year	Grab

Compliance Sampling Location: Outfall 002

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .020
Latitude 40º 14' 42.23" **Longitude** 76º 11' 18.74"
Wastewater Description: IW Process Effluent without ELG

Technology-Based Limitations

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

Parameter	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)

pH

PA Code §§ 95.2(1) requires effluent pH limits of 6.0 to 9.0 standard units (S.U.) at all times in effluent. The permit will continue to require pH limit of 6.0 to 9.0 S.U.

Total Phosphorus

The existing permit has an average monthly Total Phosphorus (TP) limit of 2.0 mg/l. This limit will remain in the permit due to anti-backsliding requirements.

Total Dissolved Solids

Total Dissolved Solids (TDS) and its major constituents including Bromide, Chloride, and Sulfate have become statewide pollutants of concern and threats to DEP's mission to prevent violations of water quality standards. The requirement to monitor these pollutants must be considered under the criteria specified in 25 Pa. Code § 95.10 and the following January 23, 2014 DEP Central Office Directive:

For point source discharges and upon issuance or reissuance of an individual NPDES permit:

- Where the concentration of TDS in the discharge exceeds 1,000 mg/L, or the net TDS load from a discharge exceeds 20,000 lbs/day, and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for TDS, sulfate, chloride, and bromide. Discharges of 0.1 MGD or less should monitor and report for TDS, sulfate, chloride, and bromide if the concentration of TDS in the discharge exceeds 5,000 mg/L.

- Where the concentration of bromide in a discharge exceeds 1 mg/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for bromide. Discharges of 0.1 MGD or less should monitor and report for bromide if the concentration of bromide in the discharge exceeds 10 mg/L.

- Where the concentration of 1,4-dioxane (CAS 123-91-1) in a discharge exceeds 10 µg/l and the discharge flow exceeds 0.1 mgd, Part A of the permit should include monitor and report for 1,4-dioxane. Discharges of 0.1 mgd or less should monitor and report for 1,4-dioxane if the concentration of 1,4-dioxane in the discharge exceeds 100 µg/l.

The application provided past WWTP data from January 2013 to March 2014, which did not include analysis of Total Dissolved Solids. As a result, TDS and its constituents will be analyzed during the next renewal process when the WWTP is again operational, and monitoring for these parameters will be evaluated at that time.

$CBOD_5$ / NH_3-N

DEP's SOP No. BCW-PMT-032 states that the WQM 7.0 Model should be run if the maximum BOD_5 concentration in the permit application exceeds 30 mg/l. The maximum BOD_5 concentration provided was 49 mg/l; therefore, the model was run.

WQM 7.0 ver. 1.0b is a water quality model designed to assist DEP in determining appropriate water quality based effluent limits (WQBELs) for carbonaceous biochemical oxygen demand ($CBOD_5$), NH_3-N and dissolved oxygen (D.O.). DEP's Technical Guidance No. 391-2000-007 provides the technical methods contained in WQM 7.0 for determining wasteload allocations and for determining recommended NPDES effluent limits for point source discharges. The model was utilized for this permit renewal. The model output indicated a $CBOD_5$ average monthly limit of 25 mg/l, an NH_3-N average monthly limit of 4.97 mg/l, and a D.O. minimum limit of 5.0 mg/l were protective of water quality.

The flow data used to run the model was acquired from USGS PA StreamStats, and USGS Gage #01576500 on the Conestoga River, and is included in the attachment. The $CBOD_5$ limit is the same as the existing limit and will remain in the permit. The NH_3-N limit is less stringent than the existing limit, but due to anti-backsliding the existing limit of 3.0 mg/l will remain in place.

Dissolved Oxygen

A minimum D.O. limit of 5.0 mg/L is a D.O. water quality criterion found in 25 Pa. Code § 93.7(a). This limit is included in the existing NPDES permit based BPJ. It is still recommended to include this limit in the draft permit to ensure that the facility continues to achieve compliance with DEP water quality standards.

Total Residual Chlorine

The attached computer printout utilizes the equations and calculations as presented in the Department's May 1, 2003 Implementation Guidance for Total Residual Chlorine (TRC) (ID No. 391-2000-015) for developing chlorine limitations. The Guidance references Chapter 92, Section 92.2d (3) which establishes a standard BAT limit of 0.5 mg/l unless a facility-specific BAT has been developed. The attached printout indicates that a water quality limit of 0.21 mg/l would be needed to prevent toxicity concerns. It is recommended that a TRC limit of 0.21 mg/l monthly average and 0.70 mg/l instantaneous maximum be applied this permit cycle, which is slightly more stringent than the existing limit.

Toxics

Based on a review of the sampling results provided in the application, there are no pollutants sampled that would be included in DEP's Toxics Screening Analysis, therefore, an evaluation of toxic pollutants was not needed for this discharge.

Chesapeake Bay Total Maximum Daily Load (TMDL)

DEP developed a strategy to comply with the EPA and Chesapeake Bay Foundation requirements by reducing point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP). This strategy can be located in the Pennsylvania Chesapeake Watershed Implementation Plan (WIP), dated January 11, 2011. Subsequently, an update to the WIP was published as the Phase 2 WIP. As part of the Phase 2 WIP, a Phase 2 Watershed Implementation Plan Wastewater Supplement (Phase 2 Supplement) was developed, providing an update on TMDL implementation for point sources and DEP's current implementation strategy for wastewater. The Phase 2 Supplement was most recently revised on September 6, 2017. Industrial discharges have been prioritized by Central Office based on their delivered TN and TP loadings to the Bay. Significant industrial wastewater dischargers are facilities that discharge more than 75 lbs/day of TN or 25 lbs/day of TP on an average annual basis and the rest are classified as non-significant dischargers. This facility is classified as a non-significant discharger. The Phase 2 Supplement states that monitoring and reporting of TN and TP will be required throughout the permit term in renewed or amended permits anytime the facility has the potential to introduce a net TN or TP increase to the load contained within the intake water used in processing. Since this facility deals with poultry processing, TN and TP monitoring will be required. A TP limit is already present in the permit; therefore, monitoring for TN will be added.

Oil and Grease

DEP's SOP No. BPNPSM-PMT-032 recommends a monitor requirement for Oil and Grease if the maximum concentration reported in the application is greater than 4 mg/l. The application lists a maximum concentration of 5.0 mg/l for Oil and Grease. There is an existing limit for Oil and Grease in the permit, which is more stringent than a monitor only requirement; therefore, the more stringent existing limit will remain in the permit.

Fecal Coliform

PA Code § 92a.47.(a)(4) requires a monthly average limit of 200/100 mL as a geometric mean and an instantaneous maximum limit not greater than 1,000/100 mL from May through September for fecal coliform. PA Code § 92a.47.(a)(5) requires a monthly average limit of 2,000/100 mL as a geometric mean and an instantaneous maximum limit not greater than 10,000/100 mL from October through April for fecal coliform. Therefore, the instantaneous maximum fecal coliform limits have been included in the permit.

Mass Loading Limitation

All mass loading effluent limitations recommended in the draft permit are concentration-based, calculated using a formula: design flow (MGD) x concentration limit (mg/l) x conversion factor of 8.34.

Anti-Degradation

The effluent limits for this discharge 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. No High Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

303(d) Listed Streams

The discharge is located on a stream segment that is designated on the 303(d) list as impaired. There is a recreational impairment for source unknown due to pathogens. The permit includes a limit for fecal coliform.

Class A Wild Trout Fisheries

No Class A Wild Trout Fisheries are impacted by this discharge.

Anti-Backsliding

Pursuant to 40 CFR § 122.44(l)(1), all proposed permit requirements addressed in this fact sheet are at least as stringent as the requirements implemented in the existing NPDES permit unless any exceptions addressed by DEP in this fact sheet.

Development of Effluent Limitations

Outfall No. 002 **Design Flow (MGD)** Variable (stormwater)
Latitude 40º 14' 37" **Longitude** 76º 11' 23"
Wastewater Description: Stormwater

Stormwater Limitations

This facility has one stormwater outfall, Outfall 002. This outfall consists of a 24" culvert across the highway from the processing plant, and drains <0.1 mi^2.

The existing permit requires annual monitoring of $CBOD_5$, COD, TSS, Total Phosphorus, Total Kjeldahl Nitrogen, Dissolved Iron ,Oil and Grease, and pH. These monitoring requirements were derived from a previous NPDES PAG-03 General Permit. This facility falls under SIC Code 2015. According to DEP's current NPDES PAG-03 General Permit, SIC Code 2015 is subject to Appendix I monitoring requirements. This appendix requires semi-annual monitoring for the parameters listed in the table below. Theses parameters will replace the existing parameters in the permit renewal.

Stormwater will be monitored and managed using best management practices. The permittee shall monitor and report analytical results for the parameters listed below on Discharge Monitoring Reports (DMRs) for Outfall 002. The benchmark values listed on the table below are not effluent limitations, and exceedances do not constitute permit violations. However, if the permittee's sampling demonstrates exceedances of benchmark values for two consecutive monitoring periods, the permittee shall submit a corrective action plan within 90 days of the end of the monitoring period triggering the plan.

Parameter	Minimum Measurement Frequency	Sample Type (mg/l)	Benchmark Values
pH (S.U.)	1 / 6months	Grab	XXX
BOD_5	1 / 6months	Grab	XXX
TSS	1 / 6months	Grab	100
COD	1 / 6months	Grab	120
Nitrate-Nitrite	1 / 6months	Grab	XXX
Oil and Grease	1 / 6months	Grab	30

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	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	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	0.21	XXX	0.70	1/day	Grab
CBOD5	4.2	8.4	XXX	25	50	62	2/month	8-Hr Composite
TSS	5.0	10	XXX	30	60	75	2/month	8-Hr Composite
Oil and Grease	Report	Report	XXX	15	XXX	30	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Ammonia Nov 1 - Apr 30	1.5	3.0	XXX	9.0	18	22.5	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	0.5	1.0	XXX	3.0	6.0	7.5	2/month	8-Hr Composite
Total Phosphorus	0.3	0.7	XXX	2.0	4.0	5.0	2/month	8-Hr Composite
TKN	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Nitrate-Nitrite	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/month	Calculation

Compliance Sampling Location: Outfall 001

Proposed Effluent Limitations and Monitoring Requirements

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

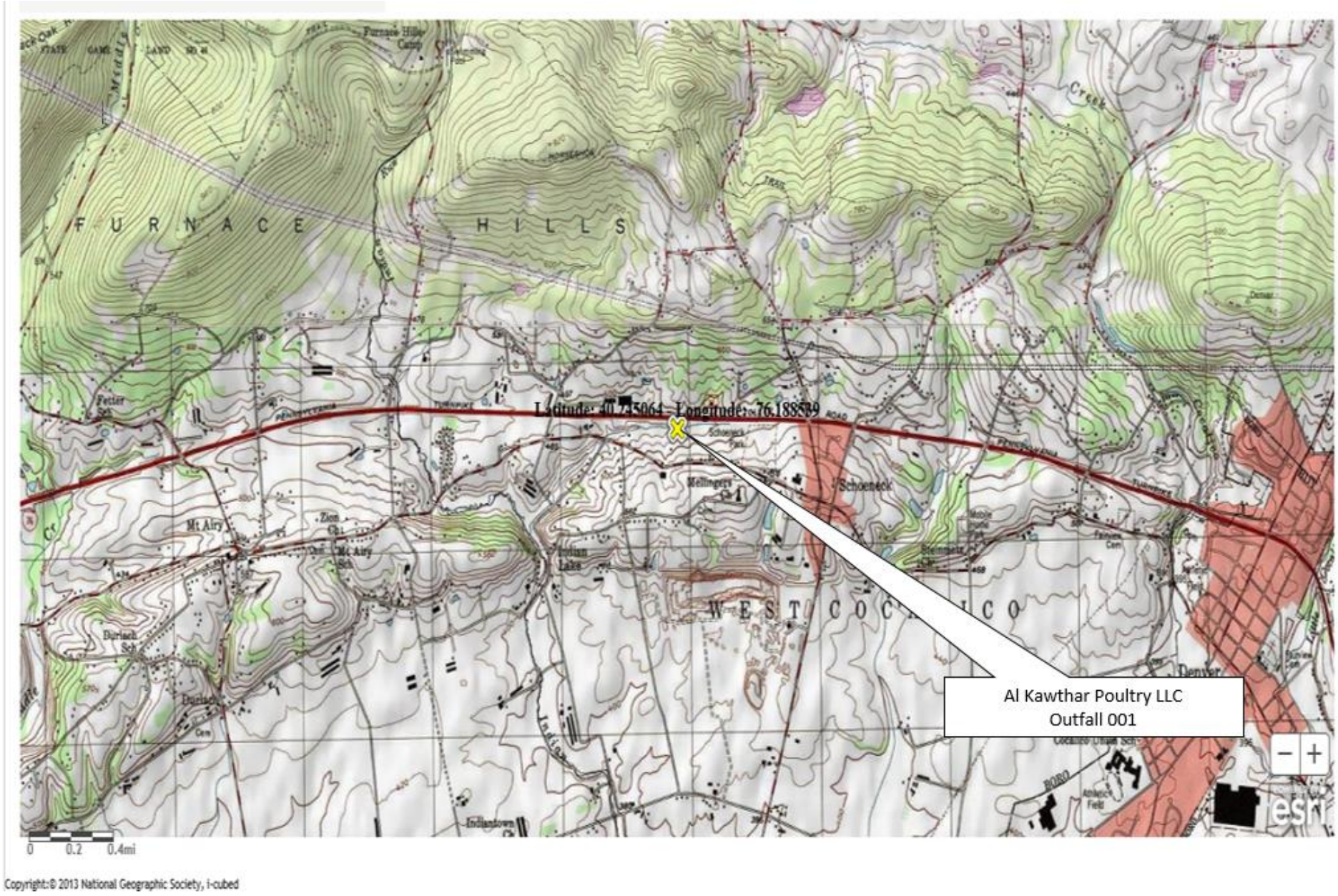
Outfall 002, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Daily Maximum	Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
BOD_5	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
COD	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	Report	XXX	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 002

Other Comments: None

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	PENTOXSD for Windows Model (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 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, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 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, 391-2000-022, 3/1999.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:


FURNACE HILLS
Latitude: 40.245064 Longitude: -76.188589
Al Kawthar Poultry LLC
Outfall 001
Schoeneck
Mt Airy
Indian Lake
Denver
0 0.2 0.4mi
esri
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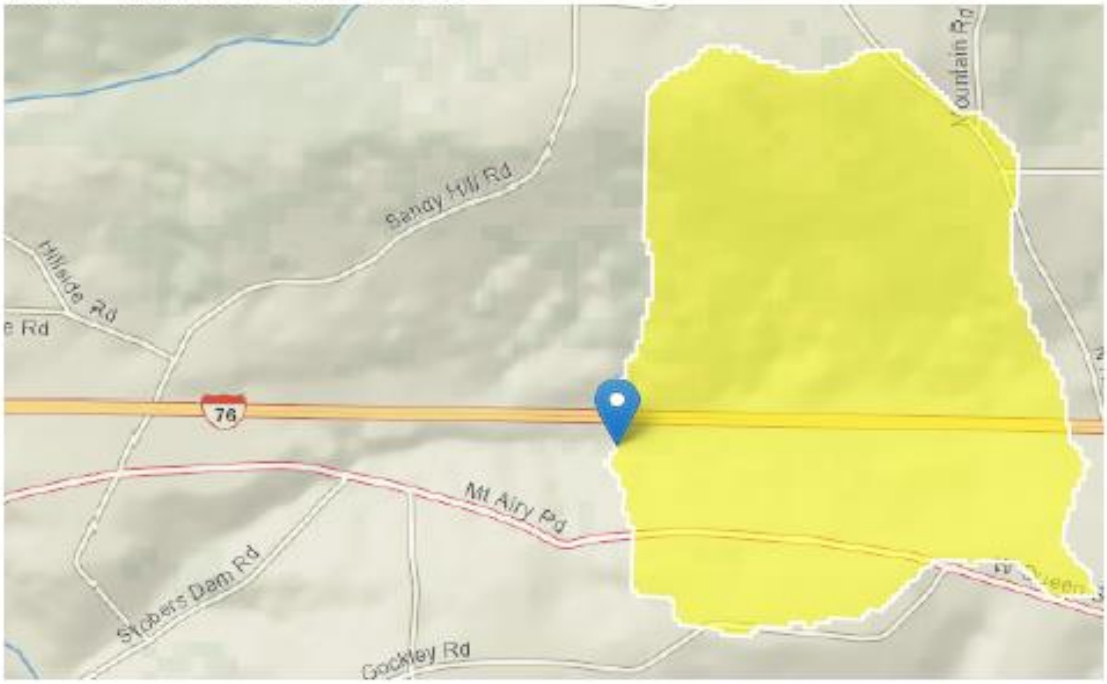
TRC EVALUATION						
Input appropriate values in A3:A9 and D3:D9						
0.044	= Q stream (cfs)		0.5	= CV Daily		
0.02	= Q discharge (MGD)		0.5	= CV Hourly		
30	= no. samples		1	= AFC_Partial Mix Factor		
0.3	= Chlorine Demand of Stream		1	= CFC_Partial Mix Factor		
0	= Chlorine Demand of Discharg		15	= AFC_Criteria Compliance Time (min)		
0.5	= BAT/BPJ Value		720	= CFC_Criteria Compliance Time (min)		
0	= % Factor of Safety (FOS)			=Decay Coefficient (K)		
Source	Reference	AFC Calculations		Reference	CFC Calculations	
TRC	1.3.2.iii	WLA afc = 0.473		1.3.2.iii	WLA cfc = 0.453	
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373		5.1c	LTAMULT cfc = 0.581	
PENTOXSD TRG	5.1b	LTA_afc= 0.176		5.1d	LTA_cfc = 0.264	
Source		Effluent Limit Calculations				
PENTOXSD TRG	5.1f	AML MULT = 1.231				
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.217		AFC		
		INST MAX LIMIT (mg/l) = 0.709				

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)**

(0.011/EXP(-K*CFC_tc/1440))+(((CFC_Yc*Qs*0.011)/(1.547*Qd)....
....*EXP(-K*CFC_tc/1440)))+Xd+(CFC_Yc*Qs*Xs/1.547*Qd))*(1-FOS/100)

Al Kawthar Poultry LLC PA0085707 Outfall 001

Region ID: PA
Workspace ID: PA20200506121749283000
Clicked Point (Latitude, Longitude): 40.24504, -76.18855
Time: 2020-05-06 08:18:06 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.37	square miles
BSLOPD	Mean basin slope measured in degrees	5.7	degrees
ROCKDEP	Depth to rock	3.4	feet
URBAN	Percentage of basin with urban development	9	percent

Low-Flow Statistics Parameters[Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.37	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	5.7	degrees	1.7	6.4
ROCKDEP	Depth to Rock	3.4	feet	4.13	5.21
URBAN	Percent Urban	9	percent	0	89

Low-Flow Statistics Disclaimers[Low Flow Region 1]

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 1]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0264	ft^3/s
30 Day 2 Year Low Flow	0.0407	ft^3/s
7 Day 10 Year Low Flow	0.00863	ft^3/s
30 Day 10 Year Low Flow	0.0147	ft^3/s
90 Day 10 Year Low Flow	0.0273	ft^3/s

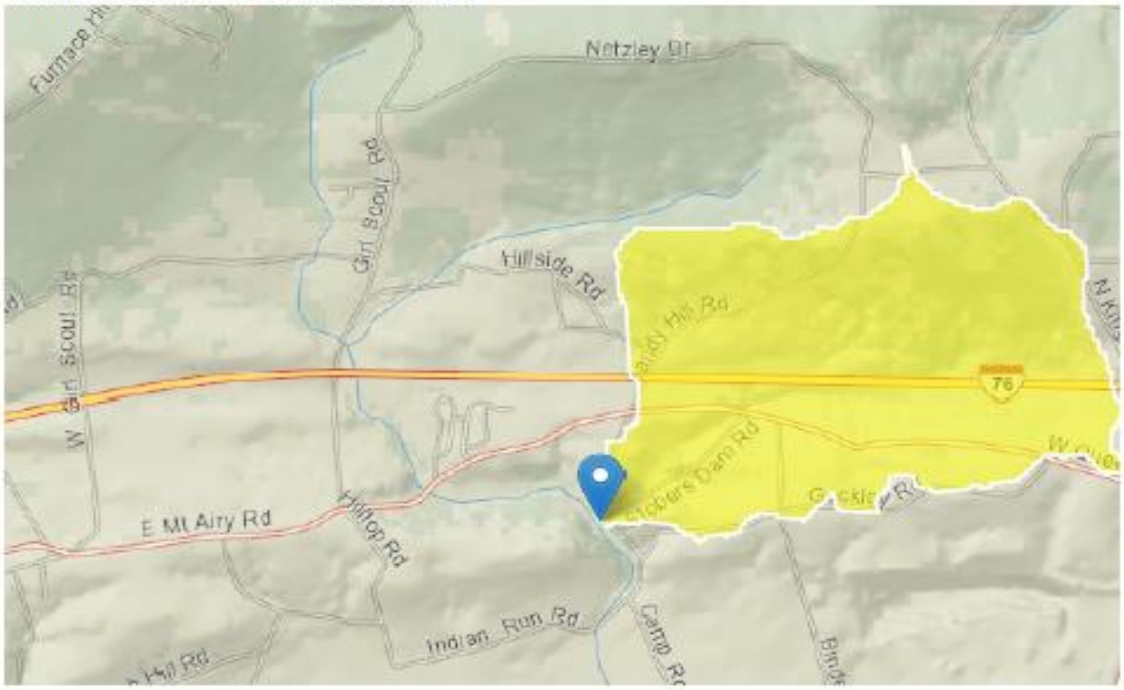
Low-Flow Statistics Citations

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/)

Application Version: 4.3.11

Al Kawthar Poultry LLC PA0085707 Downstream Pt.

Region ID: PA
Workspace ID: PA20200506122925083000
Clicked Point (Latitude, Longitude): 40.24016, -76.20204
Time: 2020-05-06 08:29:41 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.92	square miles
BSLOPD	Mean basin slope measured in degrees	5.8	degrees
ROCKDEP	Depth to rock	3.4	feet

Parameter Code	Parameter Description	Value	Unit
URBAN	Percentage of basin with urban development	7	percent

Low-Flow Statistics Parameters[Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.92	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	5.8	degrees	1.7	6.4
ROCKDEP	Depth to Rock	3.4	feet	4.13	5.21
URBAN	Percent Urban	7	percent	0	89

Low-Flow Statistics Disclaimers[Low Flow Region 1]

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 1]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.065	ft^3/s
30 Day 2 Year Low Flow	0.0993	ft^3/s
7 Day 10 Year Low Flow	0.0221	ft^3/s
30 Day 10 Year Low Flow	0.0368	ft^3/s
90 Day 10 Year Low Flow	0.0672	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/)

Application Version: 4.3.11

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
07J	7712	Trib 07712 to Indian Run	0.880	468.00	0.37	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	0.04	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
Al Kawthar	PA0085707	0.0200	0.0200	0.0200	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	5.00	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
07J	7712	Trib 07712 to Indian Run	0.000	410.00	0.92	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	0.11	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	0.00	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
07J	7712	Trib 07712 to Indian 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												
0.880	0.04	0.00	0.04	.0309	0.01248	.339	3.34	9.86	0.07	0.814	22.06	7.00
Q1-10 Flow												
0.880	0.03	0.00	0.03	.0309	0.01248	NA	NA	NA	0.06	0.929	22.62	7.00
Q30-10 Flow												
0.880	0.06	0.00	0.06	.0309	0.01248	NA	NA	NA	0.07	0.731	21.70	7.00

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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	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
07J	7712	Trib 07712 to Indian 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
0.880	Al Kawthar	8.01	15.3	8.01	15.3	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
0.880	Al Kawthar	1.69	4.97	1.69	4.97	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)		
0.88	Al Kawthar	25	25	4.97	4.97	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
07J	7712	Trib 07712 to Indian Run

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.880	0.020	22.064	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
3.344	0.339	9.864	0.066
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
11.50	1.217	2.05	0.821
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.904	27.313	Owens	5
Reach Travel Time (days)			
0.814			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.081	10.31	1.92	7.67
0.163	9.25	1.80	7.84
0.244	8.29	1.68	7.94
0.325	7.44	1.57	7.94
0.407	6.67	1.47	7.94
0.488	5.98	1.38	7.94
0.569	5.37	1.29	7.94
0.651	4.81	1.20	7.94
0.732	4.32	1.13	7.94
0.814	3.87	1.05	7.94

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
07J	7712	Trib 07712 to Indian 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)
0.880	Al Kawthar	PA0085707	0.020	CBOD5	25		
				NH3-N	4.97	9.94	
				Dissolved Oxygen			5