Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0092533**
Facility Type	**Municipal**	APS ID	**1115763**
Major / Minor	**Minor**	Authorization ID	**1488699**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Indiana County Municipal Services Authority**	Facility Name	**Iselin STP**
Applicant Address	602 Kolter Drive Indiana, PA 15701-3570	Facility Address	501 Red Street Saltsburg, PA 15681
Applicant Contact	Tricia Lefko, Compliance Superintendent (tlefko@icomsa.org)	Facility Contact	Tricia Lefko, Compliance Superintendent (tlefko@icomsa.org)
Applicant Phone	(724) 349-6640, ext. 107	Facility Phone	(724) 349-6640, ext. 107
Client ID	38534	Site ID	255089
Ch 94 Load Status	Not Overloaded	Municipality	Young Township
Connection Status	No Limitations	County	Indiana
Date Application Received	June 3, 2024	EPA Waived?	Yes
Date Application Accepted	June 14, 2024	If No, Reason	-
Purpose of Application	Renewal of an NPDES Permit for an existing discharge of treated sanitary wastewater from a municipal sewer system.		

Summary of Review

Act 14 - Proof of Notification was submitted and received.

A Part II Water Quality Management permit is not required at this time.

The Permittee should be able to meet the limits of this permit, which will protect the uses of the receiving stream.

I. OTHER REQUIREMENTS:

A. Stormwater into sewers
B. Right of way
C. Solids handling
D. Hauled-in wastes restrictions
E. Little or No Assimilative Capacity or Dilution

SPECIAL CONDITIONS:

II. Solids Management

There are 11 open violations in efacts for Client ID (38534) as of 5/12/2025 (see Attachment 1).

Approve	Deny	Signatures	Date
X		Stephen A. McCauley Stephen A. McCauley, E.I.T. / Project Manager	5/12/2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	5/16/2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.035
Latitude	40º 33' 21.52"	Longitude	-79º 23' 26.71"
Quad Name	-	Quad Code	-
Wastewater Description:	Sewage Effluent		
Receiving Waters	Harpers Run (CWF)	Stream Code	43190
NHD Com ID	125291026	RMI	1.65
Drainage Area	1.53	Yield (cfs/mi^2)	0.033
Q_{7-10} Flow (cfs)	0.05	Q_{7-10} Basis	calculated
Elevation (ft)	1060	Slope (ft/ft)	0.0169
Watershed No.	18-C	Chapter 93 Class.	CWF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired*		
Cause(s) of Impairment	Nutrients		
Source(s) of Impairment	Urban Runoff/Storm Sewers		
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	Buffalo Township Municipal Water Authority - Freeport		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2,576
PWS RMI	30.0	Distance from Outfall (mi)	35.0

* - The receiving stream is impaired by nutrients. Since monitoring is already set for Total Nitrogen and Total Phosphorus, no further action is necessary to protect the receiving stream at this time.

Sludge use and disposal description and location(s): Sludge is disposed of at the Creekside Compost Unit (ICMSA-owned), or an approved landfill.

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.

Narrative: This Fact Sheet details the determination of draft NPDES permit limits for an existing discharge of 0.035 MGD of treated sewage from an existing Publicly Owned Treatment Works (POTW) in Young Township Indiana County.

Treatment permitted under WQM Permit 3297408 consists of the following: A comminutor, an equalization tank, four aeration tanks, two clarifiers, a sludge holding tank, and ultraviolet (UV) light disinfection.

1. Streamflow:

Loyalhanna Creek at Loyalhanna Dam, PA - USGS Gage 03047000 (1943-1991):

Drainage Area:	290	sq. mi.	(USGS StreamStats)
Q_{7-10}:	9.8	cfs	(USGS StreamStats)
Yieldrate:	0.033	cfsm	(calculated)

Harpers Run at Outfall 001:

Yieldrate:	0.033	cfsm	(calculated above)
Drainage Area:	1.53	sq. mi.	(USGS StreamStats)
% of stream allocated:	100%	Basis:	No nearby discharges
Q_{7-10}:	0.05	cfs	(calculated)

2. Wasteflow:

Maximum discharge: 0.035 MGD = 0.054 cfs

Runoff flow period: 24 hours Basis: Runoff flow for municipal STPs

There is less than 3 parts stream flow (Q7-10) to 1 part effluent (design flow) at the discharge point. However, since this is an existing discharge, the more stringent treatment requirements cannot be achieved, and the receiving stream is not impaired by the discharge, the treatment requirements in document number 391-2000-014, titled, “Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers”, dated April 12, 2008, will not be implemented in this NPDES Permit renewal.

Flow will be required to be monitored as authorized under Chapter 92a.61, and as recommended in the SOP.

3. Parameters:

The following parameters were evaluated: pH, Total Suspended Solids, Fecal Coliform, E. Coli, Total Phosphorus, Total Nitrogen, NH_3-N, $CBOD_5$, Dissolved Oxygen, and Disinfection.

a. pH

Between 6.0 and 9.0 at all times

Basis: Application of Chapter 93.7 technology-based limits.

The measurement frequency was previously set to 1/day as recommended in the SOP, based on Table 6-3 in the “Technical Guidance for the Development and Specification of Effluent Limitations” (362-0400-001), which will be retained.

b. Total Suspended Solids

Limits are 30.0 mg/l as a monthly average and 60.0 as an instantaneous maximum.

Basis: Application of Chapter 92a47 technology-based limits

c. Fecal Coliform

05/01 - 09/30:	200/100ml	(monthly average geometric mean)
	1,000/100ml	(instantaneous maximum)
10/01 - 04/30:	2,000/100ml	(monthly average geometric mean)
	10,000/100ml	(instantaneous maximum)

Basis: Application of Chapter 92a47 technology-based limits

d. E. Coli

Monitoring was added for E. Coli at a frequency of 1/year.

Basis: Application of Chapter 92a.61 as recommended by the SOP for flows greater than 0.002 MGD and less than 0.05 MGD.

e. Total Phosphorus

Chapter 96.5 does not apply. Therefore, the previous monitoring for Total Phosphorus will be retained in accordance with the SOP, based on Chapter 92a.61.

f. Total Nitrogen

The previous monitoring for Total Nitrogen will be retained in accordance with the SOP, based on Chapter 92a.61.

g. Ammonia-Nitrogen (NH_3-N)

Median discharge pH to be used:	6.6	Standard Units (S.U.)
	Basis:	eDMR data from previous 12 months
Discharge temperature:	25°C	(default value used in the absence of data)
Median stream pH to be used:	7.0	Standard Units (S.U.)
	Basis:	default value used in the absence of data
Stream Temperature:	20˚C	(default value used for CWF modeling)
Background NH_3-N concentration:	0.0	mg/l
	Basis:	Default value
Calculated NH_3-N Summer limits:	3.9	mg/l (monthly average)
	7.8	mg/l (instantaneous maximum)

Calculated NH_3-N Winter limits: 11.7 mg/l (monthly average)
23.4 mg/l (instantaneous maximum)

Result: WQ modeling calculated the summer NH3-N limits above (see Attachment 2). The winter limits are calculated as three times the summer limits. These limits are less restrictive than the previous permit. Based on eDMR data, the more restrictive limits are attainable, so they will be retained with this renewal.

h. $CBOD_5$

Median discharge pH to be used: 6.6 Standard Units (S.U.)

Basis: eDMR data from previous 12 months

Discharge temperature: 25°C (default value used in the absence of data)

Median stream pH to be used: 7.0 Standard Units (S.U.)

Basis: default value used in the absence of data

Stream Temperature: 20˚C (default value used for CWF modeling)

Background $CBOD_5$ concentration: 2.0 mg/l

Basis: Default value

Calculated $CBOD_5$ limits: 25.0 mg/l (monthly average)
50.0 mg/l (instantaneous maximum)

Result: WQ modeling resulted in the calculated CBOD5 limits above (see Attachment 2). These limits are the same as the previous permit and will be retained.

i. Influent Total Suspended Solids and BOD_5

Monitoring for these two parameters will be retained as recommended in the SOP for POTWs, as authorized under Chapter 92a.61.

j. Dissolved Oxygen (DO)

The technology-based minimum of 4.0 mg/l is recommended by the WQ Model (see Attachment 2) and the SOP based on Chapter 93.7, under the authority of Chapter 92a.61. This limit is less restrictive than the previous permit. Based on eDMR data, the more restrictive limit is attainable, so it will be retained with this renewal.

The measurement frequency was previously set to 1/day as recommended in the SOP, based on Table 6-3 in the "Technical Guidance for the Development and Specification of Effluent Limitations" (362-0400-001), which will be retained.

k. Disinfection

☒ Ultraviolet (UV) light monitoring

☐ Total Residual Chlorine (TRC) limits: _____ mg/l (monthly average)
_____ mg/l (instantaneous maximum)

Basis: UV Dosage (mjoules/cm²) reporting will be retained with this renewal.

The measurement frequency was previously set to 1/day as recommended in the SOP, based on Table 6-3 in the "Technical Guidance for the Development and Specification of Effluent Limitations" (362-0400-001), which will be retained.

4. Reasonable Potential Analysis for Receiving Stream:

A Reasonable Potential Analysis was performed in accordance with State practices for Outfall 001 using the Department's Toxics Management Spreadsheet (see Attachment 3).

Result: Reasonable potential was not calculated for any parameters.

The previous monitoring for Total Aluminum, Total Iron, and Total Manganese will be retained with this renewal.

5. Reasonable Potential for Downstream Public Water Supply (PWS):

The Department's Toxics Management Spreadsheet does not calculate limits for parameters that are based on PWS criteria (TDS, Chloride, Bromide, and Sulfate).

Nearest Downstream potable water supply (PWS): Buffalo Township Municipal Water Authority - Freeport
Distance downstream from the point of discharge: 35.0 miles (approximate)

Result: No limits or monitoring are necessary since significant dilution is available.

6. Flow Information:

The Rossiter STP receives 100% of its flow from the Young Township, which consists of all separate sewers.

7. Anti-Backsliding:

Since all the permit limits in this renewal are the same or more restrictive than the previous NPDES Permit, anti-backsliding is not applicable.

8. Attachment List:

Attachment 1 - Open Violations by Client

Attachment 2 - WQ Modeling Printouts

Attachment 3 - Toxics Management Spreadsheet

(The Attachments above can be found at the end of this document)

Compliance History

DMR Data for Outfall 001 (from April 1, 2024 to March 31, 2025)

Parameter	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24
Flow (MGD) Average Monthly	0.015	0.024	0.012	0.014	0.009	0.009	0.010	0.011	0.008	0.010	0.012	0.033
Flow (MGD) Daily Maximum	0.021	0.032	0.016	0.017	0.010	0.011	0.01	0.011	0.008	0.012	0.016	0.033
pH (S.U.) Instantaneous Minimum	6.7	6.8	6.3	6.5	6.1	6.2	6.1	6.3	6.2	6.4	6.4	6.2
pH (S.U.) Instantaneous Maximum	7.6	7.6	7.9	7.5	7.4	7.8	7.6	7.8	7.9	7.4	7.6	8.3
DO (mg/L) Instantaneous Minimum	6.2	6.1	6.1	6.1	6.2	6.2	6.0	6.1	5.3	6.1	6.1	6.2
CBOD5 (lbs/day) Average Monthly	< 0.4	< 0.8	< 0.3	< 0.3	< 0.2	< 0.4	< 0.2	< 0.3	< 0.2	< 0.3	0.5	< 0.8
CBOD5 (lbs/day) Raw Sewage Influent Average Monthly	12.0	29.0	8.0	9.0	12.0	10.0	11.0	1.0	8.0	9.0	20.0	25.0
CBOD5 (mg/L) Average Monthly	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 4.0	< 3.0	< 3.0	< 3.0	< 3.0	5.0	< 3.0
CBOD5 (mg/L) Raw Sewage Influent Average Monthly	89.4	101.8	71.5	63.22	166.0	120.0	134.0	10.71	127.0	106.7	195.0	86.1
CBOD5 (mg/L) Instantaneous Maximum	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	5.87	< 3.0	< 3.0	< 3.0	3.68	4.5	< 3.0
CBOD5 (mg/L) Raw Sewage Influent Instantaneous Maximum	130.0	115.0	72.2	118.0	167.0	124.0	150.0	16.2	137.0	126.0	204.0	86.1
TSS (lbs/day) Average Monthly	1.3	1.4	0.8	0.5	0.8	1.3	0.6	0.6	0.4	0.5	< 0.6	1.2
TSS (lbs/day) Raw Sewage Influent Average Monthly	20.0	25.0	12.0	15.0	17.0	16.0	15.0	11.0	11.0	18.0	23.0	13.0
TSS (mg/L) Average Monthly	9.0	5.0	7.0	5.0	10.0	15.0	7.0	6.0	6.0	6.0	< 7.0	5.0
TSS (mg/L) Raw Sewage Influent Average Monthly	138.0	84.0	105.0	146.0	228.0	188.0	192.0	118.0	170.0	208.0	226.0	52.0
TSS (mg/L) Instantaneous Maximum	10.8	5.6	7.2	8.0	11.6	19.2	7.2	8.4	10.0	8.0	11.6	4.6

TSS (mg/L) Raw Sewage Influent Instantaneous Maximum	140.0	101.0	106.0	180.0	274.0	208.0	202.0	176.0	137.0	242.0	230.0	52.0
Fecal Coliform (No./100 ml) Geometric Mean	< 1.0	< 1.0	< 9.0	< 2.0	6.0	< 1.0	8.0	5.0	1.0	2.0	< 5.0	< 1.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	1.0	< 1.0	84.2	4.1	31.0	1.0	32.7	7.4	2.0	3.1	27.2	1.0
Total Nitrogen (mg/L) Daily Maximum	< 0.5			1.599			< 0.5			< 0.5		
Ammonia (lbs/day) Average Monthly	< 0.01	< 0.03	< 0.01	< 0.01	< 0.008	< 0.008	< 0.008	< 0.01	< 0.007	< 0.009	< 0.01	< 0.03
Ammonia (mg/L) Average Monthly	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ammonia (mg/L) Instantaneous Maximum	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1128	< 0.1	< 0.1	< 0.1	< 0.1
Total Phosphorus (mg/L) Daily Maximum	4.48			8.05			7.89			1.34		
Total Aluminum (mg/L) Daily Maximum				< 0.1								
Total Iron (mg/L) Daily Maximum				< 0.2								
Total Manganese (mg/L) Daily Maximum				< 0.02								
UV Dosage (mjoules/cm²) Average Monthly	13.5	12.4	13.4	13.2	13.6	14.0	14.0	14.0	14.0	14.0	14.0	13.9
UV Dosage (mjoules/cm²) Instantaneous Maximum	13.7	13.7	13.7	13.7	14.0	14.0	14.1	14.0	14.0	14.0	14.0	14.0

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	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	6.0 Inst Min	XXX	XXX	XXX	1/day	Grab
CBOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	Report	2/month	Grab
CBOD5	7.3	XXX	XXX	25.0	XXX	50.0	2/month	Grab
TSS Raw Sewage Influent	Report	XXX	XXX	Report	XXX	Report	2/month	Grab
TSS	8.8	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
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Grab
Ammonia Nov 1 - Apr 30	2.3	XXX	XXX	8.0	XXX	16.0	2/month	Grab
Ammonia May 1 - Oct 31	0.9	XXX	XXX	3.0	XXX	6.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	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	Minimum	Average Monthly	Maximum	Instant. Maximum		
Total Aluminum	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
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
UV Dosage (mjoules/cm²)	XXX	XXX	XXX	Report	XXX	Report	1/day	Grab

Compliance Sampling Location: at Outfall 001, after ultraviolet (UV) light disinfection.

Flow is monitor only based on Chapter 92a.61. The limits for pH and Dissolved Oxygen are technology-based on Chapter 93.7. The limits for $CBOD_5$, Total Suspended Solids, and Fecal Coliforms are technology-based on Chapter 92a.47. Monitoring for influent BOD5 and influent TSS is based on Chapter 92a.61. The limits for Ammonia-Nitrogen are water quality-based on Chapter 93.7. Monitoring for E. Coli, Total Nitrogen, Total Phosphorus, Total Aluminum, Total Iron, Total Manganese, and UV Dosage is based on Chapter 92a.61.

Attachment 1

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

WATER MANAGEMENT SYSTEM
OPEN VIOLATIONS BY CLIENT

Client ID: 38534
Client: All

Open Violations: 11

	CLIENT ID	CLIENT	PF ID	FACILITY	PF KIND	PF STATUS	INSP PROGRAM	PROGRAM SPECIFIC ID	INSP ID
1	38534	INDIANA CNTY MUNI SVC AUTH	252656	ICMSA ROSSITER	Community	Active	Safe Drinking Water	5320034	3888341
2	38534	INDIANA CNTY MUNI SVC AUTH	252741	ICMSA ARCADIA	Community	Active	Safe Drinking Water	5320041	3962392
3	38534	INDIANA CNTY MUNI SVC AUTH	252656	ICMSA ROSSITER	Community	Active	Safe Drinking Water	SM2310126	3508977
4	38534	INDIANA CNTY MUNI SVC AUTH	252656	ICMSA ROSSITER	Community	Active	Safe Drinking Water	SM2320682	3547516
5	38534	INDIANA CNTY MUNI SVC AUTH	252656	ICMSA ROSSITER	Community	Active	Safe Drinking Water	SM2327277	3590895
6	38534	INDIANA CNTY MUNI SVC AUTH	252656	ICMSA ROSSITER	Community	Active	Safe Drinking Water	SM2338381	3634851
7	38534	INDIANA CNTY MUNI SVC AUTH	252656	ICMSA ROSSITER	Community	Active	Safe Drinking Water	SM2407711	3717331
8	38534	INDIANA CNTY MUNI SVC AUTH	252656	ICMSA ROSSITER	Community	Active	Safe Drinking Water	SM2416929	3771274
9	38534	INDIANA CNTY MUNI SVC AUTH	252656	ICMSA ROSSITER	Community	Active	Safe Drinking Water	SM2424457	3821375
10	38534	INDIANA CNTY MUNI SVC AUTH	252656	ICMSA ROSSITER	Community	Active	Safe Drinking Water	SM2432613	3875421
11	38534	INDIANA CNTY MUNI SVC AUTH	252656	ICMSA ROSSITER	Community	Active	Safe Drinking Water	SM2507851	3908562

	VIOLATION ID	INSPECTION CATEGORY	VIOLATION DATE	VIOLATION CODE	VIOLATION	PF INSPECTOR	INSP REGION
1	8211474	PF	12/20/2024	C3D	FAILURE TO FILTER-TO-WASTE AS REQUIRED	THOMAS,JOHN	NWRO
2	8232434	PF	05/09/2025	C7	FAILURE TO COMPLY WITH A PERMIT CONDITION	RIPPLE,SHEENA	NWRO
3	986037	PF	02/24/2023	02	EXCEEDED THE CHEMICAL AVERAGE MAXIMUM CONTAMINANT LEVEL	THOMAS,JOHN	NWRO
4	993371	PF	05/02/2023	02	EXCEEDED THE CHEMICAL AVERAGE MAXIMUM CONTAMINANT LEVEL	THOMAS,JOHN	NWRO
5	8153400	PF	07/27/2023	02	EXCEEDED THE CHEMICAL AVERAGE MAXIMUM CONTAMINANT LEVEL	THOMAS,JOHN	NWRO
6	8163008	PF	10/25/2023	02	EXCEEDED THE CHEMICAL AVERAGE MAXIMUM CONTAMINANT LEVEL	THOMAS,JOHN	NWRO
7	8176947	PF	02/26/2024	02	EXCEEDED THE CHEMICAL AVERAGE MAXIMUM CONTAMINANT LEVEL	THOMAS,JOHN	NWRO
8	8189212	PF	06/03/2024	02	EXCEEDED THE CHEMICAL AVERAGE MAXIMUM CONTAMINANT LEVEL	THOMAS,JOHN	NWRO
9	8199291	PF	08/28/2024	02	EXCEEDED THE CHEMICAL AVERAGE MAXIMUM CONTAMINANT LEVEL	THOMAS,JOHN	NWRO
10	8209200	PF	11/26/2024	02	EXCEEDED THE CHEMICAL AVERAGE MAXIMUM CONTAMINANT LEVEL	THOMAS,JOHN	NWRO
11	8215348	PF	01/30/2025	02	EXCEEDED THE CHEMICAL AVERAGE MAXIMUM CONTAMINANT LEVEL	THOMAS,JOHN	NWRO

Attachment 2

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
18C	43190	HARPERS 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)
1.650	Iselin STP	PA0092533	0.035	CBOD5	25		
				NH3-N	3.98	7.96	
				Dissolved Oxygen			4

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
18C	43190	HARPERS RUN

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
1.650	0.035	22.587	6.749
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
4.965	0.352	14.096	0.060
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
13.90	1.021	2.06	0.854
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.047	24.097	Owens	6
Reach Travel Time (days)			
1.685			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.169	11.45	1.78	7.55
0.337	9.43	1.54	7.77
0.506	7.77	1.34	7.86
0.674	6.40	1.16	7.86
0.843	5.27	1.00	7.86
1.011	4.34	0.87	7.86
1.180	3.58	0.75	7.86
1.348	2.95	0.65	7.86
1.517	2.43	0.56	7.86
1.685	2.00	0.49	7.86

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		

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	43190	HARPERS RUN	**1.650**	1060.00	1.53	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	0.033	0.00	0.00	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
Iselin STP	PA0092533	0.0350	0.0000	0.0000	0.000	25.00	6.60

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

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	43190	HARPERS RUN	**0.000**	912.00	2.52	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	0.033	0.00	0.00	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	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	43190	HARPERS 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												
1.650	0.05	0.00	0.05	.0541	0.01699	.352	4.97	14.1	0.06	1.685	22.59	6.75
Q1-10 Flow												
1.650	0.03	0.00	0.03	.0541	0.01699	NA	NA	NA	0.05	1.876	23.13	6.71
Q30-10 Flow												
1.650	0.07	0.00	0.07	.0541	0.01699	NA	NA	NA	0.07	1.541	22.20	6.78

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
18C	43190	HARPERS 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
1.650	Iselin STP	15.87	25.34	15.87	25.34	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
1.650	Iselin STP	1.75	3.98	1.75	3.98	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)		
1.65	Iselin STP	25	25	3.98	3.98	4	4	0	0

Attachment 3

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Iselin STP** NPDES Permit No.: **PA0092533** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **POTW Sewage**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
0.035	100	6.6						

					0 if left blank		0.5 if left blank		0 if left blank			1 if left blank	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Strea m CV	Fate Coeff	FOS	Criteri a Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L											
	Chloride (PWS)	mg/L											
	Bromide	mg/L											
	Sulfate (PWS)	mg/L											
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	mg/L	<	0.1									
	Total Antimony	µg/L											
	Total Arsenic	µg/L											
	Total Barium	µg/L											
	Total Beryllium	µg/L											
	Total Boron	µg/L											
	Total Cadmium	µg/L											
	Total Chromium (III)	µg/L											
	Hexavalent Chromium	µg/L											
	Total Cobalt	µg/L											
	Total Copper	mg/L											
	Free Cyanide	µg/L											
	Total Cyanide	µg/L											
	Dissolved Iron	µg/L											
	Total Iron	mg/L	<	0.2									
	Total Lead	µg/L											
	Total Manganese	mg/L	<	0.02									
	Total Mercury	µg/L											
	Total Nickel	µg/L											
	Total Phenols (Phenolics) (PWS)	µg/L											
	Total Selenium	µg/L											
	Total Silver	µg/L											
	Total Thallium	µg/L											
	Total Zinc	mg/L											
	Total Molybdenum	µg/L											
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										

Group 3	Carbon Tetrachloride	µg/L	<										
	Chlorobenzene	µg/L											
	Chlorodibromomethane	µg/L	<										
	Chloroethane	µg/L	<										
	2-Chloroethyl Vinyl Ether	µg/L	<										
	Chloroform	µg/L	<										
	Dichlorobromomethane	µg/L	<										
	1,1-Dichloroethane	µg/L	<										
	1,2-Dichloroethane	µg/L	<										
	1,1-Dichloroethylene	µg/L	<										
	1,2-Dichloropropane	µg/L	<										
	1,3-Dichloropropylene	µg/L	<										
	1,4-Dioxane	µg/L	<										
	Ethylbenzene	µg/L	<										
	Methyl Bromide	µg/L	<										
	Methyl Chloride	µg/L	<										
	Methylene Chloride	µg/L	<										
	1,1,2,2-Tetrachloroethane	µg/L	<										
	Tetrachloroethylene	µg/L	<										
	Toluene	µg/L	<										
	1,2-trans-Dichloroethylene	µg/L	<										
	1,1,1-Trichloroethane	µg/L	<										
	1,1,2-Trichloroethane	µg/L	<										
	Trichloroethylene	µg/L	<										
	Vinyl Chloride	µg/L	<										
Group 4	2-Chlorophenol	µg/L	<										
	2,4-Dichlorophenol	µg/L	<										
	2,4-Dimethylphenol	µg/L	<										
	4,6-Dinitro-o-Cresol	µg/L	<										
	2,4-Dinitrophenol	µg/L	<										
	2-Nitrophenol	µg/L	<										
	4-Nitrophenol	µg/L	<										
	p-Chloro-m-Cresol	µg/L	<										
	Pentachlorophenol	µg/L	<										
	Phenol	µg/L	<										
	2,4,6-Trichlorophenol	µg/L	<										
Group 5	Acenaphthene	µg/L	<										
	Acenaphthylene	µg/L	<										
	Anthracene	µg/L	<										
	Benzidine	µg/L	<										
	Benzo(a)Anthracene	µg/L	<										
	Benzo(a)Pyrene	µg/L	<										
	3,4-Benzofluoranthene	µg/L	<										
	Benzo(ghi)Perylene	µg/L	<										
	Benzo(k)Fluoranthene	µg/L	<										
	Bis(2-Chloroethoxy)Methane	µg/L	<										
	Bis(2-Chloroethyl)Ether	µg/L	<										
	Bis(2-Chloroisopropyl)Ether	µg/L	<										
	Bis(2-Ethylhexyl)Phthalate	µg/L	<										
	4-Bromophenyl Phenyl Ether	µg/L	<										
	Butyl Benzyl Phthalate	µg/L	<										
	2-Chloronaphthalene	µg/L	<										
	4-Chlorophenyl Phenyl Ether	µg/L	<										
	Chrysene	µg/L	<										
	Dibenzo(a,h)Anthrancene	µg/L	<										
	1,2-Dichlorobenzene	µg/L	<										
	1,3-Dichlorobenzene	µg/L	<										
	1,4-Dichlorobenzene	µg/L	<										
	3,3-Dichlorobenzidine	µg/L	<										
	Diethyl Phthalate	µg/L	<										
	Dimethyl Phthalate	µg/L	<										
	Di-n-Butyl Phthalate	µg/L	<										
	2,4-Dinitrotoluene	µg/L	<										

	2,6-Dinitrotoluene	µg/L	<										
	Di-n-Octyl Phthalate	µg/L	<										
	1,2-Diphenylhydrazine	µg/L	<										
	Fluoranthene	µg/L	<										
	Fluorene	µg/L	<										
	Hexachlorobenzene	µg/L	<										
	Hexachlorobutadiene	µg/L	<										
	Hexachlorocyclopentadiene	µg/L	<										
	Hexachloroethane	µg/L	<										
	Indeno(1,2,3-cd)Pyrene	µg/L	<										
	Isophorone	µg/L	<										
	Naphthalene	µg/L	<										
	Nitrobenzene	µg/L	<										
	n-Nitrosodimethylamine	µg/L	<										
	n-Nitrosodi-n-Propylamine	µg/L	<										
	n-Nitrosodiphenylamine	µg/L	<										
	Phenanthrene	µg/L	<										
	Pyrene	µg/L	<										
	1,2,4-Trichlorobenzene	µg/L	<										
Group 6	Aldrin	µg/L	<										
	alpha-BHC	µg/L	<										
	beta-BHC	µg/L	<										
	gamma-BHC	µg/L	<										
	delta BHC	µg/L	<										
	Chlordane	µg/L	<										
	4,4-DDT	µg/L	<										
	4,4-DDE	µg/L	<										
	4,4-DDD	µg/L	<										
	Dieldrin	µg/L	<										
	alpha-Endosulfan	µg/L	<										
	beta-Endosulfan	µg/L	<										
	Endosulfan Sulfate	µg/L	<										
	Endrin	µg/L	<										
	Endrin Aldehyde	µg/L	<										
	Heptachlor	µg/L	<										
	Heptachlor Epoxide	µg/L	<										
	PCB-1016	µg/L	<										
	PCB-1221	µg/L	<										
	PCB-1232	µg/L	<										
	PCB-1242	µg/L	<										
	PCB-1248	µg/L	<										
	PCB-1254	µg/L	<										
	PCB-1260	µg/L	<										
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<										
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Iselin STP, NPDES Permit No. PA0092533, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Harpers Run**

No. Reaches to Model: **1**

- (●) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	043190	1.65	1060	1.53			Yes
End of Reach 1	043190	0	912	2.52			Yes

Q 7-10

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	1.65	0.1										100	7		
End of Reach 1	0	0.1													

Q h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	1.65														
End of Reach 1	0														

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Iselin STP, NPDES Permit No. PA0092533, Outfall 001

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | ◉ All ○ Inputs ○ Results ○ Limits

☑ ***Hydrodynamics***

$Q_{7\text{-}10}$

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
1.65	0.15		0.15	0.054	0.017	0.393	6.007	15.277	0.088	1.15	0.84
0	0.25		0.252								

Q_h

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
1.65	1.44		1.44	0.054	0.017	0.938	6.007	6.404	0.265	0.38	0.388
0	2.227		2.23								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 0.840 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 6.86

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Aluminum	0	0		0	750	750	2,869	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	

☑ ***CFC*** CCT (min): 0.840 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 6.86

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	5,739	WQC = 30 day average; PMF = 1
Total Manganese	0	0		0	N/A	N/A	N/A	

☑ ***THH*** CCT (min): 0.840 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	3,826	

☑ ***CRL*** CCT (min): 0.388 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments

☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Aluminum	1.84	mg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	5.74	mg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	3.83	mg/L	Discharge Conc ≤ 10% WQBEL