pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0210510**
Facility Type	**Non-Municipal**	APS ID	**1049069**
Major / Minor	**Minor**	Authorization ID	**1385445**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Ohanna Rental Properties LLC**	Facility Name	**Ohanna Rental Properties STP**
Applicant Address	9201 State Road	Facility Address	14301 West Ridge Road
	Cranesville, PA 16410-1613		West Springfield, PA 16443
Applicant Contact	Timothy Daggett	Facility Contact	Timothy Dagget
Applicant Phone	(814) 528-3719	Facility Phone	(814) 881-1287
Applicant E Mail	tdaggett62@gmail.com	Facility E Mail	
Client ID	365948	Site ID	245005
Municipality	Springfield Township	County	Erie
Ch 94 Load Status	Not Overloaded	Connection Status	Self-Imposed Connection Prohibition
Date Application Received	February 17, 2022	EPA Waived?	Yes
Date Application Accepted	February 24, 2022	If No, Reason	
Purpose of Application	NPDES renewal and WQM transfer		

Summary of Review

This renewal is in response to a late renewal permit violation notice. The annual fee was submitted late on 18 January 2022.
There are no open violations in WMS for Client ID 365948 as of 6/12/2023. CWY

New owner without previous owner's sludge records. Moore Sanitation under contract for sludge removal.

Operator Thomas W Holtz, 814-490-5541, tnhtz@yahoo.com

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		William H. Mentzer William H. Mentzer, P.E. Environmental Engineering Specialist	May 23, 2023
X		Chad W. Yurisic Chad W. Yurisic, P.E. Environmental Engineer Manager	6/12/2023

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.0035
Latitude DP	41º 56' 55.00"	Longitude DP	-80º 29' 36.00"
Latitude NHD	41º 56' 55.13"	Longitude NHD	-80º 29' 35.54"
Quad Name	East Springfield	Quad Code	0302

Wastewater Description: Treated domestic wastes from the **Ohanna Rental Properties**

Receiving Waters	Unnamed Tributary to Turkey Creek	Stream Code	62716
NHD Com ID	123921995	RMI	0.17
Drainage Area	0.05	Yield (cfs/mi^2)	0.0163
Q_{7-10} Flow (cfs)	0.0054 (dry stream for modelling)	Q_{7-10} Basis	Conneaut & Elk Crk avg
Elevation (ft)	673.46	Slope (ft/ft)	0.00364
Watershed No.	15-A	Chapter 93 Class.	CWF, MF
Existing Use	**statewide**	Existing Use Qualifier	none
Exceptions to Use	none	Exceptions to Criteria	none

Comments: Aquatic life protection downstream at 62716 RMI 0.13, Drainage 0.74 square miles, Elevation 670.10 feet Slope 0.00364 foot/foot, and 0.012-cfs stream flow. Tributary 62716 Mouth drainage 1.77-square miles, 0.0288-cfs, Elevation 666.43 feet

Assessment Status	Aquatic life supporting		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	

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

Nearest Downstream Public Water Supply Intake	State of Ohio		
PWS Waters	Turkey Creek	Flow at Intake (cfs)	NA
PWS RMI	1.55	Distance from Outfall (mi)	1.78

Changes Since Last Permit Issuance: none

Other Comments: none

Treatment Facility Summary				
Treatment Facility Name: Ohanna Rental Properties STP				
WQM Permit No.	**Issuance Date**			
2593411	June 8, 1994			
2593411 T-1	September 29, 2010			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Septic Tank Sand Filter	Hypochlorite	0.0035
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.0035	6	Not Overloaded	Anaerobic Digestion	Other WWTP

Changes Since Last Permit Issuance: none

Other Comments: The earlier transferred WQM permit states a 0.0003-MGD mean and hydraulic design flow. The original WQM permit did not state a design flow. This flow is lower than the NPDES application 0.0035-MGD 24-hour waste that was in the original 1993 NPDES application

Month	Year	Flow MGD	Load PPD				
Annual Average Design		**0.0035**					
Hydraulic Design		**0.0030**					
Organic Design			**6.0**				
Annual Average	**2019**	**0.000675**					
	2020	**0.001103**					
	2021	**0.000730**					
High Mon Average	**2021**	**0.000883**					
pH				**6.9**		**7.2**	**48**
TRC				**0.15**	**0.22**	**0.30**	**24**
F Coliform				**1**	**52**	759	**24**
CBOD5				**2**	**3.1**	**4.3**	**24**
TSS				**2**	**4.3**	**5.25**	**24**
Amm				**0.2**	**0.653**	**1.73**	**24**
N				**0.2**	**0.678**	**0.98**	**24**
P				**0.02**	**0.137**	**0.44**	**24**
DO				**4.0**	**4.71**	**6.2**	**24**

One time high maximum fecal coliform.
a

Compliance History

DMR Data for Outfall 001 (from May 1, 2021 to April 30, 2022)

Parameter	APR-22	MAR-22	FEB-22	JAN-22	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21
Flow (MGD) Average Monthly	0.000445	0.0002130	0.000602	0.000303	0.000651	0.00064	0.0007	0.00068	0.00075	0.00059	0.00085	0.00086
pH (S.U.) Instantaneous Minimum	6.8	6.8	6.8	6.8	7.0	7.1	7.0	6.9	6.9	6.9	6.9	6.9
pH (S.U.) Instantaneous Maximum	7.1	7.2	7.1	7.4	7.4	7.4	7.4	7.6	7.4	7.1	7.2	7.3
DO (mg/L) Instantaneous Minimum	4.8	4.4	5.0	5.1	5.2	4.9	4.7	4.7	4.7	4.5	4.0	4.4
TRC (mg/L) Average Monthly	0.14	0.20	0.14	0.16	0.22	0.19	0.15	0.19	0.18	0.17	0.15	0.19
CBOD5 (mg/L) Average Monthly	< 4.0	< 4.0	< 4.0	E	< 4.0	< 4.0	< 4.0	4	3.0	< 4.0	3.0	< 4.0
TSS (mg/L) Average Monthly	6.5	5.0	< 5.0	E	< 5.0	< 5.0	< 5.0	4	4.0	< 5.0	4.0	< 5.0
Fecal Coliform (CFU/100 ml) Geometric Mean	1.0	5.0	< 1.0	E	4.0	2	4.0	6.0	1.0	187	174	1.0
Total Nitrogen (mg/L) Average Monthly	1.3	1.06	0.925	E	1.73	0.985	< 0.30	0.30	0.30	1.51	1.13	0.57
Ammonia (mg/L) Average Monthly	1.3	1.06	0.925	E	1.73	0.985	< 0.30	0.30	0.30	1.51	1.13	0.57
Total Phosphorus (mg/L) Average Monthly	0.10	0.069	0.069	E	0.206	0.187	0.216	0.169	0.147	0.098	0.111	0.064

Compliance History

No listed violations

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .0035
Latitude 41º 56' 55.27" **Longitude** -80º 29' 36.61"
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)
DO	4.0	Daily Minimum		BPJ
(Escherichia) E. coli	Monitor	Annually		BPJ

Comments: none

Water Quality-Based Limitations

A Sewage program “Reasonable Potential Analysis” determined the following parameters were candidates for limitations: Phosphorus, CBOD5, ammonia and DO. Phosphorus at 1.0-mg/L is a small flow Lake Erie basin limitation.

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

Parameter		Limit (mg/l)			SBC	Model		
Name	Perion	Minimum	Average	Maximum	NA	Minimum	Average	Maximum
CBOD5							25.0	50.0
Ammonia	summer		8.0	16.0			8.72	16.44
	winter		24.0	48.0			26.16	52.32
DO		4.0				5.0		

Comments:

The receiving waters are a tributary 62616 dry reach. Perennial stream conditions are assumed downstream at RMI 0.13 where the discharge chlorine is expected to be not detectable because of natural assimilation.

Minimum reported DO is 4.0-mgL with no known dry stream impairments. The recommend 5.0-mg/L is for trout protection in flowing streams and does not apply to dry streams.

The 5-mg/L limit is caused by the change from WQN6.3 to WQM7.0 when fish criteria evaluation became an option. In WQM6.3 the dry stream reach was evaluated separately with a 3-mg/L DO goal. In WQM 7.0 the dry stream reach could be evaluated with the perennial stream reach using a 5.0-mg/L in stream goal.

Best Professional Judgment (BPJ) Limitations

Comments: Applies to DO. A 4.0-mg/L daily minimum is reported. Minimum dry stream DO should be above 6.0-mg/L Two step modelling recommends a 4.0-mg/L daily minimum while one step modelling recommends a 5.0-mg/L daily minimum.

Anti-Backsliding

Might be applicable to ammonia as the current model raised the ammonia limitation slightly. There is no need to change the permit requirements as ammonia is less than 2-mg/L and the WQ requirements can be rounded down to the existing limitations.

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
15	62705	TURKEY CREEK	**3.160**	670.10	0.74	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	0.016	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.50	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

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
15	62705	TURKEY CREEK	**3.350**	673.85	0.05	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	0.016	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.50	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
Ohanna Rental	PA0210510	0.0035	0.0035	0.0035	0.000	20.00	7.10

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	0.10	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
15	62705	TURKEY CREEK	**3.030**	666.43	1.77	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	0.016	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.50	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

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
15	62705	TURKEY CREEK	1.550	592.05	7.01	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	0.016	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.50	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

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
15	62705	TURKEY CREEK	**0.000**	572.00	8.01	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	0.016	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.50	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 D.O.Simulation

SWP Basin	Stream Code	Stream Name
15	62705	TURKEY CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
3.350	0.004	20.000	7.135
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
1.066	0.253	4.213	0.023
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
22.04	1.474	7.61	0.700
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.417	22.050	Owens	NA
Reach Travel Time (days)			
0.504			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.050	20.46	7.35	5.78
0.101	19.00	7.10	6.03
0.151	17.64	6.85	6.23
0.202	16.37	6.61	6.41
0.252	15.20	6.38	6.57
0.302	14.11	6.16	6.72
0.353	13.10	5.95	6.86
0.403	12.16	5.74	6.99
0.454	11.29	5.54	7.11
0.504	10.49	5.35	7.23

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
3.160	0.004	20.000	7.331
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
2.802	0.265	10.574	0.023
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
5.06	1.011	1.92	0.700
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.878	20.368	Owens	5
Reach Travel Time (days)			
0.342			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.034	4.88	1.88	8.19
0.068	4.72	1.83	8.24
0.103	4.56	1.79	8.24
0.137	4.40	1.75	8.24
0.171	4.25	1.71	8.24
0.205	4.11	1.67	8.24
0.239	3.97	1.63	8.24
0.273	3.83	1.59	8.24
0.308	3.70	1.55	8.24
0.342	3.58	1.51	8.24

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
15	62705	TURKEY CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
3.030	0.004	20.000	7.406
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
3.917	0.294	13.321	0.029
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.81	0.110	0.77	0.700
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.243	19.621	Owens	5
Reach Travel Time (days)			
3.087			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.309	2.71	0.62	8.24
0.617	2.62	0.50	8.24
0.926	2.54	0.40	8.24
1.235	2.45	0.33	8.24
1.544	2.37	0.26	8.24
1.852	2.29	0.21	8.24
2.161	2.21	0.17	8.24
2.470	2.14	0.14	8.24
2.779	2.07	0.11	8.24
3.087	2.00	0.09	8.24

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
1.550	0.004	20.000	7.471
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
7.905	0.382	20.680	0.039
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.00	0.000	0.03	0.700
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.243	14.601	Owens	5
Reach Travel Time (days)			
2.435			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.243	2.00	0.02	8.24
0.487	2.00	0.02	8.24
0.730	2.00	0.02	8.24
0.974	2.00	0.01	8.24
1.217	2.00	0.01	8.24
1.461	2.00	0.01	8.24
1.704	2.00	0.01	8.24
1.948	2.00	0.01	8.24
2.191	2.00	0.01	8.24
2.435	2.00	0.00	8.24

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
15	62705	TURKEY CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
3.350	0.00	0.00	0.00	.0054	0.00374	.253	1.07	4.21	0.02	0.504	20.00	7.14
3.160	0.01	0.00	0.01	.0054	0.00535	.265	2.8	10.57	0.02	0.342	20.00	7.33
3.030	0.03	0.00	0.03	.0054	0.00952	.294	3.92	13.32	0.03	3.087	20.00	7.41
1.550	0.11	0.00	0.11	.0054	0.00245	.382	7.91	20.68	0.04	2.435	20.00	7.47
Q1-10 Flow												
3.350	0.00	0.00	0.00	.0054	0.00374	NA	NA	NA	0.02	0.518	20.00	7.12
3.160	0.01	0.00	0.01	.0054	0.00535	NA	NA	NA	0.02	0.401	20.00	7.29
3.030	0.02	0.00	0.02	.0054	0.00952	NA	NA	NA	0.02	3.777	20.00	7.37
1.550	0.07	0.00	0.07	.0054	0.00245	NA	NA	NA	0.03	3.081	20.00	7.46
Q30-10 Flow												
3.350	0.00	0.00	0.00	.0054	0.00374	NA	NA	NA	0.02	0.491	20.00	7.15
3.160	0.02	0.00	0.02	.0054	0.00535	NA	NA	NA	0.03	0.302	20.00	7.36
3.030	0.04	0.00	0.04	.0054	0.00952	NA	NA	NA	0.03	2.663	20.00	7.43
1.550	0.15	0.00	0.15	.0054	0.00245	NA	NA	NA	0.05	2.064	20.00	7.48

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	95.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
15	62705	TURKEY CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
3.350	Ohanna Rental	NA	50	14.9	42.61	2	15
3.160		NA	NA	12.36	NA	NA	NA
3.030		NA	NA	11.11	NA	NA	NA
1.550		NA	NA	9.85	NA	NA	NA

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
3.350	Ohanna Rental	NA	25	1.77	8.72	2	65
3.160		NA	NA	1.56	NA	NA	NA
3.030		NA	NA	1.48	NA	NA	NA
1.550		NA	NA	1.42	NA	NA	NA

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)		
3.35	Ohanna Rental	25	25	8.72	8.72	5	5	0	0
3.16		NA	NA	NA	NA	NA	NA	NA	NA
3.03		NA	NA	NA	NA	NA	NA	NA	NA
1.55		NA	NA	NA	NA	NA	NA	NA	NA

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
15	62705	TURKEY CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
3.350	Ohanna Rental	PA0210510	0.004	CBOD5	25		
				NH3-N	8.72	17.44	
				Dissolved Oxygen			5

1A	B	C	D	E	F	G	H	I	J	K	L	M
	Discharger		Chestnut Grove						Wednesday, May 10, 2023			
	Site		Ohanna Rental Properities STP					Revised	Wednesday, May 17, 2023			
	Municipality		Springfield Township									
	County		Erie									
	NPDES Permit		PA0210510									
	0.5											
2	**TRC EVALUATION**											
3	Input appropriate values in B4:B8 and E4:E7											
4	0.012		**= Q stream (cfs)**			**0.5**	**= CV Daily**					
5	0.0035		**= Q discharge (MGD)**			**0.5**	**= CV Hourly**					
6	30		**= no. samples**			**1**	**= AFC_Partial Mix Factor**					
7	0.3		**= Chlorine Demand of Stream**			**1**	**= CFC_Partial Mix Factor**					
8	0		**= Chlorine Demand of Discharge**			**15**	**= AFC_Criteria Compliance Time (min)**					
9			**= BAT/BPJ Value**			**720**	**= CFC_Criteria Compliance Time (min)**					
	0		**= % Factor of Safety (FOS)**				**=Decay Coefficient (K)**					
10	Source		Reference	AFC Calculations			Reference		CFC Calculations			
11	TRC		**1.3.2.iii**	WLA afc = 0.730			**1.3.2.iii**		WLA cfc = 0.704			
12	PENTOXSD TRG		**5.1a**	LTAMULT afc = 0.373			**5.1c**		LTAMULT cfc = 0.581			
13	PENTOXSD TRG		**5.1b**	LTA_afc= 0.272			**5.1d**		LTA_cfc = 0.409			
14												
15	Source					Effluent Limit Calculations						
16	PENTOXSD TRG		5.1f			AML MULT = 1.231						
17	PENTOXSD TRG		5.1g			AVG MON LIMIT (mg/l) = 0.335			AFC			
18						INST MAX LIMIT (mg/l) = 1.094						

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)

	Chlorine Required			=	perennial	Chlorine Demand	+	Chlorine Residual
Stream	Reach/Node			2	1	2		
Stream	Flow	Conditions			Dry	Perennial		
Stream	Code				62716	62716		
	Function				OUTFALL			
Samples					30	30		
reach	outfall		RMI		0.32	0.13		
	Reach End		RMI		0.13	0		
reach			feet		1003.2	686.4		
drainage			sq miles		0.05	0.74		
TRC	limitation	average	mg/L		0.031	0.335		
		maximum	mg/L		0.101	1.094		
elevation		modelled	feet		673.85	670.1		
elevation		modelled	feet		670.10	666.43		
slope		modelled	foot/foot		0.004	0.005		
low flow			cfs/sq mi		0.016	0.016		
discharge			mgd		0.0035	0.0035		
Runoff	Period		hours		24.000	24.000		

Dry stream discharge where the chlorine is expected to be not detectble prior to perennial stream conditions and aquatic life.

stream	flow		cfs	0.00082	0.01206
stream	flow		MGD	0.000527	0.007796
stream	flow	total	MGD	0.004027	0.011296
stream	chlorine	demand	mg/L	0.3	0.3
discharge	discharge	demand	mg/L		
stream	Total Stream/Waste		ratio	1.2	3.2

BAT	TRC	mean	BAT	0.5	0.5
BAT	TRC	maximum	BAT	1.6	1.6

B C D E F G H I J K L M

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
15	62705	TURKEY CREEK	**3.350**	673.85	0.05	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	0.016	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.50	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
Ohanna Rental	PA0210510	0.0035	0.0035	0.0035	0.000	20.00	7.10

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	0.10	0.00	0.70

roposed 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	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	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	4.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50.0	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	8-Hr Composite
E. Coli	XXX	XXX	XXX	Report	XXX	XXX	1/year	Grab
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
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	24.0	XXX	48.0	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	8.0	XXX	16.0	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	1.0	XXX	XXX	2/month	8-Hr Composite

Compliance Sampling Location: Outfall 001 after disinfection