pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0063479**
Facility Type	**Non-Municipal**	APS ID	**1006063**
Major / Minor	**Minor**	Authorization ID	**1377727**

Applicant and Facility Information

Applicant Name	**Weis Market Inc.**	Facility Name	**Village Center At Hamlin**
Applicant Address	1000 South Second Street	Facility Address	454 Hamlin Highway
	Sunbury, PA 17801		Hamlin, PA 18427
Applicant Contact	Gary Walters	Facility Contact	Joseph Bonamico
Applicant Phone	(570) 988-3749	Facility Phone	(570) 689-4017
Client ID	84249	Site ID	253452
Ch 94 Load Status	Not Overloaded	Municipality	Salem Township
Connection Status	-	County	Wayne
Date Application Received	November 30, 2021	EPA Waived?	Yes
Date Application Accepted	April 18, 2022	If No, Reason	-

Purpose of Application: Renewal of NPDES permit for discharge of treated sewage.

Summary of Review

The applicant is requesting the renewal of an NPDES permit to discharge up to 0.030 MGD of treated sewage into an Unnamed Tributary to West Branch Wallenpaupack Creek, a High Quality, Cold-Water Fishery, Migratory Fish (HQ-CWF, MF) receiving stream in State Water Plan Basin 1-C (Wallenpaupack Creek). As per the Department's current existing use list, the receiving stream does not have an existing use classification that is more protective than its designated use. This stream segment is not designated as a naturally reproducing trout stream as per PA Fish & Boat Commission. This discharge is not expected to affect public water supplies.

Limitations for pH and Fecal Coliform are technology-based and carried over from the previous permit.

Limitations for $CBOD_5$, Total Suspended Solids (TSS), Dissolved Oxygen (DO), and Ammonia-Nitrogen are water quality-based and carried over from the previous permit.

The Nitrate-Nitrite as N and Total Phosphors limitations were also carried over from the previous permit.

The previous permit utilized stream gage 01431500 (Lackawaxen River at Hawley, PA) as a reference gage to develop the Low Flow Yield (LFY) of 0.08 cfs/mi^2, which was used to model the discharge. A Q_{7-10} Flow of 0.0744 cfs was calculated using this gage. However, the Lackawaxen River is much larger than the small unnamed tributary that this facility discharges to and the stream gage is also relatively far away from the facility. Therefore, USGS StreamStats and the statewide default LFY of 0.1 cfs/mi^2 were also both used to model the discharge. For modeling inputs, RMI values were obtained using the "PA Historic Streams" feature of eMapPA, drainage areas were delineated using USGS's StreamStats Interactive Map, and elevations were obtained using the elevation profile feature of StreamStats.

The same drainage area of 0.93 mi^2 from the previous permit was confirmed and reused for modeling. USGS StreamStats generated a Q_{7-10} of 0.00846 cfs and was used to calculate a LFY of 0.0091 cfs/mi^2. However, the very small drainage area

Approve	Deny	Signatures	Date
X		/s/ Allison Seyfried / Project Manager	October 25, 2022
X		/s/ Amy M. Bellanca, P.E. / Environmental Engineer Manager	11-2-22

Summary of Review

in StreamStats results in a warning message stating, "One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors."

The statewide LFY resulted in a Q_{7-10} Flow of 0.093 cfs/mi^2.

WQM 7.0 modeling was conducted using both StreamStats and the statewide default. Stricter limitations were not recommended by either model.

The Total Residual Chlorine (TRC) Calculation Spreadsheet was modeled using the statewide default data due to StreamStats generating the error message regarding drainage area and the possibility of the previously used stream gage not representing the small unnamed tributary accurately. The TRC Spreadsheet did not recommend stricter limitations than the previous permit.

Sewage discharges now require monitoring and reporting for E. Coli. A monitoring frequency of 1/month for design flows >= 1 MGD, 1/quarter for design flows >= 0.05 and < 1 MGD, 1/year for design flows of 0.002 – 0.05 MGD will be utilized.

Monitoring frequencies for all parameters with limitations have been updated to the recommended frequencies found in Table 6-3 of DEP's Technical Guidance for the Development and Specification of Effluent Limitations (Document No. 362-0400-001).

The existing permit expired on May 31, 2022 and the application for renewal was received on November 30, 2021.

A Water Management System Inspection query indicated that on February 10, 2021 a Routine/Partial Inspection was performed.

There are currently four open violations for this client (one in the Clean Water Program) that may need to be resolved before issuance of the final permit:

1. 12/20/2021 - Violation ID 944711 – Violation Code 302.202 – Operator Certification – Failure to submit annual system fee (Program Specific ID: PA0063479).

2. 02/07/2022 - Violation ID 944326 – Violation Code 02– Exceeded the chemical average maximum contaminant level (Program Specific ID: SM2210852 – Safe Drinking Water).

3. 05/03/2022 - Violation ID 953854 – Violation Code 02– Exceeded the chemical average maximum contaminant level (Program Specific ID: SM2210852 – Safe Drinking Water).

4. 07/29/2022 - Violation ID 963161 – Violation Code 02– Exceeded the chemical average maximum contaminant level (Program Specific ID: SM2210852 – Safe Drinking Water).

Sludge use and disposal description and location(s): As per the permittee's NPDES Permit Renewal Application, sludge is hauled to the Hazelton Sewer Authority by Koberlein Inc.

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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.03
Latitude	41º 23' 45.27"	Longitude	-75º 25' 13.71"
Quad Name	Lake Ariel	Quad Code	0742
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to West Branch Wallenpaupack Creek (HQ-CWF)	Stream Code	5662
NHD Com ID	25927786	RMI	1.158
Drainage Area	0.93 mi^2	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.093	Q_{7-10} Basis	State-wide default
Elevation (ft)	1,402.5	Slope (ft/ft)	-
Watershed No.	1-C	Chapter 93 Class.	HQ-CWF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	SILTATION		
Source(s) of Impairment	URBAN RUNOFF/STORM SEWERS		
TMDL Status	-	Name	-
Nearest Downstream Public Water Supply Intake	Easton Area Water Systems		
PWS Waters	Delaware River	Flow at Intake (cfs)	-
PWS RMI	110.4	Distance from Outfall (mi)	~ 134

Treatment Facility Summary

Treatment Facility Name: Village Center At Hamlin

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	SBRs	Chlorination	0.002 (2018-2020)

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.03	-	Not Overloaded	Holding	Hauled

Compliance History

DMR Data for Outfall 001 (from September 1, 2021 to August 31, 2022)

Parameter	AUG-22	JUL-22	JUN-22	MAY-22	APR-22	MAR-22	FEB-22	JAN-22	DEC-21	NOV-21	OCT-21	SEP-21
Flow (MGD) Average Monthly	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.002	0.001	0.001	0.002	0.002
Flow (MGD) Daily Maximum	0.003	0.003	0.002	0.003	0.003	0.004	0.002	0.003	0.002	0.002	0.004	0.006
pH (S.U.) Minimum	7.73	7.8	7.85	7.84	7.5	7.4	7.4	7.3	7.01	8.02	7.56	7.64
pH (S.U.) Maximum	8.04	8.39	8.6	8.2	8.0	7.6	7.6	7.5	8.61	8.63	8.04	8.11
DO (mg/L) Minimum	7.17	7.21	7.07	7.7	7.58	7.36	7.39	8.06	7.44	7.4	7.13	7.12
TRC (mg/L) Average Monthly	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
TRC (mg/L) Instantaneous Maximum	< 0.10	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
CBOD5 (mg/L) Average Monthly	3.0	< 3.0	< 2.0	< 3.0	< 2.0	< 3.0	< 2.0	< 3.0	< 2.0	< 3.0	< 3.0	< 3.0
TSS (mg/L) Average Monthly	5.0	< 4.0	< 3.0	< 4.0	< 3.0	6.0	4.0	< 5.0	< 3.0	< 4.0	< 4.0	< 5.0
Fecal Coliform (CFU/100 ml) Geometric Mean	< 1	< 4	< 1	38	< 1	< 2	< 1	< 2	2	< 2	< 2	< 4
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	< 1	< 4	< 1	38	< 1	< 2	< 1	< 2	2	< 2	< 2	< 4
Nitrate-Nitrite (mg/L) Average Monthly	1.3	< 2.5	4.1	< 5.7	0.8	< 2.1	0.6	< 1.1	< 0.3	< 1.1	< 2.4	< 1.3
Ammonia (mg/L) Average Monthly	0.3	< 1.0	0.3	< 1.0	0.5	1.2	0.6	< 1.0	0.4	< 1.0	< 1.0	1.1
Total Phosphorus (lbs/day) Average Monthly	< 0.009	0.02	0.006	0.005	0.005	0.004	0.003	0.002	0.003	0.004	0.003	0.006
Total Phosphorus (mg/L) Average Monthly	< 0.5	1.5	0.4	0.3	0.2	0.5	0.2	0.3	0.2	0.2	0.2	0.3

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.03
Latitude 41º 23' 45.00" **Longitude** -75º 25' 13.00"
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
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)
E. Coli (No./100 ml)	Report	IMAX	-	92a.61

Water Quality-Based Limitations

The following limitations were determined through water quality modeling:

Parameter	Limit (mg/l)	SBC	Model
Total Residual Chlorine	0.30	Average Monthly	Previous Permit/ TRC Spreadsheet
	0.73	IMAX	
Dissolved Oxygen	7.0	Minimum	Previous Permit/Modeling
$CBOD_5$	10.0	Average Monthly	
	20.0	IMAX	
Total Suspended Solids	10.0	Average Monthly	
	20.0	IMAX	
Total Phosphorous	0.5	Average Monthly	
	1.0	IMAX	
Nitrate-Nitrite as N	17.4	Average Monthly	
	34.8	IMAX	
Ammonia-Nitrogen Nov 1 - Apr 30	4.5	Average Monthly	
	9.0	IMAX	
Ammonia-Nitrogen May 1 - Oct 31	1.5	Average Monthly	
	3.0	IMAX	

Anti-Backsliding

No limitations were made less stringent.

Modeling with State-Wide default LFY:

$$\frac{0.1\ ft^3/sec}{mi^2} \times 0.93\ mi^2 = \frac{\mathbf{0.093\ ft^3}}{\mathbf{sec}}$$

Modeling Using StreamStats:

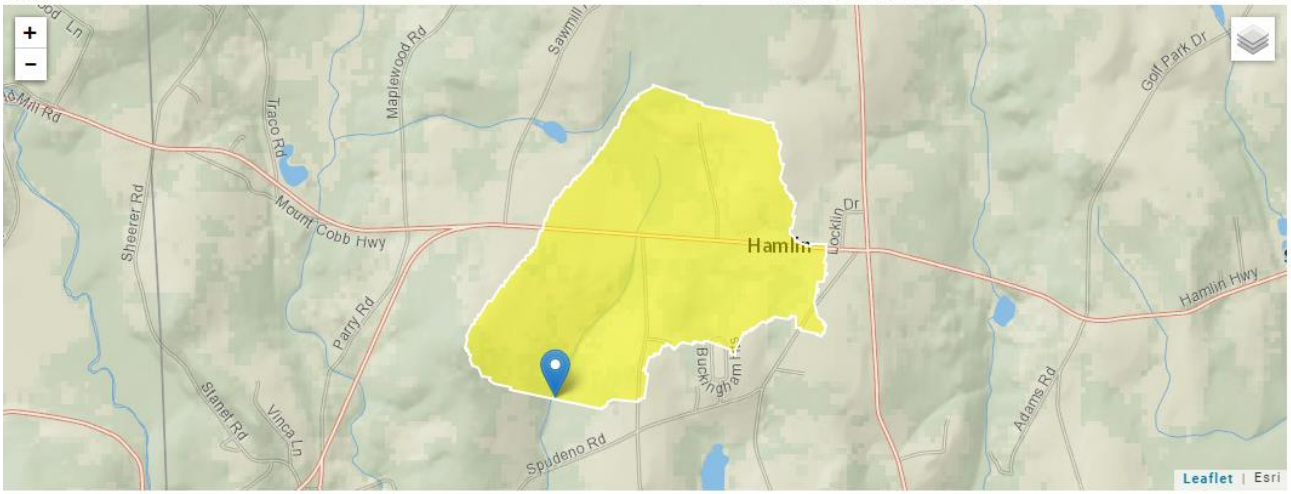
At Outfall 001 to Unnamed Tributary to West Branch Wallenpaupack Creek:

RMI	Elevation (ft)	Drainage Area (mi^2)	$Q_{7\text{-}10}$ Flow (cfs)
1.158	1,402.5	0.93	0.00846

$$Low\ Flow\ Yield\ using\ StreamStats = \frac{0.00846\ ft^3/sec}{0.93\ mi^2} = \mathbf{0.0091}\ \frac{\mathbf{ft^3/sec}}{\mathbf{mi^2}}$$

StreamStats Report

Region ID:	PA
Workspace ID:	PA20221021132646134000
Clicked Point (Latitude, Longitude):	41.39585, -75.42050
Time:	2022-10-21 09:27:05 -0400



Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.93	square miles	4.84	982
PRECIP	Mean Annual Precipitation	43	inches	33.1	47.1
GLACIATED	Percent of Glaciation	100	percent	0	100
FOREST	Percent Forest	52.6347	percent	41	100

Low-Flow Statistics Disclaimers [Low Flow Region 5]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

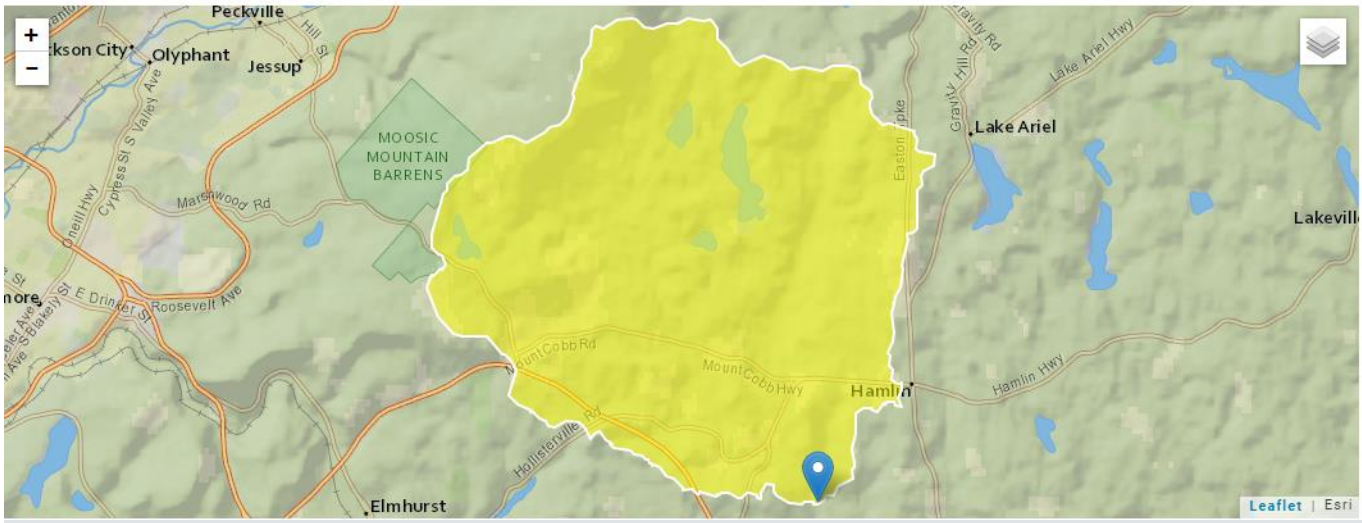
Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0351	ft^3/s
30 Day 2 Year Low Flow	0.0566	ft^3/s
7 Day 10 Year Low Flow	0.00846	ft^3/s

At confluence with West Branch Wallenpaupack Creek:

RMI	Elevation (ft)	Drainage Area (mi^2)
0.00 6.528 (On West Branch Wallenpaupack Creek)	1,287.08	32.4

StreamStats Report

Region ID:	PA
Workspace ID:	PA20221021133805232000
Clicked Point (Latitude, Longitude):	41.37993, -75.42380
Time:	2022-10-21 09:38:25 -0400



Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	32.4	square miles	4.84	982

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
01C	5662	Trib 05662 to W Br Wallenpaupack Cr

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)
1.158	Vill Ctr Hamlin	PA0063479	0.030	CBOD5	25		
				NH3-N	1.79	3.58	
				Dissolved Oxygen			5

*WQM Modeling using low Q_{7-10} from StreamStats – did not result in stricter limits

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.093	= Q stream (cfs)	0.5	= CV Daily
0.03	= 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 Discharge	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 = 0.658	1.3.2.iii	WLA cfc = 0.634
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.245	5.1d	LTA_cfc = 0.369

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.302	AFC
		INST MAX LIMIT (mg/l) = 0.987	

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)