pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NORTHCENTRAL REGIONAL OFFICE
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0024759**
Facility Type	**Sewage**	APS ID	**1075576**
Major / Minor	**Minor**	Authorization ID	**1417418**

NPDES PERMIT FACT SHEET ADDENDUM

Applicant and Facility Information

Applicant Name	**Curwensville Municipal Authority**	Facility Name	**Curwensville Municipal Authority Wastewater Treatment Plant**
Applicant Address	314 South Street	Facility Address	100 Stadium Drive
	Curwensville, PA 16833-1237		Curwensville, PA 16833-1313
Applicant Contact	Joseph Carfley	Facility Contact	David Clark
Applicant Phone	(814) 236-2631	Facility Phone	(814) 236-0582
Client ID	35027	Site ID	252525
SIC Code	4952	Municipality	Curwensville Borough
SIC Description	Trans. & Utilities - Sewerage Systems	County	Clearfield
Date Published in PA Bulletin	December 16, 2023	EPA Waived?	No
Comment Period End Date	January 14, 2024	If No, Reason	Significant CB Discharge
Purpose of Application	Application for a renewal of an NPDES permit for discharge of treated sewage.		

Internal Review and Recommendations

DEP is in receipt of comments dated December 15, 2023 submitted by GHD on behalf of the Curwensville Municipal Authority. The comments and DEP responses are as follows:

1. **Comment**: Page 4 – The correct hydraulic design capacity should be 0.8 MGD as shown in the permit renewal application and per WQM Permit No. 1713401 issued on July 19, 2013. The hydraulic design capacity shown in WQM Permit No. 1713401 A-1 issued on February 14, 2020 is incorrect and was based on an incorrect hydraulic design capacity provided in the WQM permit application for the centrifuge project. We respectfully request that DEP modify the hydraulic design capacity from 0.5 MGD to 0.8 MGD in the NPDES permit and throughout the Fact Sheet.

   Response: In response to this comment, in a January 22, 2024 email DEP requested further justification for the change from 0.5 to 0.8 MGD. The following justification was received February 12, 2024 via email from GHD on behalf of the Curwensville Municipal Authority.

   "After reviewing the permit application documents for the 2020 WQM Permit (1713401 A-1), it appears than an error was made as the application listed both the annual average design flow AND the hydraulic design capacity as 0.5 MGD instead of 0.5 MGD for the annual average design flow and 0.8 MGD for the hydraulic design capacity. The previous 2013 WQM Permit (1713401) correctly listed the hydraulic design capacity as 0.8 MGD. The 2020 WQM Permit authorized the construction of a new centrifuge which replaced the existing centrifuge at the wastewater treatment plant. This improvement to the dewatering equipment had no effect on the hydraulic design capacity of the treatment plant."

Approve	Return	Deny	Signatures	Date
X			Derek S. Garner / Project Manager	March 25, 2024
X			Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	May 31, 2024

Internal Review and Recommendations

Based on this response DEP agrees that the hydraulic design capacity should remain at 0.8 MGD. Necessary corrections have been made. DEP will coordinate issuing a revised WQM permit with the issuance of the NPDES permit.

2. **Comment**: Page 24 – The language in Part C.II.E for Headworks Analysis has reverted to the original language. If there are no significant industries currently discharging to the Authority sewer system, this paragraph should remain the same as on page 23 of the existing permit. We respectfully request that DEP reinstate the existing language in this paragraph, which states "a reevaluation of the local limits is not required at this time."

   Response: DEP has reverted the language in Part C.II.E. to the existing language as follows:

   Headworks Analysis – The permittee has reported that it currently has no significant industrial users in its system and therefore a reevaluation of the local limits is not being required at this time. Prior to accepting discharges from any user that meets the definition of significant industrial user in 40 CFR 403.3(v)(1), the permittee shall obtain approval from EPA of a reevaluation of its local limits based on a headworks analysis of its treatment plant. In order to ensure that the permittee's discharge complies with water quality standards, the reevaluation of local limits shall consider, at a minimum, all water quality standards under 25 Pa. Code Chapter 93 applicable to the pollutants included in the reevaluation, unless the POTW is subject to an effluent limitation for the pollutant in Part A of this permit. Unless otherwise approved in writing, the list of pollutants shall include arsenic, cadmium, chromium, copper, cyanide, lead, mercury, molybdenum, nickel, selenium, silver, zinc, BOD_5, TSS, ammonia, any pollutants for which a local limit currently exists, any pollutant limited in this permit, as well as any other pollutants that have been identified in the POTW in significant quantities through monitoring or the receipt of indirect discharges and hauled-in wastes. For example, facilities receiving residual waste from oil and gas operations should include pollutants such as Total Dissolved Solids (TDS), specific ions such as chlorides and sulfates, specific radionuclides, metals such as barium and strontium, and other pollutants that could reasonably be expected to be present.

3. **Comment**: Page 2 – The latitude and longitude coordinates for Outfall 001 do not match the coordinates on page 2 of the draft permit. We respectfully request that DEP correct the coordinates in the Fact Sheet to avoid future confusion.

   Response: DEP acknowledges the coordinates for Outfall 001 are 40° 58' 35.20 N, 78° 30' 52.20" W.

4. **Comment**: Pages 1-5 TMS Model – Page 5 of the NPDES permit renewal application provides actual stream Hardness and pH values upstream of Outfall 001. DEP did not take these values into consideration when the TMS was run. Inputting an average stream Hardness of 166 mg/L and a pH of 7.23 results in a Copper average monthly limit of 0.15 mg/L and a Zinc average monthly limit of 1.24 mg/L, which is contrary to DEP's TMS model run. We respectfully request that DEP use actual stream Hardness and pH in the TMS model as opposed to default values and rerun the TMS model. An excerpt of the updated TMS model is shown below.

☑ ***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
Total Copper	0.63	0.98	0.15	0.24	0.38	mg/L	0.15	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	5.16	8.05	1.24	1.93	3.09	mg/L	1.24	AFC	Discharge Conc ≥ 50% WQBEL (RP)

   Response: DEP has included the site-specific stream data and the corrected design flow in a revised run of the Toxics Management Spreadsheet. As a result, proposed total copper effluent limits are 0.098 mg/l average monthly, 0.15 mg/l daily max, and 0.24 mg/l IMAX. Proposed total zinc effluent limits are 0.8 mg/l average

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monthly, 1.25 mg/l daily max, and 2 mg/l IMAX. Loading limits have been adjusted accordingly.

Comments from U.S. EPA were received via email dated January 29, 2024. The comments and DEP's responses are as follows:

1. **Comment**: There was no WET analysis spreadsheet appended to the draft permit factsheet. There is no discussion or summary of the results from the WET testing on the factsheet either. There was only a note that no reasonable potential was determined as part of the WET tests on page 6 of the factsheet. Please send us the WET analysis spreadsheet and include a table summarizing the WET testing results so that we may complete our review.

   Response: Pages 5 and 6 of the fact sheet contain a summary of the most recent responses. DEP has provided EPA with a copy of the WET analysis spreadsheets. A review of the spreadsheets resulted in a follow-up comment via email dated January 25, 2024:

   "…page 111 of the WETT document, the WET Analysis spreadsheet did not produce T-test statistic despite the fact that the mean values were not the same for the control group vs the TIWC group. Do you know why this is the case? I would appreciate clarification on this, if possible."

   DEP is requesting that EPA contact Clean Water staff in the Central Office regarding specific inquiries into how the spreadsheet operates.

2. **Comment**: The information on the factsheet concerning the applicability of the West Branch Susquehanna TMDL to the facility's discharge is insufficient. The only related narrative is currently found on page 2 of the draft factsheet, which indicates that there is a final West Branch Susquehanna TMDL. There is no information on the factsheet to address consistency with the TMDL or any other narrative summarizing the past and current discharge levels of the TMDL pollutants of concern and whether they meet the corresponding water quality criteria (which is relevant if there are no WLAs for this discharge). Please add language to the factsheet that addresses how this permit is consistent with the West Branch Susquehanna TMDL.

   Response: A previous renewal of the permit established reporting requirements for AMD related metals (Al, Fe, and Mn) based on the West Branch Susquehanna TMDL. The sample results indicated that these three metals were present in the effluent at concentrations below criteria. The summarized maximum concentrations are as follows:

Parameter	Maximum Concentration (mg/l)
Al	0.2
Fe	0.59
Mn	0.27

   Since the metals do not approach the Chapter 93 criterion, the discharge is not expected to contribute to the West Branch Susquehanna River's impairment. Each renewal application will require the permittee to sample for TMDL-related parameters.

No comments were received from the public.

An internal review of the draft permit did not yield any comments.

Summary of Changes

1. Hydraulic design capacity on pg. 4 has been corrected from 0.5 to 0.8 MGD.
2. Pretreatment language at Part C.II.E. has been reverted to the existing language.
3. Proposed total copper effluent limits are now 0.098 mg/l average monthly, 0.15 mg/l daily max, and 0.24 mg/l IMAX.

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4. Proposed total zinc effluent limits are now 0.8 mg/l average monthly, 1.25 mg/l daily max, and 2 mg/l IMAX.
5. Loading limits for total copper and total zinc have been adjusted accordingly.

Recommendation

Based on the above changes, DEP recommends that the permit is redrafted.

Discharge Information

Instructions | Discharge | Stream

Facility: **Curwensville Municipal Authority WWTP** NPDES Permit No.: **PA0024759** Outfall No.: **001**

Evaluation Type: **Custom / Additives** Wastewater Description: **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
0.8	77	7						

				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	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Total Dissolved Solids (PWS)	mg/L		310									
Chloride (PWS)	mg/L		210									
Bromide	mg/L	<	0.362									
Sulfate (PWS)	mg/L		27									
Total Copper	µg/L		7.88									
Total Lead	µg/L	<	1.43									
Total Zinc	µg/L		66.4									
Total Aluminum	µg/L		180									
Total Phenols (Phenolics) (PWS)	µg/L		62									

Stream / Surface Water Information

Curwensville Municipal Authority WWTP, NPDES Permit No. PA0024759, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **West Branch Susquehanna River**

No. Reaches to Model: **1**

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	018668	181.86	1122	446			Yes
End of Reach 1	018668	180.1	1116	451			Yes

Q $_{7\text{-}10}$

Location	RMI	LFY (cfs/mi²)*	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	181.86	0.125										166	7.23		
End of Reach 1	180.1	0.125													

Q $_{h}$

Location	RMI	LFY (cfs/mi²)	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	181.86														
End of Reach 1	180.1														

Model Results

Curwensville Municipal Authority WWTP, NPDES Permit No. PA0024759, Outfall 001

Instructions | *Results* | RETURN TO INPUTS | SAVE AS PDF | PRINT | (●) All | ( ) Inputs | ( ) Results | ( ) Limits

☑ ***Hydrodynamics***

Q_{7-10}

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)
181.86	55.75		55.75	1.238	0.00065	1.023	125.012	122.218	0.446	0.241	779.886
180.1	56.38		56.375								

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)
181.86	249.58		249.58	1.238	0.00065	1.963	125.012	63.674	1.022	0.105	303.421
180.1	252.022		252.02								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.139 Analysis Hardness (mg/l): 153.72 Analysis pH: 7.19

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 Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	20.151	21.0	152	Chem Translator of 0.96 applied
Total Lead	0	0		0	102.796	141	1,023	Chem Translator of 0.728 applied
Total Zinc	0	0		0	168.683	172	1,250	Chem Translator of 0.978 applied
Total Aluminum	0	0		0	750	750	5,436	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	

☑ ***CFC*** CCT (min): 720 PMF: 0.961 Analysis Hardness (mg/l): 163.99 Analysis pH: 7.22

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 Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	13.667	14.2	630	Chem Translator of 0.96 applied
Total Lead	0	0		0	4.293	5.97	264	Chem Translator of 0.719 applied
Total Zinc	0	0		0	179.642	182	8,068	Chem Translator of 0.986 applied
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	

☑ ***THH*** CCT (min): 720 PMF: 0.961 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 Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	N/A	

☑ ***CRL*** CCT (min): ###### 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 Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	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
Total Copper	0.65	1.02	0.098	0.15	0.24	mg/L	0.098	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	5.35	8.34	0.8	1.25	2.0	mg/L	0.8	AFC	Discharge Conc ≥ 50% WQBEL (RP)

☑ ***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 Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Lead	264	µg/L	Discharge Conc ≤ 10% WQBEL
Total Aluminum	3,484	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)	N/A	N/A	PWS Not Applicable