pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0064025**
Facility Type	**Municipal**	APS ID	**529057**
Major / Minor	**Minor**	Authorization ID	**1322743**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**KBM Regional Authority**	Facility Name	**KBM Regional Authority WWTP**
Applicant Address	74 South Kennedy Drive	Facility Address	1056 Tresckow Road
	McAdoo, PA 18237		McAdoo, PA 18237
Applicant Contact	Terry Schwendeman	Facility Contact	Emory Toth
Applicant Phone	(570) 929-2533	Facility Phone	(570) 436-4770
Client ID	141049	Site ID	529730
Ch 94 Load Status	Not Overloaded	Municipality	Banks Township
Connection Status	No Limitations	County	Carbon
Date Application Received	August 7, 2020	EPA Waived?	No
Date Application Accepted	August 31, 2020	If No, Reason	Significant CB Discharge

Purpose of Application: Renewal of an existing NPDES sewage permit.

Summary of Review

The applicant is requesting renewal of NPDES Permit No. PA0064025 to authorize a discharge of 0.7 MGD of treated sewage from a minor sewage treatment plant into an Unnamed Tributary #27529 to Catawissa Creek (CWF, MF) in State Water Plan Watershed 04-E ("Celebration Creek"). The watershed does not have an existing use classification. The 2018 Pennsylvania Integrated Water Quality Monitoring and Assessment Report lists Catawissa Creek as 'Impaired' for Aquatic Life (Source: AMD, Cause: Metals). The discharge is not expected to affect public water supplies.

The treatment train consists of a fine screen, two SBR units, two aerobic digesters, and addition of gaseous chlorine. Caustic soda is added for pH control and ferric chloride is added for phosphorous sequestration. WQM Permit #1318401 was issued on March 29, 2018 for the addition of a Volute Dewater Press inside a new dewatering building.

In 2019, the facility discharged an average of 0.321 MGD. The highest monthly average flow of 0.460 MGD occurred in April.

The limits for Ammonia-Nitrogen and CBOD5 were established in 1999 for the original application. The limits are carried through into the new permit; water quality modeling was not performed. The limit for Total Residual Chlorine was analyzed using the Department's Total Residual Chlorine (TRC) Spreadsheet.

- The limit for average monthly TRC has been reduced from 0.46 mg/L to 0.33 mg/L. The new limit will go into effect 3-years from the effective date of the new permit.
- A requirement to monitor and report daily Dissolve Oxygen has been added to the permit.

The permit continues to include quarterly monitoring for Total Aluminum, Total Iron, and Total Manganese due to the AMD impairment noted in the Catawissa Creek Watershed TMDL.

Approve	Deny	Signatures	Date
X		Joseph Cherinko (signed) Joseph Cherinko, P.E. / Environmental Engineering Specialist	January 22, 2021
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	1-26-21

Summary of Review

Minimum measurement frequencies have been updated in accordance with Table 6-3 of DEP's Technical Guidance for the Development and Specification of Effluent Limitations.

- The minimum measurement frequency for Total Phosphorous (mg/L) has changed **from 2/month to 1/week**.
- The minimum measurement frequency for Nitrate-Nitrite as N and Total Kjedahl Nitrogen has increased from **2/month to 1/week**.
- The minimum measurement frequency for Total Nitrogen (mg/L) has increased from **1/month to 1/week**.

The Chesapeake Bay TMDL allocates the following nutrient limits to the KBM Regional Authority WWTP (Table 9-4):

- Total Nitrogen – End of Stream WLA – 13,636 lbs/yr
- Total Phosphorous – End of Stream WLA – 1,705 lbs/yr

In 2019, the facility produced 52,050 dry tons of sewage sludge. The sewage sludge was hauled by a contractor to both the CES Landfill and Hazleton Sewer Authority for disposal.

The WMS query 'Inspections' was performed. An 'Compliance Evaluation' was performed on October 14, 2020; no violations were noted. The WMS query 'Open Violations by Client Report' was performed; the applicant has no open violations.

The existing permit expires on January 31, 2021. The renewal application was due on August 4, 2020. It was marked received on August 7, 2020.

The EPA Waiver is not in effect.

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)	.7
Latitude	40º 54' 16"	Longitude	-75º 59' 52"
Quad Name	Hazleton	Quad Code	1138
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Catawissa Creek (CWF, MF)	Stream Code	27529
NHD Com ID	26284743	RMI	1.9
Drainage Area	-	Yield (cfs/mi^2)	-
Q_{7-10} Flow (cfs)	1.184	Q_{7-10} Basis	1999 Pollution Report
Elevation (ft)	1,707	Slope (ft/ft)	-
Watershed No.	5-E	Chapter 93 Class.	CWF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Catawissa Creek AMD		
Cause(s) of Impairment	Metals		
Source(s) of Impairment	Mining		
TMDL Status	Final	Name	Catawissa Creek Watershed TMDL

Changes Since Last Permit Issuance: -

Other Comments: -

Treatment Facility Summary

Treatment Facility Name: KBM Regional Authority

WQM Permit No.	Issuance Date	Scope
1301405 5401401 1301404	10/2001	Original WTP Construction
1318401	3/2018	Addition of Volute Dewater Press

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Sequencing Batch Reactor	Chlorine Gas	0.321 (2019)

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.700	1,897	Not Overloaded	Pressure Filtration	Landfill

Changes Since Last Permit Issuance: Addition of Volute Dewater Press.

Other Comments: -

Compliance History

DMR Data for Outfall 001 (from December 1, 2019 to November 30, 2020)

Parameter	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19
Flow (MGD) Average Monthly	0.263	0.253	0.219	0.267	0.376	0.398	0.365	0.379	0.264	0.284	0.290	0.269
Flow (MGD) Daily Maximum	0.626	0.801	0.394	0.837	1.44	2.468	1.765	1.21	0.391	0.589	0.817	0.407
pH (S.U.) Minimum	6.82	6.80	6.76	6.71	6.60	6.64	6.60	6.64	6.70	6.70	6.75	6.80
pH (S.U.) Maximum	6.91	6.95	6.90	6.81	6.81	6.87	6.75	6.75	6.76	6.83	6.88	6.92
TRC (mg/L) Average Monthly	0.33	0.33	0.33	0.32	0.33	0.33	0.33	0.33	0.33	0.33	0.34	0.33
TRC (mg/L) Instantaneous Maximum	0.37	0.39	0.37	0.35	0.38	0.37	0.40	0.37	0.37	0.38	0.39	0.37
CBOD5 (lbs/day) Average Monthly	13.2	12.7	11.0	13.3	18.8	19.9	18.3	19.0	13.2	14.5	14.5	13.5
CBOD5 (lbs/day) Weekly Average	13.7	19.0	13.2	19.9	30.4	36.5	21.8	28.8	14.4	18.0	16.7	14.6
CBOD5 (mg/L) Average Monthly	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.14	6.0	6.0
CBOD5 (mg/L) Weekly Average	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.54	6.0	6.0
BOD5 (mg/L) Raw Sewage Influent Average Monthly	122	195	223	211	153	155	206	145	369	161	238	241
BOD5 (mg/L) Raw Sewage Influent Weekly Average	168	248	272	244	199	219	298	196	619	251	429	391
TSS (lbs/day) Average Monthly	11.0	10.6	9.1	11.1	18.8	16.6	15.2	15.8	11.0	11.8	12.1	11.2
TSS (lbs/day) Weekly Average	11.4	15.8	11.0	16.6	25.3	30.4	18.1	24.0	12.0	14.0	13.9	12.1
TSS (mg/L) Average Monthly	5.0	5.0	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
TSS (mg/L) Raw Sewage Influent Average Monthly	219	188	223	160	140	161	273	137	351	227	170	150

TSS (mg/L) Raw Sewage Influent Weekly Average	624	220	346	210	187	300	361	270	830	490	300	250
TSS (mg/L) Weekly Average	5.0	5.0	5.0	5.0	10.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Fecal Coliform (CFU/100 ml) Geometric Mean	1.0	1.0	1.0	1	1.0	1.0	1	1	1	1	1	1
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	1.0	1.0	1.0	1	1.0	1.0	1	1	1	1	1	1
Nitrate-Nitrite (mg/L) Average Monthly	1.29	0.66	0.81	0.68	1.1	0.996	0.97	1.15	1.25	1.39	1.89	6.62
Nitrate-Nitrite (lbs) Total Monthly	76.2	34.3	44.5	38.7	82.3	75.2	80.4	106.8	91.3	82.4	124.6	384.4
Total Nitrogen (mg/L) Average Monthly	2.29	1.66	2.31	2.37	2.23	2.42	3.23	2.91	2.74	2.73	3.01	8.63
Total Nitrogen (lbs) Effluent Net Total Monthly	135.7	86.6	129.5	134.6	163.2	148.7	233.5	259.6	212.6	160.2	198.6	500.1
Total Nitrogen (lbs) Total Monthly	135.7	86.6	129.5	134.6	163.2	148.7	233.5	259.6	212.6	160.2	198.6	500.1
Total Nitrogen (lbs) Effluent Net Total Annual			3256									
Total Nitrogen (lbs) Total Annual			3256									
Ammonia (lbs/day) Average Monthly		1.2	0.63	1.05	1.07	3.3	2.6					
Ammonia (mg/L) Average Monthly	0.317	0.58	0.347	0.471	0.34	0.996	0.86	0.546	0.308	0.221	0.252	0.2
Ammonia (lbs) Total Monthly	135.7	50.7	20.5	25.7	25.0	282.2	53.5	46.2	19.5	16.3	15.9	12.3
Ammonia (lbs) Total Annual			561									
TKN (mg/L) Average Monthly	1.0	1.0	1.5	1.69	1.13	1.2	2.26	1.76	1.49	1.35	1.12	2.01
TKN (lbs) Total Monthly	59.5	52.4	85.0	95.9	80.9	73.5	153.1	152.9	121.3	77.8	73.9	115.8
Total Phosphorus (mg/L) Average Monthly	0.795	0.27	0.42	0.253	0.322	0.21	0.135	0.273	0.674	0.671	1.15	1.1

Total Phosphorus (lbs) Effluent Net Total Monthly	47.1	14.1	23.3	55.9	23.1	12.9	11.0	23.8	49.0	39	76	64
Total Phosphorus (lbs) Total Monthly	47.1	14.1	23.3	14.3	23.1	12.9	11.0	23.8	49.0	39	76.0	64.0
Total Phosphorus (lbs) Effluent Net Total Annual			433									
Total Phosphorus (lbs) Total Annual			433									
Total Aluminum (mg/L) Average Quarterly			0.100			0.100			0.1			0.1
Total Iron (mg/L) Average Quarterly			0.063			0.171			0.118			0.099
Total Manganese (mg/L) Average Quarterly			0.020			0.060			0.050			0.020

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .695
Latitude 40º 54' 16" **Longitude** -75º 59' 52"
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)

Water Quality-Based Limitations

The following limitations were determined through water quality modeling:

Parameter	Limit (mg/l)	SBC	Model
Total Residual Chlorine	0.33	Average Monthly	TRC Spreadsheet
	1.1	IMAX	1999 Pollution Report / TRC Spreadsheet
Ammonia-Nitrogen May 1 – Oct 31	9.3	Average Monthly	1999 Pollution Report
	18.6	IMAX	1999 Pollution Report