

Application Type Renewal
Facility Type Non-Municipal
Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0090557
APS ID 1059686
Authorization ID 1389933

Applicant and Facility Information

Applicant Name	<u>Beaver Valley Healthcare & Rehabilitation Center</u>	Facility Name	<u>Beaver Valley Healthcare & Rehabilitation Center</u>
Applicant Address	<u>257 Georgetown Road</u> <u>Beaver Falls, PA 15010-9740</u>	Facility Address	<u>257 Georgetown Road</u> <u>Beaver Falls, PA 15010-9740</u>
Applicant Contact	<u>Paul Mwambu</u>	Facility Contact	<u>Paul Mwambu</u>
Applicant Phone	<u>(724) 846-8200</u>	Facility Phone	<u>(724) 846-8200</u>
Client ID	<u>340540</u>	Site ID	<u>254456</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>South Beaver Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Beaver</u>
Date Application Received	<u>March 16, 2022</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u></u>	If No, Reason	<u></u>
Purpose of Application	<u>NPDES permit renewal application.</u>		

Summary of Review

The PA Department of Environmental Protection (PADEP/Department) received an NPDES permit renewal application from Beaver Valley Healthcare & Rehabilitation Center (permittee) on March 16, 2022 for permittee's Beaver Valley Healthcare & Rehabilitation Center (facility). The facility discharges treated effluent through Outfall 001 into a dry swale/storm sewer to an UNT to Painter Run (HQ-CWF) in state watershed 20-B. The current permit will expire on October 31, 2022. The terms and conditions of the current permit is automatically extended since the renewal application was received at least 180 days prior to the expiration date. Renewal NPDES permit applications under Clean Water program are not covered by PADEP's PDG per 021-2100-001.


This fact sheet is developed in accordance with 40 CFR §124.56.

Changes in this renewal: E. Coli monitoring added

Sludge use and disposal description and location(s): Liquid sludge is hauled off to Monaca WPC.

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
√		Reza H. Chowdhury, E.I.T. / Project Manager 	August 20, 2022
X		Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	08/20/2022

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.015
Latitude	40° 45' 3.4"	Longitude	-80° 25' 48"
Quad Name	New Galilee	Quad Code	1202
Wastewater Description: Sewage Effluent			
Receiving Waters	UNT to Painter Run (swale/storm sewer)	Stream Code	33391
NHD Com ID	99677440	RMI	
Watershed No.	20-B	Chapter 93 Class.	HQ-CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	Name		
Nearest Downstream Public Water Supply Intake	None before PA-OH border.		
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: None

Treatment Facility Summary				
Treatment Facility Name: Beaver Valley Nursing Center STP				
WQM Permit No.	Issuance Date			
367S019	9/8/1967			
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Activated Sludge	Hypochlorite	0.015
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.015	30	Not Overloaded		

Changes Since Last Permit Issuance: Permit transferred on February 26, 2019

Other Comments:

Beaver Valley Healthcare & Rehabilitation Center is a minor non-municipal sewage treatment plant. The facility was permitted to be built in 1967. It's an extended aeration activated sludge system with tablet chlorination. The treated effluent is discharged into a storm sewer/dry swale and travels approximately 0.4 miles before reaching to an UNT to Painter Run which is a High-Quality Trout Stocking (HQ-TSF) waterbody. Since the facility was built prior to implementation of Antidegradation policy and Dry Stream Guidance, none of them are applicable to this facility. Nonetheless, the current limits were based on Antidegradation and are comparable to Dry Stream limits for most

parameters. A modeling is not performed during this renewal since it is unknown at which point the water quality must be met. A Point of First Use survey may be conducted in the future to identify the POFU downstream of the discharge point.

Since there is no change in the treatment plant operation, influent quality, or receiving stream designation, the existing limits may be carried over.

Per most recent inspection report, the treatment facility consists of two EQ tanks, three aeration basins, two secondary clarifiers, one dosing tank, two sand filters, one chlorine contact tank, one sludge holding tank, and one grease trap.

Existing Limits								
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)	0.015	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	9.0	XXX	5/week	Grab
Dissolved Oxygen	XXX	XXX	3.0	XXX	XXX	XXX	5/week	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	1.6	5/week	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	10	XXX	20	2/month	Grab
Total Suspended Solids	XXX	XXX	XXX	10	XXX	20	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
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	9.0	XXX	18.0	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	3.0	XXX	6.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Compliance History

DMR Data for Outfall 001 (from July 1, 2021 to June 30, 2022)

Parameter	JUN-22	MAY-22	APR-22	MAR-22	FEB-22	JAN-22	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21
Flow (MGD) Average Monthly	0.008	0.009	0.010	0.009	0.010	0.008	0.009	0.009	0.009	0.008	0.010	0.0085
pH (S.U.) Instantaneous Minimum	7.41	7.16	7.1	7.0	7.2	7.3	7.15	7.3	7.28	7.3	7.11	7.05
pH (S.U.) IMAX	7.77	7.65	7.45	7.33	7.55	7.66	7.7	7.72	7.85	7.77	7.92	8.16
DO (mg/L) Instantaneous Minimum	6.65	8.3	8.37	8.55	8.6	8.43	8.36	8.4	8.24	8.09	8.13	7.7
TRC (mg/L) Average Monthly	0.23	0.24	0.21	0.12	0.13	0.26	0.5	0.19	0.26	< 0.16	0.17	0.16
TRC (mg/L) IMAX	0.73	0.72	0.55	0.24	0.34	0.65	0.67	0.9	0.92	0.44	0.49	0.74
CBOD5 (mg/L) Average Monthly	3.1	4.5	4.4	< 3.0	< 2.2	4.7	4.4	4.3	7.5	5.0	< 3.5	5.1
CBOD5 (mg/L) IMAX	4.0	4.9	4.7	4.0	2.3	5.2	5.6	5.9	8.2	5.1	4.9	7.1
TSS (mg/L) Average Monthly	2	2	< 1.2	2.0	< 1.0	< 1.0	< 1.0	< 1.0	3.0	< 1.0	< 1.0	4.0
TSS (mg/L) IMAX	2	3	1.4	2.0	< 1.0	< 1.0	< 1.0	1.0	4.0	< 1.0	1.0	5.0
Fecal Coliform (No./100 ml) Geometric Mean	< 1.0	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 3	< 1.0	< 1.0	< 1
Fecal Coliform (No./100 ml) IMAX	< 1.0	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2	10	< 1.0	< 1.0	< 1
Total Nitrogen (mg/L) Daily Maximum							32.9					
Ammonia (mg/L) Average Monthly	< 0.3	< 0.3	< 0.34	0.51	< 0.31	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Ammonia (mg/L) IMAX	< 0.3	< 0.3	0.38	0.55	0.32	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Total Phosphorus (mg/L) Daily Maximum							4.39					

Inspection summary

July 1, 2021: CEI conducted, DMR reports evaluated. Several DMR violations noted. An NOV was issued on July 9, 2021.

September 8, 2016: CEI conducted. No violation noted. Recommended to submit application for permit transfer, conduct routine DO measurements, and ensure more frequent rotation and adequate raking of sand filters.

May 17, 2017: Admin review conducted. No violation noted during the review.

Development of Effluent Limitations

Outfall No. <u>001</u>	Design Flow (MGD) <u>0.015</u>
Latitude <u>40° 46' 3.00"</u>	Longitude <u>-80° 25' 48.00"</u>
Wastewater Description: <u>Sewage Effluent</u>	

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)

Water Quality-Based Limitations

As stated in page 2-3 of this report, the existing limits will be carried over. The above TBELs apply, in addition to CBOD₅ and TSS anti-degradation limit of 10 mg/l as average monthly and 20 mg/l as IMAX. The previous protection report stated that the NH₃-N dry season limit of 3.0 mg/l as average monthly and 9.0 mg/l as IMAX were based on previous modeling efforts/protection report, no POFU survey report was identified. Without POFU survey, a modeling may not be performed in an anticipated dry stream/storm sewer. However, anti-deg guidance lists seasonal ammonia-N limits as: from May 1- Oct 31 for flow between 2,000 GPD to 50,000 GPD, average monthly limit is 3.0 mg/l. For Nov 1- Apr 30, this limit is 9.0 mg/l. These limits align with existing limit and will be carried over.

All existing limits will be carried over.

E. Coli:

DEP's SOP titled "Establishing Effluent Limitations for Individual Sewage Permits (BCW-PMT-033, revised March 24, 2021) recommends annual E. Coli monitoring for sewage dischargers with design flows of 0.002-0.05 MGD. This requirement will be applied from this permit term.

Anti-Backsliding

The proposed limits are as least as stringent as current limits, therefore anti-backsliding isn't applicable.

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" (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)	0.015	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	5/week	Grab
DO	XXX	XXX	3.0 Inst Min	XXX	XXX	XXX	5/week	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	5/week	Grab
CBOD5	XXX	XXX	XXX	10	XXX	20	2/month	Grab
TSS	XXX	XXX	XXX	10	XXX	20	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/year	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	9.0	XXX	18.0	2/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	3.0	XXX	6.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Compliance Sampling Location: At Outfall 001

Other Comments: None