pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0228885**
Facility Type	**Municipal**	APS ID	**1008560**
Major / Minor	**Minor**	Authorization ID	**1300336**

Applicant and Facility Information

Applicant Name	**Burnside Borough Clearfield County**	Facility Name	**Burnside Borough Sewage System**
Applicant Address	PO Box 208	Facility Address	2nd Avenue
	Burnside, PA 15721		Burnside, PA 15721
Applicant Contact	Richard Hoover, Operator	Facility Contact	Richard Hoover, Operator
Applicant Phone	(724) 840-6907	Facility Phone	(724) 840-6907
Client ID	206081	Site ID	459524
Ch 94 Load Status	Not Overloaded	Municipality	Burnside Borough
Connection Status	No Limitations	County	Clearfield
Date Application Received	December 23, 2019	EPA Waived?	Yes
Date Application Accepted	December 31, 2019	If No, Reason	

Purpose of Application: Renewal of a NDPES permit

Summary of Review

The subject facility is a Publicly Owned Treatment Works (POTW) serving Burnside Borough in Clearfield County. A map of the discharge location is attached.

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
✓		Keith C. Allison / Project Manager	February 24, 2020
		Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.04
Latitude	40º 48' 32.01"	Longitude	-78º 47' 10.28"
Quad Name	Burnside, PA	Quad Code	1215
Wastewater Description:	Sewage Effluent		
Receiving Waters	West Branch Susquehanna River (WWF, MF)	Stream Code	18668
NHD Com ID	61834923	RMI	220.9700
Drainage Area	99.8 mi^2	Yield (cfs/mi^2)	0.0886
Q_{7-10} Flow (cfs)	8.84	Q_{7-10} Basis	USGS Gauge 01541000, W. Br. Susquehanna River @ Bower, PA (1915-2008)
Elevation (ft)	1315	Slope (ft/ft)	Undetermined
Watershed No.	8-B	Chapter 93 Class.	WWF, MF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	METALS, SILTATION		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final	Name	West Branch Susquehanna
Nearest Downstream Public Water Supply Intake	Shawville Power Plant		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	1,953,000
PWS RMI	164.2	Distance from Outfall (mi)	Approx. 56

Changes Since Last Permit Issuance: None. The above stream and drainage characteristics were determined for the previous review and remain adequate.

Other Comments: As a result of the impairment to the West Branch Susquehanna River by AMD, the current NPDES permit includes monitoring for the metals typically associated with AMD. Monitoring for Total Aluminum, Total Iron, and Total Manganese over the past permit term have averaged 0.0525 mg/L, 0.11 mg/L, and 0.025 mg/L, respectively, which are all below their respective instream criteria (0.75 mg/L, 1.5 mg/L, and 1.0 mg/L, respectively). Therefore, the levels of these metals in the effluent have been adequately characterized at this time and the monitoring for them will be removed from this draft NPDES permit. The discharge is not specifically identified as contributor to the impairment in the West Branch Susquehanna River Watershed TMDL.

No downstream water supply is expected to be affected by the discharge at this time with the monitoring and limitations proposed.

Treatment Facility Summary				
Treatment Facility Name: Burnside Borough STP				
WQM Permit No.	**Issuance Date**			
1705409	3/28/2006			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Extended Aeration	Ultraviolet	0.04
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.04	80	Not Overloaded	Dewatering	Land Application

Changes Since Last Permit Issuance: None

Other Comments: The treatment facility, as approved by WQM Permit No. 7105409, consists of a grinder unit with bypass bar screen, 1,800-gallon surge tank, two 20,000-gallon aeration tanks, two 3,330-gallon clarifiers, a 4,000-gallon clarifier, ultraviolet light disinfection, post-aeration, 10,000-gallon aerobic digester, and belt filter press. The facility has apparently not been pressing sludge since around 2012.

Hauled-in Waste

Per the application, the permittee has not received any hauled-in wastes over the past three years and does not anticipate receiving any over the next permit term.

Sludge/Biosolids Disposal

The facility's digested sludge is transferred to the Muddy Run Regional Authority facility operating under WQM Permit No. 1705402 for further processing. Per the application, approximately 1.338 tons of sludge were removed in the past year.

Compliance History

DMR Data for Outfall 001 (from January 1, 2019 to December 31, 2019)

Parameter	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19
Flow (MGD) Average Monthly	0.025	0.0168	0.0103	0.009	0.0079	0.0063	0.0108	0.0099	0.0106	0.0099	0.0175	0.0092
Flow (MGD) Daily Maximum	0.052	0.099	0.0261	0.019	0.018	0.0117	0.0187	0.0193	0.022	0.0163	0.0358	0.015
pH (S.U.) Minimum	7.3	7.3	7.3	7.2	7.3	7.3	7.3	7.0	7.3	7.4	7.6	7.0
pH (S.U.) Maximum	7.4	7.4	7.6	7.6	7.7	7.5	7.6	7.6	7.5	7.6	7.6	7.6
DO (mg/L) Minimum	6.3	6.2	6.0	6.2	6.3	6.2	6.1	6.3	6.0	6.0	6.0	6.0
CBOD5 (lbs/day) Average Monthly	1	0.3	0.2	0.4	0.02	0.2	0.2	0.3	0.2	0.5	0.7	0.5
CBOD5 (lbs/day) Weekly Average	2	0.3	0.2	0.5	0.02	0.3	0.2	0.5	0.2	0.5	0.8	0.6
CBOD5 (mg/L) Average Monthly	5	3	3	6	3	4	3	3	3.0	6	6	6.0
CBOD5 (mg/L) Weekly Average	6	4	3	7	3	4	3	4	3.0	5	7	7.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	17	17	11	10	13	22	11	12	16	14	20	16
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	18	23	18	11	13	39	13	16	23	16	23	17
BOD5 (mg/L) Raw Sewage Influent Average Monthly	73	202	164	156	175	301	120	140	218	166	190	190
TSS (lbs/day) Average Monthly	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.2	0.2	1	0.7
TSS (lbs/day) Raw Sewage Influent Average Monthly	12	20	26	19	23	18	9	11	9.0	10	14	10
TSS (lbs/day) Raw Sewage Influent Daily Maximum	13	35	39	27	24	34	13	17	14	10	24	17
TSS (lbs/day) Weekly Average	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.9	0.2	0.2	1	0.7

TSS (mg/L) Average Monthly	1	2	3	4	5	3	2	6	2.0	2	9	9.0
TSS (mg/L) Raw Sewage Influent Average Monthly	52	202	369	284	317	251	108	106	128	110	127	127
TSS (mg/L) Weekly Average	2	2	4	4	7	5	2	7	2.0	3	9	9.0
Fecal Coliform (No./100 ml) Geometric Mean	1	1	1	1	1	1	1.0	3	3.0	1	1	1.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	1	1	1	1	1	1	1.0	10	10	1	1	1.0
UV Transmittance (%) Minimum	100	100	100	100	100	100	100	100	100	100	100	100
Ammonia (lbs/day) Average Monthly	0.02	0.01	0.007	0.1	0.03	0.006	0.1	0.007	0.008	0.02	0.001	0.008
Ammonia (mg/L) Average Monthly	0.01	0.1	0.1	0.008	0.67	0.1	1.0	0.1	0.12	0.8	0.01	0.1

Compliance History, Cont'd	
Summary of Inspections:	The facility has been inspected approximately annually by the Department over the past permit term. The most recent inspection on December 27, 2019 identified no violations at the time of inspection.
Comments:	A query in WMS found no open violations in eFACTS for Burnside Borough. The permittee received a December 4, 2019 Notice of Violation for failure to submit timely NPDES application.

Existing Effluent Limitations and Monitoring Requirements

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	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Weir
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report	XXX	XXX	XXX	1/day	Grab
CBOD5	8	13	XXX	25	40	50	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS	10	15	XXX	30	45	60	2/month	8-Hr Composite
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
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/year	8-Hr Composite
Ammonia	Report	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	1/year	8-Hr Composite
Total Aluminum	XXX	XXX	XXX	Report	XXX	XXX	1/year	8-Hr Composite
Total Iron	XXX	XXX	XXX	Report	XXX	XXX	1/year	8-Hr Composite
Total Manganese	XXX	XXX	XXX	Report	XXX	XXX	1/year	8-Hr Composite

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.04
Latitude 40º 48' 30.00" **Longitude** -78º 47' 10.00"
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
$CBOD_5$	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)

Comments: The above limitations are applicable and included in the existing permit.

Water Quality-Based Limitations

CBOD5, NH3-N & DO

The WQM7.0 model allows the Department to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD ($CBOD_5$), and ammonia nitrogen (NH_3-N) into free-flowing streams and rivers. However, modeling was not performed at this time due to the considerable dilution available in the West Branch Susquehanna River (~100:1 at Q_{7-10} conditions) and therefore, the secondary treatment limits listed above should be adequate to protect the receiving stream.

Ultraviolet Light Disinfection

UV percent transmittance is monitored to demonstrate effectual disinfection of the wastewater.

Toxics Management

No further “Reasonable Potential Analysis” was performed at this time to determine additional parameters as candidates for limitations or monitoring for this minor sewage treatment facility with no industrial dischargers.

Chesapeake Bay/Nutrient Requirements

According to the Pennsylvania’s Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, this facility is considered an existing Phase 5 Chesapeake Bay sewage discharger, and as such requires no nutrient loading limits. Per a review of the facility DMRs over the past permit term the Total Nitrogen has averaged 7.24 mg/L and 0.945 lbs/day, and the Total Phosphorus has averaged 1.62 mg/L and 0.14 lbs/day. Because the nutrients levels in the discharge have adequately been characterized at this time, the existing annual Total Nitrogen and Total Phosphorus monitoring will be removed from this proposed draft permit consistent with the Phase III Wastewater Implementation Plan (WIP).

Best Professional Judgment (BPJ) Limitations

Comments: No additional BPJ limits are necessary for this discharge at this time beyond the technology-based limitations noted above.

Anti-Backsliding

No proposed limitations were made less stringent consistent with the anti-degradation requirements of the Clean Water Act and 40 CFR 122.44(l).

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	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Weir
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report	XXX	XXX	XXX	1/day	Grab
CBOD5	8	13	XXX	25.0	40.0	50	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS	10	15	XXX	30.0	45.0	60	2/month	8-Hr Composite
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
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Ammonia	Report	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite

Compliance Sampling Location: Outfall 001

Other Comments: The above limitations are unchanged from the existing permit with the exception of the removal of monitoring for Total Aluminum, Total Iron, Total Manganese, Total Nitrogen, and Total Phosphorus as mentioned above. Due to the typically low levels of ammonia-nitrogen seen in the effluent (see data on page 5), the monthly monitoring will remain instead of an increase to twice per month as recommended by the Department's guidance. Also, the Average Monthly and Average Weekly concentration limits for TSS and CBOD5 have an additional decimal place included for consistency with the requirements of WMS and ICIS.

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	PENTOXSD for Windows Model (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis Spreadsheet (see Attachment)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☒	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☒	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☒	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☒	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: Establishing Effluent Limitations for Individual Sewage Permits, rev. 1/6/20
☐	Other:

Attachment:

- **Discharge Location Map**

Permit No. PA0228885