



---

west virginia department of environmental protection

---

Division of Water and Waste Management  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
Phone: 304-926-0495 / Fax: 304-926-0463

Harold D. Ward, Cabinet Secretary  
dep.wv.gov

**MEMORANDUM**

**To:** Marie Prezioso, Chair  
Funding Committee  
Infrastructure and Jobs Development Council

**From:** Katheryn Emery, P. E.  
Sewer Technical Review Committee

**Date:** January 16, 2023

**Subject:** Buffalo Creek PSD  
Preliminary Application: IJDC No. 2022S-2168  
Wastewater Treatment Plant Upgrade and Collection System Extensions

---

1. This committee has reviewed the preliminary application and engineering report submitted for the above referenced project in accordance with Chapter 31, Article 15A. It has been determined that the proposed project is:
  - a.  Consistent with the intent of the Infrastructure and Jobs Development Act and is the most cost-effective, environmentally sound alternative for solving the wastewater needs in this area.
  - b.  Not consistent with the Act and may not be the most cost effective, environmentally sound alternative for solving the wastewater needs in this area.
  - c.  Same as (a) above except that certain issues need to be addressed prior to design and construction as the attached comments indicate.
2. Our recommendation is that:
  - a.  The Funding Committee needs to review the proposed sources of funding to determine the best mix of grant and/or loan funds in accordance with applicable guidelines.

- b.  The Funding Committee should recommend that the Council approve the proposed project and its funding plan.
- c.  The Funding Committee does not need to review the funding assumptions on this project because of deficiencies in the engineering report. The proposed project funding should be returned until technical comments have been resolved.
- d.  This project should be referred to the Consolidation Committee.

3. Other remarks:

It is recommended that this application be returned to allow time to address the deficiencies/comments.

Attachments: Technical Comments

Engineering Fees:

Estimated construction cost =	\$14,502,500
Consultant's design fee =	\$ 500,000
Consultant's total fee =	\$ 1,100,000
Design fee percentage =	3.4 %
Design fee per ASCE curve =	unknown(off the curve but appears to be under)
Total fee percentage =	7.6 %
Total fee per ASCE curve =	unknown(off the curve but appears to be under)

Preliminary Project Ratings:

1. Public Health Benefits	15
3. Compliance with Standards	20
5. O & M Capabilities	0
6. Readiness to Proceed	0
8. Cost Effectiveness	0
10. Compliance with PSC Orders	0



STATE OF WEST VIRGINIA  
DEPARTMENT OF HEALTH AND HUMAN RESOURCES

Bureau for Public Health  
Office of Environmental Health Service

Ayne Amjad, MD, MPH  
Acting Commissioner & State Health Officer

Jeffrey H. Coben, MD  
Interim Cabinet Secretary

**MEMORANDUM**

**TO:** Jason Billups, P.E.  
DEP/Infrastructure Sewer Technical Review Committee

**FROM:** William S. Herold, Jr., P.E., Assistant Manager  
I/CD/Environmental Engineering Division

**DATE:** January 13, 2023

**SUBJECT:** Buffalo Creek PSD  
Preliminary Application **Project No.: 2022S-2168**  
Plant Upgrade/Line Extension  
Logan County

---

**RECOMMENDATION:**

We have reviewed this preliminary application and recommend it be forwarded to the Funding Committee for review.

**PROJECT SCOPE:**

This preliminary application is to extend sewage service to approximately 178 customers in the Greenville & Landville areas and to expand/upgrade the existing 0.75 MGD RBC Buffalo Creek WWTP to a 1.50 MGD Captavitor/VLR WWTP. The project will consist of the installation of approximately 13,000 LF of 8", and 4,080 LF of 6" sewer line, approximately 81 manholes, approximately 18 cleanouts, replace three (3) sewage lift stations, add four (4) sewage lift stations, add two (2) grinder pump stations, and add approximately 900 LF of 12", 1,600 LF of 6", 5,220 LF of 4", and 350 LF of 2" force main. The existing 0.75 MGD RBC Buffalo Creek WWTP will be expanded/ upgraded to a 1.50 MGD Captavitor/VLR WWTP.

The construction cost per customer for the line extensions will be **\$38,764**. The cost per customer for the entire project is **\$7,626**. Total estimated project cost is **\$16,602,500** (CWSRF Loan: **\$8,301,250 @ 1.75% for 30 years** and CWSRF Principal Forgiveness: **\$8,301,250**).

**NEED FOR PROJECT:**

The Preliminary Engineering Report indicates customers in the Greenville & Landville areas do not have community sewage collection & treatment facilities and may be discharging untreated wastewater directly into area streams. The Buffalo Creek PSD has a DEP Draft Consent Order that requires existing and future flows be addressed at the existing WWTP by increasing the design capacity.

**CONCERNS:**

None.

**PERMITS:**

A permit **will not be** required from the WV Bureau for Public Health prior to construction since CWSRF funds are proposed.



---

west virginia department of environmental protection

---

Division of Water and Waste Management  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
Phone: 304-926-0495 / Fax: 304-926-0463

Harold D. Ward, Cabinet Secretary  
dep.wv.gov

**MEMORANDUM**

**TO:** Kathy Emery, P.E., Director, DWWM

**FROM:** Daniel S. Bailey, E.I., CFM, DWWM

**DATE:** January 12, 2023

**SUBJECT:** Buffalo Creek PSD  
Preliminary Application: IJDC No. 2022S-2168  
Wastewater Treatment Plant Upgrade and Collection System Extensions

---

**RECOMMENDATION**

The IJDC application and Preliminary Engineering Report (PER) Amendment prepared by E.L. Robinson Engineering for the above referenced project has been reviewed and it is recommended to be returned to allow time to address the deficiencies/comments. .

**PROJECT DESCRIPTION**

The Buffalo Creek Public Service District (PSD) owns and operates a wastewater collection and treatment system that serves 1865 customers in Logan County, WV. The collection system consists of approximately 179,000 LF of gravity sanitary sewer, 19,000 LF of force main lines, 5 lift stations, over 1,000 manholes and cleanouts, and associated appurtenances and a 0.75 MGD wastewater treatment plant (WWTP). The system includes service to the Town of Man. The wastewater treatment plant discharges to the Guyandotte River.

The proposed project consists of upgrading the WWTP to a capacity of 1.5 MGD and extending sanitary sewer service to the areas of Greenville and Landville. This project is projected to provide service to 178 new customers. This phase will allow for the capacity to provide future service for Taplin to Rita, Huff Creek, Wyoming County, Bruno/Christian, Neibert, as well as the current customers (Phases 3, 4 and beyond).

The proposed total cost for this project is \$16,602,500 and the PSD intends to pursue \$2,000,000 in CWSRF Principal Forgiveness, and \$14,602,500 in CWSRF Loan (1.75% for 30 years). The current residential rate for 3,400 gallons is \$34.84 (0.9% MHI) with a proposed increase to \$52.39. (2020 Census data).

### **NEED FOR PROJECT**

The PER indicates that the WWTP components are exceeding its useful serviceable life, as replacement parts are obsolete or difficult to obtain. In addition, the plant does not have the capacity to handle peak flows as well as future projected flows. The facility has received numerous Notices of Violation (NOVs) as well as a Consent Order from the WVDEP. The current collection system is experiencing failures in the lift stations, some of which are resulting in unregulated Sanitary Sewer Overflow (SSO) events. The Logan Health Department has documented several cases of failing septic systems and direct discharges in the planned service areas. Inflow and Infiltration (I&I) is a large concern and the operators are attempting to discover the causes and make corrections as much as possible.

### **DEFICIENCIES/COMMENTS**

- A wasteload allocation will need to be completed before this project can proceed.
- The engineering fee waiver requirement for this project cannot be determined. The published curves do not extend to a project greater than \$10,000,000. Visually both the total fee and design fee values appear to be close if the curve were to be extended. However, the actual curve value cannot be determined so a variance is not required.
- The current service area has reported a high I&I rate. It is recommended that the proposed project include an I&I study (or more documentation) prior to moving forward with project design.
- The PER will need to be developed into a facilities plan that meets CWSRF requirements if CWSRF is approved for funding.
- Most, if not all, of the environmental correspondence will need to be updated should this project proceed utilizing recommended funding.

#### Engineering Fees:

Estimated construction cost =	\$14,502,500
Consultant's design fee =	\$ 500,000
Consultant's total fee =	\$ 1,100,000
Design fee percentage =	3.4 %
Design fee per ASCE curve =	unknown(off the curve but appears to be under)
Total fee percentage =	7.6 %
Total fee per ASCE curve =	unknown(off the curve but appears to be under)

#### Preliminary Project Ratings:

Public Health Benefits:	15
Compliance with Standards:	20