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west virginia department of environmental protection

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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:** August 18, 2022

**Subject:** City of Pennsboro  
Preliminary Application: IJDC No. 2022S-2161  
Sanitary Sewer Improvements Project - Phase I

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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.

Promoting a healthy environment.

- 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 tabled until technical comments have been resolved.
- d.  This project should be referred to the Consolidation Committee.

3. Other remarks:

The proposed project will address the high volume of I/I in the collection system. The City has received multiple Notice of Violations (NOV) and Orders from WVDEP regarding their I/I issues, and have completed multiple projects in the past to help address these issues.

This application should be tabled until the next Funding committee meeting to give the applicant time to address the comments/concerns in the DEP memo.

Attachments: Technical Comments

**Engineering Fees:**

Estimated construction cost =	\$ 2,975,000.00
Consultant's design fee =	\$ 225,000.00
Design fee percentage =	7.6 %
Design fee per ASCE curve =	9.0 %
Total fee percentage =	31.0 %
Total fee per ASCE curve =	20.0 %

**Preliminary Project Ratings:**

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

Bill J. Crouch  
Cabinet Secretary

Ayne Amjad, MD, MPH  
Commissioner & State Health Officer

**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:** August 15, 2022

**SUBJECT:** City of Pennsboro  
Preliminary Application **Project No.: 2022S-2161**  
Sewer Upgrade/Replacement  
Ritchie County

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**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 upgrade/replace portions of the City of Pennsboro's sewage collection system. The project will consist of the removal and replacement of approximately 3,900 LF of 12", 2,250 LF of 8" and 150 LF of 6" sewer line; removal and replacement of 30 manholes; and 85 sanitary sewer lateral lines with new clean out.

The cost per customer is **\$7,852**. Total estimated project cost is **\$4,130,000** (IJDC District 1 Grant: **\$1,000,000**; CWSRF Grant: **\$1,500,000** and CWSRF Loan: **\$1,630,000 @ 0.25% for 40 years**).

**NEED FOR PROJECT:**

The Preliminary Engineering Report indicates the existing City of Pennsboro's sewage collection system has a major I&I problem and removal and replacement of much of the existing sewer lines and manholes.

**CONCERNS:**

None.

**PERMITS:**

A permit **will not be** required from the WV Bureau for Public Health prior to construction.



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## MEMORANDUM

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

**FROM:** Jesse Rupe P.E., DWWM

**DATE:** August 10, 2022

**SUBJECT:** City of Pennsboro  
Preliminary Application: IJDC No. 2022S-2161  
Sanitary Sewer Improvements Project - Phase I

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## RECOMMENDATION

The IJDC Application and Preliminary Engineering Report prepared by CEC, Inc for the above referenced project has been reviewed and it is recommended to be tabled. This has been discussed with the project's engineer, and they agreed that tabling the project would allow the deficiencies/comments listed below to be addressed.

## PROJECT DESCRIPTION

The City of Pennsboro owns and operates a wastewater collection system and a 0.35 Million Gallon Per Day (MGD) wastewater treatment plant (WWTP). The City provides sewer service to approximately 526 total customers in Ritchie County, WV.

The proposed project is the first phase of a multi-phased project to address Inflow and Infiltration (I/I) issues in the City's sanitary sewer collection system. Phase I will encompass the removal and replacement of portions of the City's collection system that contribute large amounts of I/I to the system. These portions have been identified as problem areas through the completion of flow monitoring along with CCTV and manhole inspections. Phase I will consist of the replacement of approximately 6,300 linear feet (LF) of multiple size sewer lines, replacement of 30 manholes, reconnection of 85 laterals, and all other necessary appurtenances.

The proposed total cost for this project is \$4,130,000.00 and the City intends to pursue a \$1,000,000.00 IJDC Grant, a \$1,630,000 CWSRF Loan (0.25%, 40 yrs.), and a \$1,500,000

CWSRF Debt Forgiveness Loan. The proposed monthly rate for 3,400 gallons is \$71.25 (2.05 % MHI).

## **NEED FOR PROJECT**

The City of Pennsboro's collection system is plagued with I/I issues. The City has received multiple Notice of Violations (NOV) and Orders from WVDEP regarding their I/I issues, and have completed multiple projects in the past to help address these issues. Currently during wet weather events, I/I is causing high volumes of flow to be delivered to the WWTP causing operational issues at the WWTP and increasing treatment costs. There have also been instances, when I/I issues have overloaded the hydraulic capacity of portions of the collection system, resulting in flows being discharged from manholes into the surrounding landscape creating unsanitary conditions for residents and businesses. According to the annual reports from 2017 through 2021, I/I averaged approximately 79% of flow per year.

## **DEFICIENCIES/COMMENTS**

- There are concerns with the construction cost estimates for both alternatives evaluated. It appears that the cost of multiple line items in both alternatives estimates were skewed to give favor to the selected alternative and did not provide a fair analysis or representation of what each construction method would cost. An additional concern is that the selected alternatives cost estimate is lower than what it would actually cost and as the project moved closer to bidding, they would have to request additional funding.
- The PER should include the referenced Orders and NOVs that the City has received from WVDEP.
- The PER needs to include an existing system map and discuss the physical condition of the collection system and capacity of the system.
- The PER mentions that IJDC and WV DEP CWSRF funds will be pursued, but the report should confirm the exact funding scenario. The PER must also discuss the new proposed user rate. The funding scenario and user rate included in the memo were pulled from the application.
- The PER should state the Town's existing debt.
- A total engineering fee variance will be required.
- The PER will need to be developed into a facilities plan that meets CWSRF requirements if CWSRF is used.

### **Engineering Fees:**

Estimated construction cost =	\$ 2,975,000.00
Consultant's design fee =	\$ 225,000.00
Consultant's total fee =	\$ 923,109.00
Design fee percentage =	7.6 %
Design fee per ASCE curve =	9.0 %
Total fee percentage =	31.0 %
Total fee per ASCE curve =	20.0 %

### **Preliminary Project Ratings:**

Public Health Benefits:	10
Compliance with Standards:	15