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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:** May 5, 2023

**Subject:** City of Belington  
Preliminary Application: IJDC No. 2022S-2274  
Sewer System Upgrade Project

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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.

- c.  The Funding Committee does not need to review the funding assumptions on this project because of deficiencies in the engineering report. The PSC will need additional time to review.
- d.  This project should be referred to the Consolidation Committee.

3. Other remarks:

This project is recommended to be tabled to the next funding meeting to give the PSC time for an adequate review.

This project will address the City's 70% inflow and infiltration issue by rehabilitating portions of the City's existing wastewater gravity collection system, replace lift station No. 6 and include a dewatering area at the WWTP.

The City is under WVDEP Administrative Order 6520 to submit an updated Long Term Control Plan. Per a conversation with the engineer on May 4, 2023, a LTCP update will be added to the project. This will be funded via an increase in SRF Principal Forgiveness and SRF Loan. The engineer estimated a preliminary cost of \$50,000. The City of Belington is eligible for the lesser of 50% of the eligible project costs or \$1,500,000 in CWSRF Principal Forgiveness and fits within this amount.

The Total Engineering Fee is above the ASCE curve. A fee variance request was submitted on April 28, 2023. The request has been reviewed and is technically feasible.

Attachments: Technical Comments

**Engineering Fees:**

Estimated construction cost =	\$ 2,043,000.00
Consultant's design fee =	\$ 140,000.00
Consultant's total fee =	\$ 465,000.00
Design fee percentage =	6.85 %
Design fee per ASCE curve =	10.2 %
Total fee percentage =	22.76 %
Total fee per ASCE curve =	21 %

**Preliminary Project Ratings:**

Public Health Benefits:	10
Compliance with Standards:	20
O & M Capabilities	2
Readiness to Proceed	0
Cost Effectiveness	1



STATE OF WEST VIRGINIA  
DEPARTMENT OF HEALTH AND HUMAN RESOURCES

Bureau for Public Health  
Office of Environmental Health Service

Jeffrey H. Coben, MD  
Interim Cabinet Secretary

Matthew Q. Christiansen, 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:** May 13, 2023

**SUBJECT:** City of Belington  
Preliminary Application **Project No.: 2022S-2274**  
WWTP/Line Upgrades  
Barbour 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 replace portions of the City of Belington's sewage collection system and to add a sludge drying bed at the WWTP. The project will consist of the installation of approximately 1,670 LF of 12", 550 LF of 10" and 6,870 LF of 8" sewer line; 38 new manholes; replace the existing Lift Station #6 with a new lift station; purchase a new sludge vacuum truck; and add a sludge drying bed at the WWTP.

The cost per customer is **\$3,309**. Total estimated project cost is **\$2,750,000** (CWSRF Loan: **\$375,000 @ 2.75.5 for 20 years**; CWSRF Principal Forgiveness: **\$1,375,000**; IJDC District 1 Loan: **\$500,000 @ 2.75% for 20 years**; and IJDC District 1 Grant: **\$500,000**).

**NEED FOR PROJECT:**

The Preliminary Engineering Report indicates the existing sewer lines in the Beverly Pike Road and Hice areas are experiencing high I&I and are in need of replacement. The City of Belington does not have a sludge vacuum truck nor a sludge drying bed and has been paying other sewer utilities to pump their seven (7) sewage lift stations and properly dispose of their sludge.

**CONCERNS:**

None.

**PERMITS:**

A permit **will not be** required from the WV Bureau for Public Health since CWSRF are being proposed.



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### MEMORANDUM

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

**FROM:** Cali Carter, E.I., DWWM

**DATE:** May 4, 2023

**SUBJECT:** City of Belington  
Preliminary Application: IJDC No. 2022S-2274  
Sewer System Upgrade Project

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### RECOMMENDATION

The IJDC Application and Preliminary Engineering Report prepared by E.L. Robinson Engineering, for the above referenced project has been reviewed and is technically feasible.

### PROJECT DESCRIPTION

The City of Belington owns and operates a combined sanitary sewer collection system and a wastewater treatment plant (WWTP) that is designed to treat an average daily flow of 0.37 million gallons per day (MGPD). The City serves 742 residential customers, 81 commercial customers, 3 industrial customers, and 7 public authorities, totalling 833 total customers or 970 Equivalent Dwelling Units (EDU's).

This project proposes to rehabilitate portions of the City's existing wastewater gravity collection system, replace Lift Station No. 6, and construct a solids drying bed at the WWTP. Approximately 9,090 Linear Feet (LF) of sewer line and 38 manholes will be replaced in the Beverly Pike Road and Hice Street areas of Belington.

The proposed total cost for this project is \$2,750,000 and the City intends to pursue \$1,375,000 in CWSRF Principal Forgiveness, a \$500,000 IJDC Grant, a \$500,000 IJDC Loan, and a \$375,000 SRF Loan. The current monthly rate for 3,400 gallons is \$43.29 (1.41% MHI)

## **NEED FOR PROJECT**

The existing gravity wastewater collection system was installed prior to 1970's and is constructed of mainly vitreous clay pipe (VCP). Due to the age and condition of the collection system, the City's Infiltration and Inflow (I/I) is currently estimated at 70.39%. This project will focus on replacing areas of the system that are suspected to have the highest levels of I/I and contribution to Combined Sewer Overflow's (CSO's).

Lift Station No. 6, located in the northern section of the City's collection system, has never been upgraded and is currently out of service. The City is utilizing a bypass pump to pump Lift Station #6's flow until it can be replaced. It is anticipated that the replacement of the Lift Station #6 and sections of the surrounding gravity collection system will significantly reduce CSO events at CSO Outlet #C007.

The City currently pays other local municipalities for the use of a vacuum truck to clean lines, lift stations, etc. The City is currently in the process of purchasing their own vacuum truck. The construction of a sludge drying bed at the WWTP would allow the City to empty their vacuum truck there, and reduce the weight and cost of transporting and disposing of the sludge.

The proposed upgrades and replacements are expected to reduce the amount of I/I entering the system and therefore reduce the number of CSO events. Additionally, Operation and Maintenance (O&M) costs associated with LS #6 and sludge disposal are anticipated to decrease.

## **DEFICIENCIES/COMMENTS**

- The Total Engineering Fee is above the ASCE curve. A fee variance request was submitted on April 28, 2023. The request has been reviewed and is technically feasible.
- Additional alternatives for sludge management will be examined during the SRF Facilities Planning review.
- An updated Long Term Control Plan (LTCP) needs to be included as a part of the project in order to move forward. The City of Belington was to submit an updated LTCP to the WVDEP by May 19 2018, per Amendment 2 of Order 5934, dated May 19, 2017. The City has not submitted an update. Per a conversation with the engineer on May 4, 2023, a LTCP update will be added to the project. This will be funded via an increase in SRF Principal Forgiveness and SRF Loan. The engineer estimated a preliminary cost of \$50,000. This will be finalized during this SRF Facilities planning phase. The City of Belington is eligible for up to \$1,500,000 in CWSRF Principal Forgiveness.
- Project and construction costs in the Combined Preliminary Application and the PER do not match. This memo utilizes the costs found in the IJDC Combined Preliminary Application.
- Appendix B is missing.
- A public meeting must be held to discuss the project, costs, and associated customer rates.
- A partial Sanitary Sewer Evaluation Survey (SSES) was performed. Results from this study should be included in the PER.
- The PER will need to be developed into a facilities plan that meets CWSRF requirements if CWSRF is used.

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