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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:** Aug 24, 2023

**Subject:** Town of East Bank  
Preliminary Application: IJDC No. 2023S-2415  
Wastewater System Improvements Inflow and Infiltration 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 proposed project should be tabled until technical comments have been resolved.
- d.  This project should be referred to the Consolidation Committee.

3. Other remarks:

It is recommended to table this application to the September 2023 Technical/Funding review meeting so the Engineer has time to address all the comments, costs and project alternatives into the PER.



STATE OF WEST VIRGINIA  
**DEPARTMENT OF HEALTH AND HUMAN RESOURCES**

**Bureau for Public Health  
Office of Environmental Health Service**

Sherri A. Young, DO, MBA, FAAFP  
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:** August 14, 2023

**SUBJECT:** Town of East Bank  
Preliminary Application **Project No.: 2023S-2415**  
Line Upgrade/Replacement  
Kanawha 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 a large portion of the existing Town of East Bank's sewage collection system. Major work is to consist of the removal/replace of approximately 5,600 LF of 12" sewer line, approximately 18,000 LF of 8" & 3,500 LF of 6" sewer line, 80 new manholes, remove/replace 30 manholes, 20 new cleanouts, and add two (2) pump stations.

The cost per customer is **\$33,287**. Total estimated project cost is **\$13,314,649** (IJDC District 2 Grant: **\$500,000**; CWSRF Principal Forgiveness: **\$1,500,000**; WDA Economic Enhancement Grant Fund: **\$3,000,000**; Town of East Bank: **\$1,000,000**; Kanawha County Commission APR Grant: **\$2,000,000**; and US EPA Stag Grant: **\$5,314,649**).

**NEED FOR PROJECT:**

The Preliminary Engineering Report indicates the existing Town of East Bank has a significant I&I problem and that upgrades and/or replacement of existing sewage collection system should reduce the I&I problems.

**CONCERNS:**

None.

**PERMITS:**

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



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## MEMORANDUM

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

**FROM:** Robert O. Moore, Jr., DWWM

**DATE:** August 29, 2023

**SUBJECT:** Town of East Bank  
Preliminary Application: IJDC No. 2023S-2415  
Wastewater System Improvements Inflow and Infiltration Project

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## RECOMMENDATION

The IJDC Application and Preliminary Engineering Report prepared by Ghosh Engineers, Inc. for the above referenced project has been reviewed and it is recommended to table this application to the next technical/funding meeting. This will give the Engineer time to address the technical comments.

## PROJECT DESCRIPTION

The Town of East Bank (Town) currently has a service area which includes the Town itself and a service area located in between the Chelyan/Cabin Creek area to the West and the Crown City area to the East, all of which is entirely within the eastern portion of Kanawha County.

The Town's wastewater system is a collection and pumping system only. It does not own, operate, or maintain a wastewater treatment plant. All flow is collected and then pumped to the Kanawha Public Service District (PSD) for treatment at their facility. The Town currently provides service to 400 residential customers.

This project proposes to remove and replace 5,600 L.F. of 12-inch gravity sewer pipe, install 18,000 L.F. of new 8-inch gravity sewer pipe, install 3,500 L.F. of new 6-inch gravity sewer laterals, install eighty (80) new manholes, remove and replace thirty (30) manholes, install two (2) pump stations, install three hundred and fifty (350) new house connections, and all other necessary appurtenances.

The proposed total cost for this project is \$13,314,649.32 and the Town is pursuing a \$1,000,000.00 Town of East Bank Grant, a \$500,000.00 WV IJDC District 2 Grant, a \$1,500,000.00 CWSRF Principal Forgiveness Loan, a \$3,000,000.00 WDA EEGF, a \$2,000,000.00 Kanawha County Commission APR Grant, and a \$5,314,649.32 Stag Grant. The proposed monthly rate for 3,400 gallons is \$62.90 (1.62% MHI).

### **NEED FOR PROJECT**

The Town of East Bank has an aging and failing wastewater collection system contributing to an extreme amount of Infiltration and Inflow (I/I). The current system was built in the 1960's and the Town's treatment plant was decommissioned in the early 1990's. At that time, a lift station was constructed which pumps all of the collected wastewater to the PSD for treatment.

According to data provided in the PER, the Town is sending the PSD on average triple the amount of total wastewater that they should be due to the excessive I/I in the system. The PER provides data indicating that during an 18 month period, there was an average of 66% of I/I that the Town had to pay the PSD to treat.

### **DEFICIENCIES/COMMENTS**

- Some of the justification for the project is from a 1990 smoke test performed by Ghosh Engineers. The PER states that as of the writing of the report, the Town has verified that very few, if any, of the recommended corrections have been made by either the Town or the customers.
- The PER narrates that East Bank has a gravity sewer collection system that has reached the end of its useful life; however, the PER did not provide an adequate project scope that will correct the issues experienced in the Town.
- Appendix D contains a map of the 1990 Smoke Testing Results, it is seen from this map that the residents are responsible for almost 75% of the issues found. These problems include: roof leaders, drains, open and broken laterals, and catch basins. It is anticipated these problems did not get better and an adequate storm sewer needs to be addressed to handle their flow once they are removed (This is not in the PER).
- After further investigation, the Town's Tariff contains language related to surface or groundwater surcharge. The PER does not provide details regarding the surcharge or what actions East Bank has taken to enforce the tariff surcharge. Therefore, it is unknown if East Bank is enforcing their tariff.
- Table II.C.1 - *Infiltration and Inflow Analysis* is not convincing and is incomplete to make a determination if its usable.
- Ghosh response letter dated 8-8-23 does not adequately address the concerns and indicates other alternatives are available but the PER does not indicate that.
- The recent information provided by the Engineer in a follow up email, does not match the project description in the PER and it can not be determined if all costs are included in the PER cost estimates. The PER indicates the scope of work is a removal and replacement style project, as the PER does not discuss storm sewer connections, catch basins, or storm sewer outfalls (was in email). Therefore, the proposed scope of work may lead to increased sanitary flows conveyed to Kanawha PSD for treatment. The PER should be more clear on what the actual project will consist of and the costs should reflect this.

Engineering Fees:

Estimated construction cost = \$ 10,848,973.52  
Consultant's design fee = \$ 500,000.00  
Consultant's total fee = \$ 1,265,000.00  
Design fee percentage = 4.61 %  
Design fee per ASCE curve = 4.70 %  
Total fee percentage = 11.66 %  
Total fee per ASCE curve = 11.7 %

Preliminary Project Ratings:

Public Health Benefits: 5  
Compliance with Standards: 5