



west virginia department of environmental protection

Division of Water and Waste Management
601 57th 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: July 21, 2022

Subject: Town of Capon Bridge
Preliminary Application: 2022S-2181
Phase II – Sewer System Rehabilitation

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

3. Other remarks:

The proposed project will rehabilitate portions of the existing collection system to reduce infiltration and inflow. It will also upgrade the Town’s three grinder pumping stations and install emergency generators at these three stations as well as at the River pump station. The total project cost is \$1,750,000 and the proposed funding sources are an \$875,000 CWSRF principal forgiveness loan and an \$875,000 IJDC grant.

A total engineering fee variance will be required.

Attachments: Technical Comments

Engineering Fees:

Estimated construction cost =	\$ 1,255,000
Consultant’s design fee =	\$ 127,000
Design fee percentage =	10.1%
Design fee per ASCE curve =	11.5%
Consultant’s total fee =	\$ 342,000
Total fee percentage =	27.3%
Total fee per ASCE curve =	22.5%

Preliminary Project Ratings:

1. Public Health Benefits	10
3. Compliance with Standards	5
5. O & M Capabilities	2
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

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: July 1, 2022

SUBJECT: Town of Capon Bridge
Preliminary Application **Project No.: 2022S-2181**
Line Upgrade/Replacement
Hampshire 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 repair and upgrade the Town of Capon Bridge sewage collection system. Major work will consist of removal and replacement of 60 manhole lids, clean & grout the interior of 60 existing manholes, remove and replacement of 350 LF of 6" sewer line, and upgrading of three (3) grinder pump stations and add emergency generators.

The cost per customer is **\$8,706**. Total estimated project cost is **\$1,750,000** (IJDC District 2 Grant: **\$875,000** and CWSRF Debt Forgiveness: **\$875,000**).

NEED FOR PROJECT:

The Preliminary Engineering Report indicates the Town of Capon Bridge has experienced high I&I even after recent work to reduce the I&I. Also, the existing three (3) grinder pump stations are aging and in need of repair/upgrading and the addition of emergency generators.

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: June 30, 2022

SUBJECT: Town of Capon Bridge
Preliminary Application: IJDC No. 2022S-2181
Sanitary Sewer Improvements Project - Phase II

RECOMMENDATION

The IJDC Application and Preliminary Engineering Report prepared by The Thrasher Group for the above referenced project has been reviewed and is technically feasible.

PROJECT DESCRIPTION

The Town of Capon Bridge owns and operates a wastewater collection system and a 75,000 Gallon Per Day (GPD) wastewater treatment plant (WWTP). The Town provides sewer service to approximately 201 total customers in Hampshire County, WV.

The proposed project is the second phase of the Town's Sanitary Sewer Improvements project. This phase will continue collection system rehabilitation work to eliminate inflow and infiltration (I/I). This project will also include the upgrading of aging equipment at pumping stations in the collection system. The collection system rehabilitation work will consist of removal and replacement of 350 linear feet (LF) of broken gravity sewer line, cleaning and lining of sixty manholes, and the rehabilitation or replacement of 60 manhole lids. The pump station upgrades will replace the pumps and controls at the Town's three grinder stations and install new emergency generators at these three stations, as well as a new emergency generator at the River Pump Station.

The proposed total cost for this project is \$1,750,000.00 and the Town intends to pursue a \$875,000.00 IJDC Grant and a \$875,000 CWSRF Debt Forgiveness Loan. The proposed monthly rate for 3,400 gallons is \$58.17 (2.54 % MHI).

NEED FOR PROJECT

Following the completion of the I/I work associated with Phase I of this project, the Town conducted flow monitoring at the WWTP. Flow monitoring continued to show significant increase of flow at the WWTP following rain events. According to the most recent Annual Report, consistent with the period of flow monitoring, approximately 23% of the Town's treated flow can be related to I/I. The Town conducted further I/I studies and determined that the manholes in the collection system were prone to I/I and needed repairs. The Town also found a portion of broken line that needs to be addressed. Currently none of the pumping stations in the Town's system have emergency power. The Town has recently had a dry weather overflow at the River Pump Station due to the loss of power.

DEFICIENCIES/COMMENTS

- Supporting documentation for population projections need to be included.
- The proposed user rate in the PER does not match the proposed rates included in the application. The correct user rate needs to be confirmed. The user rates included in this memo are from the application.
- The PER should expand on the O&M costs that are provided.
- The PER should state the Town's existing debt.
- The PER and application are both using 2015 Census Median Household Income (MHI) data, and state that the project intends to use the WVDEP CWSRF FY2022 Intended Use Plan as they will qualify for more favorable terms under that plan.
- 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 =	\$ 1,255,000.00
Consultant's design fee =	\$ 127,000.00
Consultant's total fee =	\$ 342,000.00
Design fee percentage =	10.1 %
Design fee per ASCE curve =	11.5 %
Total fee percentage =	27.3 %
Total fee per ASCE curve =	22.5 %

Preliminary Project Ratings:

Public Health Benefits:	10
Compliance with Standards:	5

Public Service Commission of West Virginia

201 Brooks Street, P.O. Box 812
Charleston, West Virginia 25323

Phone: (304) 340-0300
Fax: (304) 340-0325



Ms. Kathy Emery, P. E.
Office of Water Resources
Department of Environmental Protection
601 57th St.
Charleston, West Virginia 25304

Re: Public Service Commission Staff Review Comments
Application No. 2022S-2181
Town of Capon Bridge - Sewer
Infrastructure Preliminary Application

Dear Ms. Emery:

As requested, the Technical Staff of the Public Service Commission of West Virginia has completed its review of the above-referenced Infrastructure application. In light of the District's current financial condition, we are recommending the application be:

- forwarded to the Funding Committee
 forwarded to the Consolidation Committee
 table the application

Please advise if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads 'Jonathan M. Fowler'.

Jonathan M. Fowler, P.E.
Engineering Division

JMF:vb

**PUBLIC SERVICE COMMISSION STAFF
TECHNICAL REVIEW**

DATE: July 11, 2022

PROJECT SPONSOR: TOWN OF CAPON BRIDGE - SEWER

PROJECT SUMMARY: Project will make various improvements, upgrades and repairs as part of an ongoing sewer improvements program.

PROPOSED FUNDING: CWSRF Debt Forgiveness	\$ 875,000
IJDC Grant	<u>875,000</u>
Total	\$ 1,750,500

CURRENT RATES:	\$45.15	3,400 gallons
	\$53.12	4,000 gallons

PROPOSED RATES:	\$58.17	3,400 gallons
	\$68.44	4,000 gallons

Application No. 2022S-2181

RECOMMENDATION: forward to the Funding Committee.
 forward to the Consolidation Committee.
 return to the Applicant.

FINANCIAL: Nathan Nelson

1. Current rates (\$45.15 for 3,400 gallons) are above the rate attributable to 1.25% (\$28.65), 1.5% (\$34.38), and 1.75% (\$40.10), of the Median Household Income (MHI), but below the rates attributable to 2.0% (\$45.83) of the MHI. Increasing current rates to 2.0% of the MHI would provide additional revenues of \$2,806.
2. Using Scenario 1, the preferred funding package consisting of CWSRF Principal Forgiveness of \$875,000 and an IJDC District 2 Grant of \$875,000, proposed rates (\$58.17 for 3,400 gallons) will provide a cash flow surplus of \$608 and debt service coverage of 209.21%.
3. Using the Scenario 2 alternate loan package of \$1,750,000 (in uncommitted funds) at 5% for 40 years (paid back over 38 years), proposed rates (\$92.45 for 3,400 gallons) will provide a cash flow surplus of \$408 and debt service coverage of 132.42%.

4. Notes to Comments:

- A. Staff's detailed adjustments are listed on Attachment A for Scenario 1 (Preferred Funding Package) and Attachment B for Scenario 2 (Loan Package).
- B. Staff prepared the attached Cash Flow Analysis utilizing information from the Annual Report for the fiscal year ended June 30, 2021, and the applicant's cash flow statement submitted with the application.
- C. Staff notes the Town's current tariff includes Supplemental Rates or Phase 2 Rates of \$51.03 (3,400 gallons). These rates become effective upon substantial completion of the project approved in Case No. 20-0050-S-CN or four months prior to initiation of project debt service, whichever occurs first. However, the Town has not and may not implement these rates. The reason being the rates of (\$58.17 for 3,400 gallons) are currently being passed by ordinance and are expected to take effect 45 days following adoption. The applicant has included these adjustments in its draft Rule 42 Exhibit.
- D. Because proposed funding is based on all grant funds and no rate increase is needed for the project, the applicant is requesting a waiver of the Rule 42 Exhibit requirement.
- E. Senate Bill 234, effective June 12, 2015, required water and sewer utilities that are political subdivisions of the state to maintain a cash working capital reserve in an amount of no less than one-eighth (1/8) of actual annual operation and maintenance expenses. It should be noted that the cash flows provided by the project sponsor include funding for the 1/8 cash working capital reserve. Staff accepted that amount in its analyses. However, this amount may be reviewed by the Commission in future filings in accordance with Public Service Commission General Order 183.11.
- F. Senate Bill 234 (2015) required, pursuant to WV Code 24-2-4b (b), that municipally operated utilities shall consider a reasonable plant-in-service depreciation expense for rates and charges. The project sponsor should take this into consideration when preparing its Rule 42. Municipals that do not provide for a reasonable depreciation expense risk delays in Certificate of Convenience and Necessity filings if rates are determined to not be sufficient.

G. The Town should carefully evaluate its revenue requirements before passing a rate ordinance in order to ensure that rates are sufficient to provide a reasonable surplus and meet coverage requirements. Calculations to support the revenue projections should also be provided.

ENGINEERING: Brandon Crace

1. This project may not require a Certificate of Convenience and Necessity from the PSC. The project sponsor should consult with Commission Staff pursuant to the requirements of General Order No. 246 for such determination. Should a Certificate be required, the sponsor should reference this application number on the PSC's Form No. 4 when its application is filed at the Commission given the requirement of West Virginia Code §24-2-11 (c) and (e) et seq. Staff notes that an affirmative determination of need for the project must be established in a Certificate filing at the PSC.
2. Scope: The Town of Capon Bridge (Town) is proposing to replace sixty (60) manhole lids and frames with watertight ones, clean and grout the interior of these sixty (60) manholes, replace approximately 350 LF of 6-inch PVC gravity sewer line, upgrade pumps and controls at three (3) grinder pump stations, install three (3) emergency backup generators, and install an elevated emergency generator at the main River Pump Station. The estimated construction cost is \$1,255,000 (includes 9.84% construction contingency), and the estimated total project cost is \$1,750,000 (includes 6.45% project contingency).
3. Need: The PER states that the Town has conducted an Infiltration and Inflow (I&I) Study in March and May of 2022, and manhole investigation, which revealed manholes in need of sealing/grouting and watertight frames/lids. A CCTV investigation revealed I&I from lateral and pipe bell joint connections and one sewer line had visible cracks with soil protruding into the line. Emergency generators are included to avoid the possibility of a dry weather sewage discharge due to potential power outages.

Customer Density: This project is an upgrade/improvement project; therefore, customer density will remain unchanged.

Cost per Customer: Based upon the estimated total project cost of \$1,750,000, and having approximately 201 customers, the cost per customer will be approximately

\$8,707. However, the cost per customer in terms of proposed borrowing is \$0, as the proposed funding is 100% grant.

4. Project Feasibility: This project appears to be technically feasible and poses little technical risk.
5. Project Alternatives: Three (3) Alternates were proposed: (#1) replace 60 manhole lids and frames with watertight ones, clean and grout those manholes, remove and replace 350 LF of 6-inch gravity sewer line; (#2) replacing 60 manholes with new 48-inch bases, cone top, and watertight frames, remove and replace 350 LF of 6-inch gravity sewer line; and (#3) do nothing. Both alternates included upgrading pumps and controls at three (3) grinder pump stations, installing three (3) emergency backup generators, and installing an elevated emergency generator at the main River Pump Station. The PER indicates the Town selected option #1, as it would be the most appropriate use of funds and most feasible.
6. Consolidation: There are no consolidation opportunities presented by this project.
7. Inconsistencies: The PER indicates no anticipated increase in O&M expenses, but this project scope includes the installation of additional/new equipment (specifically generators) that utilizes fuel, oil, grease, etc. The manhole inspection report identifies manholes as needing to be watertight, but several manholes are in grassy areas and appear to be in good condition. The PER indicates that the Phase I project was to reduce I&I, but recent observations indicate that the I&I was not reduced; which brings to question if many of these manholes are a significant source of I&I or if the I&I contribution at some manholes may be negligible. The project team and engineer should carefully consider these issues as they move forward with this work.
8. Operation and Maintenance (O&M) Expenses: The PER indicates that there is no anticipated change in O&M. However, if the I&I is reduced a reduction in treatment costs at the plant should be achieved. Additionally, the installation of generators should increase O&M expenses (due to fuel, regular maintenance, etc.).

9. Engineering Agreement: The application includes information to determine compliance with West Virginia Code §§5G-1-1, *et seq.* Total technical services (engineering) costs for the project are \$342,000, which is equal to 27.25% of the construction cost of \$1,255,000 (includes 9.84% construction contingency).

<i>Preliminary Project Ranking</i>		
O & M Capabilities		
Performance Measures:	0	<i>Pt.</i>
Asset Management:	1	<i>Pt.</i>
Environmental Management:	1	<i>Pt.</i>
Readiness to Proceed:	0	<i>Pt.</i>
Cost Effectiveness:	0	<i>Pt.</i>
Compliance with PSC Orders:	0	<i>Pt.</i>

TOWN OF CAPON BRIDGE - SEWER
 CASH FLOW ANALYSIS
 YEAR ENDED: June 30, 2021
 APPLICATION NO: 2022S-2181
 July 11, 2022

**PREFERRED FUNDING PACKAGE
 SCENARIO 1**

	Rule 42 Going Level Per Application Before Project	Rule 42 Proforma Per Application with Project	Staff Adjustments	Per Staff Analysis
	1	2	3	4
	\$	\$	\$	\$
<u>AVAILABLE CASH</u>				
Operating Revenues	176,973	176,973	-	176,973
Other Operating Revenue	4,193	4,193	-	4,193
SB 234 Annual Working Cash Collections	17,273	17,273	-	17,273
Interest Income & Other Misc.	18	18	-	18
Total Cash Available	198,457	198,457	-	198,457
<u>OPERATING DEDUCTIONS</u>				
Operating Expenses	138,181	138,181	-	138,181
Taxes	4,332	4,332	-	4,332
Total Cash Requirements Before Debt Service	142,513	142,513	-	142,513
Cash Available for Debt Service (A)	55,944	55,944	-	55,944
<u>DEBT SERVICE REQUIREMENTS</u>				
Principal & Interest (B)	26,741	26,741	-	26,741
Other Debt	1,403	1,403	-	1,403
RUS Depreciation Reserve	3,500	3,500	-	3,500
Reserve Account @ 10%	1,890	1,890	-	1,890
Renewal & Replacement Fund (2.5%)	4,961	4,961	(432) (1)	4,529
Total Debt Service Requirement	38,495	38,495	(432)	38,063
SB 234 Cash Working Capital	17,273	17,273	-	17,273
Remaining Cash	176	176	432	608
Percent Coverage (A) / (B)	209.21%	209.21%		209.21%
Average rate for 3,400 gallons	\$ 58.17	\$ 58.17	\$ -	\$ 58.17
Average rate for 4,000 gallons	\$ 68.44	\$ 68.44	\$ -	\$ 68.44

Staff Adjustments

<u>Adjustment Description</u>			\$	Increase <Decrease>
(1)	Renewal & Replacement Fund (2.5%)	Per Staff Analysis	4,529	(432)
		Per Application with Project	4,961	

Staff used 2.5% of the projection of "Operating & Other Revenues" as the basis of the renewal & replacement fund.

TOWN OF CAPON BRIDGE - SEWER
 CASH FLOW ANALYSIS
 YEAR ENDED: June 30, 2021
 APPLICATION NO: 2022S-2181
 July 11, 2022

LOAN FUNDING PACKAGE
 SCENARIO 2

	Rule 42 Going Level Per Application Before Project	Rule 42 Proforma Per Application with Project	Staff Adjustments	Per Staff Analysis
	1	2	3	4
	\$	\$	\$	\$
AVAILABLE CASH				
Operating Revenues	176,973	291,384	-	291,384
Other Operating Revenue	4,193	6,625	-	6,625
SB 234 Annual Working Cash Collections	17,273	17,273	-	17,273
Interest Income & Other Misc.	18	18	-	18
Total Cash Available	198,457	315,300	-	315,300
OPERATING DEDUCTIONS				
Operating Expenses	138,181	138,181	-	138,181
Taxes	4,332	4,332	-	4,332
Total Cash Requirements Before Debt Service	142,513	142,513	-	142,513
Cash Available for Debt Service (A)	55,944	172,787	-	172,787
DEBT SERVICE REQUIREMENTS				
Principal & Interest (B)	26,741	129,702	786 (1)	130,488
Other Debt	1,403	1,403	-	1,403
RUS Depreciation Reserve	3,500	3,500	-	3,500
Reserve Account @ 10%	1,890	12,186	79 (2)	12,265
Renewal & Replacement Fund (2.5%)	4,961	7,882	(432) (3)	7,450
Total Debt Service Requirement	38,495	154,673	433	155,106
SB 234 Cash Working Capital	17,273	17,273	-	17,273
Remaining Cash	176	841	(433)	408
Percent Coverage (A) / (B)	209.21%	133.22%		132.42%
Average rate for 3,400 gallons	\$ 58.17	\$ 92.45	\$ -	\$ 92.45
Average rate for 4,000 gallons	\$ 68.44	\$ 108.76	\$ -	\$ 108.76

Staff Adjustments

<u>Adjustment Description</u>			\$	Increase <Decrease>
(1)	Principal & Interest	Per Staff Analysis	130,488	786
		Per Application with Project	129,702	
The difference in P&I is related to Staff's calculation of a loan of \$1,750,000 for 40 years (paid over 38 years) at 5%.				
(2)	Reserve Account @ 10%	Per Staff Analysis	12,265	79
		Per Application with Project	12,186	
Staff assumed a 10% reserve on the new debt.				
(3)	Renewal & Replacement Fund (2.5%)	Per Staff Analysis	7,450	(432)
		Per Application with Project	7,882	
Staff used 2.5% of the projection of "Operating & Other Revenues" as the basis of the renewal & replacement fund.				