



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: September 21, 2022

Subject: Town of Masontown
Preliminary Application: 2022S-2212
WWTP Upgrade

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 add a new sludge storage building and post aeration basin to the existing WWTP.

The proposed total cost for this project is \$1,075,000 and the PSD is seeking a \$500,000 IJDC Grant, a \$500,000 CWSRF Principal Forgiveness Loan, and a \$75,000 Preston County ARPA Grant.

A total engineering fee variance will be required.

Attachments: Technical Comments

Engineering Fees:

Estimated construction cost =	\$ 828,915
Consultant's design fee =	\$ 70,000
Design fee percentage =	8.4%
Design fee per ASCE curve =	12.8%
Consultant's total fee =	\$ 200,000
Total fee percentage =	24.1%
Total fee per ASCE curve =	23.1%

Preliminary Project Ratings:

1. Public Health Benefits	5
3. Compliance with Standards	5
5. O & M Capabilities	3
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: September 12, 2022

SUBJECT: Town of Masontown
Preliminary Application **Project No.: 2022S-2212**
WWTP Upgrade
Preston 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 add a new sludge storage building and a new post aeration basin at the existing Town of Masontown WWTP.

The cost per customer is **\$5,193**. Total estimated project cost is **\$1,075,000** (IJDC Grant: **\$500,000**; CWSRF Debt Forgiveness Grant: **\$500,000**; and Preston County ARPA Grant: **\$75,000**).

NEED FOR PROJECT:

The Preliminary Engineering Report indicates there is no storage facility to store dewatered sludge at the WWTP when land application is not permitted. The existing post aeration basin and accompanying equipment is at the end of its useful life and needs to be replaced.

CONCERNS:

None.

PERMITS:

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



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

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

DATE: September 15, 2022

SUBJECT: Town of Masontown
Preliminary Application: IJDC No. 2022S-2212
Wastewater Treatment Plant Upgrades

RECOMMENDATION

The IJDC application and Preliminary Engineering Report (PER) prepared by Civil and Environmental Consultants (CEC) for the above referenced project has been reviewed and is technically feasible.

PROJECT DESCRIPTION

The Town of Masontown owns and operates a sanitary sewer collection system and wastewater treatment plant (WWTP) in Preston County, WV, serving a total of 478 residential and 29 commercial customers including the communities of Bretz and Arthurdale, and the Town of Reedsville. The MCSD manages approximately 16.9 miles of gravity sewer lines, 2 pumping stations, 2 grinder stations, and one mile of force main in addition to a 0.5 MGD WWTP.

The proposed project consists of constructing a new sludge storage building for use in storing dewatered sludge during months which land application is not permitted, as well as the installation of a new post aeration basin complete with a new blower, D.O. probe, and controls. This project is not projected to provide service to any new customers.

The proposed total cost for this project is \$1,075,000 and the Town intends to pursue a \$500,000 IJDC Grant, 500,000 CWSRF Debt Forgiveness, and a \$75,000 Preston County Commission ARPA Grant. The current residential rate for 3,400 gallons is \$52.39 (1.8% MHI) with no proposed increase (2020 Census data).

NEED FOR PROJECT

The PER indicates that construction of the new sludge storage facility is necessary in order for the WWTP to meet the WVDEP requirement for sludge storage and provide a long term area for the Town to store produced sludge and prevent the sludge runoff from entering the environment. The existing post aeration basin at the WWTP was constructed during the original treatment plant construction that took place in the 1990s. The post aeration basin has aged beyond its useful life and is in danger of failure, in addition to the fact that it does not provide the efficient aeration that will be possible with a new basin and new technology.

DEFICIENCIES/COMMENTS

- Should this project be approved for CWSRF funding, additional planning will be required to complete a facilities plan prior to project design. Also a public meeting will be required to be held.
- Construction contingency totalling \$75,400 is included in the total construction cost as presented in the application.
- A fee variance for total engineering services will be required.

Engineering Fees:

Estimated construction cost =	\$ 828,915
Consultant's design fee =	\$ 70,000
Consultant's total fee =	\$ 200,000
Design fee percentage =	8.4%
Design fee per ASCE curve =	12.8%
Total fee percentage =	24.1%
Total fee per ASCE curve =	23.1%

Preliminary Project Ratings:

Public Health Benefits:	5
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



September 15, 2022

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-2212
Town of Masontown - 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,



Jonathan M. Fowler, P.E.
Engineering Division

JMF:vb

**PUBLIC SERVICE COMMISSION STAFF
TECHNICAL REVIEW**

DATE: September 12, 2022

PROJECT SPONSOR: TOWN OF MASONTOWN - SEWER

PROJECT SUMMARY: This project makes necessary improvements to the existing wastewater treatment plant. The work is necessary for continued WV DEP compliance and to enhance sludge processing.

PROPOSED FUNDING: Preston County Commission ARPA Grant	\$ 75,000
CWSRF Debt Forgiveness Loan	500,000
IJDC Grant	<u>500,000</u>
Total	\$1,075,000

CURRENT / PROPOSED

RATES:	\$52.39	3,400 gallons
	\$59.96	4,000 gallons

Application No. 2022S-2212

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

FINANCIAL: William A. Nelson

1. Current rates (\$52.39 for 3,400 gallons) are above the rates attributable to 1.25% (\$36.15), 1.5% (\$43.38), and 1.75% (\$50.61) of the Median Household Income (MHI), but below the rates attributable to 2.0% (\$57.84) of the MHI. Increasing current rates to 2.0% of the MHI would provide additional revenues of \$43,190.
2. Using Scenario 1, the preferred funding package consisting of a Preston County Commission ARPA Grant of \$75,000, a CWSRF Debt Forgiveness Loan of \$500,000, and an IJDC Grant of \$500,000, proposed rates (\$52.39 for 3,400 gallons) will provide a cash flow deficit of \$7,433 and debt service coverage of 114.13%. An additional .49% (for a total of \$52.65 for 3,400 gallons) increase in proposed rates would be required to provide a cash flow surplus of \$10,456 and debt service coverage of 115.01%.

3. Using the Scenario 2 alternate loan package of \$1,075,000 (in uncommitted funds) at 5% for 40 years (paid back over 38 years), proposed rates (\$52.39 for 3,400 gallons) will provide a cash flow deficit of \$62,670 and debt service coverage of 96.56%. An additional 12.69% (for a total of \$59.04 for 3,400 gallons) increase in proposed rates will be required in order to provide a cash flow surplus of \$12,405 and debt service coverage of 115.16%.

NOTES TO COMMENTS:

- A. Staff's detailed adjustments are listed on Attachment A for Scenario 1 (Preferred Funding Package), 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 Analysis submitted with the application.
- C. The Going Level and Proforma adjustments included in the Applicant's Cash Flow Analyses for Scenarios 1 and 2 were used in Staff's Cash Flow Analyses, except as noted on Attachments A and B.
- D. Staff notes the Applicant did not include a Rule 42 Exhibit or a request for a waiver of the Rule 42 Exhibit requirement as part of its filing.
- 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 do not include funding for the 1/8 cash working capital reserve. The project sponsor would need to have non-restricted funds available to meet the 1/8 requirement, otherwise, they may need to take steps to fund this reserve. This 1/8 requirement, along with any steps taken to fund this reserve, may be evaluated 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 Masontown is proposing to construct a sludge storage building and replace its aging post aeration basin including all necessary controls, piping, and appurtenances. The estimated construction cost is \$828,915 and the estimated total project cost is \$1,075,000 (see comment 6., below).

Need: The PER states that the existing post aeration basin has aged beyond its useful life, is in danger of failure, and currently does not provide efficient aeration. The PER also indicates that the Town does not currently have an adequate sludge storage area to properly store dewatered sludge, during months when land application is not permitted. The proposed additions and upgrades will provide the Town with a more efficient post aeration process and help the Town maintain compliance with the WV DEP.

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 \$1,075,000, and having approximately 507 customers, the cost per customer will be approximately \$2,121. However, the cost per customer in terms of proposed borrowing is \$0, as the proposed funding is 100% grant.

3. Project Feasibility: The project scope appears to be technically feasible and poses little technical risk.

4. Project Alternatives: The PER includes three (3) alternates: #1 – as described in section 2. (above), #2 – new sludge storage facility only, and #3 – do nothing. Alternate #1 was selected due to the potential failure of the existing post aeration basin.
5. Consolidation: There are no consolidation opportunities presented by this project.
6. Inconsistencies: The IJDC Application does not accurately reflect the Engineer’s estimate; in that the Application does not include the construction contingency (\$75,400) shown on the Engineer’s Opinion of Probable Costs – Alternate #1.
7. Operation and Maintenance (O&M) Expenses: The PER indicates that the estimated additional O & M expenses are proposed to increase by \$1,500 due to increased electric and fuel costs associated with the proposed WWTP facilities.
8. 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 \$200,000, which is equal to 24.13% of the construction cost of \$828,915 (includes 10.00% construction contingency).

<i>Preliminary Project Ranking</i>		
O & M Capabilities		
Performance Measures:	1	<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 MASONTOWN - SEWER
 CASH FLOW ANALYSIS
 YEAR ENDED: June 30, 2021
 APPLICATION NO: 2022S-2212
 September 12, 2022

**PREFERRED FUNDING PACKAGE
 SCENARIO 1**

	Cash Flow Going Level Per Application Before Project	Cash Flow Proforma Per Application with Project	Staff Adjustments	Per Staff Analysis
	1	2	3	4
	\$	\$	\$	\$
AVAILABLE CASH				
Operating Revenues	604,116	604,116	3,100 (1)	607,216
Other Operating Revenue	4,230	4,230	-	4,230
SB 234 Annual Working Cash Collections			-	-
Interest Income & Other Misc.	4,028	4,028	-	4,028
Total Cash Available	612,374	612,374	3,100	615,474
OPERATING DEDUCTIONS				
Operating Expenses	210,741	212,241	-	212,241
Taxes	294	294	-	294
Total Cash Requirements Before Debt Service	211,035	212,535	-	212,535
Cash Available for Debt Service (A)	401,339	399,839	3,100	402,939
DEBT SERVICE REQUIREMENTS				
Principal & Interest (B)	350,344	350,344	-	350,344
Other Debt			-	-
Reserve Account @ 10%	26,853	26,853	-	26,853
Renewal & Replacement Fund (2.5%)			15,286 (2)	15,286
Total Debt Service Requirement	377,197	377,197	15,286	392,483
SB 234 Cash Working Capital			-	-
Remaining Cash	24,142	22,642	(12,186)	10,456
Percent Coverage (A) / (B)	114.56%	114.13%		115.01%
Average rate for 3,400 gallons	\$ 52.39	\$ 52.39	\$ 0.26	\$ 52.65
Average rate for 4,000 gallons	\$ 59.96	\$ 59.96	\$ 0.30	\$ 60.26

TOWN OF MASONTOWN - SEWER
 CASH FLOW ANALYSIS
 YEAR ENDED: June 30, 2021
 APPLICATION NO: 2022S-2212

Attachment A
 PREFERRED FUNDING PACKAGE
 SCENARIO 1

Staff Adjustments

<u>Adjustment Description</u>			\$	Increase <Decrease>
(1)	Operating Revenues	Per Staff Analysis	607,216	3,100
		Per Application with Project	604,116	
Staff projected that an additional \$3,100 in revenues would be needed to achieve 115% debt service coverage and a positive cash flow surplus.				
(2)	Renewal & Replacement Fund (2.5%)	Per Staff Analysis	15,286	15,286
		Per Application with Project	-	
Staff used 2.5% of the projection of "Operating & Other Revenues" as the basis of the renewal & replacement fund.				

TOWN OF MASONTOWN - SEWER
 CASH FLOW ANALYSIS
 YEAR ENDED: June 30, 2021
 APPLICATION NO: 2022S-2212
 September 12, 2022

**LOAN PACKAGE
 SCENARIO 2**

	Max Rate Going Level Per Application Before Project	Max Rate Proforma Per Application with Project	Staff Adjustments	Per Staff Analysis
	1	2	3	4
	\$	\$	\$	\$
AVAILABLE CASH				
Operating Revenues	604,116	604,116	77,000 (1)	681,116
Other Operating Revenue	4,230	4,230	-	4,230
SB 234 Annual Working Cash Collections			-	-
Interest Income & Other Misc.	4,028	4,028	-	4,028
Total Cash Available	612,374	612,374	77,000	689,374
OPERATING DEDUCTIONS				
Operating Expenses	210,741	212,241	-	212,241
Taxes	294	294	-	294
Total Cash Requirements Before Debt Service	211,035	212,535	-	212,535
Cash Available for Debt Service (A)	401,339	399,839	77,000	476,839
DEBT SERVICE REQUIREMENTS				
Principal & Interest (B)	350,344	350,344	63,731 (2)	414,075
Other Debt			-	-
Reserve Account @ 10%	26,853	26,853	6,373 (3)	33,226
Renewal & Replacement Fund (2.5%)			17,134 (4)	17,134
Total Debt Service Requirement	377,197	377,197	87,238	464,434
SB 234 Cash Working Capital			-	-
Remaining Cash	24,142	22,642	(10,238)	12,405
Percent Coverage (A) / (B)	114.56%	114.13%		115.16%
Average rate for 3,400 gallons	\$ 52.39	\$ 52.39	\$ 6.65	\$ 59.04
Average rate for 4,000 gallons	\$ 59.96	\$ 59.96	\$ 7.61	\$ 67.57

TOWN OF MASONTOWN - SEWER
 CASH FLOW ANALYSIS
 YEAR ENDED: June 30, 2021
 APPLICATION NO: 2022S-2212

Attachment B
 LOAN PACKAGE
 SCENARIO 2

Staff Adjustments

<u>Adjustment Description</u>			\$	Increase <Decrease>
(1)	Operating Revenues	Per Staff Analysis	681,116	77,000
		Per Application with Project	604,116	
	Staff projected that an additional \$77,000 in revenues would be needed to achieve 115% debt service coverage and a positive cash flow surplus.			
(2)	Principal & Interest	Per Staff Analysis	414,075	63,731
		Per Application with Project	350,344	
	The difference in P&I is related to Staff's calculation of a loan of \$1,075,000 for 40 years (paid back over 38 years) at 5%.			
(3)	Reserve Account @ 10%	Per Staff Analysis	33,226	6,373
		Per Application with Project	26,853	
	Staff assumed a 10% reserve on the new debt.			
(4)	Renewal & Replacement Fund (2.5%)	Per Staff Analysis	17,134	17,134
		Per Application with Project	-	
	Staff used 2.5% of the projection of "Operating & Other Revenues" as the basis of the renewal & replacement fund.			