



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: May 26, 2023

Subject: Mercer County PSD
Preliminary Application: IJDC No. 2023S-2341
Rock District Wastewater Treatment and Collection System (Phase 1A)

-
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:

This project will construct a new WWTP and extend service to approximately 76 unsewered customers in the Lake Bottom area of Mercer County. This project is the first phase(Phase 1A) that will address non serviced areas that have failing septic tanks or direct discharge. Phase 1B, that is also under review this month, will provide service to 317 new customers. Other multiple phases will follow to correct these issues.

The proposed total cost for this project is \$14,436,500 and the PSD intends to pursue a \$2,000,000 CWSRF Debt Forgiveness, a \$1,000,000 IJDC Grant, and a \$11,436,500 WDA Economic Enhancement Grant.

The Total and Design Engineering Fees are above the ASCE curve. After further review, these costs include engineering and soft costs for Phase 1B and Phase 1C. This is a normal practice in proposing multiple phased projects. If the construction costs for all three phases were combined, it appears that the engineering fees would be below the allowable ASCE Fee Curve so a fee variance is not required. The costs are technically feasible.

Attachments: Technical Comments

Engineering Fees:

Estimated construction cost =	\$ 11,274,500.00
Consultant's design fee =	\$ 1,040,000.00
Consultant's total fee =	\$ 2,422,000.00
Design fee percentage =	9.2 %
Design fee per ASCE curve =	6.3 %
Total fee percentage =	21.5 %
Total fee per ASCE curve =	16.3 %

Preliminary Project Ratings:

Public Health Benefits:	15
Compliance with Standards:	15
O & M Capabilities	3
Readiness to Proceed	0
Cost Effectiveness	1
Compliance with PSC Orders	0



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: Mercer County PSD
Preliminary Application **Project No.: 2023S-2341**
Project IA Sewer Collection & WWTP
Mercer 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 for a regional sewer collection and WWTP to serve the Rock District central/western Mercer County. The project is broken down into four project areas: Project I (Project IA, Project IB and Project IC), Project II, Project III and Project IV. This application is for Project IA and will serve 76 EDUs and eliminate the Shawnee MPH & Shawnee Valley MHP packaged WWTPs. The project will consist of approximately 4,830 LF of 6", 2,485 LF of 8", 1,535 LF of 15", 3,890 LF of 18" and 165 LF of 24" sewers; 51 manholes; four (4) lift stations; one (1) duplex grinder pump station; and approximately 1,715 LF of 6" and 2,855 LF of 10" force main. A 0.4 MGD (initially 0.2 MGD) SBR WWTP will be constructed to serve Project IA, IB and IC. Major components of the WWTP will be an influent lift station; headworks building with course screen and grit removal; SBR (2 basins); tertiary filter; UV disinfection; anaerobic digester; and dewatering building with belt filter press.

The cost per customer is **\$189,954**. Total estimated project cost is **\$14,436,500** (CWSRF Debt Forgiveness: **\$2,000,000**; and WDA Economic Enhancement Grant Fund: **\$11,436,500**).

NEED FOR PROJECT:

The Preliminary Engineering Report indicates the Rock District in central/western Mercer County is unsewered or inadequately sewerred.

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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Harold D. Ward, Cabinet Secretary
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MEMORANDUM

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

FROM: Jesse Rupe, P.E., DWWM

DATE: May 16, 2023

SUBJECT: Mercer County PSD
Preliminary Application: IJDC No. 2023S-2341
Rock District Wastewater Treatment and Collection System (Phase 1A)

RECOMMENDATION

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

PROJECT DESCRIPTION

Mercer County PSD currently owns and operates a wastewater collection system and a 75,000 gallon per day (GPD) wastewater treatment plant (WWTP). The collection system and WWTP are located in the Matoaka area and provide wastewater service to approximately 72 customers.

The proposed project will construct a regional wastewater collection system and 400,000 GPD WWTP to provide sanitary sewer service to approximately 1,650 customers in the Rock District of Mercer County. The proposed project will be broken into four separate projects, with multiple phases. The proposed project will be Phase 1A and include the construction of the WWTP in the Lake Bottom area. The WWTP will have the initial capacity of 200,000 GPD, with the ability to add capacity up to the final 400,000 GPD capacity as future phases are completed. Construction will also consist of the installation of approximately 12,905 linear feet (LF) of gravity sewer line, 4,500 LF of force main, five new lift stations, and the decommissioning of two existing package WWTPs. This phase will provide sanitary sewer service to approximately 76 customers in the Lake Bottom area of Mercer County.

The proposed total cost for this project is \$14,436,500 and the PSD intends to pursue a \$2,000,000 CWSRF Debt Forgiveness, a \$1,000,000 IJDC Grant, and a \$11,436,500 WDA

Economic Enhancement Grant. The proposed monthly rate for 3,400 gallons is \$83.14 (2.42 % MHI).

NEED FOR PROJECT

There is no public sanitary sewer in the project area with the exception of the PSDs existing WWTP in Matoaka. The existing WWTP in Matoaka has experienced issues for several years and received multiple Notice of Violations (NOV) from WVDEP. There are also six additional package plants in the project area that have also experienced issues and received NOV's from WVDEP. Locations in the project area that are not served by the previously mentioned WWTPs are not currently served. These areas use septic tanks or directly discharge into the environment. The County Health Department provided a letter documenting the issues with sewage disposal in the areas of Spanishburg, Lake Bottom, Kegley, Lashmeet, and Matoaka. The letter also stated that septic effluent may flow directly to a nearby creek or the Bluestone River. With the completion of Phase I in its entirety, approximately 700 customers could be served and the existing Matoaka WWTP and five of the troubled package plants could be abandoned.

DEFICIENCIES/COMMENTS

- The PER should discuss which specific receiving stream each phase will effect and its possible improvements.
- The PER should include a list of all permits required for this project.
- The schedule included in the PER shows a loan closing of April 2025. WDA EEG funds included in this phase are required to be closed on by December 2024. This project will have to move faster than what is shown on the schedule.
- The engineering fees for the total engineering fee and design engineering fee are both above the allowable amount based on the ASCE Fee Curve. An engineering fee variance will be required.
- It should be noted that this Phase contains the engineering and soft costs for Phase 1B and Phase 1C. If the construction costs for all three phases were combined, it appears that the engineering fees would be below the allowable ASCE Fee Curve.
- The PER will need to be developed into a facilities plan that meets CWSRF requirements if CWSRF is used.

Engineering Fees:

Estimated construction cost =	\$ 11,274,500.00
Consultant's design fee =	\$ 1,040,000.00
Consultant's total fee =	\$ 2,422,000.00
Design fee percentage =	9.2 %
Design fee per ASCE curve =	6.3 %
Total fee percentage =	21.5 %
Total fee per ASCE curve =	16.3 %

Preliminary Project Ratings:

Public Health Benefits:	15
Compliance with Standards:	15

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

May 23, 2023

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. 2023S-2341 & 2023S-2342
Mercer County PSD - 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
 return to the Applicant

Please advise if you have any questions.

Sincerely,

A handwritten signature in red ink, appearing to read "Jonathan M. Fowler".

Jonathan M. Fowler, P.E.
Engineering Division

JMF:vb

**PUBLIC SERVICE COMMISSION STAFF
TECHNICAL REVIEW**

DATE: May 19, 2023

PROJECT SPONSOR: MERCER COUNTY PUBLIC SERVICE DISTRICT -
SEWER

PROJECT SUMMARY: Construction of a regional sewer collection and
treatment system in the Rock Creek District of western
Mercer County.

PROPOSED FUNDING (Phase 1A, Project 2023S-2341):

WDA EE Grant	\$ 11,436,500
IJDC Grant	1,000,000
CWSRF Principal Forgiveness	<u>2,000,000</u>
Total Phase 1A	\$ 14,436,500

PROPOSED FUNDING (Phase 1B, Project 2023S-2342):

WDA EE Grant	\$ 624,000
IJDC Grant	1,000,000
CWSRF Loan	3,473,000
(.25%, .25% admin fee, 40 yrs.)	
CWSRF Principal Forgiveness	<u>2,000,000</u>
Total Phase 1B	\$ 7,097,000

Total Phase 1A & Phase 1B \$21,533,500

CURRENT RATES: \$27.01 3,400 gallons
\$29.63 4,000 gallons

PROPOSED RATES: \$83.14 3,400 gallons
\$91.21 4,000 gallons

Combined Application Nos. 2023S-2341 & 2023S-2342

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

FINANCIAL: Nathan Nelson

1. Current rates (\$27.01 for 3,400 gallons) are below the rates attributable to 1.25% (\$42.41), 1.5% (\$50.90), 1.75% (\$59.38), and 2.0% (\$67.86) of the

Median Household Income (MHI). Increasing current rates to 1.25%, 1.5%, 1.75%, and 2.0% of the MHI would provide additional revenues of \$18,316, \$28,403, \$38,490, and \$48,577 respectively.

2. Using Scenario 1, the Phase 1A preferred funding package consisting of a WDA Economic Enhancement Grant of \$11,436,500, \$2,000,000 in CWSRF Principal Forgiveness and an IJDC Grant of \$1,000,000 and the Phase 1B preferred funding package consisting of a WDA Economic Enhancement Grant of \$624,000, \$2,000,000 in CWSRF Principal Forgiveness, a CWSRF Loan of \$3,473,000 at .25%, .25% administrative fee, for 40 years (paid back over 38 years), and a \$1,000,000 IJDC Grant, proposed rates (\$83.14 for 3,400 gallons) will provide a cash flow deficit of \$761 and debt service coverage of 151.53%. An additional 0.3% (for a total of \$83.39 for 3,400 gallons) increase in proposed rates would be required to provide a bare-minimum positive cash flow surplus (of \$215) and debt service coverage of 152.57%
3. The Scenario 2, alternate loan package is unrealistic for this application. Thus, one is not being provided.
4. Notes to Comments:
 - A. Staff's detailed adjustments are listed on Attachment A for Scenario 1 (Preferred Funding Package).
 - B. Staff prepared the attached Cash Flow Analysis utilizing information from the Annual Report for the Fiscal Year Ended June 30, 2022, and the applicant's Rule 42 Exhibit submitted with the application.
 - C. Staff notes that Phase 1A will extend service to 76 new customers and construct a new treatment plant. Phase 1B will extend service to 317 new customers. The District has proposed that both phases be constructed concurrently. In this review, Staff's Proforma includes both phases. With both projects taken together, the proposed 3,400 gallon rate is \$83.14 (3,400 gallons) however, this rate may be insufficient (See Comment 2 above and Note E, below)
 - D. A Recommended Decision was entered on October 24, 2022 (Final November 6, 2022), in Case No. 22-0562-PSD-CN for a wastewater project that would "repair and upgrade the aging Matoaka Sewage Treatment Plant and wastewater collection system". This project will also serve 75 customers. The District has accounted for this project in its Rule 42 Exhibit. The District's current 3,400-gallon rate of \$27.01

will be increased to \$46.19 upon substantial completion of this project representing an increase of seventy-one percent (71%). Staff has included this project in its analysis.

- E. The District should correct a couple of issues in its Rule 42 prior to filing for a Certificate. First, all revenue projections in the Bill Analysis are based on minimum usages for every bill rendered. This was discussed by PSC Staff in the prior certificate proceeding. Secondly, the correction factor at Going Level and Proforma is at 98%. The correction factor at Per Books should carry over to subsequent bill analyses. Lastly, the Rule 42 does not include the proper number of new customers. Sewer projects should include 100% of the available customers, however, in this application the project sponsor only included 90%. Each of these issues act to lower projected revenues and thus, lead to a higher than necessary rate.
- F. 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.

ENGINEERING: Jonathan M. Fowler, P.E.

1. This project will require a Certificate of Convenience and Necessity from the PSC. The utility should consult 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). Staff notes that an affirmative determination of need for the project must be established in a Certificate filing at the PSC.
2. Scope: The Mercer County PSD proposes to construct Phases 1A and 1B of a multiple-phase series of projects which will construct a new wastewater collection and treatment system in unserved areas of Mercer County near and around Matoaka. Note that Phase 1A of the PER is filed as Application No. 2023S-2341 while Phase 1B of the PER has been filed as Application No. 2323S-2342. This review anticipates that both projects will proceed concurrently per Staff's discussions with the applicant, the

WVIJDC and the WV DEP.

The proposed combined project will provide service to about 393 new customers. Further phases of work are detailed in the PER which is entitled as the "Facilities Planning Report" for the Rock District of Mercer County. Construction costs include about \$8.1 million of new collection system and appurtenant work in Phase 1A along with about \$7.1 million of collection system and appurtenant work in Phase 1B. A new "Rock Creek" WWTP is to be built under Phase 1A at an estimated construction cost of \$3.2 million (construction costs shown herein include contingencies). Note that Phase 1A provides the necessary treatment infrastructure to provide service to Phase 1B and subsequent phases of this series of projects.

The Rock Creek District of Mercer County lacks a regional sewer provider with sewer service instead being provided by a hodge-podge of septic tanks, home aeration systems, direct discharges to area streams and by several small package plants serving individual subdivisions, trailer courts apartment complexes and so forth. Overall, the level of sewer service in the entire area is considered as inadequate and the area suffers from the lack of adequate sewer collection and a lack of environmentally-acceptable treatment. Staff is familiar with the area and has reviewed the Facilities Plan and has no objection to the proposed project which will greatly improve health & safety, sanitation and environmental quality of the Rock Creek District.

Customer Density: Based upon 393 customers and 13.1 miles of new gravity mains, the collection system customer density is about 30 customers per mile which is considered acceptable.

Cost per Customer: With a combined project cost of \$21.5 million and 393 customers, the cost per customer is about \$54,700 which is considered as moderate but acceptable for a new gravity collection system including a new WWTP.

3. **Project Feasibility:** The project is technically feasible. The cost per customer is moderate and the project is primarily grant funded. The project will replace hundreds of on-site systems and several package plants and will provide environmentally compliant sewer service to unserved areas and additional areas in future phases.
4. **Project Alternatives:** A logical review of practical alternatives was completed along with a series of Present Worth Cost Analysis. Staff has no

objection to the selected alternatives.

5. Consolidation: No consolidation opportunities are presented by the instant project. However, we note that as a result of this project the existing dilapidated WWTP serving the small community of Matoaka (about 75 customers) will eventually be retired with wastewater from that community being transmitted to the new Rock Creek Regional WWTP.
6. Inconsistencies: No fatal issues were noted.
7. Operation and Maintenance (O & M) Expenses: O & M expense estimates were provided along with calculations supporting such estimates. Staff has no issue with such estimates however; we caution the applicant to proceed conservatively and with adequate contingencies when estimating future O&M for an entirely new series of facilities.
8. Engineering Agreement: The application includes information to determine apparent compliance with West Virginia Code §§5G-1-1, et seq. Total technical services (engineering) costs for both phases are \$2.42 million which is equal to 13.2% of the combined total construction cost of \$18.4 million (including contingency).

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

MERCER COUNTY PUBLIC SERVICE DISTRICT - SEWER
 CASH FLOW ANALYSIS
 YEAR ENDED: June 30, 2022
 APPLICATION NOS: 2023S-2341 & 2023S-2342
 May 22, 2023

PREFERRED FUNDING PACKAGE
 SCENARIO 1

	Rule 42 Pending Project Per Application Before Project	Rule 42 Proforma Per Application with Project	Staff Adjustments	Per Staff Analysis
	1	2	3	4
	\$	\$	\$	\$
AVAILABLE CASH				
Operating Revenues	40,842	397,075	(30,453) (1)	366,622
Other Operating Revenue			-	-
SB 234 Annual Working Cash Collections			31,453 (2)	31,453
Interest Income & Other Misc.			-	-
Total Cash Available	40,842	397,075	1,000	398,075
OPERATING DEDUCTIONS				
Operating Expenses	40,100	251,622	108 (3)	251,730
Taxes			-	-
Total Cash Requirements Before Debt Service	40,100	251,622	108	251,730
Cash Available for Debt Servi (A)	742	145,453	892	146,345
DEBT SERVICE REQUIREMENTS				
Principal & Interest (B)		91,248	4,671 (4)	95,919
Other Debt			-	-
Reserve Account @ 10%		9,125	467 (5)	9,592
Renewal & Replacement Fund (2.5%)		9,927	(761) (6)	9,166
Total Debt Service Requirement	-	110,300	4,377	114,676
SB 234 Cash Working Capital	5,012	31,453	-	31,453
Remaining Cash	(4,270)	3,700	(3,485)	215
Percent Coverage (A) / (B)		159.40%		152.57%
Average rate for 3,400 gallons	\$ 46.19	\$ 83.14	\$ 0.25	\$ 83.39
Average rate for 4,000 gallons	\$ 50.67	\$ 91.21	\$ 0.27	\$ 91.48

**MERCER COUNTY PUBLIC SERVICE DISTRICT - SEWER
CASH FLOW ANALYSIS
YEAR ENDED: June 30, 2022
APPLICATION NOs: 2023S-2341 & 2023S-2342**

**Attachment A
PREFERRED FUNDING PACKAGE
SCENARIO 1**

Staff Adjustments

<u>Adjustment Description</u>		\$	Increase <Decrease>
(1) Operating Revenues	Per Staff Analysis	366,622	(30,453)
	Per Application with Project	397,075	
Adjust revenues in accordance with PSC General Order 183.11. Staff also projected that an additional \$1,000 in revenues would be needed to generate a 115% debt service coverage and a positive cash flow surplus.			
(2) SB 234 Annual Working Cash Collections	Per Staff Analysis	31,453	31,453
	Per Application with Project	-	
Account for SB 234 (2015) funding pursuant to PSC General Order 183.11.			
(3) Operating Expenses	Per Staff Analysis	251,730	108
	Per Application with Project	251,622	
To record Staff calculation of a 0.25% CWSRF administrative fee.			
(4) Principal & Interest	Per Staff Analysis	95,919	4,671
	Per Application with Project	91,248	
The difference in P&I is related to Staff's calculation of a loan of \$3,473,000 for 40 years (paid back over 38 years) at 0.25%.			
(5) Reserve Account @ 10%	Per Staff Analysis	9,592	467
	Per Application with Project	9,125	
Staff assumed a 10% reserve on the new debt.			
(6) Renewal & Replacement Fund (2.5%)	Per Staff Analysis	9,166	(761)
	Per Application with Project	9,927	
Staff used 2.5% of the projection of "Operating & Other Revenues" as the basis of the renewal & replacement fund.			