



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

From: Katheryn Emery, P.E., Engineer Chief
Sewer Technical Review Committee

Date: May 21, 2025

Subject: Town of Carpendale
Preliminary Application: IJDC No. 2021S-2037
Phase 1 – Wastewater Collection and Conveyance Project

-
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 returned.
- d. This project should be referred to the Consolidation Committee.

3. Other remarks:

This request should be returned. The original scope was previously reviewed by the IJDC and the Town of Carpendale received a funding decision letter on April 5, 2023. There are technical concerns with the revised scope and since the project costs are comparable, it is the committee's recommendation that the original scope should move forward. The total cost of the project was outlined to be \$4,918,298.00.

Carpendale and Ridgley should evaluate consolidating their systems and resources.

A message was left for the Consultant to discuss the project but a response was not received.



Russel Crane
Interim Cabinet Secretary of Health

Jason R. Frame
OEHS Director

MEMORANDUM

TO: Meredith J. Vance, Director
Environmental Engineering Division

FROM: Patrick Murphy, P.E.
Environmental Engineering Division 

DATE: May 12, 2025

SUBJECT: Town of Carpendale
IJDC Application- **2021S-2037**
Sewer Line Upgrade and Replacement
Mineral County

Recommendation: We have reviewed this preliminary application and recommend that it be forwarded to the Funding Committee for review.

Project Scope: The project scope proposes to rehabilitate and upgrade the existing sewer collection system focusing on reducing inflow and infiltration. The project proposes to upgrade and replace existing lines as well as add a pump station.

The total project cost is **\$4,793,331.00**

Need for the Project: The aging/deteriorating condition of some of Carpendale's sewerage facilities along with I&I issues are concerning and if not resolved could result in sanitary sewer overflows (SSO's), further deterioration of the system.

Concerns: No concerns were noted.

Permits: WVDEP NPDES, WVDEP Construction Stormwater; US Army Corps of Engineers and the WV Department of Health.





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: Katheryn Emery, P.E., Engineer Chief, DWWM

FROM: Spencer Fultineer, DWWM

DATE: May 12, 2025

SUBJECT: Town of Carpendale
Preliminary Application: IJDC No. 2021S-2037
Phase 1 – Wastewater Collection and Conveyance Project

RECOMMENDATION

The IJDC Application and Preliminary Engineering Report prepared by The EADS Group, Inc., for the above referenced project has been reviewed and should be returned.

PROJECT DESCRIPTION

The Town of Carpendale owns and operates an existing wastewater collection system operating under NPDES Permit# WV0101567. The Town's collection system currently serves approximately 381 customers.

This project aims to replace the existing forcemain while maintaining nearly the same alignment. Since the project is unable to replace the forcemain in its current position within a condemned tunnel, it has been decided that Horizontal Directional Drilling beneath the tunnel and the river would be a better option. This project will place a new 8" diameter sanitary sewer forcemain within a 16" diameter casing. This project will also include the installation of a new pump station in Carpendale to convey flow to the City of Cumberland. Within the City of Carpendale, there will be an 8" forcemain, an 8" gravity main, and new manholes added. Lastly, this project will be responsible for the decommissioning of Pump Stations 3 & 4.

The proposed total cost for this project is \$4,793,331.00 and the Town intends to pursue a Local Grant for \$300,000, an IJDC Grant for \$500,000, a USACE Grant for \$1,600,000, a CWSRF Principle Forgiveness Loan for \$1,500,000, and a CWSRF Loan for \$893,331 at a 1.75% rate for 30 years.

The proposed 3,400 gallon rate is \$65.85.

NEED FOR PROJECT

The Town of Carpendale is experiencing increased rates of I/I especially during storm events. In 2021 Carpendale Performed a CCTV Inspection. This inspection revealed cracked piping, root intrusions, leaking joints, submerged pipe, and other blockages and defects. Along with I/I issues, inspection of the pump stations led to discovering that they are deteriorated and unreliable.

The only existing method of conveying sewer flow from Carpendale to Cumberland is the forcemain through the condemned Knobley Tunnel. This forcemain must be moved due to risk of tunnel collapse and the damage that it would cause to the sewer line.

DEFICIENCIES/COMMENTS

- Using the Combined Application, the Total Engineering Fee and the Design Fee appear to be within the ASCE curve.
- The total cost of the project is increased and is comparable to the original scope. The 2500+ LF directional drill is a concern for maintenance, installation and meeting design criteria.
- The PER will need to be developed into a facilities plan that meets CWSRF requirements if CWSRF is used.
- How do the O&M Costs compare for removing the entire direction drill pipe or diverting flow through Ridgley?

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



May 20, 2025

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. 2021S-2037
Town of Carpendale, Sewer System Improvements
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 Technical Staff's comments enclosed herewith, we are recommending the application be:

- Forward the Application
- Return the Application
- Returned to the Applicant

Please advise if you have any questions.

Sincerely,

Jonathan M Fowler

Jonathan M. Fowler, P.E.
Engineering Division

Enclosures
JMF:vb

**PUBLIC SERVICE COMMISSION STAFF
TECHNICAL REVIEW**

DATE: May 20, 2025

PROJECT SPONSOR: TOWN OF CARPENDALE - (SEWER)

PROJECT SUMMARY: Project is to rehabilitate the sanitary sewer collection system of the Town of Carpendale.

PROPOSED FUNDING:	CWSRF Principal Forgiveness	\$1,500,000
	CWSRF Loan (1.75%, .25% AF, 30 yrs.)	893,331
	IJDC District 1 Grant	500,000
	USCOE Grant	1,600,000
	Mineral County Commission ARPA Grant	<u>300,000</u>
	Total	\$4,793,331

CURRENT RATES: \$58.90 3,400 Gallons
\$64.60 4,000 Gallons

PROPOSED RATES: \$65.85 3,400 Gallons
\$72.22 4,000 Gallons

Application No. 2021S-2037

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

FINANCIAL: William Nelson

1. Current rates (\$58.90 for 3,400 gallons) are above the rates attributable to 1.25% (\$41.31), 1.5% (\$49.57), and 1.75% (\$57.84), of the Median Household Income (MHI) survey approved for the Applicant, but below 2.0% (\$66.10) of the MHI. Increasing current rates to 2.0% of MHI would provide additional revenues of \$31,635.
2. Using Scenario 1, the preferred funding package consisting of a CWSRF Principal Forgiveness of \$1,500,000, a CWSRF Loan of \$893,331 at 1.75%, .25% Admin. Fee, for 30 years, an IJDC District 1 Grant of \$500,000, a USCOE Grant of \$1,600,000, and a Mineral County Commission ARPA Grant of \$300,000, proposed rates (\$65.85 for 3,400 gallons) will provide a cash flow

surplus of \$28,128 and debt service coverage of 145.71%.

3. Using the Scenario 2 alternate loan package of \$3,193,331 (in uncommitted funds) at 5% for 40 years (paid back over 38 years), and committed funds consisting of a USCOE Grant of \$1,600,000, proposed rates (\$126.35 for 3,400 gallons) will provide a cash flow surplus of \$122,806 and debt service coverage of 163.33%.

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, 2024, and the applicant's Rule 42 Exhibit submitted with the application.
 - C. Staff used the MHI survey of \$39,659 accepted for the Applicant and listed in this application.
 - D. Staff notes this application was originally reviewed in May of 2022, and had a cost of \$3,400,000.
 - E. Staff has included a Scenario 3 analysis. Staff notes that the project sponsor is proposing a CWSRF Loan at 1.75%, .25% Administrative Fee, for 30 years. Since proposed target rates of \$65.85 (3,400 gallons) are greater than 1.75% (\$57.84) but less than 2% (\$66.10) of the MHI, the terms of this proposed CWSRF Loan would typically be .75%, .25% Administrative Fee, for 30 years, for the preferred funding package. If the preferred funding package is adjusted for this change, proposed target rates (\$65.85 for 3,400 gallons) would provide a cash flow surplus of \$33,809 and debt service coverage of 152.34%.
 - F. Senate Bill 234, effective June 12, 2012 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 operations 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.

- G. 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.

- H. 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. Pursuant to House Bill 2742 passed in the 2025 Legislative Session, this project will not require a Certificate of Convenience and Necessity from the PSC.

2. Scope: The Town of Carpendale (Carpendale) is proposing to replace its Knobley Tunnel forcemain that conveys sewage flows to the City of Cumberland. The proposed project scope includes: a new lift station, 2525 LF of 8-inch forcemain (drill & install with 16-inch steel casing), 240 LF of 8-inch forcemain (hard rehabilitation), 865 LF 8-inch forcemain (soft rehabilitation), 400 LF of 8-inch gravity main (hard rehabilitation), 500 LF of 8-inch gravity main (soft rehabilitation), 9 manholes, eliminate existing lift stations 3 & 4, and all necessary appurtenances. The estimated construction cost is \$3,082,612 (includes 10.0% construction contingency), and the estimated total project cost is \$4,793,331 (includes 14.69% project contingency).

Need: The PER indicates that Carpendale’s sewer facilities are in aging/deteriorating conditions and the collection system is experiencing I&I issues. The PER states that the “...hazardous condition within Knobley Tunnel could also cause environmental issues.”. Additionally, the PER specifies that “...the I&I is causing high treatment costs and high Operational and Maintenance (O&M) costs to Carpendale, straining their budget.”

Cost per Customer: Based upon the estimated total project cost of \$4,793,331, and proposing to have 381 existing customers, the cost to serve each new customer is

\$12,581. The cost per customer in terms of proposed borrowing is \$2,345, as the proposed funding is 81.4% grant.

3. Project Feasibility: The proposed project scope cannot be maintained by a small sewer system. We consider it as technically unfeasible.
4. Project Alternatives: The PER included an evaluation of alternatives: Option #1 – Force Main to Ridgeley, WV, Option #2 – Replace Force Main through Knobley Tunnel and Place Inside Steel Casing Pipe, and Option #3 – Horizontal Directional Drill (HDD) under Knobley Tunnel and Potomac River. The PER indicates that Alternative #3 was selected as it is “...the most feasible option due to constructability and cost.”

The issues associated with maintaining the proposed ½-mile- long, deep and inaccessible Horizontal Directional Drill component of the work should be more carefully considered before proceeding. A small sewer utility like Carpendale simply does not have the financial, organizational or specialized technical skills required to repair and maintain the proposed pipeline. In fact, this issue was acknowledged in the “Disadvantages” discussion for Option 3 in PER as follows; *“If any damage or maintenance is required on force main, a new bore must be drilled”*.

This application should be returned for more complete consideration of maintenance issues.

5. Consolidation: The Carpendale sewer system and the adjacent Ridgley sewer system are both relatively small systems serving communities with declining customer bases. Small sewer utilities are becoming increasingly unviable from both operational and financial aspects. To enhance the operational and financial viability of both of these small systems over the long-term they must be consolidated.
6. Operation and Maintenance (O&M) Expenses: Supporting calculations for O&M expenses was not included in the PER.
7. 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 \$822,665, which is equal to 26.69% of the construction cost of \$3,082,612 (includes 10.0% construction contingency).
8. Other Deficiencies/Comments:
 - The schedule for the Phase II Infiltration & Inflow rehabilitation project should be accelerated since this would actually reduce expenses associated with treatment

costs and which were stated as “... *straining their budget*”.

- The cost for Geotechnical Engineering Services (\$143,065) is high and is likely associated with the proposed HDD; this cost may be significantly lower if the HDD is deleted.
- The cost associated with the Preparation of Funding Applications (\$100,000) is high.

**TOWN OF CARPENDALE - SEWER
CASH FLOW ANALYSIS
YEAR ENDED: June 30, 2024
APPLICATION NO: 2021S-2037
May 20, 2025**

**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
	\$	\$	\$	\$
AVAILABLE CASH				
Operating Revenues	258,853	289,409	(15,441) (1)	273,968
Other Operating Revenue	-	-	-	-
SB 234 Annual Working Cash Collections			15,441 (2)	15,441
Interest Income & Other Misc.	8,787	8,787	-	8,787
Total Cash Available	267,640	298,196	-	298,196
OPERATING DEDUCTIONS				
Operating Expenses	123,528	123,528	1,167 (3)	124,695
Taxes	512	512	-	512
Total Cash Requirements Before Debt Service	124,040	124,040	1,167	125,207
Cash Available for Debt Service (A)	143,600	174,156	(1,167)	172,989
DEBT SERVICE REQUIREMENTS				
Principal & Interest (B)	80,189	121,882	(3,164) (4)	118,718
Other Debt	-	-	-	-
Reserve Account @ 10%	-	4,169	(316) (5)	3,853
Renewal & Replacement Fund (2.5%)	6,691	7,455	(606) (6)	6,849
Total Debt Service Requirement	86,880	133,506	(4,086)	129,420
SB 234 Cash Working Capital	15,441	15,441	-	15,441
Remaining Cash	41,279	25,209	2,919	28,128
Percent Coverage (A) / (B)	179.08%	142.89%		145.71%
Average rate for 3,400 gallons	\$ 58.90	\$ 65.85	\$ -	\$ 65.85
Average rate for 4,000 gallons	\$ 64.60	\$ 72.22	\$ -	\$ 72.22

Staff Adjustments

<u>Adjustment Description</u>			\$	Increase <Decrease>
(1)	Operating Revenues	Per Staff Analysis	273,968	(15,441)
		Per Application with Project	289,409	
	Adjust revenues in accordance with PSC General Order 183.11.			
(2)	SB 234 Annual Working Cash Collections	Per Staff Analysis	15,441	15,441
		Per Application with Project	-	
	Account for SB 234 (2015) funding pursuant to PSC General Order 183.11.			
(3)	Operating Expenses	Per Staff Analysis	124,695	1,167
		Per Application with Project	123,528	
	Staff's calculation includes the .25% administrative fee associated with the CWSRF Loan of \$893,331.			
(4)	Principal & Interest	Per Staff Analysis	118,718	(3,164)
		Per Application with Project	121,882	
	The difference in P&I is related to Staff's calculation of a loan of \$893,331 for 30 years 1.75%.			
(5)	Reserve Account @ 10%	Per Staff Analysis	3,853	(316)
		Per Application with Project	4,169	
	Staff assumed a 10% reserve on the new debt.			
(6)	Renewal & Replacement Fund (2.5%)	Per Staff Analysis	6,849	(606)
		Per Application with Project	7,455	
	Staff used 2.5% of the projection of "Operating & Other Revenues" as the basis of the renewal & replacement fund.			

**TOWN OF CARPENDALE - SEWER
CASH FLOW ANALYSIS
YEAR ENDED: June 30, 2024
APPLICATION NO: 2021S-2037
May 20, 2025**

**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	258,853	555,421	(15,441) (1)	539,980
Other Operating Revenue	-	-	-	-
SB 234 Annual Working Cash Collections			15,441 (2)	15,441
Interest Income & Other Misc.	8,787	8,787	-	8,787
Total Cash Available	267,640	564,208	-	564,208
OPERATING DEDUCTIONS				
Operating Expenses	123,528	123,528	-	123,528
Taxes	512	512	-	512
Total Cash Requirements Before Debt Service	124,040	124,040	-	124,040
Cash Available for Debt Service (A)	143,600	440,168	-	440,168
DEBT SERVICE REQUIREMENTS				
Principal & Interest (B)	80,189	357,548	(88,057) (3)	269,491
Other Debt	-	-	-	-
Reserve Account @ 10%	-	27,736	(8,806) (4)	18,930
Renewal & Replacement Fund (2.5%)	6,691	14,105	(605) (5)	13,500
Total Debt Service Requirement	86,880	399,389	(97,467)	301,921
SB 234 Cash Working Capital	15,441	15,441	-	15,441
Remaining Cash	41,279	25,338	97,467	122,806
Percent Coverage (A) / (B)	179.08%	123.11%		163.33%
Average rate for 3,400 gallons	\$ 58.90	\$ 126.35	\$ -	\$ 126.35
Average rate for 4,000 gallons	\$ 64.60	\$ 138.58	\$ -	\$ 138.58

Staff Adjustments

<u>Adjustment Description</u>			\$	Increase <Decrease>
(1)	Operating Revenues	Per Staff Analysis	539,980	(15,441)
		Per Application with Project	555,421	
	Adjust revenues in accordance with PSC General Order 183.11.			
(2)	SB 234 Annual Working Cash Collections	Per Staff Analysis	15,441	15,441
		Per Application with Project	-	
	Account for SB 234 (2015) funding pursuant to PSC General Order 183.11.			
(3)	Principal & Interest	Per Staff Analysis	269,491	(88,057)
		Per Application with Project	357,548	
	The difference in P&I is related to Staff's calculation of a loan of \$3,193,133 for 40 years (paid back over 38 years) at 5%.			
(4)	Reserve Account @ 10%	Per Staff Analysis	18,930	(8,806)
		Per Application with Project	27,736	
	Staff assumed a 10% reserve on the new debt.			
(5)	Renewal & Replacement Fund (2.5%)	Per Staff Analysis	13,500	(605)
		Per Application with Project	14,105	
	Staff used 2.5% of the projection of "Operating & Other Revenues" as the basis of the renewal & replacement fund.			

**TOWN OF CARPENDALE - SEWER
CASH FLOW ANALYSIS
YEAR ENDED: June 30, 2024
APPLICATION NO: 2021S-2037
May 20, 2025**

**PREFERRED FUNDING PACKAGE
SCENARIO 3**

	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	258,853	289,409	(15,441) (1)	273,968
Other Operating Revenue	-	-	-	-
SB 234 Annual Working Cash Collections			15,441 (2)	15,441
Interest Income & Other Misc.	8,787	8,787	-	8,787
Total Cash Available	267,640	298,196	-	298,196
OPERATING DEDUCTIONS				
Operating Expenses	123,528	123,528	1,167 (3)	124,695
Taxes	512	512	-	512
Total Cash Requirements Before Debt Service	124,040	124,040	1,167	125,207
Cash Available for Debt Service (A)	143,600	174,156	(1,167)	172,989
DEBT SERVICE REQUIREMENTS				
Principal & Interest (B)	80,189	121,882	(8,329) (4)	113,553
Other Debt	-	-	-	-
Reserve Account @ 10%	-	4,169	(833) (5)	3,336
Renewal & Replacement Fund (2.5%)	6,691	7,455	(606) (6)	6,849
Total Debt Service Requirement	86,880	133,506	(9,767)	123,739
SB 234 Cash Working Capital	15,441	15,441	-	15,441
Remaining Cash	41,279	25,209	8,600	33,809
Percent Coverage (A) / (B)	179.08%	142.89%		152.34%
Average rate for 3,400 gallons	\$ 58.90	\$ 65.85	\$ -	\$ 65.85
Average rate for 4,000 gallons	\$ 64.60	\$ 72.22	\$ -	\$ 72.22

Staff Adjustments

<u>Adjustment Description</u>			\$	Increase <Decrease>
(1)	Operating Revenues	Per Staff Analysis	273,968	(15,441)
		Per Application with Project	289,409	
	Adjust revenues in accordance with PSC General Order 183.11.			
(2)	SB 234 Annual Working Cash Collections	Per Staff Analysis	15,441	15,441
		Per Application with Project	-	
	Account for SB 234 (2015) funding pursuant to PSC General Order 183.11.			
(3)	Operating Expenses	Per Staff Analysis	124,695	1,167
		Per Application with Project	123,528	
	Staff's calculation includes the .25% administrative fee associated with the CWSRF Loan of \$893,331.			
(4)	Principal & Interest	Per Staff Analysis	113,553	(8,329)
		Per Application with Project	121,882	
	The difference in P&I is related to Staff's calculation of a loan of \$893,331 for 30 years at .75%.			
(5)	Reserve Account @ 10%	Per Staff Analysis	3,336	(833)
		Per Application with Project	4,169	
	Staff assumed a 10% reserve on the new debt.			
(6)	Renewal & Replacement Fund (2.5%)	Per Staff Analysis	6,849	(606)
		Per Application with Project	7,455	
	Staff used 2.5% of the projection of "Operating & Other Revenues" as the basis of the renewal & replacement fund.			