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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  
Meredith J. Vance, Director, Environmental Engineering Division, BPH

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

**Date:** January 23, 2024

**Subject:** Town of Ellenboro  
IJDC Application - 2024W-2632  
Highland Road Waterline Extension 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 water 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 for the consultant to address technical comments.
- d. \_\_\_ This project should be referred to the Consolidation Committee.

3. Other remarks:

This project will extend public water service to approximately 22 new residential customers that live in the Highland Road area of Ellenboro. An interconnect with the City of Pennsboro's proposed extension will also be completed. Currently the existing homes rely on private wells that have been tested and show concentrations of lead and arsenic or do not have adequate supply to meet demand and result in individuals hauling water..

It is recommended that further sampling be conducted via BPH sampling guidelines to confirm that the contamination is located in the private wells and there isn't further contamination being introduced through the plumbing of each house.

This application needs to be tabled until next month's meeting to allow time to determine how compliance with the Lead and Copper Rule requirements will be met and how the applicant will ensure compliance with the regulatory agencies.

The proposed total cost for this project is \$1,775,000 and Ellenboro intends to pursue a \$887,500 IJDC Grant and a \$887,500 DEP DWTRF Principal Forgiveness Loan.

Using the Combined Application, the Total Engineering Fee and the Design Fee appear to be within the ASCE curve.

Preliminary Project Ratings:

Public Health Benefits: 15  
Compliance with Standards: 0



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Harold D. Ward, Cabinet Secretary  
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### MEMORANDUM

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

**FROM:** Jesse Rupe, P.E., DWWM

**DATE:** December 5, 2024

**SUBJECT:** Town of Ellenboro  
IJDC Application - 2024W-2632  
Highland Road Waterline Extension Project

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### RECOMMENDATION

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

### PROJECT DESCRIPTION

The Town of Ellenboro operates a water distribution system under (PWSID # 3304302) in Ritchie County, West Virginia. Ellenboro provides drinking water to approximately 245 total customers. Ellenboro's distribution system includes 3 water storage tanks and has a total storage capacity of 459,000 gallons. Ellenboro's water is treated at the Hughes River Water Board water treatment plant (WTP) and has a 2.5 Million Gallon per Day (MGD) capacity.

This project proposes to extend public water service to approximately 22 new residential customers that live in the Highland Road area of Ellenboro. The proposed extension will provide water service and fire protection along Highland Road from its intersection with Lamberton Road to the intersection with County Route 16/4. This will also provide an interconnection with the current Pennsboro project. Construction would consist of the installation of new 6" water main lines, 2" service lines, and 5 new fire hydrants.

The proposed total cost for this project is \$1,775,000 and Ellenboro intends to pursue a \$887,500 IJDC Grant and a \$887,500 DEP DWTRF Principal Forgiveness Loan. The proposed monthly rate for 3,400 gallons is \$80.12 (1.90% MHI).

## **NEED FOR PROJECT**

The proposed water line extension is necessary to provide residents along Highland Road with a reliable source of safe drinking water. All the residents that will be served by the proposed extension currently obtain potable water from private wells. The wells/cisterns serving the homes are problematic because of the unreliability of available water and lack of clean water. The majority of the wells are contaminated with heavy metals, test results from the wells show that there are large concentrations of lead and arsenic. Many residents are required to purchase and haul water to their homes in order to have an adequate supply of safe water. This project would enable the residents of these areas to have a clean and reliable source of drinking water and provide fire protections throughout the area.

## **DEFICIENCIES/COMMENTS**

- It should be noted that Ellenboro has received petitions requesting water service from 20 of the 22 potential new customers.
- It is recommended that further sampling be conducted via BPH sampling guidelines to confirm that the contamination is located in the private wells and there isn't further contamination being introduced through the plumbing of each house.
- It should be noted that the proposed funding scenario between the PER and application do not match. The funding scenario used in the memo is from the application.
- Using the Combined Application, the Design, and Total Engineering Fees appear to be within the ASCE Curves.

### Preliminary Project Ratings:

Public Health Benefits: 15  
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



December 11, 2024

Meredith J. Vance  
Office of Environmental Health Services  
350 Capitol Street, Room 313  
Charleston, West Virginia 25301-3713

Re: Public Service Commission Staff Review Comments  
Application No. 2024W-2632  
Town of Ellenboro – Water System Improvements  
Infrastructure Preliminary Application

Dear Ms. Vance:

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:

- forwarded to the Funding Committee
- forwarded to the Consolidation Committee
- 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:** December 10, 2024

**PROJECT SPONSOR: TOWN OF ELLENBORO**

**PROJECT SUMMARY:** Extension to Highland Ridge and tie-in to Pennsboro.  
The total project cost will be \$1,775,000 serving 22 new customers.

<b>PROPOSED FUNDING:</b> DWTRF Principal Forgiveness	\$ 887,500
IJDC District 1 Grant	<u>887,500</u>
Total	\$1,775,000

<b>CURRENT RATES:</b>	\$ 65.79	3,400 gallons
	\$ 76.24	4,000 gallons

<b>PROPOSED RATES:</b>	\$ 80.12	3,400 gallons
	\$ 92.85	4,000 gallons

Application No. 2024W-2632

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

**FINANCIAL: Bob Cadle**

1. Current rates (\$65.79 for 3,400 gallons) are above the rates attributable to 1.25% (\$52.73) and 1.5% (\$63.28) of the Median Household Income (MHI), but below the rates attributable to 1.75% (\$73.83) and 2% (\$84.38) of the MHI. Increasing current rates to 1.75% and 2% of the MHI would provide additional revenues of \$52,177 and \$120,638.
2. Using Scenario 1, the preferred funding package consisting of DWTRF Principal Forgiveness of \$887,500 and IJDC District 1 Grant of \$887,500, proposed rates (\$80.12 for 3,400 gallons) will provide a cash flow surplus of \$1,863 and debt service coverage of 127.87%.

3. Using the Scenario 2 alternate loan package of \$1,775,000 (in uncommitted funds) at 5% for 40 years (paid back over 38 years), proposed rates (\$100.63 for 3,400 gallons) will provide a cash flow surplus of \$760 and debt service coverage of 122.26%.

#### 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 Cash Flow Analysis submitted by the accountant.
- C. Staff notes the Applicant's cash flow analyses include going level rates of \$80.12 (3,400 gallons), however, as of this date no ordinance adopting these rates has been submitted to the Commission for Legal Division's review. Staff included these rates in its analyses.
- D. Because proposed funding is based on all grant funding 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.
2. Scope: The Town of Ellenboro (Ellenboro) is proposing to extend water service to 22 potential water customers along Highland Road (Bonds Creek Road). The proposed project scope includes: 11,500 LF of 6-inch PVC water main, 70 LF of 6-inch DIP watermain, 2,050 LF of PVC watermain, 50 LF of 12-inch steel casing (bore & jack) with 6-inch PVC watermain, 50 LF of 6-inch steel casing (bore & jack) with 2-inch PVER watermain, 300 LF of 12-inch HDPE casing horizontal drill with 6-inch watermain, 200 LF of 3/4-inch polyethylene service tubing (open cut), 375 LF of 3/4-inch polyethylene service tubing (bore & jack), twenty-two (22) 5/8-inch X 3/4-inch high pressure meter setting, 3 leak detection meter settings, eight (8) 6-inch gate valves (complete with box and lid), three (3) 2-inch gate valves (complete with box and lid), three (3) 2-inch branch connections, 2 tie-ins to existing 6-inch watermains, 5 fire hydrants, three (3) 2-inch post flushing hydrant, four (4) 3/4-inch air release valve assemblies, 2 HDPE to M.J.T. w/concrete anchor, 250 LF of gravel driveway/road restoration, 25 LF of concrete driveway/road restoration, 250 LF of 2-inch gravel overlay, 100 LF of stream bank slope protection, 9,500 LF of WVDOH rock lined ditch, 4,400 LF of restoration of disturbed areas, and all necessary appurtenances. The estimated construction cost is \$1,380,000 (includes 15.88% construction contingency), and the estimated total project cost is \$1,775,000 (includes 9.66% project contingency).

Need: The PER indicates that residents within the project area currently utilize private wells and springs, some of which have been contaminated by heavy metals and/or no longer have sufficient capacity. Additionally, the PER states



some families do not have adequate supply to meet demands, resulting in individuals hauling water.

Customer Density: Based upon the provided water main pipe quantities (13,620 LF), the proposed water line extensions total approximately 2.58 mile. This is approximately equivalent to 8 customers per mile which is somewhat low.

Cost per Customer: Based upon the estimated total project cost of \$1,775,000, and proposing to have 22 new customers, the cost to serve each new customer is \$80,682. However, the project is 100% grant and contribution funded; therefore, the proposed borrowing is \$0.

3. Project Feasibility: The project appears to be technically feasible and poses little technical risk.
4. Project Alternatives: The PER did not include an evaluation of alternatives. However, a do-nothing option would not address the quality and quantity issues residents are experiencing at their private wells and springs.
5. Consolidation: There are no consolidation opportunities presented by this project.
6. Operation and Maintenance (O&M) Expenses: The PER included a breakdown of changes to O&M, and suggests that costs are estimated to increase by approximately \$3,854 due to the additional purchased water expenses.
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 \$244,500, which is equal to 17.72% of the construction cost of \$1,380,000 (includes 15.88% construction contingency). The 5G advertisement is not legible and appears to be from 2018.
8. Deficiencies/Comments:
  - IJDC Application General Budget does not break out the Construction Contingency (\$189,075) amount shown in the PER's Opinion of Probable Construction Cost, but it included in the Construction Cost Estimate.
  - The PER includes petitions for water service; however, it appears that of approximately 60 petitions, only 10-15 appear to be associated with this project. The remaining petitioners appear to be part of a separate water extension project proposed by Pennsboro.

TOWN OF ELLENBORO  
 CASH FLOW ANALYSIS  
 YEAR ENDED: June 30, 2023  
 APPLICATION NO: 2024W-2632  
 December 11, 2024

**PREFERRED FUNDING PACKAGE  
 SCENARIO 1**

	Going Level Per Application Before Project	Proforma Per Application with Project	Staff Adjustments	Per Staff Analysis
	1	2	3	4
	\$	\$	\$	\$
<b><u>AVAILABLE CASH</u></b>				
Operating Revenues	427,119	429,408	-	429,408
Other Operating Revenue	4,618	4,756	-	4,756
SB 234 Annual Working Cash Collection	12,703	25,888	-	25,888
Interest Income & Other Misc.	4,170	4,170	-	4,170
<b>Total Cash Available</b>	<b>448,610</b>	<b>464,222</b>	<b>-</b>	<b>464,222</b>
<b><u>OPERATING DEDUCTIONS</u></b>				
Operating Expenses	203,249	207,103	-	207,103
Taxes	4,778	4,778	-	4,778
<b>Total Cash Requirements Before Debt Service</b>	<b>208,027</b>	<b>211,881</b>	<b>-</b>	<b>211,881</b>
<b>Cash Available for Debt Servi (A)</b>	<b>240,583</b>	<b>252,341</b>	<b>-</b>	<b>252,341</b>
<b><u>DEBT SERVICE REQUIREMENTS</u></b>				
Principal & Interest (B)	197,347	197,347	-	197,347
Other Debt	2,216	-	-	-
Reserve Account @ 10%	16,388	16,388	-	16,388
Renewal & Replacement Fund (2.5%)	11,111	11,501	(647) (1)	10,854
<b>Total Debt Service Requirement</b>	<b>227,062</b>	<b>225,236</b>	<b>(647)</b>	<b>224,589</b>
<b>SB 234 Cash Working Capital</b>	<b>12,703</b>	<b>25,888</b>	<b>-</b>	<b>25,888</b>
<b>Remaining Cash</b>	<b>818</b>	<b>1,217</b>	<b>647</b>	<b>1,863</b>
<b>Percent Coverage (A) / (B)</b>	<b>121.91%</b>	<b>127.87%</b>		<b>127.87%</b>
Average rate for 3,400 gallons	\$ 80.12	\$ 80.12	\$ -	\$ 80.12
Average rate for 4,000 gallons	\$ 92.85	\$ 92.85	\$ -	\$ 92.85

**Staff Adjustments**

<u>Adjustment Description</u>		\$	Increase <Decrease>
(1) <b>Renewal &amp; Replacement Fund (2.5%)</b>	<b>Per Staff Analysis</b>	<b>10,854</b>	<b>(647)</b>
	<b>Per Application with Project</b>	<b>11,501</b>	

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

TOWN OF ELLENBORO  
 CASH FLOW ANALYSIS  
 YEAR ENDED: June 30, 2023  
 APPLICATION NO: 2024W-2632  
 December 11, 2024

**LOAN PACKAGE  
 SCENARIO 2**

	Going Level Per Application Before Project	Proforma Per Application with Project	Staff Adjustments	Per Staff Analysis
	1	2	3	4
	\$	\$	\$	\$
<b><u>AVAILABLE CASH</u></b>				
Operating Revenues	427,119	545,962	-	545,962
Other Operating Revenue	4,618	5,791	-	5,791
SB 234 Annual Working Cash Collections	12,703	25,888	-	25,888
Interest Income & Other Misc.	4,170	4,170	-	4,170
<b>Total Cash Available</b>	<b>448,610</b>	<b>581,811</b>	<b>-</b>	<b>581,811</b>
<b><u>OPERATING DEDUCTIONS</u></b>				
Operating Expenses	203,249	207,103	-	207,103
Taxes	4,778	4,778	-	4,778
<b>Total Cash Requirements Before Debt Service</b>	<b>208,027</b>	<b>211,881</b>	<b>-</b>	<b>211,881</b>
<b>Cash Available for Debt Servi (A)</b>	<b>240,583</b>	<b>369,930</b>	<b>-</b>	<b>369,930</b>
<b><u>DEBT SERVICE REQUIREMENTS</u></b>				
Principal & Interest (B)	197,347	301,779	798 (1)	302,577
Other Debt	2,216	-	-	-
Reserve Account @ 10%	16,388	26,831	80 (2)	26,911
Renewal & Replacement Fund (2.5%)	11,111	14,441	(647) (3)	13,794
<b>Total Debt Service Requirement</b>	<b>227,062</b>	<b>343,051</b>	<b>230</b>	<b>343,281</b>
SB 234 Cash Working Capital	12,703	25,888	-	25,888
<b>Remaining Cash</b>	<b>818</b>	<b>991</b>	<b>(230)</b>	<b>760</b>
<b>Percent Coverage (A) / (B)</b>	<b>121.91%</b>	<b>122.58%</b>		<b>122.26%</b>
Average rate for 3,400 gallons	\$ 80.12	\$ 100.63	\$ -	\$ 100.63
Average rate for 4,000 gallons	\$ 92.85	\$ 116.62	\$ -	\$ 116.62

**Staff Adjustments**

<u>Adjustment Description</u>		\$	Increase <Decrease>
(1) <b>Principal &amp; Interest</b>	<b>Per Staff Analysis</b>	<b>302,577</b>	<b>798</b>
	<b>Per Application with Project</b>	<b>301,779</b>	
<p>The difference in P&amp;I is related to Staff's calculation of a loan of \$1,775,000 for 40 years (paid over 38 years) at 5%.</p>			
(2) <b>Reserve Account @ 10%</b>	<b>Per Staff Analysis</b>	<b>26,911</b>	<b>80</b>
	<b>Per Application with Project</b>	<b>26,831</b>	
<p>Staff assumed a 10% reserve on the new debt.</p>			
(3) <b>Renewal &amp; Replacement Fund (2.5%)</b>	<b>Per Staff Analysis</b>	<b>13,794</b>	<b>(647)</b>
	<b>Per Application with Project</b>	<b>14,441</b>	
<p>Staff used 2.5% of the projection of "Operating &amp; Other Revenues" as the basis of the renewal &amp; replacement fund.</p>			