



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

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

Date: June 17, 2024

Subject: Town of Davis
Preliminary Application: IJDC No. 2024W-2554
Water System Improvements 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 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:

The proposed project consists of replacing the raw water line from both surface water intakes to the WTP. Additionally, the project proposes to upgrade both surface water intakes with new screens and install an air burst system at the Blackwater River intake. This is proposed to address the elevated lead levels in the sample analyses from the raw water line supplying the WTP. The Cast Iron water line is suspected to contain lead joints, which could be responsible for the lead contamination.

This project also will remove and replace the water line in the distribution system along Third Street and Fifth Street. Finally, a hydrologic study is proposed to determine the potential to develop a secondary groundwater source on the existing property owned by the Town. The Town has a water loss in the system of 41% based on the 2022 PSC Annual Report.

The proposed total cost for this project is \$1,200,000 and the Town intends to pursue a \$600,000 DWTRF Principal Forgiveness Loan and \$600,000 DWTRF 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: 40
Compliance with Standards: 10



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MEMORANDUM

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

FROM: Justin Moffitt, P.E., DWWM

DATE: June 7, 2024

SUBJECT: Town of Davis
Preliminary Application: IJDC No. 2024W-2554
Water System Improvements Project

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 Davis owns and operates the water treatment plant (WTP) and water distribution system. The Town's water system is permitted to operate under Public Water System Identification number PWSID# 3304701 and provides service to approximately 446 customers. The WTP treats approximately 130,000 gallons per day (GPD) from surface water intakes on the Blackwater River and Weimer Run Dam. Raw water is transported to the WTP through approximately 3,000 linear feet (LF) of eight inch cast iron (CI) water line. The Town's distribution system consists of approximately 7.6 miles of main water line, one (1) 500,000 gallon water storage tank (WST), and 66 fire hydrants.

The proposed project consists of installing approximately 3,000 LF of new 10-inch PVC water line and all necessary appurtenances to replace the raw water line from both surface water intakes to the WTP. This project also proposes to remove and replace approximately 600 LF of water line in the distribution system along Third Street and Fifth Street. The existing four inch AC and six inch CI water lines will be replaced with new six inch PVC water lines. Additionally, the project proposes to upgrade both surface water intakes with new screens and install an air burst system at the Blackwater River intake. Finally, a hydrologic study is proposed to determine the potential to develop a secondary groundwater source on the existing property owned by the Town.

The proposed total cost for this project is \$1,200,000 and the Town intends to pursue a \$600,000 DWTRF Principal Forgiveness Loan and \$600,000 DWTRF Loan. The proposed monthly rate for 3,400 gallons will be \$52.53 (1.5% MHI).

NEED FOR PROJECT

The Town has seen elevated lead levels in sample analyses from the raw water line supplying the WTP. The CI water line is suspected to contain lead joints, which could be responsible for the lead contamination. The raw water line is located in an area that makes maintenance very difficult, and there is an exposed section of pipe that causes concern of a potential line break due to freezing. The surface water intakes also experience frequent clogging due to sediment buildup at their current location. This project proposes to install a new 10-inch PVC raw water line to alleviate the issues caused by the lead contamination and support future growth in the area, as well as upgrade the surface water intakes to prevent clogging. The project also proposes to replace two sections of main water line in the distribution system: one line that is leaking significantly and suspected to contain lead joints, and one line that consists of a deteriorating AC pipe. The Town has a water loss in the system of 41% based on the 2022 PSC Annual Report. The line replacement and raw water intake upgrades would allow the Town to provide safe, reliable water service to its customers.

DEFICIENCIES/COMMENTS

- Project does not estimate the future situation of additional customers or water demand.
- PER does not include current or proposed water rates.
- Using the Combined Application, the Design, and Total Engineering Fees appear to be within the ASCE Curves.

Preliminary Project Ratings:

Public Health Benefits: 40
Compliance with Standards: 10

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



June 10, 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-2554
Town of Davis, 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: June 10, 2024

PROJECT SPONSOR: TOWN OF DAVIS – (WATER)

PROJECT SUMMARY: The purpose of this project is to make improvements to the existing raw water line and raw water intake system and to evaluate the use of groundwater in the future.

PROPOSED FUNDING: DWTRF Loan(1.75%, .25%AF, 30 yrs.)\$ 600,000
DWTRF Principal Forgiveness Loan 600,000
Total \$1,200,000

CURRENT RATES: \$37.40 3,400 gallons
\$44.00 4,000 gallons

PROPOSED RATES: \$52.53 3,400 gallons
\$61.80 4,000 gallons

Application No. 2024W-2554

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

FINANCIAL: William Nelson

1. Current rates (\$37.40 for 3,400 gallons) are below the rates attributable to 1.25% (\$43.77), 1.5% (\$52.52), 1.75% (\$61.28), and 2% (\$70.03) of the Median Household Income (MHI). Increasing current rates to 1.25%, 1.5%, 1.75%, and 2% of the MHI would provide additional revenues of \$60,115, \$142,730, \$225,345, and \$307,960 respectively.
2. Using Scenario 1, the preferred funding package consisting of a DWTRF Loan of \$600,000 at 1.75%, .25% Admin. Fee, for 30 years, and a DWTRF Principal Forgiveness Loan of \$600,000, proposed rates (\$52.53 for 3,400 gallons) will provide a cash flow surplus of \$29,464 and debt service coverage of 136.86%.

3. Using Scenario 2, alternate loan package of \$1,200,000 (in uncommitted funds) at 5% for 40 years (paid back over 38 years), proposed rates (\$54.40 for 3,400 gallons) will provide a cash flow deficit of \$2,335 and debt service coverage of 113.81%. An additional 0.5% (for a total of \$54.67 for 3,400 gallons) increase in proposed rates will be required in order to provide a cash flow surplus of \$102 and debt service coverage of 115.13%.
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, 2023, the Applicant's Rule 42 Exhibit submitted with the application.
 - C. Staff notes the Applicant's Cash Flow Analysis reflects proforma rates of (\$52.53 for 3,400 gallons). These rates have not been adopted by the Town as of this date, however, for purposes of this review, Staff accepted and reflected the proforma rates in its analysis.
 - D. 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 flow 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.
 - E. 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.

- F. Based on the Town's Going-Level deficit it should consider pursuing an ordinance to adjust rates and resolve any deficiencies. 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 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 Davis (Davis) is proposing to replace its existing raw water line and make upgrades to its raw water intakes. The proposed project scope includes: improvements at both the Blackwater River and Weimer Run Dam intakes, 2,965 LF of 10-inch PVC pipe, three (3) 10-inch M.J.T. gate valves (complete with box and lid), three (3) 8-inch pressure in-line cleanout, abandonment of existing 8-inch PVC pipe, removal and replacement of an existing 6-inch CIP with 6-inch PVC pipe, removal and replacement of an existing 4-inch ACP with 6-inch PVC pipe, 60 LF of 6-inch PVC pipe, 90 LF of 12-inch steel casing, two (2) 6-inch M.J.T. gate valves (complete with box and lid), 4 tie-ins to existing water lines, reconnection of 2-inch customer service line, tie-in at existing WTP, 95 LF of WVDOH Type "B" Trench repair, 95 LF of 2-inch asphalt pavement, 205 LF of concrete sidewalk and driveway repair, 3,030 LF of gravel driveway and roadway repair, 355 LF of restoration of

disturbed areas, along with all necessary appurtenances. The estimated construction cost is \$890,000 (includes 15.16% construction contingency), and the estimated total project cost is \$1,200,000 (includes 2.01% project contingency).

Need: The PER indicates that Davis has reported elevated lead levels from the raw water line and the existing cast iron raw water line is assumed to contain lead joints. The PER states that the raw water line is in a location which is difficult to perform maintenance, and has an exposed section of pipe. The project proposes to make upgrades to the intakes to prevent clogging, relocated the raw water line for easier maintenance, replacement of the potential threat of lead from the existing raw water line pipe, and perform a source water study to evaluate the development of a future groundwater source.

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

Cost per Customer: Based upon the estimated total project cost is \$1,200,000, and having approximately 446 customers, the cost per customer will be approximately \$2,691. However, the cost per customer in terms of proposed borrowing is \$1,334, as the proposed funding is 50.4% grant funded.

3. Project Feasibility: Although the project scope appears to be technically feasible and poses little technical risk, the Engineer should evaluate the source water for lead and copper prior to entering the raw water intake, and compare the results with the those obtained from inside homes.
4. Project Alternatives: The PER evaluated three (3) alternates: #1 – Remove and Replace Raw Water Line, #2 – Purchase Raw Water from the City of Thomas, and #3 – Do Nothing. The PER states Alternate #1 was recommended as this option will not increase O&M expenses.
5. Consolidation: There is a potential consolidation opportunity presented by this project. Alternate 2 evaluated purchasing raw water from the City of Thomas (Thomas); however, this PER indicates the Thomas WTP does not have adequate capacity to provide Davis with potable water without major upgrades.
6. Operation and Maintenance (O&M) Expenses: The PER states that O&M costs are not estimated to increase. However, supporting calculations or a detailed

discussion of changes to O&M expenses were 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 \$202,000, which is equal to 22.70% of the construction cost of \$1,200,000 (includes 15.16% construction contingency).
8. Deficiencies/Comments:
 - The PER does not provide any lead and copper data related to the raw water of the Blackwater River, and it is assumed the lead issues are related to a raw water line material. If not already studied, the applicant should sample the raw water for lead and copper and compare the results with the results obtained from finished water.
 - The IJDC Application does not show the construction contingency; however, the construction subtotal does match the PER's total estimated construction costs (including $\pm 15\%$ construction contingency).

TOWN OF DAVIS - WATER
 CASH FLOW ANALYSIS
 YEAR ENDED: June 30, 2023
 APPLICATION NO: 2024W-2554
 June 10, 2024

**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	352,961	495,750	-	495,750
Other Operating Revenue	5,069	5,069	-	5,069
SB 234 Annual Working Cash Collections	-	-	-	-
Interest Income & Other Misc.	-	-	1,124 (1)	1,124
Total Cash Available	358,030	500,819	1,124	501,943
OPERATING DEDUCTIONS				
Operating Expenses	294,789	294,789	784 (2)	295,573
Taxes	9,927	9,927	-	9,927
Total Cash Requirements Before Debt Service	304,716	304,716	784	305,500
Cash Available for Debt Servi (A)	53,314	196,103	340	196,443
DEBT SERVICE REQUIREMENTS				
Principal & Interest (B)	117,659	144,050	(513) (3)	143,537
Other Debt	-	-	-	-
Reserve Account @ 10%	8,334	10,973	(51) (4)	10,922
Renewal & Replacement Fund (2.5%)	9,760	9,760	2,760 (5)	12,520
Total Debt Service Requirement	135,753	164,783	2,196	166,979
SB 234 Cash Working Capital	-	-	-	-
Remaining Cash	(82,439)	31,320	(1,856)	29,464
Percent Coverage (A) / (B)	45.31%	136.14%		136.86%
Average rate for 3,400 gallons	\$ 37.40	\$ 52.53	\$ -	\$ 52.53
Average rate for 4,000 gallons	\$ 44.00	\$ 61.80	\$ -	\$ 61.80

Staff Adjustments

<u>Adjustment Description</u>		\$	Increase <Decrease>
(1)	Interest Income & Other Miscell.	Per Staff Analysis Per Application with Project	1,124 - 1,124
Staff used information from the Annual Report for the Fiscal Year Ended June 30, 2023 for "Interest Income".			
(2)	Operating Expenses	Per Staff Analysis Per Application with Project	295,573 294,789 784
Staff's calculation reflects the amount of the .25% administrative fee associated with the DWTRF Loan.			
(3)	Principal & Interest	Per Staff Analysis Per Application with Project	143,537 144,050 (513)
The difference in P&I is related to Staff's calculation of a DWTRF Loan of \$600,000 for 30 years at 1.75%.			
(4)	Reserve Account @ 10%	Per Staff Analysis Per Application with Project	10,922 10,973 (51)
Staff assumed a 10% reserve on the new debt.			
(5)	Renewal & Replacement Fund (2.5%)	Per Staff Analysis Per Application with Project	12,520 9,760 2,760
Staff used 2.5% of the projection of "Operating & Other Revenues" as the basis of the renewal & replacement fund.			

TOWN OF DAVIS - WATER
 CASH FLOW ANALYSIS
 YEAR ENDED: June 30, 2023
 APPLICATION NO: 2024W-2554
 June 10, 2024

**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
	\$	\$	\$	\$
<u>AVAILABLE CASH</u>				
Operating Revenues	352,961	513,398	2,500 (1)	515,898
Other Operating Revenue	5,069	5,069	-	5,069
SB 234 Annual Working Cash Collections	-	-	-	-
Interest Income & Other Misc.	-	-	1,124 (2)	1,124
Total Cash Available	358,030	518,467	3,624	522,091
<u>OPERATING DEDUCTIONS</u>				
Operating Expenses	294,789	294,789	-	294,789
Taxes	9,927	9,927	-	9,927
Total Cash Requirements Before Debt Service	304,716	304,716	-	304,716
Cash Available for Debt Servi (A)	53,314	213,751	3,624	217,375
<u>DEBT SERVICE REQUIREMENTS</u>				
Principal & Interest (B)	117,659	152,088	36,712 (3)	188,800
Other Debt	-	-	-	-
Reserve Account @ 10%	8,334	11,777	3,671 (4)	15,448
Renewal & Replacement Fund (2.5%)	9,760	9,760	3,264 (5)	13,024
Total Debt Service Requirement	135,753	173,625	43,647	217,272
SB 234 Cash Working Capital	-	-	-	-
Remaining Cash	(82,439)	40,126	(40,023)	102
Percent Coverage (A) / (B)	45.31%	140.54%		115.13%
Average rate for 3,400 gallons	\$ 37.40	\$ 54.40	\$ 0.27	\$ 54.67
Average rate for 4,000 gallons	\$ 44.00	\$ 64.00	\$ 0.32	\$ 64.32

Staff Adjustments

<u>Adjustment Description</u>		\$	Increase <Decrease>
(1) Operating Revenues	Per Staff Analysis	515,898	2,500
	Per Application with Project	513,398	
Staff calculated that an additional \$2,500 in revenues would be needed to achieve positive cash balance and 115% debt service coverage.			
(2) Interest Income & Other Miscell.	Per Staff Analysis	1,124	1,124
	Per Application with Project	-	
Staff used information from the Annual Report for the Fiscal Year Ended June 30, 2023 for "Interest Income".			
(3) Principal & Interest	Per Staff Analysis	188,800	36,712
	Per Application with Project	152,088	
The difference in P&I is related to Staff's calculation of a loan of \$1,200,000 for 40 years (paid back over 38 years) at 5%.			
(4) Reserve Account @ 10%	Per Staff Analysis	15,448	3,671
	Per Application with Project	11,777	
Staff assumed a 10% reserve on the new debt.			
(5) Renewal & Replacement Fund (2.5%)	Per Staff Analysis	13,024	3,264
	Per Application with Project	9,760	
Staff used 2.5% of the projection of "Operating & Other Revenues" as the basis of the renewal & replacement fund.			



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Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

MEMORANDUM

MEMO TO: Meredith J. Vance
Office of Environmental Health Services
Bureau for Public Health

FROM: Brian D. Bailey *BB*
Technical Analyst
General Permits & Support Team

DATE: May 22, 2024

Infrastructure Preliminary Application for the Davis, Town of: Systems
Improvements in Tucker County, WV. (2024W-2554)

We have reviewed the above referenced project application information. The Town of Davis discharges its backwash to its site, which is covered under WV/NPDES Site Registration No. WVG640032, and expires July 18, 2028.

If the Town of Davis is considering repairing and painting an existing water treatment plant or storage tanks, then the scope of this project requires precautions to prevent contamination of the waters of the state. Prior to beginning any removal of old paint, the Town of Davis should contact Mr. Brad Wright or a member of his staff at (304)-926-0499, extension 49746 for guidance in determining whether the paint to be removed is considered a hazardous waste. If so, proper containment and disposal procedures must be followed for the paint and any material associated with the sandblasting. If it is determined that the paint is not hazardous, the Town of Davis should contact John Lockhart or a member of his staff at (304)-926-0499, extension 43889 for proper disposal options.

Construction activities with a disturbed area of one (1) acre or greater are now required to register for the NPDES Storm Water Construction General Permit No. WV0115924 that became effective on April 6, 2024. Projects registered under the previous General Permit No. WV0115100 were automatically provided coverage under WV/NPDES General Permit

Promoting a healthy environment.

No. WV0115924. For more information, they may contact Larry Board at (304)-926-0499, extension 43883.

In light of the above, we have no objection to this project as long as the appropriate provisions are taken to assure compliance with Chapter 22, Article 11, of the Code of West Virginia and any associated regulations. The responsible party may contact Mylinda Maddox (304) 926-0499 ext. 43825, should additional information be required.

BDB:mam

cc: Katheryn Emery