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: Brad Sergent, Chair
Meredith J. Vance, Director, Environmental Engineering Division, BPH

From: Katheryn Emery, P.E., Program Manager
Sewer Technical Review Committee

Date: May 21, 2026

Subject: Hardy Co. PSD
IJDC Application - 2024W-2509
Baker Secondary Water Source

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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:

The project proposes converting two test wells into permitted public water supply wells, a new 60,000 gallon raw water storage tank, and other necessary conveyance appurtenances. This project is to develop a secondary public water source for use when the primary source is contaminated with toxic algae blooms to provide its customers with safe and reliable drinking water, as well as to comply with recent Senate Bill 373, which requires public water systems utilizing surface water sources to have a secondary source in the event of contamination issues.

The proposed cost for this project is $2,430,000. The PSD will pursue a funding scenario of a $150,000 grant from the Hardy County Commission, a $150,000 WVIJDC PFA Grant, and a $2,130,000 DWTRF Emerging Contaminants Principal Forgiveness Loan. The proposed monthly rate for 3,400 gallons is $51.86 (1.3% MHI).

It is recommended that this application be tabled one month to allow time for the consultant to address the comments in the attached memos.

Documentation must be provided to determine eligibility for DWTRF EC funding.

Preliminary Project Ratings:
Public Health Benefits: 15
Compliance with Standards: 15

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MEMORANDUM

TO: Katheryn Emery, P.E., Program Manager, DWWM

FROM: Carin Angelle, DWWM

DATE: May 13, 2026

SUBJECT: Hardy Co. PSD
Baker Secondary Water Source
IJDC No. 2024W-2509

RECOMMENDATION

The IJDC application and Preliminary Engineering Report (PER) prepared by The Thrasher Group for the above referenced project have been reviewed and we are recommending it to be tabled to allow the deficiencies/comments listed below to be addressed.

PROJECT DESCRIPTION

The Hardy County Public Service District (PSD) provides potable water to customers across several areas of Hardy County, including Baker. The Baker water treatment plant (WTP) and distribution system operates under PWSID Number WV3301613 and draws water from the Parker Hollow Impoundment. The WTP serves 58 customers and treats approximately 14.9 million gallons of water per year.

The purpose of this project is to develop a secondary public water source for the Baker water system that provides its customers with safe and reliable drinking water, as well as to comply with recent Senate Bill 373, which requires public water systems utilizing surface water sources to have a secondary source in the event of contamination issues. The project proposes converting two test wells (TW-101 and TW-102) into permitted public water supply wells, which involves installing new well pumps, pump housings with well caps, control panels, electrical services, access roads, fencing, approximately 500 linear feet (LF) of 12” PVC raw water line, a new 60,000 gallon raw water storage tank, and other necessary conveyance appurtenances.

The proposed cost for this project is $2,430,000. The PSD will pursue a funding scenario of a $150,000 grant from the Hardy County Commission, a $150,000 WVIJDC PFA Grant, and a $2,130,000 DWTRF Emerging Contaminants Principal Forgiveness Loan. The proposed monthly rate for 3,400 gallons is $51.86 (1.3% MHI).

NEED FOR PROJECT

The Parker Hollow Impoundment has proven susceptible to algae blooms which occur six times annually, on average. Occasionally, the blooms contain toxic anabaena algae that threaten the availability of water service to the Baker community, leaving customers without secure access to water until the bloom passes and highlighting the Baker area's need for a secondary water source. Additionally, the PSD must develop a secondary water source to comply with Senate Bill 373 passed in 2015. Converting the two test wells into public water supply wells to be used in emergency situations would address the water source concern during toxic algae blooms as well as the PSD's non-compliance with the Senate Bill.

DEFICIENCIES/COMMENTS

- Using the Combined Application, the Total Engineering Fees appear to be below the ASCE Design Fee Curves.
- An evaluation of the alternatives to purchase all water needed for the Baker area from Moorefield or Wardensville with the Baker WTP shut down. This evaluation should include construction costs, O&M costs to include new customers, and present worth to include salvage value of the existing Baker WTP.
- There are concerns about the water quality of the Parker Hollow impoundment and the proposed emergency wells, as well as water quantity of wells.
- Discussions with DEP's Dam Safety group would need to occur as part of the evaluation regarding a well at the toe of the reservoir embankment.

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 20, 2026

Brad Sergent, Chair
Water Development Authority, Acting Executive Director
Katheryn Emery, P.E., Program Manager
CWSRF & DWTRF, Division of Water and Waste Management, WVDEP
Meredith Vance, Director
Environmental Engineering Division, WVBPH

Re: Public Service Commission Staff Review Comments
Application No. 2024W-2509
Hardy County PSD – Water Source Improvements (Baker System)
Infrastructure Preliminary Application

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

__X__ Tabled to Allow Applicant to Address Comments

Please advise if you have any questions.

Sincerely,

Brandon Crace

Brandon Crace
Engineering Division

Enclosures

PUBLIC SERVICE COMMISSION STAFF
TECHNICAL REVIEW

DATE: May 20, 2026

PROJECT SPONSOR: **HARDY COUNTY PUBLIC SERVICE DISTRICT – (WATER)**

PROJECT SUMMARY: The Hardy County PSD is proposing to develop 2 test wells to production wells as an alternate raw water source for its existing Baker Water System.

PROPOSED FUNDING:

IJDC PFA Grant	$ 150,000
Hardy Co. Comm. Grant	$ 150,000
DWTRF Emerging Contaminant PFL	$2,130,000
Total	$2,430,000

CURRENT RATES:

$50.40	3,400 gallons
$58.50	4,000 gallons

PROPOSED RATES:

$51.86	3,400 gallons
$60.20	4,000 gallons

Application No. 2024W-2509

RECOMMENDATION:
____ Forward to the Funding Committee
____ Forward to the Consolidation Committee
__X__ Tabled to Allow Applicant to Address Comments

FINANCIAL: Bob Cadle

1. Current rates ($50.40 for 3,400 gallons) are above the rates attributable to 1.25% ($48.45) of the Median Household Income (MHI), but below the rates attributable to 1.50% ($58.14), 1.75% ($67.83), and 2% ($77.52) of the MHI. Increasing current rates to 1.50%, 1.75% and 2.0% of the MHI would provide additional revenues of $286,629, $645,422, and $1,004,214 respectively.

2. Using Scenario 1, the preferred funding package consisting of an IJDC PFA Grant of $150,000, a Hardy County Commission Grant of $150,000, and a DWTRF Emerging Contaminant PFL of $2,130,000, proposed rates ($51.86 for 3,400 gallons) will provide a cash flow surplus of $13,721 and debt service coverage of 150.17%.

3. Using the Scenario 2 alternate loan package of $2,130,000 (in uncommitted funds) at 5% for 40 years (paid back over 38 years) and committed funds consisting of an IJDC PFA Grant of $150,000 and a Hardy County Commission Grant of $150,000, proposed rates ($55.69 for 3,400 gallons) will provide a cash flow surplus of $13,268 and debt service coverage of 142.19%.

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, 2025, and the Applicant's Cash Flow Statement submitted with the application.
   C. Because proposed funding is based on all grant funding, the Applicant is requesting a waiver of the Rule 42 Exhibit requirement.
   D. Staff notes the Applicant's cash flow analyses include going level rates of $50.40 (for 3,400 gallons). Staff included these rates in its analyses.
   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. The cash flow provided by the project sponsor shows a Per Books deficit. The District should carefully evaluate its revenue requirements before pursuing a rate increase in order to ensure that rates are sufficient to provide a reasonable surplus and meet coverage requirements.

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 Hardy County PSD is proposing to develop 2 test wells to production wells as an alternate raw water source for its existing Baker Water System. The proposed project scope includes: mobilization,

demobilization, erosion and sediment control measures, 400 LF of 12-inch PVC pipe, 100 LF of 12-inch DIP, four (4) 12-inch gate valve (complete with box and lid), 2 tie-ins to existing 12-inch raw water line, 2 sample taps, 250 LF of 4-inch conduit, 200 LF of 6-ft chain-link fencing (with two (2) 6-ft wide swing gates), 2 new well sites (pump housing, access road, well pump, electrical service, and control panel), upgrades to existing electrical equipment, new raw water storage tank (with valve vault, and necessary site work), restoration of disturbed areas, and all necessary appurtenances. The estimated construction cost is $1,700,000 (includes 15.14% construction contingency), and the estimated total project cost is $2,430,000.

Need: The Revised PER indicates that the Baker Water System relies on the Parker Hollow Impoundment as its single source of water. The PER states “The Parker Hollow Impoundment has proven to be uniquely susceptible to algae blooms, some of which testing has shown are toxic anabaena algae containing cyanotoxins.”, and “These algae blooms continue to occur in an increasing frequency on the Impoundment.” The PER indicates that the algae blooms occur 6 times annually, and events last from 10 days to 3-4 weeks. Despite recent coordinated efforts with the Natural Resources Conservation Service (NRCS) and WV Conservation Agency, algae blooms continue to increase in frequency.

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 $2,430,000, and having approximately 2375 customers (58 Baker System [21 commercial + 37 residential]), the cost per customer will be approximately $1,024. However, the cost per customer in terms of proposed borrowing is $0, as the proposed funding is 100% grant.

3. Project Alternatives: The Revised PER evaluated three (3) alternatives: Alternative #1 – Conversion of Test Wells to Production Wells, Alternative #2 – Purchase Water from Moorefield, Alternative #3 – Purchase Water from Wardensville, and Alternative #4 – Do Nothing. The PER states that Alternative #1 “…is considered the most cost-effective solution to provide a secondary source for the Baker water system.”.

4. Consolidation: The PER did evaluate purchasing finished water from the Town of Moorefield as Alternative #2, and purchasing finished water from the Town of Wardensville as Alternative #3. However, the PER indicates that these alternatives were evaluated for the purchase of water on an

emergency basis, the proposed emergency interconnection would be required to be flushed prior to each use, and that flushing the water main would result in increased operation costs. Although the PER does indicate that both the Town of Moorefield and Wardensville have the operational capacity to meet the full demand of the Baker System, the PER did not evaluate decommissioning the Baker WTP and any O&M cost savings.

5. Operation and Maintenance (O&M) Expenses: The PER did include a discussion and breakdown of anticipated changes to O&M. The PER indicates an anticipated annual ***increase*** of $2,331.58 to O&M expenses related to Alternative #1. However, this evaluation does not indicate the current annual O&M expenses at the Baker Water System. The PER indicates an anticipated annual ***increase*** of $9,158.27 to O&M expenses related to Alternative #2; however, this analysis did not include an evaluation of decommissioning (cost savings) the existing Baker WTP. The PER indicates an anticipated annual ***increase*** of $9,158.27 to O&M expenses related to Alternative #2; however, this analysis did not include decommissioning (cost savings) of the existing Baker WTP. Alternative #3 results in an annual increase of $9,083.84 to O&M expenses, with the potential to serve an additional 21 customers along the alignment. Both Alternative #2 and #3 assumes flushing water prior to each usage and costs associated.

6. 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 $555,000, which is equal to 32.65% of the construction cost of $1,700,000 (includes 15.14% construction contingency).

7. Deficiencies/Comments:
   - The selected Alternative (Alt. #1) only provides water volumes sufficient for emergency usage. Additionally, the Engineer's representative indicated, via phone, that in the event the proposed wells were to be used as emergency source water, the Baker System customers would be notified to conserve water. Commercial/Industrial customers make up 36% of the customer base on the Baker Water System (this does not include consideration of water volumes used).
   - Alternative #1 (Conversion of Test Wells to Production Wells) only provides 72 GPM available from 2 combined wells, which is noted as "…sufficient to meet the water demand of the Baker system in case of an emergency.", and any additional pumped volumes are expected impact existing private wells.

- TW-102 (proposed production well) is considered to be Groundwater Under the Direct Influence of Surface Water (GWUDI), with water quality testing indicating the presence of E. coli bacteria and PFOA (PFAS substance). "…the PSD plans to address PFAS removal in a separate project." TW-102 is located just below the toe of the embankment, and near the principal spillway of the Parker Hollow Impoundment.
- Alternative #2 (Purchase Water from Moorefield) and Alternative #3 (Purchase Water from Wardensville) ***did*** evaluate alternatives of purchasing 100% finished water (discontinuation of utilizing Parker Hollow Impoundment); however, the PER provides the same statement for both alternatives "However, this alternative would remove the need for the Baker WTP, which is 13 years old and has not reached the end of its useful life."
- There are residences within the Baker Water System that are served by private wells. Therefore, there are potential water customers within the Baker Water System service area, and additional customers would increase the demand on source water.
- Although the PER indicates an estimated total annual O&M of $9,158.27 for Alternative #2, the O&M evaluation of Alternative #1 ($2,331.58 increase) only considers the proposed additions and does not provide any details related to current O&M associated with the Baker System, or take into consideration the PER indicated a future PFAS removal project.
- Despite the increasing reoccurring toxic algae blooms affecting the source water in the Parker Hollow Impoundment, the lack of water volume available in the proposed wells, TW-102 testing indicating GWUDI (E. coli and PFOA), the possibility of a future project required to address PFAS, both Alternative #2 and #3 capable of providing 100% of the demand (existing customers + approximately 74 potential customers), and both Alternative #2 and #3 having "…a turnover rate of approximately 1.5 days, which is adequate to maintain drinking water standards."; the PER indicates the Alternative #1 is the selected alternative.
- The PER states the unaccounted for lost water associated with the Baker System is currently unknown.

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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: March 19, 2026

SUBJECT: Infrastructure Preliminary Application for the Hardy County PSD: Baker Alternate Source Project in Hardy County, WV. (2024W-2509)

We have reviewed the above referenced project application information. Hardy County PSD, discharges its backwash to its site, which is covered under WV/NPDES Site Registration No. WVG640131, and expires July 18, 2028.

If the Hardy County PSD 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 Hardy County PSD 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 Hardy County PSD 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 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