



west virginia department of environmental protection

Division of Water and Waste Management
601 57th Street, SE
Charleston, WV 25304
Phone: 304-926-0495

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

MEMORANDUM

To: Wayne Morgan, P. E.
Executive Secretary
Infrastructure and Jobs Development Council

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

Date: February 17, 2021

Subject: Bradley Preliminary Application: 2020S – 1884
Willis Branch Sewer Extension

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 application. 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 application has instigated regionalization discussions with a failing utility in the area. As a result, I recommend this application be tabled until it is determined that this project, in its current scope, would be necessary if Bradley PSD becomes part of the regional solution.

Attachments: Technical Comments



west virginia department of environmental protection

Division of Water and Waste Management
601 57th Street, SE
Charleston, WV 25304
Phone: 304-926-0495 / Fax: 304-926-0496

Austin Caperton, Cabinet Secretary
dep.wv.gov

MEMORANDUM

TO: Kathy Emery, P.E., Acting Director, DWWM

FROM: Jesse Rupe, Engineer Trainee, DWWM

DATE: February 18, 2021

SUBJECT: Bradley PSD
Preliminary Application 2020S-1884
West Raleigh Extension Project – Phase I

RECOMMENDATION

The IJDC Application and Preliminary Engineering Report prepared by Ghosh Engineers, Inc., for the above referenced project has been reviewed and should be tabled.

PROJECT DESCRIPTION

Bradley PSD currently owns and operates four wastewater collection systems and wastewater treatment plants (WWTP) in northwest Raleigh County and provides service to 60 customers in this portion of their service area. The existing WWTPs are comprised of three package aeration plants and one facultative lagoon, the total average design flow (ADF) for these four plants is 42,900 gallons per day (gpd).

The proposed project consists of the replacement of the existing collection systems and the four existing WWTPs with a Septic Tank Effluent Pump (STEP) collection system, and one 41,000 gpd. AdvanTex wastewater treatment facility. This will provide service to 409 potential customers. The PSD proposes splitting this project into two phases due to the potential effect to sewer rates and available funding. Phase I will consist of the installation of 189 STEP tanks, an 18,900 gpd. AdvanTex treatment facility, approx. 41,000 linear feet (LF) of various sized force mains, and all other necessary appurtenances. Phase I will also include the replacement of the Eunice community package plant with a new 5,000 gpd. package plant to serve five customers.

The proposed total cost for this project is \$5,000,000 and the PSD intends to pursue a \$4,000,000 SRF Loan (30 yr., 1.75% interest, and 0.25% admin), \$500,000 SRF Debt

Forgiveness, a \$475,000 IJDC District 2 Grant, and a \$25,000 IJDC Soft Cost Grant. The proposed monthly rate for 3,400 gallons is \$50.69 (1.63% MHI).

NEED FOR PROJECT

The four existing WWTPs to be replaced are approximately 35 miles from the PSD’s primary service area and are in extremely poor condition. The collection systems for these WWTPs are made of clay pipe and have deteriorated and are experiencing large amounts of infiltration and inflow (I/I). The WWTPs have received several Notice of Violations (NOV) from the WVDEP. Given the current situation of these plants and their distance from the PSD’s primary service area, it is not economical for the PSD to properly operate and maintain these systems and this project would provide financial relief in operation costs to the PSD. The Report also indicates that homes in this area that are not connected to the current systems are discharging into individual septic tanks or have direct discharges. The majority of the current septic tanks are not working properly due to poor soil conditions and partially treated wastewater is flowing into nearby waterways.

DEFICIENCIES/COMMENTS

- Phone conferences with the WVDEP were held on 1/26/2021 and 2/2/2021 to discuss future steps of consolidation. It has been decided to table this project to allow the discussions that were part of the conference calls time to progress and determine the best possible alternative for this area.
- The documentation of need for the project must be better identified in the report. Any documentation from the Health Dept. concerning the existing unserved homes and failing septic systems should be included. Any Agency Orders, I/I reports, etc. should be included as well.
- The PER will need to be developed into a facilities plan that meets CWSRF requirements if CWSRF is used.

Engineering Fees:

Estimated construction cost =	\$ 3,945,449.00
Consultant’s design fee =	\$ 276,000.00
Consultant’s total fee =	\$ 689,000.00
Design fee percentage =	7.0 %
Design fee per ASCE curve =	8.0 %
Total fee percentage =	17.5 %
Total fee per ASCE curve =	19.0 %

Preliminary Project Ratings:

Public Health Benefits	10
Compliance with Standards	10

**PUBLIC SERVICE COMMISSION STAFF
TECHNICAL REVIEW**

DATE: February 3, 2021

PROJECT SPONSOR: BRADLEY PUBLIC SERVICE DISTRICT

PROJECT SUMMARY: This project will involve the extension of public sewer service to residents in the Dorothy, Colcord, and Eunice communities in Northwestern Raleigh County, WV.

PROPOSED FUNDING: CWSRF Loan (1.75%, 30 yrs., 0.25% admin)	\$ 4,120,449
CWSRF Forgivable Loan	500,000
IJDC Soft Cost Grant	80,000
IJDC District 3 Grant	<u>420,000</u>
Total	\$ 5,120,449

CURRENT RATES:	\$44.04	3,400 gallons
	\$50.83	4,000 gallons

PROPOSED RATES:	\$51.09	3,400 gallons
	\$58.97	4,000 gallons

Application No. 2020S-1884

RECOMMENDATION: forward to the Funding Committee.
 forward to the Consolidation Committee.
 table the application.

FINANCIAL: Nathan Nelson

1. Current rates (\$44.04 for 3,400 gallons) are above the rate attributable to 1.25% (\$38.91) of the Median Household Income (MHI), but below the rates attributable to 1.50% (\$46.69), 1.75% (\$54.47) and 2.0% (\$62.25) of the MHI. Increasing current rates to 1.50%, 1.75% and 2.0% of the MHI would provide additional revenues of \$74,290, \$292,536 and \$510,783 respectively.
2. Using Scenario 1, the preferred funding package consisting of an IJDC Soft Cost Grant of \$80,000, an IJDC Grant of \$420,000, a CWSRF Loan of \$4,120,449 at 1.75%, .25% Admin. Fee, for 30 years, and a CWSRF forgivable loan of

\$500,000, proposed rates (\$51.09 for 3,400 gallons) will provide a cash flow surplus of \$1,599 and debt service coverage of 126.43%.

3. Using the Scenario 2 alternate loan package of \$5,120,449 (in uncommitted funds) at 5% for 40 years (paid back over 38 years), proposed rates (\$55.41 for 3,400 gallons) will provide a cash flow deficit of \$4,953 and debt service coverage of 123.09%. An additional 0.3% (for a total of \$55.58 for 3,400 gallons) increase in proposed rates will be required in order to provide a cash flow surplus of \$409 and debt service coverage of 123.84%.

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 used the MHI for Raleigh County Magisterial District 2 of \$37,351 from the 2015 U.S. Census, as requested by the Applicant, versus the MHI of \$41,032 that was listed in the application because it more accurately reflects the MHI in the area of the extension.
- C. Staff prepared the attached Cash Flow Analysis utilizing information from the Annual Report for the Fiscal Year Ended June 30, 2020, and the applicant's Rule 42 Exhibit submitted with the application.
- D. This project will connect 189 customers to the new plant. Of those customers, 55 are existing customers and 134 are new customers currently without public sewer service.
- 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.

ENGINEERING: Jim Spurlock

1. This project will require a Certificate of Convenience and Necessity from the PSC. The project 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). Staff notes that an affirmative determination of need for the project must be established in a Certificate filing at the PSC.
2. Scope: Bradley PSD is proposing to construct a Septic Tank Effluent Pumping (STEP) sewage system to replace three small District-owned package treatment plants and their respective systems, and to provide service to new customers in the area. A fourth package treatment plant will be replaced separately, aside from the new system. This first phase will serve 189 customers, 60 of which are served by the existing systems. The project will ultimately serve 409 customers. The instant project includes a treatment plant, approximately 41,000 feet of force mains, and 189 onsite processors (STEP units).

Customer Density: 24.4 customers/mile

Cost per Customer: \$27,092 (taken from the total project cost estimate of \$5,120,449 spread over 189 existing and new customers). This is considered to be acceptable in the current project development environment.

3. Project Feasibility: The project is technically feasible. The cost per customer is moderate. The project will replace inadequate developer-built sewer systems, provide public sewer service to new customers, and provide increased centralization for the system.
4. Project Alternatives: The other alternative considered was to construct a gravity system to send flows to Boone-Raleigh PSD for treatment. That alternative was more expensive both in terms of construction and projected O & M. It was also contingent upon improvements being made to Boone-Raleigh's system.
5. Consolidation: Although not directly related to this project, there have been some recent discussions and activities regarding the regionalization of sewer service in the County. Therefore, the Council's decision on this application should be tabled until the broader regionalization topics have been addressed.
6. Inconsistencies: None were noted.

7. Operation and Maintenance (O & M) Expenses: O & M expenses are expected to increase by \$79,529 as a result of the project. Supporting calculations were provided.

8. 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 \$689,000, which is equal to 16.76% of the construction cost of \$4,110,449 (including contingency).

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

BRADLEY PUBLIC SERVICE DISTRICT - SEWER
 CASH FLOW ANALYSIS
 YEAR ENDED: June 30, 2020
 APPLICATION NO: 2020S-1884
 February 18, 2021

**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
	\$	\$	\$	\$
<u>AVAILABLE CASH</u>				
Operating Revenues	1,223,859	1,499,691	(94,636) (1)	1,405,055
Other Operating Revenue	36,209	43,538	-	43,538
SB 234 Annual Working Cash Collections			94,636 (2)	94,636
Interest Income & Other Misc.	10,087	10,087	-	10,087
Total Cash Available	1,270,155	1,553,316	-	1,553,316
<u>OPERATING DEDUCTIONS</u>				
Operating Expenses	688,000	757,088	155 (3)	757,243
Taxes	23,560	25,649	-	25,649
Total Cash Requirements Before Debt Service	711,560	782,737	155	782,892
Cash Available for Debt Service (A)	558,595	770,579	(155)	770,424
<u>DEBT SERVICE REQUIREMENTS</u>				
Principal & Interest (B)	431,645	608,285	1,074 (4)	609,359
Other Debt	10,844	10,844	-	10,844
Reserve Account @ 10%	-	17,664	107 (5)	17,771
Renewal & Replacement Fund (2.5%)	31,754	38,833	(2,618) (6)	36,215
Total Debt Service Requirement	474,243	675,626	(1,437)	674,189
SB 234 Cash Working Capital	86,000	94,636	-	94,636
Remaining Cash	(1,648)	317	1,282	1,599
Percent Coverage (A) / (B)	129.41%	126.68%		126.43%
Average rate for 3,400 gallons	\$ 44.04	\$ 51.09	\$ -	\$ 51.09
Average rate for 4,000 gallons	\$ 50.83	\$ 58.97	\$ -	\$ 58.97

BRADLEY PUBLIC SERVICE DISTRICT - SEWER
 CASH FLOW ANALYSIS
 YEAR ENDED: June 30, 2020
 APPLICATION NO: 2020S-1884
 February 18, 2021

**LOAN FUNDING PACKAGE
 SCENARIO 2**

	Rule 42 Going Level Per Application Before Project	Rule 42 Proforma Per Application with Project	Staff Adjustments	Per Staff Analysis
	1	2	3	4
	\$	\$	\$	\$
<u>AVAILABLE CASH</u>				
Operating Revenues	1,223,859	1,626,116	(88,558) (1)	1,537,558
Other Operating Revenue	36,209	46,897	-	46,897
SB 234 Annual Working Cash Collections			94,058 (2)	94,058
Interest Income & Other Misc.	10,087	10,087	-	10,087
Total Cash Available	1,270,155	1,683,099	5,500	1,688,600
<u>OPERATING DEDUCTIONS</u>				
Operating Expenses	688,000	752,465	-	752,465
Taxes	23,560	25,649	-	25,649
Total Cash Requirements Before Debt Service	711,560	778,114	-	778,114
Cash Available for Debt Service (A)	558,595	904,985	5,500	910,486
<u>DEBT SERVICE REQUIREMENTS</u>				
Principal & Interest (B)	431,645	727,932	7,275 (3)	735,207
Other Debt	10,844	10,844	-	10,844
Reserve Account @ 10%	-	29,629	727 (4)	30,356
Renewal & Replacement Fund (2.5%)	31,754	42,077	(2,466) (5)	39,611
Total Debt Service Requirement	474,243	810,482	5,536	816,018
SB 234 Cash Working Capital	86,000	94,058	-	94,058
Remaining Cash	(1,648)	445	(36)	409
Percent Coverage (A) / (B)	129.41%	124.32%		123.84%
Average rate for 3,400 gallons	\$ 44.04	\$ 55.41	\$ 0.17	\$ 55.58
Average rate for 4,000 gallons	\$ 50.83	\$ 63.95	\$ 0.19	\$ 64.14