



---

west virginia department of environmental protection

---

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  
Funding Committee  
Infrastructure and Jobs Development Council

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

**Date:** February 14, 2023

**Subject:** City of Ravenswood  
Preliminary Application: IJDC No. 2022S-2292  
Jackson County Business Park Extension (Phase 2A)

---

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.

Promoting a healthy environment.

- 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 funding should be tabled until technical comments have been resolved.
- d. \_\_\_ This project should be referred to the Consolidation Committee.

3. Other remarks:

This project proposes to extend sanitary sewer service to the Jackson County Business Park.

The proposed total cost for this project is \$19,940,300 and the City intends to pursue \$19,000,000 in WDA EEG Funds with a City contribution of \$940,300.

Attachments: Technical Comments

**Engineering Fees:**

Estimated construction cost =	\$ 16,815,300.00
Consultant's design fee =	\$ 975,000.00
Consultant's total fee =	\$ 2,190,000.00
Design fee percentage =	5.80 %
Design fee per ASCE curve =	7.5 %
Total fee percentage =	13.02 %
Total fee per ASCE curve =	19 %

**Preliminary Project Ratings:**

1. Public Health Benefits	5
3. Compliance with Standards	5
5. O & M Capabilities	2
6. Readiness to Proceed	0
8. Cost Effectiveness	1



STATE OF WEST VIRGINIA  
DEPARTMENT OF HEALTH AND HUMAN RESOURCES

Bureau for Public Health  
Office of Environmental Health Service

Jeffrey H. Coben, MD  
Interim Cabinet Secretary

Matthew Q. Christiansen, MD, MPH  
Commissioner & State Health Officer

**MEMORANDUM**

**TO:** Jason Billups, P.E.  
DEP/Infrastructure Sewer Technical Review Committee

**FROM:** William S. Herold, Jr., P.E., Assistant Manager  
I/CD/Environmental Engineering Division

**DATE:** February 13, 2023

**SUBJECT:** City of Ravenswood  
Preliminary Application **Project No.: 2022S-2292**  
Sewage Extension to Jackson County Industrial Park  
Jackson County

---

**RECOMMENDATION:**

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

**PROJECT SCOPE:**

This preliminary application is to extend sewage service to the Jackson County Industrial Park, Berkshire-Hathaway, Constellium and the other industrial customers on or near the Keyser Aluminum site. The project will consist of the installation of approximately 32,000 LF of 12" and 9,000 LF of 6" force main, six (6) sewage pump stations with generators and the addition of a floating aerator at the sewage treatment facilities.

The cost per customer is **\$19,940,300**. Total estimated project cost is **\$19,940,300** (WDA Economic Enhancement Grant: **\$19,000,000**; and Local/City/Council Grant: **\$940,300**).

**NEED FOR PROJECT:**

The Preliminary Engineering Report indicates significant industrial developments have recently been announced for the Jackson County Business Park and surrounding properties including the Jackson County Airport. Those developments, as well as the nearby Maritime Industrial Park and existing industrial sites, will all require wastewater service once they become operational. The City of Ravenswood currently has wastewater treatment capacity available and can easily extend its wastewater collection system along WV Route 2 to the Jackson County Business Park.

**CONCERNS:**

None.

**PERMITS:**

A permit **will be** required from the WV Bureau for Public Health.



---

west virginia department of environmental protection

---

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:** Katheryn Emery, P.E., Director, DWWM

**FROM:** Cali Carter, E.I., DWWM

**DATE:** January 30, 2023

**SUBJECT:** City of Ravenswood  
Preliminary Application: IJDC No. 2022S-2292  
Jackson County Business Park Extension (Phase 2A)

---

## 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 City of Ravenswood (City) owns and operates a sewage collection system and a three-cell aerated lagoon wastewater treatment plant (WWTP) that is designed to treat an average daily flow of 750,000 gallons per day (GPD). The WWTP is currently treating less than 400,000 GPD. The City provides wastewater collection and treatment services for the City and treatment services to the Northern Jackson Public Service District (PSD). The City has a total of 1,794 customers, comprising 1,658 residential, 135 commercial, and one wholesale customer, Northern Jackson PSD. These customers equate to 2,092 Equivalent Dwelling Units (EDU's).

This project proposes to extend sanitary sewer service to the Jackson County Business Park. The extension will consist of approximately 8 miles of force main, 6 pump stations, and the installation of new floating mixer-aerators in the first cell of the existing aerated lagoon. The pumps and piping will be sized to accommodate the projected future flows for the Jackson County Business Park as well as projected flows for residential customers that are near or along WV Route 2. The extension will result in an estimated 150,000 GPD of sewage to be treated at the City's WWTP.

As previously stated, flows from this proposed extension will initially be treated at the City's existing lagoon WWTP but it should be noted that a Phase 2B Project is in development to replace the existing lagoon with a new, larger WWTP. Phase 2 B is scheduled to be designed at the same time this project is being constructed.

The proposed total cost for this project is \$19,940,300 and the City intends to pursue \$19,000,000 in WDA EEG Funds with a City contribution of \$940,300. The proposed monthly rate for 3,400 gallons is \$32.94 (1.06% MHI).

### **NEED FOR PROJECT**

Significant industrial developments have been announced for the Jackson County Business Park and surrounding properties, including the Jackson County Airport. Those developments, as well as the nearby Maritime Industrial Park and existing industrial sites, will all require wastewater service once they become operational. This extension will not only serve the proposed industrial developments but will allow approximately 350 nearby residences to receive sewer service in the future.

### **DEFICIENCIES/COMMENTS**

- The PER will need to be developed into a facilities plan that meets CWSRF requirements if CWSRF is used.
- An Economic Enhancement Grant (EEG) Application will need to be submitted to WDA.

#### Engineering Fees:

Estimated construction cost =	\$ 16,815,300.00
Consultant's design fee =	\$ 975,000.00
Consultant's total fee =	\$ 2,190,000.00
Design fee percentage =	5.80 %
Design fee per ASCE curve =	7.5 %
Total fee percentage =	13.02 %
Total fee per ASCE curve =	19 %

#### 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

February 14, 2023

Ms. Kathy Emery, P. E.  
Office of Water Resources  
Department of Environmental Protection  
601 57<sup>th</sup> St.  
Charleston, West Virginia 25304

Re: Public Service Commission Staff Review Comments  
Application No. 2022S-2292  
City of Ravenswood  
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 the District's current financial condition, we are recommending the application be:

- forwarded to the Funding Committee  
 forwarded to the Consolidation Committee  
 return to the Applicant

Please advise if you have any questions.

Sincerely,

A handwritten signature in red ink, appearing to read "Jonathan M. Fowler".

Jonathan M. Fowler, P.E.  
Engineering Division

JMF:vb

**PUBLIC SERVICE COMMISSION STAFF  
TECHNICAL REVIEW**

**DATE:** February 13, 2023

**PROJECT SPONSOR:** CITY OF RAVENSWOOD – (SEWER)

**PROJECT SUMMARY:** Project will consist of 6 plus miles of force mains and 6 pump stations to serve the Jackson Co. Industrial Park, Berkshire-Hathaway, Constellium and other industrial customers on and near the old Century Aluminum site.

<b>PROPOSED FUNDING:</b> Local/City/Council Grant	\$940,300
WDA Economic Enhancement Grant	<u>\$19,000,000</u>
Total	\$19,940,300

<b>CURRENT RATES:</b>	\$24.14	3,400 gallons
	\$28.02	4,000 gallons

<b>PROPOSED RATES:</b>	\$32.94	3,400 gallons
	\$38.24	4,000 gallons

Application No. 2022S-2292

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

**FINANCIAL:** Kaitlyn J. Shamblin

1. Current rates (\$24.14 for 3,400 gallons) are below the rates attributable to 1.25% (\$38.55), 1.5% (\$46.27), 1.75% (\$53.98), and 2% (\$61.69) 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 \$373,461, \$573,243, \$773,025, and \$972,807, respectively.
2. Using Scenario 1, the preferred funding package consisting of a Local/City/Council Grant of \$940,300 and a WDA Economic Enhancement Grant of \$19,000,000, proposed rates (\$32.94 for 3,400 gallons) will provide a cash flow surplus of \$26,832 and debt service coverage of 125.99%.

3. Using Scenario 2, alternate loan package of \$19,940,300 (in uncommitted funds) at 5% for 40 years (paid back over 38 years), proposed rates (\$42.56 for 3,400 gallons) will provide a cash flow deficit of \$969,144 and debt service coverage of 56.01%. An additional 72% (for a total of \$73.20 for 3,400 gallons) increase in proposed average rates would be required to provide a cash flow surplus of \$6 and debt service coverage of 115.10%.

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, 2022, and the Applicant's Cash Flow Analysis submitted with the application.
- C. 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 filing.
- D. Staff notes the Applicant's proposed rates of \$32.94 (3,400 gallons) were adopted by City Council on May 4, 2021, (ORDS Ravenswood 21B) and are to be effective for all service rendered upon substantial completion of another project, or the commencement of debt service for that project, whichever occurs first. In addition, staff, in its analysis, has reconciled to the Applicants revenue adjustment for its projected industrial customer given the lack of a bill analysis and consumption data.
- 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 flow provided by the project sponsor includes funding for the 1/8 cash working capital reserve. Staff accepted that amount in its analysis. 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 City 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:** Jim Spurlock

1. This project may not require a Certificate of Convenience and Necessity from the PSC. The project sponsor should consult with Staff pursuant to General Order 246 for such determination. If a Certificate is required, the utility 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: The City of Ravenswood proposes to construct approximately 8 miles of force mains, 6 pumping stations with generators and odor suppression systems, and new floating mixer-aerators to be installed in the first cell of the existing treatment lagoons. The extension will serve the Jackson County Industrial park and other existing industrial customers at and near the old Maritime Industrial Park, as well as new industrial customers at the Century Aluminum site.

Customer Density: The PER does not contain a proposed customer count. New industrial development is projected to produce 250,000 gallons per day by mid-2024, and over 1.4 MGD within six years.

Cost per Customer: See comment No. 2. The total estimated project cost

is \$19,940,300. Proposed funding includes a WDA Economic Enhancement Grant in the amount of \$19,000,000 and a local grant in the amount of \$940,300.

3. **Project Feasibility:** The project is technically feasible. The existing treatment lagoons are sufficient to serve the development initially. A new, larger treatment plant to accommodate significantly increased future flows is being planned for a future project. The proposed industrial developments are expected to have a significant positive economic impact on the City of Ravenswood and Jackson County. The extension will also allow approximately 350 nearby residences to receive sewer service in the future.
4. **Project Alternatives:** The alternative of pumping to Cottageville PSD or the City of Ripley were considered and dismissed due to the large distances involved and the lack of available treatment capacity.
5. **Consolidation:** No consolidation opportunities are presented by the project.
6. **Inconsistencies:** None were noted.
7. **Operation and Maintenance (O & M) Expenses:** O & M expenses are projected to increase by \$185,000 annually 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 \$2,190,000 which is equal to 13.02% of the construction cost of \$16,815,300 (including contingency).

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

CITY OF RAVENSWOOD - SEWER  
 CASH FLOW ANALYSIS  
 YEAR ENDED: June 30, 2022  
 APPLICATION NO: 2022S-2292  
 February 13, 2023

**PREFERRED FUNDING PACKAGE  
 SCENARIO 1**

	Cash Flow Going Level Per Application Before Project	Cash Flow Proforma Per Application with Project	Staff Adjustments	Per Staff Analysis
	1	2	3	4
	\$	\$	\$	\$
<b><u>AVAILABLE CASH</u></b>				
Operating Revenues	625,450	1,069,292	(55,697) (1)	1,013,595
Other Operating Revenue	14,094	14,094	-	14,094
SB 234 Annual Working Cash Collections			55,697 (2)	55,697
Interest Income & Other Misc.	484	484	-	484
<b>Total Cash Available</b>	<b>640,028</b>	<b>1,083,870</b>	<b>-</b>	<b>1,083,870</b>
<b><u>OPERATING DEDUCTIONS</u></b>				
Operating Expenses	249,346	445,574	(5,146) (3)	440,428
Taxes	8,278	8,278	5,146 (4)	13,424
<b>Total Cash Requirements Before Debt Service</b>	<b>257,624</b>	<b>453,852</b>	<b>-</b>	<b>453,852</b>
<b>Cash Available for Debt Servi (A)</b>	<b>382,404</b>	<b>630,018</b>	<b>-</b>	<b>630,018</b>
<b><u>DEBT SERVICE REQUIREMENTS</u></b>				
Principal & Interest (B)	282,720	500,063	-	500,063
Other Debt	-	-	-	-
Reserve Account @ 10%	-	21,734	-	21,734
Renewal & Replacement Fund (2.5%)	16,001	27,097	(1,405) (5)	25,692
<b>Total Debt Service Requirement</b>	<b>298,721</b>	<b>548,894</b>	<b>(1,405)</b>	<b>547,489</b>
<b>SB 234 Cash Working Capital</b>	<b>31,168</b>	<b>55,697</b>	<b>-</b>	<b>55,697</b>
<b>Remaining Cash</b>	<b>52,515</b>	<b>25,427</b>	<b>1,405</b>	<b>26,832</b>
<b>Percent Coverage (A) / (B)</b>	<b>135.26%</b>	<b>125.99%</b>		<b>125.99%</b>
Average rate for 3,400 gallons	\$ 24.14	\$ 32.94	\$ -	\$ 32.94
Average rate for 4,000 gallons	\$ 28.02	\$ 38.24	\$ -	\$ 38.24

**Staff Adjustments**

<u>Adjustment Description</u>		\$	Increase <Decrease>
(1) <b>Operating Revenues</b>	<b>Per Staff Analysis</b>	<b>1,013,595</b>	<b>(55,697)</b>
	<b>Per Application with Project</b>	<b>1,069,292</b>	
Adjust revenues in accordance with PSC General Order 183.11.			
(2) <b>SB 234 Annual Working Cash Collections</b>	<b>Per Staff Analysis</b>	<b>55,697</b>	<b>55,697</b>
	<b>Per Application with Project</b>	<b>-</b>	
Account for SB 234 (2015) funding pursuant to PSC General Order 183.11.			
(3) <b>Operating Expenses</b>	<b>Per Staff Analysis</b>	<b>440,428</b>	<b>(5,146)</b>
	<b>Per Application with Project</b>	<b>445,574</b>	
Reclassify Utility Regulatory Assessment Fees to Taxes.			
(4) <b>Taxes</b>	<b>Per Staff Analysis</b>	<b>13,424</b>	<b>5,146</b>
	<b>Per Application with Project</b>	<b>8,278</b>	
Reclassify Utility Regulatory Assessment Fees from Operating Expenses.			
(5) <b>Renewal &amp; Replacement Fund (2.5%)</b>	<b>Per Staff Analysis</b>	<b>25,692</b>	<b>(1,405)</b>
	<b>Per Application with Project</b>	<b>27,097</b>	
Staff used 2.5% of the projection of "Operating & Other Revenues" as the basis of the renewal & replacement fund.			

CITY OF RAVENSWOOD - SEWER  
CASH FLOW ANALYSIS  
YEAR ENDED: June 30, 2022  
APPLICATION NO: 2022S-2292  
February 13, 2023

LOAN 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
	\$	\$	\$	\$
<b>AVAILABLE CASH</b>				
Operating Revenues	625,450	2,235,264	84,520 (1)	2,319,784
Other Operating Revenue	14,094	14,094	-	14,094
SB 234 Annual Working Cash Collections			55,697 (2)	55,697
Interest Income & Other Misc.	484	484	-	484
<b>Total Cash Available</b>	<b>640,028</b>	<b>2,249,842</b>	<b>140,217</b>	<b>2,390,059</b>
<b>OPERATING DEDUCTIONS</b>				
Operating Expenses	249,346	445,574	(5,146) (3)	440,428
Taxes	8,278	8,278	5,146 (4)	13,424
<b>Total Cash Requirements Before Debt Service</b>	<b>257,624</b>	<b>453,852</b>	<b>-</b>	<b>453,852</b>
Cash Available for Debt Servi (A)	382,404	1,795,990	140,217	1,936,207
<b>DEBT SERVICE REQUIREMENTS</b>				
Principal & Interest (B)	282,720	1,653,880	28,328 (5)	1,682,208
Other Debt	-	-	-	-
Reserve Account @ 10%	-	21,734	118,215 (6)	139,949
Renewal & Replacement Fund (2.5%)	16,001	56,246	2,101 (7)	58,347
<b>Total Debt Service Requirement</b>	<b>298,721</b>	<b>1,731,860</b>	<b>148,644</b>	<b>1,880,504</b>
SB 234 Cash Working Capital	31,168	55,697	-	55,697
<b>Remaining Cash</b>	<b>52,515</b>	<b>8,433</b>	<b>(8,427)</b>	<b>6</b>
Percent Coverage (A) / (B)	135.26%	108.59%		115.10%
Average rate for 3,400 gallons	\$ 24.14	\$ 42.56	\$ 30.64	\$ 73.20
Average rate for 4,000 gallons	\$ 28.02	\$ 49.40	\$ 35.57	\$ 84.97

Staff Adjustments

<u>Adjustment Description</u>		\$	Increase <Decrease>
(1) <b>Operating Revenues</b>	<b>Per Staff Analysis</b>	<b>2,319,784</b>	<b>84,520</b>
	<b>Per Application with Project</b>	<b>2,235,264</b>	
<p>Adjust revenues of (\$55,697) in accordance with PSC General Order 183.11.          Proposed rate is 29.2% more than going level. Applicant proforma adjustment of \$1,103,031 was 129.2% more than revenue at going level. Staff correction resulted in variance of (\$853,784).          Staff also projected that an additional \$994,000 revenues would be needed to achieve 115% debt service coverage and a positive cash flow surplus.</p>			
(2) <b>SB 234 Annual Working Cash Collections</b>	<b>Per Staff Analysis</b>	<b>55,697</b>	<b>55,697</b>
	<b>Per Application with Project</b>	<b>-</b>	
<p>Account for SB 234 (2015) funding pursuant to PSC General Order 183.11.</p>			
(3) <b>Operating Expenses</b>	<b>Per Staff Analysis</b>	<b>440,428</b>	<b>(5,146)</b>
	<b>Per Application with Project</b>	<b>445,574</b>	
<p>Reclassify Utility Regulatory Assessment Fee to Taxes.</p>			
(4) <b>Taxes</b>	<b>Per Staff Analysis</b>	<b>13,424</b>	<b>5,146</b>
	<b>Per Application with Project</b>	<b>8,278</b>	
<p>Reclassify Utility Regulatory Assessment Fee from Operating Expenses.</p>			
(5) <b>Principal &amp; Interest</b>	<b>Per Staff Analysis</b>	<b>1,682,208</b>	<b>28,328</b>
	<b>Per Application with Project</b>	<b>1,653,880</b>	
<p>The difference in P&amp;I is related to Staff's calculation of a loan of \$19,940,300 for 40 years (paid back over 38 years) at 5%.</p>			
(6) <b>Reserve Account @ 10%</b>	<b>Per Staff Analysis</b>	<b>139,949</b>	<b>118,215</b>
	<b>Per Application with Project</b>	<b>21,734</b>	
<p>Staff assumed a 10% reserve on the new debt.</p>			
(7) <b>Renewal &amp; Replacement Fund (2.5%)</b>	<b>Per Staff Analysis</b>	<b>58,347</b>	<b>2,101</b>
	<b>Per Application with Project</b>	<b>56,246</b>	
<p>Staff used 2.5% of the projection of "Operating &amp; Other Revenues" as the basis of the renewal &amp; replacement fund.</p>			