

Petitioner's Exhibit 4

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EXHIBIT NO. 4
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OFFICIAL
EXHIBITS

PETITIONER'S EXHIBIT 4

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

**PETITION OF JACKSON COUNTY WATER
AUTHORITY FOR AUTHORITY TO ISSUE
LONG-TERM DEBT AND ADJUST ITS
RATES AND CHARGES**

CAUSE NO. _____

PREFILED DIRECT TESTIMONY OF

LORI A. YOUNG, P.E.

ON BEHALF OF

JACKSON COUNTY WATER AUTHORITY

I.
Introduction

1

2 **1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Lori A. Young and my business address is 110 Commerce Drive, Danville,
4 Indiana 46122.

5 **2. MS. YOUNG, HOW ARE YOU EMPLOYED?**

6 A. I am a Registered Professional Engineer with the firm of Fleis & VandenBrink, a consulting
7 engineering and architectural firm headquartered in Grand Rapids, Michigan. Fleis &
8 VandenBrink offer a wide range of engineering and architectural services from ten (10)
9 different office locations in Michigan and Indiana.

10 **3. HOW LONG HAVE YOU BEEN EMPLOYED BY FLEIS & VANDENBRINK?**

11 A. I have only been employed by Fleis & VandenBrink since October 1, 2024, when my prior
12 firm Curry & Associates, Inc., merged with Fleis & VandenBrink. Prior to the merger, I
13 was employed by Curry & Associates, Inc. for twenty-eight (28) years.

14 **4. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND, EXPERIENCE,**
15 **AND PROFESSIONAL STATUS.**

16 A. I have earned a Bachelor and Master of Science Degrees in Civil Engineering from Purdue
17 University, West Lafayette, Indiana. These degrees were awarded in 1995 and 1996,
18 respectively. I also earned a Master of Business Administration Degree at Indiana
19 Wesleyan University in 2004. I became a licensed professional engineer in the State of

1 Indiana in the year 2000, and my professional engineer registration number is PE
2 IN10000117.

3 **5. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE?**

4 A. I have worked as a design engineer and project manager for Fleis & VandenBrink since
5 1996. Throughout this time, I have worked on a number of water and wastewater projects
6 in Indiana. The projects have included such tasks as water and wastewater assessments
7 and planning studies, utility relocations, infrastructure rehabilitation, water and wastewater
8 treatment, water distribution systems, sanitary sewer collection systems, stormwater
9 drainage, and advisory roles to governmental entities and private utilities. Although my
10 role for a particular client may vary, I typically assist clients on all project phases from
11 preliminary planning through budgeting, funding, design, obtaining regulatory approvals
12 (including, but not limited to, approval from the Indiana Utility Regulatory Commission
13 ("Commission")), bidding, and contract administration.

14 **6. HAVE YOU OR YOUR FIRM TESTIFIED AS EXPERT WITNESSES BEFORE**
15 **VARIOUS INDIANA GOVERNMENTAL AGENCIES, INCLUDING THE**
16 **COMMISSION?**

17 A. Yes. I have previously testified as an expert witness on behalf of the Waldron
18 Conservancy District, Brown County Water Utility, Inc., Edwardsville Water Authority,
19 and North Dearborn Water Authority. I also testified on behalf of Jackson County Water
20 Utility, Inc. (now the Jackson County Water Authority ("Jackson County Water")) in its

1 prior rate case before the Commission, Cause No. 45640.

2 **7. PLEASE DESCRIBE THE TYPES OF UTILITY ORGANIZATIONS WHICH**
3 **YOUR FIRM REPRESENTS.**

4 A. Our firm represents investor-owned utilities, nonprofit rural water and sewer companies,
5 water authorities, conservancy districts, regional districts, and municipally owned utilities.
6 I, along with other members of our firm, have also performed engineering services for a
7 number of sewer and water projects for the Department of Natural Resources.

8 **8. PLEASE DESCRIBE YOUR INVOLVEMENT IN THE VARIOUS WATER**
9 **PROJECTS CARRIED OUT BY YOUR FIRM.**

10 A. I typically meet with a representative of the utility to determine the utility's individual
11 needs, and then provide design criteria and specifications, oversee the preparation of
12 drawings, obtain the necessary permits and approvals, assist the utility in bidding, and,
13 finally, act as an inspector for the construction of the contemplated improvements. The
14 scope of our projects ranges from gathering basic preliminary data to preparation of
15 engineering reports, supervision of construction, and ultimately, final project inspection.

16 **9. WHAT IS THE EXTENT OF YOUR INVOLVEMENT IN THE WATER PROJECT**
17 **THAT IS THE SUBJECT OF THIS PROCEEDING?**

18 A. Curry & Associates, Inc. and now Fleis & VandenBrink has been the consulting engineer
19 for Jackson County Water for approximately forty-two (42) years. During our time of
20 involvement, Jackson County Water has maintained and extended water service into

1 various rural and municipal areas in Jackson, Lawrence, Brown, Bartholomew, and
2 Jennings Counties, Indiana. Generally, its service area has included a large area in south
3 central Indiana from Brownstown to areas adjacent to Interstate 65. In the last couple of
4 years, Jackson County Water has tested for and discovered that it has perfluoroalkyl or
5 polyfluoroalkyl substances ("PFAS") in its water supply. On April 10, 2024,
6 Environmental Protection Agency ("EPA") announced the final National Primary Drinking
7 Water Regulation ("NPDWR") for six PFAS. The regulation requires Jackson County
8 Water to reduce the amount of two PFAS compounds, PFOA and PFOS, in its water supply
9 below four (4) parts per trillion. In light of this EPA requirement, Jackson County Water
10 has aggressively sought alternatives to ensure that its water supply is in compliance with
11 the new regulatory requirements. Over the last couple of years, I have worked with Jackson
12 County Water to identify capital improvements that could treat its water supply to the point
13 of EPA compliance and, alternatively, the possibility for drilling new wells in a new area
14 that would not contain PFAS. I developed cost estimates for each of these two (2)
15 alternatives and presented both to the Board. Due to the rather high cost associated with
16 new treatment facilities, the Board has opted to drill new wells in an effort to obtain a water
17 supply without PFAS.

18 **10. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

19 A. The purpose of my testimony is two-fold. First, I will briefly describe Jackson County
20 Water's current system and the improvements it proposes to make to address and remediate

1 the PFAS that is currently in its water supply. Second, I will generally describe Jackson
2 County Water's prospective capital and periodic maintenance needs and the estimated cost
3 of the same.

4 **II.**
5 **Current System and Proposed Improvements**

6 **11. MS. YOUNG, CAN YOU GENERALLY DESCRIBE THE CURRENT FACILITIES**
7 **OWNED AND OPERATED BY JACKSON COUNTY WATER?**

8 A. Jackson County Water currently owns and operates a water treatment plant in Brownstown,
9 Indiana, rated at 2,000 gallons per minute. This water plant is a catalytic reactor-type water
10 treatment plant. The treatment process is designed to:

- 11 a. Reduce hardness from 330 ppm to approximately 180 ppm;
12 b. Remove iron;
13 c. Remove manganese;
14 d. Disinfect the water using chorine;
15 e. Fluoridate the water; and
16 f. Measure both raw water and finished water flow.

17 Raw water for this water treatment plant originates from six (6) existing wells which are
18 capable of producing an aggregate flow of approximately 2,800 gallons per minute. These
19 wells are shallow wells which remove raw water from the layers of sand and gravel in the
20 White River Valley which is near the Town of Brownstown and Jackson County Water's
21 water treatment plant. The existing facilities are the result of various waterworks
22 improvements which have been added over a number of years and include hundreds of
23 miles of water transmission and distribution mains of various diameters and of different

1 materials. Jackson County Water's facilities also include above-ground storage facilities,
2 booster pumps, office, and storage buildings. A description referencing these facilities is
3 included in my Preliminary Engineering Report ("PER") which I have attached to this
4 testimony as Petitioner's Exhibit 5.

5 **12. DID YOU COMPLETE AND SUBMIT THE PER AS PART OF THE FINANCING**
6 **PROCESS WITH THE DRINKING WATER STATE REVOLVING FUND LOAN**
7 **PROGRAM ("DWSRF")?**

8 A. Yes, I did. I, along with other members of my firm and Jackson County Water, completed
9 the PER and submitted it to the DWSRF in March, 2024. The DWSRF, in turn, reviewed
10 the PER along with all other preliminary engineering reports that were submitted by
11 utilities across the state. Based on a variety of factors, the DWSRF rated the Jackson
12 County Water project as the number three priority on the DWSRF's Project Priority List
13 published on July 15, 2024. A copy of the DWSRF's Project Priority List is attached as
14 Petitioner's Exhibit 6. Due to the timing associated with obtaining Commission approval,
15 purchasing the property in question, installing test wells, obtaining bids, and beginning
16 construction, the DWSRF has moved this project to its next fiscal quarter beginning July
17 1, 2025. In the meantime, however, the DWSRF has offered Jackson County Water a very
18 beneficial interim funding package in the form of a \$750,000 forgivable loan and a
19 \$250,000 zero percent (0%) interest loan. The proceeds from the forgivable loan and zero
20 percent (0%) interest loan will fund Jackson County Water's preliminary engineering, land

1 acquisition, and soft costs. Jackson County Water's financial advisor, Mr. Earl Ridlen,
2 will further explain the details of the financing in his prefiled testimony exhibits that were
3 filed simultaneously herewith.

4 **13. MS. YOUNG, CAN YOU PLEASE DESCRIBE THE PER TO THE EXTENT IT IS**
5 **NOT OTHERWISE SELF-EXPLANATORY?**

6 A. Yes, I can.

7 **14. PLEASE DESCRIBE THE CONTENTS OF THE PER.**

8 A. The PER is organized into an executive summary and six (6) chapters. The Executive
9 Summary provides an overview of needs for the planning horizon. Chapter 1 generally
10 describes Jackson County Water's current conditions and infrastructure with tables and
11 referencing exhibits. Chapter 2 describes Jackson County Water's need for the proposed
12 capital improvements including population trends in and around Jackson County Water's
13 service territory, customer growth, and Jackson County Water's projected twenty (20) year
14 water system needs.

15 Chapter 3 identifies the various alternatives for the proposed improvements. Chapter 4
16 includes the recommended improvements and estimated cost of the proposed project.

17 Chapter 5 evaluates the environmental impact of the proposed projects and includes a
18 number of maps and diagrams. Chapter 6 outlines the public participation component,
19 interlocal agreements, and other required SRF information. It also includes a financial
20 information form required by the DWSRF.

1 **15. PLEASE DESCRIBE THE PROPOSED IMPROVEMENTS THAT WOULD BE**
2 **FUNDED BY THE DWSRF DEBT.**

3 A. The Project will construct six (6) new wells, each with a planned design pumping capacity
4 of 500 gpm. These wells will provide a supplemental water supply with the objective of
5 better water quality and low or no PFAS contamination. Included with the project are all
6 the non-construction costs required for the construction of new wells including
7 engineering, land purchase for additional wells, hydrogeology, modeling and test wells.

8 **16. WHY DID THE BOARD ULTIMATELY DECIDE TO INSTALL NEW WELLS?**

9 A. While I am not a member of the Board, I was present during the conversations concerning
10 the various alternatives to address Jackson County Water's PFAS issue. At some point in
11 the future, Jackson County Water will be required to replace its water treatment plant that
12 consists of components that are now up to 39 years old. One of the options to address the
13 PFAS issue and comply with EPA mandates was to install a new water treatment plant that
14 used granular activated carbon ("GAC") filters for treatment. This type of treatment
15 process is effective for significantly reducing the amount of PFAS in Jackson County
16 Water's water supply, but it is feared that it would be expensive to install and thereafter
17 operate. This concern was exacerbated by the fact that IDEM has not yet adopted PFAS
18 limits for discharge of filter backwash water and other possible treatment reject water
19 streams to the river from the water treatment facility. The emerging treatment technologies
20 and new EPA PFAS limits are contributing to uncertainty and volatility in costs for GAC

1 replacement and disposal. The Board had great concern that the cost of operating and
2 maintaining this new plant would be extremely expensive which would, in turn, lead to a
3 significant rate increase for Jackson County Water's customers. As an alternative, the
4 Board decided to pursue a Phase I option to install new wells in an area that will hopefully
5 not have water contaminated with PFAS. This would allow Jackson County Water to delay
6 water treatment plant construction until PFAS treatment costs and discharge limits for
7 discharge to the river are more clearly defined. A future Phase II Project shall be developed
8 if necessary to remove PFAS to ensure Jackson County Water's drinking water meets
9 regulatory standards. By that time, the regulatory limits will be more clearly defined for
10 discharge streams, and the hydrogeological investigation will allow better understanding
11 of the PFAS plume and how to most strategically and cost effectively perform PFAS
12 removal treatment.

13 **III.**

14 **Periodic Maintenance and Other Capital Improvements**

15 **17. HAVE YOU REVIEWED THE PERIODIC MAINTENANCE ITEMS AND**
16 **AMOUNTS SET FORTH IN MR. RIDLEN'S PREFILED TESTIMONY AND**
17 **EXHIBITS?**

18 A. Yes, I have. I have reviewed the periodic maintenance expense items and estimated costs
19 set forth in Mr. Ridlen's accounting report ("Accounting Report"). I believe the items and
20 amounts are consistent with the periodic maintenance expenses that Jackson County Water
21 will incur on a prospective basis.

1 **18. CAN YOU EXPLAIN THE PROCESS BY WHICH JACKSON COUNTY WATER**
2 **DETERMINED AN APPROPRIATE AMOUNT FOR PERIODIC MAINTENANCE**
3 **EXPENSE?**

4 A. Yes, I can. Jackson County Water's general manager, Larry McIntosh, and I worked
5 together on developing an accurate list of the utility's periodic maintenance needs and
6 estimated costs of such tasks. As a starting point, I reviewed the periodic maintenance
7 expense for other similarly situated utilities for which I have worked and then provided
8 this list to Mr. McIntosh. Mr. McIntosh used this list and compared recent invoices and
9 his experience in preparing a final list. The final list of periodic maintenance expense was
10 provided to Mr. Ridlen who included the estimated periodic maintenance expense for
11 Jackson County Water in his Accounting Report.

12 **19. DO YOU BELIEVE THE AMOUNTS FOR PERIODIC MAINTENANCE ARE**
13 **APPROPRIATE AND REASONABLE?**

14 A. Yes, I do. After significant review and research, I believe the items and amounts detailed
15 in the Accounting Report are an accurate reflection of the type and amount of expenses
16 that Jackson County Water will experience for periodic maintenance.

17 **20. TO YOUR KNOWLEDGE, IS JACKSON COUNTY WATER SEEKING AN**
18 **EXPENSE OR ALLOWANCE IN ITS RATES FOR DEPRECIATION THAT WILL**
19 **BE USED TO PAY FOR CERTAIN CAPITAL IMPROVEMENTS?**

1 A. Yes. Although I am not an attorney, I understand that by converting to a water authority,
2 . Jackson County Water is able to include in its revenue requirement the greater amount of
3 extensions and replacements or depreciation. In this instance, Jackson County Water has
4 decided to include an amount in its rates for depreciation. Jackson County Water intends
5 to use these funds to pay for unexpected and unforeseen repairs and replacements and to
6 complete certain capital improvements.

7 **III.**
8 **Conclusion**

9 **21. DOES THIS CONCLUDE YOUR TESTIMONY?**

10 A. Yes, it does.

VERIFICATION

I affirm under the penalties for perjury that the foregoing testimony is true to the best of my knowledge, information, and belief.

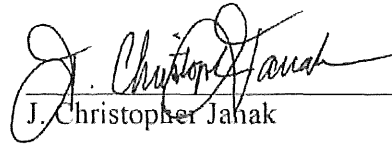
Lori A. Young

Lori A. Young, P.E.
Fleis & VandenBrink

CERTIFICATE OF SERVICE

I certify that a copy of the foregoing "Verified Direct Testimony and Exhibits of Lori A. Young, P.E." was served upon the following by electronic mail this 1st day of November, 2024:

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