

Exhibit No.:
Issues:

Revenue Requirement for
St. Joseph District
Ernest Harwig
Direct Testimony and Schedules
St. Joseph Industrial Group
Missouri-American Water Company
WR-2000-281, SR-2000-282
(Consolidated)

Witness:
Type of Exhibit:
Sponsoring Party:
Company:
Case Nos.:

FILED³

APR 03 2000

**Before the
Missouri Public Service Commission**

Missouri Public
Service Commission

In the Matter of Missouri-American Water)	
Company's Tariff Sheets Designed to Implement)	Case Nos. WR-2000-281
General Rate Increases for Water and Sewer)	SR-2000-282
Service Provided to Customers in the Missouri)	(Consolidated)
Service Area of the Company.)	

Direct Testimony and Schedules of

Ernest Harwig

On Behalf of

St. Joseph Industrial Water Users

Project 7313
April 2000



BRUBAKER & ASSOCIATES, INC.

Before the
Missouri Public Service Commission

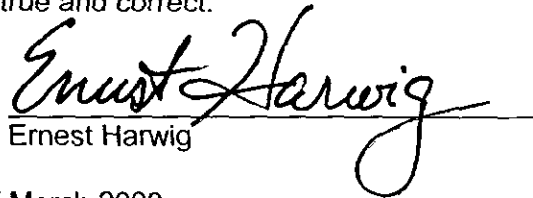
In the Matter of Missouri-American Water)	
Company's Tariff Sheets Designed to Implement)	Case Nos. WR-2000-281
General Rate Increases for Water and Sewer)	SR-2000-282
Service Provided to Customers in the Missouri)	(Consolidated)
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Affidavit of Ernest Harwig

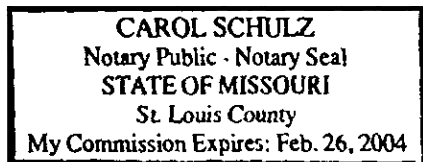
State of Missouri)
) SS
County of St. Louis)

Ernest Harwig, being first duly sworn on his oath, states:

1. My name is Ernest Harwig. My business address is 1215 Fern Ridge Parkway, Suite 208, St. Louis, Missouri 63141-2000. I am a consultant in the field of public utility regulation with the firm of Brubaker & Associates, Inc.
2. Attached hereto and made a part hereof for all purposes is my Direct Testimony which has been prepared in written form for introduction into evidence in the above-referenced docket.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.


Ernest Harwig

Subscribed and sworn to before me this 31st day of March 2000.




Carol Schulz

My Commission expires on February 26, 2004.

**Before the
Missouri Public Service Commission**

In the Matter of Missouri-American Water)	
Company's Tariff Sheets Designed to Implement)	Case Nos. WR-2000-281
General Rate Increases for Water and Sewer)	SR-2000-282
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Service Area of the Company.)	

Direct Testimony of Ernest Harwig

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

2 **A Ernest Harwig; 1215 Fern Ridge Parkway, Suite 208; St. Louis, MO 63141.**

3 **Q PLEASE STATE YOUR OCCUPATION.**

4 **A I am a consultant in the field of public utility regulation and employed by Brubaker &**
5 **Associates, Inc., energy, regulatory and economic consultants.**

6 **Q PLEASE STATE YOUR EDUCATION AND QUALIFICATIONS.**

7 **A These are stated in Appendix A attached to this testimony.**

8 **Q ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

9 **A I am testifying on behalf of St. Joseph Industrial Water Users, a group of industrial**
10 **water consumers located in St. Joseph. These customers would experience a**
11 **significant increase in their cost of water if the rates proposed by Missouri-American**
12 **Water Company (MAWC or Company) were approved in this proceeding.**

1 **Q WHAT IS THE SUBJECT OF YOUR TESTIMONY?**

2 **A I am presenting a series of revenue requirement calculations for the St. Joseph**
3 **District of MAWC on a district-specific basis. This revenue requirement reflects the**
4 **costs of upgrading the existing water treatment site and facility as recommended by**
5 **Dr. Charles Morris. My decision not to discuss other topics included in the**
6 **Company's direct testimony should not be construed as an endorsement of the**
7 **Company's positions on those topics.**

8 **Q WHAT DO YOU MEAN BY YOUR USE OF THE TERM "DISTRICT-SPECIFIC"?**

9 **A By the term "district-specific," I am referring to a revenue requirement based solely on**
10 **the operating and capital costs of providing water to customers in the St. Joseph**
11 **District through the water resources, facilities and personnel located in the St. Joseph**
12 **District, without regard to costs incurred in the other districts where MAWC provides**
13 **service.**

14 **Q WILL YOU FILE ADDITIONAL TESTIMONY PERTAINING TO COSTS AND RATES**
15 **IN THE ST. JOSEPH DISTRICT?**

16 **A Yes. Subsequent to the filing of this testimony on revenue requirements, I will file**
17 **additional testimony pertaining to rate design.**

18 **Q HOW DID YOU CALCULATE THE INCREASES IN REVENUE REQUIREMENTS**
19 **ASSOCIATED WITH DR. MORRIS' RECOMMENDATIONS?**

20 **A To calculate the revenue requirements, it was necessary to determine a fixed charge**
21 **rate to apply to the cost of the recommended plant improvements. The fixed charge**
22 **rate reflects depreciation, return on investment, and property taxes.**

1 I first calculated composite depreciation rates for each of the three phases of
2 treatment plant improvements recommended by Dr. Morris. These rates were based
3 on workpapers supplied by MAWC and discussions with Dr. Morris.

4 The rate of return was based on the Company's capital structure, assuming a
5 10% post-tax cost of common equity. The property tax rate was taken from the
6 Company's workpapers.

7 These calculations yielded fixed charge rates of 14.87%, 14.99% and 15.18%
8 for each of the three phases. The corresponding revenue increases are \$3.451
9 million for the first phase, \$1.814 million for the second phase, and \$759,000 for the
10 third phase, for a total of \$6.024 million. This is shown in Schedule 1-RR.

11 **Q DID THE COMPANY CALCULATE A DISTRICT-SPECIFIC REVENUE**
12 **REQUIREMENT FOR ST. JOSEPH?**

13 **A** Yes, it did. According to Company Witness Stout's district-specific cost study,
14 \$21.863 million of revenues would be required to recover the cost of service in St.
15 Joseph. This includes fixed charges on the new treatment plant, and the levels of pro
16 forma O&M expenses, depreciation and taxes proposed by the Company. This would
17 necessitate an increase of \$12.022 million, or 122%, above present revenues.

18 **Q WHAT IMPACT WOULD THE PHASED INCREASES HAVE ON WATER RATES IN**
19 **ST. JOSEPH?**

20 **A** Revenues from present water rates are \$9.842 million annually. The first phase
21 would represent an increase of about 35% above present revenues. The second
22 phase increase would be 13.6%, and the third phase would be 5.0%. Compounded,
23 the overall increase to recover the cost of plant improvements would be 61.2%. Total

1 revenues would be \$15.866 million. This is shown on Schedule 2-RR. I should note,
2 based on Dr. Morris' testimony, that this level of increase is on the high end.

3 These revenue adjustments pertain solely to plant improvements. To the
4 extent that other cost increases or decreases are found appropriate, they should be
5 included.

6 **Q ARE YOU TESTIFYING THAT MAWC'S RETURN ON COMMON EQUITY COST IS**
7 **10%?**

8 **A** No, I am not. I am simply using a 10% equity return, and a corresponding 8.42%
9 overall rate of return for purposes of illustration. I note that MAWC, the Commission
10 Staff, and the Office of Public Council filed a Non-Unanimous Stipulation and
11 Agreement before the Missouri Public Service Commission on February 23, 2000,
12 which incorporated a 10% return on equity assumption.

13 **Q DO YOU RECOMMEND THAT THE COMMISSION APPROVE RATES FOR THE**
14 **ST. JOSEPH DISTRICT ON A DISTRICT-SPECIFIC BASIS?**

15 **A** Yes, I do, for the reasons that I will set forth in Part 2 of my testimony, which
16 addresses the subject of rate design. I believe the Commission should set rates for
17 St. Joseph on a district-specific basis regardless of its findings concerning the
18 prudence of any investment in the new St. Joseph treatment plant.

19 **Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

20 **A** Yes, it does. However, I also reserve the right to submit revised schedules in light of
21 updated information from the Company or testimony filed by the other parties to this
22 case regarding plant in service, expenses, and operating income.

Qualifications of Ernest Harwig

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

2 **A Ernest Harwig. My business mailing address is PO Box 412000, 1215 Fern Ridge**
3 **Parkway, Suite 208, St. Louis, Missouri 63141-2000.**

4 **Q WHAT IS YOUR OCCUPATION?**

5 **A I am a consultant in the field of public utility regulation and am employed by Brubaker**
6 **& Associates, Inc., energy, economic and regulatory consultants.**

7 **Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

8 **A I graduated from Austin College with a Bachelor of Arts Degree in Economics.**
9 **Subsequently, I received a Master of Arts Degree in International Economics from**
10 **Texas Tech University. I later attended seminars in Economics at the University of**
11 **Cologne in the Federal Republic of Germany. I also received a Master of Arts Degree**
12 **in Economic Theory while completing all course work towards the Ph.D. at Southern**
13 **Methodist University. My major field was Industrial Organization.**

14 Prior to joining Drazen-Brubaker & Associates, Inc., I was employed as a
15 utility rate analyst with the Public Service Commission of Wisconsin, where I designed
16 rates for private and municipal electric utilities and analyzed testimony and exhibits
17 presented by the utilities in rate cases. I also prepared exhibits for presentation in
18 major electric utility rate cases.

19 I joined the firm of Drazen-Brubaker & Associates, Inc., in September 1975.
20 In addition to our main office in St. Louis, the firm also has branch offices in Kerrville,
21 Texas; Plano, Texas; Denver, Colorado; Chicago, Illinois; and Washington, DC. In

1 April 1995, the firm of Brubaker & Associates, Inc. was formed. It includes most of
2 the former DBA principals and staff. At the firm, I have been engaged in the
3 preparation of testimony and exhibits relating to electric, gas, water, wastewater and
4 steam utilities. These included determinations of rate base, operating income and
5 depreciation rates; the performance of cost of service studies; and the design of rates
6 for utility services. I have also provided technical assistance in the negotiation of
7 contracts for water and wastewater services between municipal suppliers and
8 industrial customers. I have been a member of the American Water Works
9 Association since 1986.

10 **Q ARE YOU AUTHOR OF ANY PUBLICATIONS?**

11 A Yes. I am the co-author of two articles: "Municipal Electric Utility Pricing," which
12 appeared in the February 1976 issue of Governmental Finance, and "Water Rates:
13 An Industrial User's View," which appeared in the May 1986 issue of Journal AWWA.

14 **Q HAVE YOU PREVIOUSLY APPEARED BEFORE A REGULATORY COMMISSION?**

15 A Yes. I have testified before the public utility regulatory commissions of Alabama,
16 California, Delaware, Illinois, Indiana, Kentucky, Minnesota, Missouri, New
17 Hampshire, California, Pennsylvania, Rhode Island, Tennessee, West Virginia and
18 Wisconsin. In addition, I have assisted both utility customers and suppliers in local
19 rate proceedings and contract negotiations for water and wastewater services in
20 about twenty states.

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MISSOURI-AMERICAN WATER COMPANY
MPSC Case No. WR-2000-281

Fixed Charge Rates and Revenue Requirements
For Recommended Treatment Plant Alternative
(Dollar Amounts in Thousands)

<u>Line</u>	<u>Description</u>	<u>Phase 1</u> (1)	<u>Phase 2</u> (2)	<u>Phase 3</u> (3)	<u>Total</u> (4)
1	Plant Investment	\$23,200	\$12,100	\$5,000	\$40,300
2	Depreciation Rate	2.820%	2.940%	3.130%	
3	Property Tax Rate	0.864%	0.864%	0.864%	
4	Return	<u>11.189%</u>	<u>11.189%</u>	<u>11.189%</u>	
5	Fixed Charge Rate	14.873%	14.993%	15.183%	
6	Fixed Charges (Line 1 * Line 5)	\$3,451	\$1,814	\$759	\$6,024

MISSOURI-AMERICAN WATER COMPANY

MPSC Case No. WR-2000-281

Calculation of Rate Increases to Recover Cost
of Recommended Treatment Plant Alternative
(Dollar Amounts in Thousands)

<u>Line</u>	<u>Phase</u>	<u>Present</u>	<u>Increase</u>		<u>Total</u>
		<u>Revenues</u>	<u>Amount</u>	<u>Percent</u>	<u>Revenues</u>
		(1)	(2)	(3)	(4)
1	Phase 1	\$9,842	\$3,451	35.06%	\$13,293
2	Phase 2	\$13,293	\$1,814	13.65%	\$15,107
3	Phase 3	\$15,107	\$759	5.02%	\$15,866
4	Cumulative		\$6,024	61.21%	