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Rate Design
Donald E. Johnstone
Rebuttal Testimony
Ag Processing et. al.
WR-2003-0500
November 10, 2003

**Missouri American Water Company
WR-2003-0500**

Rebuttal Testimony of

Donald E. Johnstone

on behalf of the

CITY OF RIVERSIDE, MISSOURI
and
AG PROCESSING INC A COOPERATIVE

November 10, 2003



**BEFORE THE
PUBLIC SERVICE COMMISSION OF MISSOURI**

In the Matter of Missouri-American Water)
Company for Authority to File Tariffs) Case No. WR-2003-0500
Reflecting Increased Rates for Water)
and Sewer Service.)

Affidavit of Donald E. Johnstone

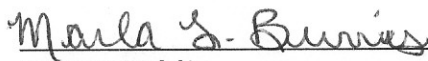
State of Missouri)
) SS
County of Camden)

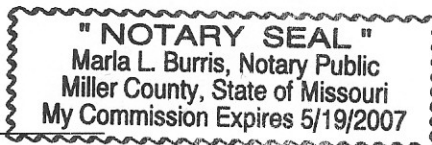
Donald E. Johnstone, being first duly sworn, on his oath states:

1. My name is Donald E. Johnstone. I am a consultant and President of Competitive Energy Dynamics, L. L. C. I reside at 19 Black Hawk Drive, Lake Ozark, MO 65049. I have been retained by City of Riverside, Missouri and Ag Processing Inc a cooperative in this proceeding.
2. Attached hereto and made a part hereof for all purposes are my rebuttal testimony and schedules in written form for introduction into evidence in the above captioned proceeding.
3. I hereby swear and affirm that my rebuttal testimony and schedules are true and correct and show the matters and things they purport to show.


Donald E. Johnstone

Subscribed and sworn before me this 10th day of November, 2003


Notary Public



Competitive Energy
DYNAMICS

Missouri American Water Company
WR-2003-0500

Rebuttal Testimony of Donald E. Johnstone

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Missouri American Water Company
WR 2003-0500

1 **INTRODUCTION**

2 **Q PLEASE STATE YOUR NAME AND ADDRESS.**

3 **A** Donald E. Johnstone. My address is 19 Black Hawk Drive, Lake Ozark, MO
4 65049.

5 **Q BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

6 **A** I am President of Competitive Energy Dynamics, L. L. C. My qualifications and
7 experience are set forth in Schedule 1 to this testimony.

8 **Q ON WHOSE BEHALF ARE YOU APPEARING?**

9 **A** I am appearing on behalf of the City of Riverside, Missouri ("Riverside") and Ag
10 Processing Inc a cooperative ("AGP"). Riverside is a customer of the Missouri
11 American Water Company ("MAWC") in the Platte County District (aka Parkville
12 District) and AGP is a customer in the St. Joseph District.

13 **Q WHAT IS THE INTEREST OF YOUR CLIENTS IN THIS PROCEEDING?**

14 **A** My clients share an interest in appropriate rates for the services they receive
15 from MAWC. Riverside also has an interest in appropriate rates for services its

1 citizens receive from MAWC and that the rates be appropriately based on cost
2 of service. Like many other parties, they support the proposition that the
3 reasonable cost of providing services should be the fundamental starting point
4 for the design of rates. At the same time, they wish to avoid abrupt changes
5 that can result from changes in cost allocation and rate design approaches. It
6 is also important that similarly situated customers in the same district pay the
7 same rate. Further, the interruptible service supported by The Empire District
8 Electric Company ("Empire") should be made available in all districts based on
9 the costs in those districts.

10 Riverside and AGP share a concern that the applicable rates proposed by
11 MAWC and the Staff of the Missouri Public Service Commission (Staff) may vary
12 substantially from an appropriate cost basis and are highly discriminatory.
13 Therefore Riverside and AGP oppose important aspects of the rate design
14 submitted by MAWC and for the Staff by witness Mr. Wendell R. Hubbs. More
15 specifically, my clients are quite concerned with the use of the recently
16 created rate classes (i.e. Residential, Commercial, Industrial, Public Authority
17 and Sales for Resale), for the definitions of what it takes to be in these classes
18 are not defined in the tariff. Furthermore, MAWC and Staff do not have the
19 statistical data to support the cost studies without extrapolating from areas as
20 far away as Pennsylvania. Consequently, large and potentially unwarranted
21 differences in rates are being created for customers that have every
22 appearance of being similarly situated based on meter size and usage. My

1 clients also oppose the elimination of the declining block structure as proposed
2 by Mr. Hubbs. Finally, my clients strongly oppose such large changes in the
3 applicable rates without a proper consideration of the impact. Many customers
4 were severely impacted as a result of the rates approved in WR-2000-281.
5 Further drastic changes are proposed for many of the same customers. In
6 consideration of the history and uncertainties in important underlying usage
7 characteristics it is of utmost importance to develop limits on the impacts of
8 the rates to be implemented in this proceeding.

9 Silence on other issues and the testimonies of other parties does not
10 indicate either support or acquiescence to any other particular proposal and
11 my clients reserve the right to assert additional positions at appropriate times
12 in this proceeding.

13 **THE MAWC RATE DESIGN PROPOSAL**

14 **Q PLEASE SUMMARIZE THE RATE DESIGN PROPOSAL OF MAWC FOR THE ST.**
15 **JOSEPH AND PLATTE COUNTY DISTRICTS.**

16 **A** MAWC generally proposes a continuation of the existing structures for the St.
17 Joseph District and the Platte County District. This means that class
18 differentiated rates are again proposed. However, there is a fundamental
19 problem in that neither the present nor the proposed tariff state definitions for
20 what it takes to belong to one or another of the rate classes. I am advised by
21 counsel that both Missouri law, Section 393.130 RSMo and the case law forbid

1 any difference in charge which is not based upon difference of service and even
2 when based upon difference of service must have some reasonable relation to
3 the amount of difference.

4 Another important consideration is simply the degree of change
5 compared to present rates. Some rate components are going down while
6 others are proposed to increase by 100% or more. To make matters worse, the
7 proposal comes on the heels of truly extraordinary increases pursuant to the
8 rates set in WR-2000-281. In the Platte County District the Public Authority
9 and Sales for Resale usage charges increased by 107% and 170% respectively. In
10 the St. Joseph District there are similarly large percentage impacts in usage
11 charges: the Industrial class usage charges went up 177%, the Public Authority
12 Class usage charges went up 103% and the Sales for Resale class usage charges
13 went up 239%! Very large increases are now being proposed for customers that
14 have already just endured rates changes that more than doubled due to the
15 last rate case. There has been considerable concern for customers in the
16 Brunswick District. It is now quite apparent that rates in Brunswick are far
17 from the only rate impact problem before the Commission. Many customers in
18 other districts require the same degree of attention and consideration.

19
20 **THE MPSC STAFF RATE DESIGN PROPOSAL**

21 **Q PLEASE SUMMARIZE THE RATE DESIGN PROPOSAL OF STAFF FOR THE PLATTE**

1 **COUNTY AND ST. JOSEPH DISTRICTS.**

2 A Mr. Hubbs has submitted a class cost of service study for each MAWC district
3 and rates for the recently created (but to date undefined) customer classes in
4 each district. I will focus on the Platte County and St. Joseph districts,
5 although the issues are likely to be relevant to most if not all other districts.

6 First, Mr. Hubbs, like MAWC, has used the new customer classes of
7 Residential, Commercial, Industrial, Public Authority and Sales for Resale
8 where there had been a single declining block rate applicable to all customers
9 (because there were no classes). I certainly support the creation of customer
10 classes if and when necessary and/or appropriate to reflect usage differences
11 that reasonably could not be captured by the customer charges and the
12 declining block usage charges. However, a danger lies in creating a class or
13 classes where there is no material difference in usage characteristics that leads
14 to different costs and therefore a need for different rates. Said another way,
15 charging different rates to similarly situated customers in the same district --
16 when there are no material cost differentials that are associated with providing
17 service to these customers -- is commonly characterized as an undue
18 discrimination. This potential for undue discrimination is the danger created
19 by any unnecessary classes and I am advised by counsel that such undue
20 discrimination is impermissible under Missouri law.

21 Second, as compared to presently effective rates in these districts Staff
22 proposes to reduce the customer charges substantially, thereby creating

1 additional increases in usage charges that just increased by over 100% for the
2 several classes already identified - Sales for Resale, Public Authority, and
3 Industrial.

4 Third, Staff proposes to eliminate the declining block structure for the
5 usage rates, thereby creating large disparate impacts among various customers.

6 Taken as a whole for the Platte County and St. Joseph Districts, the
7 Staff's proposed rates create rate impact considerations with double and triple
8 digit percentage changes in specific rates. Regardless of one's position in the
9 matters of class definitions, class cost of service studies, and the design of the
10 rates themselves, the combined effect of the Staff proposal like the MAWC
11 proposal gives rise to serious impact problems in comparison to presently
12 effective rates.

13 I also compared the proposed rates to the "1997 Rates," those in effect
14 immediately prior to the rates that became effective in November 2000 as a
15 result of Case No. WR-2000-281. The comparison reveals increases that are
16 even more disproportionate in the volumetric rates in the Platte County and St.
17 Joseph Districts. Thus, the rates submitted by Staff in this proceeding present
18 a truly extraordinary shift for many customers in these districts as compared to
19 the 1997 Rates. These are major rate impacts on many customers that are
20 recent and fresh in their minds and budgets.

21 I also note my understanding on advice of counsel that the 1997 Rates
22 are the most recent rates set pursuant to a final and unappealable order of the

1 Commission. I am also advised by counsel that the presently effective rates of
2 MAWC are currently under appeal, and that the case has been remanded to the
3 Commission by the Court. One effect of this circumstance is that any
4 comparison to the presently effective rates - or a proposal based on presently
5 effective rates - would hinge on rates which may not ultimately be determined
6 to be lawful. For this reason too it seems to be apropos to consider the
7 proposed changes in comparison to the 1997 rates.

8 **DEFICIENCIES IN THE MAWC AND STAFF PROPOSALS**

9 Q PLEASE SUMMARIZE THE DEFICIENCIES OF THE MAWC AND STAFF PROPOSALS
10 FOR THE PLATTE COUNTY AND ST. JOSEPH DISTRICTS.

11 A First there are deficiencies related to the customer classes:

- 12 - There are no definitions of what it takes to be in the customer classes;
- 13 - Any perceived need to create the several new customer classes and to
14 establish different rates for the classes appears to be based on
15 assumption rather than factual studies of the districts and factual
16 differences in load and usage characteristics between and among
17 the new classes and between and among customers assigned to
18 such new classes.

19 Second, there are changes in rate design which exacerbate rate impact
20 problems:

- 1 - There is the elimination of or tinkering with the declining block
2 structure of the usage charges by MAWC;
- 3 - The Staff proposes to completely eliminate the declining block
4 structure in apparent disregard of the MAWC studies showing
5 increasing economies with size of customer and with no study of
6 load factor effects related to increasing size;
- 7 - The Staff proposes to reduce (and shift) costs allocated to the
8 customer charge, thereby increasing usage rates and at the same
9 time establishing the continuing appropriateness of a declining
10 block structure for usage charges, notwithstanding Staff's
11 proposed elimination of the same.

12 Third, there is the very serious matter of customer impacts:

- 13 - The consideration of the impact of proposed rate changes on classes of
14 customers and individual customers has been wholly inadequate;
- 15 - The consideration of the potential cumulative impact of proposed rate
16 changes in consideration of the recent doubling of some
17 customers' bills has been wholly inadequate.

18 **Q DO RIVERSIDE AND AGP OPPOSE THE CONTINUED USE OF THE RESIDENTIAL,**
19 **COMMERCIAL, INDUSTRIAL, PUBLIC AUTHORITY, AND SALES FOR RESALE**
20 **CUSTOMER CLASSES?**

21 **A Yes, unless there is a demonstration of need based on Platte County and St.**
22 **Joseph District customers. The principle question is really whether there are**

1 measured differences in usage characteristics that in turn create a need for
2 distinct rates. If measured differences do exist then there are additional
3 questions, 1) are there homogeneous classes that can be defined on the basis
4 of load and usage characteristics and 2) do the differences lead to different
5 costs of service and different rates. My clients believe there should be no class
6 distinctions unless these conditions exist in reality for these districts.

7 **Q SHOULD THE RELATIVE CHARGES WITHIN THE DISTRICTS AND THE RATE**
8 **CLASSES BE CHANGED IN THIS PROCEEDING?**

9 A Yes. To lock in the currently existing rate design with a pro rata approach to
10 any rate change would be a mistake. It would both ignore the disparate
11 impacts already in existence and stop any progress.

12 **Q CAN YOU ILLUSTRATE THE RATE IMPACT PROBLEMS IN MORE DETAIL?**

13 A Yes. I have prepared several schedules that will help. Schedule 2 shows the
14 amount of the changes proposed by MAWC and Staff as compared to present
15 rates, those approved in Case No. WR-2000-281. Page 1 of the Schedule
16 contains rates for the Platte County District and Page 2 addresses the St.
17 Joseph District. There are large changes in both the positive and negative
18 directions. Of course it is the large increases that always create the largest
19 concerns by customers. It does not take sophistication; just common sense to
20 know these large increases can lead to problems.

1 Q HOW CAN THE IMPACTS FIRST CREATED BY THE PRESENT RATES BE
2 CONSIDERED?

3 A The best way is to consider the impact of the current rate proposals relative to
4 the rates that were in place prior to the year 2000 rate changes. Since the
5 prior rates became effective in 1997, I simply refer to them as the "1997
6 Rates." Schedule 3 first shows the increases between the 1997 Rates and the
7 "present rates," those approved in WR-2000-281. This schedule shows in detail
8 the large increases for both the Platte County and St. Joseph Districts.

9 Next I computed the increases being proposed by MAWC and Staff in
10 comparison to the 1997 Rates. This computation reflects the effect of the WR-
11 2000-281 rate increases along with the increases proposed by MAWC and Staff
12 in this proceeding. It is hard to find the words to describe just how severe the
13 impact problems are. In the Platte County District MAWC proposes to more
14 than double the charges in 11 of the 20 usage blocks (4 blocks for each of the
15 5 rate classes created in WR-2000-281 yield 20 usage rates). For its
16 recommendation, in Staff proposes to more than double the rates in 14 of the
17 usage blocks.

18 In the St. Joseph District the proposals are even more severe. MAWC
19 proposes to more than double 17 of the 20 usage rates and Staff proposes to
20 more than double 15 - all in comparison to the 1997 Rates.

1 Q IS THERE A DISCREPANCY SIMPLY BECAUSE MAWC IS PROPOSING AN OVERALL
2 INCREASE FOR THE COMPANY AS WHOLE WHILE STAFF IS PROPOSING AN
3 OVERALL DECREASE?

4 A While the overall increase or decrease is relevant, that is not by any means the
5 only problem. The Staff has the benefit of proposing an overall rate decrease,
6 but yet the impacts are terrible in part because Staff proposes drastic rate
7 design changes on top of the very extraordinary rate changes that came out of
8 WR-2000-281.

9 As a check on the effect of the proposed rate decrease I reduced the
10 MAWC proposed rates in each district pro rata to produce the same district
11 revenue as the Staff rates. The number of usage rates that double does drop.
12 In the Platte County District the number is 8, down from 11 and in the St.
13 Joseph District it is 13, down from 17. This obviously does not solve the
14 problems with the MAWC proposed rates.

15 **RECOMMENDATIONS**

16 Q WHAT ARE YOUR SPECIFIC RECOMMENDATIONS?

17 A First, there is the matter of the rate change in this proceeding. The rate
18 changes proposed by MAWC or Staff should be adjusted to reduce the severe
19 impacts that are inherent in the proposals. Indeed, the adjustments should
20 also recognize, consider and ameliorate some of the severe impacts created by
21 the last case. Any rate change should not make matters worse, nor should it

1 lock in the damage done. In consideration of these very unique circumstances,

2 I recommend the following in response to the MAWC and Staff proposals:

- 3 a. Start with MAWC proposed rates by district since the MAWC proposal at
4 least accounts for customers that do not use the distribution system.
5 b. Adjust all rate elements (customer charges, usage charges, etc.) in each
6 respective district pro rata to achieve the allowed district revenue. This
7 will likely be a downward adjustment from the MAWC proposed rates (or
8 an upward adjustment from the Staff proposed rates if the Commission
9 instead made that choice of a starting point).
10 c. In any event limit the increase in each rate element to a 100% increase
11 as compared to the corresponding element in the 1997 Rates.
12 d. Recoup the resulting shortage in district revenue created by the 100%
13 increase limit by increasing every rate element that is not so limited on
14 a pro rata basis to make up the shortage.
15 e. Verify that no rate element goes up by more than 100% as a result of the
16 pro rata increases. If so reduce any effected rate element to a 100%
17 increase and again recoup on a pro rata basis from every rate component
18 that is not so limited.

19 **Q IS THERE AN EASIER WAY TO SET THE RATES?**

20 **A** Yes, although the results would be a little different. The easiest way to limit
21 the serious impacts between customers is to develop the needed rates by
22 increasing the 1997 rate elements pro rata for each district to produce the
23 district revenues allowed in this proceeding. This would mitigate disparate
24 customer impacts and also leave the class rates within each district the same
25 for the time being. I recommend this approach as an alternative means to
26 mitigate the serious impact issues created by the MAWC and Staff proposals.

27 **Q DO YOU HAVE ANY FURTHER RECOMMENDATIONS?**

28 **A** I recommend that the customer classes, if they remain in place for the Platte
29 County and St. Joseph Districts be clearly defined in the tariff. Also, within

1 one year MAWC should provide a study of the need for the classes as defined.
2 Need is to be based on the establishment of homogeneous classes based on the
3 usage characteristics (of actual customers in the Platte County and St. Joseph
4 Districts) that have a material impact on the cost of serving customers in each
5 class. In the absence of evidence supporting the continuation of the current
6 classes, unnecessary classes should be eliminated to preclude any possibility of
7 undue discrimination in the rates for similarly situated customers. I also
8 believe it would be reasonable to eliminate the classes while the study is
9 underway. Of course, the study should have preceded the creation of the
10 classes and the issue now is how to deal with the classes that exist.

11 I further recommend that interruptible rates along the lines of those
12 suggested in the Joplin District for Empire District Electric Company (Empire)
13 be implemented in all districts. A cost-based interruptible rate is an important
14 option for customers seeking to control their costs in order to operate their
15 Missouri facilities more efficiently.

16 Assuming the Commission approves some form of interruptible rate
17 pursuant to Empire's proposal, the same rate design should be made available
18 on a non-discriminatory basis in at least the St. Joseph and Platte County
19 Districts where my clients have interests. The charges should reflect the costs
20 of each respective district while following cost allocation and rate design
21 principles consistent with the approved Empire rate.

22 Q DOES THIS CONCLUDE YOUR TESTIMONY?

1 A Yes it does.

Qualifications of Donald E. Johnstone

Q PLEASE STATE YOUR NAME AND ADDRESS.

A Donald E. Johnstone. My address is 19 Black Hawk Drive, Lake Ozark, MO 65049.

Q PLEASE STATE YOUR OCCUPATION.

A I am President of Competitive Energy Dynamics, L.L.C. and a consultant in the field of public utility regulation.

Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A In 1968, I received a Bachelor of Science Degree in Electrical Engineering from the University of Missouri at Rolla. After graduation, I worked in the customer engineering division of a computer manufacturer. From 1969 to 1973, I was an officer in the Air Force, where most of my work was related to the Aircraft Structural Integrity Program in the areas of data processing, data base design and economic cost analysis. Also in 1973, I received a Master of Business Administration Degree from Oklahoma City University.

From 1973 through 1981, I was employed by a large Midwestern utility and worked in the Power Operations and Corporate Planning Functions. While in the Power Operations Function, I had assignments relating to the peak demand and net output forecasts and load behavior studies which included such factors as weather, conservation and seasonality. I also analyzed the cost of

Schedule 1
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replacement energy associated with forced outages of generation facilities. In the Corporate Planning Function, my assignments included developmental work on a generation expansion planning program and work on the peak demand and sales forecasts. From 1977 through 1981, I was Supervisor of the Load Forecasting Group where my responsibilities included the Company's sales and peak demand forecasts and the weather normalization of sales.

In 1981, I began consulting, and in 2000, I created the firm Competitive Energy Dynamics, L.L.C. As a part of my twenty years of consulting practice, I have participated in the analysis of various electric, gas, water, and sewer utility matters, including the analysis and preparation of cost-of-service studies and rate analyses. In addition to general rate cases, I have participated in electric fuel and gas cost reviews and planning proceedings, policy proceedings, market price surveys, generation capacity evaluations, and assorted matters related to the restructuring of the electric and gas industries. I have also assisted companies seeking locations for new manufacturing facilities.

I have testified before the state regulatory commissions of Delaware, Hawaii, Illinois, Iowa, Kansas, Massachusetts, Missouri, Montana, New Hampshire, Ohio, Pennsylvania, Tennessee, Virginia and West Virginia, and the Rate Commission of the Metropolitan St. Louis Sewer District.

**Missouri-American Water Company
Rate Comparison to Present Rates
Platte County District**

**Customer Charges
per Month**

Line No.	Size of Meter	1997 Rate (A)	Present Rate (B)	MAWC Proposed Rate			MPSC Proposed Rate		
				MAWC Proposed Rate (C)	Difference from Present Rate (D)	% Change from Present Rate (E)	MPSC Proposed Rate (F)	Difference from Present Rate (G)	% Change from Present Rate (H)
1	5/8 - inch	\$ 5.94	\$ 7.08	\$ 8.50	\$ 1.42	20%	\$ 8.78	\$ 1.70	24%
2	3/4 - inch	7.60	9.06	10.90	1.84	20%	9.13	0.07	1%
3	1 - inch	10.77	12.84	15.40	2.56	20%	9.93	(2.91)	-23%
4	1 1/2 - inch	18.73	22.33	26.80	4.47	20%	12.82	(9.51)	-43%
5	2 - inch	28.28	33.71	40.50	6.79	20%	14.65	(19.06)	-57%
6	3 - inch	50.54	60.24	72.00	11.76	20%	32.98	(27.26)	-45%
7	4 - inch	82.34	98.15	118.00	19.85	20%	45.15	(53.00)	-54%
8	6 - inch	161.85	192.93	232.00	39.07	20%	69.88	(123.05)	-64%
9	8 - inch	257.26	306.65	368.00	61.35	20%	149.70	(156.95)	-51%
10	10 - inch	416.20	520.92	625.00	104.08	20%	-	(520.92)	-100%
11	12 - inch	686.53	859.27	1,032.00	172.73	20%	-	(859.27)	-100%

**Usage Charges
Dollars per 1000 Gallons**

			1997 Rate (A)	Present Rate (B)	MAWC Proposed Rate			MPSC Proposed Rate		
					MAWC Proposed Rate (C)	Difference from Present Rate (D)	% Change from Present Rate (E)	MPSC Proposed Rate (F)	Difference from Present Rate (G)	% Change from Present Rate (H)
Residential										
12	For the first	100,000	\$ 1.9550	\$ 3.4685	\$ 3.4900	\$ 0.0215	1%	\$ 3.0918	\$ (0.3767)	-11%
13	For the next	1,900,000	1.0950	1.9430	3.4900	\$ 1.5470	80%	\$ 3.0918	\$ 1.1488	59%
14	For the next	3,000,000	0.8450	1.4995	3.4900	\$ 1.9905	133%	\$ 3.0918	\$ 1.5923	106%
15	For all over	5,000,000	0.5690	1.0098	3.4900	\$ 2.4802	246%	\$ 3.0918	\$ 2.0820	206%
Commercial										
16	For the first	100,000	\$ 1.9550	\$ 3.5187	\$ 3.4900	\$ (0.0287)	-1%	\$ 2.5693	\$ (0.9494)	-27%
17	For the next	1,900,000	1.0950	1.9712	1.7900	\$ (0.1812)	-9%	\$ 2.5693	\$ 0.5981	30%
18	For the next	3,000,000	0.8450	1.5212	1.7900	\$ 0.2688	18%	\$ 2.5693	\$ 1.0481	69%
19	For all over	5,000,000	0.5690	1.0244	1.7900	\$ 0.7656	75%	\$ 2.5693	\$ 1.5449	151%
Industrial										
20	For the first	100,000	\$ 1.9550	\$ 2.4544	\$ 2.5000	\$ 0.0456	2%	\$ 2.1381	\$ (0.3163)	-13%
21	For the next	1,900,000	1.0950	1.3749	1.5000	\$ 0.1251	9%	\$ 2.1381	\$ 0.7632	56%
22	For the next	3,000,000	0.8450	1.0611	1.5000	\$ 0.4389	41%	\$ 2.1381	\$ 1.0770	101%
23	For all over	5,000,000	0.5690	0.7145	1.3000	\$ 0.5855	82%	\$ 2.1381	\$ 1.4236	199%
Public Authority										
24	For the first	100,000	\$ 1.9550	\$ 4.0469	\$ 3.4900	\$ (0.5569)	-14%	\$ 2.6371	\$ (1.4098)	-35%
25	For the next	1,900,000	1.0950	2.2671	1.7900	\$ (0.4771)	-21%	\$ 2.6371	\$ 0.3700	16%
26	For the next	3,000,000	0.8450	1.7495	1.7900	\$ 0.0405	2%	\$ 2.6371	\$ 0.8876	51%
27	For all over	5,000,000	0.5690	1.1782	1.7900	\$ 0.6118	52%	\$ 2.6371	\$ 1.4589	124%
Sale for Resale										
28	For the first	100,000	\$ 1.9550	\$ 5.2769	\$ 3.4900	\$ (1.7869)	-34%	\$ 2.4996	\$ (2.7773)	-53%
29	For the next	1,900,000	1.0950	2.9561	2.8000	\$ (0.1561)	-5%	\$ 2.4996	\$ (0.4565)	-15%
30	For the next	3,000,000	0.8450	2.2813	1.7900	\$ (0.4913)	-22%	\$ 2.4996	\$ 0.2183	10%
31	For all over	5,000,000	0.5690	1.5362	1.5000	(0.0362)	-2%	\$ 2.4996	\$ 0.9634	63%

**Missouri-American Water Company
Rate Comparison to Present Rates
St. Joseph District**

**Customer Charges
per Month**

Line No.	Size of Meter	1997 Rate (A)	Present Rate (B)	MAWC Proposed Rate			MPSC Proposed Rate		
				MAWC Proposed Rate (C)	Difference from Present Rate (D)	% Change from Present Rate (E)	MPSC Proposed Rate (F)	Difference from Present Rate (G)	% Change from Present Rate (H)
1	5/8 - inch	\$ 5.94	\$ 7.08	\$ 8.50	\$ 1.42	20%	\$ 7.89	\$ 0.81	11%
2	3/4 - inch	7.60	9.06	10.90	1.84	20%	8.60	(0.46)	-5%
3	1 - inch	10.77	12.84	15.40	2.56	20%	9.73	(3.11)	-24%
4	1 1/2 - inch	18.73	22.33	26.80	4.47	20%	14.45	(7.88)	-35%
5	2 - inch	28.28	33.71	40.50	6.79	20%	16.86	(16.85)	-50%
6	3 - inch	50.54	60.24	72.00	11.76	20%	52.28	(7.96)	-13%
7	4 - inch	82.34	98.15	118.00	19.85	20%	76.72	(21.43)	-22%
8	6 - inch	161.85	192.93	232.00	39.07	20%	123.28	(69.65)	-36%
9	8 - inch	257.26	306.65	368.00	61.35	20%	278.38	(28.27)	-9%
10	10 - inch	416.20	520.92	625.00	104.08	20%	-	(520.92)	-100%
11	12 - inch	686.53	859.27	1,032.00	172.73	20%	-	(859.27)	-100%

**Usage Charges
Dollars per 1000 Gallons**

			1997 Rate (A)	Present Rate (B)	MAWC Proposed Rate			MPSC Proposed Rate		
					MAWC Proposed Rate (C)	Difference from Present Rate (D)	% Change from Present Rate (E)	MPSC Proposed Rate (F)	Difference from Present Rate (G)	% Change from Present Rate (H)
Residential										
12	For the first	100,000	\$ 1.9550	\$ 2.8793	\$ 3.1200	\$ 0.2407	8%	\$ 2.8887	\$ 0.0094	0%
13	For the next	1,900,000	1.0950	1.6131	3.1200	\$ 1.5069	93%	2.8887	\$ 1.2756	79%
14	For the next	3,000,000	0.8450	1.2448	3.1200	\$ 1.8752	151%	2.8887	\$ 1.6439	132%
15	For all over	5,000,000	0.5690	0.8383	3.1200	\$ 2.2817	272%	2.8887	\$ 2.0504	245%
Commercial										
16	For the first	100,000	\$ 1.9550	\$ 3.3757	\$ 3.1200	\$ (0.2557)	-8%	\$ 2.4299	\$ (0.9458)	-28%
17	For the next	1,900,000	1.0950	1.8911	2.7240	\$ 0.8329	44%	2.4299	\$ 0.5388	28%
18	For the next	3,000,000	0.8450	1.4595	2.4000	\$ 0.9405	64%	2.4299	\$ 0.9704	66%
19	For all over	5,000,000	0.5690	0.9828	2.4000	\$ 1.4172	144%	2.4299	\$ 1.4471	147%
Industrial										
20	For the first	100,000	\$ 1.9550	\$ 5.4203	\$ 4.7900	\$ (0.6303)	-12%	\$ 2.2521	\$ (3.1682)	-58%
21	For the next	1,900,000	1.0950	3.0364	3.1500	\$ 0.1136	4%	2.2521	\$ (0.7843)	-26%
22	For the next	3,000,000	0.8450	2.3433	2.4500	\$ 0.1067	5%	2.2521	\$ (0.0912)	-4%
23	For all over	5,000,000	0.5690	1.5780	1.7000	\$ 0.1220	8%	2.2521	\$ 0.6741	43%
Public Authority										
24	For the first	100,000	\$ 1.9550	\$ 3.9599	\$ 3.1200	\$ (0.8399)	-21%	\$ 2.3212	\$ (1.6387)	-41%
25	For the next	1,900,000	1.0950	2.2184	3.1200	\$ 0.9016	41%	2.3212	\$ 0.1028	5%
26	For the next	3,000,000	0.8450	1.7120	2.8800	\$ 1.1680	68%	2.3212	\$ 0.6092	36%
27	For all over	5,000,000	0.5690	1.1528	2.0700	\$ 0.9172	80%	2.3212	\$ 1.1684	101%
Sale for Resale										
28	For the first	100,000	\$ 1.9550	\$ 6.6267	\$ 3.1200	\$ (3.5067)	-53%	\$ 2.3350	\$ (4.2917)	-65%
29	For the next	1,900,000	1.0950	3.7123	3.1200	\$ (0.5923)	-16%	2.3350	\$ (1.3773)	-37%
30	For the next	3,000,000	0.8450	2.8649	2.8800	\$ 0.0151	1%	2.3350	\$ (0.5299)	-18%
31	For all over	5,000,000	0.5690	1.9292	2.0700	\$ 0.1408	7%	2.3350	\$ 0.4058	21%

**Missouri-American Water Company
Rate Comparison to 1997 Rates
Platte County District**

**Customer Charges
per Month**

Line No.	Size of Meter	1997 Rate			Present Rate			MAWC Proposed Rate			MPSC Proposed Rate		
		1997 Rate	Difference	% Change	Present Rate	Difference	% Change	MAWC	Difference	% Change	MPSC	Difference	% Change
		from 1997	from 1997	from 1997	from 1997	from 1997	from 1997	Proposed Rate	from 1997	from 1997	Proposed Rate	from 1997	from 1997
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
1	5/8 - inch	\$ 5.94	\$ -	0%	\$ 7.08	\$ 1.14	19%	\$ 8.50	\$ 2.56	43%	\$ 8.78	\$ 2.84	48%
2	3/4 - inch	7.60	-	0%	9.06	1.46	19%	10.90	3.30	43%	9.13	1.53	20%
3	1 - inch	10.77	-	0%	12.84	2.07	19%	15.40	4.63	43%	9.93	(0.84)	-8%
4	1 1/2 - inch	18.73	-	0%	22.33	3.60	19%	26.80	8.07	43%	12.82	(5.91)	-32%
5	2 - inch	28.28	-	0%	33.71	5.43	19%	40.50	12.22	43%	14.65	(13.63)	-48%
6	3 - inch	50.54	-	0%	60.24	9.70	19%	72.00	21.46	42%	32.98	(17.56)	-35%
7	4 - inch	82.34	-	0%	98.15	15.81	19%	118.00	35.66	43%	45.15	(37.19)	-45%
8	6 - inch	161.85	-	0%	192.93	31.08	19%	232.00	70.15	43%	69.88	(91.97)	-57%
9	8 - inch	257.26	-	0%	306.65	49.39	19%	368.00	110.74	43%	149.70	(107.56)	-42%
10	10 - inch	416.20	-	0%	520.92	104.72	25%	625.00	208.80	50%	-	(416.20)	-100%
11	12 - inch	686.53	-	0%	859.27	172.74	25%	1,032.00	345.47	50%	-	(686.53)	-100%

**Usage Charges
Dollars per 1000 Gallons**

		1997 Rate			Present Rate			MAWC Proposed Rate			MPSC Proposed Rate		
		1997 Rate	Difference	% Change	Present Rate	Difference	% Change	MAWC	Difference	% Change	MPSC	Difference	% Change
		from 1997	from 1997	from 1997	from 1997	from 1997	from 1997	Proposed Rate	from 1997	from 1997	Proposed Rate	from 1997	from 1997
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
Residential													
12	For the first 100,000	\$ 1.9550	\$ -	0%	\$ 3.4685	\$ 1.5135	77%	\$ 3.4900	\$ 1.5350	79%	\$ 3.0918	\$ 1.1368	58%
13	For the next 1,900,000	1.0950	-	0%	1.9430	0.8480	77%	3.4900	2.3950	219%	\$ 3.0918	1.9968	182%
14	For the next 3,000,000	0.8450	-	0%	1.4995	0.6545	77%	3.4900	2.6450	313%	\$ 3.0918	2.2468	266%
15	For all over 5,000,000	0.5690	-	0%	1.0098	0.4408	77%	3.4900	2.9210	513%	\$ 3.0918	2.5228	443%
Commercial													
16	For the first 100,000	\$ 1.9550	\$ -	0%	\$ 3.5187	\$ 1.5637	80%	\$ 3.4900	\$ 1.5350	79%	\$ 2.5693	\$ 0.6143	31%
17	For the next 1,900,000	1.0950	-	0%	1.9712	0.8762	80%	1.7900	0.6950	63%	\$ 2.5693	1.4743	135%
18	For the next 3,000,000	0.8450	-	0%	1.5212	0.6762	80%	1.7900	0.9450	112%	\$ 2.5693	1.7243	204%
19	For all over 5,000,000	0.5690	-	0%	1.0244	0.4554	80%	1.7900	1.2210	215%	\$ 2.5693	2.0003	352%
Industrial													
20	For the first 100,000	\$ 1.9550	\$ -	0%	\$ 2.4544	\$ 0.4994	26%	\$ 2.5000	\$ 0.5450	28%	\$ 2.1381	\$ 0.1831	9%
21	For the next 1,900,000	1.0950	-	0%	1.3749	0.2799	26%	1.5000	0.4050	37%	\$ 2.1381	1.0431	95%
22	For the next 3,000,000	0.8450	-	0%	1.0611	0.2161	26%	1.5000	0.6550	78%	\$ 2.1381	1.2931	153%
23	For all over 5,000,000	0.5690	-	0%	0.7145	0.1455	26%	1.3000	0.7310	128%	\$ 2.1381	1.5691	276%
Public Authority													
24	For the first 100,000	\$ 1.9550	\$ -	0%	\$ 4.0469	\$ 2.0919	107%	\$ 3.4900	\$ 1.5350	79%	\$ 2.6371	\$ 0.6821	35%
25	For the next 1,900,000	1.0950	-	0%	2.2671	1.1721	107%	1.7900	0.6950	63%	\$ 2.6371	1.5421	141%
26	For the next 3,000,000	0.8450	-	0%	1.7495	0.9045	107%	1.7900	0.9450	112%	\$ 2.6371	1.7921	212%
27	For all over 5,000,000	0.5690	-	0%	1.1782	0.6092	107%	1.7900	1.2210	215%	\$ 2.6371	2.0681	363%
Sale for Resale													
28	For the first 100,000	\$ 1.9550	\$ -	0%	\$ 5.2769	\$ 3.3219	170%	\$ 3.4900	\$ 1.5350	79%	\$ 2.4996	\$ 0.5446	28%
29	For the next 1,900,000	1.0950	-	0%	2.9561	1.8611	170%	2.8000	1.7050	156%	\$ 2.4996	1.4046	128%
30	For the next 3,000,000	0.8450	-	0%	2.2813	1.4363	170%	1.7900	0.9450	112%	\$ 2.4996	1.6546	196%
31	For all over 5,000,000	0.5690	-	0%	1.5362	0.9672	170%	1.5000	0.9310	164%	\$ 2.4996	1.9306	339%

**Missouri-American Water Company
Rate Comparison to 1997 Rates
St. Joseph District**

**Customer Charges
per Month**

Line No.	Size of Meter	1997 Rate			Present Rate			MAWC Proposed Rate			MPSC Proposed Rate		
		1997 Rate	Difference	% Change	Present Rate	Difference	% Change	MAWC Proposed Rate	Difference	% Change	MPSC Proposed Rate	Difference	% Change
		from 1997	from 1997	from 1997	from 1997	from 1997	from 1997	from 1997	from 1997	from 1997	from 1997	from 1997	from 1997
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
1	5/8 - inch	\$ 5.94	\$ -	0%	\$ 7.08	\$ 1.14	19%	\$ 8.50	\$ 2.56	43%	\$ 7.89	\$ 1.95	33%
2	3/4 - inch	7.60	-	0%	9.06	1.46	19%	10.90	3.30	43%	8.60	1.00	13%
3	1 - inch	10.77	-	0%	12.84	2.07	19%	15.40	4.63	43%	9.73	(1.04)	-10%
4	1 1/2 - inch	18.73	-	0%	22.33	3.60	19%	26.80	8.07	43%	14.45	(4.28)	-23%
5	2 - inch	28.28	-	0%	33.71	5.43	19%	40.50	12.22	43%	16.86	(11.42)	-40%
6	3 - inch	50.54	-	0%	60.24	9.70	19%	72.00	21.46	42%	52.28	1.74	3%
7	4 - inch	82.34	-	0%	98.15	15.81	19%	118.00	35.66	43%	76.72	(5.62)	-7%
8	6 - inch	161.85	-	0%	192.93	31.08	19%	232.00	70.15	43%	123.28	(38.57)	-24%
9	8 - inch	257.26	-	0%	306.65	49.39	19%	368.00	110.74	43%	278.38	21.12	8%
10	10 - inch	416.20	-	0%	520.92	104.72	25%	625.00	208.80	50%	-	(416.20)	-100%
11	12 - inch	686.53	-	0%	859.27	172.74	25%	1,032.00	345.47	50%	-	(686.53)	-100%

**Usage Charges
Dollars per 1000 Gallons**

		1997 Rate			Present Rate			MAWC Proposed Rate			MPSC Proposed Rate		
		1997 Rate	Difference	% Change	Present Rate	Difference	% Change	MAWC Proposed Rate	Difference	% Change	MPSC Proposed Rate	Difference	% Change
		from 1997	from 1997	from 1997	from 1997	from 1997	from 1997	from 1997	from 1997	from 1997	from 1997	from 1997	from 1997
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
Residential													
12	For the first 100,000	\$ 1.9550	\$ -	0%	\$ 2.8793	\$ 0.9243	47%	\$ 3.1200	\$ 1.1650	60%	\$ 2.8887	\$ 0.9337	48%
13	For the next 1,900,000	1.0950	-	0%	1.6131	0.5181	47%	3.1200	2.0250	185%	2.8887	1.7937	164%
14	For the next 3,000,000	0.8450	-	0%	1.2448	0.3998	47%	3.1200	2.2750	269%	2.8887	2.0437	242%
15	For all over 5,000,000	0.5690	-	0%	0.8383	0.2693	47%	3.1200	2.5510	448%	2.8887	2.3197	408%
Commercial													
16	For the first 100,000	\$ 1.9550	\$ -	0%	\$ 3.3757	\$ 1.4207	73%	\$ 3.1200	\$ 1.1650	60%	\$ 2.4299	\$ 0.4749	24%
17	For the next 1,900,000	1.0950	-	0%	1.8911	0.7961	73%	2.7240	1.6290	149%	2.4299	1.3349	122%
18	For the next 3,000,000	0.8450	-	0%	1.4595	0.6145	73%	2.4000	1.5550	184%	2.4299	1.5849	188%
19	For all over 5,000,000	0.5690	-	0%	0.9828	0.4138	73%	2.4000	1.8310	322%	2.4299	1.8609	327%
Industrial													
20	For the first 100,000	\$ 1.9550	\$ -	0%	\$ 5.4203	\$ 3.4653	177%	\$ 4.7900	\$ 2.8350	145%	\$ 2.2521	\$ 0.2971	15%
21	For the next 1,900,000	1.0950	-	0%	3.0364	1.9414	177%	3.1500	2.0550	188%	2.2521	1.1571	106%
22	For the next 3,000,000	0.8450	-	0%	2.3433	1.4983	177%	2.4500	1.6050	190%	2.2521	1.4071	167%
23	For all over 5,000,000	0.5690	-	0%	1.5780	1.0090	177%	1.7000	1.1310	199%	2.2521	1.6831	296%
Public Authority													
24	For the first 100,000	\$ 1.9550	\$ -	0%	\$ 3.9599	\$ 2.0049	103%	\$ 3.1200	\$ 1.1650	60%	\$ 2.3212	\$ 0.3662	19%
25	For the next 1,900,000	1.0950	-	0%	2.2184	1.1234	103%	3.1200	2.0250	185%	2.3212	1.2262	112%
26	For the next 3,000,000	0.8450	-	0%	1.7120	0.8670	103%	2.8800	2.0350	241%	2.3212	1.4762	175%
27	For all over 5,000,000	0.5690	-	0%	1.1528	0.5838	103%	2.0700	1.5010	264%	2.3212	1.7522	308%
Sale for Resale													
28	For the first 100,000	\$ 1.9550	\$ -	0%	\$ 6.6267	\$ 4.6717	239%	\$ 3.1200	\$ 1.1650	60%	\$ 2.3350	\$ 0.3800	19%
29	For the next 1,900,000	1.0950	-	0%	3.7123	2.6173	239%	3.1200	2.0250	185%	2.3350	1.2400	113%
30	For the next 3,000,000	0.8450	-	0%	2.8649	2.0199	239%	2.8800	2.0350	241%	2.3350	1.4900	176%
31	For all over 5,000,000	0.5690	-	0%	1.9292	1.3602	239%	2.0700	1.5010	264%	2.3350	1.7660	310%