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AGDOZ

Rate Design Donald Johnstone Rebuttal Testimony AGP WR-2011-0337 January 19, 2012

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### Missouri American Water Company WR-2011-0337

**Rebuttal Testimony of** 

**Donald E. Johnstone** 

on behalf of

AG PROCESSING INC, A COOPERATIVE

January, 2012



<u>PGP</u> Exhibit No. 2 Date 2-21-12 Reporter File NOWR-2011-033

#### **BEFORE THE**

#### PUBLIC SERVICE COMMISSION OF MISSOURI

In the Matter of Missouri-American Water Company's Request for Authority to Implement a General Rate Increase for Water Service Provided in Missouri Service Areas

WR-2011-0337

### Affidavit of Donald E. Johnstone

State of Missouri SS County of  $\mathfrak{S}$ 

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 384 Black Hawk Drive, Lake Ozark, MO 65049. I have been retained by AG PROCESSING INC, A COOPERATIVE.

2. Attached hereto and made a part hereof for all purposes are my testimony and schedules in written form for introduction into evidence in the above captioned proceeding.

3. I hereby swear and affirm that my testimony is true and correct and show the matters and things they purport to show.

Donald E. Johnstone

Subscribed and sworn to this 19<sup>th</sup> day of January, 2012.

Notary Public

AMANDA WILTSHIRE Notary Public - Notary Seal STATE OF MISSOURI St. Charles County Commission Expires: July 23, 2012 M٧ Commission # 086056

Competitive Energy DYNAMICS

## Missouri American Water Company

## WR-2011-0337

## Rebuttal Testimony of Donald E. Johnstone

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Competitive Energy
DYNAMICS

1	Missouri American Water Company										
2	WR-2011-0337										
3	Rebuttal Testimony of Donald E. Johnstone										
4	<u>INTR</u>	ODUCTION									
5	Q	Q PLEASE STATE YOUR NAME AND ADDRESS.									
6	A	Donald E. Johnstone. My address is 384 Black Hawk Drive, Lake Ozark, MO 65049.									
7	0	ARE VOLLTHE CAME DONALD JOUNGTONE THAT CURMITTED DIRECT TECTMONY IN									
/	ų	THE PROCEEDINGS									
8		THIS PROCEEDING?									
9	A	I previously submitted rate design direct testimony in this docket.									
10	Q	PLEASE PROVIDE AN OVERVIEW OF YOUR TESTIMONY.									
11	А	As explained in my earlier testimony, the rates for MAWC water service in each district									
12		should reflect the cost of the water services provided in each district for each rate									
13		class, for the reasons set forth in that testimony. In this testimony I respond to Staff's									
14		proposal to create what are characterized as "hybrid" districts.									
15		Silence in this testimony should not be construed as agreement with or support									
16		for any issues not addressed.									
17		For the purpose of illustration I cite the district-specific revenue requirements									
18		prepared by Staff at its mid-level return. This is not intended as support for this									
19		result. My client reserves the right to assert a position on revenue requirements									
20		matters in due course.									

1 Q PLEASE SUMMARIZE THE STAFF'S PROPOSED VARIATION FROM DISTRICT-SPECIFIC 2 PRICING.

3 Staff proposes to consolidate districts into what it calls "hybrid" districts. In reality 4 what is accomplished is an averaging of the costs over the several districts comprising 5 each of the Staff's hybrid districts. The combinations appear to be based roughly on 6 geography. If the proposed combinations were based on similar circumstances and 7 similar costs, the existing rates would already be similar for each existing district 8 within each hybrid grouping. That is not the case.

9 The districts proposed for combination have existing rates that are widely 10 divergent. For example, Staff would combine the St. Joseph District, one of the lower 11 cost districts, with two higher cost districts, Brunswick and Parkville. The average 12 present residential revenue per 1000 gallons for Parkville is 36% higher than in the St. 13 Joseph District. Brunswick is 188% higher. While this illustrates the vast disparity 14 among the districts at present rates, the disparity would be larger yet if Brunswick was 15 paying its cost of service as measured by the Staff's district-specific revenue 16 requirements. Also, wide variations in the underlying costs for the St. Joseph, 17 Parkville, and Brunswick districts are documented in Schedules BAM DIR 3, 4, and 5 18 attached to the direct testimony of OPC witness Meisenheimer. The costs are 19 substantially lower in the St. Joseph District as compared to the costs in the other two 20 districts. One important result of Staff's hybrid combination of dissimilar districts is 21 the creation of inter-district subsidies. In this example, the burden would be on the 22 St. Joseph District.

## 1 SUMMARY OF TESTIMONY AND RECOMMENDATIONS

2	Q	GIVEN THE STAFF'S PROPOSAL FOR HYBRID DISTRICT PRICING, WOULD YOU PLEASE
3		PROVIDE A SUMMARY OF YOUR TESTIMONY AND RECOMMENDATIONS?
4 5 7 8 9	A	• Staff proposes to combine high and low cost districts without regard for the wide variations in costs. I oppose Staff's proposal because it creates large subsidies and the advantage of below-cost rates for select customers based on location. At the same time, there would be large subsidies provided by the lower-cost districts, thereby creating disadvantages based on location.
10		• The cost of the services provided should be the primary determinant of rates.
11 12 13 14 15 16 17		• As an alternative to the Staff proposal, the seven largest districts should continue to pay rates based on the cost of providing services in each district. The smaller districts could be combined into a hybrid district with four rate levels. The four rate levels provide a mechanism for combining the smaller districts into groups with similar costs and a combined "hybrid" rate level. Under this form of consolidation, the equity of cost-based rates is preserved to the extent possible.
18 19 20 21		• The increase in revenue requirements for the small districts taken as a group (the hybrid district) is 80% at the Staff mid-level return. Given such a large increase, I suggest a phase-in. The purpose is simply to mitigate the impact of such a large increase.
22 23 24 25 26		• A case can be made for MAWC to simply forego the revenues not collected in year one of the phase-in. MAWC appears to have embarked on system expansion without regard to its ability to collect revenues from the customers for whom the costs are being incurred. Thus they may be culpable for the problem.
27 28 29 30 31 32		• Another alternative is to collect the revenues forgone in year one of the phase- in over a three-year amortization. However, given the role of MAWC in creating the problem, as it made acquisitions in pursuit of growth, it is unreasonable to saddle existing customers with subsidies to accommodate MAWC growth by acquisition. The growth was pursued with apparent disregard for the impacts of the ensuing cost-based rates on customers.
33 34 35 36 37 38		• So long as the district-specific cost-based rates are continued for the larger districts, explicitly including the St. Joseph District, my clients are not opposed to just and reasonable rates that may be created by consolidating some or all of the other districts that have similar costs and rates. The key is to design rates that are reasonably cost-based for all of the customers that would be a part of any limited rate consolidation.

#### 1 COMPARATIVE ANALYSIS OF THE HYBRID DISTRICTS SUGGESTED BY STAFF

## 2 Q FIRST, ARE THERE REASONS FOR THE DIFFERENCES IN COST AMONG THE EXISTING 3 DISTRICTS?

4 A Yes. Many factors can influence costs. Some of the important considerations are the
5 source of water/cost of treatment, the soil, topography, the amount capacity/excess
6 capacity, and the size of the district. These considerations result in varying amounts
7 of investment and expense to provide service. The wide variations in revenues per
8 gallon delivered provide evidence of the combined effects of these factors.

9 Q DID STAFF PROVIDE AN ANALYSIS IN AN ATTEMPT TO QUANTITATIVELY
 10 DEMONSTRATE THAT SOME OR ALL OF THESE IMPORTANT CHARACTERISTICS ARE
 11 SIMILAR FOR THE DISTRICTS THAT COMPRISE THEIR SUGGESTED HYBRID DISTRICTS?
 12 A Apparently not. I saw nothing quantitative in the Staff testimony.

#### 13 Q HOW DO THE RESIDENTIAL RATES COMPARE AMONG THE DISTRICTS?

14 A To assess the relative residential rate levels I computed the average rate revenue per 15 1000 gallons for each district. Updated Schedule 3 page 2 in my direct testimony 16 provides the average residential rate revenue per 1000 gallons for each district under 17 present rates. There is a wide range with St. Louis Metro on the low end and 18 Brunswick on the high end.

Rebuttal Schedule 1 shows similar figures assuming the mid-level increase
 proposed by Staff is approved. Within each of Staff's suggested hybrid districts the
 variation from low to high is over four to one.

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## 1QWOULD THERE BE SIGNIFICANT SUBSIDIES FLOWING AMONG THE DISTRICTS2COMPRISING EACH OF STAFF'S SUGGESTED HYBRID DISTRICTS?

A Yes. Since districts with widely divergent costs would be combined, the lower cost
districts would subsidize the higher cost districts. This would create a burden for the
lower cost districts that would be a disadvantage based on location. Conversely,
districts with higher costs would enjoy rates at a deep discount compared to costs.
This would provide the relative advantage of subsidized below-cost rates based on
location.

#### 9 COST-BASED DISTRICT CONSOLIDATION

#### 10 Q CAN YOU SUGGEST AN ALTERNATIVE TO STAFF'S CONSOLIDATION OF DISTRICTS?

As explained in my direct testimony, rates should primarily reflect costs and any variations should be limited. I recommended cost-based district-specific prices. However, I also explained that limited variations are sometimes warranted for practical considerations, although that does not detract from the importance of a policy in support of cost-based rates for each district. Of course, one would expect some evidence of a practical necessity to vary from cost-based rates and essentially none has been offered.

Given these considerations, I have prepared an alternative hybrid rate consolidation recommendation. As a starting point I recommend the continuation of district-specific rates for the seven largest districts. I recommend the consolidation of the remaining districts, each of which is much smaller, into a consolidated hybrid district with 4 rate levels.

23The overall cost-based increase for the consolidated hybrid district (again24assuming Staff's mid-level return for illustration) would be 80%. Given such a sizeable

increase on top of the changes engendered by the consolidation, and also on top of
rates that in several districts that are already relatively high, I recommend a phase-in
to the higher rate level.

## 4 Q PLEASE EXPLAIN HOW YOU DEVELOPED THE FOUR RATE LEVELS WITHIN THE 5 HYBRID DISTRICT.

A I combined the districts based on present and proposed revenue per 1000 gallons,
according to the Staff's present revenues, usage, and required revenues at Staff's midlevel return. Each rate level is developed by combining the candidate small districts
that are close to one another in unit costs. While there are many sources of cost
variations, the focus on the average unit costs of the districts leads to combinations
where the net impact of the cost variations on rates is less.

#### 12 Q PLEASE EXPLAIN HOW THE PHASE-IN TO COST-BASED PRICE LEVELS IS STRUCTURED.

- A Given the 80% overall increase for the hybrid district under the Staff case, I structured
   a two step phase-in. While the increases vary because the costs vary, the increase for
   the districts at each price level has a first-year increase that is roughly one half of the
   cost-based total increase.
- For the second year my goal was to achieve rate levels consistent with the
  underlying costs. Also, I amortized the first-year reduction from cost over three years
  and added that to the second-year cost levels.

## 20 Q DOES YOUR RECOMMENDATION ACHIEVE THE GOAL OF A COST-BASED RATE LEVEL 21 IN YEAR TWO?

22 A Not entirely. In consideration of impact and the relatively high rates in the Brunswick

Page 6

district, I limited the total increase in the level 4 rate to a level designed to produce a
 cumulative increase of 37% for Brunswick customers.

# 3QWHAT IS THE VARIATION BETWEEN THE REVENUE REQUIREMENT AND REVENUES4PRODUCED UNDER YEAR 1 OF THE PHASE-IN?

5 A It is \$762,000. This is the sum of the shortfalls at each of the four rate levels in the
6 hybrid district.

#### 7 Q WHAT SHOULD BE DONE TO ADDRESS THE SHORTFALL?

8 Α There are several possibilities. First, one could reach the conclusion that MAWC 9 should have the burden. It has provided no evidence that it ever considered whether 10 or not it would be able to increase rates to the newly acquired customers in a manner 11 that would provide cost recovery. In fact, it did not answer the specific question 12 posed in a data request as to whether or not it assumed it would recover the costs 13 incurred on behalf of these customers from the customers. Instead, it simply stated 14 that it expected to recover the costs. That is a dubious assumption in consideration of 15 the district-specific pricing that has been the norm. Nevertheless, since that is its 16 choice, MAWC should bear the consequences if management incorrectly assumed that 17 existing customers could be called upon to subsidize its system expansion.

Another possibility is that an accommodation might be worked in a settlement.
While there have been settlements in the past, that result is unpredictable.

20 **Q** 

## WHAT IS THE SHORTFALL IN SUBSEQUENT YEARS GIVEN THAT THE LEVEL 4 RATE IS

## 21 CAPPED AT A LEVEL BELOW THE COST OF SERVICE?

22 A It is approximately zero. The extra revenues provided by the 3-year amortization of

the year one shortfall are sufficient to offset the subsidy to the customers that would
be served at level 4 prices in the hybrid district. Of course, the revenues cannot be
counted both as an amortization of the year 1 phase in and also as funds to offset to
Brunswick. There is a shortfall due to the ongoing subsidy of price level 4.

#### 5 RATE CHANGES FOR CUSTOMERS IN THE HYBRID DISTRICT

#### 6 Q PLEASE PROVIDE THE DETAILS OF THE RATE CHANGES YOU RECOMMEND.

7 A The details are set forth on Rebuttal Schedule 1. The district-specific cost-based
8 increases for the 7 largest districts are shown on lines 1 through 7, assuming for
9 illustration the Staff revenue requirements at the mid-level return.

10 The consolidated price levels in the hybrid district are shown on lines 9 through 11 36 along with the current and proposed average revenues per 1000 gallons and the 12 increases.

## 13 Q WHAT ARE THE INCREASES YOU PROPOSE UNDER THE PHASE-IN FOR THE HYBRID 14 DISTRICT?

15 A The average increase for customers at the level 1 rate is 25.0% for year 1 and 42.7% 16 for year 2. Since the consolidation to a single level 1 price occurs in year 1, there is a 17 range of increases. The lowest is 16.1% for the Roark customers and the highest is 18 44.0% for the Loma Linda customers. In year 2 all receive the same 42.7% increase.

19The average increase for customers at the level 2 rate is 32.7% for year 1 and2045.3% for year 2. The lowest Year 1 increase is 7.0% for the Lake Taneycomo21customers and the highest is 46% for the Riverside Estates customers. In year 2 all22receive the same 45.3% increase.

23

The average increase for customers at the level 3 rate is 26.1% for year 1 and

22.6% for year 2. The lowest Year 1 increase is 0.1% for the Spring Valley customers
 and the highest is 31.0% for the Warren County customers. In year 2 all receive the
 same 22.6% increase.

The average increase for customers at the level 4 rate is 16.5% for year 1 and 36.3% for year 2. The lowest Year 1 increase is 0.5% for the Brunswick customers and the highest is 37.0% for the Ozark Mountain customers. In year 2 all receive the same 36.3% increase.

8 CONCLUSIONS

9 Q PLEASE SUMMARIZE YOUR CONCLUSIONS.

A Simply put, the rates among and within the districts must reflect the cost of services
 provided. My primary recommendation continues to be cost-based district-specific
 prices.

The hybrid districts proposed by Staff combine districts that have widely disparate costs. The wide disparities create inappropriate subsidies. Instead, districtspecific prices should be continued for the large districts while smaller districts may be consolidated according to their cost levels. This will substantially reduce the number of districts while preserving a better cost basis for each of the rates. Also, the inter-district subsidies are minimized with the better cost basis.

In consideration of the large increases for the smaller districts, I recommend a
 two-step phase-in of the higher rates for customers in the hybrid district. Since MAWC
 bears the responsibility for providing the services at costs consistent with just and
 reasonable rates, it may be appropriate for them to absorb the shortfall in the first
 year. Once that is accommodated, the amortization of the year one revenues forgone

1 is sufficient to fund the ongoing subsidy for three years. By that time there will need

.

2 to be another rate case to address rate levels post phase-in.

## 3 Q DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?

4 A Yes it does.

#### Missouri American Water Company Missouri PSC Docket No. WR-2011-0337

## District Specific Pricing for Large Districts and Hybrid Consolidation of Small District and Rate Phase In

	Residential													
		Limit/		R	ate Revenue		Present	COS	COS	Rate	Year 1 In	icreases	Year 2 li	ncreases
Line	Water District / Existing District	Spread Factors	Staff Present Rate Revenue	Assuming Staff Middle Return		Usage (1000 Gallons)	Revenue per 1000 Gal	Percent	Revenue per 1000 Gal	Revenue per 1000 Gal	Amount per 1000 Gal	Percent	Arnount per 1000 Gal	Percent
	(A)	(B)	(C)		(D)	(E)	(F)	(G)	(H)	(1)	(J)	(K)	(L)	(M)
1	St. Louis Metro		\$ 116.663.161	\$	122.316.973	29,709,995	\$3.93	4.8%	\$4.12		\$0.19	4.8%		
2	St. Joseph		\$ 10,187,047	ŝ	11,451,057	1,618,976	\$6.29	12.4%	\$7.07		\$0.78	12.4%		
3	Joplin		\$ 9,581,409	\$	10,388,514	1,305,210	\$7.34	8.4%	\$7.96		\$0.62	8.4%		
4	Jefferson City		\$ 3,132,723	\$	4,539,079	478,852	\$6.54	44.9%	\$9.48		\$2.94	44.9%		
5	Parkville		\$ 3,581,300	\$	4,163,854	417,584	\$8.58	16.3%	\$9.97		\$1.40	16.3%		
6	Mexico		\$ 1,747,507	\$	2,107,452	209,763	\$8.33	20.6%	\$10.05		\$1.72	20.6%		
7	Warrensburg		\$ 2,004,091	\$	2,107,381	347,320	\$5.77	5.2%	\$6.07		\$0.30	5.2%		
8	Subtotal Large Districts		\$ 146,897,238	\$	157,074,310	34,087,699	\$4.31	6.9%	\$4.61		\$0.30	6.9%		
	Consolidated Hybrid District													
9	Loma Linda	44.0%	\$ 94,591	\$	131,584	26,355	\$3.59	39.1%	\$4.99		\$1.58	44.0%		
10	Roark		\$ 165,056	\$	254,123	37,076	\$4.45	54.0%	\$6.85		\$0.72	16.1%		
11	Maplewood Lake Carmel		\$ 91,300	\$	193,771	21,479	\$4,25	112.2%	\$9.02		\$0.92	21.6%		
12	Subtotal Group 1		\$ 350,947	_	579,479	84,910	\$4.13	65.1%	\$6.82					
13	Adjustment		·	14	(140,641)	•								
14	Hybrid District Level 1 Year 1				438.838		\$0.66			\$5.17	\$1.04	25.0%		
15	Hybrid District Level 1 Year 2	33.3%			626,359		•			\$7.38	•		\$2.21	42.7%
16	Riverside Estates	46.0%	\$ 112,757	\$	207,642	16,401	\$6.88	84.1%	\$12.66		\$3.16	46.0%		
17	Lake Taneycomo		\$ 58,363	ŝ	96,490	6,219	\$9.38	65.3%	\$15.52		\$0.65	7.0%		
18 19	Subtotal Group 2		171,120		304,132	22,620	\$7.57	77.7%	\$13.45					
20	Hybrid District Level 2 Year 1				227 648		\$2.51			\$10.04	\$2 47	32 72		
21	Hybrid District Level 2 Year 2	33.3%			329,827		\$6.90			\$14.58	<i></i>	51.175	\$4.54	45.3%
22	Warren County	21.0%	\$ 330.754	٤	496 005	29.611	\$11 17	50.0%	\$16.75		\$3.46	31.0%		
23	Spring Valley	0.1%	67,189		83,533	4.253	\$14.62	34.3%	\$19.64		\$0.01	0.1%		
24	Subtotal Group 3	0.110	\$ 397,943	Ś	579,538	33,864	\$11.60	47.5%	\$17.11		20101	0.117		
25	Adjustment		• • • • • • • • • •	ŝ	(84.019)	,			•					
26	Hybrid District Level 3 Year 1			Ś	495.519		\$3.45			\$14.63	\$3.03	26.1%		
27	Hybrid District Level 3 Year 2	33.3%		\$	607,544		\$4.04			\$17.94	••••		\$3.31	22.6%
28	Ozark Mountain	37.0%	\$ 197,218	\$	372,999	14.412	\$13.34	94.0%	\$25.88		\$4.93	37.0%		
29	Lakewood Manor		\$ 23.063	Š	50,458	1,448	\$15.92	118.8%	\$34.83		\$2.35	14.8%		
30	Brunswick		\$ 243,464	Ś	571,551	13,396	\$18.17	134.8%	\$42.67		\$0.10	0.5%		
31	Subtotal Group 4		<u>د 458 745</u>	Ś	995.008	29,257	\$15.68	116.9%	\$34.01					
32	Adjustment		¢,,	ŝ	(460,432)									
33	Hybrid District Level 4 Year 1			Ś	534.576		\$4.84			\$18,27	\$2.59	16.5%		
34	Hybrid District Level 4 Year 2			Ś	728,459		\$4.08			\$24.90	-		\$6.63	36.3%
35	Adjustment Year 2			\$	(266,549)									
36	Brunswick/Level 4 Cap	37.0%					\$18.17							
38	White Branch Water		\$ 83,189	\$	125,702	•		51.1%	•			51.1%		
39	Rankin Acres		\$ 51,683	\$	69,452	-		34.4%	-			34.4%		
40	Subtotal Group Unmetered		\$ 134,872	\$	195,154									
41	Hybrid District Total		\$ 1,508,627	\$	2,653,311									
42	Year 1 Adjustment Total			\$	(762,176)									
43	Hybrid District Year 1 Revenue			\$	1,891,135									
44	Year 2 Adjustment Total			\$	(12,491)									
45	Hybrid District Year 2 Revenue			\$	2,640,820									
AK	Total Revenue Remiromost		\$ 148 ADS 845	¢	159 777 471	7 678								
40	Year 1 Revenue		\$ 140,403,003	₹ ¢	158.965 445	7.17%								
48	Year 2 Revenue			ć	159.715 130	7.67%								
				4										