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Report
Rate Design
Witness: James A. Busch
Sponsoring Party: MO PSC Staff
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MISSOURI PUBLIC SERVICE COMMISSION

**TARIFF, SAFETY, ECONOMIC, AND
ENGINEERING ANALYSIS
DEPARTMENT**

REGULATORY REVIEW DIVISION

DIRECT TESTIMONY

OF

JAMES A. BUSCH

MISSOURI-AMERICAN WATER COMPANY

CASE NO. WR-2011-0337

*Jefferson City, Missouri
December 2011*

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

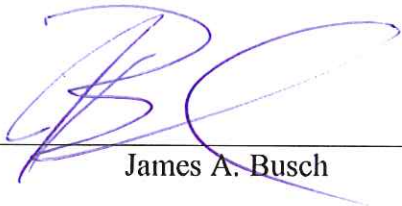
In the Matter of Missouri-American Water)
Company's Request for Authority to)
Implement A General Rate Increase for)
Water and Sewer Service Provided in)
Missouri Service Areas)

Case No. WR-2011-0337

AFFIDAVIT OF JAMES A. BUSCH

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

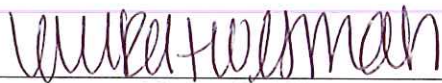
James A. Busch, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form, consisting of 12 pages to be presented in the above case; that the answers in the foregoing Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.



James A. Busch

Subscribed and sworn to before me this 9th day of December, 2011.

LAURA HOLSMAN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: June 21, 2015
Commission Number: 11203914



Notary Public

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DIRECT TESTIMONY

OF

JAMES A. BUSCH

MISSOURI-AMERICAN WATER COMPANY

CASE NO. WR-2011-0337

13 Q. Please state your name and business address.

14 A. My name is James A. Busch and my business address is P. O. Box 360,
15 Jefferson City, Missouri 65102.

16 Q. By whom are you employed and in what capacity?

17 A. I am the Regulatory Manager of the Water and Sewer Unit, Regulatory Review
18 Division of the Missouri Public Service Commission (Commission).

19 Q. Are you the same James A. Busch that sponsored the Rate Design portion of
20 Staff's *Report on Cost of Service* that was previously filed in this matter?

21 A. Yes I am.

22 Q. Have your educational background and work experience already been
23 discussed in this matter?

24 A. Yes. My credentials are listed in Appendix 1 of Staff's *Report on Cost of
25 Service*.

26 Q. Have you previously filed testimony before the Commission?

27 A. Yes. The cases in which I have filed testimony before the Commission are
28 listed in Appendix 1 of Staff's *Report on Cost of Service*.

Q. Did you prepare the class cost of service study (CCOS)?

1 A. No. However, I am a case coordinator for this case and the Manager of the
2 Water and Sewer Unit for the Tariff, Safety, Economic and Engineering Analysis Department
3 in this proceeding. The CCOS study was prepared under my direct supervision in those
4 capacities. Staff expert James M. Russo performed the CCOS study and will be sponsoring
5 the study.

6 **I. EXECUTIVE SUMMARY**

7 Q. What is the purpose of your direct testimony?

8 A. The purpose of my direct testimony is to sponsor Staff's *Report on Class Cost*
9 *of Service and Rate Design (Report)*. The Report will describe in greater detail Staff's
10 position relating to the development of Staff's CCOS study and is being filed concurrently
11 with this testimony. Also, this testimony will provide the support and justification for Staff's
12 rate design proposal regarding district pricing.

13 **II. CLASS COST OF SERVICE**

14 Q. What is the general purpose of a CCOS study?

15 A. The general purpose of a CCOS study is to determine a measure of relative
16 class cost responsibility for the overall revenue requirement of a utility. For any given item of
17 cost, the responsibility of a certain class of customer to pay that cost can be either directly
18 assigned or allocated to a customer class using a reasonable method for determining class
19 responsibility for that cost.

20 Q. What is the purpose of Staff's CCOS study in this proceeding?

21 A. The purpose of Staff's CCOS study is to provide the Commission a method to
22 use to ultimately determine the relative class cost responsibility for the overall revenue
23 requirement of Missouri-American Water Company (MAWC or Company).

1 Q. What method of cost allocation did Staff use in its CCOS study when direct
2 allocation was not possible?

3 A. Staff used the base-extra capacity method as described in the American Water
4 Works Association manual of water supply practices, Principles of Water Rates, Fees, and
5 Charges, Fifth Edition (AWWA M1). This is the method used by Staff and other parties in
6 previous MAWC cases and is a widely accepted method for allocating costs to the various
7 customer classes.

8 Q. What is Staff's recommendation to the Commission based on its CCOS study?

9 A. Staff recommends that the Commission utilize the results from Staff's CCOS
10 study in determining the appropriate rate design to use to collect the appropriate revenues
11 from the various customer classes and districts served by MAWC.

12 **III. RATE DESIGN**

13 Q. What is the general purpose of rate design?

14 A. The purpose of rate design is to take the results from a CCOS study and to
15 design rates for each customer class in each service territory that will give the utility an
16 opportunity to collect its Commission approved revenue requirement.

17 Q. What is the purpose of Staff's rate design proposal?

18 A. The purpose of Staff's rate design proposal is to present to the Commission a
19 method to design rates for the various customer classes receiving service in MAWC's various
20 service territories. In this proceeding, Staff is proposing a different method than it has
21 proposed in prior rate cases to design the rates that will be used to collect the appropriate
22 levels of revenue from each service territory and from each customer class. In the case of
23 MAWC, rate design is multifaceted. As discussed above, the general purpose of rate design is

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1 to develop rates for each customer class based upon an allocation of the Company's cost of
2 service. However, in MAWC's case, rates must also be developed based upon the allocation
3 of the Company's cost of service to its various service territories. This allocation is generally
4 performed prior to the allocation of the cost of service to the various classes.

5 Q. Is the allocation of costs to the various districts performed in a similar manner
6 as the allocation of costs to the customer classes?

7 A. Yes. There are costs that can be directly assigned to a particular district.
8 Examples would be costs associated with a treatment facility or costs associated with the
9 distribution system. However, there are certain corporate costs that must be allocated to all of
10 the districts. The Commission's Auditing Staff determined the appropriate manner to allocate
11 corporate costs to the various districts and between the water and sewer systems as well.

12 Q. How were rates developed in previous MAWC rate cases?

13 A. In previous rate cases, going back to MAWC's rate case in and around 2000,
14 rates were generally developed based on district-specific pricing (DSP).

15 Q. Please explain DSP.

16 A. District specific pricing takes all of the costs of providing service to each
17 individual district and develops rates based upon that district's cost of service. Thus, the rates
18 that customers in any district pay only cover costs associated with providing service to that
19 district. As mentioned earlier, certain costs can be assigned directly to each district.
20 Additionally, certain corporate costs must be allocated to each district based upon certain
21 allocation factors. These factors can include customer numbers, feet of main, etc., depending
22 upon the cost. Under DSP, the direct costs and allocated costs are put together to determine a
23 district's specific cost of service.

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1 Q. What is the primary benefit of DSP?

2 A. The primary benefit of DSP is that the cost causers pay for the costs. This is
3 commonly referred to as cost causation. What this means is that those customers (generally
4 district-wide or based on customer class) who caused the cost to occur are the customers
5 responsible for paying those costs.

6 Q. Are there other benefits to DSP?

7 A. Yes. There are several benefits to DSP. Staff provided a more thorough
8 discussion of DSP in its filings and proceedings in Case Nos. SR-2010-0023 and SW-2011-
9 0103.

10 Q. You indicated that rates were “generally developed” using a DSP pricing
11 strategy in previous cases. Please explain.

12 A. Due to certain districts having very small customer numbers and relatively
13 high cost of service, certain levels of support were built into rates of larger districts to help
14 offset the rates for the smaller districts. This was developed to help minimize rate shock and
15 to try to keep rates in smaller districts as affordable as possible. However, rates in certain
16 districts were still much higher than rates in other districts.

17 Q. Is there a different type of pricing strategy that can be used to develop rates?

18 A. Yes. The opposite method of DSP is single-tariff pricing (STP), also known as
19 consolidated-tariff pricing. In STP, all costs from the utility are combined and rates are
20 developed on a system-wide basis. Thus, residential customers in all of the utility’s service
21 territories will pay the same customer charge and commodity rate. For example, a MAWC
22 residential customer in St. Joseph will be charged the same rate as a residential customer in

1 Mexico and as a residential customer in Joplin. This is the method of rate design MAWC
2 proposed in its direct testimony in this proceeding.

3 Q. What is the primary benefit of STP?

4 A. The primary benefit of STP is that it spreads out costs to a larger customer
5 base. This helps mitigate the impact of large capital expenditures that need to be made by the
6 Company in any particular district.

7 Q. Are there other benefits of STP?

8 A. Yes. There are several benefits to STP. Staff provided a more thorough
9 discussion of STP in its filings and proceedings in Case Nos. SR-2010-0023 and SW-2011-
10 0103.

11 Q. Are DSP and STP the only two methods that can be used to develop rates?

12 A. No. DSP and STP are the two extremes on the rate design spectrum. An
13 analyst can also use a combination, or hybrid, of the two extremes to develop rates
14 appropriate to collect the revenues needed by the Company to cover its cost of service.

15 Q. What method is Staff recommending in this proceeding?

16 A. Staff is proposing a hybrid approach in this proceeding.

17 Q. Why is Staff moving away from its previous recommendations regarding DSP
18 in this current rate case?

19 A. There are many reasons why Staff is altering its approach to rate design for
20 MAWC at this time.

21 First, MAWC has increased the number of districts it provides service to over
22 the past couple of years. In the past, MAWC's operating districts included St. Louis County,
23 St. Charles, Warren County (Incline Village), Mexico, Jefferson City, Brunswick,

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1 Warrensburg, Platte County, St. Joseph, and Joplin. Since the last rate case, MAWC has
2 acquired the assets of Loma Linda Water Company (interconnected to the Joplin district),
3 Roark Water and Sewer, Inc. (Roark), and most Aqua Missouri properties. Properties
4 acquired from Aqua Missouri include several water and sewer service territories. These
5 service territories have relatively small, mainly residential customer bases. With so many
6 districts, especially many that are very small, it becomes extremely difficult to continue to
7 develop rates on a district-specific basis.

8 One reason for the difficulty in developing rates on a district-specific basis is the need
9 to allocate corporate costs to each separate service territory. Corporate costs are a substantial
10 portion of the cost of service for MAWC. Trying to determine the most equitable manner to
11 allocate those costs to each service territory is difficult, at best, when attempting to determine
12 the true cost of service to those service territories, especially when the service territories are
13 of various sizes and operating characteristics. Combining these service territories in the
14 manner as Staff proposes in this proceeding alleviates some of the need for precision.
15 Corporate costs are allocated to a larger grouping of service territories via the hybrid-district
16 in which they are assigned.

17 Second, in this proceeding, many Staff hours were devoted to the allocation and direct
18 assignment of costs to all of the districts where MAWC provides service, nearly 30 separate
19 districts. While Staff was able to adequately perform such an arduous task in this case, based
20 on Staff's proposal in this case (if the Commission approves), Staff will be able to more
21 efficiently allocate its resources to the overall audit and investigation of the Company's books
22 and records, rather than focusing resources on separating and allocating each cost to the
23 separate districts. In effect, continuing DSP would result in the Company and Staff

1 conducting approximately 30 separate rate cases during MAWC's future rate cases. Staff's
2 proposal may benefit the customers in a reduced rate case expense, as it is likely that the
3 Company will not have to allocate as many resources to future rate cases.

4 Third, as noted above, the systems that MAWC has been purchasing are mostly small
5 systems with primarily residential customer bases. In order to keep these small systems in
6 proper working order so that they can continue to provide safe, adequate, and reliable service
7 to their customers, investment is needed or will need to be made in the future. A major
8 problem facing the state of Missouri is the adequacy of the water and sewer systems providing
9 service to the citizens of the State. In some instances, the current owner of these small
10 systems does not have the ability to make the appropriate infrastructure improvements.
11 MAWC does have that ability and, as such, has acquired several of these assets. When
12 improvements need to be made, the higher cost of upgrades must be spread over the smaller
13 customer base, which may cause rates to increase dramatically. The dramatic increases may
14 result in rate shock to the consumers.

15 One way to mitigate or offset potential rate shock from the cost of those needed
16 repairs is to spread those costs over a larger customer base. Since many of the smaller
17 systems experience little or no growth, the only way to spread the costs to a larger customer
18 base is to move away from DSP. Thus, a larger number of customers will be responsible for
19 providing the appropriate level of revenues to the Company. This helps those smaller system
20 customers.

21 Fourth, as described earlier, MAWC has been purchasing and investing in the assets of
22 small systems in Missouri. It is currently in the process of purchasing the assets of two more
23 systems (Meramec Sewer, Co., File No. SO-2012-0091 and Saddlebrooke Water and Sewer

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1 Infrastructure, LLC, File No. WA-2012-0066). Staff recognizes that MAWC is one of a few
2 entities in the state that has the capability of purchasing the assets of struggling water and
3 sewer systems and making the needed infrastructure investment to ensure the continued
4 provision of safe and adequate service. In Staff's opinion, moving away from a strict DSP
5 rate design philosophy will encourage not only MAWC, but other large water and sewer
6 utilities, to invest in Missouri. It will also ensure that safe, adequate and reliable water and
7 sewer service is available to the citizens of the State.

8 Q. What is Staff's specific rate design proposal in this proceeding?

9 A. Specifically, Staff proposes to create three hybrid-districts. The hybrid-
10 districts would be made up of the following service territories:

11 For water service:

- 12 • Water District 1 – St. Louis Metro (St. Louis County and St. Charles), Incline
13 Village (Warren County), Mexico, Jefferson City, and Lake Carmel (near
14 Jefferson City)/Maplewood (near Sedalia).
- 15 • Water District 2 – St. Joseph, Platte County, and Brunswick.
- 16 • Water District 3 – Joplin (which includes Loma Linda Water Company),
17 Roark, Warrensburg, White Branch, Lake Taneycomo, Lakewood Manor,
18 Rankin Acres, Spring Valley, and Riverside Estates.

19 For sewer service:

- 20 • Sewer District 1 – Cedar Hill and Incline Village.
- 21 • Sewer District 2 – Cole County/Callaway County, Maplewood, Laurie, and
22 Lake Carmel.
- 23 • Sewer District 3 – Platte County

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- 1 • Sewer District 4 – Roark.

2 Q. Please explain Staff’s rationale for its recommendation regarding the water
3 districts.

4 A. Staff’s rationale was to choose the combination of service territories for each
5 of the three hybrid-districts for water with respect to the basic concept of cost causation that
6 underlies DSP. Staff reviewed the operating characteristics of all of the systems and generally
7 placed each system with other systems that exhibited those similar operating characteristics
8 and are in geographic proximity. Staff grouped the systems based on operating characteristics
9 determined by source of supply (surface water, alluvial wells, or deep wells) and based on
10 geographic location. It is Staff’s opinion that these hybrid districts would exhibit the general
11 principles of cost causation as explained in more detail below.

12 For Water District 1, the two larger territories, St. Louis and Jefferson City, receive
13 their source of water supply from surface water locations. Also, MAWC’s operations
14 combine the service areas in Staff’s proposed District 1. So, these areas share many of the
15 same labor and management functions and thus share in those corporate costs.

16 For Water District 2, the three water systems all receive their source of supply from
17 alluvial wells. The Company also combines these territories in its operations and thus these
18 systems share many of the same labor and management functions.

19 For Water District 3, the systems mainly receive their source of water supply from
20 deep wells. Joplin utilizes sources of water supply from a surface water site as well as several
21 deep wells. These systems are geographically close, as well. As a result, MAWC will have
22 similar labor and management supervising these systems.

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1 Q. Please explain Staff's rationale for its recommendation regarding the sewer
2 districts.

3 A. Unlike the water systems, there is no basic rhyme or reason for one system
4 having a lagoon vs. a mechanical treatment plant. Instead, Staff tried to group these systems
5 based on geographic location. This is a reasonable approach because the workers who will be
6 responsible for any given district will generally also have responsibility for nearby systems.

7 Q. Is Staff abandoning its support of DSP in all instances?

8 A. No. As highlighted by Staff in Case Nos. SR-2010-0023 and SW-2011-0103,
9 Staff investigates each instance on a case-by-case basis and will make a recommendation that,
10 in its opinion, is best for that particular situation. Blindly adopting one pricing strategy over
11 another pricing strategy is not in the public interest. Each situation is different and conditions
12 are constantly changing which requires a vigilant review and investigation to determine the
13 best solution. Thus, it is based upon this review and investigation of the MAWC's current
14 situation that Staff proposes its hybrid-district rate design proposal for Commission approval.

15 Q. Are there any other adjustments that Staff has made to its rate design proposal?

16 A. Yes. According to Staff's cost of service calculations and subsequent rate
17 design, the customer's of MAWC's sewer systems could potentially see significant rate
18 increases in their monthly sewer charges. In order to try and mitigate the rate shock of this
19 increase, Staff is proposing a shift of revenue responsibility from the four hybrid- districts to
20 Water District 1 in the amount of \$1,833,995. This reasonable shift of revenue responsibility
21 will mitigate the potential rate shock to MAWC's sewer customers in those districts in this
22 proceeding.

1 Q. Why shift the revenue responsibility from the four sewer districts to Water
2 District 1?

3 A. The reason that Staff chose Water District 1 is because of the large number of
4 customers in that district. Staff is cognizant of the slight increase in rates to those customers
5 as a result of this shift. But Staff is of the opinion that due to the large number of customers
6 in that district, the effect to them will be negligible while the benefit to the sewer customers
7 will be significant.

8 **III. TARIFF ISSUES**

9 Q. Has MAWC proposed to change any of its miscellaneous service fees?

10 A. Yes. In its direct filing, MAWC has proposed to consolidate its miscellaneous
11 service fees. For Staff's direct filing, Staff is not proposing any changes to MAWC's
12 miscellaneous service fees. However, Staff reserves the right to make further
13 recommendations in its rebuttal testimony.

14 **IV. RECOMMENDATION**

15 Q. What is Staff's recommendation to the Commission?

16 A. Staff recommends that the Commission accept Staff's class cost of service
17 study and adopt its hybrid-district rate design recommendation of combining certain service
18 territories as outlined in this testimony.

19 Q. Does this conclude your direct testimony?

20 A. Yes.