

Exhibit No.:
Issues: Cedar Hill Treatment Plant, City of
Riverside, City of St. Joseph Issues
Witness: Kevin H. Dunn
Exhibit Type: Rebuttal
Sponsoring Party: Missouri-American Water Company
Case No.: WR-2010-0131
SR-2010-0135
Date: April 15, 2010

MISSOURI PUBLIC SERVICE COMMISSION

**CASE NO. WR-2010-0131
CASE NO. SR-2010-0135**

REBUTTAL TESTIMONY

OF

KEVIN H. DUNN

ON BEHALF OF

MISSOURI-AMERICAN WATER COMPANY

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

IN THE MATTER OF MISSOURI-AMERICAN) WATER COMPANY FOR AUTHORITY TO) FILE TARIFFS REFLECTING INCREASED) RATES FOR WATER AND SEWER) SERVICE)	CASE NO. WR-2010-0131 CASE NO. SR-2010-0135
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AFFIDAVIT OF KEVIN H. DUNN

Kevin H. Dunn, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Rebuttal Testimony of Kevin H. Dunn"; that said testimony and schedules were prepared by him and/or under his direction and supervision; that if inquires were made as to the facts in said testimony and schedules, he would respond as therein set forth; and that the aforesaid testimony and schedules are true and correct to the best of his knowledge.



Kevin H. Dunn

State of Missouri
County of St. Louis
SUBSCRIBED and sworn to
Before me this 14th day of April 2010.



Notary Public

My commission expires:



Doris K. Adams
Cole County
Commission # 06433658
My Commission Expires
May 20, 2010

**DIRECT TESTIMONY
KEVIN H. DUNN
MISSOURI-AMERICAN WATER COMPANY
CASE NO. WR.2010.0131
SR.2010.0135**

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1 **REBUTTAL TESTIMONY**

2
3 **KEVIN H. DUNN**

4
5 **WITNESS INTRODUCTION AND PURPOSE**

6
7 **Q. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.**

8 A. My name is Kevin H. Dunn, my title is Director Engineering for American
9 Water, and my business address is 727 Craig Road, St. Louis, Missouri
10 63141.

11
12 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN THIS**
13 **PROCEEDING?**

14 A. Yes, I have submitted direct testimony in this proceeding.
15

16 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

17 A. The purpose of my rebuttal testimony is to discuss on behalf of Missouri-
18 American Water Company (MAWC or Company) the issue of the Cedar Hill
19 Plant Capacity Adjustment, as presented in the Staff Report – Cost of
20 Service (p. 38 and 39), and Cedar Hill Sewer Excess Capacity as presented
21 in the Office of the Public Counsel's Direct Testimony of Ted Robertson. I will
22 also discuss issues as presented by the City of Riverside's Direct Testimony
23 of Michael Duffy and Fire Chief Gordon Fowlston and respond to the Direct
24 Testimony of St. Joseph witness J. Bruce Woody as it pertains to the
25 proposed main extension tariff (and proposed sharing of the cost of main
26 extensions), Company's investment in infrastructure when opportunities are

1 available, and Company's proposed tariff treatment of "standards and
2 contractual requirements".

3
4 **CEDAR HILL TREATMENT PLANT**

5
6 **Q. WHEN DID MAWC ACQUIRE THE CEDAR HILL SEWER SYSTEM?**

7 A. MAWC purchased this system in 2004. The transaction was approved by the
8 Commission in Case No. SM-2004-0275.

9
10 **Q. WHAT WAS THE CONDITION OF THE CEDAR HILL SYSTEM AT THE TIME
11 OF ACQUISITION?**

12 A. The plant, while sufficient for existing customers, did not have any capacity for
13 growth and an expansion of the plant was contemplated at the time of the
14 transaction. As the need for expansion of the system presented itself, MAWC
15 was able to invest the dollars necessary to expand the Cedar Hill waste
16 treatment facility so that it would continue to have sufficient capacity. This
17 expansion increased the treatment facility capacity from 75,000 GPD to 150,000
18 GPD.

19
20 **Q. COULD YOU FURTHER EXPLAIN HOW THE EXPANSION OF THE
21 ORIGINAL 75,000 GPD TREATMENT PLANT CAME ABOUT?**

22 A. MAWC has an obligation to meet the service requirements of customers in its
23 certificated service territory. The plant was expanded to satisfy a
24 commitment to serve a new development that is located within MAWC's
25 certificated territory. Prior to entering into a contractual commitment to build

1 this facility, MAWC personnel reviewed schematic designs, development
2 plans, financial records, and required a significant contribution from the
3 developer. Construction of the plant expansion occurred only after an
4 agreement with the developer was executed. In addition to the need to
5 expand the plant, there was also a need to replace/upgrade the existing
6 treatment facilities

7
8 **Q. HAVE YOU REVIEWED THE STAFF'S RECOMMENDATION IN REGARD**
9 **TO THE CEDAR HILL TREATMENT PLANT?**

10 A. Yes, I have.

11
12 **Q. WHAT DOES THE STAFF RECOMMEND?**

13 A. The Staff Report – Cost of Service proposes a disallowance of \$2,179,908 that it
14 believes is associated with the expansion project. The recommendation is based
15 on Staff's view that "it is unreasonable for current customers to pay for the entire
16 capital cost of this plant expansion project." Thus, Staff recommends that the
17 cost of what it believes to be "additional capacity" only be recovered when new
18 customers are connected to the system through the Contribution-in-aid-of-
19 Construction (CIAC) charge created in Case No. WR-2007-0216. Public Counsel
20 witness Ted Robertson's Direct Testimony supports the Staff's recommendation
21 for a reduction, but he has yet to make a specific rate base disallowance. For
22 this Rebuttal Testimony I am assuming that Mr. Robertson is proposing the same
23 total disallowance as Staff and, thus, I will respond directly to the Staff's
24 testimony. However, until more is known about the Public Counsel's adjustment,
25 it should be noted the same response would apply to Public Counsel's testimony.

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Q. DO YOU AGREE WITH THE STAFF RECOMMENDATION?

A. No. MAWC not only prudently planned and constructed this Wastewater Treatment Facility, but it also required and accepted CIAC from new developers that will use the plant as required by its approved tariffs. Staff witness James A. Merciel, Jr. previously stated in his Surrebuttal Testimony in the Company's last rate case (Case No. WR-2008-0311) that the project was prudently undertaken and necessary for the future growth that was imminent at that time.

Also, the Staff's recommended \$2,179,908 disallowance not only represents the cost of expanding the Wastewater Treatment Facility from 75,000 gallons per day facility to 150,000 gallons per day, but also includes items that are unrelated to the expansion but still necessary to provide safe and adequate sewer service.

The Staff's approach is unusual, at best. By suggesting that the Company recover its costs in small increments only as additional customers are added to the system one by one, its approach would penalize the Company for necessary and efficient construction. It is neither cost effective nor technically feasible to build a facility in the small increments that Staff's position is, in effect, suggesting.

Q. DOES THE STAFF'S RECOMMENDED DISALLOWANCE REPRESENT ONLY THOSE COSTS OF INCREASING THE TREATMENT FACILITY FROM THE EXISTING 75,000 GPD TO THE NOW 150,000 GPD?

1 A. No. The costs associated with the total expansion project include items that
2 are not just for treatment of the collected waste. The total proposed
3 disallowance includes costs for construction of an office and storage building
4 on the site, installation of the HVAC system for the office, installation of
5 roadway and fencing, and the cost associated with an Inflow and Infiltration
6 study. These costs represent \$469,405 of the total project cost of
7 \$2,022,005. (See attached **Schedule KHD-1**).

8 In addition, the total treatment cost represents the addition of a 75,000 gpd
9 plant and a replacement of the original 75,000 gpd treatment plant.
10

11 **Q. WERE CONTRIBUTIONS RECEIVED ASSOCIATED WITH SERVICE**
12 **COMMITMENTS?**

13 A. Yes. As the new plant was built in conjunction with a developer request for
14 service, the developer paid the standard contribution in aid of construction for
15 the treatment plant expansion cost. Also, prior to MAWC ownership, an
16 agreement had been made with Northwest High School, whereby it paid a
17 contribution for the addition of a new treatment facility. These two
18 contributions total \$491,820.
19

20 **Q. WHAT PLANNING HORIZON DID MAWC CONSIDER WHEN**
21 **CONSTRUCTING THIS SEWER PLANT?**

22 A. The Company considered a 10 to 15 year planning horizon when sizing the
23 plant expansion. Historical growth trends and knowledge of potential growth
24 from discussions with developers and local planning agencies help form the
25 basis for projected future needs.

1

2 **Q. DOES THE MISSOURI DEPARTMENT OF NATURAL RESOURCES (DNR)**
3 **HAVE GUIDELINES THAT YOU MUST FOLLOW IN REGARD TO PLANT**
4 **CAPACITY?**

5 A. Yes. Plant capacity for system needs are designed using hydraulic, organic,
6 and peak loadings as presented in the DNR, Clean Water Commission,
7 Design Guide 10 CSR 20-8.

8

9 **Q. IN APPLYING THOSE CAPACITY GUIDELINES, MUST MAWC TAKE**
10 **INTO ACCOUNT MORE THAN JUST THE CUSTOMERS THAT ARE**
11 **CURRENTLY CONNECTED TO THE SYSTEM?**

12 A. Yes. When MAWC requests the addition of customer(s) or capacity increase,
13 the Engineering Report requires an existing facility evaluation that includes a
14 tabulation of current and committed loads. These committed loads include
15 existing lots or lots of subdivisions that do not have laterals connected to the
16 sewer main and that have been previously listed as future connections to the
17 existing capacity of the treatment facilities. These are primarily lots that have
18 either paid a tap on fee or have a contractual agreement for capacity. The
19 number of connections and the design usage per connection are added to
20 the current usage to determine if the new projected customers can be added
21 to the existing facility.

22

23 **Q. WHAT COMMITMENTS DOES MAWC HAVE IN PLACE AT THIS TIME**
24 **FOR THE CEDAR HILL TREATMENT PLANT?**

1 A. Attached as **Schedule KHD-2** is a listing of MAWC's current commitments.
2 This schedule agrees with the last request MAWC sent to the Department of
3 Natural Resources to request the addition of new customers to the Cedar Hill
4 Treatment Plant (which is also known as the Sand Creek Treatment Facility).
5 This request occurred with the addition of the lots associated with the Lake
6 Tamarackk Subdivision.

7
8 **Q. WHAT IS THE LAKE TAMARACKK SUBDIVISION?**

9 A. Lake Tamarackk is a developer (Medley Hill Terrace Realty and
10 Development Company) owned subdivision wastewater system within the
11 certificated area of MAWC's Cedar Hill District. This system consists of
12 collection lines and a lagoon treatment facility for the wastewater from the
13 fifty-one homes in the subdivision. The system has been cited by DNR for
14 various violations of the Missouri Clean Water Law. DNR has gone as far as
15 issuing an Abatement Order whereby the subdivision was to submit to DNR a
16 contract with MAWC, (a system of higher Continuing Authority as established
17 in 10 CSR 20-6.010(3)(B)3), to provide collection and treatment from the
18 homes that were connected to the lagoon. The owner of the Lake
19 Tamarackk Subdivision has signed a Contract with MAWC for MAWC to
20 acquire substantially all of the assets that constitute the wastewater
21 collection of the Lake Tamarackk system. This collection system will be
22 connected to the existing Cedar Hill District, by April 30, 2010, and the waste
23 flow will be treated at the Sand Creek Wastewater Treatment Facility. The
24 trunk line connecting the two systems is currently under construction. Once

1 complete the Tamarack system will send its waste supply to the Sand Creek
2 Wastewater Treatment Facility.

3
4 **Q. WHAT IS THE CONSEQUENCE OF THE EXISTING COMMITMENTS?**

5 A. **Schedule KHD-2** shows that the 150,000 gpd treatment facility capacity has
6 already been exceeded for purposes of the DNRs' analysis. Ironically, while
7 the Staff is discussing an "excess capacity" disallowance associated with the
8 plant that is now providing service, DNR's methodology is pushing MAWC to
9 begin planning the next expansion. MAWC will need to discuss options with
10 DNR to avoid a building moratorium from being placed on Cedar Hill home
11 construction.

12
13 **Q. IS THE OLD TREATMENT PLANT STILL IN SERVICE?**

14 A. Yes, but in different form. As I noted, portions of the old plant are utilized in
15 the new facility. Rather than retire the remainder of the old treatment plant,
16 MAWC was able to use it to provide required redundant clarification for the
17 new system. During the design phase, a review of DNR standards was
18 performed. These standards required a redundant clarification for all
19 treatment facilities totaling 100,000 gpd or greater, and thus the new
20 treatment plant required redundant clarification.

21 MAWC, along with its design consultants, reviewed the existing plant
22 clarification zone and determined that this type of zone was not appropriate
23 for the settling required and would require two additional clarifiers to meet the
24 total redundancy. MAWC also reviewed the existing extended aeration zone
25 and determined that it would require additional height in order to meet the

1 future ammonia removal that would possibly be required at the next renewal
2 of the NPDES permit. Therefore, the practical and lowest cost solution was to
3 install a 150,000 gpd extended aeration and clarification plant and to use the
4 existing 75,000 gpd plant's aeration zone for the redundant clarifier and other
5 sections of the existing plant for a sludge holding tank.

6
7 **Q. DOES THAT MEAN THAT CUSTOMERS SERVED BY THE OLD**
8 **TREATMENT FACILITY ARE CURRENTLY BEING SERVED BY THE NEW**
9 **CEDAR HILL TREATMENT PLANT?**

10 A. Yes, the old and new treatment facilities have been combined into one and
11 now serve the entire area. Therefore, the total cost of the treatment facility is
12 \$1,552,600 and the cost of one-half of the plant replacing the original 75,000
13 gallons per day facility would be \$776,300. The revenue requirement for
14 these necessary and prudently incurred costs should be covered by all the
15 existing customers in Cedar Hill and not wait for additional customers to
16 come onto the system.

17
18 **Q. PLEASE SUMMARIZE THE COMPANY'S POSITION IN REGARD TO THE**
19 **CEDAR HILL TREATMENT PLANT EXPANSION.**

20 A. The Company believes that it prudently designed and built a 150,000 gpd
21 waste water treatment facility of which 75,000 gpd replaced an existing
22 facility. Of the total project cost of \$2,022,005, the total non-treatment cost of
23 the plant is \$469,405, which is not part of the capacity expansion or subject
24 to the reasons for Staff's additional capacity adjustment. Contributions in aid
25 of construction have been received in the amount of \$491,820. Considering

1 the non-treatment portion of the original cost and the half of the cost for the
2 replacement of the original plant, which under any circumstance should be
3 shared by all users of the system, a further reduction for the CIAC already
4 paid for the plant to be expanded and the capacity charge paid by the 51
5 Lake Tamarack customers, the remaining cost of the capacity of the plant not
6 in service would be only \$206,428 (See attached **Schedule KHD-1**). This
7 portion of the construction costs represents approximately 19,943 gallons of
8 capacity, an amount which is less than the 15% that Staff would recommend
9 as reasonable plant for “planning and constructing expansions.” Further, if
10 you consider the committed loads that have paid a tap on fee or have a
11 contractual agreement for capacity, the new plant is fully utilized and the
12 Company needs to begin to consider planning for additional plant. Staff,
13 however, has reduced the Company’s rate base by \$2,179,908 and
14 recommends that additional plant only be added to rate base when the
15 customers connect and pay the existing capacity charge. However, with the
16 addition of Lake Tamarack to the treatment facility and the contractual
17 commitment from the O’Brien Subdivision, contributions have already been
18 received for most of the available plant capacity.

19 MAWC expects that prudent facilities, constructed in accordance with the
20 Company’s obligation to serve and which are currently in use and useful,
21 should be included in MAWC’s rate base. The Staff agrees that this plant
22 was prudently built so some other measure of allowing the Company to earn
23 on its investment should be considered if charging these costs directly to the
24 Cedar Hill customers is not acceptable because of the possible rate shock.

CITY OF RIVERSIDE

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Q. HAVE YOU REVIEWED THE TESTIMONY OF THE CITY OF RIVERSIDE'S MICHAEL DUFFY AND GORDON FOWLSTON?

A. Yes, I have.

Q. WHAT ARE THEIR RECOMMENDATIONS IN REGARDS TO THE PLATTE COUNTY DISTRICT RATES?

A. They request relief in rates based on what they perceive to be an inadequacy of MAWC service and they object to certain charges.

Q. WHAT ISSUES DO THE RIVERSIDE WITNESSES POINT TO IN SUPPORT OF THEIR ALLEGATIONS?

A. Riverside witness Fowlston describes the following issues : 1) low water pressure and low gallons per minute produced by the City's fire hydrants; 2) MAWC's performance of annual maintenance of fire hydrants and water flow tests; 3) fire hydrants are not color coded for flows (multiple colors are used for fire hydrants and some have not been painted and are rusting); 4) fire hydrants are not painted with reflective paint; and, 5) MAWC has been slow to respond or has not covered the hydrants to show they are out-of-service.

Q. PLEASE DESCRIBE THE SERVICE THAT MAWC HAS PROVIDED TO THE PLATTE COUNTY DISTRICT.

A. Over the last 3 years, MAWC has annually, on average, invested \$4.2M and delivered 665 MG of water that meets or exceeds all state and federal standards, at an average pressure of 91 psi, serving over 5,500 customers

1 24 hours a day every day. MAWC is providing safe and adequate service to
2 its Platte County customers.

3
4 **Q. DOES MAWC AGREE THAT THERE IS AN INADEQUATE SERVICE IN**
5 **THE CITY OF RIVERSIDE'S DISTRIBUTION SYSTEM?**

6 A. No. MAWC believes its distribution system and its maintenance of such are
7 providing a safe and adequate service.

8
9 **Q. HOW DO YOU RESPOND TO THE ALLEGATION THAT THE FIRE**
10 **HYDRANTS PRODUCE LOW WATER PRESSURE AND LOW GALLONS**
11 **PER MINUTE?**

12
13 A, Riverside witness Fowlston describes four major fires that occurred in the
14 City since 2007 where fire hydrant flow was estimated to be as low as 125
15 gallons per minute. He also refers to the MAWC "Riverside Fire Flow
16 Modeling Report" that describes areas within the City of Riverside fire
17 protection that are below the local Ordinance 2005-05 fire flow requirements.
18 He concludes that the low flows are inadequate, as the Company must
19 provide the fire flow as per a Riverside Ordinance. MAWC does not agree
20 that it must rebuild portions of its system when a new fire flow Ordinance(s)
21 comes into existence. The Company designs proper fire flow through water
22 mains at the time the new mains are to be installed. Any one fire hydrant on
23 these mains will meet fire flow requirements at the time of the main design.
24 Therefore, the distribution system as installed in the Riverside fire protection

1 area is adequate to meet the fire flows based at the time each water main
2 was installed.

3

4 **Q. IS THERE A CONSISTENT STANDARD FOR FIRE FLOWS?**

5 A. No. Fire flow as determined by the International Fire Code or ISO has
6 changed significantly over the years. In 1984, the fire flow requirements were
7 250 - 500 gallons per minute for residential areas. However, today some
8 recommendations are as high as 1500 gallons per minute.

9 It is neither feasible nor prudent to rebuild a water distribution system to meet
10 changing fire flow design parameters. MAWC believes the distribution
11 system should be built to current standards as it is expanded or replaced.

12

13 **Q. DOES MAWC TAKE FIRE FLOW INTO ACCOUNT AS IT EXPANDS ITS
14 SYSTEM?**

15 A. Yes. The Company regularly performs hydraulic modeling of its systems as
16 part of its period planning studies. One factor that is reviewed in these
17 studies is a comparison of current hydraulic capacity against the fire flow of
18 current design requirements. These models help to define areas that should
19 be considered for future main replacements. Projects are considered in the
20 Platte County system for the capital budget each year and mains are
21 reviewed that would have service issues such as multiple main break history,
22 insufficient pressure or flow, etc. Lower fire flow is one of the considerations
23 that help to increase the prioritization for replacement of sections of main.

24

25 **Q. WHAT IS THE "RIVERSIDE FIRE FLOW MODELING REPORT"?**

1 A. Contrary to Riverside's assertions, this report does not describe deficiencies
2 of the system serving the City of Riverside, but rather describes a fire flow
3 analysis of the system in comparison to the current City of Riverside criteria
4 and describes areas that would have problems meeting this current criterion
5 at adequate pressure. As discussed in this report, MAWC has completed the
6 installation of the 16" and 24" mains labeled as Phase IA and IV as well as
7 Phase 1B (the connection to Kansas City Water at Briarcliff). These mains
8 have allowed for an increase in fire flow into the City of Riverside as detailed
9 in the report. The one area that fire flow will not increase due to the
10 installation of these mains is the City of Houston Lake area.

11

12 **Q. HOW DO YOU RESPOND TO RIVERSIDE WITNESS FOWLSTON'S**
13 **ASSERTION THAT MAWC'S ANNUAL FIRE HYDRANT MAINTENANCE**
14 **OF WATER FLOW TESTING IS INADEQUATE?**

15 A. I disagree with his characterization of the Company's maintenance
16 procedures. MAWC annually inspects and operates each fire hydrant.
17 Repairs or replacements then take place as needed. Fire flow tests are
18 performed upon requests by developers for design of flow to their
19 developments or by the Company as it calibrates its hydraulic model. Each
20 test is recorded and filed at the Company's local office. MAWC does not
21 believe there is any deficiency in this regard.

22

23 **Q. ON PAGE 2, LINES 7-9, OF RIVERSIDE WITNESS FOWLSTON'S DIRECT**
24 **TESTIMONY HE STATES THAT "FIRE HYDRANTS ARE NOT COLOR**
25 **CODED FOR FLOWS PER NATIONAL FIRE PROTECTION**

1 **ASSOCIATION STANDARDS (MULTIPLE COLORS ARE USED FOR FIRE**
2 **HYDRANTS AND SOME HAVE NOT BEEN PAINTED AND ARE**
3 **RUSTING).” HOW DO RESPOND TO THIS ALLEGATION?**

4 A. Currently, not all fire hydrants in the Platte County District have been painted
5 to meet National Fire Protection Association Standards. However, MAWC
6 follows Missouri Public Service Commission and Department of Natural
7 Resources guidelines in regard to the service it provides and it is not
8 currently required to follow National Fire Protection Association Standards.
9 MAWC has, nevertheless, generally agreed to work with local fire authorities
10 and, within reason, to paint hydrants to address this issue. MAWC has an
11 annual hydrant painting program where a percentage of fire hydrants in a
12 district are painted each year. MAWC will attempt to coordinate color coding
13 with the Riverside Fire Department.

14
15 **Q. PAGE 2 LINES 9 AND 10 OF GORDON FOWLSTON’S DIRECT**
16 **TESTIMONY STATES “FIRE HYDRANTS ARE NOT PAINTED WITH**
17 **REFLECTIVE PAINT PER NATIONAL FIRE PROTECTION ASSOCIATION**
18 **STANDARDS.” DO THE NATIONAL FIRE PROTECTION ASSOCIATION**
19 **STANDARDS APPLY TO MAWC?**

20 A. No. MAWC is not required to follow National Fire Protection Standards, so
21 hydrants are not currently painted with reflective paint.

22
23 **Q. WHY HAS MAWC NOT PREVIOUSLY USED REFLECTIVE PAINT?**

24 A. MAWC has decided not to use reflective paint because of the added cost and
25 the lack of interest in this type paint system by nearly all of the fire authorities

1 in the MAWC operating areas. MAWC can begin to paint hydrants in
2 Riverside utilizing reflective paint, if this is desired by the City of Riverside
3 and its local fire authority. However, it should be noted that doing so will
4 create some additional cost for Platte County customers.

5
6 **Q. HAVE SOME MAWC DISTRICTS ADDRESSED THIS ISSUE IN ANOTHER**
7 **MANNER?**

8 A. Yes. As an alternative, reflective tape bands have been installed by other
9 fire authorities.

10
11 **Q. ON PAGE 2 (LINES 10 THROUGH 14) OF RIVERSIDE WITNESS**
12 **FOWLSTON'S DIRECT TESTIMONY, HE STATES THAT MAWC IS SLOW**
13 **TO RESPOND TO MAINTAIN FIRE HYDRANTS AND/OR COVER FIRE**
14 **HYDRANTS THAT ARE OUT-OF-SERVICE. HOW DO YOU RESPOND?**

15 A. MAWC does notify local fire authorities when fire hydrants are out-of-service.
16 Hydrants that are going to be out-of-service for any length of time are
17 covered and marked as such. MAWC's practice is to timely schedule
18 resources to respond to notification of damaged hydrants and will normally
19 perform work within two business days.

20
21 **Q. ARE THERE OTHER CONCERNS THAT THE FIRE DEPARTMENT HAS**
22 **EXPRESSED IN REGARD TO THE RIVERSIDE WATER DISTRIBUTION**
23 **SYSTEM?**

24 A. Yes. Riverside witness Fowlston's Direct Testimony discusses an issue
25 concerning MAWC's possible requirement of a second service line for

1 residential fire suppression when not required by fire code and an issue with
2 the distance and location of fire hydrants. He, with Riverside witness Duffy,
3 also has a concern that MAWC may be inappropriately charging fire hydrant
4 and standby fees.

5

6 **Q. WHAT IS THE CONCERN WITH THE COMPANY'S REQUIREMENT FOR**
7 **A SECOND SERVICE LINE FOR RESIDENTIAL FIRE SUPPRESSION?**

8 A. MAWC is unsure as to the concern caused by the requirement for a separate
9 line into the residential home for fire suppression. MAWC has been directly
10 involved with various groups in regard to the proposed requirements for
11 installing fire suppression systems into residential homes. MAWC has
12 reviewed current plumbing and cross connection codes in its service areas
13 and has proposed a tariff whereby MAWC will allow fire suppression lines to
14 be provided either through: 1) a split service where the fire line and domestic
15 service have one line from the water main but splits into two distinctive lines
16 into the building for each function; 2) two separate lines from the tap at the
17 water main into the house which isolates both completely from each other;
18 or, 3) a single line that has a full flow meter installed that will allow the fire
19 suppression flow requirement. MAWC plans to review the building design
20 requirements as well as local codes in determining and approving the proper
21 service into the residential home. This issue is further addressed in the
22 Rebuttal Testimony of MAWC witness Greg Weeks.

23

24 **Q. WHAT IS THE ISSUE WITH LOCATION AND DISTANCE OF EXISTING**
25 **FIRE HYDRANTS?**

1 A. The Direct Testimony of Riverside witness Fowlston details four fires and in
2 regard to each fire describes the location of the next closest fire hydrant to
3 the fire hydrant that was in use. These distances ranged from 500 – 2,000
4 feet.

5

6 **Q. HOW WAS THE LOCATION OF THESE FIRE HYDRANTS INITIALLY**
7 **DETERMINED?**

8 A. These fire hydrants were either installed with the mains at the time of original
9 installation or when an Ordinance or fire authority made a request to install a
10 fire hydrant. MAWC installs fire hydrants on mains with sufficient capacity at
11 no cost to the City of Riverside or local fire authority, if required by an
12 Ordinance or requested in writing. Currently, all hydrants requested by
13 Ordinance or in writing have been installed.

14

15 **Q. DOES THE CITY OF RIVERSIDE DESCRIBE WHAT IT BELIEVES TO BE**
16 **AN INAPPROPRIATE CHARGE IN REGARD TO FIRE SERVICE?**

17 A. Yes. Both Mr. Fowlston’s and Mr. Duffy’s describe the lawfulness of MAWC
18 charging a “hydrant fee” and a “standby fee” for certain fire hydrants and
19 sprinkler systems, rather than including the cost of placement and
20 maintenance of such fire hydrants in its cost basis in determining a fair and
21 reasonable rate to be charged for water. MAWC is unsure of what fees are
22 being charged directly to the City of Riverside that would be unlawful. Fire
23 hydrants that the City determines are necessary and have the required
24 diameter main to meet the required fire flow are installed by the Company at
25 no charge to the City and the costs associated with such installation are

1 recovered in the rates of all customers. Private fire service that is a
2 requirement of a building's fire suppression only, and not for the protection of
3 the public, are installed at the cost of the building owner. Appropriate
4 customer charges for private fire service are applied in accordance with
5 MAWC's tariff.

6
7 **Q. RIVERSIDE WITNESS DUFFY DISCUSSES A CONTRIBUTION**
8 **RIVERSIDE HAS MADE CONCERNING MAWC'S WATER DISTRIBUTION**
9 **SYSTEM. WHY IS THE CITY CONTRIBUTING FUNDS?**

10 A. As stated by Mr. Duffy, the City of Riverside has approved funds of up to
11 \$500,000 for each of five years beginning in 2008. These funds were
12 allocated after meeting with MAWC and discussing areas in the City where
13 fire hydrant flow was not as prescribed in Ordinance 2005-05 and where the
14 City wanted to see fire flow improvement. MAWC does not now believe, nor
15 has it stated, that the mains in the City of Riverside are insufficient, as
16 alleged on page 2, line 4 of Michael Duffy's Direct Testimony. MAWC has
17 worked with the City in regard to the replacement of these mains, as the City
18 wanted to secure an earlier replacement of certain mains than otherwise may
19 have occurred. The mains originally planned by the City are more for
20 providing water to a new or unserved area, situations where the Company
21 would normally require a developer to pay for the mains.

22
23 **Q. WHAT IS THE NATURE OF THE SERVICE PROVIDED IN THE AREAS**
24 **WHERE THE CITY WILL BE CONTRIBUTING MAINS?**

1 A. The meetings with the City discussed providing flow to areas within the City
2 that were available for new development and replacing existing fire hydrants
3 that are below the Ordinance 2005-05 recommendations. Two areas of future
4 development were of primary concern: the development of Hidden Acres and
5 Gatewoods Third Plat. These developments were presented for review to
6 MAWC in 2006 and desired fire flows, as specified by the local fire authority,
7 changed several times. The fire flow ultimately required by the fire authority
8 was 1,000 gpm. The Company had stated that the existing main available
9 for connection could not provide this level of flow and that an offsite piping
10 arrangement would be needed. The City decided that its first project would
11 be to install a 12" main along Gower Rd from High Dr to NW 50th, this 12" also
12 replaces a stretch of 6" main on Gower from High St to Cerrito Lane. This
13 main not only provides an additional source of water to the developer's area
14 but also provides additional fire flow within the City of Riverside. The cost of
15 this project was approx. \$218,000. The only other project the City has
16 decided to fund is the installation of 12" main from the end of the last
17 extension north through the Gatewoods Third Plat Subdivision. The City has
18 taken over the contract from the developer to have this main installed. A
19 portion of this main has just been installed but the remaining portion must
20 wait on the roadways of the development to be at grade. This main will
21 provide the fire flow in this new subdivision. The City has not provided
22 MAWC with a plan that describes whether it intends to utilize the remaining
23 expenditures for general fire flow improvements or to offset costs of new
24 development.

25

1 **Q. DOES THE COMPANY PROPOSE TO COMPENSATE THE CITY OF**
2 **RIVERSIDE FOR THE CONTRIBUTIONS IT HAS MADE IN THESE**
3 **WATER MAINS?**

4 A. MAWC is treating the installation of these mains as contributions in aid of
5 construction as provided in its existing tariffs, just as it would a developer of
6 the property. Refunds could be made available for the mains installed within
7 the subdivision but all cost not within the Gatewoods Third Plat Subdivision
8 would not have a refund. All mains installed at the expense of the City are
9 treated as contributed property and the costs associated with this contributed
10 plant (e.g. depreciation and a return on investment) are excluded from the
11 Company's cost of service for ratemaking purposes.

12

13 **CITY OF ST. JOSEPH ISSUES**

14

15 **Q. HAVE YOU REVIEWED THE TESTIMONY OF ST. JOSEPH WITNESS J.**
16 **BRUCE WOODY?**

17 A. Yes, I have.

18

19 **Q. WHAT ISSUES WILL YOU RESPOND TO AS PERTAINS TO HIS**
20 **TESTIMONY?**

21 A. I will discuss St. Joseph's witness Woody's issues that pertain to proposed
22 main extension rules, the Company's investments in infrastructure, and
23 Company's "standards and contractual requirements" that are not in the tariff.

24

1 **Q. WHAT ARE THE ISSUES THAT ST. JOSEPH WITNESS WOODY HAS**
2 **WITH THE PROPOSED MAIN EXTENSIONS TARIFF?**

3 A. Witness Woody states that the proposed tariff for Main Extensions is an
4 impediment to development as it no longer allows for the Company to invest
5 in free extensions where the cost of the free extension installation is less
6 than four (4) times revenues of the estimated normal annual usage of the
7 prospective group of customers that will connect to the main. Also, he states
8 that the provisions will further discourage development because the new tariff
9 will no longer provide developer refunds for customers that connect to the
10 main extension within a ten year period. Witness Woody also asserts that the
11 investment required for main extensions often discourages developers from
12 proceeding with construction.

13
14 **Q. DOES MAWC AGREE THAT FUTURE DEVELOPMENT WILL BE**
15 **IMPEDED DUE TO THE PROPOSED NEW MAIN EXTENSION TARIFF?**

16 A. No. Free extensions are not currently allowed in all of MAWC's districts and
17 refunds are not as significant in all districts as what the existing St. Joseph
18 tariff allows, yet growth in those other areas did not halt. The St. Louis Metro
19 District has the smallest available refund amount and has continued to grow
20 over many years. MAWC believes that the cost causer (normally the
21 developer) should be responsible for the cost associated with the main
22 extension. It does not seem reasonable that all ratepayers in the district
23 should support the developer by subsidizing the cost of the main extension.
24 The Company believes it is better to use its limited funds for the replacement
25 of mains. This will allow the Company to continue to support investment into

1 the system serving all customers and replacing mains that have a history of
2 breaks or pressure problems.

3 MAWC questions the notion that development would be discouraged based
4 on the fact that the water company no longer gives free extensions or
5 refunds, while, at the same time, the sewer system, which has equally costly
6 infrastructure for new systems, does not normally provide for either free
7 extensions or refunds and yet development continues to occur.

8
9 **Q. HOW DO YOU RESPOND TO THE ASSERTION THAT SEVERAL**
10 **INSTANCES OF THE CURRENT MAIN EXTENSION POLICY HAVE HURT**
11 **ST. JOSEPH'S RESIDENTS AND INSTITUTIONS?**

12 A. St. Joseph witness Woody gives several examples where the Company
13 should have invested in main extensions or upgrades instead of putting these
14 costs on the developer. The first example describes a large church that was
15 required to spend approximately \$100,000 to replace a 4" main with a 12"
16 main between two 8" mains to accommodate the fire flows. MAWC has not
17 been able to fully investigate this project but, based on information available
18 to date, believes that this church, while adding to its structure, was required
19 by the local fire authority to meet a higher fire flow than what was previously
20 required. The cost for such an upgrade should be borne by the cost causer
21 and not by all ratepayers of the district. MAWC has been diligent in providing
22 sufficient transmission piping throughout the St. Joseph distribution to
23 provide adequate service. In cases such as this where the increase in fire
24 flow main size is required, Commission Rule 4 CSR 240-10.030(35) states:
25 "no utility shall be required to install larger mains or fire hydrants or otherwise

1 supply fire service, unless proper contractual arrangements shall have been
2 made with the utility by the individual desiring such service.”. This policy
3 requires that this customer pay the cost for his requirement and not have the
4 cost unilaterally borne by all of the districts’ ratepayers.

5
6 **Q. WHAT IS THE RESPONSE TO THE ASSERTION THAT THE COMPANY**
7 **DOES NOT PROPERLY INVEST, BY UPGRADE OR EXTENSION, WHEN**
8 **OPPORTUNITIES ARE AVAILABLE?**

9 A. MAWC seeks to prudently invest in mains and main replacements as
10 budgeting constraints allow. Over the last two years MAWC has expended
11 over \$162 million (\$106m in 2008 & \$62m in 2009) in all of its districts.
12 Projects are reviewed annually and are then prioritized on a needs basis.
13 Many projects come about after the budgeting stage and have to be
14 reviewed as to the need to replace projects already budgeted and prioritized.
15 One of these projects was the East Towne Business Park which required a
16 12” main for the Business Park and the Company was considering the main
17 as an option for possible upgrade. However, at the time this project was sent
18 in for review by engineering, the Company could not substantiate the
19 possible growth beyond this subdivision nor justify the proposed upsizing of
20 the main.

21
22 **Q. WHAT IS YOUR RESPONSE TO THE TIMBER CREEK SUBDIVISION**
23 **HAVING TO INSTALL OFF-SITE VALVE IMPROVEMENTS TO IMPROVE**
24 **MAWC’S INADEQUATE INFRASTRUCTURE?**

1 A. This project is not unlike the church issue in that, in accordance with the fire
2 authority's requirement, Timber Creek Subdivision fire flow was 1500 gpm.
3 To obtain this amount of fire flow in the area will require substantial main
4 upgrade. These costs would again be expected to be paid by the cost causer
5 as the benefit was for their subdivision. However, upon further review of the
6 hydraulic model for the area it was determined that this area could be placed
7 in a higher pressure zone which would not require the expensive main
8 replacement. However, to place this subdivision into the higher zone would
9 require the installation of two pressure reducing valves to keep from having
10 too high of pressure in a low lying area. When these valves are installed it
11 will be at a substantial savings in cost to the developer over the proposed
12 main extension to provide the required fire flow.

13
14 **Q. ARE THE COMPANY'S "STANDARDS AND CONTRACTUAL**
15 **REQUIREMENTS", WHICH APPEAR BINDING ON THE APPLICANTS, IN**
16 **THE PROPOSED TARIFF FOR MAIN EXTENSIONS?**

17 A. No, like the existing St. Joseph main extension tariff, the Company standards
18 and contractual requirements are not a part of the tariff. The standards and
19 contractual requirements could change from time to time and MAWC
20 believes it is not appropriate to have items that could change based on
21 industry needs be a part of a tariff that is rather inflexible. If these items were
22 included in the tariff, MAWC would be required to revise the tariff or obtain a
23 variance/waiver each time a modification is necessary to address project-
24 specific issues. MAWC provides such documentation to customers and
25 developers when main extensions are proposed.

1

2 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

3 **A. Yes, it does.**

Missouri-American Water
Cedar Hill Plant Improvement Project UPIS and CIAC

subacct	naruc	accr	description	3/31/2008 accum cost	non-treatment related plant	treatment related plant	in service date
361100	352.100		Pipe and Fittings - PVC 8"	51,910	51,910		5/31/2007 0:00
361100	352.200		Structure - Manhole/Catch Basin	51,910	51,910		5/31/2007 0:00
355200	356.000		Electrical - Generator (Alternator - AC, DC)	20,928		20,928	4/23/2007 0:00
371200	365.000		Electrical - Motor Starter/Motor Control Center (Oil, Adjustable Speed, Vacuum, Star Delta, Soft Start, Resistance, Air, Auto Transformer, Direct On Line, Variable HV Air)	49,304		49,304	4/23/2007 0:00
371200	365.000		Electrical - Power Supply Equipment (DC Supply, Fuel Cells, Hydroelectric, Phase Converter, Portable Light Plant, Power Inverter, Solar Panel, Uninterruptible Power Supply, Voltage Regulator, Wind Generator)	3,990		3,990	4/23/2007 0:00
371200	365.000		Process Pumping Equipment - Submersible Centrifugal Pump	39,900		39,900	4/23/2007 0:00
354400	371.000		HVAC/Plumbing - HVAC Equipment (Air Condition Unit/Air Chiller, Heat Pump)	17,100	17,100		4/23/2007 0:00
354400	371.000		Structure - Manhole/Catch Basin	22,800		22,800	4/23/2007 0:00
354400	371.000		Structure - Paving (Parking Lot, Sidewalk, Driveway, Road)	45,600	45,600		4/23/2007 0:00
354400	371.000		Structure - Vault/Chamber/Pit (Concrete, Fiberglass, Plastic, Steel)	155,040		155,040	4/23/2007 0:00
354400	371.000		Structure - Wood Building	228,001	228,001		4/23/2007 0:00
354400	371.000		Structure - Fence (Barrier, Gate, Masonry, Palisade, Wire Mesh, Wooden)	33,028	33,028		4/23/2007 0:00
354400	371.000		Structure - Vault/Chamber/Pit (Concrete, Fiberglass, Plastic, Steel)	52,320		52,320	4/23/2007 0:00
354400	371.000		Structure - Wood Building	41,856	41,856		4/23/2007 0:00
380000	372.000		Electrical - Generator (Alternator - AC, DC)	45,600		45,600	4/23/2007 0:00
380000	372.200		INSTALL TREATMENT EQUIPMENT sand creek WWTP	43,172		43,172	4/23/2007 0:00
380000	372.300		INSTALL TREATMENT EQUIPMENT sand creek WWTP	776,852		776,852	4/23/2007 0:00
380000	372.400		Meters - Process (Closed Pipe Time of Flight, Magnetic, Multi-jet, Programmable, Open Channel, Ultrasonic, Paddle, Propeller, Thermal Mass Flow, Ultrasonic, Vortex, Rotameter)	19,380		19,380	4/23/2007 0:00
380000	372.400		INSTALL TREATMENT EQUIPMENT sand creek WWTP	43,051		43,051	4/23/2007 0:00
380000	372.500		Pipe and Fittings - Ductile Iron 6"	5,292		5,292	4/23/2007 0:00
380000	372.500		Treatment - Clarification - Clarification Tank (Steel, Concrete)	52,320		52,320	4/23/2007 0:00
381000	373.000		Pipe and Fittings - Ductile Iron 8"	43,949		43,949	4/23/2007 0:00
381000	373.000		Flow Control - Other Valve (Air, Altitude, Backflow Preventor, Ball, Check, Cone, Diaphragm, Flap (Outfall), Float, Foot, Globe, Knife, Needle, Open Chanel Gate, Pinch, Piston, Plug, Pressure/Vacuum Release, Pressure Relief, Solenoid, Telescopic)	40,795		40,795	4/23/2007 0:00
381000	373.000		Pipe and Fittings - Ductile Iron 4"	24,110		24,110	4/23/2007 0:00
381000	373.000		Pipe and Fittings - Ductile Iron 6"	15,289		15,289	4/23/2007 0:00
381000	373.000		Pipe and Fittings - Ductile Iron 8"	52,630		52,630	4/23/2007 0:00
381000	373.000		Pipe and Fittings - Ductile Iron 10"	12,937		12,937	4/23/2007 0:00
382000	374.100		Structure - Vault/Chamber/Pit (Concrete, Fiberglass, Plastic, Steel)	14,701		14,701	4/23/2007 0:00
396000	396.000		Instrumentation - Control System - Modem	7,410		7,410	4/23/2007 0:00
396000	396.000		Instrumentation - Control System - Programmable Logic Controller	10,830		10,830	4/23/2007 0:00

Total UPIS \$2,022,005 \$469,405 \$1,552,600

CIAC	CIAC Amount	non-treatment related ciac	treatment related ciac	CIAC GL Date
271160	O'Brien	106,823	106,823	1/3/2007 0:00
271160	O'Brien	100,000	100,000	6/22/2006 0:00
271160	O'Brien	118,865	118,865	7/9/2007 0:00
271160	O'Brien	6,820	6,820	9/12/2006 0:00
271160	Northwest HS *	159,312	159,312	12/2/2004 0:00
Total CIAC	491,820	-	491,820	

* Northwest HS CIAC was transferred to the Company's books at the time of acquisition.

Plant less CIAC	\$1,060,780
New Plant Cost/Gal	\$10
2009 Existing Avg Daily Usage	75,150
Existing Usage Cost of Plant	\$777,853
Remaining Plant not Contributed	\$282,928
Lake Tamarac Capacity Charge Paid	\$76,500
Remaining Plant less CIAC less Capacity Charge	\$206,428
Capacity not yet Paid or Used	19,943 gallons
% Capacity Remaining	13.30%

Sand Creek Committed Loads

2/10/2010

Committed flows	future gpd	Permitted	# of committed lots	DNR flow 370 gpd/home	Historical Sand Creek flows 305 gpd/home
Clover Lake	16,280	Yes	44	16,280	13,420
Osage Trails	5,180	Yes	14	5,180	4,270
Lammert Lane	1,110	Yes	3	1,110	915
Moto Mart	1,110	Yes	3	1,110	915
Craig Drive	1,850	Yes	5	1,850	1,525
O'Brien Place	42,180	No, but contributed to plant expansion	114	42,180	34,770
Pete O'Brien Road	2,220	Yes	6	2,220	1,830
Cedar Hill Road	3,700	Yes	10	3,700	3,050
Matterhorn Drive	1,110	Yes	3	1,110	915
Brookside & Honeysuckle	2,960	Yes	8	2,960	2,440
Lake Tamarack	18,870	Yes	51	18,870	15,555
	<u>96,570</u>			<u>96,570</u>	<u>79,605</u>

current Sand Creek load 75,150 updated with 2009 data
 design Sand Creek load 150,000
 74,850

uncommitted remaining capacity
 # of lots remaining

-21,720 -4,755
 -59 -16