

Exhibit No.:  
Issues: Cedar Hill Treatment Plant  
Witness: Kevin H. Dunn  
Exhibit Type: Rebuttal  
Sponsoring Party: Missouri-American Water Company  
Case No.: WR-2008-0311  
SR-2008-0312  
Date: September 30, 2008

**MISSOURI PUBLIC SERVICE COMMISSION**

**CASE NO. WR-2008-0311  
CASE NO. SR-2008-0312**

**REBUTTAL TESTIMONY**

**OF**

**KEVIN H. DUNN**

**ON BEHALF OF**

**MISSOURI-AMERICAN WATER COMPANY**

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**


<b>IN THE MATTER OF MISSOURI-AMERICAN )</b>	
<b>WATER COMPANY FOR AUTHORITY TO )</b>	
<b>FILE TARIFFS REFLECTING INCREASED )</b>	<b>CASE NO. WR-2008-0311</b>
<b>RATES FOR WATER AND SEWER )</b>	<b>CASE NO. SR-2008-0312</b>
<b>SERVICE )</b>	

**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 29<sup>th</sup> day of September 2008.

  
\_\_\_\_\_  
Notary Public

My commission expires:

Staci A. Olsen  
Notary Public - Notary Seal  
State of Missouri  
St. Charles County  
Commission # 05519210  
My Commission Expires: March 20, 2009

**REBUTTAL TESTIMONY  
KEVIN H. DUNN  
MISSOURI-AMERICAN WATER COMPANY  
CASE NO.WR-2008-0311  
CASE NO.SR-2008-0312**

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1 **REBUTTAL TESTIMONY**

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3 **KEVIN H. DUNN**

4  
5 **I. 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 MAWC the  
18 issue of the Cedar Hill Capacity Adjustment as presented in the Staff Report  
19 – Cost of Service.  
20

21 **II. CEDAR HILL TREATMENT PLANT**

22  
23 **Q. HAVE YOU REVIEWED THE STAFF'S RECOMMENDATION IN REGARD**  
24 **TO THE CEDAR HILL TREATMENT PLANT?**

25 A. Yes, I have.  
26

1 **Q. WHAT DOES THE STAFF RECOMMEND?**

2 A. The Staff Report – Cost of Service proposes a disallowance of \$2,179,907 that it  
3 believes is associated with the expansion project. The recommendation is based  
4 on Staff's view that "it is unreasonable for current customers to pay for the entire  
5 capital cost of this plant expansion project." Thus, Staff recommends that the  
6 cost of what it believes to be "additional capacity" only be recovered when new  
7 customers are connected to the system.

8

9 **Q. DO YOU AGREE WITH THE STAFF RECOMMENDATION?**

10 A. No. MAWC has an obligation to have capacity available to meet the  
11 requirements of its regulated customers. I will demonstrate in my testimony  
12 that the Cedar Hill Treatment Plant was prudently planned and constructed,  
13 is used and useful and satisfies our obligation to serve. MAWC should not  
14 have to wait for new customers in order to recover costs of or return on  
15 prudently planned and constructed plant that is currently being used to  
16 provide service.

17

18 The Staff's approach is unusual, at best. By suggesting that the Company  
19 recover its costs in small increments only as additional customers are added  
20 to the system one by one, its approach would penalize the Company for  
21 efficient construction. It simply would not be efficient or even technically  
22 feasible to build a facility in the small increments that they are, in effect,  
23 suggesting.

24

25 **Q. WHAT WERE THE CIRCUMSTANCES SURROUNDING THE CEDAR HILL**

1        **SYSTEM AT THE TIME OF ACQUISITION?**

2    A.    MAWC purchased this system in 2004. The transaction was approved by the  
3        Commission in Case No. SM-2004-0275. The plant, while handling the existing  
4        customers, did not have any capacity for growth and an expansion of the plant  
5        was contemplated at the time of the transaction. As the need for expansion of  
6        the system presented itself, MAWC was able to invest the dollars necessary to  
7        expand the Cedar Hill waste treatment facility so that it would continue to have  
8        sufficient capacity.

9  
10   **Q.    DOES THE STAFF'S RECOMMENDED DISALLOWANCE REPRESENT**  
11   **ONLY THOSE COSTS OF INCREASING THE TREATMENT FACILITY**  
12   **FROM THE EXISTING 75,000 GPD TO THE NOW 150,000 GPD?**

13   A.    No. The costs associated with the total expansion project includes items that  
14        are not just for treatment of the collected waste. The total proposed  
15        disallowance includes cost for construction of an office and storage building  
16        on the site, installation of the HVAC system for the office, installation of  
17        roadway and fencing, and the cost associated with an Inflow and Infiltration  
18        study. These costs represent \$479,965 of the total project cost of  
19        \$2,040,281. (See attached **Schedule KHD-1**).

20  
21        In addition, the total treatment cost not only represents the addition of a  
22        75,000 gpd plant but also represents a replacement of the original 75,000  
23        gpd treatment plant.

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

3 A. MAWC has an obligation to meet the service requirements of customers in its  
4 certificated service territory. The plant was expanded to satisfy a  
5 commitment to serve a new development that is located within MAWC's  
6 certificated territory. Prior to entering into a contractual commitment to build  
7 this facility, MAWC personnel reviewed schematic designs, development  
8 plans, financial records and required a significant contribution. Construction  
9 of the plant expansion occurred only after an agreement with the developer  
10 was executed in accordance with the Company's obligation to serve.  
11

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

14 A. Yes. As the subject plant was built in conjunction with a developer request  
15 for service, the developer paid the standard contribution in aid of construction  
16 for the treatment plant expansion cost. Also, prior to MAWC ownership, an  
17 agreement had been made with Northwest High School where it paid a  
18 contribution for the addition of a new treatment facility. These contributions  
19 total \$538,069.  
20

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

23 A. The Company considered a 10 to 15 year planning horizon when sizing the  
24 plant expansion. Historical growth trends and knowledge of potential growth

1 from discussions with developers and local planning agencies help form a  
2 basis for projected future needs.

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

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

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

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



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

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

9  
10 **Q. WHAT IS THE LAKE TAMARACK SUBDIVISION?**

11 A. Lake Tamarack is a developer (Medley Hill Terrace Realty and Development  
12 Company) owned subdivision wastewater system within the certificated area  
13 of MAWC. This system consists of collection and lagoon treatment for the  
14 wastewater from the homes in the subdivision. The system has been cited by  
15 DNR for various violations of the Missouri Clean Water Law. DNR has gone  
16 as far as issuing an Abatement Order whereby the subdivision was to submit  
17 to DNR a contract with MAWC, a system of higher Continuing Authority as  
18 established in 10 CSR 20-6.010(3)(B) 3, to provide collection and treatment  
19 from the homes that were connected to the lagoon. The owner of the Lake  
20 Tamarack Subdivision has signed a Term Sheet with MAWC that would call  
21 for MAWC to acquire substantially all of the assets that constitute the  
22 wastewater collection of the Lake Tamarack system.

23  
24 **Q. WHAT IS THE CONSEQUENCE OF THE EXISTING COMMITMENTS?**

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

8  
9 **Q. DID THE COMPANY TAKE STEPS TO BUILD THE NEW FACILITY**  
10 **ECONOMICALLY?**

11 A. Yes. MAWC followed standard bidding procedures in all phases of  
12 engineering and construction of the new treatment plant. Moreover, portions  
13 of the old treatment plant were converted to new uses. In order to further  
14 control costs, MAWC took the innovative approach of utilizing existing  
15 materials and parts for use in the new plant.

16  
17 **Q. IS THE OLD TREATMENT PLANT STILL IN SERVICE?**

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

MAWC, along with its design consultants, reviewed the existing plant clarification zone and determined that this type of zone was not appropriate for the settling required and would require two additional clarifiers to meet the total redundancy. MAWC also reviewed the existing extended aeration zone and determined that it would require additional height in order to meet the future ammonia removal that would be required at the next renewal of the NPDES permit. Therefore, the practical solution was to install a 150,000 gpd extended aeration and clarification plant and to use the existing 75,000 gpd plant's aeration zone for the redundant clarifier and other sections of the existing plant for a sludge holding tank.

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

A. Yes, the old and new treatment facilities have been combined into one and now serve the entire area.

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

A. The Company believes that it prudently designed and built a 150,000 gpd waste water treatment facility of which 75,000 gpd replaced an existing facility. Of the total project cost of \$2,040,281, the total non-treatment cost of plant built is \$479,965, which is not part of the capacity expansion or the reasons for Staff's additional capacity adjustment. Contributions in aid of construction have been received in the amount of \$538,069. Staff, however,

1 has reduced the Company's rate base by \$2,179,907. As to the treatment  
2 facility, MAWC expects that prudent facilities, constructed in accordance with  
3 the Company's obligation to serve and which are currently in use and useful,  
4 should be included in MAWC's rate base.

5  
6 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

7 **A.** Yes, it does.

Rebuttal Schedule KHD-1

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

subacct	naruc	acc 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)	20,891		20,891	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)	53,230		53,230	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)	4,050		4,050	4/23/2007 0:00
371200	365.000	Process Pumping Equipment - Submersible Centrifugal Pump	40,501		40,501	4/23/2007 0:00
354400	371.000	HVAC/Plumbing - HVAC Equipment (Air Condition Unit/Air Chiller, Heat Pump)	17,357	17,357		4/23/2007 0:00
354400	371.000	Structure - Manhole/Catch Basin	23,143		23,143	4/23/2007 0:00
354400	371.000	Structure - Paving (Parking Lot, Sidewalk, Driveway, Road)	46,287	46,287		4/23/2007 0:00
354400	371.000	Structure - Vault/Chamber/Pit (Concrete, Fiberglass, Plastic, Steel)	157,374		157,374	4/23/2007 0:00
354400	371.000	Structure - Wood Building	231,433	231,433		4/23/2007 0:00
354400	371.000	Structure - Fence (Barrier, Gate, Masonry, Palisade, Wire Mesh, Wooden)	39,286	39,286		4/23/2007 0:00
354400	371.000	Structure - Vault/Chamber/Pit (Concrete, Fiberglass, Plastic, Steel)	52,228		52,228	4/23/2007 0:00
354400	371.000	Structure - Wood Building	41,782	41,782		4/23/2007 0:00
380000	372.000	Electrical - Generator (Alternator - AC, DC)	46,287		46,287	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)	19,672		19,672	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)	52,228		52,228	4/23/2007 0:00
381000	372.300	Pipe and Fittings - Ductile Iron 8"	43,871		43,871	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 Chancel Gate, Pinch, Piston, Plug, Presure/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	7,522		7,522	4/23/2007 0:00
396000	396.000	Instrumentation - Control System - Programmable Logic Controller	10,993		10,993	4/23/2007 0:00

Total UPIS

\$2,040,781 \$479,965 \$1,560,817

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	21,268		21,268	10/6/2007 0:00
271160	O'Brien	100,000		100,000	6/22/2006 0:00
271160	O'Brien	143,846		143,846	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

538,069 - 538,069

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

**Rebuttal Schedule KHD-2**

**Sand Creek Committed Loads**

Committed Flows	Agreement in Place	# of lots remaining	Guideline Estimated Flow GPD
Clover Lake	paid tap on fees	34	12,580
Osage Trials	paid tap on fees	15	5,550
Lammert Lane	2 of 3 paid tap on fees	3	1,110
Moto Mart	None	3	1,110
Craig Drive	paid tap on fees	8	2,960
Pete O'Brien Road	paid tap on fees	7	2,590
Cedar Hill Road	paid tap on fees	10	3,700
Brookside & Honeysuckle	paid tap on fees	8	2,960
O'Brien Place	Contractual Agreement	114	42,180
Total		202	74,740

Current Sand Creek load 66,110 gallons  
Design Sand Creek Load 150,000 gallons  
  
Uncommitted Remaining Capacity **9,150** gallons

Lake Tamarac	Term Sheet	50	18,500
Total		252	93,240

Current Sand Creek Load 66,110 gallons  
Design Sand Creek Load 150,000 gallons  
  
Uncommitted Remaining Capacity **-9,350** gallons