

Exhibit No.:
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Loss Reduction Deferral
Mechanism, Demand-Side Water
and Energy Efficiency*
Witness: *James A. Merciel, Jr.*
Sponsoring Party: *MO PSC Staff*
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Case No.: *WR-2015-0301*
Date Testimony Prepared: *February 11, 2016*

MISSOURI PUBLIC SERVICE COMMISSION

COMMISSION STAFF

REBUTTAL TESTIMONY

OF

JAMES A. MERCIEL, JR.

MISSOURI-AMERICAN WATER COMPANY

CASE NO. WR-2015-0301

Jefferson City, Missouri
February 2016

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**TABLE OF CONTENTS OF
REBUTTAL TESTIMONY
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JAMES A. MERCIEL, JR.
MISSOURI-AMERICAN WATER COMPANY
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EXECUTIVE SUMMARY 1
SUPPLY-SIDE DEFERRAL MECHANISM 2
DEMAND-SIDE EFFICIENCY EXPENSE 8

1 A. Yes. “Supply-side” refers to water being delivered to customers and
2 supply-side energy conservation specifically refers to measures taken by MAWC regarding
3 reducing energy use in providing that water. “Demand-side” refers to customer water use and
4 demand-side energy conservation refers essentially to customers reducing water usage and
5 thereby conserving energy.

6 Q. Would you provide a summarization of your rebuttal testimony?

7 A. Staff recommends against implementing a supply-side capital expenditure
8 deferral program at this time. But given the worthy goal of reducing energy consumption,
9 Staff recommends further study of the benefit to ratepayers and value of a capital deferral
10 incentive. Then, if such a program is deemed to be worth the effort, then development of
11 defining includable projects and determination of appropriate capital expenditure threshold
12 and limit levels should be accomplished through a collaborative of interested parties. Staff
13 also recommends further study of a demand-side conservation program through a
14 collaborative. For both of these issues, collaborative groups are necessary in order to identify
15 and study available resources for data collection and research, as well as to develop programs
16 that are going to be ultimately accepted by the various stakeholders.

17 **SUPPLY-SIDE DEFERRAL MECHANISM**

18 Q. What is Staff’s position regarding the supply-side capital deferral proposal?

19 A. While Staff agrees that DE’s concept of encouraging MAWC to undertake
20 energy conservation measures is positive and beneficial, and that MAWC and all water and
21 sewer utilities should take reasonable measures to evaluate projects and updates that will
22 decrease the overall amount of energy required to provide water and wastewater service to its

1 customers, it is Staff's position that it opposes the supply-side capital deferral program as
2 currently proposed by DE witness Epperson in her direct testimony.

3 Q. Please provide Staff's reasoning for opposing DE's proposal.

4 A. Staff has five main reasons for opposing DE's proposal.

5 Q. What are the five reasons?

6 A. The reasons, described further below, are:

- 7 1. A deferral of capital expenditures is not considered by Staff to be the
8 proper way of handling capital expenditures;
- 9 2. Staff is unsure of the benefit or the need to provide such a deferral as an
10 incentive for MAWC to undertake water and energy savings projects;
- 11 3. Details of what projects, or portions of projects that would be eligible
12 for inclusion;
- 13 4. Cost effectiveness is not presently addressed as a factor for eligible
14 capital projects; and,
- 15 5. Staff is unsure whether or not DE's proposed threshold levels to begin
16 the deferral, and to limit of the amount that may be deferred, are
17 reasonable.

18 Q. Would you please describe the first reason?

19 A. A deferral of capital expenditures is not considered by Staff to be the proper
20 way of handling capital expenditures, with a very few exceptions. Deferral of capital
21 expenditures, in general from an accounting perspective, is discussed in the rebuttal testimony
22 of Staff witness Mark L. Oligschlaeger.

23 Q. Would you please describe the second reason to reject the deferral proposal?

1 A. MAWC already undertakes projects that result in water loss reduction which,
2 among other things, reduces energy usage and also includes energy savings measures in other
3 projects. Staff is therefore unsure of the benefit or the need for an incentive.

4 Q. What projects has MAWC undertaken to address water loss and energy usage?

5 A. Various capital projects are stated and described in the direct testimonies of
6 MAWC witnesses Kevin H. Dunn and Philip C. Wood, filed on July 31, 2015. Although
7 these witnesses list and describe the projects to illustrate capital investment needs, energy
8 savings and energy rebates are involved with a number of the projects.

9 Q. Are the projects that involve energy conservation and/or water loss reduction
10 undertaken for the sole purpose of addressing those issues?

11 A. The majority of MAWC's capital projects are not undertaken for the sole
12 purpose of reducing energy or reducing water loss, although they could result in energy
13 savings. An example of a project that is solely for the purpose of energy conservation would
14 be building light fixture replacements. An example of a project that results in energy savings
15 would be a water main replacement undertaken because of frequent main breaks. Although
16 the purpose of the replacement might be to reduce the cost of main breaks, a savings of
17 reduced lost water for each break is also realized.

18 Q. Would it ever be feasible to replace water mains for the purpose of reducing
19 energy consumption?

20 A. Yes, it could be. Water utilities sometimes undertake leak detection and repair
21 programs specifically to address water loss. I recommended, in the Staff Report - Revenue
22 Requirement Cost of Service filed on December 23, 2015, that such a program should be

1 considered for MAWC's Saddlebrooke system which is presently experiencing losses of
2 almost four (4) times customer usage.

3 Q. Would you please describe the third reason to reject the deferral proposal?

4 A. Details regarding exactly how the program would work are uncertain. This
5 means that there are no criteria that can be used to define projects or portions of projects that
6 would be eligible for inclusion.

7 Q. Can you give examples of questionable deferral inclusions?

8 A. Yes. If a building used by MAWC for operations is replaced, and the new
9 building has lighting that is more energy efficient than that in the old building, then a question
10 that seems obvious is whether the whole building should be includable, or just the cost of the
11 lights. The same scenario could apply to a booster pump station, where the entire facility is
12 replaced including new pumps and electric motors that are more efficient than the old pumps
13 and motors. Again, it should be defined at the outset whether or not the entire project,
14 structure, security devices and ancillary building features be includable, or just the pumps and
15 motors. Several specific capital projects that result in energy savings are outlined in
16 Mr. Wood's testimony, however, the vast majority of capital spending involved replacement
17 of obsolete assets; and in those situations improved energy use was not the specific purpose,
18 but it was accomplished when the obsolete assets were replaced.

19 Q. Why is it important to establish criteria to determine the eligibility of capital
20 expenditures?

21 A. Such criteria are extremely important in order to avoid after-the-fact arguments
22 about projects and associated capital expenditure deferred by MAWC. A deferral program
23 must be able to provide guidance both to MAWC so that it can correctly and properly defer

1 projects and capital expenditure amounts as intended by the deferral program, and to Staff,
2 OPC, DE or other parties who review MAWC's deferral activity so that they can properly
3 evaluate reasonableness of inclusions consistent with the intent of the deferral program.

4 Q. Would you please describe the fourth reason to reject the deferral proposal?

5 A. Cost effectiveness is not presently addressed or required to be quantified for
6 the eligible capital projects, whether main replacements or major pump/motor upgrades or
7 other items. While energy reduction and water loss reduction are always worthy goals, the
8 capital costs must be borne by ratepayers, and if the costs they must bear far exceed the
9 benefits of a project, then it may not be worthwhile even if there are some energy savings.

10 Q. Are obsolete main replacements made for the purpose of reducing water loss?

11 A. Not necessarily. Justification for main replacement is most often not
12 specifically for the sole purpose of reducing water loss. Main replacement projects, including
13 those that MAWC undertakes in its St. Louis County service area through the ISRS program,
14 are most often undertaken because the water main pipeline is obsolete, as evidenced by
15 frequent main breaks.

16 Q. Would the cost savings of reduced lost water justify the capital cost of
17 main replacement?

18 A. The cost of water main replacements in most situations would not be justified
19 by energy and production savings alone. Main replacement is most often justified by the cost
20 savings of reduced main break repairs which can cost up to several thousand dollars each
21 when ground and pavement restoration is included, along with the intangible benefits of
22 reduced water outage customer impact and reduced automotive traffic disruptions when
23 repairs take place in streets. Energy savings of course exist as another benefit where leaks

1 and breaks of obsolete water mains were the causes of water loss, sometimes extensive.
2 I would question whether or not the expense of main replacements with a deferral program is
3 justified solely for energy savings, and whether or not it is reasonable to expect MAWC to
4 increase main replacements beyond that justifiable by main break and leak repair costs.

5 Q. Would you please describe the fifth reason to reject the deferral proposal?

6 A. Staff is unsure whether or not DE's proposed threshold levels to begin the
7 deferral over the amount of \$100 million of capital investment per year and, and limit the
8 amount to \$100 million of capital investment per year, are reasonable. Although it appears
9 that DE studied MAWC's spending, Staff is unsure how those amounts were determined
10 by DE, and whether they would really fit well for MAWC's capital budget. MAWC's
11 acquisition of additional systems could be a factor in capital spending levels, because such
12 capital expenditure is used for company expansion, and is variable and independent of capital
13 budgeting intended to be used for the benefit of existing customers. Also, Staff is unsure
14 whether or not spending threshold and limit levels are to be assigned to operating districts or
15 simply applied to MAWC's entire operation.

16 Q. Why are threshold and limit levels as related to MAWC's capital
17 budget important?

18 A. It is important to assure that a deferral program could actually be useful.
19 If MAWC is unable to apply capital expenditures and meet threshold and limit levels, then
20 there would be no point in even setting up a deferral program. Also, similar to criteria
21 defining includable projects, criteria that better defines factors such as whether or not to
22 include extraordinary spending for system acquisitions, or whether or not threshold and limit

1 levels should be subdivided and assigned to various MAWC service areas, or combinations of
2 service areas, needs to be addressed.

3 Q. Can these questions and concerns be addressed somehow, so that it can be
4 positively determined whether or not a program designed to incentivize MAWC is realistic?

5 A. Yes, I think they can be addressed and such a determination made.
6 As described in this rebuttal testimony, adequate details regarding how a deferral program
7 should be administered is vital, but that detail does not exist at present. Staff recognizes that
8 efforts to realistically address water loss reduction and energy savings are good, and Staff is
9 certainly open to exploring DE's ideas. Evaluation, first, of whether or not any special
10 ratemaking treatment and whether or not it is workable and a benefit to MAWC ratepayers
11 must be done, either in the context of this case or after this case is finished. If it is determined
12 that special ratemaking treatment is beneficial, then details of how the program is intended to
13 work must be carefully determined and clearly outlined.

14 Q. How should these questions and concerns be studied and addressed?

15 A. These questions would best be addressed by Staff, MAWC, DE, and other
16 interested stakeholders working together as a collaborative. Unless and until the benefits of
17 creating a deferral program at all can be determined by a collaborative, and if so whether or
18 not a workable one can be adequately developed by the collaborative, then administration of
19 such a program could be problematic and controversial.

20 **DEMAND-SIDE EFFICIENCY EXPENSE**

21 Q. What is Staff's position regarding demand-side spending by MAWC to
22 promote water use reduction and conservation by customers?

Rebuttal Testimony of
James A. Merciel, Jr

1 A. Staff is not opposed to consideration of such a spending program. However,
2 there are unaddressed questions that pertain to reasonableness and determination of the level
3 of 0.5% of total revenue, and less than 20% of the program fund to be available for
4 administration, outreach, and evaluation costs, as stated by Mr. Hyman in his testimony.

5 Q. If these spending levels were to be adopted for demand-side water use and
6 conservation programs, what would be the impact upon ratepayers?

7 A. This amount of revenue would amount to an impact of approximately
8 \$3.30 per year per customer, based on approximate numbers of \$1.55 million program cost
9 and 470,000 customers.

10 Q. Could the reasonableness of spending levels be determined?

11 A. Yes. Staff would agree that further study of the cost-benefit of such a program
12 is appropriate. Mr. Hyman, in his testimony, discussed the benefits of evaluation of program
13 details by a collaborative comprised of interested stakeholders. Staff supports, at the least,
14 development of a demand-side conservation program through the work of a collaborative, if
15 other parties show enough interest to work on the development of such a program.

16 Q. Does this conclude your rebuttal testimony?

17 A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water)
Company's Request for Authority to Implement) Case No. WR-2015-0301
a General Rate Increase for Water and Sewer)
Service Provided in Missouri Service Areas)

AFFIDAVIT OF JAMES A. MERCIEL, JR.

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

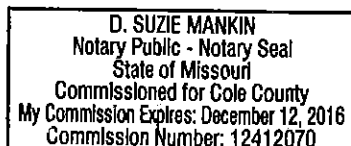
COMES NOW JAMES A. MERCIEL, JR. and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing REBUTTAL TESTIMONY; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.


JAMES A. MERCIEL, JR.

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 11th day of February, 2016.




Notary Public