Missouri Public Service Commission

POST OFFICE BOX 360
JEFFERSON CITY, MISSOURI 65102
573-751-3234
573-751-1847 (Fax Number)
http://www.psc.state.mo.us

July 24, 2000

Mr. Dale Hardy Roberts
Secretary/Chief Regulatory Law Judge
Missouri Public Service Commission
P. O. Box 360
Jefferson City, MO 65102

FILED[2]
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Missouri Public Service Commission

RE: WR-2000-281, et al.

Dear Mr. Roberts:

Enclosed for filing in the above-captioned case are an original and eight (8) conformed copies of an **INITIAL BRIEF OF STAFF.**

This filing has been mailed or hand-delivered this date to all counsel of record.

Thank you for your attention to this matter.

Sincerely yours,

Keith R. Krueger
Deputy General Counsel
(573) 751-4140
(573) 751-9285 (Fax)

KK/jb
Enclosure
cc: Counsel of Record

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BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water Company's Tariff Sheets Designed to Implement General Rate Increases for Water and Sewer Service provided to Customers in the Missouri Service Area of the Company	))))))	Case No. WR-2000-281, et al. (Consolidated)

INITIAL BRIEF OF STAFF

Submitted by:

Keith R. Krueger, #23857
Attorney for the Staff of the
Missouri Public Service Commission
P.O. Box 360
Jefferson City, Mo 65102
(314) 751-4140

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INITIAL BRIEF OF STAFF

COMES NOW the Staff of the Missouri Public Service Commission ("Staff") and for its Initial Brief states to the Missouri Public Service Commission ("Commission") as follows:

INTRODUCTION

Missouri American Water Company ("MAWC" or "Company") filed revised tariff sheet for the purpose of implementing a general rate increase for water service (Case No. WR-2000-281) and a general rate increase for sewer service (SR-2000-282) on October 15, 1999. The operation of law date for the revise tariff sheets is September 15, 2000. The Commission held an evidentiary hearing on the Company's rate case on June 5-9, 2000, June 14-16, 2000, and June 26-27, 2000.

The Company serves seven separate water districts, located in St. Joseph, Joplin, St. Charles, Warrensburg, Mexico, Parkville and Brunswick, Missouri, and one sewer district, located in Parkville, Missouri. None of the seven water districts are physically interconnected to another district.

The Company's tariffs for water service are currently uniform throughout the state. That is, service to each of the seven districts is governed by a single tariff. This is known as "Single Tariff Pricing," or "STP," and is to be distinguished from a practice known as "District Specific Pricing," in which separate tariffs might be prepared for each of the seven district's of the Company.

MAWC has made numerous construction improvements to the facilities throughout its system, at a cost of more than $90 million, since its last rate case. By far the largest such improvement was the construction of a new water treatment plant and related facilities to serve the St. Joseph District. The cost of these facilities in the St. Joseph District, alone, was approximately $70 million.

The water treatment plant that previously served the St. Joseph District ("the old plant") drew its water supply from the Missouri River. Some parts of the old plant were more than 100 years old. The Company experience problems at the old plant in 1989 as a result of low water flows in the Missouri River. In 1993, the St. Joseph area suffered from a record flood ("the great flood"), which damaged the old plant and interrupted service to the customers in the St. Joseph for a few days.

In an attempt to address the potential problems presented by low water flows and flooding, as well as the age of the old, river source water treatment plant, the Company decided that it needed to either make major improvements to the existing plant or construct a new plant. After conducting various feasibility studies, MAWC decided that the construction of a new water treatment plant, using a groundwater source of supply, was the best available option.

In 1997, the Company filed an application to the Commission, in Case No. WA-97-46, in which it sought a certificate of authority to increase its service area. The Company sought this additional service territory in order to construct a new well field, new water treatment plant at a higher elevation away from the river, and new transmission lines. In this case, MAWC also sought approval from the Commission of its plan to construct a new water treatment plant.

The Commission granted the requested certificate of authority in Case No. WA-97-46. The Commission also stated that construction of facilities for a new ground water source of supply and treatment at a remote site was a reasonable alternative. However the Commission declined to make a finding regarding the prudence of the construction costs to be incurred by the Company and the management of construction of the proposed project.

MAWC thereafter commenced construction of the well field, the new water treatment plant and the transmission line (collectively, the "SJTP") in accordance with the proposal that it presented to the Commission in Case No. WR-97-46. Construction was completed and the facilities were placed in service on April 30, 2000.

The Company now seeks a rate increase of approximately $16 million.

MAWC, the Staff, the Office of the Public Counsel ("OPC") and various intervenors attended a prehearing conference on February14-18, 2000 and reached agreement on some of the issues in this case. On July 3, 3000, the Company, Staff and OPC filed a Joint Recommendation, which summarized the agreements reached at the prehearing conference.

By far the most significant remaining issues are (1) the amount of construction cost that is associated with the SJTP that should be included in the Company's rate base, and (2) the rate design that should be adopted, to establish how the Company's costs will be recovered from its customers.

The Staff contends that the Commission has already found in Case No. WA-97-46, that the Company's *decision to construct* the new water treatment plant was prudent, and that it was reasonable for the company to rely on this finding by the Commission, and to proceed with construction. The Staff further contends that *most* of the costs associated with construction of the new plant were prudently incurred and should be included in the Company's rate base; however some adjustments do need to be made.

OPC and various intervenors contend that construction of the SJTP was unnecessary and imprudent, and that the Company should have rebuilt the old plant, at a cost of approximately $35 million, instead of building the new plant at a cost of about $70 million.

The Staff also contends that, although STP and DSP are both appropriate rate designs in certain circumstances, the Commission should adopt DSP in this case. DSP is appropriate in this case, because it is the best way to achieve the major objective of rate design, which is to assign responsibility for a cost to the cost causer. Because of the very large construction costs associated with the SJTP in this case, the continued use of STP in this case would require customers in the other six districts to provide major subsidies to the customers in the St. Joseph District.

Any rate increase that allowed the Company to immediately recover all of its prudently incurred costs would result in "rate shock" to at least some of MAWC's

customers. The Staff therefore recommends that in the areas where the rates that result from DSP would result in very large rate increases, the Commission should order a five-year phase-in of the rate increase.

The other issues that were not resolved by agreement of the parties were identified in the Proposed List of Issues, Order of Witnesses and Order of Cross-Examination that the Staff filed on behalf of all parties in this case on May 25, 2000.

This brief will address all of the issues that have not been resolved by agreement of the parties in the order that they appear on the Proposed List of Issues, Order of Witnesses and Order of Cross-Examination.

ARGUMENT

ISSUE NO. 1: ACCOUNTING AUTHORITY ORDER

Should MAWC be allowed to include in the cost of service, through rate base and expense adjustments, amounts related to post-in-service AFUDC and deferred depreciation expense for the period from the in-service date of the new St. Joseph water treatment plant to the operation of law date in this case?

On November 19, 1999, the Company filed a motion for an accounting authority order ("AAO") with respect to its new St. Joseph water treatment plant.

The Commission eventually ruled, in an order issued March 23, 2000, that the Company "may capitalize post-in-service AFUDC[1] and defer depreciation with respect to its new water treatment plant in St. Joseph, Missouri, pending the final determination of this Commission." The Commission stated that the Company did not need Commission approval to capitalize the AFUDC or to defer depreciation on it new plant. But the Commission added: "All issues, including whether or not these costs are indeed extraordinary and non-recurring, remain for the hearing ..."

[1] "AFUDC" refers to Allowance for Funds Used During Construction.

The question presented is, therefore, whether the Company may now include AFUDC and deferred depreciation expense for the period of time between the in-service date of the new St. Joseph water treatment plant and the effective date of the order in this case in its cost of service.

The Company should not be allowed to include these items in its cost of service, because they are not extraordinary, unusual and unique, and nonrecurring.

The most basic requirement that a water company must satisfy before it may provide utility services to the public is that it must construct or have access to adequate production facilities. As stated by Staff witness Stephen M. Rackers, "Construction of facilities to provide service is certainly a typical and customary business activity of MAWC." (Rackers Rebuttal, Ex. 53, p. 5, lines 8-10).

In this case, the timing of the events that, according to the Company, created the need for an AAO, was totally within the Company's control. The Company claims that the new water treatment plant was needed because the existing treatment plant had been out of service twice – first in 1989 (11 years ago), due to low water created by ice jams upstream on the Missouri River, and again in 1993 (seven years ago) due to flooding. The need for the new production facilities at St. Joseph was therefore not an unanticipated situation beyond the Company's control. The Company has been discussing the possible replacement of the plant for several years. It can hardly be said that the construction in this case resulted from some sort of emergency, or that the Company had to take immediate action, since six years elapsed between the 1993 flood and the construction of the water treatment plant.

The Company exercised total control over the planning and construction of this project. Furthermore, the Company also had total control over the timing and manner in which it sought to include the cost of the plant in the rates it charges to its customers. It knew the timetable for the construction of the new St. Joseph treatment plant when it filed its current rate case.

The period of time between the date when a utility experiences a change in the cost of the service it provides (either an increase or a decrease) and the date when the change in cost is recognized in the rates that the utility charges in known as "regulatory lag." Regulatory lag is, likewise, not an extraordinary event, but is a fundamental part of the process of utility regulation that exists in Missouri. During periods of excess earnings, regulatory lag may be beneficial to shareholders. During periods of increasing costs, such as the Company claims it experienced with regard to construction of the St. Joseph water treatment plant, regulatory lag may be detrimental to shareholders.

The Commission recognized these facts in its Report and Order in Case No. EO-91-358 and EO-91-360, where it said:

> Lessening the effect of regulatory lag by deferring costs is beneficial to a company but not particularly beneficial to ratepayers. Companies do not propose to defer profits to subsequent rate cases to lessen the effects of regulatory lag, but insist it is a benefit to defer costs. Regulatory lag is a part of the regulatory process and can be a benefit as well as a detriment. Lessening regulatory lag by deferring costs is not a reasonable goal unless the costs are associated with an extraordinary event.
>
> Maintaining the financial integrity of a utility is also a reasonable goal. The deferral of costs to maintain current financial integrity, though, is of questionable benefit. If a utility's financial integrity is threatened by high costs so that its ability to provide service is threatened, then it should seek interim rate relief. If maintaining financial integrity means sustaining a specific return on equity, this is not the purpose of regulation. It is not reasonable to defer costs to insulate shareholders from any risks. If costs are such that a utility considers its return on equity unreasonably low, the proper approach is to file a rate case so that a new

rate requirement can be developed which allows the company the opportunity to earn its authorized rate of return.
In the matter of the application of Missouri Public Service for the issuance of an accounting order relating to its electrical operations, 1 Mo.PSC 3d 200, 207.

MAWC witness James E. Salser frankly acknowledged that the Company's request for an AAO in this case was an attempt to insulate its shareholders from regulatory lag. (Salser Rebuttal, Ex. 7, p. 1, line 18 – p. 2, line 3).

Mr. Salser also cried poverty, claiming that the discontinuance of the capitalization of AFUDC and the commencement of depreciation on the St. Joseph water treatment plant would cost the Company $319,000 each month from May through mid-September 2000, and that the Company's return on common equity would fall to 4.22% for the period *from May through August 2000.* (Salser Rebuttal, Ex. 7, p. 4, lines 6-22).

However, it is important to note that this claimed period of low earnings would only last for about four months. In the case now being presented to the Commission, and in all rate cases, the Commission looks at a test *year* of 12 months, as a guide to determining whether the Company is entitled to a rate increase. And the Company's results for virtually any 12-month period show that the Company is not experiencing any financial emergency.

Actual and budgeted financial results show that for the 12-month periods ending on the last days of April, May, June, July, August, and September, 2000, the Company will experience returns on equity of 13.71%, 12.54%, 11.46%, 10.68%, 9.83% and 9.14%, respectively. (Rackers Rebuttal, Ex. 53, p. 6, lines 6-9). The Staff has recommended a return on equity in this case within the range of 9.50% to 10.75%. (McKiddy Direct, Ex. ___, p. 35, line7- p.36, line 5). Only for the 12 months ending in September would the Company's ROE fall below the low end of the Staff's range, and

the high return expected for the 12 months ending April 30, 2000, suggest that the Company was *overearning* until the construction of the St. Joseph treatment plant was completed.

Furthermore, the Company's earnings will remain well above the required minimum level of 1.5 times earnings. Even without an AAO or rate increase, MAWC's interest coverages will range from a maximum of 3.33 times down to a minimum of 2.72 times, during the period from April through September 2000.

In short, there is simply no financial reason why the Commission should feel compelled to include the post-in-service AFUDC in rate base and to defer the depreciation expense until the effective date of the order in this case.

ISSUE NO. 2: PREMATURE RETIREMENT

Shall the net plant investment associated with the existing St. Joseph water treatment plant facilities that are no longer providing service to St. Joseph customers be included in MAWC's rate base and amortized to expense?

When MAWC placed the new St. Joseph water treatment plant into service, it retired the "old" river source treatment plant. At the time of the retirement, the value of the old treatment plant included in rate base was $2,832,906, consisting of its original cost of $6,885,094, less a depreciation reserve of $4,052,188. The Company expects that it will incur costs of about $500,000 for the removal and demolition of the old plant.

The Staff believes it is inappropriate for the Company to be allowed to amortize the costs associated with the premature retirement of the old plant, which are presently *estimated* at $3,332,906 (consisting of the undepreciated balance of the old plant plus the costs of removal and demolition), at this time. Until a depreciation study can be

performed to evaluate the accuracy of the majority of the reserve and depreciation rates for a majority of the accounts, it would not be appropriate to propose an amortization for a single account. (Mathis direct Ex. 44, p. 4, lines 1-8)

Unfortunately, the depreciation study previously performed by the Company in Case Nos. WR-97-237 and SR-97-238 cannot be used to develop accurate depreciation rates in this case. This study was based upon flawed data, which distorted the Staff's calculations. (Mathis Direct, Ex. 44, p. 5, lines 1-7) It is therefore necessary to conduct a new depreciation study, to determine the proper amounts to include in the depreciation reserve account.

The Company has agreed to perform a depreciation study prior to the filing of its next rate case. See Item 2 of the Joint Recommendation filed by Company, Staff and OPC in this case on July 3, 2000. Until the results of this depreciation study are known, it is inappropriate to amortize any of the expenses associated with the premature retirement of the old plant.

The Staff recommends that both the plant account and the depreciation reserve be reduced by the original cost of the old treatment plant as of the date when the old treatment plant was taken out of service. These corresponding adjustments will preserve the estimated unrecovered investment of $2,832,906 until the depreciation study is performed. (Mathis Direct, Ex. 44, p. 4, lines 10-13)

The Company should also be permitted to reduce the depreciation reserve associated with the old treatment plant by cost actually incurred for removal and demolition when those costs are actually incurred. (Mathis Direct, Ex. 44, p. 4, lines 14-15)

ISSUE NO. 3: AFUDC CAPITALIZATION RATE

Should MAWC's rate base be adjusted to reflect a different capitalization rate for AFUDC?

MAWC has utilized the rate of return that was established in the Company's most recent rate case to determine the amount of AFUDC that is to be included in rate base. (Salser Rebuttal, Ex. 7, p. 5, lines 16-21). That is, the AFUDC was determined by, in essence, assuming that the carrying costs on construction work in progress ("CWIP") could be determined by applying the rate of return from the previous rate case to the outstanding monthly balances of CWIP. Staff contends that that calculation overstates the amount of AFUDC, and that this procedure should be changed to more accurately reflect the amount of AFUDC to be added to rate base and the true financing cost of CWIP.

The Staff recommends that the AFUDC rate be determined, on a monthly basis, by first reflecting the carrying charges associated with the Company's short-term debt as the primary financing cost of CWIP. To the extent that the balance of CWIP exceeds short-term debt in any month, the carrying charges for the CWIP, in excess of short-term debt should be determined by applying the composite rate of the outstanding amounts of other sources of financing available to the Company (long-term debt, equity and preferred stock). (Rackers Direct, Ex. 52, p. 14, lines 3-13).

MAWC typically utilizes short-term debt to finance construction projects and to build plant, and short-term financing is traditionally recognized as the primary source of construction financing. As a result, no short-term debt has been included in the capital structure. (Rackers Direct, Ex. 52, p. 14, lines 15-16). As of December 31, 1999, the

Company had approximately $35 million of short-term debt outstanding. This was less than the balance of plant then under construction. (Rackers Direct, Ex. 52, p. 14, lines 17-20).

Under the Company's proposal and prior practice, the carrying charges on short-term debt would not be reflected anywhere in the determination of the Company's rate base or rate of return. (Rackers Direct, Ex. 52, p. 13, lines 19-23 and p. 14 lines 16-17). As a result, the Company's rate base would be determined on the basis of a fiction that the carrying charges on CWIP are related to the rate of return from the prior case, which reflected no short-term debt. Since the failure to include short-term debt is an inappropriate practice that materially affects the cost of service (as noted above, it was $35 million as of December 31, 1999), it is a significant item that should be brought to the attention of the Commission and corrected. (Rackers Surrebuttal, Ex. 54, p. 2, lines 18-20)

Staff witness Rackers testified that the amount of the required adjustment is $1,289,674. (Ex. 109, Accounting Sch. 4-3, Adjustment No. P-20.2). The Company's rate base should be adjusted by $1,289,674, as recommended by the Staff.

ISSUE NO. 4: ST. JOSEPH TREATMENT PLANT AND RELATED FACILITIES ("SJTP") VALUATION

What valuation should be included in rate base for the water treatment plant and related facilities necessary to provide water for the St. Joseph District?

The value of the new St. Joseph water treatment plant that should be included in rate base is $66,536,410. This amount represents the total costs incurred in the construction of the new water treatment plant and its related facilities of $70,097,840,

reduced by an adjustment of $2,271,756 for excess capacity, as described more fully in subsequent pages of this Initial Brief, and an adjustment of $1,289,674 to reflect a different capitalization rate for AFUDC. The AFUDC adjustment is explained in the discussion of Issue No. 3 which is contained in this Brief.

In order to properly determine the value of the water treatment plant and related facilities to include in rate base, the Commission needs to address a series of questions.

The Commission must initially decide whether to sustain the Company's motion to strike certain portions of the direct testimony of OPC witnesses Ted L. Biddy, Russell Trippensee, St. Joseph Area Industrial Intervenors witness Charles D. Morris and Ernest Harwig, who testified on behalf of various intervenors. Basically, the Commission must determine whether it has previously decided, in Case No. WA-97-46, that the Company's decision to construct the St. Joseph water treatment and related facilities was "prudent". The Staff respectfully requests that the Commission sustain these Company motions filed on June 1, 2000, for the reasons expressed in these motions.

If, however, the Commission rejects this request and overrules the Company's motions to strike and to summarily determine that the decision to construct the new St. Joseph water treatment plant was prudent, the Commission must then perform a "two-step" analysis.

The first step is to determine whether the Company made a prudent decision when it decided to construct the new facility. In this regard, the Commission should carefully consider the effect of its Report and Order in Case No. WA-97-46, in which it found that "[construction of] facilities for a new ground water source of supply and treatment at a remote site [was] a reasonable alternative." The Staff agrees with the Company that it

did everything it could be expected to do before beginning construction of this very large project and that it sought the Commission's approval of what it proposed to do in advance. Staff also agrees that MAWC was acting reasonably when it relied on the Commission's Report and Order in Case No. WA-97-46 when it moved forward and built the new water treatment. The Commission should therefore find that the Company's decision to build the new ground water source of supply and treatment at a remote site was reasonable and prudent.

The second step in the analysis is to determine whether the Company constructed the new water supply and treatment plant in a prudent or reasonable manner. In performing this analysis, the Commission must examine whether any aspects of the cost of constructing the new facility were excessive because the Company did not properly manage the construction, or because the plant, as constructed, has excess capacity that is not presently "used and useful."

Ultimately, the Commission must determine how what valuation it should include in the Company's rate base for the facilities that are being used to serve the Company's St. Joseph District.

The Staff submits that the Company's management of the construction project was, for the most part, prudent, and that the construction costs were reasonable. However, the new water treatment facility does contain some excess capacity, and the cost of this excess capacity should not be included in the Company's rate base for the St. Joseph District.

The following pages of this Initial Brief will investigate each of these issues in turn. In addition, because one of the key elements of this Issue No. 4 is whether the

Company's actions were prudent, the Staff has included a brief discussion of the meaning of "prudence," and how the Commission can determine whether the Company acted prudently.

MAWC's Motion To Strike Testimony and Motion For Summary Determination

On June 1, 2000, the Company filed its Motion to Strike Testimony and Motion for Summary Determination. In this motion, the Company asked the Commission to strike certain portions of the testimony of four witnesses, and to summarily determine that MAWC's decision to construct the St. Joseph treatment plant and related facilities had already been found, in a prior case, to be prudent.

The Staff supports this Motion because it believes the Commission has already decided that the decision to build the new plant in St. Joseph was reasonable. Therefore, since the reasonableness or "prudence" of the decision to build a new facility has been approved as a result of the litigation in Commission Case No. WA-97-46, all testimony going to the issue of the decision to build the new plant is irrelevant, superfluous, and inappropriate. From Staff's perspective, in connection with the St. Joseph plant, the only issue properly before the Commission is whether the costs to build the new facility were reasonable.

Effect of the Commission's Decision in Case No. WA-97-46

As noted above, the Staff believes that in Case Number WA-97-46, the Commission found that the decision to build the new St. Joseph treatment plant was "reasonable" and that the Company has therefore met the prudence standard of scrutiny. Specifically, the Commission stated in WA-97-46 that "based on the extensive evidence

presented, the Commission finds that the proposed project, consisting of the facilities for a new ground water source of supply and treatment at a remote site is a *reasonable* alternative." (emphasis supplied). Staff notes that the Commission did not say that this choice of a new ground water facility was the "perfect" alternative. However perfection is not required, as the Commission stated in *In the Matter of Union Electric Company's Callaway Nuclear Plant and Callaway Rate Base and Other Issues*, 27 Mo P.S.C. 183, 192, 194 (1985).

In connection with the costs to build the new facility, the Staff would quote the plain language of the Commission's Order in WA-97-46 wherein it says that "the Commission will make *no finding* regarding the prudence of the actual costs incurred and the management of construction of the proposed project." (emphasis supplied). Thus, it is abundantly clear that the Commission reserved the issue of the reasonableness of the costs to construct the plant for later determination. Therefore, costs of construction were not pre-approved in WA-97-46.

The "prudence" standard

The Commission has wrestled with the meaning of "prudence" in several previous cases, and has enunciated a standard that should be used for a prudence analysis. In one such case, *Re: Union Electric Company*, supra, a proceeding that involved the construction of a nuclear power plant, the Commission stated that Union Electric had the burden of proving the "reasonableness" of the costs associated with the plant. The Commission then added that the reasonableness of these costs would be judged by using

the standard of "prudence" (*Id.*, at 192). The Commission said that prudence, in connection with the new facility, would be defined as follows:

> ...the company's conduct should be judged by asking whether the conduct was reasonable at the time, under all the circumstances, considering that the company had to solve its problem prospectively rather than in reliance on hindsight. In effect, our responsibility is to determine how reasonable people would have performed the tasks that confronted the company. (*Id.*, at 194)

The Commission noted in the above case, that in applying the prudence standard, it would not use a standard of "perfection" because that kind of analysis would rely too heavily on hindsight. (*Id.*, at 194)

The Staff contends that the prudence or reasonableness standard as it applies to this case requires a "two-tiered" analysis. Basically, the questions that should be asked are whether the decision to build the plant was reasonable, and if so, were the costs incurred to build that plant reasonable.

Does the new water treatment plant provide a safer, more reliable source of supply that the old St. Joseph water treatment plant?

The new SJTP obtains its source of supply from ground water wells located near the Missouri River. A ground water supply is better than a surface water supply for several reasons, according to Staff witness James Merciel. These reasons include the fact that ground water has more constant temperature, hardness, mineral content, organic content and turbidity, which makes it easier and more economical to treat. (Merciel Rebuttal, Ex. 49, p. 10, lines 1-6). In addition, water borne parasites such as *cryptosporidium* and *lamblia giardia* are more commonly found in surface water than in ground water, thus making ground water a safer source of supply. (Merciel Rebuttal, Ex. 49, p. 11, lines 4-8).

Dr. Charles D. Morris, an engineering professor at the University of Missouri-Rolla, testified on behalf of the St. Joseph Area Industrial Intervenors. He did not dispute Mr. Merciel's assertion that ground water is generally a safer source of supply than surface water. He did, however, claim that the ground water supply to the SJTP is "ground water under the direct influence of surface water," as defined by the U.S. Environmental Protection Agency ("EPA"). According to the EPA, "ground water under the direct influence of surface water means:

> any water beneath the surface of the ground with significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as Giardia lamblia or ... Cryptosporidium, or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions ... (Excerpt from Federal Register, Ex. 89)

Dr. Morris stated that it was his opinion that the ground water source for the SJTP is ground water under the direct influence of surface water. (Tr. 1836, line 23 – Tr. 1837, line 8). He agreed that the excerpt set forth above is "a definition as defined by the federal EPA" for the term "ground water under the influence of surface water." However, he was not satisfied with the EPA definition, but added, repeatedly, that the determination of whether ground water is "under the direct influence of surface water" is to be made by the state – apparently without regard for what the EPA definition states (Tr. 1811, line 6 – Tr. 1812, line 5; Tr. 1819, line 20 – Tr. 1820, line 34).

The Missouri Department of Natural Resources' ("MDNR") procedures for determining whether a water source is "ground water under the direct influence of surface water" are found on pages 34-41 of its *Guidance Manual for Surface Water System Treatment Requirements* ("Guidance Manual"), which the St. Joseph Area Industrial

Intervenor introduced as Exhibit 89. The Guidance Manual describes a four-step process for determining whether ground water is under the influence of surface water.

Step 1 of this procedure is to determine whether the water source is an obvious surface water source. (Ex. 89, p. 35). Dr. Morris agrees that the SJTP water supply is not from an obvious surface water source. (Tr. 1827).

Step 2 includes the following provision:

> Wells constructed into alluvium which records indicate have been constructed in a manner no less stringent than set forth for non public wells in the Water Well Construction Code 10 CSR 23-3.010 through 10 CSR 23-3.100 will be considered to be not under the direct influence of surface water if:
> ...
> b. the well is located at least 200 feet from any surface water ...
>
> (Ex. 89, pp.35-36).

The language in this provision from the Guidance Manual is in the disjunctive, so that if any of the four tests that are listed there are satisfied, the water source is not "ground water under the influence of surface water."

Dr. Morris said he had no reason to believe the wells at the SJTP were not constructed in accordance with the requirements of the Guidance Manual. (Tr. 1829, lines 6-11). He first testified that the wells were "approximately 200 foot" from the Missouri River, but he indicated that he was relying on the testimony of Company witness John Young, and said that he had not measured the distance. He added that the wells are 50 to 60 feet deep. (Tr. 1824, lines 4-24). However, later in his testimony, he apparently changed his mind, stating: "in my opinion, they're within 200 foot of the source." (Tr. 1830, lines 13-15).

Although Dr. Morris thought it was important that the state make the determination of whether a water source is under the direct influence of surface water, he

apparently does not like the way the MDNR does it, either. He does not believe the 200 foot limit should be a "magic cutoff" (Tr. 1832, lines 8-16), and he things that "200 foot is an arbitrary number." (Tr. 1843, lines 11-25). Perhaps he would prefer to establish his own standard.

Step 3 of the Guidance Manual provides for an on-site inspection of the ground water source, or a survey. (Ex. 89, pp. 36-37). Dr. Morris acknowledged that he had not performed such an inspection or survey. Instead, he relied on a hydrogeologic report that was prepared for the Company, to conclude that the ground water was under the direct influence of surface water. He acknowledged, however, that this hydrogeologic report did not comply with the procedures described in the Guidance Manual. (Tr. 1833, line 11 – Tr. 1834, line 7).

If a water source is not classified as under the direct influence of surface water pursuant to Steps 1-3 of the Guidance Manual, Step 4 provides for an examination of the biological life found in the water supply. Dr. Morris said he had not done any such examination of the SJTP water supply. (Tr. 1834, line 20 – Tr. 1835, line 20).

Based on all of the foregoing, the Staff submits that the SJTP water source is not "under the direct influence of surface water," for the following reasons:

- The water is more than at least 200 feet from the Missouri River, horizonally, and in addition it is 50 to 60 feet deep, so it is more than 200 feet from surface water. This alone is sufficient proof that it is not classified as "under the direct influence of surface water."

- There is no evidence whatsoever in this case that any of the biological life described in the regulations of the EPA and MDNR is present in the water supply.
- The only evidence of significant physical changes in the water's characteristics is either vague and unspecific as to its extent, or it is based on the measurement of conductivity as a proxy for hardness.
- There is no evidence that the DNR has ever made a finding that the SJTP water source was under the direct influence of surface water.

The Staff therefore submits that there is no persuasive evidence that the water supply is under the direct influence of surface water, or that it is unsafe in any way. This source is supply is safer and better than the water that was obtained from the Missouri River and treated in the old plant.

Should the Company have pursued the alternative of rebuilding the old plant, instead of building the new St. Joseph plant?

Staff witness Merciel stated that portions of the old plant were over 100 years old and that many other plant components were from 40 to 100 years old. (Merciel Direct, Ex. 48, p. 3, lines 4-6). Merciel stated that because of this advanced age, it was appropriate and economically justifiable to replace the facility (Merciel Direct, Ex. 48, p. 3, lines 9-13).

Mr. Merciel noted that the Company would have, no doubt, faced intense criticism if it had made a substantial investment in the old treatment plant, which was located in a flood plain, if the rebuilt plant was somehow damaged by another severe flood. (Merciel Rebuttal, Ex. 49, p. 12, lines 13-21).

Mr. Merciel testified that it was important to consider factors other than just the costs of rebuilding the old plant versus the cost of building a new one at a different location. (Merciel Direct, Ex. 48, p. 4, lines 7-8). Mr. Merciel stated that other important considerations included: the day-to-day fluctuations in the quality characteristics of the river water; the expected changes in the drinking water regulations that apply to surface water; the possibility of low river water levels; governmental policies against constructing new water treatment plants in flood plains; and, most significantly, the continued risks associated with river flooding even if flood protection measures were taken. (Merciel Direct, Ex. 48, p.4, lines 8-20).

It should also be noted that when Mr. Merciel compared the costs of rebuilding the old plant versus building a new one, the difference between the two costs of the two choices was only about $400,000 ($63.3 million for rebuilding the old plant, compared to $63.7 million for constructing a new plant). (Merciel Rebuttal, Ex. 49, p. 7, lines 4-9).

In addition, Mr. Merciel testified that there are several benefits related to a ground water source versus a surface water source. Specifically, ground water is more constant in terms of temperature, hardness, mineral content, organic content, and turbidity. (Merciel Rebuttal, Ex. 49, p. 10, lines 1-6). In addition, Merciel stated in testimony that water borne parasites such as *cryptosporidium* and *lamblia giardia*, which can cause moderate to severe illness in humans, are more commonly found in surface water rather than in ground water. (Merciel Rebuttal, Ex. 49, p. 11, lines 4-8).

Mr. Merciel summarized his testimony concerning MAWC's decision to use a ground water source by saying that there is "value" in using ground water as a source of

supply, because such a source generally minimizes the problems and risks connected with water treatment. (Merciel Rebuttal, Ex. 49, p. 11, lines 19-21).

OPC witness Ted Biddy's approach of estimating the costs to upgrade the old plant by utilizing an evaluation completed by the Company in 1991 and then updating the costs to 2000 prices did not form a reasonable basis for comparing the cost of a plant upgrade to the cost of a new treatment plant, according to Mr. Merciel. (Merciel Rebuttal, Ex. 49, p. 2, lines 9-15). Merciel stated the 1991 evaluation was of little value, because it was limited to replacing certain old plant components, it constituted only a minimum upgrade, and it was prepared prior to the great flood of 1993. For example, Mr. Biddy's estimate did not include any allowance for the upgrading or relocation of the pump building at the old plant.

In addition, Mr. Merciel disagreed with Mr. Biddy's contention that the old plant could have been "flood proofed". Mr. Merciel testified that even with additional levee protection, there would still be a significant risk of flooding at the old plant site with the concomitant risk of a water supply failure. (Merciel Rebuttal, Ex. 49 p. 3, lines 18-19). Further, Mr. Merciel stated that the old plant site's pump building was below the level of the flood of record. Mr. Biddy, himself, even acknowledged that if flood water did again reach the old plant area, the pump building would be in jeopardy. (Tr. 1626, lines 20-23). The pump building at the old plant site housed the pumps and motors that transported river water to the treatment facility and the pumps and motors that sent the treated water to the distribution system. (Tr. 1625, lines 1-8). Mr. Merciel's point regarding the pump building was simply that if water did penetrate the defenses offered by an additional levee

that was constructed in the manner that Mr. Biddy proposed, an essential component of the treatment facility would be threatened.

The validity of Mr. Biddy's contention that the old plant site could be "flood-proofed" was also called into question by Mr. Biddy's own admission that he had not studied the soil make-up of the existing levee system around the old plant as to its ability to resist saturation from flood waters (Tr. 1628, lines 19-23), and his candid acknowledgement that he understood levees failed in Missouri during the 1993 flood (Tr. 1629, lines 7-11). In addition, Mr. Biddy would not state that the additional levee protection he proposed would be 100% effective in protecting the old plant. Mr. Biddy said that "...as good as man can design, it would be flood proof." (Tr. 1627, lines 9-18).

Mr. Biddy's general credibility was further undermined when several factual assertions that he characterized in his testimony as "obvious" turned out to be based on strikingly flawed assumptions. For example, Mr. Biddy testified that MAWC used the graded roadway and County Line Road during the flood. (Tr. 1616, lines 17-23). During cross-examination, Mr. Biddy admitted that he had merely "assumed" this road had been used during the great flood of 1993 (Tr. 1617, lines 8-11; Tr. 1619, lines 4-25; Tr. 1620, lines 1-19). In fact, the evidence showed that the only access to the plant during the height of the flood was by boat. (Tr. 1619, lines 18-25; Tr. 1620, lines 1-6).

Mr. Biddy also testified in his direct testimony, at page 14, lines 7 through 9, that County Line Road could be used during flood situations. While under questioning on the stand, he acknowledged that he did not drive or walk the length of this road to determine its actual usability, during flood conditions or otherwise. (Tr. 1621, lines 15-18; Tr. 1622, lines 7-13). About all that Mr. Biddy had done during his initial visit to the old plant was

photograph this roadway. He then boldly asserted in testimony before the Commission, that it was, in fact, useable during a flood. (Biddy Direct, Ex. 19. p. 14, lines 7-9). Staff witness Merciel's evidence, in stark contrast, established that the Staff had in fact conducted a field investigation of the road. The Staff investigation revealed that the roadway had been blocked off by gates and was no longer a public way suitable for access during emergency situations. (Merciel Rebuttal, Ex. 49, p. 6, lines 5-19).

Lastly, Mr. Biddy once again, matter of factly represented to the Commission that one or two culverts installed on an alternate access roadway would make the roadway passable during a flood. (Tr. 1622, lines 23-254; Tr. 1623, lines 1-4). During cross-examination, Mr. Biddy admitted that he reached this "one or two culverts will solve the problem" conclusion without ever visiting the creek sites, where the creeks intersected the roadway, to determine whether the installation of culverts was actually a suitable solution. In fact, Mr. Biddy was totally unaware of the nature of the creeks or their actual size. (Tr. 1623, lines 5-19). Repeatedly, with absolutely no personal knowledge of actual facts, Mr. Biddy "solved" problems with the old plant using bare, inaccurate, or baseless assumptions.

What asset value should be included in rate base for the St. Joseph water treatment plant and related facilities?

Staff contends that the valuation of the new water supply and treatment plant facilities in the St. Joseph District should be the actual costs incurred and recorded on the books of the Company as of April 30, 2000, adjusted to reflect the proper AFUDC capitalization and capacity. The total costs for the new St. Joseph water supply and treatment plant facilities are embedded in Staff's True-Up Accounting Schedules (Exhibit

109). This Exhibit was admitted into evidence during the true-up portion of the hearing before the Commission.

Although not this construction cost figure was not specifically identified in the Total St. Joseph District Plant In Service Costs, as presented in Staff's True-Up Accounting Schedule 3 (part of Exhibit 109), Staff's review of these total St. Joseph District costs indicates that $70,097,840 is the total cost of the new St. Joseph Supply and Treatment Plant prior to Staff adjustments. Adjusting this total figure by subtracting Staff adjustments for excess capacity ($2,271,756) and subtracting Staff adjustments for AFUDC ($1,289,674), results in a total valuation of the new facility for rate base inclusion purposes of $66,536,410.

Were any of the costs of building the new treatment plant in St. Joseph imprudently incurred?

Except with regard to capacity, there was no evidence that the costs incurred to build the St. Joseph facility were unreasonable or excessive. In fact, to the contrary, Staff Witness Merciel testified, in connection with the expenses incurred in constructing the new St. Joseph plant, that "it appeared to me [MAWC] took low bids." (Tr. 1593, line 20). Mr. Merciel added that "... the Company went to great lengths to make sure they got the best – best cost or the best deal, so to speak." (Tr. 1593, lines 23-25). In summarizing his testimony on the costs for the new plant, Mr. Merciel stated that after "...having reviewed contractor bid proposals and change orders and having discussed a number of matters with some of the Company's engineers, it appears that the Company was prudent in selecting low bids and cost effective products..." (Merciel Rebuttal, Ex. 49, p. 14, lines 9-13).

Mr. Merciel did testify, however, that there was "excess capacity" built into the new facilities that should be excluded from rate base. Specifically, Mr. Merciel said that $2,271,756 should be kept from inclusion into the rate base until it was actually being used by the Company to serve customer demand. (Merciel Rebuttal, Ex. 49, p. 18, lines 17-20). The figure of $2,271,756 represents the amount that was overbuilt in terms of the supply and treatment components of the new St. Joseph facilities. This excess capacity is addressed in greater detail in the Staff's discussion of Issue No. 5.

ISSUE NO. 5: SJTP CAPACITY

What is the appropriate capacity for SJTP that should be included in rate base?

The Commission should recognize 23 million gallons per day (mgd) as the appropriate capacity to utilize for current needs at the new water treatment plant, rather than the 30 mgd capacity that the Company built into the new facilities at St. Joseph. (Merciel Rebuttal, Ex. 49, p. 17, lines 17-21). Mr. Merciel recognized that several components of the new facilities could have been sized for less than 30 mgd. (Merciel Rebuttal, Ex. 49, p. 17, lines 22-23). The items that should have been downsized are specified on page 18, lines 1 through 8 of Mr. Merciel's Rebuttal testimony.

During cross-examination, John S. Young, Jr., a witness for the Company, acknowledged that Mr. Merciel had previously offered testimony in another case (Case No. WA-97-46) in support of the construction of the new water treatment plant (Tr. 1156, lines 24-25; Tr. 1157, lines 1-3). Mr. Young also agreed that the peak day demands at the St. Joseph treatment facility never exceeded 23 million gallons per day in 1994, 1995, and 1999. (Tr. 1163, lines 15-19). Mr. Young acknowledged that the St. Joseph plant has

never had a peak day demand as high as 30 million gallons a day. (Tr. 1163, lines 20-25; Tr. 1164, line 1). He also admitted that the largest peak day demand ever experienced by the St. Joseph facility was about 25.6 mgd, and that this occurred in July of 1991. (Tr. 1160, lines 17-25; Tr. 1161, lines 1-6). Finally, Mr. Young acknowledged that this singular peak day demand of 25.6 mgd has not occurred since July of 1991 (Tr. 1161, lines 4-9).

In summary, the evidence of record indicates that the St. Joseph district generally requires a maximum capacity of about 23 mgd from its supply and treatment facilities, and that the largest demand ever placed upon the old St. Joseph water treatment plant (25.6 mgd) occurred only once, nearly 10 years ago. While Staff agrees that for planning purposes, the construction of a new facility should include some extra capacity for near-term projected future needs, Staff contends that the ratepayers should not be required to pay for larger excess capacity costs until those larger capacities are actually being "used" to meet higher capacity demands.

Staff therefore respectfully recommends that the appropriate capacity to include in rate base for the St. Joseph District is 23 mgd, and that $2,271,756 of the construction cost for the St. Joseph water treatment plant be excluded from rate base, because it relates to the construction of excess capacity for the new St. Joseph treatment facility.

ISSUE NO. 6: DEFERRED TAXES

Should MAWC's rate base be adjusted to reflect the amount of deferred taxes existing on the books of Missouri Cities Water Company prior to its acquisition by MAWC? If so, what is the appropriate adjustment?

The deferred tax issues in this case arose out of MAWC's purchase of Missouri Cities Water Company ("Missouri Cities") from Avatar in 1993. The Commission approved this acquisition in Case No. WM-93-255. Prior to this acquisition, Missouri Cities had certain deferred tax obligations. Although MAWC acquired Missouri Cities, it did not acquire the deferred taxes. The Staff contends that the deferred taxes that existed on the books of Missouri Cities should be deducted from MAWC's rate base.

Company witness Salser testified that this issue involves two types of deferred taxes: deferred investment tax credits ("ITC") and deferred taxes resulting from Missouri Cities' depreciation accounting. Staff will deal with each of these issues in turn.

Accumulated deferred ITC

Deferred ITC is not an issue in this case. Although deferred ITC of $582,242 existed on the books of Missouri Cities when it was acquired by MAWC, the Staff has not proposed to deduct it from the Company's rate base. (Gibbs Surrebuttal, Ex. 37, p. 2, lines 9-17) There is no disagreement between the Staff and the Company on this issue.

Deferred taxes resulting from Missouri Cities' depreciation accounting

For ratemaking purposes, Missouri Cities depreciated its plant on a straight line basis. This "straight line" depreciation expense was included in the cost of service and collected from Missouri Cities' ratepayers. For tax purposes, however, Missouri Cities was permitted to utilize an accelerated depreciation deduction. By using accelerated depreciation, Missouri Cities was able to reduce its current tax bill, but it accrued an

obligation to pay deferred income taxes in the future. However that deferred tax obligation ceased to exist after MAWC acquired Missouri Cities.

The consequence of all of this is as follows: the ratepayers of Missouri Cities provided to Missouri Cities funds, for the purpose of paying a future obligation, which went away when MAWC acquired Missouri Cities. The value of these funds acquired from the Missouri Cities ratepayers should be offset against MAWC's rate base, for essentially the same reason that contributions in aid of construction ("CIAC") are offset against rate base. They are funds available to the Company which were essentially contributed by others, and the Company should not earn a return on these funds.

Company witness Salser contends that the Company did not acquire these deferred taxes when it acquired Missouri Cities because, he says, the Commission approved the agreement between the two companies when it approved the Company's acquisition of Missouri Cities. (Salser Rebuttal, Ex. 7, p. 8, lines 17-20) But the Company's acquisition of Missouri Cities was not litigated, and the Commission made clear, in its order in that case, that it was making no ruling as to ratemaking issues, stating: "... the responsibility for the resultant costs of acquisition, and any resultant rate increases, are not before the Commission in this case, and no finding will be made in that regard." (Gibbs Surrebuttal, Ex. 37, p. 3, line 16 – p. 4, line 8)

These deferred taxes were properly included as an offset to rate base in the past, and they should be included as an offset to rate base in the future. The fact that, in the last two rate cases, no adjustment was made to rate base for this purpose does not change the fact that it is not proper to do. The Company should be allowed to earn a return on

the funds that it dedicates to the public service, but not on those funds that were contributed by the ratepayers of a predecessor company.

Mr. Salser's also cites the Internal Revenue Code and an IRS private letter ruling in support of the Company's claim that rate base should not be adjusted for deferred taxes. (Salser Rebuttal, Ex. 7, p. 9, lines 1-12)

On lines 2-5 of his Surrebuttal, Mr. Salser cites various portions of Section 46 of the Internal Revenue Code. This section pertains to the accumulated investment tax credit deferral. As noted above, this is not an issue in this case.

On lines 6-12, he refers to a private letter ruling, to support his argument with respect to the tax deferral resulting from accelerated depreciation. However, as Staff witness Gibbs noted in his rebuttal testimony, the private letter ruling was directed only to the taxpayer who requested it, and it was not MAWC that requested it. Furthermore, Section 6110(j)(3) of the Internal Revenue Code and the private letter ruling itself both state specifically that the private letter ruling "may not be used or cited as precedent." (Gibbs Surrebuttal, Ex. 37, p. 4, lines 18-23) The Commission should disregard the contents of the private letter ruling.

Even if the Commission does consider the private letter ruling, it is not persuasive. It is fact-intensive, complicated, and very difficult for one who is not a tax lawyer to read and understand, so it is very hard to apply it to the situation at hand. Furthermore, the factual situation described in the private letter ruling is not analogous to the factual situation in the present case. (Gibbs Surrebuttal, Ex. 37, p. 4, lines 23-26)

For the foregoing reasons, the Commission should reduce MAWC's rate base by an amount equal to the deferred taxes of Missouri Cities at the time when MAWC acquired it.

ISSUE NO. 7: RETURN ON EQUITY

What return on equity is appropriate for MAWC?

The Commission should approve a return on equity based on a range of 9.50 percent to 10.75 percent. This is the result that obtains from properly applying the discounted cash flow (DCF) method long favored by the Commission to the facts of this case.

Commission Preference for the Discounted Cash Flow Method

The Commission has on many occasions in the past found that the (DCF) method of analysis is an appropriate way to calculate the required return on equity. The Commission has never stated that the DCF method is the only method that may be utilized, but it has clearly indicated that the DCF method of analysis is the method it prefers. In every contested case that the Commission has decided for at least the last 20 years, the Commission has placed its primary reliance on the DCF method. There is no reason why the DCF method should now be discarded in favor of some other method of analysis.

Under the DCF method, the cost of common stock equity is equal to the expected dividend yield plus the expected growth in dividends continuously summed into the

future. (McKiddy Direct, Ex. 45, p. 23, lines 6-7). The cost of equity equation is very simple, and may be expressed as:

$$k = \frac{D_1}{P_0} + g$$

where k is the required return on equity, D_1 is the expected dividends, P_0 is the present price of the company's stock, and g is the annual growth rate in dividends. (McKiddy Direct, Ex. 45, p. 23, lines 1-5).

Return on Equity Calculations of Staff Witness McKiddy

Applying this simple equation to the facts in the case at hand, Staff witness McKiddy determined that MAWC's expected dividend yield is 3.25%, the Company's expected dividend growth rate is in the range of 6.25% to 7.25%, and the return on equity should be in the range of 9.50% to 10.75%. (McKiddy Direct, Ex. 45, p. 21, line 19 – p. 26, line 12).

Ms. McKiddy then checked the reasonableness of the DCF method by comparing it with the results obtained through use of two other methods of analysis: the Risk Premium Method and the Capital Asset Pricing Model (CAPM).

Under the Risk Premium Method, a "risk premium" is added to the current yield on A rated public utility bonds. Ms. McKiddy found that A rated public utility bonds were yielding 8.14% in December 1999, and the risk premium for American Waterworks ("AWK"), the parent of MAWC, averaged 280 basis points over the last five years and 256 basis points over the last 12 years. Thus according to the Risk Premium Method, MAWC's cost of equity would range from 10.70% to 10.94%. This is near the high end

of the range of returns determined through use of the DCF method (10.75%). (McKiddy Direct, Ex. 45, p. 26, line 13 – p. 27, line 7).

Under the CAPM method, the expected return on equity equals the sum of the "risk-free rate" plus the "market risk premium" multiplied by a factor known as beta (β), which is a measure of the volatility of the price of the stock being examined. Ms. McKiddy determined that the risk-free rate ranged from 5.55% to 6.07% during the six-month period ending September 30, 1999, the market risk premium, as calculated by Ibbotson Associates, was 7.50%, and β for AWK was 0.50, as determined by Value Line. Using these inputs, she determined that the Company's cost of equity, under the CAPM analysis, ranged from 9.30% to 9.82%. This is near the low end of the range of returns determined through use of the DCF method (9.50%). (McKiddy Direct, Ex. 45, p. 27, line 8 – p. 29, line 5).

Thus, one of the other two principal methods of calculating cost of equity for MAWC produced a result near the high end of the range that was found using DCF analysis, and the other produced a result near the low end of the range that was found using DCF analysis.

As a third check on the reasonableness of the results reached through use of the DCF method, Ms. McKiddy compared the results for MAWC to the results obtained from analyzing six comparable publicly traded water companies. She rejected the results of her DCF analysis of those six companies because the resulting range of ROEs was unreasonably *low*, and she found that the results of her CAPM analysis of those six companies supported the low end of her recommended range for MAWC, as determined through DCF analysis.

Return on Equity Calculations of OPC Witness Burdette

Office of the Public Counsel witness Mark Burdette used an approach that was quite similar to Ms. McKiddy's analysis. He utilized the DCF method as his primary means of analysis, and recommended that MAWC's cost of common equity be established at 9.92%. (Burdette Direct, Ex. 24, p. 19, lines 6-15 ; see also pages 8-19).

Mr. Burdette then checked the reasonableness of the result reached through use of the DCF method by comparing it to his CAPM analysis of a group of comparable companies. His determination of the cost of equity for these comparable companies ranged from a low of 9.04% to a high of 10.48%, providing strong support for the results of his DCF analysis. (Burdette Direct, Ex. 24, p. 19, line 17 – p. 21, line 10).

Return on Equity Calculations of Company Witness Walker

Overview of Mr. Walker's Approach

Although OPC's analysis differed slightly from the Staff's, it was at least similar, and it produced a result that was quite comparable to the result the Staff reached. However Company witness Harold Walker, III, used an approach that was much different from either the Staff's or the OPC's, and it produced significantly different results.

Mr. Walker's approach differed in the following principal respects:

- Instead of relying primarily upon the DCF method, as both the Staff and the OPC did, and as the Commission has in every one of its recent Reports and Orders that addressed the issue in the last 20 years, Mr. Walker used a

combination of the DCF Method, the CAPM Method and the Risk Premium;

- Instead of checking the reasonableness of the results by comparing them with analyses of comparable companies, as Staff and OPC did, he determined a cost of equity for comparable companies and adjusting it to determine the cost of equity for MAWC; and
- He added 30 basis points to the results reached through use of each of the three methods, as an "investment risk adjustment;" and
- He concluded that MAWC's true cost of equity was approximately equal to the average of the results from the three separate analyses.

The Commission should disregard Mr. Walker's analysis and adopt the Staff's recommendation, for the reasons set forth in the following paragraphs.

The Commission has traditionally utilized the DCF method, and has not relied upon the CAPM Method or the Risk Premium Method.

In *Missouri Cities Water*, 26 Mo. P.S.C. (N.S.) 1, 26-7, the Commission said that it has consistently found DCF analyses to be appropriate for determining a rate of return on equity because it is relatively simple to apply and measures investor expectations for a specific company, citing its prior decision in *Re: Continental Telephone Company*, PSC Case No. TR-82-223. The Commission added that the DCF analysis is "considerably more systematic [than the comparable earnings approach] and allows this Commission to treat all utilities it regulates in a consistent manner," citing its prior decision in *Re: Missouri Public Service Company,* PSC Case No. 18,181, 20 Mo. PSC (N.S.) 57, (1975).

In its Report and Order in *Kansas City Power & Light*, 28 Mo. P.S.C. (N.S.) 238, 246, the Commission said: "[T]he Commission finds that the DCF analysis is the appropriate method to utilize in determining the preoperational return on equity for KCPL." It also said, in the same case, at page 238: "The DCF analysis has traditionally been accepted by this Commission in utility rate cases."

In *In re: Arkansas Power and Light Company,* 28 Mo. P.S.C. (N.S.) 433, 472 (1986), the Commission noted that it had "adopted the DCF model in previous cases as a reasonable method for determining the return on equity for a public utility company."

The Commission said that it had approved the DCF analysis "in many previous cases," in its Report and Order in *Missouri Cities Water*, 1 MPSC 3rd 119, 128.

And in *Sho-Me Power*, 1 MPSC 3rd 259, 267, the Commission said: "The DCF method normally employed by the Commission to calculate equity returns utilizes widely-published data pertaining to companies whose stock is publicly-traded, whose parent company's stock is publicly-traded, or is similar to other companies with publicly-traded stock and has the traditional capital structure of regulated utilities."

Company witness Walker acknowledged that he was aware that the Commission has generally relied on the DCF method as its primary tool for determining return on equity while using the CAPM and Risk Premium Models primarily for testing the reasonableness of the result obtained by using the DCF model. (Tr. 2184, line 23 – Tr. 2185, line 4).

Mr. Walker has not offered any compelling reason why the Commission should abandon its longstanding acceptance of the DCF analysis, and he has not even testified that it produces an unreasonable result.

In the absence of a reason to change, the Commission should continue to rely primarily upon the DCF method for determining the cost of equity.

Mr. Walker's Discounted Cash Flow Analysis

Apparently recognizing that the Commission gives credence to the DCF analysis, Company witness Walker performs a DCF calculation. He struggles to reach the conclusion that the DCF cost rate is 10.5%. This represents the sum of a current dividend yield of 3.6%, plus 0.1% for growth in dividends, plus 6.8% for stock appreciation. (Walker Direct, Ex. 12, Schedule 13, p. 1; see also the discussion at Walker Direct, Ex. 12, p 24, line 4 – p. 29, line 14).

Instead of doing a *company-specific* analysis of the current dividend yield of MAWC's parent, AWK, Mr. Walker chose to analyze the dividend yields of a group of comparable companies. He then added a factor for dividend growth that is not included in the generally recognized DCF equation that is reproduced above.

To determine his growth factor, Mr. Walker first calculated seven separate measures of growth for the comparable companies, which are reproduced in Table 4, on page 27 of Mr. Walker's direct testimony. After studying this table and applying some subjective analysis, he concludes that a 6.8% growth factor is reasonable. (Walker Direct, Ex. 12, p. 29, lines 8-10). This 6.8% figure is greater than nine of the 11 growth rates shown in his Table 4. The only two growth rates in Table 4 that exceed 6.8% are the "projected 4 year growth" and the "projected 5 year growth" that would have to be achieved by MAWC to achieve the ROE that he determines, primarily through a risk premium analysis, will be the standard for the comparable companies in the future.

But Mr. Walker is still not satisfied with the 10.5% ROE that results from his DCF analysis. He finds it necessary to add another 0.3% for an "investment risk adjustment," discussed in more detail below, to conclude that the proper ROE for MAWC under the DCF analysis is 10.8%. (Walker Direct, Ex. 12, Sch. 2).

This result is barely above the top of Staff witness McKiddy's recommended range for return on equity. Furthermore, Mr. Walker is not very satisfied with this result, either.

Mr. Walker states that "DCF only provides a reasonable estimate of the Water Group's common equity cost rate when their market price and book value are similar (M/B=100%)." (Walker Direct, Ex. 12, p. 34, lines 1-2). The Water Group's current market-to-book ratios are much higher now (231%), as a result of a "short-term acquisition frenzy." (Walker Direct, Ex. 12, p. 29, lines 21-23). This drives the dividend yield, and consequently the ROE as determined by the DCF down. Because of this, he recommends that less weight be given the indicated DCF cost rate. (Walker Direct, Ex. 12, p. 34, line 11).

There are several shortcomings in this analysis:

- Even though the Commission has expressed a preference for a company-specific analysis,[2] Mr. Walker chose to base his DCF on the dividends and growth of "comparable" companies.

[2] See, e.g., *St. Joseph Light & Power*, 2 MPSC 3rd 248, 255, where the Commission said: "The Commission finds it more reasonable to establish the return on equity on a company-specific basis"; *Continental Telephone Company*, PSC Case No. TR-82-223, where the Commission said: "[The DCF analysis] is relatively simple to apply and measures investor expectations for a specific company"; and *Re: Missouri Public Service Company,* PSC Case No. 18,181, 20 Mo. PSC (N.S.) 57, where the Commission said "[the DCF analysis] is considerably more systematic [than the comparable earnings approach]."

- Mr. Walker ignores the fact that virtually every time the Commission describes the DCF method it refers to the *current* dividend yield, which is based on the *current* market price.[3] Mr. Walker seeks to avoid this inconvenient part of the equation by saying the current prices are uncharacteristically high.
- Mr. Walker states that DCF will always understate ROE when M/B is greater than 100%, and will always overstate it when M/B is less than 100% (Citation??) and that one must disregard the current high stock prices, because they are result of an "acquisition frenzy" (Citation – Tr. 2190+?). This ignores the function of the stock market, whose purpose it to establish an appropriate current market price for the stock. If the current price of the stock is high, it is because investors value the shares highly, regardless of the relatively low yield that the high stock price produces. They are therefore willing to pay more for the stock, and it should be easy for MAWC, or AWK to raise capital in such a market.

Mr. Walker's Capital Asset Pricing Method Analysis

Mr. Walker next turned his attentions to the CAPM Method, but again he found it necessary to tinker with the recognized equations that Staff witness McKiddy used.

Mr. Walker used a "risk-free rate" of 6.0%, which is within the range of rates that Ms. McKiddy used (5.55% to 6.07%). He also used a β of 0.52, which is very near to the β that Ms. McKiddy used (0.52). And, like Ms. McKiddy, he recognized that the historical "market premium," as calculated by Ibbotson is 7.50%.

[3] See, e.g., *Kansas City Power & Light*, 28 Mo. P.S.C. (N.S.) 238, 238 ???: "The DCF analysis calculates ... by adding the dividend yield (current dividend per share divided by market price) ..."; *Missouri Cities Water*, 1 MPSC 3rd 119, 128: "... dividing a stocks dividend by its current price, thus producing a 'yield' ..."; and *St. Louis County Water,* 29 Mo. P.S.C. (N.S.) 425, 431: " ... by dividing the stock's expected dividend by the stock's current price to produce a yield ..."

This apparently produced a result that was not to his liking, however, so he made three modifications to the CAPM Method:

- Because he concluded that "the Water Group's beta is understated due to their small size effecting [sic] their stock price change" (Walker Direct, Ex. 12, p. 35, lines 16-17), he found it necessary to adjust the β, by increasing it. Although there is little explanation of how he determined what this adjustment should be, it appears that he gave 75% weight to the β of 0.52 that he initially chose and 25% weight to a "zero-beta" (which actually amounts to a β of 1.0, not 0), thus producing a result that is identical to using a β of 0.64. This analysis produces a CAPM cost rate of 11.3%. (Walker Direct, Ex. 12, Sch. 18, p. 1).
- Mr. Walker next decides that historical information is not sufficient, but that projections of future developments should be considered. In the future, he says, the market premium will increase from 7.5% to 9.0%. As a result, the projected CAPM cost rate is 12.3%. (Walker Direct, Ex. 12, Sch. 18, p. 1). By averaging these two cost rates (11.3% and 12.3%), he concludes that the CAPM rates for the comparable companies is 11.8%, which he calls "conservative." (Walker Direct, Ex. 12, p. 37, lines 21-22; see also Walker Direct, Ex. 12, Sch. 2).
- Finally, he again adds one more adjustment, an "investment risk adjustment" of 0.3%, to account for the fact that MAWC is a small, risky, undiversified company, much different than its parent, AWK.

Mr. Walker's tinkering with the established method of calculating ROEs using the CAPM Method is not necessary, justified, or supported by the literature on the subject. His modifications of the CAPM Method should be rejected, in favor of the calculations of

CAPM rates presented by Staff witness McKiddy, and the results of using the CAPM Method should be used only as a check on the reasonableness of the results obtained through use of the DCF Method.

Mr. Walker's Risk Premium Method Analysis

The third method that Mr. Walker uses to calculate MAWC's cost of equity is the Risk Premium Method, which he describes at pages 39-42 of his Direct Testimony (Ex. 12). It produces the highest result and seems to be the one he most favors, if the number of times he mentions the need that investors feel for a 450 basis point premium is any indication.

Under this method, Mr. Walker calculates the ROE in the same fashion as Staff witness McKiddy did – by simply adding a "risk premium" to the prospective yields on A rated public utility bonds. Mr. Walker assumed a 7.9% bond yield (Walker Direct, Ex. 12, Sch. 19, p. 1), which is actually slightly less than the 8.14% bond yield that Ms. McKiddy used, because Ms. McKiddy had more recent data available when she wrote her testimony. But Mr. Walker disagreed sharply with Ms. McKiddy on the amount of the risk premium. Mr. Walker pegged it at 450 basis points, based on calculations shown on page 2 of Schedule 19 of his Direct Testimony, whereas Ms. McKiddy found that the risk premium was in the range of 256 to 280 basis points.

In developing his projected risk premium, Mr. Walker multiplies the "forecasted equity premium" (Walker Direct, Ex. 12, Sch. 19, p. 2, col. G) by and "estimated risk adjustment," of 70%. The 70% figure is designed to reflect the fact that the bonds of the "comparable companies" have a lower level of risk than Moody's A rated industrial

bonds have. He does not explain how he chose the 70% figure, but he does say that it is a "conservative estimation of their level of risk."

The 70% figure has an important effect on the results obtained. By using this figure, Mr. Walker determines the 12-month average of "forecasted risk premium" to be 5.1%. (Walker Direct, Ex. 12, Sch. 19, p. 2).

Mr. Walker's calculation of ROE using the Risk Premium Method do not withstand scrutiny, for the following reasons:

- The 70% "estimated risk adjustment" appears to be far too subjective to use as a significant part of the basis for the Commission's determination of an appropriate ROE for MAWC. If this "estimated risk adjustment" was only 60%, instead of 70%, the risk premium would shrink to 4.38%. And if it was only 50%, instead of 70%, the risk premium would shrink to 3.65%. Why, for example, would this term not be 52%, as is the β that he used (at least partially) in his CAPM analysis?
- Although Mr. Walker acknowledges that the "average risk premium" for S&P Utilities was only 3.7% for the most recent 10-year period, he chose to use older data, which produced an "average risk premium" of 4.9% as more meaningful to the present. (Walker Direct, Ex. 12, p. 41, lines 2-7).
- The Commission has long recognized that the risk premium model is not as acceptable as the DCF method. For example, the Commission made the following statement in a 1991 case:

> "The Commission finds that as described by Company's witness, the risk premium model is not as acceptable as the discounted cash flow method for arriving at an estimate of Company's cost of equity. The 'spread' between either treasury bills or bonds and the common stocks of non-regulated enterprises may provide a reliable index to the costs of equity in a regulated monopoly, but the Commission does not find such to be the

> case in this instance. In addition, the amount of the 'spread' can be dictated by one's choice of the time periods when either notes, bonds, or stocks are issued or examined, the nature of the enterprises whose stock is being used to establish the 'spread,' and by the reliance on purely historical data to establish a return for a future time period." *Missouri Cities Water*, 1 MPSC 3rd 119, 130.

Ms. McKiddy's calculation of ROE using the Risk Premium Method is based on actual historical data from MAWC's parent, and is far more reliable than data from subjectively chosen "comparable" companies.

Mr. Walker's Risk Adjustment

As if all of the foregoing adjustments and modifications to the Commission's usual primary reliance on the DCF Method for determining ROE were not enough, Mr. Walker found it necessary to add an additional 30 basis points to the ROEs that he calculated using each of the three methods, based on the risk associated with investments in MAWC. (Walker Direct, Ex. 12, Sch. 2; also, see discussion on pages 43 and 44 of the Direct Testimony).

Mr. Walker acknowledges that "a specific quantification of risk differences can be difficult." (Walker Direct, Ex. 12, p. 43, line 10). Undeterred by this difficulty and the fact that he is not employed by Moody's or any other bond rating service, he opines that MAWC would have, at best, a BBB bond rating, "given [MAWC's] size, liquidity considerations, and given the lack of diversity in geographic area served versus the comparable companies." (Walker Direct, Ex. 12, p. 43, lines 11-15).

A few observations should be made in this regard:

- MAWC is not truly a small company. It is a wholly owned subsidiary of AWK, the largest water utility in the United States.

- It is reasonable to believe that the economies of scale that AWK obtains by owning 23 subsidiary companies scattered throughout the United States will inure to the benefit of MAWC and that MAWC will benefit from the diversification and the economies of scale that the parent company has achieved. In fact, AWK announced during the hearing in this case that it had formed a new subsidiary specifically to streamline the financing function, create cash management efficiencies and a lower cost of capital for the utility subsidiaries. (Tr. 2177; Ex. 114). It certainly sounds like AWK hopes to provide these benefits to MAWC.
- Where shares of a regulated Missouri utility are not traded publicly, it is proper to base an ROE analysis on information about the parent company (AWK). (Tr. 2295). See also *Continental Telephone,* 26 Mo. P.S.C. (N.S) 201, 202, wherein the Commission said: "In a case where a subsidiary is wholly owned by a parent, the Commission determines the subsidiary's cost of equity by reference to the parent's cost of equity."

Mr. Walker contends that MAWC's cost of capital is higher than AWK's merely because it is smaller than the parent company. To take this analysis to its logical extreme, one would have to recognize that the cost of capital for, say, the Company's Brunswick District, is higher than the cost of capital for MAWC as a whole, because it is smaller than MAWC. In fact, Mr. Walker acknowledged that the ROEs for each of MAWC's individual districts would be higher than the ROE for MAWC as a whole. (Tr. 2209, line 14 – Tr. 2210, line 23). So if the Company were analyzed in this way, the Company would require a higher ROE than if it were analyzed as a whole, even though the risk to

investors would be exactly the same. That simply does not make sense. The Commission should reject that reasoning, and, for the same reason, should reject the claim that MAWC's cost of capital is higher than AWK's cost of capital.

ISSUE NO. 8a: SINGLE TARIFF PRICING, DISTRICT SPECIFIC PRICING OR COMPROMISE

Shall MAWC's rates be designed consistent with a "single tariff" rate design, "district-specific" rate design, or some other methodology?

The Staff of the Public Service Commission ("Staff") recommends District Specific Pricing ("DSP") for all districts, but with a five-year phase-in period for the rate increases in the Mexico, Parkville, Brunswick and St. Joseph districts (Staff's Statement of Positions on Issues at 3-4; see also Hubbs Direct, Supplemental Direct, Rebuttal and Surrebuttal, Ex. 40-43, and Rackers Surrebuttal, Ex. 54, p. 6, lines 3-11). However, some other questions need to be answered prior to explaining why this is the best rate design for this case.

Definition of terms

The first issue is definition of terms. "Single-tariff pricing ('STP') is the use of a unified rate structure for multiple water (or other) utility systems that are owned and operated by a single utility, but that may or may not be physically interconnected. Under single-tariff pricing, all customers of the utility pay the same rate for service, even though the individual systems providing service may vary in terms of operating characteristics and stand-alone costs." (Beecher Direct, Ex. 58, Schedule JB-2, p. 74). "Single tariff pricing essentially allows for allocating the average costs of combined systems in the course of ratemaking." (Beecher Direct, Ex. 58, p. 8, lines 2-4). The Commission has

previously defined STP as "...the establishment of a single rate structure applicable to all customers of a utility which serves two or more separate service areas."(Case No. WR-97-237, Report and Order, p. 10).

District Specific Pricing ("DSP") is pricing whereby direct costs associated with a specific district are recovered from that district. In DSP, common corporate costs are distributed (allocated) throughout the system to each district for recovery (Tr. 1017, lines 11-24; Hubbs Rebuttal, Ex. 42, p. 7, lines 16-19).

Legality of STP

MAWC currently uses STP (Case No. WR-97-237, Report and Order, pp. 13-14; Stout Direct, Ex. 9, p. 14, lines 8-10). However, a question has been raised as to whether the practice of applying STP to the various districts of a multi-district public water utility can lawfully continue in the State of Missouri. There is no statute in Missouri that expressly prohibits STP, and case law supports the use of STP in Missouri. Single tariff pricing is lawful in Missouri, and could be utilized in this case if the Commission determines that it is the most suitable rate design for the Company.

Single Tariff Pricing has been expressly approved by this Commission (see Case No. WR-97-237, Report and Order, p. 14; see also Case No. WO-98-204, p. 7). In Case No. WR-97-237, the Commission reviewed a nonunanimous stipulation **for MAWC** in which parties proposed a single tariff rate design (Case No. WR-97-237, Report and Order dated November 6, 1997, pp. 13-14). The Commission noted that it must protect the public interest, ensure that MAWC's rates are just and reasonable, and ensure that MAWC provides safe and adequate service to the public in compliance with Sections

393.130 and 393.140 RSMo (Case No. WR-97-237, Report and Order, p. 15). The Commission determined that the STP rate design advocated by MAWC was just and reasonable (Case No. WR-97-237, p. 15).

Many years ago, the Missouri Supreme Court indicated its approval of the concept of systemwide ratemaking in the case of *State ex rel. City of West Plains v. Public Service Commission*, 310 S.W.2d 925, 933 (Mo. Banc 1958), stating:

> We are able to discern no legitimate reason or basis for the view that a utility must operate exclusively either under a systemwide rate structure or a local unit rate structure, or the view that an expense item under a systemwide rate structure must of necessity be spread over the entire system regardless of the nature of the item involved. Experts in utility rates may well conclude that a "hybrid system" or a "modified system" of ratemaking, wherein certain expense items are passed on to others on a systemwide basis, is the system which will produce the most equitable rates. And it would appear to be the province and duty of the Commission, in determining the questions of reasonable rates, to allocate and treat costs (including taxes) in the way in which, in the Commission's judgment, the most just and sound result is reached.

The Missouri Supreme Court in an earlier case, *State ex rel. Laundry v. Public Service Commission*, 34 S.W.2d 37 (Mo. 1931), had stated the following: "...laws designed to enforce equality of service and charges and prevent unjust discrimination, such as the Missouri act, require the same charge for doing a like and contemporaneous service under the same or substantially similar circumstances or conditions." (*Id.*, at 44). The Missouri Supreme Court further stated in *State ex. rel. Laundry* also stated the following:

> The common law today forbids all discrimination between two applicants who ask the same service... Thus the principle of quality designed to be enforced by Legislation and judicial decisions forbids any difference in charge which is not based upon difference of service, and even when based upon difference of service must have some reasonable relation to the amount of difference, and cannot be so great as to produce unjust discrimination."

Id. at 46-47.

There is also no question regarding the legality of STP with a Capital Addition Surcharge, such as MAWC has proposed through the testimony of its witness, William E. Stout, P.E. (Stout Rebuttal, Ex. 10, p. 17, line 38 - p. 19, line 15). For the reasons previously cited in *State ex rel. City of West Plains*, supra, at 933, there is no legitimate legal argument against using STP with a Capital Addition Surcharge in St. Joseph. It is just such a hybrid system as was envisioned in that case that is being proposed herein. Accordingly such a hybrid system would be legal.

A phase-in of the rate increase approved by the Commission, such as OPC and Staff have proposed in this case is legal for the same reasons.

Appropriateness of DSP

Even though STP is a legally viable rate design for certain systems, it is not the best choice herein. While Staff has previously advocated STP in MAWC cases, Staff has determined that STP is not the appropriate rate design in this case, because of the particular facts surrounding this case. (Tr. 974, lines 1-12; Tr. 1002, lines 8-18). The best choice herein is DSP, with a five-year phase-in the districts that receive significant rate increases. (Rackers Surrebuttal, Ex. 54, p. 6, lines 3-11).

The major goal of ratemaking is to design rates that recover the allocated cost of service from those causing the costs to be incurred (Hubbs Rebuttal, Ex. 42, p. 3, lines 1-3). The primary difference between STP and DSP is that STP draws its rate design circle around the entire company for allocation of costs to the specific classes, while DSP draws its rate design circle around each operating district (Hubbs Rebuttal, Ex. 42, p. 3, lines 6-

7). Allocation of the total cost of service for each class can be performed using either method, but the differences in a DSP cost of service by customer class, as compared to an STP cost of service by customer class, give a measure of the differences in the recovery responsibility between the two methods (Hubbs Rebuttal, Ex. 42, p. 3, lines 7-11). Another important and proper goal of ratemaking is to minimize subsidization. If this can be accomplished, it has the effect of more equitably recovering the cost of serving a class of customers from those customers (Hubbs Rebuttal, Ex. 42, p. 4, lines 5-15; Tr. 949, lines 1-9). In the present case, two significant differences among the various districts are the sources of supply and the treatment processes (Hubbs Rebuttal, Ex. 42, p. 5, lines 1-3; Stout Direct, Ex. 9, p. 14, lines 21-23). Contrary to the contention of one witness, the mere fact of supposedly increasingly higher treatment demands will not eliminate the cost difference between these operating characteristics. The cost differences in providing water in each district will remain even with higher treatment costs. This argument does not support the use of STP instead of DSP.

On the contrary, the fact that the various district of the Company have some similar operating characteristics, such as those listed by Mr. Stout, only supports the fact that water is being sourced, treated and delivered in every district with some similar characteristics (Hubbs Rebuttal, Ex. 42, p. 5, lines 12-14). Operating characteristics, alone, do not deal with the embedded district-specific cost differentials as they relate to company-wide class allocations (Hubbs Rebuttal, Ex. 42, p. 5, lines 15-16). Recognition of relative cost differentials between the different district classes is what should be used to determine the validity of using STP or DSP (Hubbs Rebuttal, Ex. 42, p. 5, lines 16-18).

One argument for using STP rather than DSP for rate design, advanced by the Company in this case, is that the similarity of the operating characteristics of the separate districts justifies the use of STP as opposed to DSP. (Stout Direct, Ex. 9, p. 15, line 12 - p. 16, line 4). However, the existence of similar operating characteristics supports only the fact that water service is being provided with some similar facilities; the provision of water service, in and of itself, does not support a STP rate design versus a DSP rate design. What should instead be considered as justification for the selection of a rate design method are the dramatic cost differentials that exist among MAWC's seven districts. (Hubbs Rebuttal, Ex. 42, p. 6, lines 5-6). In a case where the Commission is asked to determine whether to use STP or DSP, where large cost differentials exist between districts, DSP should be used to recover the costs of the cost-causing district. (Hubbs Rebuttal, Ex. 42, p. 5, lines 6-7).

The mere existence of equivalence of service among the districts (i.e. in each district, the Company provides water to its customers within the district) does not support STP. The fact that there is a dramatic difference in the relative cost to deliver this water in each district is the criteria that should be used to justify the use of DSP rather than STP. Under this criteria also, DSP is the appropriate rate design.

Another argument advanced in favor of STP is that many common costs are incurred for the districts and these do not result in the development of district-specific revenue requirements that precisely show the cost of serving each district, especially if stand-alone costs are considered. (Hubbs Rebuttal, Ex. 42, p. 7, lines 16-17; Stout Direct, Ex. 9, p. 17, lines 1-11). This highlights the important point that Staff is not advocating stand-alone pricing A rate design that utilized stand-alone costs exclusively would not

allow for the allocation of common costs. However, the allocation of common costs is a valid technique for determining the district-specific cost of service. (Hubbs Rebuttal, Ex. 42, p. 7, lines 16-17). These allocated common costs are specific and valid for use in determining the cost of service, and they are used to spread the economies of such items as centralized billing to the separate districts. (Hubbs Rebuttal, Ex. 42, p.7, lines 16-17). OPC has offered a rate design approach that yields results that fall somewhere between STP and DSP. (Busch Direct, Ex. 27, p. 4, lines 1-7). OPC seemingly supports the concept of DSP, but in reality OPC's plan does not set rates that reflect district specific costs. Instead OPC's plan still contains substantial subsidization from one district to another. OPC takes this position on rate design primarily for the purpose of avoiding rate shock to the ratepayers (Busch Direct, Ex. 27, p. 4, lines 4 - 7). From Staff's perspective, OPC's stance is a disingenuous plan that ultimately mirrors the same discriminatory aspects of STP that, ironically, other parties are using to justify DSP. If the Commission determines that DSP is the appropriate rate design in this case, then movement toward DSP should be implemented according to the Staff's rate design methodology, which will result in DSP becoming a reality during a five-year phase-in period.

The Staff has, however, made one important modification to its position of advocating DSP in this case. (Hubbs Surrebuttal, Ex. 43, p. 4, lines 16-18). Under the Staff's proposal, the commodity rates for the Brunswick District would be set equal to the highest commodity rates of the other districts; to the extent that the DSP-allocated costs are not recovered from the Brunswick District by the application of this rate, they would be applied to the Joplin District classes. (Hubbs Rebuttal, Ex. 42, p. 4, lines 16-18). The differential herein is approximately $175,000; responsibility for this shortfall would be

shifted from the Brunswick District to the Joplin District. However, ever after absorbing this amount, the Joplin District would still receive an overall decrease in water rates under DSP. (Hubbs Rebuttal, Ex. 42, Schedules Joplin WRH 1- 4). This provision, together with the five-year phase-in period, keeps the effect of the Company's overall move to DSP within the bounds of gradualism, and should be supported. (Hubbs Surrebuttal, Ex. 43, p. 4 line 19 - p. 5, line 6).

In view of the foregoing Staff respectfully submits that the Commission should adopt DSP with a five-year phase-in, and with the modification of the rates for the Brunswick District, as previously discussed.

ISSUE NO. 8b: ALLOCATION OF CORPORATE DISTRICT EXPENSE

What is the proper allocation of MAWC's corporate district investment and expense?

Corporate District investment and expense should be allocated on the basis of the composite payroll allocation. In order to elaborate on this point, it is first necessary to describe the operations of MAWC in Missouri.

MAWC is comprised of seven water operating districts and one sewer operating district. (Gibbs Direct, Ex. 36, p. 4, lines 21-23). The seven water operating districts, referred to by geographic location, are: Brunswick, Mexico, Parkville (Platte County), Warrensburg, St. Charles, Joplin and St. Joseph districts. (Gibbs Direct, Ex. 36, p. 4, line 22 - p. 5, line 12). The sewer district is referred to as the Parkville (Platte County) Sewer District (Gibbs Direct, Ex. 36, p. 5, lines 1-2).

In addition to the seven operating districts, MAWC has a non-operating Corporate District. (Gibbs Direct, Ex. 36, p. 5, lines 7-8). The costs that are recorded by the

Company on the books of the Corporate District, generally consist of those costs that are incurred for the benefit of the entire system, which cannot be directly assigned to a specific operating district. (Gibbs Direct, Ex. 36, p. 5, lines 8-10). The majority of customer accounting and administrative functions for all of the operating districts occur at the Corporate District, which is physically located within the St. Joseph District. (Gibbs Direct, Ex. 36, p. 5, lines 10-12).

Schedule 2 attached to the direct testimony of Staff witness Doyle Gibbs shows the allocation factors that were actually utilized by Staff in preparing its Accounting Schedules in this case. The Corporate Allocation Factors are broken down into 11 areas and are self-explanatory. (Gibbs Direct, Ex. 36, p. 6, lines 13-20; also Gibbs Direct, Ex. 36 Schedules 2-1 and 2-2).

There is essentially no difference in the methodologies utilized by MAWC and Staff in the allocation of corporate plant. (Gibbs Surrebuttal, Ex. 37, p. 6, lines 8 -9). The only difference that exists between MAWC and the Staff lies in the allocation of corporate labor. (Gibbs Surrebuttal, Ex. 37, p. 6, lines 12-13; see also Statement of Positions filed by Staff and by MAWC).

The composite payroll allocation that the Staff used to allocate corporate A&G expense and general plant is the same allocation that the Federal Energy Regulatory Commission uses to allocate A&G expense between regulatory jurisdictions in the electric industry. (Gibbs Surrebuttal, Ex. 37, p. 7, lines 10-15). Staff updated its number in the True-Up testimony that it filed, to take account of the effects of changing to a monthly billing system in the St. Joseph District. (Gibbs Surrebuttal, Ex. 37, p. 8, lines 12-13).

Instead of utilizing composite payroll allocation, such as Staff uses, MAWC breaks Administrative and General labor into five categories – Water Quality, Accounting, Engineering, Employee Relations and General. (Stout Direct, Ex. 9, Table 1-B, p. 2 of 4; Gibbs Surebuttal, Ex. 37, p. 6, lines 15-17). MAWC then allocates these categories between the districts using different factors. (Stout Direct, Ex. 9, Table 1-B, p. 2 of 4). It is possible to break down the Administrative and General labor along the lines utilized by Mr. Stout, but doing so would require the one making the allocations to make some assumptions about the specific job responsibilities of each employee. (Gibbs Surrebuttal, Ex. 37, p. 6, lines 20-21). The Company's chart of accounts does not provide for such identification. (Gibbs Surrebuttal, Ex. 37, p. 6, lines 21-23). Accordingly no such breakdown can be done. Furthermore, the Company's workpapers do not include any such summary of job responsibilities and are of no help. (Gibbs Surrebuttal, Ex. 37, p. 6, lines 22-23).

In any event, a more detailed breakdown of job responsibilities would not appear to have a material effect on the outcome. Mr. Stout acknowledged as much, when he stated: "It is my expectation that the use of [Mr. Gibbs'] allocation factors with a comparable revenue requirement and rate base would produce results very close to those that I developed." (Stout Rebuttal, Ex. 10, p. 2, lines 4-6). In view of the foregoing, Staff and MAWC do not appear to have any significant difference in corporate cost allocations. This is further buttressed by the true-up testimony that MAWC filed in this case. It does not contain any adjustment for the corporate allocations that are advocated in MAWC's true-up testimony. (Salser True-Up Direct, Ex. 107, Sch. JES-2-1; Salser True-Up

Rebuttal, Ex. 108, Sch. JES-5, p. 1 of 8). The absence of any such adjustment suggests that MAWC agrees with Staff's corporate allocations.

In view of the foregoing, it is clear that MAWC's corporate district expense and investment should be allocated utilizing the composite payroll allocation.

ISSUE NO. 8c: ALLOCATION OF COST/REVENUE AMONG CLASSES

On what basis shall the portion of revenues to be borne by MAWC's various customer rate classes be determined?

Staff urges the Commission to adopt DSP and allocate the district-specific costs to the various classes as advocated by Staff Witness Hubbs. (Staff Statement of Positions, p. 4). Staff's position of DSP has already been discussed herein, under Issue No. 8a. In this Issue No. 8c, the question concerns Staff's cost of service study, how it was derived and why it is most appropriate.

Staff allocated the cost of service to MAWC's various rate classes and also developed the customer rates necessary to recover the costs allocated to each customer classification (Hubbs Direct, Ex. 40, p. 2, lines 21-23). The results of such allocations provide the relative cost levels that should be recovered from each customer class within each district. (Hubbs, Direct , Ex. 40, p. 2, line17 –p.3 line 2). Rates are then designed to recover the allocated cost from each customer class utilizing a district specific cost of service computations (Hubbs, Ex 40 p. 3, lines 1-2).

Base-Extra Capacity Method

The base-extra capacity method, as described in the 1991 and prior Water Rates Manuals of the American Water Works Association (AWWA), was used by both Mr.

Stout and Mr. Hubbs to allocate the pro forma costs. (Stout Direct, Ex. 9, p.19, lines 11-13; Hubbs Direct, Ex. 40, p. 3, lines 5-6). The base-extra capacity method is a recognized method for allocating the cost of providing water service to customer classifications in proportion to the classification's use of the commodity, facilities and services. (Stout Direct, Ex. 9, p.19, lines 11-13; Hubbs Direct, Ex. 40, p. 3, lines 5-6). It is generally accepted as a sound method for allocating the cost of water service and has been accepted by this Commission for that purpose, and was so accepted in MAWC's most recent case. (Stout Direct, Ex. 9, p. 19, lines 13-19). It is the most widely accepted costing methodology in the water industry. (Harwig Rebuttal, Ex. 61, p. 3, lines 10-12).

There are four basic categories of cost responsibility in the base-extra capacity method. (Stout Direct, Ex. 9, p. 19, lines 20-21; Hubbs Direct, Ex. 40, p. 4, lines 1-14). The four basic categories of cost responsibility are: base costs; extra capacity costs; customer costs; and fire protection costs. (Hubbs Direct, Ex. 40, p. 4, lines 1-14; Stout Direct, Ex. 9, p. 19, lines 20-21). Base costs tend to vary with the amount of water consumption and are allocated to customer classifications on this consumption basis (Hubbs Direct, Ex. 40, p. 4, lines 4-5; Stout Direct, Ex. 9, p. 19, lines 22-24). Base costs also include costs associated with supplying, treating, pumping and distributing water to customers under average load conditions without the elements necessary to meet peak demands. (Stout Direct, Ex. 9, p. 19, line 23 – p. 20, line 1). The largest proportion of the total cost of service is classified to the base, or average day, cost category in the base-extra capacity cost method. (Harwig Surrebuttal, Ex. 62, p. 16, lines 20-21). Much smaller proportions of total cost are allocated to the maximum day or maximum hour functions. (Harwig Surrebuttal, Ex. 62, p. 16, lines 21-22).

The next category of costs is extra capacity costs. (Hubbs Direct, Ex. 40, p. 4, lines 6-8; Stout Direct, Ex. 9, p. 20, lines 3-10). Extra capacity costs are costs associated with meeting usage requirements in excess of the average load conditions. (Hubbs Direct, Ex. 40, p. 4, lines 6-7; Stout Direct, Ex. 9, p. 20, lines 3-10). Extra capacity costs include operating and capital costs for additional plant and system capacity beyond that required for average use. (Hubbs Direct, Ex. 40, p. 4, lines 6-8; Stout Direct, Ex. 9, p. 20, lines 3-10). These costs are divided to meet maximum-day extra demand and maximum hour extra demand in excess of average usage. (Hubbs Direct, Ex. 40, p. 4, lines 6-8; Stout Direct, Ex. 9, p. 20, lines 8-10).

Customer costs is the third category of costs. (Hubbs Direct, Ex. 40, p. 4, lines 9-12; Stout Direct, Ex. 9, p. 20, lines 11-12). These costs comprise those costs that are associated with providing service to a customer regardless of the amount of water the customer consumes. (Hubbs Direct, Ex. 40, p. 4, lines 9-10; Stout Direct, Ex. 9, p. 20, lines 11-15). These costs include customer accounting and collection expenses, meter reading costs and billing expenses. (Hubbs Direct, Ex. 40, p. 4, lines 10-11; Stout Direct, Ex. 9, p. 20, lines 12-14). Customer costs also include return on plant related to meters and services. (Hubbs Direct, Ex. 40, p. 4, lines 11-12).

The fourth category of costs is those costs that are associated with providing the facilities to meet the potential peak demands of fire service. (Stout Direct, Ex. 9, p. 20, lines 16-17). Fire protection costs are further divided into costs to meet Public Fire Protection and Private Fire Protection demands. (Hubbs Direct, Ex. 40, p. 4, lines 13-14; Stout Direct, Ex. 9, p. 20, lines 19-21).

Allocation of each type of cost is accomplished through the application of class allocation factors. (Hubbs Direct, Ex. 40, p. 4, lines 16-17; Stout Direct, Ex. 9, p. 20, line 23 - p. 21, line 7). These class allocation factors are applied to the annualized and normalized expenses, plant, rate base, return of investment and return on investment. (Hubbs Direct, Ex. 40, p. 4, lines 17-18). Rates are developed to recover from each class the cost of service assigned to each class in the district. (Hubbs Direct, Ex. 40, p. 5, lines 1-2).

The next step performed by Staff witness Hubbs was the application of class allocation to all of the appropriate categories on a district-specific basis, while Mr. Stout did this on a company-wide basis. (Hubbs Direct, Ex. 40, p. 2, lines 17-19). Even though Mr. Hubbs applied a few of Mr. Stout's class allocators to the elements of cost of service differently then did Mr. Stout did, there are no material allocation differentials of Mr. Stout's study with which Staff disagrees. (Hubbs Rebuttal, Ex. 42, p. 14, lines 2-4). If the Commission adopts DSP as advocated by the Staff, then both Staff and the Company take the position that the Commission should use Mr. Hubbs' class cost of service. (Staff Statement of Positions, p. 4; MAWC Statement of Positions on Contested Issues, pp. 5-6). If the Commission adopts STP, then the Staff agrees with Mr. Stout's class cost of service. (Hubbs Rebuttal, Ex. 42, p. 14, lines 1-2). In the event that the Commission adopts STP then Staff supports the creation of separate rates for each of the different classes to recover the allocated cost of service as determined by the Commission.

OPC's Calculation of Cost of Service

A different cost of service study for class revenue is advocated by the Office of the Public Counsel. (OPC Statement of Positions, p. 5). OPC claims that its class cost allocation methodology is the most appropriate method because its methodology properly allocates costs to small users with a high peak-to-average usage ratio, whereas the Company's and Staff's use of the base and extra capacity method over-allocates costs to small users. (OPC Statement of Positions, p. 5). OPC is advocating a substantial shifting of costs away from residential customers to industrial and sale for resale classes. (Hu Direct, Ex. 30, p. 10, lines 4-8). However, the deviations from the base-extra capacity method advocated by OPC do not hold up under scrutiny.

It is interesting to note that, while OPC alleges that the base-extra capacity method over-allocates costs to small users, this was, in fact, the method initially utilized by Ms. Hu. (Staff Statement of Positions, p. 5; Hu Direct, Ex. 30, p. 2, lines 21-22). Ms Hu notes that the base-extra capacity method is commonly used in the water industry. (Hu Direct, Ex. 30, p. 2, lines 20-21). And Ms. Hu performed the classification step using the base-extra capacity method. (Hu Direct, Ex. 30, p. 2, lines 20-21). In addition, her description of the classification step is similar to the classification steps utilized by Mr. Hubbs and Mr. Stout. (Hu Direct, Ex. 30, p. 2, line 20- p.3, line 16; Hubbs Direct, Ex. 40, p. 4, line 1-12; Stout Direct, Ex. 9, p. 19, line 20 - p. 20, line 2).

However, Ms. Hu "modifies" the Base-Extra Capacity Method to recognize her concept of "economies of scale." (Hu Direct, Ex. 30, p. 4, line 22 - p. 5, line 2). Ms. Hu used an "economies of scale" factor of 0.5 to reflect the fact that four times as much capacity can be provided through one water pipe that is twice the diameter of another pipe and which costs less than twice as much to install. (Hu Direct, Ex. 30, p. 6, lines 1-

8). Ms. Hu asserts that economies of scale in sizing water facilities may permit peak loads to be served at incremental capital costs that are less than average costs. (Harwig Rebuttal, Ex. 61, p. 9, lines 8-10).

While it is true that scale economies exist, the extra capacity component of the Base-Extra Capacity Method of class cost-of-service allocation is essential to providing service to all customers. (Hubbs Rebuttal, Ex. 42, p. 14, lines 19-21). This is not unneeded extra capacity; rather, it is the amount of capacity over average flows. (Hubbs Rebuttal, Ex. 42, p. 15, lines 1-2). The entire system is needed to supply water service, including both base and extra capacity. (Hubbs Rebuttal, Ex. 42, p. 15, lines 1-2). Ms. Hu believes that, because of the alleged inherent economies of scale, the construction cost per unit of capacity associated with adding extra peak capacity is substantially less than the unit cost associated with base capacity cost. (Hubbs Rebuttal, Ex. 42, p. 15, lines 3-5).

The "economies of scale" referred to by Ms. Hu are not a part of the traditional Base-Extra Capacity Method as described in the AWWA manual, however, and this approach is not typical of the many water company cost of service studies that Mr. Stout has prepared or reviewed. (Stout Rebuttal, Ex. 10, p. 4, lines 4-7). The economy of scale reference that Mr. Stout made in his direct testimony is not the same as the economies of scale referred to by Ms. Hu. (Stout Rebuttal, Ex. 10, p. 4, lines 8-14). Mr. Stout was referring to the lower cost of service per customer in large water systems, as compared to cost of serving each customer in a smaller water system. (Stout Rebuttal, Ex. 10, p. 4, lines 8-10). Ms. Hu's concept refers to the incremental cost of additional capacity. (Stout Rebuttal, Ex. 10, p. 4, lines 12-15). This refers to the fact that the additional cost

of installing an 8-inch main as compared to a 6-inch main is not in proportion to the additional capacity obtained with the 8-inch pipe, but rather reflects an economy of scale. (Stout Surrebuttal, Ex. 11, p. 4, lines 12-15).

It is not reasonable to incorporate Ms. Hu's theory of "economies of scale" in an allocation of cost to customer classes. (Stout Rebuttal, Ex. 10, p. 4, lines 16-20). Ms. Hu argues, contrary to Mr. Stout, Mr. Hubbs, and the AWWA's definition of extra capacity costs, that extra capacity costs represent only the incremental cost of adding such capacity to the system. (Stout Rebuttal, Ex. 10, p. 4, lines 18-20). This is an attempt to introduce marginal or incremental cost concepts into the allocation of embedded costs to customers and use the results as a basis for designing rates that also are based on embedded costs. (Stout Rebuttal, Ex. 10, p. 5, lines 7-19). This is inappropriate, since embedded costs are being used. (Stout Rebuttal, Ex. 10, p. 5, lines 7-19). If marginal cost pricing in which the extra capacity requirements were priced at today's marginal cost of adding such capacity, then Ms. Hu's concept would be consistent in that it would apply her "economies of scale" to all aspects of the process of cost determination and design (Stout Rebuttal, Ex. 10, p. 5, lines 7-19). The AWWA manual uses the ratio of capacities, not the ratio of marginal costs to total costs, for allocating costs between the base and extra capacity functions. (Stout Rebuttal, Ex. 10, p. 5, lines 15-19).

Ms. Hu's concept is not described or suggested in any text that sets forth methods for allocation of costs for water, gas or electric utilities. (Stout Rebuttal, Ex. 10, p. 7, lines 10-11). Ms. Hu admitted that her "modifications" to the base-extra capacity method have not been accepted by any regulatory commission. (Tr. 618, lines 17-20, 23-25). The only reference that Ms. Hu could cite for support of her theory is an obscure

quote from a report that was not offered or received into evidence. (Hu Rebuttal, Ex. 31, p. 14, footnote 1). However, the footnote, in the rebuttal testimony of Ms. Hu, about the report cites the City of Austin, Texas and is dated 1993. (Hu Rebuttal, Ex. 31, p. 14, footnote 1). Mr. Harwig, a witness in this case, was involved in the rate proceeding in Austin, Texas. (Tr. 1069, lines 5-19). He did not recall seeing the report that Ms. Hu cited, while he was doing his work for the City of Austin, Texas. (Tr. 1069, lines 23-24). The City of Austin, Texas retained a consultant to perform a cost of service study, the consultant used the base-extra capacity method, rates were designed on that basis and those rates were voted on by the Austin City Council. (Tr. 1070, lines 4-9).

Ms. Hu's hypothetical scenario, in which a base system is built by itself, overlooks the logical fact that no company would build such a plant alone. (Hubbs Rebuttal, Ex. 31, p. 15, lines 10-11). A company builds most of its facilities at the same time to handle the loads, which include the base capacity (average use) and extra capacity (that capacity over average usage). Accordingly no company would build and design a plant with base capacity only, because such a plant would not be able to supply any type of normal customers. (Hubbs Rebuttal, Ex. 42, p. 15, lines 10-11). Allocation of the cost of facilities based on class usage and capacities is far more logical than shifting the costs based on a totally infeasible plant scenario. (Hubbs Rebuttal, Ex. 42, p. 15, lines 11-15). Ms. Hu's allocation assumes that a base system is priced as if it would be built by itself, however, as discussed previously, this is unrealistic since a plant, in order to be useful, must have both base capacity and extra capacity. (Hubbs Rebuttal, Ex. 42, p. 15, lines 6-16). Ms. Hu's economies of scale then reduce the extra capacity allocator thereby shifting cost to the base capacity function.

Ms. Hu is wrong when she suggests that the base-extra capacity method is not appropriate for the allocation of capacity-related costs. (Hubbs Surrebuttal, Ex. 43, p. 7, lines 17-18). She believes that the base-extra capacity method allocates too much cost to low load factor groups like the residential class and too little cost to high load factor groups such as the industrial class. (Hubbs Surrebuttal, Ex. 43, p. 7, lines 7-9). Ms. Hu states that the reason for this over allocation is that the base-extra capacity method of allocation produces peak responsibility allocation factors. (Hubbs Surrebuttal, Ex. 43, p. 7).

The base-extra capacity method appropriately allocates costs based on the peak use of the system. (Hubbs Surrebuttal, Ex. 43, p. 7, lines 18-19). The peaking requirements for each class of service represent that portion of the costs that are needed to provide service for peak usage. (Hubbs Surrebuttal, Ex. 43, p. 7, lines 19-21). The base-extra capacity method allocates these costs based on their capacity needs and thereby allocates the costs of system facilities between the classes based upon the capacity usage of the separate classes. (Hubbs Surrebuttal, Ex. 43, p. 7, line 21 - p. 8, line 3). Low load factor customers require more capacity to be served and therefore use a greater proportion of the capacity-related facilities than do high factor customers and accordingly should pay the costs associated with the capacity facilities that they use. (Hubbs Surrebuttal, Ex. 43, p. 8, lines 3-6). Allocation of capacity-related facilities based on a method that does not assign capacity-related costs on a capacity or peaking basis in inappropriate (Hubbs Surrebuttal, Ex. 43, p. 8, lines 10-12), and accordingly Ms. Hu's cost of service is not appropriate.

Ms. Hu is also inconsistent in not extending her logic to the remainder of the pipe's costs. (Stout Rebuttal, Ex. 10, p. 5, line 20 – p. 6, line 12; Harwig Rebuttal, Ex. 61, p. 10, lines 3-4). She acknowledged that she did not assess the magnitudes of economies of scale in facilities other than transmission and distribution mains. (Hu Direct, Ex. 30, p. 6, lines 7-8; Harwig Rebuttal, Ex. 61, p. 10, lines 11-12). If we are to determine the extra capacity costs based only on the incremental cost of adding such capacity by using a larger size pipe, then we should also determine the base costs based only on the incremental cost of adding the average capacity. (Stout Rebuttal, Ex. 10, p. 5, line 21 – p. 6, line 12). The incremental cost of adding the average or base capacity is the cost to install a 6-inch main rather than a main of minimal size or a "zero-inch" main. (Stout Rebuttal, Ex. 10, p. 6, lines 1-3). The result of this would be an increase of customer costs. (Stout Rebuttal, Ex. 11, p. 6, lines 7-12 reach the customer (Stout

The pure peak responsibility method described by Ms Hu is the Coincident Peak method. (Stout Surrebuttal, Ex. 11, p. 2, lines 14-23). This method allocates capacity costs to customer classes based on the use of each class on the day or hour of system peak demand. (Stout Surrebuttal, Ex. 11, p. 2, lines 15-17). Use of the Coincident Peak method can result in a low allocation of capacity costs to customers whose peak demands did not occur at the same time or coincident with the system peak. (Stout Surrebuttal, Ex. 11, p. 2, lines 17-19). However, this does not occur with the Base-Extra Capacity Method, because it uses the peak of each class whenever it occurs, as does the Non-Coincident Peak Method. (Stout Surrebuttal, Ex. 11, p. 2, lines 19-22; Harwig Surrebuttal, Ex. 62, p. 14, line 19 - p. 15, line 11). Under the Base-Extra Capacity

Method, greater weight is placed on average use than either the Non-Coincident Peak method or the Coincident Peak method. (Stout Surrebuttal, Ex. 11, p. 4, lines 5-7).

Contrary to Ms. Hu's claims, the Base-Extra Capacity Method is not a pure peak responsibility allocation. (Hubbs Surrebuttal, Ex. 43, p. 8, lines 14-22; Stout Surrebuttal, Ex. 11, p. 2, lines 2-12). The Base-Extra Capacity method allocates capacity costs to customer classification on the bases of average daily use (or annual water consumption) and of use in excess of average (extra capacity). (Stout Surrebuttal, Ex. 11, p. 2, lines 5-7). The weighting of the average use and extra capacity factors is based on the ratio of system average day to system peak day and the complement of this ratio (1.00 - the ratio), respectively. (Stout Surrebuttal, Ex. 11, p. 2, lines 7-10). The extra capacity factors are based on estimates of the non-coincidental peak demand of each customer class. (Stout Surrebuttal, Ex. 11, p. 2, lines 10-11). The non-coincidental peak demand of a class is the highest use of the class and may or may not coincide with the system peak. (Stout Surrebuttal, Ex. 11, p. 2, lines 11-13).

Despite Ms. Hu's fervent protestations to the contrary, the base-extra capacity method properly reflects the cost causation responsibility associated with the different usage patterns of the classes. The base-extra capacity method allocates costs based on average use and on capacity use over average use. (Hubbs Surrebuttal, Ex. 43, p. 9, lines 5-6). Base capacity is allocated based on class average use and extra capacity (that use which exceeds average use) is allocated based on peak use, on both an hourly basis and a daily basis. (Hubbs Surrebuttal, Ex. 43, p. 9, lines 7-9).

What Ms. Hu considers a pure peak responsibility allocation analyzes only the smallest portion of peak use allocations, the daily allocation and not the hourly allocation.

The extra capacity factor of the Base-Extra Capacity Method allocates costs based on both a peak day responsibility of the class and the peak hour responsibility of the class. As can be seen in the allocation factors for the Base-Extra Capacity Method, the hourly peak factors for the residential class are dramatically higher than the daily peak factors, which are in turn dramatically higher than base usage factors. The base-extra capacity method allocates costs related to the capacity of the system based on each specific class use. (Hubbs Surrebuttal, Ex. 32, p. 9).

Ms. Hu states, at page 9 of her Rebuttal testimony, that a reasonable cost allocation methodology should give weight to both class annual water consumption and class maximum water demand. Mr. Hubbs agrees and this is exactly what the Base-Extra Capacity method does and for that reason (Hubbs Surrebuttal, Ex. 43, p. 9, lines 12-13) the Staff's cost of service study should be adopted.

ISSUE NO. 8d: PHASE-IN

Should MAWC'S rate increase be phased in over a number of years? If so, what is the appropriate "phase-in amount, and what is the appropriate phase-in period?

As previously discussed, supra, Staff advocates a District Specific Rate Design in this case. However, Staff is cognizant of the significant increases in rates in several of the districts. For this reason Staff advocates a five-year phase-in of rates and recommends allowing the Company to earn a carrying charge equal to the rate of return authorized by the Commission on any amounts deferred. (Rackers Surrebuttal, Ex. 54, p. 5, lines 18-20).

The significant rate increases that will be produced in this case are due to several factors. (Rackers Rebuttal, Ex. 53, p. 7, lines 2-10). These factors include plant

additions, with the most significant being the St. Joseph treatment plant, revenue shifts, and the elimination of single tariff pricing. (Rackers Rebuttal, Ex. 53, p. 7, lines 2-10). A phase-in of rate increases would mitigate rate shock. (Rackers Direct, Ex. 52, p. 11, lines 13-14). The term "rate shock" has been used to characterize the extremely significant increase that would result from reflecting the entire first-year revenue requirement associated with the SJTP in rates, for example. (Rackers Direct, Ex. 52, p. 11, lines 15-21). Other extremely significant rate increases will be felt from revenue shifts and the elimination of single tariff pricing. Such other significant rate increases can also be mitigated by the use of phase-ins.

The Staff's phase-in methodology defers a portion of the rate increases resulting from the revenue requirement associated with the SJTP as well as the extremely significant increase from the aforementioned factors. These deferrals would earn a return equal to the rate of return ultimately approved by the Commission in this case. The accumulated deferrals would be recovered in the future though additional rate increases in years two through five. By the end of year five, all necessary rate increases associated with the plant and other factors will be fully reflected in rates and all prior phase-in deferrals will be recovered. The Staff recommends that the Commission approve all four of the subsequent rate increases as part of its order in this case. Each of these rate increases will take effect automatically on the annual anniversary of the effective date of the rates from this case. (Rackers Direct, Ex. 52, p. 12, line 14 - p. 13, line 10; Rackers Rebuttal, Ex. 53, p. 7, lines 2-12; Rackers Surrebuttal, Ex. 54, p. 3, line 11 - p. 7, line 17).

Staff realizes that its phase-in proposal may cause a reduction in the level of earnings reported on the Company's financial statements. (Rackers Surrebuttal, Ex. 54,

p. 4, line 20 - p. 5, line 14). Although reported earnings may be initially reduced, the Staff proposal accumulates deferrals that will be reflected in the Company's rates and reported financial statement earnings in the future. (Rackers Surrebuttal, Ex. 54, p. 5, lines 1-5). Staff advocates a carrying cost equal to the rate of return ultimately approved by the Commission until the entire approved rate increase is actually fully reflected in rates. (Rackers Surrebuttal, Ex. 54, p. 5, lines 4-5). This carrying cost compensates the Company for the time value of money during the deferral period. (Rackers Surrebuttal, Ex. 54, p. 5, lines 4-5).

The Company contends that it would not be able to record the deferred revenues on its books until the future rate increases are actually enacted. (Hamilton Surrebuttal p.5 lines 1-10). Regardless of whether the deferred revenues can be or are recorded on the books of MAWC before they are actually received in future years, it is clear that the effects of the numbers that can be presented on MAWC's financial statements must be weighed against other considerations. As discussed supra, the specific reason for the phase-in is to prevent the extreme rate increases from being implemented at one time. This certainly is an important consideration that can override MAWC's concerns, especially when it is coupled with the carrying costs that will compensate the Company for the time value of money. The Company's financial statements could contain a footnote explaining the deferrals. (Tr. 509 lines 2-12). Such a footnote would notify investors of the reasons for the deferral, and would provide accurate information about the financial condition of the Company.

The Company argues against the phase-in by suggesting that the Commission may not allow recovery of phase-in deferrals in the future. (Rackers Surrebuttal, Ex. 54,

p. 5, lines 6-14). Such a contention is without any support in the record or in the history of the Commission. In the previous two phase-ins ordered by the Commission, which involved Union Electric Company and Kansas City Power and Light Company, all amounts deferred were fully reflected in the cost of service and rates. (Rackers Surrebuttal, Ex. 54, p. 5, lines 6-14). Utilizing the old adage that past actions are the best predictor of future behavior, there is no credible reason to believe that the Commission or its Staff would not propose to reflect amounts previously deferred, under an ordered phase-in plan for MAWC, in the cost of service.

The Company also suggests that the Company could be forced to continue deferrals or forgo recovery of deferrals due to future rate increases required by future plant additions. (Rackers Surrebuttal, Ex. 54, p. 5, lines 8-14). This contention is also without merit. There is nothing in the Staff's phase-in proposal that prevents the Company from filing for a rate increase to address future plant additions or other changes in the cost of service. (Rackers Surrebuttal, Ex. 5, p. 5, lines 18-20). As a matter of course, any future rate case filing during the phase-in period would require an examination of the total cost of service but clearly would not prevent recovery of amounts previously deferred. (Rackers Surrebuttal, Ex. 54, p. 5, lines 18-23). The past actions of the Commission and Staff provide no basis for the allegation that deferred amounts under an ordered phase-in for MAWC would not be reflected in the cost of service.

In view of the foregoing Staff submits that there is a legal basis for phase-ins, that a phase-in of five years is appropriate herein to reduce rate shock, and that as

compensation for MAWC the phase-in should have a carrying cost equal to the rate of return authorized by the Commission in this case.

CONCLUSION

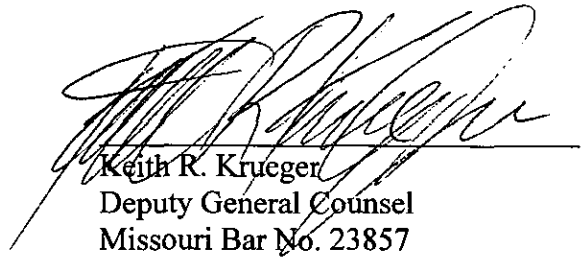
The Commission issued a Report and Order in Case No. WA-97-46, in which it stated that MAWC's proposal to construct a new ground water source of supply and treatment at a remote site was a reasonable alternative for providing water service to its customers in the St. Joseph District. The Company reasonably relied on that Commission finding when it constructed its new facilities to serve the St. Joseph District. Except for the adjustments that have been suggested by Staff, the costs of constructing the SJTP should now be included in the Company's rate base.

The Company's costs of providing water are most appropriately borne by the customer causing the cost. Because of the very large construction costs that the Company has incurred in the St. Joseph District, Single Tariff Pricing would result in large subsidies from the customers of the other six districts to the customers of the St. Joseph District, thus defeating the principle objective of rate design. The Commission should therefore adopt District Specific Pricing in this case, with a minor modification to accommodate the needs of the customers in the Company's Brunswick District.

If the Commission allows the Company to recover the full amount of its prudently incurred costs in a single rate increase, it will result in "rate shock" to the customers of Missouri-American Water Company. The Commission should therefore order that the rate increase should be phased in over a period of five years for the customers who would otherwise face very large rate increases.

Respectfully submitted,

DANA K. JOYCE
General Counsel



Keith R. Krueger
Deputy General Counsel
Missouri Bar No. 23857

Attorney for the Staff of the
Missouri Public Service Commission
P. O. Box 360
Jefferson City, MO 65102
(573) 751-4140 (Telephone)
(573) 751-9285 (Fax)

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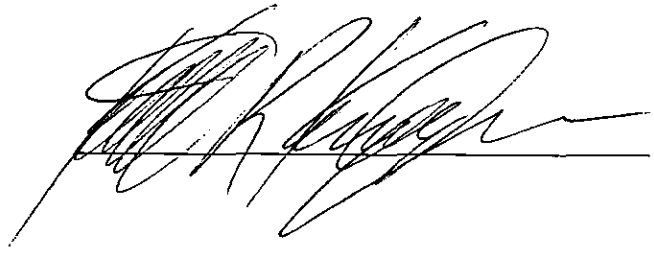

Service List for
Case No. WR-2000-281, et al.
July 24, 2000

Office of the Public Counsel
P.O. Box 7800
Jefferson City, MO 65102

W. R. England, III, Dean L. Cooper
Brydon, Swearengen & England P.C.
P.O. Box 456
Jefferson City, MO 65102-0456

Chuck D. Brown
City Attorney
303 East Third St., P.O. Box 1355
Joplin, MO 64802-1355

Stuart Conrad
Finnegan, Conrad & Peterson, L.C.
3100 Broadway, Suite 1209
Kansas City, MO 64111

James Fischer
Attorney at Law
101 West McCarty Street, Suite 215
Jefferson City, MO 65101

Leland B. Curtis
Curtis, Oetting, Heinz, Garrett & Soule, P.C.
130 S. Bemiston, Suite 200
St. Louis, MO 63105

Joseph W. Moreland/Martin Walter
Blake & Uhlig, P.A.
2500 Holmes Rd.
Kansas City, MO 64108

Charles Brent Stewart
Stewart & Keevil, L.L.C.
1001 Cherry Street, Suite 302
Columbia, MO 65201

Louis J. Leonatti
Leonatti & Baker
P.O. Box 758
Mexico, MO 65265

Karl Zobrist
Blackwell Sanders Peper Martin LLP
2300 Main Street, Suite 1100
Kansas City, MO 64108

James Deutsch/Henry Herschel
Riezman & Blitz, P.C.
308 East High St., Ste. 301
Jefferson City, MO 65101

Lisa Robertson/Brian Head/Timothy Kissock
City Hall – Room 307
1100 Frederick Ave.
St. Joseph, MO 64501

Diana Vuylsteke, Esq.
One Metropolitan Square, Ste. 3600
211 N. Broadway
St. Louis, MO 63102-2750

Ed Downey
221 Bolivar St., Ste. 101
Jefferson City, MO 65102