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BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE BY ITS SUN CITY WEST WATER AND WASTEWATER DISTRICTS.	**DOCKET NOS. WS-01303A-02-0867** **WS-01303A-02-0868** **W-01303A-02-0869** **WS-01303A-02-0870** **W-01303A-02-0908** **(CONSOLIDATED)**
IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, INC., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE BY ITS SUN CITY WATER AND WASTEWATER DISTRICTS.	**ARIZONA-AMERICAN WATER COMPANY'S APPLICATION FOR REHEARING OF DECISION NO. 67093**
IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE BY ITS MOHAVE WATER AND HAVASU WATER DISTRICTS.	

Arizona Corporation Commission
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IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE BY ITS ANTHEM WATER, AGUA FRIA WATER AND ANTHEM/AGUA FRIA WASTEWATER DISTRICTS.
IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE BY ITS TUBAC WATER DISTRICT.

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Arizona-American Water Company ("Arizona-American or "the Company") hereby applies for rehearing of Decision No. 67093 (docketed June 30, 2004) ("the Decision") pursuant to A.R.S. § 40-253 and A.A.C. R14-3-111. The specific matters on which rehearing is sought are as follows:

1. **Rate Base Issues.** The Decision violates the fair value standard, contained in Article 15, section 14 of the Arizona Constitution, in two different respects. First, in developing the Company's fair value rate base for each district, the Commission simply averaged the original cost rate base ("OCRB") and the reconstruction cost new ("RCND") rate base because this method is "traditional," and disregarded the Company's evidence showing that the RCND rate bases are conservative and substantially understate the current value of the Company's utility plant and property. Decision at 14-16.

Second, the Company's fair value rate bases were not used to determine the Company's authorized level of operating income. Instead, operating income was determined by multiplying the rate of return by the OCRB. Decision at 31-33. This "backing-in" method produces fluctuating rates of return on the fair value rate bases, which range from 6.43% to as low as 4.32%. Decision at 33-35. These rates of return are below the current cost of investment grade bonds and, in some instances, below current yields on Treasury instruments. *See* Schedule attached at Tab 2. This method is unlawful and violates the Arizona Constitution.

2. **Rate of Return.** The Commission adopted the rate of return, 6.5%, recommended by the Utilities Division ("Staff"), which is based on the Company's embedded cost of debt and a return on common equity of only 9.0%. Decision at 29-31. In adopting Staff's recommendation, the Commission arbitrarily rejected all of the cost of equity estimates of the Company's expert, Dr. Thomas M. Zepp, as well as evidence that the versions of the finance models used by Staff understate the current cost of equity. Moreover, the Commission failed to consider recent increases in interest rates, while

rejecting the Company's risk premium and capital asset pricing model estimates because Dr. Zepp used forecasted interest rates. The forecasted interest rates used by Dr. Zepp, however, are actually *lower* than current interest rates.[1] Moreover, the Commission ignored evidence of actual and authorized earnings, concluding that information regarding actual earnings has been "replaced" by "corporate finance models." Decision at 29. Based on current interest rates and actual equity returns, and taking into account the amount of debt in the Company's capital structure, Arizona-American is entitled to an authorized return on equity substantially greater than 9.0% and an overall return on its rate base in excess of 6.5%.

3. **Rate Case Expense.** The Commission authorized the Company to recover $418,941 in rate case expense, despite the fact that its actual rate case expense exceeded $1 million. Decision at 18-20. The primary basis for this determination was the Residential Utility Consumer Office's ("RUCO") contention that the Company used an inappropriate test year. The reality is that the Company's rate case expense was significant because of the size and complexity of this proceeding, which involved 10 different water and wastewater districts, each of which has its own rate base, income statement and rate schedule. Only one significant issue was affected by the Company's use of a 2001 test year. Moreover, a delay in filing would have made it even more difficult to obtain plant records and other historic data from Citizens Communications Company ("Citizens"), resulting in further complications and, ultimately, more expense. Finally, as discussed below, the amount of rate case expense requested by the Company, $715,000 (amortized over three years), is reasonable when compared to other Citizens and Arizona-American rate proceedings.

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[1] As discussed below, Staff used an average of the yields on 5, 7 and 10-year Treasury notes in its capital asset pricing model ("CAPM"). Since Staff's original CAPM estimates were made, the average yield on those instruments has increased by over 100 basis points (1.0%).

Arizona-American respectfully submits that the forgoing determinations the in the Decision are arbitrary, unreasonable, unlawful and unsupported by the evidence in the record for the reasons set forth below.[2]

I. OVERVIEW AND SUMMARY OF THE COMPANY'S APPLICATIONS.

In November 2002 and December 2002 (Tubac water district), Arizona-American filed applications for a determination of the fair value of its utility plant and property and for adjustments to its rates and charges for utility service. The Company's applications covered 10 water and wastewater districts, and sought rate adjustments based on the fair value rate bases and operating results in those districts utilizing a 12-month test period ending December 31, 2001, with appropriate pro forma adjustments to annualize and normalize rate base, revenues and expenses on a going-forward basis. These districts were previously owned and operated by Citizens, and were acquired by Arizona-American on January 15, 2002.

None of the districts has received any recent rate increases.[3] Citizens' Agua Fria Water Division, Sun City Water Company, Sun City Sewer Company, Sun City West Utilities Company and Tubac Valley Water Company's last rate orders were issued in May 1997, based on test years ending March 31, 1995. Decision No. 60172 (May 7, 1997).[4] Citizens' Mohave Water Division last received rate increases in February 1990,

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[2] In support of this application, the Company also incorporates by reference its post-hearing Closing Brief, filed in the docket on February 4, 2004, and its post-hearing Reply Brief, filed in the docket on February 18, 2004, which discuss each of the issues identified above.

[3] A small wastewater district located in Mohave County, formerly known as Sorenson Utility Company, was also acquired by Arizona-American. This wastewater district is not involved in the rate applications, nor is the Paradise Valley water district, which has been owned and operated by Arizona-American since the late 1960s. Both of those districts had recently received rate increases and, consequently, were not included in this rate case.

[4] In this Decision, Sun City Water Company and Sun City West Utilities' rates for water service were reduced.

based on a test year ending March 31, 1988. Decision No. 56806 (Feb. 1, 1990). Havasu Water Company last received rate increases in February 1992, based on a test year ending December 31, 1990. Decision No. 57743 (Feb. 21, 1992).[5]

The Company requested adjustments to its rates and charges for service that would produce an overall increase in revenue of approximately $8.2 million, as shown on page 6 of the Decision, which would provide a rate of return of 7.5% on the fair value of the Company's utility plant and property devoted to public service. Under the Decision, the Company's rates are adjusted to produce a total increase in revenue of approximately $1.3 million, with rates of return on the Company's fair value rate bases ranging from 4.32% to 6.43%, depending the particular district. Decision at 33-35; Schedule attached at Tab 1. In contrast, at the time the Commissioners considered the Company's applications at open meeting, the yield on a long-term Treasury note was about 5.5%, while the yield on an investment grade corporate bond was about 6.8%. *See* Federal Reserve Statistical Release H.15, attached at Tab 2. As discussed below, these unreasonable and confiscatory rates of return result from the combination of using the historic or "original" cost of the Company's utility plant and property as the rate base for each district, instead of each district's fair value rate base, and the application of an extremely low rate of return, 6.5%, to the original cost rate bases.

II. THE RECOMMENDED ORDER VIOLATES THE "FAIR VALUE" STANDARD MANDATED BY THE ARIZONA CONSTITUTION BY IGNORING EVIDENCE OF CURRENT VALUE AND RELYING EXCLUSIVELY ON HISTORIC COST TO SET RATES AND CHARGES FOR UTILITY SERVICE.

A. Overview of the "Fair Value" Standard.

Under the Arizona Constitution, utility rates must be established on the basis of the

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[5] In addition, Arizona-American was required to file for rate review for the Anthem water and wastewater districts by 2004 or, if earlier, when the number of equivalent residential units in Anthem reached 3,500. Decision No. 60975 (June 19, 1998).

"fair value" of the utility's property. Ariz. Const. art. 15, § 14. For example, in the seminal decision *Simms v. Round Valley Light & Power Co.*, 80 Ariz. 145, 151, 294 P.2d 378, 382 (1956), the Arizona Supreme Court stated:

> It is clear, therefore, that under our constitution as interpreted by this court, *the Commission is required to find the fair value of the company's property and use such finding as a rate base* for the purpose of calculating what are just and reasonable rates. . . . While our constitution does not establish a formula for arriving at fair value, *it does require such value to be found and used as the base in fixing rates. The reasonableness and justness of the rates must be related to this finding of fair value.* [Emphasis supplied.]

More recently, the Arizona Supreme Court confirmed that in a monopoly setting, fair value is the exclusive rate base on which a utility's rates are established. *US West Communications, Inc. v. Ariz. Corp. Comm'n,* 201 Ariz. 242, 244-46, ¶¶ 13-19, 34 P.3d 351, 354-55 (2001) (summarizing and approving Arizona decisions requiring the use of fair value to set rates in a traditional, monopolistic context).

Under the fair value method, rates are set "according to the actual present value of the assets employed in the public service." *Duquesne Light Co. v. Barasch*, 488 U.S. 299, 308 (1989). "Fair value means the value of properties at the time of inquiry," and not simply their historic cost. *Simms*, 80 Ariz. at 151, 294 P.2d at 382.

> [The] fair value standard mimics the operation of the competitive market. To the extent the utilities' investments in plants are good ones (because the benefits exceed their costs) they are rewarded with an opportunity to earn an "above cost" return, that is, a fair return on the current "market value" of the plant. To the extent the utilities' investments turn out to be bad ones (such as plants that are canceled and so never used and useful to the public), the utilities suffer because the investments have no fair value and so justify no return.

Duquesne Light, 488 U.S. at 308-09. *See also Bluefield Waterworks & Improvement Co. v. Pub. Serv. Comm'n of West Va.*, 262 U.S. 679, 690 (1923) ("If the property, which legally enters into the consideration of the question of rates, has increased in value since it was acquired, the company is entitled to the benefit of such increase."); *City of Tucson v.*

Citizens Utilities Water Co., 17 Ariz.App. 477, 480, 498 P.2d 551, 554 (1972) ("The Court reiterated [in *Simms*] that fair value meant 'value of properties at the time of inquiry' . . . which figure will necessarily reflect the current cost of construction.").

In this case, Arizona-American presented evidence establishing both an original cost less depreciation ("OCLD") rate base and a reconstruction cost new less depreciation ("RCND") rate base for each district in accordance with the Commission's rule defining the requirements for an application seeking rate adjustments. A.A.C. R14-2-103(B)(1) and Schedules B-1 through and B-4. There were certain minor disagreements relating to total plant in service and accumulated depreciation, as described on pages 7 through 9 of the Decision, which resulted in the adoption of adjusted OCLD rate bases for all 10 districts totaling approximately $90.9 million. Decision at 10. These adjustments were carried over to the RCND rate bases, which, as adjusted, total approximately $134.4 million. Decision at 11.

The Company does not challenge the amount of these rate bases. The dispute centers instead on how these rate bases should be used to satisfy the constitutionally-mandated fair value standard. As shown below, the Commission violated the fair value standard in two significant respects. First, in determining the fair value rate base for each district, the Commission ignored the Company's evidence regarding the fair value of each district's utility plant and simply averaged the OCLD and the RCND rate bases. As a result, the Company's fair value rate bases were substantially understated. Second, the Commission failed to actually use the fair value rate bases to set rates, relying instead on each district's OCLD rate base to determine the revenue requirement. This approach renders the fair value standard meaningless.

B. The Use of the Average of the Company's OCRB and RCND Rate Bases is Unlawful and Ignores the Evidence Presented.

The Company maintains that each district's RCND rate base should be used as its

fair value rate base ("FVRB") because the RCND rate bases provide the best estimate of the current value of the Company's utility plant and property. In addition to offering reproduction cost new ("RCN") plant-in-service studies for each district, which were accepted by Staff (and not challenged by any other party), the Company also provided the recent purchase price paid by Arizona-American in acquiring Citizens' water and wastewater assets as evidence that the fair value of those assets substantially exceeds their original cost. Staff, in contrast, proposed to use the average of the OCLD rate base and the RCND rate base as each district's FVRB because this what the Commission "traditionally" has done. In the Decision, the Commission adopted Staff's position and rejected the Company's position on several different grounds, which are contrary to law and to the evidence presented.

First, the Commission equated the use of the Company's RCND rate base as the FVRB with the recovery of an "acquisition adjustment." Decision at 14-15. However, there was simply no evidence that the Company's RCND rate bases actually included any acquisition adjustment.[6] As shown in the Company's schedules, no adjustment was made to any of the RCND rate bases to account for the cost of acquiring Citizens' utility plant and property. *See* Bourassa Dt. (Ex. A-24), Rejoinder Schedules B-1 (rate base summary) and B-3 (adjustments to RCRB). *See also* Stephenson Rb. (Ex. A-74) at 9-11 (discussing acquisition adjustment); Tr. at 105 ("The [RCRB] does not include an acquisition

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[6] The acquisition adjustment mentioned in the Decision is an accounting entry made in connection with Arizona-American's acquisition of the Citizens' water and wastewater systems, the purchase price of which was approximately $276,500,000. *See* Stephenson Dt. (Ex. A-64) at 10 (discussing transaction). Under the Uniform System of Accounts, Arizona-American was required to record the difference between (1) the cost (i.e., purchase price) of Citizens' water and wastewater systems and (2) the original cost of Citizens' utility plant and property, less any amounts credited at the time of the acquisition to accumulated depreciation, accumulated amortization and contributions in aid of construction with respect to such property. *See* Ex. A-86 (Uniform System of Accounts, Balance Sheet Account No. 114).

adjustment . . . . It is the company's estimate of the current value of its utility property.") and 123 (same).

Although acknowledging this evidence, the Commission nevertheless concluded that the use of the Company's RCND rate bases would have the "effect" of including an acquisition adjustment in rate base, apparently because the RCND rate bases are greater than the OCLD rate bases. Decision at 15. However, if Citizens had not sold its water and wastewater assets and, instead, had applied for rate adjustments, Citizens' RCND rate bases *would be exactly the same* as the Company's RCND rate bases, as Youngtown's witness, Mr. Burton, admitted during the hearing. Tr. at 1279-81. In other words, the RCND rate bases are larger than the OCLD rate bases because the current cost to reproduce the utility systems is greater than the historic cost to construct them, regardless of whether the systems have been sold. It was unlawful to prohibit Arizona-American from seeking a return on an RCND rate base simply because there has been a change in ownership, when the prior owner would have had the right to request the same ratemaking treatment under the Arizona Constitution.

In the discussion found on pages 14 and 15 of the Decision, the Commission also confused the concepts of "cost" and "value." For example, the Decision states that the "OCRB methodology is based on current, verifiable and reasonable adjustments to a verifiable, objective record of the *value* of assets . . . ." Decision at 14 (emphasis supplied). However, an "original cost" rate base reflects the *historic cost* to construct the assets, rather than the assets' *current value*. While the historic cost to construct an asset may well be "verifiable" and "objective," that cost may have little relation to the asset's value today, which is the crux of the fair value methodology. *E.g.*, *Duquesne Light*, 488 U.S. at 308-09; *Bluefield Waterworks*, 262 U.S. at 690; *US West*, 201 Ariz. 245-56, ¶¶ 13-18, 34 P.3d 354-55.

For these reasons, the Commission's conclusion that the Company failed to present

a "legitimate basis" for using each district's RCND rate base as the district's FVRB is not supported by substantial evidence. Because the principal goal of the fair value standard is to set rates on the basis of the current value of the property devoted to public service, as opposed to that property's historic cost, arbitrarily averaging the utility's RCND rate base with its OCLD rate base violates the Arizona Constitution.

> It is well established that values of utility properties fluctuate, and that owners must bear the decline and are entitled to the increase. The decision of this court in *Smyth v. Ames* . . . declares that to ascertain value 'the present as compared with the original cost of construction' are, among other things, matters for consideration. But this does not mean that the original cost or the present cost *or some figure arbitrarily chosen between these two is to be taken as the measure.* The weight to be given to such cost figures and other items or classes of evidence is to be determined in the light of the facts of the case in hand.

McCardle v. Indianapolis Water Co., 272 U.S. 400, 410 (1926) (emphasis supplied) (quoting *Smyth v. Ames*, 169 U.S. 466, 547 (1898)).

In this case, Arizona-American presented RCND rate bases for each district and evidence of a recent arms-length transaction involving two independent and sophisticated parties, which evidence was undisputed. That evidence showed that the current value of the Company's utility plant exceeds its RCND rate bases and, therefore, that the use of its RCND rate bases as the FVRB for each district is conservative. Conversely, there is no evidence supporting the use of the average of the Company's OCLD and RCND rate bases as fair value, other than it is "traditional." Therefore, the Commission's determination was arbitrary and not supported by substantial evidence.

C. The Commission Failed to Use the Company's Fair Value Rate Bases to Set Rates, in Violation of the Arizona Constitution.

Putting aside the issue of how each district's FVRB was determined, the Commission failed to apply its rate of return, 6.5%, to that rate base. Instead, the Commission used the so-called "backing in" method advocated by Staff, RUCO and

Youngtown. Under this method, the Company's OCLD rate base and rate of return on rate base were first determined. Next, the OCLD rate base is multiplied by the rate of return to determine the Company's operating income. Third, the Company's operating income is divided by its FVRB, to compute what is euphemistically called the "fair value rate of return." Finally, the so-called "fair value rate of return" is multiplied by the FVRB to produce the authorized operating income. The last two steps are meaningless – Arizona-American's operating income is actually based on the original cost of its plant rather than its plant's fair value.

For example, assume that a hypothetical utility's OCLD rate base is $1 million, its rate of return on rate base is 9.0%, and its FVRB is $1.5 million. The utility's operating income would be determined, as follows:

Step One – Determine Operating Income

OCLD Rate Base	1,000,000
Rate of Return	x 9%
Operating Income	**$ 90,000**

Step Two – Compute "Fair Value Rate of Return"

Operating Income	90,000
FVRB	÷ 1,500,000
"Fair Value Rate of Return"	**6%**

Step Three – Re-Compute Operating Income

FVRB	1,500,000
"Fair Value Rate of Return"	x 6%
Operating Income	**$ 90,000**

Thus, the utility's operating income will always be based on its OCLD rate base as

opposed to the fair value of its utility plant. For example, if the hypothetical utility's FVRB were $1.2 million instead of $1.5 million, the required operating income, $90,000, would be divided by $1.2 million to produce a "fair value return" equal to 7.5%. If the utility's FVRB were instead $900,000, the "fair value rate of return" would be set at 10%. In each case, the utility's authorized operating income, $90,000, remains unchanged. Consequently, this method renders the fair value of the Company's utility plant meaningless, as well as the Commission's own requirement that a utility submit an RCND rate base. A.A.C. R14-2-103(B)(1) and Rate Base Schedules B-1, B-3 and B-4.

In this case, each water and wastewater district's OCLD rate base was multiplied by 6.5%, the rate of return on rate base, to determine the district's authorized operating income. The district's operating income was then divided by the district's FVRB to produce the "fair value rate of return." The result is that each district has a *different* rate of return on its FVRB, which is *less* than the authorized rate of return:

District	Rate of Return on Rate Base
Sun City Water	4.32%
Sun City Wastewater	4.37%
Tubac Water	5.12%
Havasu Water	5.44%
Mohave Water	5.46%
Sun City West Wastewater	5.48%
Sun City West Water	5.70%
Agua Fria Water	6.20%
Anthem Water	6.38%
Anthem/Agua Fria Wastewater	6.43%
Authorized Return	6.5%

Decision at 33-35. The use of these fluctuating rates of return ensures that the Company's authorized operating income is always based on the original cost of each district's plant. The authorized rate of return is *not* applied to the fair value of the Company's property, as required under Arizona law. *E.g., Phelps Dodge Corp. v. Ariz. Electric Power Coop.*, 207 Ariz. 95, __ , ¶ 18, 83 P.3d 573, 582 (App. 2004) ("The Commission has traditionally used fair value to set a utility's rate base."), *citing Scates v. Ariz. Corp. Comm'n*, 118 Ariz. 531, 534, 578 P.2d 612, 615 (App. 1978). As a result, the returns on FVRB are *less* than the current yields on investment grade bonds and, in some cases, *less* than the yields on U.S. Treasury notes. *See* Schedule attached at Tab 2.

In response to the Company's argument, the Commission noted various Arizona appellate decisions cited by its Staff, and concluded that "no legitimate basis [has been] presented for departing from this traditional ratemaking methodology." Decision at 32. During the course of the proceeding, however, no one identified the source of this methodology. Further, none of the court decisions discussed by the Commission actually approves this method. The only decision that actually describes the "backing in" method is *Litchfield Park Serv. Co. v. Ariz. Corp. Comm'n*, 178 Ariz. 431, 434-35, 874 P.2d 988, 991-92 (App. 1994). The description in that case, however, is *dicta*, i.e., general background that has nothing to do with the actual issues presented for review, which has never been followed or subsequently cited as authoritative by an Arizona appellate court. *E.g., compare US West*, 201 Ariz. at 244-46, ¶¶ 13-19, 34 P.3d at 254-55 (decided after *Litchfield Park* and summarizing Arizona jurisprudence on fair value standard).

The Commission also stated that in *Sun City Water Co. v. Ariz. Corp. Comm'n*, 113 Ariz. 464, 465, 556 P.2d 1126, 1127 (1976), the Arizona Supreme Court affirmed a Commission decision, stating that "cost of capital estimates must be restated if they are applied to a fair value rate base." Decision at 32. This description misstates *Sun City Water* in several respects. First, the Court did not discuss the underlying Commission

decision. Instead, the issue was the scope of the Court of Appeals' review of the trial court's decision. *Id.* at 475, 556 P.2d at 1127. Second, none of the issues on appeal related to the lawfulness of the "backing-in" method. Instead, the issues on appeal were the sufficiency of the rate of return, whether the new rates would produce that rate of return, and whether the trial court erred in remanding the Commission's decision for a new determination of rates. *Id.* Third, in reversing the Court of Appeals, the Supreme Court simply concluded that the *trial court's* judgment was supported by "reasonable evidence." *Id.* Consequently, *Sun City Water* did not address, let alone support, the lawfulness of the "backing-in" method.[7]

The remaining decisions cited on page 32 of the Decision support the Company's position. For example, in *Scates*, 118 Ariz. at 533-34, 578 P.2d at 614-15, the Court explained:

> The general theory of utility regulation is that the total revenue, including income from rates and charges, should be sufficient to meet a utility's operating costs and to give the utility and its stockholders a reasonable rate of return on the utility's investment. . . . To achieve this, *the Commission must first determine the "fair value" of a utility's property* ***and use this fair value as the utility's rate base***. . . . The Commission then must determine what the rate of return should be, and then apply that figure to the rate base in order to establish just and reasonable tariffs. [Emphasis supplied; citations omitted.]

The *Scates* court relied on *Simms*, quoted above, and *Ariz. Corp. Comm'n v. Arizona Public Serv. Co.*, 113 Ariz. 368, 555 P.2d 326 (1976) ("*APS*"). In *APS*, the Arizona

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[7] Putting aside the plain language of the court's decision, which never mentions how the rate of return is applied to the utility's rate base, the Court of Appeals' subsequent decision in *Ariz. Corp. Comm'n v. Citizens Utilities Co.*, 120 Ariz. 184, 584 P.2d 1175 (App. 1978) (review denied), makes it clear that *Sun City Water* is irrelevant. In *Citizens Utilities*, the court explained that its decision in *Sun City Water* was vacated because "there existed reasonable evidence before the trial court regarding the Commission's rate of return." *Id.* at 188, 584 P.2d at 1179. The manner in which the rate of return is applied was never mentioned.

Supreme Court stated:

> Article 15, section 14, [of the Arizona Constitution] requires the Commission to ascertain the fair value of the property within the state, of every public service doing business therein. Under the constitution as interpreted by this court, *the Commission is required to find the fair value of the company's property* ***and use such finding as a rate base*** for the purpose of determining what are just and reasonable rates.

113 Ariz. at 370, 555 P.2d at 328 (emphasis supplied; citing *Simms*).[8]

The requirement that the Commission apply the rate of return to the utility's FVRB was emphasized earlier this year in *Phelps Dodge*, in which the Court stated:

> In monopolistic markets, "*fair value has been the factor by which a reasonable rate of return was multiplied* to yield, with the addition of operating expenses, the total revenue that a corporation could earn." . . . Although *US West II* held that this rate-of-return method for rate setting may be inappropriate in a competitive environment, it affirmed the supreme court's long-standing view that *this method is properly employed in traditional, non-competitive markets*.

207 Ariz. at __, ¶ 21, n.8, 83 P.3d at 583, n.8 (emphasis supplied) (quoting *US West*, 201 Ariz. at 245, ¶ 19, 34 P.3d at 355). The Decision conflicts with both *Phelps Dodge* and *US West* because it failed to apply the rate of return to the Company's fair value rate bases.

Moreover, the Arizona Supreme Court addressed the "backing in" method employed in the Decision, and stated that it is "illegal":

> The company contends *the commission . . . first determined what the company should be allowed to earn* in order to maintain a sound financial position, attract necessary additions to capital and pay a fair return on common equity; *and second, having thus established the amount the company should be allowed to earn for such purposes, it proceeded to adjust the*

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[8] Similarly, in *City of Tucson*, also cited on page 32 of the Decision, the Court followed *Simms* in holding that the Commission's FVRB was not supported by substantial evidence. 17 Ariz.App. at 480-81, 498 P.2d at 554-55. Again, this decision supports the Company.

> *rate of return to any rate base.* If this be true, it would be an illegal method of establishing a rate base. The standard for establishing a rate base must be the fair value of the property and not what the commission might believe was a fair rate of return on common equity.

Simms, 80 Ariz. at 155, 294 P.2d at 385 (emphasis supplied). More recently, in *Citizens Utilities*, the Court of Appeals stated that the use of a "fluctuating" rate of return is unlawful:

> Under our constitution, a utility is entitled to a fair rate of return on the fair value of its properties, "no more and no less." . . . Dr. Langum [the Staff cost of capital witness] violated this principle by pegging his opinion as to rate of return to the finding of fair value. *This results in a fluctuating rate of return. Thus, under Dr. Langum's theory, it makes no difference whether the Commission used original cost or reproduction cost as the base, the amount of dollars in the Company's coffers is basically the same.*

120 Ariz. at 190, n. 5, 584 P.2d at 1181, n. 5 (emphasis supplied; quoting *Ariz. Corp. Comm'n v. Arizona Water Co.*, 85 Ariz. 198, 203, 335 P.2d 412, 415(1959)).

In short, none of the Arizona appellate decisions cited in the Decision provides that the Commission may lawfully back into the rate of return on FVRB by applying the rate of return to the OCLD rate base to determine the utility's operating income. Instead, the decisions state that the fair value of the utility's plant and property must be used as its rate base, and that the rate of return must be applied to that rate base. The only decision suggesting otherwise is *Litchfield Park*, which, as discussed, mentions the "backing in" approach in a background discussion that had nothing to do with the issues on appeal and is inconsistent with *US West* and *Phelps Dodge*, as well as prior Arizona Supreme Court decisions. Therefore, the Decision violates the Arizona Constitution.

III. THE RECOMMENDED RATE OF RETURN, 6.5%, IS UNREASONABLY LOW AND FAILS TO PROVIDE ARIZONA-AMERICAN A REASONABLE RETURN ON COMMON EQUITY CAPITAL.

A. Overview.

The Commission adopted Staff's recommended rate of return, 6.5%, based on

Staff's capital structure, Staff's cost of long-term debt, and Staff's cost of common equity capital. This rate of return is *less* than the current interest rate on investment grade bonds, which, as discussed below, is approximately 6.8%. Although there was some disagreement about the Company's capital structure and its cost of debt, as a practical matter, resolving each of these disagreements in favor of Staff did not have a material impact on the Company's revenue requirement. The primary reason for the Commission's extremely low rate of return was the adoption of Staff's recommended return on equity.

In its applications, Arizona-American requested a return on equity of 11.5%. RUCO originally recommended a 9.11% return on equity, but increased its recommendation to 9.61% in its surrebuttal filing. Rigsby Dt. (Ex. R-5) at 4; Rigsby Sb. (Ex. R-6) at 10. Staff originally recommended a 9.7% return on equity, but *reduced* its recommendation to 9.0% in its surrebuttal filing. Reiker Dt. (Ex. S-45) at 25; Reiker Sb. (Ex. S-46) at 2. All of the parties agreed that it is appropriate to increase the Company's return on equity by 50 basis points to account for the fact that Arizona-American has more debt in its capital structure than the sample group of publicly traded utilities used in the witnesses' analyses, and the Commission approved that adjustment. *See* Decision at 23.

The Commission adopted Staff's 9.0% recommendation and used it to determine the 6.5% return on rate base. Decision at 31.[9] In doing so, the Commission (1) ignored increases in interest rates and other market indicators of the current cost of capital; (2) rejected all of the equity cost estimates provided by the Company's expert, Dr. Thomas M. Zepp, and accepted Staff's estimates; and (3) ignored the evidence presented by the Company regarding the returns on equity that the comparable utilities are actually earning.

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[9] The Commission used the weighted cost of capital approach to derive its return on rate base. *See* Decision at 31.

See, e.g., Zepp Rb. (Ex. A-49) at 3-4 and Rebuttal Table 1. The Commission also concluded that the comparable earnings method "has been replaced by market based corporate finance models." Decision at 29. In fact, on every disputed point concerning Arizona-American's rate of return, the Commission adopted its Staff's position and rejected the positions of the other parties. *See* Decision at 22-31.

B. The Legal Standard Applicable to Setting a Utility's Rate of Return.

Over the past 100 years, the United States Supreme Court, as well as various federal and state courts (including Arizona), have held that a regulated utility is entitled to earn a return "commensurate with returns on investments in other enterprises having corresponding risks." *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591, 603 (1944). One of the most commonly cited statements of the applicable legal standard is found in *Bluefield Waterworks*:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same part of the country on investments and other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to ensure confidence in the financial soundness of the utility and should be adequate under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties.

262 U.S. at 692-93. The criteria set forth in *Bluefield Waterworks* remain applicable today. *See, e.g., Duquesne Light*, 488 U.S. at 314-15 (citing *Bluefield Waterworks*, 262 U.S. at 692-93)); *Sun City Water*, 26 Ariz. App. 304, 306, 547 P.2d 1104, 1109 (quoting *Bluefield Waterworks*), *vacated on other grounds* 113 Ariz. 464, 556 P.2d 1126 (1976).

C. The Commission's Rejection of the Company's Evidence on Cost of Equity, Including Current Interest Rates and Actual Earnings of Comparable Water Utilities, was Arbitrary and Unreasonable.

1. The Commission Ignored Increases in Interest Rates, Which Support a Return on Rate Base in Excess of 7.0%.

The cost of capital witnesses for both Staff and RUCO emphasized the relationship between interest rates and the cost of equity capital. In fact, both witnesses relied on the existence of low interest rates during 2003 as justification for their respective rate of return recommendations. For example, the Staff cost of capital witness testified about the decline in intermediate-term Treasury rates from June 1998 to May 2003, stating: "Interest rates have declined significantly in the past twenty years and are currently at their lowest level since the 1950's. . . . According to the capital asset pricing model, the cost of equity moves in the same direction as interest rates. Chart 2 suggests that capital costs, including the cost of equity, are lower than they have been in decades." Reiker Dt. (Ex. S-45) at 5-6 (chart omitted). The Staff witness also testified, in critiquing Dr. Zepp's risk premium estimates of the current cost of equity, that "[i]nterest rates for Baa corporate bonds are *lower* than they were in every year since *1967*. . . . Baa-rated *utility* bonds have performed in the same manner." *Id.* at 57 (emphasis in original). He concluded by asserting that "[t]hese low Baa bond yields are consistent with the currently low costs of capital." *Id.* at 58.

The RUCO cost of capital witness testified that "[c]onsideration of the current economic environment is necessary because trends in interest rates, present and projected levels of inflation, and the overall state of the U.S. economy determine the rates of return that investors earn on their invested funds." Rigsby Dt. (Ex. R-5) at 28. He provided a discussion of factors affecting the economy since 1990, including actions taken by the Federal Reserve to reduce interest rates since early 2001. *Id.* at 31-33. As a consequence, according to the RUCO witness, "[a]s of the final week of July 2003, all of the leading

interest rates have declined," including "yields on all maturities of U.S. Treasury instruments." *Id.* at 33. Based on this information, the RUCO witness testified, "I believe that my estimate of equity costs will provide Arizona-American with a reasonable rate of return on the Company's invested capital when economic data *on lower interest rates*, continued growth in construction, and the low and stable outlook for inflation are all taken into consideration." *Id.* at 36 (emphasis supplied).

After this testimony was filed by Staff and RUCO, interest rates, including yields on U.S. Treasury securities, began to increase, as shown below.

Month[10]	5-Year Treasuries	10-Year Treasuries	20-Year Treasuries
May 2003	2.52%	3.57%	4.52%
July 2003	2.87%	3.98%	4.92%
Oct. 2003	3.19%	4.29%	5.21%
Dec. 2003	3.27%	4.27%	5.11%
April 2004	3.39%	4.35%	5.16%
May 2004	3.85%	4.72%	5.46%
June 2004	3.93%	4.73%	5.45%

Federal Reserve Statistical Release H.15, available on the Federal Reserve website at http://www.federalreserve.gov/release/h15. The yields on investment-grade industrial bonds have exhibited a similar pattern during the past 12 months. The yields on Aaa rated bonds increased from 5.22% in May 2003 to 6.04% in May 2004, while the yields on Baa rated bonds increased from 6.35% in May 2003 to 6.75% in May 2004. *Id.*

In short, while interest rates were at 40-year lows in mid-2003, interest rates

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[10] These months were selected to coincide with key events in the rate case. For example, the Staff cost of capital witness relied on data published in May, 2003, in his direct testimony. Reiker Dt. (Ex. S-45) at 22-23. *See* Decision at 3-4 (discussing procedural history).

subsequently increased. Moreover, interest rates are forecasted to continue to increase through 2004 and 2005. *See* Zepp Rb. (Ex. A-49) at 19-21; Zepp Rj. (Ex. A-50) at 23-26 and Rejoinder Table 6. These changes in interest rates are widely publicized and available from a variety of sources, including the Federal Reserve's official website. Arizona-American provided this updated information on interest rates to the Commissioners in its Exceptions to the recommended opinion and order, filed on May 16, 2004, and discussed recent increases in interest rates again during the Commission's open meeting conducted on June 15, 16 and 18, 2004, at which time the agency voted to approve the Decision. Given the emphasis placed on interest rates and their relationship to capital costs by the parties' witnesses, the Commission should have considered this evidence in issuing the Decision. Instead, the Commission ignored it. As a consequence, the rate of return on Arizona-American's rate bases authorized by the Commission, even without the use of the "backing in" method, is actually *below* the current yield on investment-grade industrial bonds, and, as explained below, key inputs into Staff's finance models failed to reflect increased capital costs.

2. The Commission Ignored the Evidence Supporting Dr. Zepp's DCF Model Estimates.

The Commission accepted Staff's discounted cash flow model ("DCF") estimates of the cost of equity, as well as Staff's criticisms of the Dr. Zepp's DCF estimates, including his restatements of Staff's models. Decision at 30. The primary difference between Dr. Zepp's DCF estimates and those of Staff is the method chosen to estimate dividend growth rates.

a. Constant Growth DCF Model Estimates.

In implementing the constant growth DCF model, Dr. Zepp relied on near-term earnings and sustainable growth, and did not consider dividend per share ("DPS") growth and historic earnings per share ("EPS") growth. As Dr. Zepp explained in his testimony,

these measures of dividend growth are substantially less than other recognized measures of dividend growth. *E.g.*, Zepp Rb. (Ex. A-49) at 42-47; Zepp Rj. (Ex. A-50) at 19-21; Tr. at 322. For the water utility sample, EPS growth is expected to be *three times faster* than DPS growth. For the gas utility sample, EPS are expected to grow *six times faste*r than DPS. Zepp Rb. (Ex. A-49) at 43. Under these conditions, the use of DPS growth and historic EPS growth produces unreasonable results that are inconsistent with other measures of current capital costs.

The Commission rejected this evidence, accepting Staff's illogical argument that investors might conclude the proxy water utilities lack confidence in continued earnings growth and will cut their dividends. Decision at 30. In fact, during the past five years, the average prices of water utility stocks have increased *faster* than their EPS, DPS, and the book value of their stocks. Zepp Rb. (Ex. A-49) at 44 and Rebuttal Table 6. Dr. Zepp explained that this rapid growth in stock prices would cause investors to expect more rapid growth in the future than in the past. *Id.*; Zepp Rj. (Ex. A-50) at 19-20. In other words, investors would not bid up the price of the stock if they expected dividend growth to lag behind earnings.

The reality is that the use of historic and forecasted DPS growth and historic EPS growth in the constant growth DCF model produces equity cost estimates in the 5.9% to 6.6% range, as Staff own exhibits illustrate:

Growth Measure	Dividend Yield	Dividend Growth	Equity Cost
10-Year DPS Growth	3.44%	2.5%	**5.94%**
Projected DPS Growth	3.44%	2.9%	**6.34%**
10-Year EPS Growth	3.44%	3.2%	**6.64%**
Projected EPS Growth	3.44%	8.7%	12.14%
10-Year Intrinsic Growth	3.44%	4.9%	8.34%
Projected Intrinsic Growth	3.44%	7.7%	11.14%

Reiker Sb. (Ex. S-46) at Schedule JMR-S4 (dividend growth) and Schedule JMR-S7 (dividend yield). There is no evidence in the record that investors expect publicly traded water utilities to earn a return on equity of approximately 6%, particularly when the yield on Aaa industrial bonds was over 6% and the yield on Baa industrial bonds was nearly 7% when the Decision was issued. Nevertheless, on page 30 of the Decision, the Commission stated that "the omission of dividends per share growth from the DCF model moves the model's result away from and not toward a reliable estimation, which only to inflate the estimate to the detriment of ratepayers." Obviously, no rational investor expects the returns on equity of the publicly traded water utilities to drop below bond yields, and they certainly would not invest any money in those firms if that were the case.

b. Multi-Stage DCF Estimates.

The Commission also accepted Staff's two-stage DCF model, while rejecting the more sophisticated version of the multi-stage model proposed by Dr. Zepp and supported by a communication from Dr. Myron Gordon, who is described in the testimony of the Staff cost of capital witness as having "pioneered" the use of the DCF model in setting utility rates. Reiker Dt. (Ex. S-45) at 10.[11] Staff's two-stage DCF model erroneously assumes that investors would look at dividend growth for five years ("stage 1") and then adopt a growth rate for the economy as a whole for the terminal growth rate ("stage 2"). Zepp Rb. (Ex. A-49) at 47-48. As explained by Dr. Zepp:

> Knowledgeable investors expect the relatively slow near-term growth in DPS will be rewarded by higher future growth as the utilities gain financial strength from growing their earnings retention ratios. A multi-stage growth DCF model should incorporate this reasonable expectation of investors and not immediately go to a final stage growth rate that has nothing to do with the improved financial strength of the utilities.

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[11] RUCO's cost of capital witness also acknowledged that Professor Gordon is an expert on the correct implementation of the DCF model. Rigsby Dt. (Ex. R-5) at 7 and 15 (citing Gordon's textbook).

Id. at 48.

Again, however, the Commission adopted Staff's version of the model, accepting Staff's argument that Dr. Zepp should not have used forecasts of intrinsic or sustainable growth to determine second-stage growth in his restatement of the model, even though Staff used such forecasts in its constant growth DCF model. Decision at 30-31. Dr. Zepp explained that Staff's two-stage version of the model is far more speculative because it (1) ignores the projected growth rates used in Staff's constant growth DCF model, which are shown above, and (2) assumes that an economy-wide growth rate will apply to the utility sample group as early as 2009. Zepp Rb. (Ex. A-49) at 48-49; Zepp Rj. (Ex. A-50) at 23. As stated, Professor Myron Gordon has agreed that an intermediate stage reflecting projected intrinsic growth is necessary to properly implement a multi-stage model. Zepp Rj. (Ex. A-50) at 21-22 and Exhibit TMZ-RJ-2 (communication from Professor Gordon).[12] The Commission disregarded this evidence and adopted its Staff's flawed approach.

3. Staff's CAPM Equity Cost Estimates Are Unreasonably Low and Should Have Been Rejected by the Commission.

In the Decision, the Commission has repeated the Staff witness' statement that the capital asset pricing model ("CAPM") that the is "the best-known model of risk and return." Decision at 26 (citing Reiker Dt. (Ex. S-45) at 21). In fact, this statement is taken out of context and is misleading. The entire statement, which is found in a well known finance textbook, is actually as follows:

> The capital asset pricing theory is the best-known model of risk and return. It is plausible and widely used but far from

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[12] Professor Gordon stated in his communication that "there is good reason to believe that a higher rate of growth in earnings than in dividends in the near future will lead to a higher growth rate in the dividend subsequently." Dr. Zepp's intermediate growth stage implements this concept, while the more simplistic, two-stage model used by Staff ignores it.

> perfect. Actual returns are related to beta over the long run, but the relationship is not as strong as the CAPM predicts, and other factors seem to explain returns better since the mid-1960s. Stocks of small companies, and stocks with high book values relative to market prices, appear to have risks not captured by the CAPM.

Richard A. Brealey and Stewart C. Myers, *Principles of Corporate Finance* 212 (6th ed. 2000). *See also* Charles F. Phillips, Jr., *The Regulation of Public Utilities*, 396-97 (3rd ed. 1993) (summarizing various theoretical and practical problems with the CAPM). Although the Company pointed out several significant flaws in Staff's CAPM estimates, the Commission ignored this evidence, stating the CAPM "is a reasonable means of estimating Arizona-American's cost of equity." Decision at 30.

The version of the CAPM used by Staff is often called the Sharpe-Linter model after William Sharpe and John Linter who originally derived it. Zepp Rb. (Ex. A-49) at 34. Since the original form of the CAPM was derived, empirical studies have shown that the cost of equity for firms with betas less than 1.0 (which would include all of the publicly traded utilities in the parties' sample groups) are closer to the cost of equity for an average risk stock (a beta of 1.0) than the original Sharpe-Lintner model predicts. Zepp Dt. (Ex. A-44) at 45, n. 13; Zepp Rb. (Ex. A-49) at 35-39. Dr. Zepp testified that Professor Sharpe[13] now believes that a different version of the CAPM, known as the "zero-beta" CAPM, provides a better explanation of stock prices, and the version of the CAPM used by Staff understates the expected return on the risk-free asset used in the model. Zepp Dt. (Ex. A-44) at 45 n. 14; Zepp Rb. (Ex. A-49) at 39-41. Put simply, this means that water utilities require a higher equity return than is indicated by the version of the CAPM used by Staff and approved by the Commission.

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[13] Professor Sharpe was a co-winner of the Nobel Prize for his work in developing the initial version of the CAPM in the mid-1960s. Brealey and Myers, *supra*, at 195.

Putting aside the conceptual problems inherent in the basic CAPM model used by Staff, there are problems with the way Staff's cost of capital witness implemented that model. A critical input in the CAPM model is the selection of an appropriate "beta" for the firm being evaluated. The Staff cost of capital witness explained that "[b]eta is the measurement of an investment's market risk, and it reflects both the business risk and the financial risk of a firm." Reiker Dt. (Ex. S-45) at 6. In implementing the CAPM in this case, Staff used the average of the betas published by an investment service, *Value Line,* for the six publicly traded water utilities in Staff's proxy group. *Id.* at 23. *Value Line*'s betas are derived from a regression analysis between weekly percent changes in the price of a stock and weekly percent changes in the New York Stock Exchange average over a period of five years. Roger A. Morin, *Regulatory Finance: Utilities' Cost of Capital* 65 (1994). In other words, beta measures a security's volatility in relation to that of the market. Morin, *supra*, at 63; Brealey and Myers, *supra*, at 174-75.

As Dr. Zepp explained, estimating betas for water utilities is especially problematic because they are small firms whose stock is thinly-traded, meaning that as the stock market index changes, the individual utility's stock price remains unchanged due simply to a lack of trading. Zepp Dt. (Ex. A-44) at 46-47; Zepp Rb. (Ex. A-49) at 11 and 34-35. *See also* Morin, *supra*, at 72. In this case, all of the publicly traded water utilities in Staff's sample group are small companies. Ex. A-99 and Ex. A-100 (financial data on sample group of water utilities). Philadelphia Suburban[14] is by far the largest water utility in the sample group, with net utility plant of nearly $1.4 billion and operating revenue in excess of $400 million, and utility operations in 15 states. Ex. A-100. Philadelphia

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[14] In early 2004, Philadelphia Suburban Corporation's name was changed to Aqua America, Inc. To be consistent with the record, the Company will continue to refer to that water utility as Philadelphia Suburban.

Suburban is nevertheless considered a "Mid Cap" stock, while the remaining five water utilities are considered "Small Cap" stocks. Ex. A-83. In other words, the utilities in the sample group fall within the category of stocks that, according to Professors Brealey and Myers, "appear to have risks not captured by the CAPM," i.e., the results of the basic CAPM understate their equity cost.

Finally, putting aside the theoretical problems with the basic CAPM model and with obtaining an accurate estimate of beta for water utility stocks, there is one additional, equally serious problem: Arizona-American's stock is not publicly traded and, therefore, it has no estimated beta. As explained in the Decision, Staff "derived" its beta for Arizona-American "from the average of the *Value Line* betas for the six proxy water utilities." Decision at 27. Noticeably absent from the Decision (as well as the record generally), however, is any credible explanation of why the average beta of this group is appropriate for Arizona-American. The estimated betas in Staff's sample group range from a high of 0.7 (Philadelphia Suburban) to a low of 0.5 (SJW Corp.). Reiker Sb. (Ex. S-46), Schedule JMR-S5. There was simply no basis for the Commission to assume that Arizona-American's hypothetical beta is less than the *Value Line* beta for Philadelphia Suburban, a substantially larger, publicly traded utility with a AA- credit rating. *See* Ex. A-99 and Ex. A-100.

Given these problems with the CAPM, it is little wonder that Staff's CAPM estimates were extremely low, only 8.1%. Reiker Sb. (Ex. S-46) at 2 and Schedule JMR-S7. Moreover, the Staff's witness employed a version of the model that is extremely volatile and produced dramatically different results over a period of several months. Between the time Staff filed its direct and surrebuttal testimonies, Staff's indicated cost of equity decreased from 11.1% to only 8.1%. *Compare* Reiker Dt. (Ex. S-45), Schedule JMR-S8 *with* Reiker Sb. (Ex. S-46), Schedule JMR-S7. This dramatic decrease occurred even though the intermediate-term Treasury spot rate used in Staff's CAPM was actually

30 basis points *higher* when Staff's "updated" CAPM equity cost estimate was made last October in its surrebuttal filing. *Id.*

In sum, given the uncertainty surrounding the version of the CAPM used by Staff, the problems with estimating the betas for small water utility stocks, and the lack of any evidence demonstrating that Arizona-American would have a beta equal to the average beta of Staff's sample group, the Commission should have given Staff's CAPM cost of equity estimate little weight. Instead, the Commission relied on it in determining Arizona-American cost of equity and the appropriate return on rate base.

4. Although The Risk Premium Method Provides a Direct and More Objective Estimate of the Current Cost of Equity Than the CAPM, the Commission Rejected this Method.

Because of the problems in using the CAPM to set utility rates, few regulatory commissions give the CAPM much weight when determining equity costs. Zepp Rb. (Ex. A-49) at 39-40. The preferred method to implement the CAPM is to estimate the equity cost using a risk premium approach, as Dr. Zepp did in this case. Under the risk premium approach, the risk premium is directly estimated by comparing authorized and actual returns on equity with the current yields of investment grade bonds or other debt instruments:

> The risk premium method of determining the cost of equity, sometimes referred to as the "stock-bond-yield spread method" or the "risk positioning method," or again the "bond-yield plus risk-premium" method, recognizes that common equity capital is more risky than debt from an investor's standpoint, and that investors require higher returns on stocks than on bonds to compensate for the additional risk. The general approach is relatively straightforward: First, determine the historical spread between the return on debt and the return on equity. Second, add this spread to the current debt yield to derive an estimate of current equity return requirements.
>
> The risk premium approach to estimating the cost of equity derives its usefulness from the simple fact that while equity return requirements cannot be readily quantified at any given time, the returns on bonds can be assessed precisely at every

> instant in time. If the magnitude of the risk premium between stocks and bonds is known, then this information can be used to produce the cost of common equity. This can be accomplished retrospectively using historical risk premiums or prospectively using expected risk premiums.

Morin, *supra*, at 269. As Dr. Zepp explained, "there is no need to estimate betas or market risk premiums, and there is no reason to determine if 'beta risk' is the only risk of relevance to investors holding shares of water utilities. It is a simpler and less subjective approach." Zepp Rb. (Ex. A-49) at 40.

The Commission, however, rejected Dr. Zepp's risk premium equity cost estimates because Dr. Zepp relied on forecasts of Baa corporate bond rates. *See* Decision at 29-30. The Commission adopted Staff's argument that "current" interest rates (i.e., interest rates as of September, 2003) provide a more accurate forecast of interest rates during 2004 and 2005 – the time period during which new rates will be in effect – than the forecasted interest rates used by Dr. Zepp. The Commission ignored Dr. Zepp's explanation of why this argument was erroneous.

> There are basically three approaches that can be taken. One is Mr. Reiker's approach, adopt current interest rates and assume they are the best forecast of next year's rates. The second is to adopt published forecasts of interest rates. Third is to derive forward rates for 2004 from current short-term rates and current intermediate-term rates. Of the three, the approach Mr. Reiker has taken creates the most uncertainty and the greatest chance that the cost of equity will be understated.

Zepp Rj. (Ex. A-50) at 24. Dr. Zepp also provided evidence showing that interest rates increased in 2003 and were likely to be even higher in 2004. *Id.*, Rejoinder Table 6 (comparing current and forecasted treasury rates).

The Staff cost of capital witness strongly criticized Dr. Zepp for using forecasted interest rates in implementing the risk premium and CAPM models, both of which rely on interest rates. *E.g.*, Reiker Sb. (Ex. S-46) at 17 ("the Commission should not rely on a

forecasted interest rate that was likely predicted with no more accuracy than that of a coin toss"). It turned out, however, that the interest rate forecasts used by Dr. Zepp were somewhat conservative:

	Staff Direct May 6, 2003	Staff Surrebuttal Sept. 25, 2003	Forecasted Interest Rates Used by Zepp	Interest Rates June 18, 2004
5-Year Treasury Note	2.74%	3.05%	3.7%	3.97%
7-Year Treasury Note	3.38%	3.59%	N/A	4.37%
10-Year Treasury Note	3.80%	4.12%	4.6%	4.75%
Average	3.3%	3.6%	4.2%	4.4%

Reiker Dt. (Ex. S-45) at 23 n. 11; Zepp Rj. (Ex. A-50) at 24-26 and Rejoinder Table 6; Federal Reserve Statistical Release H.15 (June 21, 2004). Thus, the interest rates used by Staff to derive its CAPM equity cost estimates increased by 110 basis points – 1.1%.

The Commission ignored this evidence and instead agreed with Staff that Dr. Zepp's use of forecasted interest rates was suspect. On this basis, the Commission rejected Dr. Zepp's risk premium estimates in favor of Staff's CAPM estimates, which were based on outdated "spot" interest rates that failed to reflect current capital costs. Decision at 29-30.

The Commission also accepted Staff's argument that Dr. Zepp's risk premium approach is flawed because Baa corporate bond rates include a default premium. Decision at 30. However, Dr. Zepp testified that Staff's argument was another red herring. Under the risk premium method, it is irrelevant whether Baa bond rates include a default premium if the same default premium that existed in the past is expected in the future. Zepp Rj. (Ex. A-50) at 26. Dr. Zepp also testified that the quotation from Professor William Sharpe in the Staff witness' Surrebuttal Testimony did not apply to the analysis

Dr. Zepp presented because that analysis already takes into account the existence of a risk premium. *Id.* at 26-27. This is supported by Dr. Morin's view that "the choice of debt instrument in the risk premium analysis is largely immaterial, as long as it is consistently applied." Morin, *supra*, at 278. In fact, Dr. Zepp provided empirical data demonstrating that Baa corporate bond rates provide more reliable estimates of the cost of equity than Treasury rates. Zepp Rb. (Ex. A-49) at 22-23 and Rebuttal Tables 2 and 3. Once again, the Commission ignored this evidence and adopted Staff's position. Decision at 30.

5. The Commission Improperly Ignored Actual and Authorized Equity Returns.

It would seem axiomatic that in analyzing the returns on equity earned by a group of publicly traded companies under the comparable earnings standard, the starting point is what those companies are actually earning. In fact, that is what this Commission has traditionally done. For example, in *Litchfield Park*, the Commission Staff used comparable earnings, along with the DCF model and an analysis of firm-specific risks, to develop its recommended rate of return. 178 Ariz. at 436-37, 874 P.2d at 993-94. *See also Citizens Utilities*, 120 Ariz. at 190-91, 584 P.2d at 1181-82 (describing comparative earnings methodology used by Staff's witness); *Sun City Water Co. v. Ariz. Corp. Comm'n*, 26 Ariz. App. at 309-10, 547 P.2d at 1109-10 (the Commission "must appraise the equity earnings of other utilities and non-regulated companies and use this appraisal in setting the allowed rate of return on the equity component in the cost of capital").

In this case, in contrast, the Commission summarily rejected the Company's evidence on comparable earnings, stating that the comparable earnings method "has been replaced by market based corporate finance models." Decision at 29. At a minimum, the Commission should have considered actual and authorized returns on equity as a check on whether the results produced by the parties' finance models were reasonable. Put bluntly, the Commission ignored relevant evidence because it conflicted with its Staff's

recommendation.

Staff's proxy group of publicly traded water utilities have earned the following returns on equity:

	2000	2001	2002	2003
American States	9.3%	10.1%	9.5%	5.6%
California Water	10.1%	7.2%	9.5%	7.9%
Philadelphia Suburban	11.7%	12.4%	12.7%	12.3%
Connecticut Water	12.1%	12.1%	10.9%	11.2%
Middlesex Water	7.1%	9.1%	9.6%	8.2%
SJW Corp.	7.4%	9.4%	9.3%	9.8%
Average ROE	9.6%	10.1%	10.3%	9.2%

Ex. A-83; *C.A. Turner Utility Reports*, May 2004 (copy attached to Company's Exceptions, filed May 16, 2004). Notably, the water utilities currently reporting the lowest equity returns, American States Water and California Water Service, recently received substantial rate increases, which will result in increased earnings. *See In the Matter of the Application of Southern California Water Company*, Decision No. 0403039 (March 16, 2004) at 62-73 (excerpts attached at Tab 3).[15] The California Public Utilities Commission ("CPUC") granted American States rate increases of $8 million in the year 2003 as well as additional increases of $1.9 million in 2004 and $2.8 million in 2005. The CPUC granted California Water Service rate increases of $12.8 million in 2003, and additional increases of $2.2 million in 2004 and in 2005. In approving these increases, American States was authorized a 9.9% return on equity, while California Water Service was authorized a 9.7% return on equity. In other recent rate decisions issued by the

[15] Southern California Water Company is American States' primary utility subsidiary. *See* Ex. A-83.

CPUC, Suburban Water Systems was authorized a 9.84% return on equity for 2003-2005, and California-American Water Company was authorized a 10.25% return on equity for the same period. *Id.* at 73, n. 44. In each of these contemporaneous decisions, the authorized equity return was higher than in this case.

While initially criticizing the comparable earnings method (*see* Rigsby Sb. (Ex. R-6) at 5-6), RUCO acknowledged that recent authorized equity returns are relevant by citing in its post-hearing Reply Brief a decision issued in January 2004 by the West Virginia Public Utilities Commission, in which a 7.0% return on equity was authorized for a water utility affiliated with Arizona-American, West Virginia-American Water Company. *See* Decision at 28. That decision, which is on appeal before the state supreme court, is an outlier. As shown in the schedule attached at Tab 4, since 2002, 13 American Water Works water utility subsidiaries in other states have received rate decisions with authorized equity returns ranging from 10.6% (Pennsylvania and Hawaii) to 9.75% (New Jersey). The average authorized equity return for this water utility group is 10.17%.

The bottom line is that, with the exception of West Virginia, all of the recently authorized equity returns are significantly higher than the results produced by the versions of the finance models used by Staff, which averaged only 8.5%. Reiker Sb. (Ex. S-46), Schedule JMR-S7. Obviously, something is wrong with the finance models used by Staff and approved by the Commission when those models consistently produce returns *below* the returns the sample group of water utilities are actually earning and are authorized to earn. In fact, during the pendency of this rate case, Staff's recommended cost of equity dropped from 9.7% to 9.0% within a period of less than 60 days, during a period when interest rates were increasing. *Compare* Reiker Dt. (Ex. S-45) at 25 (filed Sept. 5, 2003) *with* Reiker Sb. (S-46) at 2 (filed Oct. 31, 2003).

In contrast, the versions of the finance models used by Arizona-American's expert, Dr. Zepp, do produce results consistent with actual and authorized returns on equity. Dr.

Zepp's updated estimates, presented in his Rebuttal Testimony, were:

Dr. Zepp Cost of Equity Estimates	
DCF (Water Companies)	10.5%
Risk Premium (Past Water Utilities' ROEs)	11.0 – 11.2%
Risk Premium (Natural Gas Utilities' ROEs)	10.4 – 10.7%
Risk Premium (Moody's Gas Stock Index)	10.3 – 10.9%
Average	10.5 – 10.8%

Zepp Rb. (Ex. A-49) at 5-6 and Update Table 24. The average of Dr. Zepp's estimates, 10.5% to 10.8%, are consistent with actual and authorized returns for Staff's water utility sample group, set forth above.

Dr. Zepp also restated the equity cost estimates made by Staff and RUCO, using the same finance models but with more reasonable assumptions. The cost of equity produced by these restatements is, again, consistent with the actual returns:

	Equity Costs For Water Utility Sample	Equity Cost for Arizona-American
DCF Estimates		
Staff	9.8% to 10.1%	10.3% to 10.6%
RUCO	10.1% to 10.9%	10.6% to 11.4%
CAPM Estimates		
Staff	9.9% to 10.1%	10.4% to 10.6%
RUCO	9.8%	10.3%
Estimated Equity Cost Range for Arizona-American		10.3% to 11.4%

Zepp Rj. (Ex. A-50) at 10-14 and Rejoinder Table 14.

In short, there is no disagreement that the methods used by the cost of capital witnesses for the Company, Staff and RUCO – the DCF model, the risk premium model,

and the CAPM – are all recognized methods of estimating the cost of equity. *E.g.*, Morin, *supra*, 28 ("There are four generic methodologies available to measure the cost of equity: DCF, Risk Premium, and CAPM, which are market-oriented, and Comparable Earnings, which is accounting oriented."). *See also* Phillips, *supra*, 394-99 (discussion of approaches commonly used to estimate the cost of equity). There was considerable disagreement, however, regarding how these methods should be implemented. Regardless of the methods used, however, they should produce results that are consistent with reality. Here, the Commission rejected the Company's cost of equity estimates, and concluded that "the methodology and variables used by Staff," such as Staff's September 25, 2003 spot interest rates, are "reliable and reasonable." Decision at 31. At the same time, the Commission ignored increases in interest rates as well as actual and authorized returns on equity for the water utilities used as proxies for Arizona-American. This was arbitrary and unreasonable, and results in an overall rate of return on rate base that is less than the current yield on an investment grade bond.

IV. THE AMOUNT OF RATE CASE EXPENSE RECOMMENDED IN THE DECISION IS UNREASONABLE.

This rate case was a lengthy, complicated and difficult proceeding, and Arizona-American was required to devote extensive resources in its prosecution. This case involved five applications concerning 115,000 customers, 10 parties, hundreds of discovery requests, five rounds of prefiled testimony, 9 days of hearings, over 100 hundred marked exhibits, over 1,800 pages of hearing transcripts, two rounds of post-hearing briefs, written exceptions and a three-day open meeting before the Commissioners. *See* Tr. at 799-802. It took nearly 20 months to obtain a final decision. As a consequence, the Company's witnesses testified that as of November 2003 (i.e., prior to the hearing) its total rate case expense for this proceeding exceeded $1 million, and that total rate case expense would likely be between $1.3 million and $1.4 million. Decision

at 18. Nevertheless, the Company requested recovery of only $715,000 in rate case expense, amortized over three years. Decision at 18. As explained by Company witness David Stephenson, Arizona-American recognized that some of its rate case expense should be absorbed by the Company. Tr. at 488.

Staff supported the Company's requested recovery of rate case expense and included an amortized portion of the $715,000 in its recommendations. Exs. S-15 through S-24. However, RUCO opposed the Company's request.[16] RUCO recommended that the Company be allowed to recover $418,941 in rate case expense, which amount is based on the amount that Citizens was allowed to recover in its last rate proceeding in 1997 covering only the Maricopa County systems, adjusted for inflation.

The Commission adopted RUCO's recommended rate case expense, concluding that "the Company chose the test year" and that "ratepayers should not be made to bear the burden of the Company's choices to incur unreasonable increase in expenses." Decision at 20. It is unclear what increased expenses the Decision refers to; there is no evidence that the choice of test year had a material impact on the level of rate case expense incurred or sought by the Company. Moreover, in adopting RUCO's position, the Commission again largely ignored the evidence presented by the Company.

First, the Commission's conclusion that the selection of 2001 as the test year supports lower rate case expense recovery is erroneous. Although RUCO made that argument, claiming that use of a 2001 test year resulted in a substantial amount of additional and unnecessary rate case expense, it failed to produce evidence to support its

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[16] The Decision states that "only the Company disputed RUCO's proposal" concerning rate case expense, which is a misstatement of the record. Decision at 19. In fact, no other party supported RUCO's punitive amount of rate case expense, and no other party used RUCO's amount of rate case expense in its recommendations. Instead, the other parties used the Company's requested expense amount.

claim. The evidence before the Commission irrefutably shows that the bulk of the activities associated with the rate case would have been precisely the same if the Company had delayed its filing. *E.g.,* Tr. at 136-38, 1532-44. The most labor-intensive aspect of this case related to the development of plant-in-service and rate base schedules, in accordance with A.A.C. R14-2-103, the Commission's rule governing applications for rate increases. *See* Ex. A-102. Nearly 80% of the data requests served on the Company pertained to plant-in-service issues. *Id.* The use of a later test year would not have simplified or eliminated issues relating to plant. Instead, those issues would have been exacerbated by further delay because, as the Decision states on page 18, plant records and other historic data were held by another company, Citizens, which no longer existed and no longer had any employees. Tr. at 1537-38, 1540-41. Obviously, it would have been more difficult to access and utilize those records if the Company had, for example, filed its rate applications in 2003, utilizing 2002 as the test year.

The only issue that resulted from the selection of a 2001 test year was the dispute over the Company's proposed pro forma adjustment to remove Citizens' test year overheads and salaries and bring in the Company's overheads and salaries, an adjustment supported by RUCO and approved by the Commission in the Decision. *See* Decision at 16-18. However, the amount of additional expense associated with that adjustment is only a small part of the total rate case expense that the Company has incurred. *See* Ex. A-102. Ultimately, the amount of rate case expense is a product of the size and complexity of the applications, which would not have been reduced by simply choosing a different test year.

Second, RUCO's recommended rate case expense of $418,941 is unreasonable when compared to other rate proceedings. Citizens' 1995 rate proceeding, the basis for RUCO's recommendation, involved fewer districts, and fewer customers. Tr. at 812. In addition, Citizens had specific employees that were assigned the task of prosecuting rate

applications, and those expenses were included in the overhead and management fees charged to the districts and recovered in rates. Ex. A-74 at 23-24. This was not the case for Arizona-American, something RUCO ignored in its analysis. In fact, the only factor RUCO considered in utilizing Citizens' rate case expense from its 1995 proceeding was the inflation rate. Tr. at 812.

In contrast, in Citizens' 1990 rate proceeding for its Mohave water and wastewater districts, the Commission authorized rate case expense of $165,000. *See* Ex. S-4, Decision No. 56806 (February 1, 1990) at 10-11. Had RUCO used that prior Citizens' rate case, and made adjustments for inflation and for the greater number of districts involved in this case (10 districts versus two districts and five applications versus one application), the amount of rate case expense would be far greater than the amount the Company is now requesting. Tr. at 1598. Simply multiplying rate case expense of $165,000, authorized for only two districts, by five results in rate expense of $825,000 – with no adjustment for inflation.

The same is true if the Company's 1996 rate application for the Paradise Valley water district (formerly named Paradise Valley Water Company) is used as a comparison. In that case, the Company filed a single application involving one water system with approximately 4,400 customers. Decision No. 60226 (May 27, 1997). The issue of rate case expense was contested, with the Company seeking and the Commission approving $62,200 in rate case expense amortized over two years. *Id.* at 12-13. Adjusting that expense amount for the larger number of districts (10 districts versus one district in that case), and taking into account inflation since 1996 when the application was filed, further illustrates that the amount of rate case expense requested by the Company was reasonable.

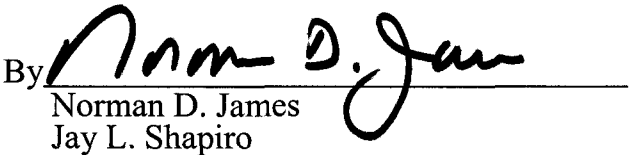
Finally, in this proceeding, the Town of Youngtown, which intervened to address a narrow range of issues affecting only the Sun City water and wastewater districts, incurred approximately $70,000 on consultants' fees alone. If legal fees are also included,

Youngtown's expenses will be approximately equal to $100,000. Tr. at 1255-57. Certainly, it should come as no surprise that Arizona-American's rate case expense would be at least seven times the amount Youngtown incurred in connection with its intervention, which related to only two districts and a limited number of issues.

Despite this evidence, the Commission adopted RUCO's argument with little discussion or analysis. The Commission erroneously implied that the Company failed to "mitigate the costs" associated with retaining outside counsel and consultants to present the Company's case. Decision at 20. Again, there is no evidence to support this conclusion. Moreover, to the extent it were true, it is obvious that the Company has mitigated its costs by requesting $715,000 as opposed to its actual rate case expense, which exceeded $1 million. In short, the Commission's decision to limit rate case expense to only $418,941, roughly one-third of the amount the Company will actually incur, or approximately $40,000 per district, was contrary to the overwhelming weight of evidence and unreasonable given the size and complexity of this proceeding. Therefore, the Company's requested amount of rate case expense should have been approved.

RESPECTFULLY SUBMITTED this 9th day of July, 2004.

FENNEMORE CRAIG

By 

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ORIGINAL and 21 copies of the foregoing were delivered this 9th day of July, 2004, to:

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ARIZONA-AMERICAN WATER COMPANY
Comparison of Company Requested and Actual Increases

District	Company Requested Revenue Increase	Decision No. 67093 Revenue Increase	Company Percent Change	Decision No. 67093 Percent Change
Sun City West Water	$1,156,931	$ 547,430	34.22%	16.19%
Sun City West Wastewater	$1,565,307	$ 934,366	44.27%	26.43%
Sun City Water	$4,453,755	$1,476,373	71.92%	23.84%
Sun City Wastewater	$ 260,879	($ 745,794)	5.13%	-14.66%
Mohave Water	$ 142,344	($ 675,701)	3.24%	-15.38%
Havasu Water	$ 123,933	$ 45,163	28.11%	10.24%
Anthem Water	($ 12,809)	($ 280,170)	-0.32%	-6.99%
Agua Fria Water	$ 62,372	($ 269,577)	1.01%	-4.36%
Anthem/Agua Fria Wastewater	$ 311,419	$ 226,725	16.68%	12.15%
Tubac Water	$ 181,931	$ 81,434	71.49%	32.00%
Ten District Total	$8,246,082	$1,340,249	27.58%	3.79%

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ARIZONA-AMERICAN WATER COMPANY

Authorized Returns on Fair Value Rate Bases by District and Recent Interest Rates

District	Rate of Return on Rate Base
Sun City Water	4.32%
Sun City Wastewater	4.37%
Tubac Water	5.12%
Havasu Water	5.44%
Mohave Water	5.46%
Sun City West Wastewater	5.48%
Sun City West Water	5.70%
Agua Fria Water	6.20%
Anthem Water	6.38%
Anthem/Agua Fria Wastewater	6.43%
Authorized Return on Rate Base	6.50%

Debt Instrument	Rate for Week Ending June 18, 2004[1]
10-Year Treasury Note	4.75%
20-Year Treasury Bonds	5.46%
Moody's Aaa Industrial Bonds	6.01%
Moody's Baa Industrial Bonds	6.78%

[1] Data from Federal Reserve Statistical Release H.15 (release date June 21, 2004). A copy is attached to this schedule.

Federal Reserve Statistical Release

H.15

Selected Interest Rates

Release Date: June 21, 2004

Release dates | Daily update | Historical data | About
Current release *Other formats:* Screen reader | ASCII | PDF (17 KB)

FEDERAL RESERVE STATISTICAL RELEASE

H.15 (519)

For immediate release
June 21, 2004

SELECTED INTEREST RATES
Yields in percent per annum

Instruments	2004 Jun 14	2004 Jun 15	2004 Jun 16	2004 Jun 17	2004 Jun 18	Week Ending Jun 18	Week Ending Jun 11	2004 May
Federal funds (effective) 1 2 3	1.02	1.03	1.00	1.01	1.00	1.01	0.99	1.00
Commercial paper 3 4 5								
Nonfinancial								
1-month	1.12	1.17	1.14	1.18	1.15	1.15	1.07	1.00
2-month	1.29	1.27	1.25	1.24	1.25	1.26	1.16	1.04
3-month	1.42	1.45	1.42	1.40	n.a.	1.42	1.27	1.07
Financial								
1-month	1.16	1.18	1.16	1.15	1.17	1.16	1.08	1.02
2-month	1.29	1.29	1.28	1.30	1.30	1.29	1.20	1.08
3-month	1.43	1.45	1.44	1.46	1.46	1.45	1.33	1.16
CDs (secondary market) 3 6								
1-month	1.23	1.24	1.22	1.23	1.23	1.23	1.16	1.05
3-month	1.51	1.52	1.48	1.50	1.50	1.50	1.41	1.20
6-month	1.84	1.85	1.80	1.82	1.81	1.82	1.72	1.46
Eurodollar deposits (London) 3 7								
1-month	1.20	1.19	1.20	1.21	1.21	1.20	1.13	1.03

3-month	1.49	1.49	1.47	1.48	1.47	1.48	1.36	1.18
6-month	1.84	1.82	1.77	1.80	1.78	1.80	1.66	1.44
Bank prime loan 2 3 8	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Discount window primary credit 2 9	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
U.S. government securities								
Treasury bills (secondary market) 3 4								
4-week	1.02	1.07	1.03	1.00	1.00	1.02	0.99	0.89
3-month	1.40	1.32	1.28	1.25	1.26	1.30	1.25	1.02
6-month	1.74	1.65	1.65	1.62	1.64	1.66	1.56	1.31
Treasury constant maturities								
Nominal 10								
1-month	1.07	1.09	1.05	1.02	1.03	1.05	1.01	0.91
3-month	1.41	1.34	1.30	1.28	1.29	1.32	1.27	1.04
6-month	1.77	1.68	1.69	1.66	1.68	1.70	1.59	1.33
1-year	2.25	2.16	2.24	2.21	2.24	2.22	2.07	1.78
2-year	2.97	2.77	2.84	2.81	2.81	2.84	2.75	2.53
3-year	3.45	3.26	3.31	3.28	3.28	3.32	3.27	3.10
5-year	4.10	3.90	3.96	3.93	3.94	3.97	3.98	3.85
7-year	4.51	4.31	4.36	4.33	4.34	4.37	4.42	4.31
10-year	4.89	4.69	4.74	4.71	4.72	4.75	4.80	4.72
20-year 11	5.59	5.41	5.46	5.42	5.43	5.46	5.52	5.46
Inflation-indexed 12								
5-year	1.55	1.38	1.43	1.42	1.40	1.44	1.43	1.34
7-year	1.94	1.79	1.82	1.80	1.79	1.83	1.84	1.77
10-year	2.26	2.16	2.18	2.16	2.15	2.18	2.16	2.09
Inflation-indexed								
long-term average 13	2.54	2.44	2.46	2.42	2.41	2.45	2.47	2.45
Interest rate swaps 14								
1-year	2.48	2.43	2.43	2.45	2.38	2.43	2.31	2.03
2-year	3.30	3.23	3.24	3.27	3.17	3.24	3.14	2.90
3-year	3.84	3.75	3.76	3.80	3.70	3.77	3.71	3.53
4-year	4.23	4.13	4.14	4.17	4.08	4.15	4.13	3.98
5-year	4.52	4.42	4.43	4.44	4.36	4.43	4.45	4.33
7-year	4.94	4.84	4.85	4.86	4.77	4.85	4.89	4.79
10-year	5.33	5.23	5.23	5.24	5.17	5.24	5.29	5.21
30-year	5.90	5.80	5.81	5.80	5.74	5.81	5.86	5.80
Corporate bonds								
Moody's seasoned								
Aaa 15	6.14	5.97	6.02	5.96	5.98	6.01	6.08	6.04
Baa	6.90	6.75	6.78	6.74	6.75	6.78	6.84	6.75
State & local bonds 16				5.05		5.05	5.10	5.07
Conventional mortgages 17					6.32	6.32	6.30	6.27

See overleaf for footnotes

n.a.-- not available

FOOTNOTES

1. The daily effective federal funds rate is a weighted average of rates on brokered trades.
2. Weekly figures are averages of 7 calendar days ending on Wednesday of the current week; monthly figures include each calendar day in the month.
3. Annualized using a 360-day year or bank interest.
4. On a discount basis.
5. Interest rates interpolated from data on certain commercial paper trades settled by The Depository Trust Company. The trades represent sales of commercial paper by dealers or direct issuers to investors (that is, the offer side). The 1-, 2-, and 3-month rates are equivalent to the 30-, 60-, a 90-day dates reported on the Board's Commercial Paper Web page (www.federalreserve.gov/releases/cp).
6. An average of dealer offering rates on nationally traded certificates of deposit.
7. Bid rates for Eurodollar deposits collected around 9:30 a.m. Eastern time.
8. Rate posted by a majority of top 25 (by assets in domestic offices) insured U.S.-chartered commercial banks. Prime is one of several base rates used by banks to price short-term business loans.
9. The rate charged for discounts made and advances extended under the Federal Reserve's primary credit discount window program, which became effective January 9, 2003. This rate replaces that for adjustment credit, which was discontinued after January 8, 2003. For further information, see www.federalreserve.gov/boarddocs/press/bcreg/2002/200210312/default.htm.
   The rate reported is that for the Federal Reserve Bank of New York. Historical series for the rate o adjustment credit is available at www.federalreserve.gov/releases/h15/data.htm.
10. Yields on actively traded non-inflation-index issues adjusted to constant maturities. Source: U.S. Treasury.
11. A factor for adjusting the daily nominal 20-year constant maturity in order to estimate a 30-year rat be found at www.treas.gov/offices/domestic-finance/debt-management/interest-rate/ltcompositeindex.htm
12. Yields on Treasury inflation protected securities (TIPS) adjusted to constant maturities. Source: U. Treasury. Additional information on both nominal and inflation-indexed yields may be found at

www.treas.gov/offices/domestic-finance/debt-management/interest-rate/index.html.

13. Based on the unweighted average bid yields for all Inflation Protected Securities with remaining term to maturity of more than 10 years.
14. International Swaps and Derivatives Association (ISDA) mid-market par swap rates. Rates are for a Fi Rate Payer in return for receiving three month LIBOR, and are based on rates collected at 11:00 a.m. Garban Intercapital plc and published on Reuters Page ISDAFIX1. Source: Reuters Limited.
15. Moody's Aaa rates through December 6, 2001 are averages of Aaa utility and Aaa industrial bond rates. As of December 7, 2001, these rates are averages of Aaa industrial bonds only.
16. Bond Buyer Index, general obligation, 20 years to maturity, mixed quality; Thursday quotations.
17. Contract interest rates on commitments for fixed-rate first mortgages. Source: FHLMC.

Note: Weekly and monthly figures on this release, as well as annual figures available on the Board's histo H.15 web site (see below), are averages of business days unless otherwise noted.

Current and historical H.15 data are available on the Federal Reserve Board's web site (www.federalreserve.gov/). For information about individual copies or subscriptions, contact Publications Services at the Federal Reserve Board (phone 202-452-3244, fax 202-728-5886). For paid electronic access to current and historical data, call STAT-USA at 1-800-782-8872 or 202-482-1986.

DESCRIPTION OF THE TREASURY NOMINAL AND INFLATION-INDEXED CONSTANT MATURITY SERIES

Yields on Treasury nominal securities at "constant maturity" are interpolated by the U.S. Treasury from the daily yield curve for non-inflation-indexed Treasury securities. This curve, which relates the yield on a security to its time to maturity, is based on the closing market bid yields on actively traded Treasury securities in the over-the-counter market. These market yields are calculated from composites of quotations obtained by the Federal Reserve Bank of New York. The constant maturity yield values are read from the yield curve at fixed maturities, currently 1, 3 and 6 months and 1, 2, 3, 5, 7, 10 and 20 years. This method provides a yield for a 10-year maturity, for example, even if no outstanding security has exactly 10 years remaining to maturity. Similarly, yields on inflation-indexed securities at "constant maturity" are interpolated from the daily yield curve for Treasury inflation protected securitie in the over-the-counter market. The inflation-indexed constant maturity yields are read from this yield curve at fixed maturities, currently 5, 7, and 10 years.

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Mailed 03-18-04

Decision 04-03-039 March 16, 2004

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of SOUTHERN CALIFORNIA WATER COMPANY (U 133-W), for an order authorizing it to increase rates for water service by $19,826,100 or 29.72% in the year 2003; by $6,327,800 or 7.31% in the year 2004; and by $6,326,200 or 6.81% in the year 2005 in its Region III Service Area and to increase rates for the General Office Allocation in all of its Customer Service Areas in this Application including: Arden-Cordova, Bay Point, Clearlake, Los Osos, Ojai, Santa Maria, Simi Valley and Metropolitan.	Application 02-11-007 (Filed November 4, 2002)

OPINION RESOLVING APPLICATION

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OPINION RESOLVING APPLICATION

1. Summary

This decision grants Southern California Water Company (SCWC) authority to increase rates by $8,097,000, or 12.06% in the year 2003; by $1,891,600 or 2.50% in the year 2004; and by $2,789,100 or 3.60% in the year 2005 in its Region III Service Area. Rates for Region III will continue to be determined on a regional, rather than district specific, basis. SCWC's request to also increase rates for the General Office Allocation to customer service areas (CSAs) in Regions I and II is denied. We find that SCWC violated Public Utilities Code Section 851 when it failed to seek the Commission's approval for its lease of water rights to the City of Folsom. We fine SCWC $1,095,000 for this violation, but suspend $915,000 of the fine amount, for a net fine of $180,000. We require that 70% of prior revenues from the lease, plus interest, be reflected as a credit to future rates. The following table summarizes the authorized rate increases for Region III.

District	2003		2004		2005	
Region III						
Orange	$4,647,200	17.69%	$ 899,300	2.89%	$ 1,198,800	3.75%
Claremont	520,800	4.83%	332,700	2.93%	438,900	3.75%
San Dimas	1,021,400	7.90%	145,500	1.04%	530,700	3.76%
San Gabriel	720,000	11.40%	332,300	4.71%	276,900	3.75%
Barstow	1,187,800	17.80%	84,300	1.07%	311,100	3.93%
Calipatria-Niland	-	0.00%	97,500	9.17%	32,700	3.93%
Desert	-	0.00%	-	0.00%	-	0.00%
Wrightwood	-	0.00%	-	0.00%	-	0.00%
Total Region III	$8,097,000	12.06%	$1,891,600	2.50%	$2,789,100	3.60%

2. Background

2.1. Procedural History

SCWC filed this general rate case (GRC) application pursuant to Pub. Util. Code § 454,[1] which governs proposed rate changes. The company requests Commission authorization to increase rates in its Region III Customer Service Areas, which include Orange County, Claremont, San Dimas, San Gabriel Valley, Barstow, Calipatria-Niland, Desert and Wrightwood. In addition, SCWC requested authority to increase current authorized revenues for the General Office for certain other CSAs that are not in for a GRC at this time.

The Office of Ratepayer Advocates (ORA) and the Orcutt Area Advisory Group filed protests to the application. Also, the Cities of Claremont and San Dimas sent a joint letter, to the assigned administrative law judge (ALJ) for this proceeding, indicating their opposition to the rate increases. A Prehearing

[1] Unless indicated otherwise, all statutory citations are to the Public Utilities Code.

COST OF SERVICE ISSUES

14. Cost of Capital

SCWC requests a rate of return on rate base of 10.15% for each of the years 2003, 2004 and 2005. ORA recommends the Commission adopt a rate of return on rate base of 8.54% for 2003, 8.52% for 2004 and 8.55% for 2005. In determining the proposed rates of return, both parties recommend adoption of a capital structure composed of 50% long-term debt and 50% equity. SCWC recommends a cost of debt of 7.8% and a return on equity of 12.45% for 2003, 2004 and 2005. ORA recommends a cost of debt of 7.67% for 2003, 7.63% for 2004 and 7.68% for 2005 and a return on equity of 9.41% for each of the years.

As discussed below, we adopt an average cost of debt of 7.67% in 2003, 7.63% in 2004 and 7.68% in 2005 and a return on equity of 9.90% for each of the years. This equates to a rate of return on rate base of 8.79% for test year 2003, 8.77% for 2004 and 8.79% for attrition year 2005.

14.1. Cost of Debt

SCWC derived its cost of debt by calculating the embedded cost of debt currently outstanding and the projected cost of new debt issues. SCWC derived a coupon rate of 8.00% for new debt issues by adding a spread of 150 basis points to the Blue Chip Financial Forecast of long-term treasury yields. The 150 basis point spread is an amount consistent with current spreads for an "A+" rated utility issue. To the 8.00% coupon rate for new debt issues, SCWC added 13 basis points to approximate the annual cost factor for issuing new debt, to arrive at a cost of new debt equal to 8.13%.

Once both the embedded cost of debt and the cost of new debt were calculated, SCWC adjusted the embedded cost of debt yearly to reflect reductions in debt due to sinking fund payments, maturities, and projected new debt issues.

Accordingly, SCWC derived an estimated, effective cost of long-term debt for 2003 through 2005 of 7.77%, 7.83%, and 7.84%, respectively.

ORA updated the forecast used to determine the coupon rates, using the most recent DRI forecast. Table 5-1 in ORA's testimony shows its resulting forecast of the new issue coupon rate to be 6.63% for 2003 and 8.47% for 2005. The associated effective interest rates are shown to be 6.76% for the 2003 new issue and 8.62% for the 2005 new issue. ORA's resulting forecast of the average cost of debt is 7.67% in 2003, 7.63 in 2004 and 7.68 in 2005.

We reject SCWC's contention that ORA did not account for the issuance costs of new debt. As described above, ORA increased its forecast of the 2003 new issue coupon rate of 6.63% to an effective rate of 6.76% (13 basis points) and increased its forecast of the 2005 new issue coupon rate of 8.47% to an effective rate of 8.62% (15 basis points). This methodology is similar to SCWC's where it took the forecasted coupon rate of 8.00% for 2003 and 2005 and increased it by 13 basis points to derive the effective rate of 8.13%, for both years. Since ORA's forecast incorporates more recent information, to which SCWC does not object, we will adopt ORA's forecast of average long-term debt costs for the period 2003-2005.

14.2. Return on Equity

SCWC requests a return on equity of 12.45 percent. The utility performed four common equity market cost analyses, followed by three book value return on equity analyses. SCWC derived a market cost estimate of 10.87% by averaging costs indicated by the Ibbotson CAPM Method (11.98%), the Fama-French Three Factor Model (10.80%), the Risk Premium (RP) Analysis (10.89%) and Discounted Cash Flow (DCF) Model (9.81%).

After deriving the market-required return rates on market price of SCWC's equity, SCWC then converted those rates to "book value" equivalent return rates. SCWC asserts that a return based strictly on market prices is applicable directly to book value only if the price to book value ratio is already 1.00. Since its current market to book ratio is about 1.9, SCWC used three methods to make the book value conversion. SCWC's conversion of the DCF market cost results in a book value return on equity of 11.10%. The use of the Modigliani & Miller Conversion of Market Leveraged Cost results in a return of 11.58% and the Brigham Leverage Curve-Based Conversion results in a return of 11.66%. The average of the three methods is 11.45%.

To its estimated book value return on equity of 11.45%, SCWC added 10 basis points to account for incremental business risk resulting from return variability, market capitalization, customer mix, capitalization size shortfall and other specific risks. SCWC asserts that water utilities, being the most capital intensive of the utilities as well as the smallest, are particularly susceptible to the risk phenomena of combined forms of leverage and small size. In addition, SCWC added 90 basis points to its required book value return on equity to account for the risks created by the Commission's issuance of Resolution W-4294 and D.03-06-072 in the balancing account OIR.

ORA's 9.41% return on equity is derived from a quantitative analysis using two financial models, DCF and RP, to estimate investors' expected return on equity for SCWC. ORA applied both models to a group of comparable water utilities. The DCF model projected returns on equity of 8.00% based on the 3-month dividend yield, 8.00% based on the 6-month dividend yield, and 7.99% based on the 12-month dividend yield, with an average of 8.00%. The RP model combined average equity risk premiums with average interest forecasts for the

test period (years 2003 to 2005). Based on the average 10-year risk premiums, ORA calculated an expected return on equity of 10.59% for the 10-year Treasury bond yield and 10.90% for the 30-year Treasury bond yield. Using the 5-year average risk premium produced expected returns of 10.70% for the 10-year Treasury bond yield and 11.12% for the 30-year Treasury bond yield. Averaged together, ORA calculated an average ROE of 10.83% based on the RP model. Averaging the results of the two financial models produces ORA's expected return on equity of 9.41%.

As discussed below, we have developed a return on equity range and determined that the 9.9% midpoint value of that range will provide SCWC an appropriate return on equity for the years 2003 through 2005.

14.3. Return on Equity – Discussion of Models

The differences in return on equity recommendations between SCWC and ORA are caused by (1) SCWC's adjustment to the model results to convert from a market basis to a book value basis, (2) SCWC's use of two additional financial models, (3) differences in the financial model assumptions and inputs, and (4) SCWC's adjustments to reflect additional risk. This section discusses the first three items

Regarding SCWC's position that it is inappropriate to compare book value returns with market derived returns, it is not clear that the adjustment or the magnitude of the adjustment proposed by SCWC is reasonable or necessary. SCWC's use of the market to book conversion raises its equity return recommendation from 10.87% to 11.45%, or 58 basis points. ORA argues plausibly that the current high market to book ratios for regulated water companies indicate that authorized returns should actually be lowered rather than raised. More importantly, we must recognize that comparisons and

averaging of DCF and RP results have been the basis for many of our decisions regarding equity return levels. These past Commission authorized returns have not included SCWC's proposed adjustment. SCWC has not demonstrated, based on its financing experience, or any other practical criteria why the adjustment is necessary at this time. We are reluctant to make a make a major change such as this without convincing evidence supporting the necessity for the change. We will therefore not include the market to book conversion in determining a reasonable equity return. This treatment and the return on equity that we are authorizing today are in line with recent authorizations for other Class A water companies.

SCWC argues that an additional premium is necessary in factoring risk, because small companies are at greater risk than large companies. Specifically, in its CAPM analysis, SCWC uses a small company premium, which is calculated using data from the 2001 Ibbotson Associates SBBI yearbook. The data include all stocks listed on the New York Stock Exchange, American Stock Exchange, and the NASDAQ. The vast majority of the companies on these exchanges are non-regulated and non-water. The Commission has stated that water utilities should not be compared to companies in other industries (D.01-04-034, *mimeo.* at p.13-14; D.90-02-042, *mimeo.* at p. 38.) As stated in D.92-01-025, "[d]ue to the revenue recovery mechanisms in place for water utilities, we find that water utilities do not face the same overall risks as energy and telecommunications utilities." Therefore, for the determination of a reasonable range for equity returns we will not rely on the CAPM, nor will we use the Fama-French Three Factor Model, which appears to be similar in many respects to the CAPM.

The financial models we will consider are the DCF and RP models, both of which have been used in the past by the Commission in determining equity

returns for Class A water utilities. Also, both models were run by ORA and SCWC, although there were significant differences in the results.

In its prepared testimony analysis, ORA did not include Artesian Resources as one of the comparable companies. In response to SCWC's criticism for the omission, ORA reran the DCF and RP models the same way they were run for its report, with the inclusion of Artesian Resources. Based on numbers provided during evidentiary hearing,[42] if Artesian Resources were included in the comparable group, ORA's DCF analysis would yield a return of 8.35% and the RP analysis would yield a return of 10.52%. The average of the methods would be 9.43%, two basis points higher than ORA's recommended value of 9.41%.

In many of our decisions we have defined a reasonable range for equity returns. The authorized return would fall somewhere within that range. Model results for both ORA and SCWC show a wide range of equity returns. ORA's original analysis resulted in an 8.00% result from its DCF model, and a 10.83% result from its RP model - 283 basis points apart, or a recommended average that is 17.6% higher than the DCF result, and 13.1% lower than the RP result. SCWC asserts that this large disparity of 283 basis points between the DCF and RP results makes the ORA analysis unreliable. With the inclusion of Artesian Resources in the comparable group, ORA's spread between the DCF and RP model results would be reduced to 217 basis points. In its market cost of equity analysis, SCWC shows a range from 9.81% to 11.98%, or 217 basis points. The spread between SCWC's DCF (9.81%) and RP (10.89%) results, which amounts to

[42] ORA/Wilson, RT 571, 573.

108 basis points, is somewhat less than the comparable ORA spread. However, it is clear that a fairly large spread in model results is common and not counter to our objective to determine a reasonable range. Once such a range is determined, we will exercise our judgment in determining the authorized return for SCWC.

Regarding the differences in the results, SCWC and ORA criticize each other's models. For instance, for the DCF, ORA criticizes SCWC's adjustment of the dividend yields to account for market pressure and issuance costs. ORA states that, in D.92-11-047, the Commission rejected the use of issuance costs and sinking fund effects in determination of rate of return. SCWC criticizes ORA's DCF formula on the grounds that ORA uses data from the most recent six and twelve- month periods, and not just the most recent three- month period, which SCWC characterizes as the only "current" data. ORA asserts that its approach takes advantage of a longer time period to average out any short-term aberrations, though in this case the results for the three, six and twelve months were all within one one-hundredth of a percent.

Regarding the RP analysis, SCWC criticizes ORA's model on the ground that it uses "too much history," which is wrong because "history does not repeat itself." ORA argues that using just the 5-year period, which SCWC proposes, would ignore the longer-term trends in the model. ORA asserts that its RP model is superior to SCWC's proposal because it balances historical trends in the risk premium with forecast interest rates to arrive at return on equity.

Based on the record, we do not see either SCWC's or ORA's analyses as clearly superior, and we will consider the determinations of both ORA and SCWC. We adopt an equity return range of 9.08% to 10.70% for SCWC. We

derive the floor rate by taking the simple average of the parties' DCF results and the ceiling by taking the simple average of the RP results.[43]

In order to determine where SCWC should fall in that ROE range, we next assess the risk factors.

14.4. Return on Equity – Discussion of Risk

We see no indication of high financial, business or regulatory risk for SCWC. After considering that along with evidence on the financial models, adjustments to the models, interest rate trends, the current economy and our informed judgment, we have determined that the midpoint of our range (9.90%) reflects an appropriate equity return for SCWC. We therefore authorize this return for SCWC's Region III for the years 2003, 2004, and 2005. This return along with our adopted capital structure and costs of debt, equates to a rate of return on rate base of 8.79% for test year 2003, 8.77% for test year 2004 and 8.79% for attrition year 2005.

Risk factors consist of financial, business and regulatory risk. Financial risk is tied to the utility's capital structure. The proportion of its debt to permanent capital determines the level of financial risk that a utility faces. As a utility's debt ratio increases, a higher return on equity may be needed to compensate for that increased risk. Both SCWC and ORA utilize a capital structure consisting of 50% debt and 50% equity, and neither party asserts increased or decreased financial risks associated with that structure.

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[43] For the DCF, SCWC shows a return of 9.81% while ORA shows 8.35% (including Artesian). The average is 9.08%. For the RP, SCWC shows a return of 10.89% while ORA shows 10.52% (including Artesian). The average is 10.70%.

Business risks pertain to uncertainties resulting from competition and the economy. A utility that has the most variability in operating results has the most business risk. Regulatory risk pertains to new risks that investors face from future regulatory actions that we, and other regulatory agencies, might take. Assessments of these risks are conducted to determine whether there is a need to increase return to compensate investors for added risk.

In its application, SCWC identifies and quantifies two elements of risk. First, it asserts business risk associated with the capital intensive nature of water utilities and operating leverage concerns caused by California water utilities having higher than average quantities of purchased water (fixed costs). However, the Commission has provided various regulatory mechanisms that deal with this risk – balancing accounts for purchased water, purchased power and pump taxes; memorandum accounts for catastrophic events; memorandum accounts for SDWA compliance; 50% fixed cost recovery and construction work in progress in rate base. Also, in this decision, we have approved memorandum account treatment for the Calipatria treatment plant. All of these factors tend to reduce risk associated with the capital intensive and high fixed cost nature of SCWC's operations. We see no reason to add a premium to the ROE to compensate for these risks.

The second risk specifically identified by SCWC concerns potential adjustments to balancing account procedures raised in Resolution No. W-4294. At the time of the application filing, related issues were being considered in R.01-12-009 where, on June 19, 2003, the Commission issued a final decision. In summary, D.03-06-072 revised the existing procedures for recovery of under collections and over collections in balancing-type memorandum accounts (accounts) existing on or after November 29, 2001 as follows: (1) If a utility is

within its rate case cycle and is not over earning, the utility shall recover its account subject to reasonableness review; and (2) If a utility is either within or outside of its rate case cycle and is over earning, the utility's recovery of expenses from the accounts will be reduced by the amount of the over earning, again subject to reasonableness review. The utility shall remove the amount of the over earning from the account and shall amortize it below the line. Utilities shall use the recorded rate of return means test to evaluate earnings for all years.

Conclusion of Law 7, states in relevant part:

> "[T]he readjustment of a utility's specific rate of return is not within the scope of this industry-wide proceeding. The appropriate forum for such a utility-specific inquiry is a utility's general rate case or other appropriate proceeding the Commission may designate in the future."

The affect of D.03-06-072 is to limit recovery of costs subject to balancing accounts when the utility is over earning its authorized rate of return. The issue is whether this imposes additional risk on the utility to the extent that a premium should be added to the equity return. In the policy discussion of D.03-06-072, we state:

> "Like the Edison case, we believe that a revision to our existing procedures is necessary here in order to effectively correct distorted results. The existing procedures for recovery of under and over collections in balancing accounts, which we suspended as of November 29, 2001, were originally established for the utilities to recover unanticipated increases in electricity costs between general rate cases, without the need to file an additional rate case application. The procedures also served the purpose of protecting shareholders from having to finance large unanticipated expenses until the next general rate case.
>
> "These procedures served, in effect, as insurance to protect a utility against its failure to earn its authorized earnings due to unanticipated expenses beyond the utility's control. When a

> person obtains insurance, the insurance is paid or invoked when the event insured against occurs. Similarly, offset balancing account recovery should only occur when the utility fails to earn up to its authorized rate of return due to unanticipated expenses beyond its control and that are the subject of the balancing account. To the extent a utility is earning above its authorized rate of return, recovery of the balancing account should be reduced by the amount of over earning since the event insured against (i.e., the failure to earn its authorized earnings) has not occurred.
>
> "Thus, the existing procedures become problematic when they have the effect of enhancing utilities' earnings above the Commission-authorized rates of return. It is unreasonable and unnecessary to permit the utilities to pass through to ratepayers the dollar-for-dollar costs accumulated in their balancing accounts when these same utilities are earning more than their authorized rate of return, particularly when their ratepayers are also experiencing the same increased electrical costs in their own homes. To permit such recovery would be to grant the utilities an unanticipated windfall at ratepayer expense." (D.03-062-072, *mimeo.* at pp. 15-16.)

As described above, D.03-06-072 corrects an imbalance in the risks associated with previous balancing account procedures. The opportunity for unanticipated windfalls caused by balancing account protection should not have existed from the beginning. It would be illogical for us to increase the ROE by 90 basis points, as requested by SCWC, to compensate for the loss of what has been determined to be an illegitimate opportunity.

Additional information in the record indicates that SCWC is financially healthy. In evaluating SCWC's risk, ORA considered the Standard & Poor's (S&P) credit rating of SCWC, since this rating factors in a company's total risk. S&P rates SCWC A+/Stable, Business Profile 3. ORA Table 3-1, contained in Exhibit 9, shows S&P benchmark financial ratios as compared to SCWC for the

years 1997-2001. According to ORA, based on those ratios, SCWC's overall rating would be "A," a strong indication that it is a financially healthy company. Placing SCWC in the middle of our ROE range appears fair and puts the authorized return in line with that recently authorized for other large water utilities under our jurisdiction.[44]

15. Sales

SCWC and ORA do not agree on forecasts of the annual sales per commercial customer, as summarized in Paragraph 3.02 of the Stipulation. In estimating sales for the commercial class, SCWC used a monthly regression model, while ORA used the Modified Bean method, which incorporates annual data. As discussed below, we will adopt SCWC's estimates for commercial sales per customer.

15.1. Discussion

The monthly regression model used by SCWC produces results which are statistically more significant than that produced by ORA's model, which failed the F-statistic and Durbin - Watson tests. Additionally, the Water Division[45] and

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[44] For example, in D.03-05-078, Suburban Water Systems was authorized a 9.84% ROE for 2003 - 2005; in D.03-02-030 California-American Water Company was authorized a 10.25% ROE for 2003 - 2005; and in D.03-09-021 California Water Service Company, based on a joint recommendation, was authorized a 9.70% ROE for 2002-2005.

[45] See Exhibit 54, which quotes the Commission's Water Division document, "Water Regulatory Policy," prepared in August 1997, where it is noted that sales forecasting is an important part of GRC proceedings and that, "[i]n 1992, the Modified Bean method was replaced with an Econometric Model which expanded the statistical data information and calculations to include additional variables."

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ARIZONA-AMERICAN WATER COMPANY

Requested and Approved Returns on Equity In Recent Rate Cases of Affiliates

Name of Affiliate	Effective Date of Order	Requested ROE	Approved ROE
Hawaii-American Water Company	Apr. 22, 2004	10.90%	10.60%
Pennsylvania-American Water	Jan. 16, 2004	12.00%	10.60%
Indiana-American Water Company	Nov. 6, 2002	11.50%	10.50%
Iowa-American Water Company	Feb. 21, 2002	11.33%	10.45%
Ohio-American Water Company	Feb. 7, 2002	11.75%	10.30%
Illinois-American Water Company	Aug. 12, 2003	11.02%	10.27%
California-American (Monterey)	Feb. 23, 2003	10.68%	10.26%
New Mexico-American Water Company	Dec. 12, 2003	11.15%	10.08%
Missouri-American Water Company	April 16, 2004	11.00%	10.00%
Tennessee-American Water Company	Aug. 7, 2003	11.00%	9.90%
Virginia-American Water Company	Nov. 23, 2003	10.75%	9.80%
New Jersey-American Water Company	Feb. 18, 2004	11.25%	9.75%
E'Town Water Company (N.J.)	Feb. 18, 2004	11.25%	9.75%
Average ROE Approved			**10.17%**
Arizona-American Water Company	June 30, 2004	11.50%	9.00%
West Virginia-American Water Company (Review Granted by West Va. Sup. Ct.)	Jan. 2, 2004	11.00%	7.00%