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BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF CHAPARRAL CITY 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 FOR UTILITY SERVICE BASED THEREON.	DOCKET NO. W-02113A-04-0616 On remand from the Arizona Court of Appeals, No. 1 CA-CC 05-0002

CHAPARRAL CITY WATER COMPANY'S REMAND CLOSING BRIEF

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CHAPARRAL CITY WATER COMPANY

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Rebuttal Testimony of Thomas J. Bourassa	A-R4	Bourassa Rmd. Rb.
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I. INTRODUCTION

This matter comes before the Arizona Corporation Commission ("Commission") pursuant to the decision and mandate of the Arizona Court of Appeals in *Chaparral City Water Co. v. Ariz. Corp. Comm'n*, No. 1 CA-CC 05-002 (Feb. 13, 2007) (Ex. A-R13).[1] In the concluding paragraph of its decision, the Court stated:

> We find that the Commission did not comply with the requirements of Article 15, Section 14, of the Arizona Constitution when the Commission determined the operating income of Chaparral City using the original cost rate base instead of the fair value rate base. We therefore vacate the Commission's decision and remand. However, we also find that Chaparral City has not made a clear and convincing showing that the Commission's decisions regarding the methodologies used to determine cost of equity were unlawful or unreasonable. Accordingly, although we vacate the decision, we affirm the Commission's methodologies used to determine the cost of equity. The matter is remanded to the Commission for further determination.

Id. at 8, ¶ 49.

Under these circumstances, the issues properly before the Commission are limited. The Commission may not reopen or reconsider issues that were not raised on appeal. As a general rule, "[a] remand sends the pending matter back to the body from which it came where further action will be limited by the terms of the mandate." *Sun City Water Co. v. Ariz. Corp. Comm'n*, 113 Ariz. 464, 466, 556 P.2d 1126, 1128 (1976) (following *Harbel Oil Co. v. Superior Court of Maricopa County*, 86 Ariz. 303, 306, 345 P.2d 427, 429 (1959)). *See also Jordan v. Jordan*, 132 Ariz. 38, 40, 643 P.2d 1008, 1010 (1982) (citing numerous cases). The mandate in this case provides:

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[1] Citations to the record are made as follows: Citations to a witness' pre-filed testimony are abbreviated using the format set forth on pages iii to v, above, following the Table of Contents, which also lists the hearing exhibit numbers of the parties' pre-filed testimony. Other hearing exhibits are cited by the hearing exhibit number and, where applicable, by page number, e.g., A-R13 at 2. The transcript of the hearing conducted on January 28 and 29, 2008, is cited by page number, e.g., Tr. at 1.

> **NOW, THEREFORE, YOU ARE COMMANDED** that such proceedings be had in said cause as shall be required to comply with the decision of this court, a copy of the MEMORANDUM DECISION being attached hereto.

Mandate, *Chaparral City Water Co. v. Ariz. Corp. Comm'n*, No. 1 CA-CC 05-002 (May 29, 2007) (emphasis in original).

Under these circumstances, Chaparral City Water Company ("Chaparral City" or "the Company") submits that the issues before the Commission are as follows:

1. What rate of return should be applied to Chaparral City's fair value rate base to derive its operating income?

2. Is Chaparral City entitled to recover a portion of the fees and expenses it incurred in connection with its appeal of Decision No. 68176 (Sept. 30, 2005) and this remand proceeding?

Other issues have also been raised during this remand proceeding, including the Residential Utility Consumer Office's (RUCO's) attempt to challenge the Company's fair value rate base ("FVRB") by suggesting that the reproduction cost study overstates the current value of Chaparral City's utility plant and property devoted to public service, and the Utilities Division's (Staff's) attempt to change the capital structure determined by the Commission in Decision No. 68176 by substituting a new, hypothetical capital structure for the Commission-approved capital structure. Neither the FVRB nor the Company's capital structure were at issue in the initial phase of this case, nor were the FVRB or the capital structure challenged on appeal. Therefore, these matters are outside the scope of the Court of Appeals' mandate and cannot be re-litigated.[2]

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[2] For this reason, the Company has accepted Staff's position that property taxes, although revenue-driven, may not be adjusted on remand. Bourassa Rmd. Rj. at 2-3. *See also* Smith Rmd. Dt. at 13 ("I am advised by Staff legal counsel that [net adjusted operating income] was not in dispute at the Court of Appeals, and therefore should not be subject to revision in this remand proceeding."); Smith Rmd. Sb. at 25 ("The Company's attempt to

On remand, Chaparral City is requesting that the Commission apply the rate of return used to determine its authorized operating income, 7.6 percent, to the correct rate base – the FVRB, as determined in Decision No. 68176. This approach complies with the decision and mandate of the Court of Appeals because it uses the fair value of Chaparral City's plant and property in a meaningful way. *See* Ex. A-R13 at 11-13, ¶¶ 13-16. Applying the rate of return to the correct rate base results in an increase in operating income of $251,525, and an increase in revenue of $409,666, which is a percentage increase of only 5.6 percent. Rmd. Sch. A-1 (attached hereto).[3]

The Company also seeks recovery of additional rate case expense of $100,000, which is no more than half of the additional fees and expenses that the Company has incurred since October 1, 2005, in connection with its successful appeal of Decision No. 68176 and this remand proceeding. *See* Ex. A-R4 at 9-13; Ex. A-R5 at 21.

The revenue deficiency and the additional rate case expense would be recovered through a temporary surcharge. The calculation of this surcharge is shown on page 1 of Final Remand Schedule A-1. The surcharge is computed by dividing the total amount of water sold during 2007 into the amount to be recovered, $409,666, which produces a surcharge rate of $0.56 per 1,000 gallons. Rmd. Sch. A-1. The surcharge would be in effect for 12 months or until the deficiency has been recovered.

Chaparral City maintains that this modest increase is necessary and appropriate.

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re-litigate the amount of property taxes ... that was determined by the Commission in Decision No. 68176 was beyond the scope of this remand proceeding.").

[3] The Company has prepared schedules setting forth its final position on remand, which are attached hereto at Tab A. These schedules are identical to the schedules attached to Mr. Bourassa's rejoinder testimony (Ex. A-R5), except that the surcharge amount has been recalculated using the gallons sold during 2007 rather than 2006 and the effective date of the surcharge is assumed to be May 1, 2008. Unless otherwise indicated, references to the Company's schedules will refer to the attached schedules.

Most importantly, it will comply with the Court of Appeals decision and mandate by using fair value in a meaningful way in setting rates. The other parties, unfortunately, continue to advocate methods that are based on the Company's historic investment in its utility plant and property, and would plainly violate the fair value standard if adopted by the Commission. *See, e.g.*, Ex. A-R13 at 13, ¶ 16.

II. SUMMARY OF THE PRIOR PROCEEDINGS BEFORE THE COMMISSION AND THE COMPANY'S APPEAL OF DECISION NO. 68176

A. The Prior Proceedings Before the Commission

Chaparral City is an Arizona corporation engaged in the provision of water utility service. It serves approximately 12,000 customers within the Town of Fountain Hills and a portion of the City of Scottsdale, in Maricopa County. *See* Ex. A-R6 at 3.

On August 24, 2004, the Company applied for a determination of the fair value of its utility plant and property devoted to public service and increases in its rates and charges for service, based on a test year ended December 31, 2003. *See id.* at 1-3. The Company sought an increase in revenue of $1.77 million, or approximately 29 percent. *Id.* at 3. The Company's proposed increase in revenues would have produced an 8.21 percent rate of return on the Company's fair value rate base. *See* Bourassa Rj., Schedule A-1. That rate of return, however, was based on the Commission's approval of automatic adjustment mechanisms that would allow the Company to recover increases in cost of purchased water and purchased power. If such mechanisms were not approved, then the Company requested a return of 8.6 percent, based on a higher cost of equity resulting from additional investment risk. Ex. A-R6 at 16. *See also* Ex A-R13 at 26-2745-47 (discussing the denial of the risk adjustment)..

Following the submission of pre-filed testimony by the Company, Staff and RUCO, a hearing was conducted before a duly authorized Administrative Law Judge, commencing on May 31, 2005. Decision No. 68176 at 2. Ultimately, the Commission

issued Decision No. 68176 on September 30, 2005, authorizing an increase in revenue of $1,107,596 and establishing new rates and charges for service. Ex. A-R6 at 3, 28, 38-39, 41-44. The Company's new rates became effective on October 1, 2005. *Id.* at 43-44.

In setting rates, the Commission employed what has become known as the "backing-in method," under which the cost of capital adopted by the Commission, 7.6 percent, was applied to the Company's original cost rate base ("OCRB") to determine the Company's authorized operating income. That operating income was then used to "translate" the 7.6 percent cost of capital into what was called a "fair value rate of return" of 6.34 percent. *Id.* at 28. In other words, operating income of $1,294,338 was divided into the Company's fair value rate base of $20,340,298 to obtain a percentage return of 6.36 percent. If the Company's FVRB had been $22 million instead, the "fair value rate of return" instead would have been 5.88 percent. Similarly, if the FVRB had been $18 million, the "fair value rate of return" would have been 7.19 percent. In reality, the cost of capital, 7.6 percent, was used as the rate of return and applied to the OCRB to produce the required operating income, rendering the fair value determination required by the Arizona Constitution meaningless.[4]

B. <u>The Court of Appeals' Decision</u>

The Company sought rehearing of Decision No. 68176, which was denied by operation of law, and appealed the decision to the Arizona Court of Appeals pursuant to A.R.S. § 40-254.01. *See* Ex. A-R13 at 2-5, ¶¶ 2-5 (summarizing procedural history of case). In the appeal, two issues were presented for review:

1. Does the "backing-in" method employed by the Commission in setting rates, under which Chaparral City's authorized

[4] "For regulatory purposes, the rate of return is the amount of money earned by a public utility, over and above operating costs, expressed as a percentage of the rate base." Charles F. Phillips, Jr., *The Regulation of Public Utilities – Theory and Practice* 375-76 (2d ed. 1988).

operating income and revenues are based on the historic cost of the Company's property, violate Article XV, §§ 3 and 14 of the Arizona Constitution?

2. Was the Commission's adoption of its Staff's recommended equity return of 9.3 percent and resulting 7.6 percent return on rate base arbitrary and unreasonable?

Ex. A-R9 at 5.

With respect to the first issue on appeal, the Court of Appeals found that "the Commission did not comply with requirements of Article 15, Section 14, of the Arizona Constitution when the Commission determined the operating income of Chaparral City using the original cost rate base instead of the fair value rate base." Ex. A-R13 at 28, ¶ 28. The court explained:

> Under the Arizona Constitution, a public utility is entitled to a fair return on the fair value of its property devoted to public use. ... The Commission is required to find the fair value of the utility's property at the time of the inquiry and to use that finding in setting just and reasonable rates. ... Here, the Commission determined Chaparral City's operating income based on its OCRB and then mathematically calculated a corresponding rate of return had the income based on the FVRB. Under this method, Chaparral City's operating income, and therefore its revenue requirements and rates, were not based on the fair value of its property, but on its OCRB, which does not comport with the Arizona Constitution.

Id. at 11-12, ¶ 14 (citations omitted). The court did not direct the Commission to use a specific rate of return methodology, but emphasized that the "Commission cannot determine rates based on the original cost, or OCRB, and then engage in a superfluous mathematical exercise to identify the equivalent FVRB rate of return." *Id.* at 13-14, ¶ 17. The court also explained that under the fair value standard, rates cannot be based on the investment made in the plant: "Rates cannot be based on investment, but must be based on the fair value of the utility's property." *Id.* at 13, ¶ 16 (citing *Simms v. Round Valley Light & Power Co.*, 80 Ariz. 145, 151, 294 P.2d 378, 382 (1956), and *Ariz. Corp. Comm'n v. Ariz. Water Co.*, 85 Ariz. 198, 203, 335 P.2d 412, 415 (1959)).

With respect to the second issue on appeal, the Court of Appeals ruled in favor of the Commission. Ex. A-R13 at 27-28, ¶¶ 48-49. The court held that "Chaparral City's objections to the methodologies used in determining the cost of equity involve matters of judgment within the province of the Commission" and that Chaparral City failed to make "a clear and convincing showing that the Commission's decisions in these matters were unreasonable or unlawful." *Id.* at 27-28, ¶ 48. Consequently, the cost of equity adopted by the Commission, which was based on Staff's recommendations, is not at issue on remand.

Following a three month period, during which the Commission considered but did not seek review of the Court's decision by the Arizona Supreme Court, the Court of Appeals issued its mandate to the Commission on May 29, 2007, commanding the Commission "that such proceedings be had in [this] cause as shall be required to comply with the decision of this court." After an unsuccessful attempt by the Company to discuss settlement, the Company filed schedules for the purpose of complying with the Court's decision and mandate, requesting adjustments to its rates and charges for service and the approval of a surcharge designed to recover the revenue deficiency together with carrying costs and additional rate case expense. Ex. A-R3.

Thereafter, procedural orders were issued by the Administrative Law Judge setting dates for filing testimony and for the hearing in the remand proceeding. A hearing was conducted on January 28 and 29, 2008, at the conclusion of which the parties were ordered to file closing briefs and their final schedules.

III. THE FAIR VALUE AND PRUDENT INVESTMENT METHODS

In order to frame the primary issue before the Commission – the appropriate rate of return to apply to the fair value of Chaparral City's plant and property – it is necessary to discuss the fair value standard and the differences between that standard and the prudent investment or original cost approach, under which rates are set on basis of the

utility's investment in plant, rather than the plant's current value. As shown later in this brief, the approaches advocated by Staff and RUCO are rooted in the prudent investment method and, if adopted by the Commission, would again violate Arizona law.

A. The Fair Value Standard

In Arizona, utility rates must be established on the basis of the "fair value" of the utility's property. Ariz. Const. art. 15, § 14. For example, in the seminal decision *Simms,* 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.

Simms, 80 Ariz. at 151, 294 P.2d at 382. Three years later, the Arizona Supreme Court followed *Simms* and squarely rejected the prudent investment approach, stating:

> This court has held that under our constitution the Corporation Commission must find the fair value of the properties devoted to the public use, and that in determining the fair value the Commission cannot be guided by the prudent investment theory nor can it use common equity as the rate base standard. ... *The amount of capital invested is immaterial. Under the law of fair value a utility is not entitled to a fair return on its investment; it is entitled to a fair return on the fair value of its properties devoted to the public use, no more and no less.*

Ariz. Water, 85 Ariz. at 203, 335 P.2d at 415 (emphasis added).

Simms and *Arizona Water* provide the basic constitutional framework for rate-making in Arizona, and have been consistently followed by Arizona courts. In 2001, the Arizona Supreme Court reaffirmed that in a monopoly setting, fair value is the "exclusive rate base" on which utility companies are entitled to a fair rate of return. *US West Communications, Inc. v. Ariz. Corp. Comm'n,* 201 Ariz. 242, 244-46, ¶¶ 13-19, 34 P.3d

351, 354-55 (2001) (summarizing Arizona court decisions requiring the use of fair value to set rates in a monopolistic setting). Even more recently in *Phelps Dodge Corp. v. Ariz. Corp. Comm'n*, 207 Ariz. 95, 83 P.3d 573 (App. 2004), the Court of Appeals 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 105, ¶ 21 n. 8, 83 P.3d at 583 n. 8 (App. 2004) (quoting *US West,* 201 Ariz. at 245, ¶ 19, 34 P.3d at 355).

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," *Simms*, 80 Ariz. at 151, 294 P.2d at 382, not simply their historic cost or the amount originally invested to build them. *See also Arizona Pub. Serv.,* 113 Ariz. at 370, 555 P.2d at 328 ("The company is entitled to a reasonable return upon the fair value of its properties at the time the rate is fixed."); *Consolidated Water Utilities, Ltd. v. Ariz. Corp. Comm'n,* 178 Ariz. 478, 482 n. 6, 875 P.2d 137, 141 n. 6 (App. 1993) ("The fair value rate base is the fair value of the company's properties within the state at the time the rate is fixed.").

For this reason, the "fair value standard mimics the operation of the competitive market." *Duquesne Light,* 488 U.S. at 308-09. A utility is allowed to benefit from increases in the value of the property it devotes to public service, but also bears the risk of obsolescence and other loss of property value:

> In theory the *Smyth v. Ames* fair value standard mimics the operation of the competitive market. To the extent the utilities' investments in plants are good ones (because their

> 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 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.

Id. (quoting *Smyth v. Ames*, 169 U.S. 466, 547 (1898)). *See also Bluefield Waterworks & Improvement Co. v. Pub. Serv. Comm'n*, 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.") (quoting *Willcox v. Consolidated Gas Co.,* 212 U.S. 19, 52 (1909)); *City of Tucson v. Citizens Utilities Water Co*, 17 Ariz. App. 477, 480, 498 P.2d 551, 554 (1972) ("The [Arizona Supreme] 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.").

B. <u>The Prudent Investment/Original Cost Approach</u>

Justice's Brandeis' dissenting opinion in *Missouri ex rel. Southwestern Bell Tel. Co. v. Public Serv. Comm'n*, 262 U.S. 276, 289-312 (1923), is generally regarded as the genesis of the prudent investment or original cost approach to setting rates. *See, e.g., Duquesne Light,* 488 U.S. at 309. As explained by the Supreme Court, Justice Brandeis

> ... accepted the *Smyth v. Ames* eminent domain analogy, but concluded that what was "taken" by public utility regulation is not specific physical assets that are to be individually valued, but the capital prudently devoted to the public enterprise by the utility's owners. ... Under the prudent investment rule, the utility is compensated for all prudent investments at their actual cost when made (their "historical" cost), irrespective of whether individual investments are deemed necessary or beneficial in hindsight. The utilities incur fewer risks, but are limited to a standard rate of return on the actual amount of money reasonably invested.

Id.

The Court explained that the "most serious problem" associated with the fair value standard, in Justice Brandeis' view, was "the laborious and baffling task of finding the

present value of the utility." *Id.* at 309 n.5 (quoting *Southwestern Bell*, 262 U.S. 276, 292 94 (Brandeis, J. dissenting)). "The [prudent investment] system avoids the difficult valuation problems encountered under the *Smyth v. Ames* test because it relies on the actual historical cost of investments as the basis for setting the rate." *Id.* at 309 n.6. As one scholar has explained, "Justice Brandeis sought definiteness, stability and readiness of ascertainment. Under present accounting practices, the definiteness of a prudent investment rate base and the ease with which it may be determined cannot be questioned." A. J. G. Priest, *Principles of Public Utility Regulation* 495 (1969).

Put simply, under the prudent investment standard, a utility's rates are based on the historic investment in its plant, as recorded on the utility's books, while under the fair value standard, a utility's rates are based on the current value of its property, not the original cost to build it. As explained by the Illinois Supreme Court,

> [T]he concept of fair value holds that it is the value of the utility's property devoted to public service upon which the reasonable rate must be returned. It is a *Value concept* and not a *Cost concept*. Stating it briefly, a cost rate base reflects the amount of invested capital, whereas a value rate base reflects the value of the assets which the utility has devoted to serving the public.

Union Elec. Co. v. Ill. Comm. Comm'n, 396 N.E.2d 510, 516 (Ill. 1979) (emphasis supplied).

Notwithstanding Justice's Brandeis' dissent, the fair value standard continued to be applied by the courts in determining the constitutionality of a utility's rates for more than 20 years. *See, e.g., Los Angeles Gas & Electric Corp. v. Railroad Comm'n*, 289 U.S. 287, 305-312 (1933); *United Rys. & Electric Co. v. West*, 280 U.S. 234, 248-49 (1930); *McCardle v. Indianapolis Water Co.*, 272 U.S. 400, 408-12 (1926). In 1944, the Supreme Court ceased its practice of scrutinizing the rate-setting methodologies of public utility commissions under the fair value standard. The Court adopted in *Federal Power*

Comm'n v. Hope Natural Gas, 320 U.S. 591 (1944), what has become known as the "end result" test, declaring, in interpreting the federal Natural Gas Act:

> Under the statutory standard of "just and reasonable" it is the result reached and not the method employed which is controlling. ... It is not the theory but the impact of the rate order which counts. If the total effect of the rate order cannot be said to be unjust and unreasonable, judicial inquiry is at an end. The fact that the method employed to reach that result may contain infirmities is not then important.

Hope Natural Gas, 320 U.S. at 602 (citations omitted). Thus, the commission was not required to set rates based on the fair value of the pipeline company's property to satisfy constitutional requirements. *See also Duquesne*, 488 U.S. at 310 (discussing *Hope*).

Arizona courts have made it clear, however, that the *Hope Natural Gas* Court's refusal to require use of the fair value method does not alter the express mandate of Article 15, Section 14 of the Arizona Constitution. Indeed, in *Simms*, the first Arizona decision to address *Hope Natural Gas*, the Arizona Supreme court squarely rejected the application of *Hope Natural Gas* to rate-making in Arizona, holding that the Arizona Constitution requires the fair value of a utility's property to be found and used as the rate base. *Simms*, 80 Ariz. at 150-51, 294 P.2d at 381-82. *See also Iowa-Illinois Gas and Electric Co. v. City of Fort Dodge*, 85 N.W.2d 28, 38-44 (Iowa 1957) (discussing *Hope* and subsequent cases in concluding that fair value must be used under Iowa law). In *US West*, the Arizona Supreme Court affirmed that the fair value standard continues to be the standard by which utility rates must be set in a monopolistic setting, specifically noting that on three separate occasions, the voters defeated proposed amendments to the fair value provision of the Arizona Constitution. *US West,* 201 Ariz. at 245-46 & n.2, ¶¶ 10-19, 34 P.3d at 354-55 & n.2. In short, regardless of what is currently done in other jurisdictions, the fair value standard is the standard by which rates must be set in Arizona.

C. The Rate of Return Applied to a Fair Value Rate Base

The Arizona Supreme Court rhetorically asked in *US West*, what is to be done

with the finding of fair value? Id. at 245, ¶ 13, 34 P.3d at 354. The court answered that question by explaining that "fair value has been the factor by which a reasonable rate of return was multiplied to yield, with the addition of reasonable operating expenses, the total revenue that a corporation could earn. ... That revenue figure was then used to set rates." *Id.* (following *Scates v. Ariz. Corp. Comm'n*, 118 Ariz. 531, 533-34, 578 P.2d 612, 614-15 (App. 1978)). Nothing in that opinion, the Court of Appeals' decision in this case, or in any other Arizona decision indicates, however, that it is permissible to manipulate the rate of return to produce a result that is equivalent to using an OCRB, or that the reasonableness of rates should be determined by reference to the result that would be produced under the prudent investment/original cost method.[5] This would unlawfully conflate fair value with prudent investment, undermining the purpose of using the fair value of a utility's property as its rate base. *See, e.g., Ariz. Water,* 85 Ariz. at 203, 335 P.2d at 415 ("the Commission cannot be guided by the prudent investment theory nor can it use common equity as the rate base standard").

A useful discussion of an appropriate rate of return methodology when fair value is used as the rate base is found in *City of Alton v. Commerce Comm'n*, 165 N.E.2d 513 (Ill. 1960). There, the commission authorized a return of 5.6 percent on a water utility's FVRB, resulting in an increase in revenue of 47.5 percent. 165 N.E.2d at 515-16. The intervenors appealed the decision to the circuit court, which disallowed the return on the FVRB because it would produce an excessive return to the common stockholder. *Id.* at 516, 519. The circuit court calculated the net income available for distribution to stockholder, and divided that amount by the book value of the utility's common equity,

[5] On appeal, the Commission attempted to argue that the backing in method had been approved in *Litchfield Park Serv. Co. v. Ariz. Corp. Comm'n*, 178 Ariz. 431, 434-35, 874 P.2d 988, 991-92 (App. 1994). But the court said that this discussion was merely dicta that did not approve or disapprove the setting of a "fair value return" by reference to the operating income produced by applying the rate of return to OCRB. Ex A-R13 at 10.

which resulted in an equity return of 17 percent. *Id.* at 519. The Illinois Supreme Court reversed and upheld the return on the FVRB, explaining that the circuit court had erroneously assumed that the "return on the original common stock investment was the relevant figure in determining the reasonableness of an overall rate of return." *Id.* The court explained:

> It is well established in Illinois that the utility is entitled to a reasonable overall return on the fair value of its property, not the original cost. This provides a flexible rate-making standard which is equally applicable in periods of rising and falling price levels. ... It would be inconsistent to judge the overall return on the basis of fair value but judge the return accruing to common shareholders on the basis of a par value which is essentially original cost. ***The significant figure is the rate of return on common stock valued at fair value.***

Id. (emphasis supplied). *See also Union Electric*, 396 N.E.2d at 516 (quoting and following *City of Alton* and rejecting the *Hope* "end result" test advocated by the commission).

The court noted that there are several ways to determine a reasonable rate of return on the utility's common equity valued at fair value. For example, the "fair value attributable to the common stock might be determined by subtracting the par [i.e., book] value of debt and preferred stock, to reflect the fact that all increments in value belong to the equity, or by dividing fair value in the same percentages as book value." *Id.* at 520. These approaches provide a rational framework for developing a fair rate of return through the weighted cost of capital ("WACC") in a fair value context. The first approach recognizes that any increase (or decrease) in property value inures to the benefit (or detriment) of the equity holders. Thus, the difference between the OCRB and the FV (which Staff calls the FV Increment in its testimony[6]) would be added to the equity balance, and the adjusted equity balance would be used in the WACC calculation to

[6] *See, e.g.,* Parcel Dt. at 5-7.

determine the cost of capital/rate of return. The second approach assumes that the FV Increment is funded equally by all of the components of the capital structure, which reduces the potential benefit to the equity holders when the FV Increment is positive, but also reduces the potential detriment to the equity holders when the FVRB Increment is negative.

The North Carolina Supreme Court required the first approach in determining the rate of return on fair value in *State ex rel. Utilities Comm'n v. Duke Power Co.*, 206 S.E.2d 269 (N.C. 1974). At the time this case was decided, North Carolina's statute governing rate-making required that "the Commission shall fix rates which will enable a well managed utility to earn a 'fair rate of return' on the 'fair value' of its properties 'used and useful' in rendering its service." 206 S.E.2d at 276. Thus, North Carolina law was analogous to Arizona law. In setting intrastate rates for Duke Power, however, the state commission used an approach similar to the "backing-in" method used to set Chaparral City's rates in Decision No. 68176. The commission determined that Duke Power's cost of equity was 11 percent. That equity cost was used, along with the annual interest on the utility's debt and dividends on its preferred stock, to compute the amount that would be a "fair" dollar return to the utility on the actual capital invested in its properties, i.e., the utility's OCRB. That dollar return was then used to compute an overall return of 7.05 percent on the fair value of the utility's properties. *Id.* at 281. The court held that this approach violated the fair value standard because it produced the same total dollar return as if "the fair value of the properties had been exactly the same as Duke's actual net investment in the properties." *Id.*

The court also reaffirmed that the FV Increment must be recognized as a component of the utility's equity in determining the rate of return:

> The "fair value" increment (fair value of the plant less original cost, depreciated) found by the Commission was approximately $95,500,000. For rate of return purposes, this

> increment must be added to the equity component of Duke's actual investment in its electric plant. Duke is entitled [under the statute] to earn the same rate of return on this increment as it is entitled to earn on the retained earnings (surplus) which it has reinvested in its plant. The wisdom of the statute is not for us or for the Commission. The Legislature has so decreed and its mandate must be observed by the Commission.

Id.

Duke Power is consistent with the view of the Illinois Supreme Court in *City of Alton* that the difference between OCRB and FVRB – the FV Increment – should be recognized in determining the rate of return by adjusting the utility's equity balance to include the FV Increment and then using the adjusted equity balance to determine the cost of capital. That approach complies with the fair value standard by allowing the utility and its equity investors to benefit from increases in the value of the property devoted to public service, but also requiring the utility and its equity investors to bear the risk of obsolescence and other loss of property value, which would result in a downward adjustment to the utility's equity balance. As the Texas Supreme Court, in discussing the fair value standard, explained:

> In 1899 a federal court in *San Diego Land & Town Co. v. National City*, ... recognized that the equity capital in a public utility was entitled to rise and fall with the economic cycle and that if the rate of return were based upon the original cost of the property the equity ownership would be permanently fixed just as it is in the case of a secured bonded indebtedness. And this, of course, without the advantages of security. In affirming this case, the Supreme Court put the result squarely upon *Smith v. Ames*, [169 U.S. 466 (1898)].

Railroad Comm'n v. Houston Natural Gas Corp., 289 S.W.2d 559, 565 (1956) (discussing *San Diego Land & Town Co. v. City of National City*, 74 F. 79 (C.C.Cal. 1896), affirmed 174 U.S. 739 (1899)). *See also McCardle*, 272 U.S. at 411 ("It is well established that values of utility properties fluctuate, and that owners must bear the decline and are entitled to the increase."); Walker Rmd. Rb. at 21 ("The equity investors

have risked their capital by investing in assets that have increased in value, and they are entitled to a fair return on those assets."); Tr. 32-33.

Under the *Duke Power* approach, if the FV Increment is positive, the WACC would likely be higher (because the percentage of equity in the capital structure would increase), producing a higher rate of return. If the FV Increment is negative, however, the WACC would likely be lower (because the percentage of equity in the capital structure would decrease), producing a lower rate of return. This would mimic the competitive market, which is the purpose of the fair value standard. *Duquesne Light,* 488 U.S. at 308-09.

The second approach suggested in *City of Alton* would instead assume that the FV Increment is supported by the utility's overall capital structure, including its outstanding debt and, if issued, preferred stock. This is a more conservative approach than the North Carolina approach. Instead of adjusting the utility's equity balance upward or downward, depending on whether the FV Increment is positive or negative, to compute the WACC, the utility's actual capital structure is used to compute the WACC, without any adjustment. In other words, if, as in this case, 58.8 percent of the utility's capital structure is common equity, then 58.8 percent of the FV Increment would be allocated to the common equity holders, rather than 100 percent. This means that the ultimate return dollars to the utility and its investors will be less if the FV Increment is positive and, conversely, higher if the FV Increment is negative, in comparison to adjusting the utility's common equity as in *Duke Power*. This dampens the effect of using fair value to set rates.

Chaparral City's recommendation, discussed below, is consistent with the second, more conservative approach suggested in *City of Alton*, in which the Company's WACC of 7.6 percent is applied to its FVRB without any adjustment. Under Staff's approach, the WACC also would be applied to the Company's FVRB, but only when the FVRB is

less than the OCRB. Tr. 351. If the FVRB exceeds the OCRB, however, Staff would assign a "zero cost" to the FV Increment under Alternative 1, or a nominal cost of 1.25 percent under Alternative 2. Parcell Dt. at 5-6, 8-9. Thus, under Staff's approach, utilities receive no benefit if their investments are good ones, but will suffer if their investments turn out to be bad ones. Staff's "heads I win, tails you lose" approach is itself unlawful:

> [T]he impact of certain rates can only be evaluated in the context of the system under which they are imposed. One of the elements always relevant to setting the rate under *Hope* is the return investors expect given the risk of the enterprise. *Id.*, at 603, 64 S.Ct., at 288 ("[R]eturn to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks"); . . . . The risks a utility faces are in large part defined by the rate methodology because utilities are virtually always public monopolies dealing in an essential service, and so relatively immune to the usual market risks. Consequently, *a State's decision to arbitrarily switch back and forth between methodologies in a way which required investors to bear the risk of bad investments at some times while denying them the benefit of good investments at others would raise serious constitutional questions.*

Duquesne Light, 488 U.S. at 314-15 (emphasis supplied).

IV. CHAPARRAL CITY'S POSITION ON REMAND AND ITS REQUESTED RATE ADJUSTMENTS AND TEMPORARY SURCHARGE

A. The Company's Proposed Rate Adjustments

To comply with the Court of Appeals' decision and mandate, Chaparral City proposes that the rate of return, 7.6 percent, be applied to its FVRB of $20,340,298. This produces a required operating income of $1,545,863, as shown on Schedule A-1 (attached hereto). To achieve this operating income, test year adjusted revenue must be increased by $1,517,262, which is $409,666 greater than the revenue increase authorized in Decision No. 68176. Rmd. Sch. A-1. On a percentage basis, the overall revenue increase is 5.6 percent.

Schedule A-1 also contains the computation of the surcharge proposed by the Company to recover the revenue deficiency and a portion of the additional rate case expense incurred by the Company in connection with the appeal and the subsequent remand proceeding. The surcharge calculation assumes that adjusted rates will be implemented on May 1, 2008 (i.e., 31 months after the rates authorized in Decision No. 68176 became effective), and applies a carrying cost (interest rate) of 7.6 percent to the unrecovered balance. Rmd. Sch. A-1 at 1. The surcharge is computed by dividing the total amount of water sold during 2007, 1,960,436,000 gallons, into the amount to be recovered, $1,097,384, which produces a surcharge rate of $0.56 per 1,000 gallons. *Id.* at 2.[7] The Company has chosen to use a charge per 1,000 gallons of water, rather than a charge per meter or similar connection-based charge, to continue the conservation-oriented price signal to large volume water users consistent with the Commission's direction in Decision No. 68176. *See* Ex. A-R6 at 28-31 (discussing rate design), 39 (findings of fact 19 and 20).

The adjusted rates proposed by the Company are based on the inverted-tier rate design approved by the Commission in Decision No. 68176, as shown on Schedule H-3. The average monthly bill for a customer on a 3/4-inch meter (the Company's largest customer class) would increase by $1.95 (5.69 percent), excluding the surcharge. Rmd. Sch. A-1, p. 2; Rmd. Sch. H-4. With the surcharge included, the average monthly bill for a customer on a 3/4-inch meter would increase by $7.10 (20.67 percent). The surcharge is temporary, however, and would be in effect for a period of 12 months or until full recovery is made.

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[7] The surcharge methodology proposed by Staff is the same as the Company's methodology except that Staff's revenue increase is much smaller and Staff opposes the recovery of any additional rate case expense, resulting in a much smaller surcharge rate or no surcharge at all under Staff Alternative 1. *See* Tr. 304-05; Smith Rmd. Dt., 21-23 and Attachments RCS-2, Sch. A and RCS-3, Sch. A.

B. The Company's Recommendation Complies with the Fair Value Standard

Chaparral City's recommendation actually uses the fair value of the Company's utility plant and property in a meaningful way in setting rates and, therefore, is consistent with the Court of Appeals' decision and mandate. *See* Ex. A-R13 at 11-13. Chaparral City applies the percentage rate of return used in Decision No. 68176, derived by means of the WACC, to the correct rate base. Staff and RUCO, in contrast, propose methodologies that are rooted in original cost concepts, i.e., historic investment in plant, notwithstanding the Court of Appeals' decision to the contrary. *See, e.g., id.* at 13, ¶ 16 ("[T]he Commission appears to be advocating the setting of rates based on the investment made in the plant. However, rates cannot be based on investment, but must be based on the fair value of the utility's property.").

1. The Company's Fair Value Rate Base

Put simply, the rate base is the value of the various utility plant and property used to provide service, less accumulated depreciation, funds contributed by customers, and certain other deductions. *See, e.g., Simms*, 80 Ariz. at 149-51, 294 P.2d at 380-82 (discussing methods for valuing a utility's property for rate-making purposes). In accordance with Commission rule A.A.C. R14-2-103, Chaparral City submitted schedules reflecting its OCRB and its reconstruction cost new less depreciation rate base ("RCND"). Ex. A-R6 at 9. To eliminate disputes, Chaparral City used the average of its OCRB and its RCRB as the FVRB. *Id.* Staff recommended that the Commission use the same methodology to determine fair value. *Id.* RUCO did not oppose the use of this methodology, but used its own recommended rate base. *Id.* The Commission adopted Chaparral City's FVRB, $20,340,298, finding that "the average of the adjusted OCRB and RCND provides a reasonable measurement of the current value of the Company's property devoted to public service." *Id.* The Commission's determination of the FVRB

was not challenged on appeal and, therefore, is not at issue on remand.

Nevertheless, RUCO's witness, Dr. Johnson, has contended that the averaging of OCRB and RCND overstated the current value of Chaparral City's property. Johnson Rmd. Dt. at 32-34; Tr. 177-78, 189. In response to this testimony, the Company presented rebuttal from Mr. Gisler, a registered civil engineer and the Planning Manager for Golden State Water Company and Chaparral City, who explained that the costs to build a new water system today would exceed the cost of constructing Chaparral City's existing system. Ex. A-R1 at 1-2, 4-8. He also explained that, in contrast to other types of utility service, the technology associated with water systems has changed little since World War II. *Id.* at 3-4, 6. For example, Chaparral City continues to use ductile iron pipe for its major transmission mains. *Id.* at 8-9. In Mr. Gisler's opinion as a water system engineer who is familiar with the Company's system, the use of the average of OCRB and RCND is a conservative estimate of the current value of Chaparral City's plant. *Id.* at 9.

The Company also presented rebuttal from Mr. Walker, who is an expert on utility valuation techniques, and has personally conducted numerous valuation, cost and depreciation studies for utilities. Ex. A-R2 at 1-2, App. A. Mr. Walker reviewed the reconstruction cost new ("RCN") study prepared by Mr. Bourassa, and determined that it was a reasonable estimate of RCN values and likely understated the Company's total RCN value. *Id.* at 3-4, 7. He also reviewed the FVRB determined by Mr. Bourassa and accepted by the Commission, and concluded that the Commission's method of averaging OCRB and RCND to derive the FVRB is a very conservative valuation approach. *Id.* at 5. Mr. Walker, moreover, explained that Dr. Johnson has confused several different valuation approaches and is simply speculating about the cost of replacing Chaparral City's existing system. *Id.* at 10-12. *See also* Gisler Rmd. Rb. at 3-4, 7-9.

Dr. Johnson simply ignored the testimony of Mr. Gisler and Mr. Walker. *See*

generally Ex. R-R2. In fact, when asked about the details of Chaparral City's water system given by Mr. Gisler, Dr. Johnson was unable to recall even seeing Mr. Gisler's testimony. Tr. 175-76, 178. As with the remainder of his testimony in the remand proceeding, Dr. Johnson preferred to talk in vague generalities, speculating about the reproduction and replacement of municipal water systems rather than addressing the facts in the record relating to Chaparral City and Chaparral City's system. *See* Tr. at 176-78.

In short, RUCO's attempt to contest the Company's FVRB on remand is a red herring. The methodologies used to determine the Company's FVRB were reasonable, and produced a conservative result.

> The arguments against fair value are all ones of expediency, not ones of justice or fundamental fair treatment. It is obvious that fair value introduces certain problems of proof. There must be estimates of reproduction cost, and of course these are by necessity estimates, but they are estimates of the cost of a plant in existence. They are close enough for practical purposes, and are obviously more likely to be correct than contractors' estimates of a plant to be built, on which estimates billions of dollars have been and will be spent.
>
> Furthermore, with the complete bookkeeping records now kept, it is not too difficult or expensive to apply trended percentages to original cost and thereby obtain a trended original cost, which will serve as a very accurate guide to the general effects of inflation, over the life of the property – or, as the case may be in some instances, deflation. ... The original cost of a piece of real estate or property sixty years old is obviously not a sound basis for judgment of value today, and obviously far more out of line than any estimate of reproduction cost or of trended original cost. These criteria are also far more definite and clarifying than the vague and indefinite "end result."

Iowa-Illinois Gas, 85 N.W.2d at 42. That is not to say that the Commission should mechanically accept RCN studies and similar evidence of current values when setting rates. The Commission can and should consider technological advances that would render the current reproduction of an identical plant inappropriate in determining the

FVRB. As the Supreme Court has stated, "it may be safely generalized that the due process clause never has been held by this Court to require a commission to fix rates on the present reproduction value of something no one would presently want to reproduce ... ." *Market St. Ry. v. Railroad Comm'n*, 324 U.S. 548, 567 (1945). *See also Simms*, 80 Ariz. at 155, 294 P.2d at 385 (obsolescence "certainly is a matter the commission would have the right to consider in arriving at present fair value").

While technological advances may well result in a fair value that is less than original cost in the case of electric, gas and telecommunications utilities, however, the opposite is true for the water utility industry, as Mr. Gisler explained. Gisler Rmd. Rb. at 3-4. "Technology changes [in the water industry] have been slow and limited; therefore, obsolescence has not been a problem and facilities have a very long life. However, that same lack of technological change has prevented any noticeable improvement in productivity and has meant that each new increment of capacity is more costly." Charles F. Phillips, Jr., *The Regulation of Public Utilities – Theory and Practice* 836 (2d ed. 1988) (quoting Loren D. Mellendorf, "The Water Utility Industry and Its Problems," *Public Utilities Fortnightly* 111 (March 17, 1983)). *See also* Priest, *supra*, 755 ("Some modifications obviously would be made if a water utility's plant were to be reproduced, but technological progress has not fundamentally altered water service facilities.").

For these reasons, there is no basis for RUCO's belated attempt to contest Chaparral City's rate base. And for the same reason, RUCO's parade of horribles argument concerning other utilities, such as Arizona Public Service Company ("APS") (*see, e.g.*, Tr. 188, 193-94), is irrelevant to the narrow issue before the Commission. In a subsequent rate case, the FVRB of APS (or any other large electric and gas utility) may be found to be greater than its OCRB or less than its OCRB, depending on the particular facts and circumstances of that utility, including the obsolescence of its plant. But as Dr. Zepp testified, water utilities are different from other utilities because the water industry

has not experienced any significant technological changes that would decrease the cost of service. Tr. at 244-46. *See also* Priest, *supra*, 755 *id.* at 751-54 (identifying seven difficulties specifically confronting water utilities, including the absence of any significant technological breakthroughs in the business of supplying water, longer-lived plant, which subjects water utilities to greater inflationary impacts, and higher investment in plant per dollar of revenue).

2. The Company's Rate of Return

The primary issue is the appropriate rate of return to apply to Chaparral City's FVRB. In Decision No. 68176, the Commission applied the WACC, 7.6 percent, to the OCRB to determine Chaparral City's authorized operating. *See* Ex. A-R13 at 7-8, ¶ 7, 12, ¶ 14. This was consistent with Staff's recommendation that "the Commission adopt an overall rate of return ("ROR") of 7.6 percent." Ramirez Sb., Executive Summary. Unfortunately, as the Court of Appeals determined, that rate of return was applied to the wrong rate base – the OCRB, rather than the fair value of Chaparral City's property devoted to public use. Ex. A-R13 at 12, ¶ 14, 13, ¶ 17. Consequently, applying the 7.6 percent rate of return to Chaparral City's FVRB complies with the Arizona Constitution and the decision of the Court of Appeals. The application of the WACC-derived cost of capital to the FVRB is also consistent with the decisions of other jurisdictions, including the *City of Alton* and *Duke Power* decisions discussed above, which recognize that the difference between OCRB and FVRB is being financed with investor-supplied capital. *See also* Tr. 32-33, 115-19.

Nevertheless, Staff and RUCO object to applying the 7.6 percent rate of return to Chaparral City's FVRB. For example, Mr. Parcell testifies that "the concept of cost of capital is designed to apply to an original cost rate base" because "the rate base is financed by the capitalization." Parcell Rmd. Dt. at 4. He also asserts that if the cost of capital is used as the rate of return and applied to the FVRB, the "link between rate base

and capitalization is broken" because the difference between OCRB and FVRB "is not financed with investor-supplied funds and, indeed, is not financed at all." *Id.* *See also* Parcell Rmd. Sb. at 7-10; Smith Rmd. Dt. at 16-17; Smith Rmd. Sb. at 14-18. RUCO's witness similarly argues that in setting rates, "the focus is on the accounting data" and that "the specific computations" used to derive the cost of capital "are closely tied to accounting data." Johnson Rmd. Dt. at 12. All of these arguments are based on prudent investment/original cost rate-making principles and erroneously assume that Chaparral City's cost of capital is linked to its OCRB when, in fact, the WACC was determined independently of Chaparral City's rate base. As explained below, there is no mystical link between the WACC and OCRB, as Staff and RUCO contend.

a. The Capital Structure Used in the WACC Computation Does Not Match the Utility's Rate Base, Regardless of How the Rate Base Is Determined.

In this case, the WACC calculation was based on Chaparral City's actual, adjusted capital structure as of December 31, 2003, and was determined to be as follows:

	Amount	Cost	Weighted Cost	Dollar Return
Long-Term Debt	$8,363,309	5.1 %	2.1 %	$426,529
Common Equity	$11,901,727	9.3 %	5.5 %	$1,106,860
Total Capital	$20,265,036	--	7.6 %	$1,533,390

A-R6 at 16, 26.[8] By contrast, the OCRB approved by the Commission was $17,030,765, while the FVRB approved by the Commission was $20,340,298. *Id.* at 9. Thus, the capital structure adopted in Decision No. 68176 does not match either the OCRB or the

[8] The column entitled "Dollar Amount" was calculated by multiplying the components of the capital structure by their authorized cost. Due to rounding, the total dollar amount, $1,533,390, actually produces a return of 7.567 percent, rather than 7.6 percent. The total annual cost of capital expressed in dollars is actually $1,540,143 ($20,265,036 x 0.076).

FVRB. Instead, total capital is greater than OCRB by about $3.2 million, and less than FVRB by about $75,000.

The utility's WACC is derived from its actual capital structure and is expressed as a percentage return, and not as a dollar return. That percentage is then applied to the utility's rate base, regardless of whether the resulting return produces the dollar cost of capital. Bourassa Rmd. Rj. at 11; Tr. 132-33, 140-44. For example, in the initial phase of this case, Staff's cost of capital witness discussed the WACC concept and the Company's capital structure in the abstract, and simply calculated a percentage WACC without reference to the Company's rate base or the dollar return provided to the Company. Ramirez Dt. at 4-7, Sch. AXR-1; Ramirez Sb. at 2, Sch. AXR-1. Mr. Ramirez did not discuss Chaparral City's rate base or, for that matter, the rate bases of any of the six publicly traded water utilities that were used in the sample group to estimate the cost of equity. *Id.* RUCO's cost of capital witness likewise ignored the return dollars necessary for the Company to recover its cost of capital, as well as the rate bases of the Company and his water utility sample group, in developing RUCO's recommended WACC. Rigsby Dt. at 41-44, Sch. WAR-1.

In the recent rate case of Far West Water & Sewer's sewer division, the Commission adopted Staff's proposed capital structure consisting of 44 percent debt and 56 percent equity, which was the utility's actual, company-wide capital structure. Decision No. 69335 (February 20, 2007) at 13-14. It was irrelevant in computing the WACC that the debt was incurred to construct water treatment facilities rather than plant in the sewer division's rate base, and also irrelevant that the total capital used in computing the WACC substantially exceeded the sewer division's rate base. Bourassa Rmd. Rb. at 19-20; Tr. 141-43. The same would be true if the utility's rate base were determined under a different approach. *See* Walker Rmd. Rb. at 12-13 (discussing different rate base methodologies); Zepp Rmd. Rj. at 11-12 (same); Tr. 112. In these

cases, it is implicitly assumed that the rate base is being financed by debt and equity capital in the same percentages as the percentages of debt and equity capital in the utility's capital structure. But there is normally no attempt to ensure that the dollar return is recovered. What is instead recovered is a return on the particular rate base being used.

In short, the Commission determined in Decision No. 68176 that Chaparral City's total capital as of December 31, 2003, was $20,265,036. Ex. A-R6 at 16. That capital is financing the utility's rate base, i.e., "the net or depreciated value of the tangible and intangible property ... of the enterprise." Phillips, *supra*, at 177 (Ex. S-R1). The value of that property for rate-making purposes may be greater than, or less than, the utility's total capital, as all of the parties have acknowledged. *E.g.*, Bourassa Rmd. Rb. at 18-22; Parcell Rmd. Sb. at 9; Johnson Rmd. Sb. at 7. When the WACC is applied to the rate base, it is assumed that the rate base is being financed by the same percentages of debt and equity that comprise the utility's capital structure. Thus, if the Commission-determined WACC were applied (erroneously) to Chaparral City's OCRB, which totaled $17,030,765, it is implicitly assumed that 58.8 percent of that rate base is financed by common equity and 41.2 percent of that rate base is financed by long-term debt. Likewise, if the Commission-determined WACC is applied to Chaparral City's FVRB of $20,340,298, it is implicitly assumed that 58.8 percent of that rate base is financed by common equity and 41.2 percent of that rate base is financed by long-term debt. Because the WACC is applied to the rate base, regardless of whether the resulting return produces the dollar cost of capital, there is no theoretical or practical reason why the WACC cannot be applied to a FVRB, given that under Arizona law, rates must be based on the fair value of the utility's property.

b. The Determination of the Cost of Equity and the Overall Rate of Return is Independent of the Rate Base.

The methods used to estimate the costs of the components of Chaparral City's capital structure are also independent of the rate base to which the WACC is applied. Chaparral City's capital structure has only two components: long-term debt and common equity. The cost of long-term debt is determined by the terms of the instruments evidencing the indebtedness, and has nothing to do with the type of rate base used or rate-making generally. The cost of debt is simply the interest that must be paid annually to the debt holders. Consequently, there was no disagreement during the initial phase of this case regarding Chaparral City's cost of long-term debt, which was 5.1 percent. Ex. A-R6 at 16.

"Although the cost of debt can be determined from fixed cost rates, the cost assigned to the equity component of the capital structure can only be estimated." *Id.* at 17. In the initial phase of this case, the Commission adopted Staff's 9.3 percent cost of equity estimate, and used that cost in computing the WACC. *Id.* at 25-26. Staff arrived at that equity cost by averaging the results produced by applying two finance models, the Discounted Cash Flow ("DCF") model and the Capital Asset Pricing Model ("CAPM"), to a sample group of six publicly traded water utilities. *Id.* at 21-22. *See also* Ex. A-R13 at 15-27 (discussing the methodology used by Staff). As Dr. Zepp explained, the DCF model and the CAPM are market-based finance models that rely on publicly available information on stocks traded on a national exchange. Thus, the results produced by those models are <u>independent</u> of the rate base to which they are applied.

> The particular versions of the models used by Staff provide an estimate of the return an investor expects to receive on dollars invested on shares of common stock of a group of substantially larger, publicly traded companies. Both models relied on market data available from Value Line and other public sources. The rate bases of the publicly traded companies do not factor into the models. Nor did Chaparral

> City's rate base factor into the models. Thus, the percentage equity cost adopted by the Commission in Decision No. 68716 is independent of whatever formula is used to determine the FVRB.

Zepp Rmd. Rb. at 12. *See also id.* at 10-12; Bourassa Rmd. Rb. at 16-18. Moreover, Staff itself has admitted, in response to a Company data request, that its cost of capital analysis did not include any information related to the type of rate base to which the cost of capital would be applied. Bourassa Rb. at 9, Ex. 1 (Staff response to data request 2-5).

Notably, other jurisdictions sometimes use different methods of estimating the cost of equity, including methods that are accounting-based rather than market-based, such as the Comparable Earnings method. The Comparable Earnings method estimates the cost of equity by using the return earned on book equity investment by firms of comparable risks. Roger A. Morin, *New Regulatory Finance* 381 (2006). In discussing the Comparable Earnings method, Dr. Morin explains:

> The Comparable Earnings approach is far more meaningful in the regulatory arena than in the sphere of competitive firms. Unlike industrial companies, the earnings requirement of utilities is determined by applying a percentage rate of return to the book value of a utility's investment, and not on the market value of that investment. Therefore, it stands to reason that a different percentage rate of return than the market cost of capital be applied when the investment base is stated in book value terms rather than market value terms. In a competitive market, investment decisions are taken on the basis of market prices, market values, and market cost of capital. ***If regulation's role was to duplicate the competitive result perfectly, then the market cost of capital would be applied to the current market value of rate base assets employed by utilities to provide service.*** But because the investment base for ratemaking purposes is expressed in book value terms, a rate of return on book value, as is the case with Comparable Earnings, is highly meaningful.

Id. at 394-95 (emphasis added).

In his text, Dr. Morin generally assumes that utility commissions employ a prudent investment/original cost approach, under which utility rates are established based on the

book value of the utility's investment in plant as opposed to using fair value. *See* Bourassa Rmd. Rj. at 9-10 (discussing Dr. Morin's "Invested Capital Approach" to computing a utility's operating income based on its book investment). Despite Arizona's rejection of the prudent investment approach, Dr. Morin's discussion of the Comparable Earnings approach is still instructive because, as the Supreme Court explained in *Duquesne Light*, 488 U.S. at 308, the fair value method mimics the operation of the competitive market.

This Commission has not used Comparable Earnings or other cost of equity estimation approaches that rely on accounting-based equity returns. Zepp Rmd. Rb. at 11-12. For example, in a recent decision setting rates for another Arizona water utility, the Commission stated:

> In estimating its cost of equity, Arizona Water relied on a risk premium analysis methodology used by the [California] PUC staff, which uses comparisons to actual or authorized returns on equity. This sort of "comparable earnings" analysis has long been discredited for several reasons, ... Market-based methods like the DCF model and the CAPM provide more reliable estimates of equity cost, because it is capital markets, not regulatory commissions that determine the cost of equity. Use of the risk premium analysis urged by the Company would circumvent the market forces that regulation attempts, as much as possible, to replicate. ... The risk premium analysis methodology erroneously assumes that accounting-based "actual" ROEs are equal to the cost of equity.

Arizona Water Co., Decision No. 68302, 37-38 (Nov. 14, 2005). These market-based models, which rely on the current market prices of publicly traded utility stocks, are ideally suited for use in determining a fair return on a market-based rate base.

In short, it is clearly appropriate to use a cost of equity estimate derived by means of the DCF model and the CAPM (which utilize market-based data that is independent of any rate base) to determine the return on the fair value of Chaparral City's property. In order to duplicate the competitive market, "the market cost of capital would be applied to the current market value of rate base assets employed by utilities to provide service."

Morin, *supra*, at 395 (emphasis added). That is what Chaparral City proposes in this case and, moreover, what the fair value standard requires.

V. THE RECOMMENDATIONS OF STAFF AND RUCO VIOLATE THE FAIR VALUE STANDARD AND CANNOT BE ADOPTED

Staff and RUCO propose alternative methodologies to determine a "fair value rate of return" that appear to be based on a combination of the reasoning behind the prudent investment method, under which the utility is compensated for all prudent investments at their actual cost, without regard to the current value of the utility's property, and the rationale of *Hope Natural Gas* "end result" test, arguing that the result of their respective recommendations are fair because they approximate the result produced by applying the cost of capital to the OCRB. Both parties assert that a dollar return to the Company that would exceed the result produced by applying the WACC to Chaparral City's book investment in plant would overcompensate Chaparral City and its investors. These arguments ignore the fair value standard, under which the appropriateness of the return must be judged in the context of the fair value of the utility's property, not the historic cost of its plant or the book amount invested. *See, e.g., City of Alton*, 165 N.E.2d at 519 ("It would be inconsistent to judge the overall return on the basis of fair value but judge the return accruing to common shareholders on the basis of a par value which is essentially original cost. The significant figure is the rate of return on common stock valued at fair value.").

A. Staff's Methodology for Computing the "Fair Value Rate of Return" Violates Arizona Law

Staff is recommending that the Commission compute a "fair value rate of return" (the "FVROR"), which is then applied to Chaparral City's FVRB. Staff's methodology appears to be based on *Duke Power, supra.* As in *Duke Power*, both of Staff's

alternatives involve the restatement of Chaparral City's capital structure into three components, long-term debt, common equity and the FV Increment, with the latter being equal to the difference between Chaparral City's FVRB and its OCRB. In *Duke Power*, the court explained that the utility is entitled under the fair value standard "to earn the same rate of return on this increment as it is entitled to earn on the retained earnings (surplus) which it has reinvested in its plant." 206 S.E.2d at 281. Staff, in contrast, applies a rate of return of 0.00 percent in its Alternative 1 and a return of 1.25 percent in its Alternative 2 to the FV Increment. Parcell Rmd. Dt. at 5 (Alternative 1), 9 (Alternative 2).[9]

The following is a comparison of the rates of return and return dollars produced by Staff's two alternatives and a prudent investment/original cost approach, under which the WACC is applied to Chaparral City's OCRB:

OCRB Approach

Item	Amount	Capitalization Percent	Cost (%)	FV (%)	**Cost in Dollars**
Debt	$7,016,675	41.2%	5.10%	2.10%	**$357,850**
Equity	$10,014,090	58.8%	9.30%	5.47%	**$931,310**
Total	$17,030,765	100.00%		7.57%	**$1,289,161**

Staff Alternative 1

Item	Amount	Capitalization Percent	Cost (%)	FV (%)	**Cost in Dollars**
Debt	$7,016,675	34.50%	5.10%	1.76%	**$357,850**
Equity	$10,014,090	49.23%	9.30%	4.58%	**$931,310**
FVRBI	$3,309,533	16.27%	**0.00%**	0.00%	**$0**
Total	$20,340,299	100.00%		6.34%	**$1,289,161**

[9] To put Staff's Alternative 2 and 1.25 percent "cost" in context, at the time Staff's cost of capital witness prepared his updated equity cost estimate, the yield on investment grade bonds was approximately 6.0 percent. Ex. A-23 at 2. The "risk free" rate used by Staff in its CAPM estimates, based on spot rates of intermediate Treasuries, was 4.0 percent. Ramirez Sb., Sch. AXR-8. There is no investment vehicle that would produce a return of only 1.25 percent. Tr. 137.

Staff Alternative 2

Item	Amount	Capitalization Percent	Cost (%)	FV (%)	**Cost in Dollars**
Debt	$7,016,675	34.50%	5.10%	1.76%	**$357,850**
Equity	$10,014,090	49.23%	9.30%	4.58%	**$931,310**
FVRBI	$3,309,533	16.27%	**1.25%**	0.00%	**$41,369**
Total	$20,340,299	100.00%		6.34%	**$1,330,530**

Zepp Rmd. Rb. at 18-21. Staff's actual recommendations vary slightly – a reduction in operating income of $4,763 under Alternative 1, and a reduction in operating income of $35,917 under Alternative 2. Smith Rmd. Dt., Attachment RCS-2, Sch. A, Attachment RCS-3, Sch. A. Staff has conceded that its Alternative 1 produces the same result as the "backing-in" method and that, as Dr. Zepp explained, any difference between the two methods is solely the result of rounding off some numbers before computing the operating income. Ex. A-R14; Zepp Rmd. Rj. at 5-7 and Ex. TMZ RJ-1. Thus, Staff's Alternative 1 is simply another back-door method of determining operating income that is equivalent to operating income produced by means of the method declared unlawful by the Court of Appeals.

Staff's witnesses attempt to justify this transparent methodology – which is another "superfluous mathematical exercise" intended to produce a rate of return equivalent to applying the WACC to the OCRB – on the basis of "financial theory." This "financial theory," however, appears to have been cribbed from Justice Brandeis' dissenting opinion in *Southwestern Bell.*

For example, Mr. Parcell explains that "[t]he fundamental, underlying premise on which original cost rate base regulation is based is the recognition that a utility should be granted an opportunity to earn its prudently-incurred costs, including capital costs." Parcell Rmd. Sb. at 7. He also explains that "[s]ince the increment between fair value

rate base and original cost rate base is not financed with investor-supplied funds, it is logical and appropriate, from a financial standpoint, to assume that this increment has no financing cost." Parcell Rmd. Dt. at 5. During the hearing, he testified:

> Q. [By Mr. James] So you are saying ... the approximately $3.3 million difference that you call in your testimony the fair value increment isn't supported by any investment?
>
> A. [By Mr. Parcell] That's correct. The difference between original cost rate base and fair value rate base is not supported by investment because it is not dollars that are provided by investors, the $17 million versus the $20 million.
>
> ...
>
> It is not appropriate for the company's investors to [earn a return on the FVRB increment] because investors did not put up the money to support that differential. Investors are entitled to an opportunity to earn a fair return on their invested dollars. But the dollars that they did not invest are not entitled to a return on. [*sic*] Otherwise, it becomes an adder to the equity owners.

Tr. at 348-49. Mr. Smith also argues that assigning a zero cost to the FV Increment is appropriate because "[t]he difference between the FVRB and OCRB has not been financed by any identifiable debt or equity capital on the utility's books." Smith Rmd. Sb. at 18.

This is the prudent investment/original cost approach in spades. Staff's approach actually ignores approximately $3.2 million of "identifiable" debt and equity on the Company's books by reducing the amount of debt from $8,363,309 to $7,016,676, and reducing the amount of equity from $11,901,727 to $10,014,090. *Compare* Ex. A-R6 at 16 *with* Parcell Rmd. Dt. at 5 (Alternative 1), 9 (Alternative 2). *See also* Tr. at 136-37. According to Mr. Parcell, it is appropriate to ignore the additional $3.2 million of invested capital shown on the Company's books because total capital exceeds the historic cost of the Company's plant as reflected by its OCRB. Tr. at 349-50. In other words,

Staff's recommendations "would fully compensate the Company's investors for their investment" (Parcell Rmd. Dt. at 9), as long as their investment does not exceed the original cost of the utility's plant.

The adoption of this method would again violate Arizona law. *See* Ex. A-R13 at 13 ("[T]he Commission appears to be advocating the setting of rates based on the investment made in the plant. However, rates cannot be based on investment, but must be based on the fair value of the utility's property."). *See also Ariz. Water*, 85 Ariz. at 203, 335 P.2d at 415 ("the amount of capital invested is immaterial. Under the law of fair value a utility is not entitled to a fair return on its investment; it is entitled to a fair return on the fair value of its properties devoted to public use, no more and no less.").

B. RUCO's "Inflation Adjustment" Violates the Fair Value Standard

RUCO's witness, Dr. Johnson, believes that the prudent investment/original cost method is the only method that produces an appropriate end result, and that if the current value of the utility's property is considered in setting rates, the rate of return must be adjusted to offset the effect of deviating from the prudent investment/original cost method. Again, this would violate Arizona law.

First, Dr. Johnson maintains that "[t]he fundamental premise of the return on rate base approach to ratemaking is to allow utilities with an opportunity to recover their actual costs, including their actual cost of capital, consistent with what occurs in competitive industries." Johnson Rmd. Sb. at 11. All of the cases discussed above, including *Bluefield Waterworks*, *McCardle*, *Los Angeles Gas*, *United Railways*, *Simms*, *Arizona Water*, *City Of Alton*, *Duke Power*, *Iowa-Illinois Gas* and *Union Electric*, involved the "return on rate base approach to ratemaking." In fact, one of the most commonly cited discussions of the requirements for setting a fair rate of return was set forth by the Supreme Court 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 general part of the country on investments in 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 returns 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. Notably, the Court also set aside the commission's rate base because it was based on original cost (*id.* at 689-92), and held that a return of 6 percent on fair value was "substantially too low," noting that recent returns were in the 7½ to 8 percent range (*id.* at 684-95). As these cases demonstrate, under the fair value standard, which is intended to mimic the operation of the competitive market, the rate of return is applied to the fair value of the utility's property, not to its OCRB or to the investment recorded on its books. *Duquesne Light*, 488 U.S. at 308.

Dr. Johnson nevertheless contends that "a return that fully compensates investors for the actual level of capital costs, without unduly burdening customers," is produced only "when the WACC is applied to an original cost rate base." Johnson Rmd. Sb. at 3 (emphasis added). Again, this is simply the prudent investment approach. As explained previously, when the WACC is applied to the OCRB, the utility's return is limited by its historic investment in plant. When the WACC is correctly applied to the FVRB, the utility is allowed to earn a fair return on the current value of its property. *See, e.g., Duke Power*, 206 S.E.2d at 281; *City of Alton*, 165 N.E.2d at 519. The fact that the return dollars may be greater (or less) than would be produced under the prudent investment approach is irrelevant: The fair value standard is intended to recognize increases (and decreases) in property values, and therefore the return dollars may be higher or lower

than the return dollars produced using original cost. Zepp Rmd. Rb. at 13-16. "As the company may not be protected in its actual investment, if the value of its property be plainly less, so the making of a just return for the use of property involves the recognition of its fair value if it be more than its cost." *Railroad Comm'n*, 289 S.W.2d at 566 (quoting *Minnesota Rate Cases*, 230 U.S. 352, 454 (1913)). *See also McCardle*, 272 U.S. at 410-11; *Bluefield Waterworks,* 262 U.S. at 690.

Dr. Johnson finally assumes that application of the WACC to the OCRB always yields an appropriate result, and therefore serves as the benchmark for rate-making in Arizona:

> The *end result* of applying the WACC (including an estimate of the cost of equity) to an OCRB is to provide an opportunity to earn a just and reasonable return. The *reasonableness of this end result* has been confirmed over multiple decades by thousands of carefully reasoned decisions by both regulators and appellate courts throughout the United States. ... [A]pplying the WACC to a consistently higher rate base valuation (fair value) will necessary achieve an unjust and *unreasonable result* – one that overcompensates stockholders, and unnecessarily burdens customers.

Johnson Rmd. Sb. at 5-6 (emphasis added). This, of course, is the *Hope Natural Gas* "end result" test, which, as discussed above, has been squarely rejected by the Arizona courts. *See Simms*, 80 Ariz. at 150-51, 294 P.2d at 381-82; Zepp Rmd. Rb. at 24-25.

To ensure that Arizona is like other jurisdictions that do not require the use of the fair value in setting rates, RUCO proposes to apply a 2.0 percent "adjustment factor" to the WACC, reducing the WACC from 7.6 percent to 5.6 percent. Johnson Rmd. Dt. at (unnumbered) 40. The application of 5.6 percent to Chaparral City's FVRB would produce an operating income of $1,132,278, which is $162,060 less than the operating income of $1,294,338 approved in Decision No. 68176. Bourassa Rmd. Rb. at 15. This would produce a return on Chaparral City's book equity of 5.9 percent – 340 basis points less than the 9.3 percent cost of equity authorized by the Commission and affirmed by the

Court of Appeals in this case. *Id.* at 22; Walker Rmd. Rb. at 19.

The primary justification for this approach is RUCO's contention that the application of the WACC to Chaparral City's FVRB "double counts" inflation. *See, e.g.*, Johnson Rmd. Sb. at 5 ("the equity cost component provides investors with compensation for inflation"); *id.* at 16 ("the thrust of my [direct] testimony was clearly focused on avoiding overcompensation for general inflation – inflation that is recognized by equity investors generally, because such compensation is already compensated for within the cost of equity capital"); Tr. 12-13. RUCO has ignored the fact that, as a consequence of being regulated, inflation adversely impacts utilities to a far greater extent than other businesses, and that one of the purposes of setting rates on the basis of fair value of a utility's property, as opposed to that property's historical cost, is to allow utilities a reasonable opportunity to earn a fair return on their property devoted to public service. *See* Bourassa Rmd. Rb. at 31-32. As one commentator has explained:

> [T]he utility must offer the equity investor earnings potential comparable to that of equivalent equity investment. The constant inflation of recent years has made equityholders anxious to secure protection from the depreciation of the dollar in relation to real things. Most equity investments represent pro rata ownership of real things and, thus, have a potential element of inflation protection lacking in debt instruments. Certain modes of utility regulation, however, undermine the very nature of equity investment by fixing, forever, its value for ratemaking purposes in terms of historical dollars. To the extent that methods of valuing utility property for rate purposes create an unfavorable distinction between utility equity investment and other potential equity investments, a utility's ability to attract capital, in competition with enterprises offering corresponding business risks, is severely limited. At the same time, utility ratepayers may receive the mistaken impression that they are affording generous returns to utilities. In fact, the positions of the equity owner of a utility enterprise is constantly deteriorating in comparison to that of equity owners of other enterprises.

Robert A. Webb, "Utility Rate Base Valuation in an Inflationary Economy," 28 *Baylor L. Rev.* 823, 825 (1976). If the intent of fair value rate-making is to mimic the competitive

market, as the Supreme Court stated in *Duquesne Light*, and as Dr. Johnson has conceded (Johnson Rmd. Sb. at 11), then the current value of the utility's property must be recognized in setting rates, as opposed to treating equity ownership in a public utility like a bond that is amortized through the accrual of depreciation.

In contrast to unregulated capital intensive industries, where there is freedom to increase prices so that real capital – the productive capacity of the company – is not diminished, regulated utilities must depend on regulatory commissions to recognize the adverse affects of inflation in setting rates. In *Iowa-Illinois Gas*, for example, the court held that 70 percent weight should be given to reproduction costs and 30 percent to original cost in setting rates in order to offset the impact of inflation on the utility. The court explained:

> The remaining life undepreciated must be given a [current] value. If this were not so, the result would be to practically give the consumers all the benefits of ownership with none of its disadvantages. We are sure that is not the intent of the law. Ostensible gains and losses resulting from price fluctuations should go with ownership. It is pointed out by the able trial court, adherence to original cost alone when the property is in fact privately owned, neither gives the stockholder a realistic income in high times nor the ratepayer a realistic rate in low times. By establishing here and now fair *present* value, we more nearly keep the income and the rates stable in terms of realities. In the future when economic conditions justify a reappraisal, it should be made, upward or downward as the case may be.

85 N.W.2d at 47. Consequently, during periods of inflation, "considerable weight – more weight than the trial court will allow – must be given to reproduction costs in arriving at an adjudged fair value of the company's property now used in rendering service to the firm customers of defendant city." *Id. See also State ex rel. Missouri Water Co. v. Public Service Comm'n*, 308 S.W.2d 704, 719-20 (Mo. 1957) (rate-making agencies must give consideration to the impact of inflation on utilities, following *Iowa-Illinois Gas*).

As previously discussed, the impact of inflation on water utilities is particularly

acute because water utilities are capital intensive and utilize assets with relatively long useful lives. Thus, "water utilities are 'different' because (1) they are comparatively small, (2) have not been able to match technological strides with other utilities, (3) have not improved their overall load factors comparably with other utilities and (4) continue to incur substantial increases in costs per customer." Priest, *supra*, at 757. "For the utility – and the water company is the prime example which cannot successfully combat inflation through technological advances, there is no alternative save increased charges. If attrition which results from inflation and its inexorable persistence are proved ..., regulatory agencies seem obligated to deal with it either by increasing rates of return or by giving consideration to fair value when rate bases are determined." *Id.* at 761 (emphasis added).

RUCO has conveniently ignored the adverse effects of inflation in its testimony, and instead proposes that Chaparral City's rate of return be slashed. But inflation is the loss of purchasing power, and it affects all aspects of the utility's business, not simply its rate of return. Mr. Bourassa, for example, compared the impact of inflation on Chaparral City's operating expenses with its impact on Chaparral City's FVRB and operating income. Bourassa Rmd. Rb. at 42-43. Using an assumed inflation factor of 4 percent and the operating expenses and rate bases determined in Decision No. 68176, operating expenses would increase by $160,120 during the one-year period following the test year. *Id.* In contrast, the increase in FVRB and resulting increase in operating income over that same period would be only $30,917. *Id.* at 43. In other words, for every additional dollar of operating income, the Company would pay an additional five dollars of operating expenses due to inflation. Thus, inflation erodes the utility's earnings, even if fair value is used in setting rates. Dr. Johnson ignored this testimony in his surrebuttal.

The impact of inflation is exacerbated by the Commission's refusal to allow Arizona water utilities to obtain adjustment mechanisms to recover increases in key operating expenses outside a general rate case. *See Arizona Water Co.*, Decision No.

68302 43-46 (Nov. 14, 2005) (eliminating purchased water and power adjustment mechanisms); *Arizona Water Co.*, Decision No. 66849 13-14 (March 19, 2004) (same). In this case, Chaparral City sought authority to implement automatic adjustment mechanisms designed to pass on increases (and decreases) in water purchased from the Central Arizona Project and power purchased from Salt River Project and Arizona Public Service Company. Ex. A-R6 at 31-34. During the test year, purchased water and power expenses totaled more than $1.3 million, and constituted 21 percent of total operating expenses and more than 100 percent of the operating income authorized in Decision No. 68176. Bourassa Rj., Sch. C-1. The Company's request was rejected, however. Ex. A-R6 at 33-34. Other jurisdictions, in contrast, allow utilities to implement adjustments of this nature without having to complete a general rate case. Zepp Dt. at 18-20; Bourassa Dt. at 20-22.

Dr. Johnson also argues that the Commission should authorize a low return on fair value in this case because the Company will recover higher earnings in future years as its FVRB increases. *See* Johnson Rmd. Dt. at 29, 31-32. For example, he has claimed that "[t]he return on investment provided in a fair value jurisdiction might be somewhat lower in the initial years, and higher in the later years." *Id.* at 31. As the Company's witnesses have demonstrated, however, Dr. Johnson's contention is specious for a number of reasons, including the speculative nature of his assumed inflation rate, his confusion about how the RCND rate base is determined, and his failure to consider the impact of depreciation, which erodes the FVRB. Zepp Rmd. Rb. at 30-39; Bourassa Rmd. Rb. at 43-47; Walker Rmd. Rb. at 10-19.

As a preliminary matter, Dr. Johnson does not appear to understand the methodology used to derive the RCND rate base, which estimates the current cost of reconstructing the Company's water system, not inflation. Mr. Bourassa derived the RCND rate base by means of an RCN study, which was based on the Handy-Whitman

account-specific indexes for water utilities in the Plateau Region. Bourassa Dt at 7-8; Walker Rmd. Rb. at 3-4 The RCN study was reviewed by Staff, and Staff agreed with the Company's values. Scott Dt., Exhibit MSJ at 6. Next, accumulated depreciation, advances in aid of construction, and contributions in aid of construction were trended and restated, and deducted from the RCN values to obtain the RCND rate base. Bourassa Dt. at 8. The Company did not trend or otherwise determine a current value for its real property, franchises, organizational costs and other intangibles. *Id.* Consequently, the RCND value is understated, as Mr. Walker – a valuation expert – testified. Walker Rmd. Rb. at 5. Mr. Walker also explained during the hearing that the Handy-Whitman indexes do not measure inflation, nor are they based on general inflation in the economy, but are affected by many variables. Tr. at 43-45, 50-51. In fact, the indexes may be negative; the Handy-Whitman average index for Total Gas Plant declined by 4.4 percent during 2006, while other general measures of inflation, such as the CPI, were increasing. Zepp. Rmd. Rb. at 17, 30.

Dr. Johnson also provided inconsistent testimony regarding his assumed rate of inflation. To derive the FVRB, the Commission averaged OCRB and RCND. Ex. A-R6 at 9. Thus, any purported "inflation" found in the estimate of current reconstruction costs in Mr. Bourassa's RCN study is offset by averaging the RCND with the OCRB, which is based on historic cost and contains no "inflation." If Dr. Johnson is assuming that Chaparral City's FVRB is increasing by 2 percent each year, then the RCND must be increasing by twice that rate – by 4 percent per year. Zepp Rmd. Rb. at 37-38. Yet Dr. Johnson also testified that the appropriate inflation rate is 2 percent per year. Johnson Rmd. Dt. at 35-40. This ambiguity has never been addressed by RUCO.

By rule, a utility required to trend and restate accumulated depreciation in developing its RCND rate base so that the ratio of accumulated depreciation to RCN plant costs is equal to the ratio between accumulated depreciation and the plant at original

cost. *See* A.A.C. R14-2-103(A)(3)(h) & (n) (defining OCRB and RCND). As stated, depreciation was trended and restated in this case, as were advances in aid of construction and contributions in aid of construction. Consequently, the Company's FVRB was only 19 percent greater than its OCRB. Walker Rmd. Rb. at 5. As Mr. Walker explained, other jurisdictions use varying test periods and approaches to determine utilities' rate bases, which produce differences far greater than 19 percent. *Id.* at 12-13. He also pointed out that authorized equity returns for water utilities in other jurisdictions varied considerably, with the 9.3 percent equity return authorized for Chaparral City falling in the bottom 15 percent of equity returns authorized from 2002 through mid-2006, according to a National Association of Water Companies study. *Id.* at 14, Sch. 2.

Moreover, as Dr. Zepp and Mr. Bourassa demonstrated, depreciation will continue to offset future increases in the Company's FVRB. The Company's average depreciation rate is 3.4 percent. Zepp Rmd. Rb. at 36; Bourassa Rmd. Rb. at 41. While it is uncertain whether Dr. Johnson expects the value of Chaparral City's RCND rate base to increase by an average of 2 percent per year, as he testified, or by 4 percent per year, which is the growth rate implied by his proposed adjustment to the 7.6 WACC, in either case, over time, the net present value of the Company's operating income will never catch up, even if it is assumed that Chaparral City files for rate increases every year, which is obviously unrealistic. Zepp Rmd. Rb. at 35-36; Bourassa Rmd. Rb. at 40-41.

In sum, RUCO's ham-fisted adjustment, which would reduce the Company's overall return on rate base by over 26 percent and the effective return on its common equity by over 35 percent to a cost that is equivalent to a debt instrument, is simplistic and speculative. Dr. Johnson has presented only vague generalities, and has ignored the specific facts and arguments presented by the Company's witnesses. Water utilities and their investors are harmed by inflation to a much greater extent than they might benefit through increases in the value of the utility's rate base. Further, it is unknown whether

and to what extent the Company's FVRB and its actual realized return on equity (which RUCO also ignores) are affected by inflation. Bourassa Rmd. Rb. at 45-47. The bottom line is that RUCO's recommendation, like Staff's, would undermine the fair value standard by imposing an arbitrary rate of return that is less than investment grade bond on any utility that dares to ask the Commission to follow the Arizona Constitution and use its FVRB to set rates. This would violate Arizona law.

VI. THE COMPANY SHOULD BE ALLOWED TO RECOVER A REASONABLE AMOUNT OF RATE CASE EXPENSE

The Company seeks to recover rate case expense equal to $100,000 for all proceedings subsequent to Decision No. 68176, including the appeal and this remand which resulted directly from the appeal. Ex. A-R3; Bourassa Rmd. Rb. at 9. This amount was estimated to be no more than one-half of the amount of additional rate case expense already incurred and to be incurred since Decision No. 68176 was issued in September 2005. Bourassa Rmd. Rb, at 9. This remains the Company's position today, despite the protracted proceedings and complexity of the issues presented by the other parties. The Company has always been willing to bear a portion of its costs resulting from the Commission's violation of the Arizona Constitution.

RUCO took no position on recovery of rate case expense in its prefiled testimony, and its witness did not know RUCO's position on this issue. Tr. at 155. Staff opposes recovery of any rate case expense in this remand proceeding. Staff's opposition to recovery of additional rate case expense is two-fold. First, Staff opposes recovery of additional rate case expense because the Company "met with only limited success" on appeal. Smith Rmd. Dt. at 19-20. Second, Staff asserts that the Commission already awarded the Company a "normalized" level of rate case in Decision No. 68176. Smith Rmd. Sb. at 28-30. Neither of these arguments warrants forcing the Company to absorb

its entire rate case expense for the proceedings.[10]

According to Mr. Smith, the Company met with only limited success on appeal because the court did not conclude that the Commission is bound to apply the WACC to the FVRB. Smith Rmd. Dt. At 19. This is the same red-herring first asserted by the Commission in the appeal. *See* Ex. A-R13 at 9, ¶ 10. The court rejected the Commission's attempt to "recast" the Company's argument, and the Commission should now reject Staff's attempt to do so. The Company has never asserted that the Commission is "bound," "required" or "obligated" to apply the WACC to the FVRB. *E.g.*, Tr. at 59-61; Bourassa Rb, Ex. A-R4, at 10-11. But the Company does assert that the Court of Appeals held that the Commission violated the Arizona Constitution and that this remand proceeding is a direct consequence of that holding. Staff admits this to be true. Tr. at 286-87. The Company is certainly entitled to recover a reasonable amount of rate case expense incurred in proceedings mandated as a result of the Commission's unlawful action.

Staff is also wrong in asserting that Commission already awarded the Company a sufficient level of rate case in Decision No. 68176. Smith Rmd. Sb. at 28-30. Mr. Smith admitted that the Commission's award of rate case expense in Decision No. 68176 could not have accounted for rate case expenses to be incurred successfully challenging the validity of the decision. Tr. at 298. The recovery of rate case expense sought herein is clearly in addition to the so-called "normalized" level of rate case expense determined by the Commission to cover the proceedings leading up to Decision No. 68176. Bourassa Rmd. Rb. at 11-13. The only way for the Company to recover a portion of the rate case

[10] Staff also raised A.R.S. § 12-348, which precludes an award of fees by the court in an appeal from a rate case. Staff later admitted, however, that this statute is not applicable to this proceeding as it does not prevent the ACC from awarding rate case expense. *See* Ex. A-R15.

expense it has incurred since the decision was issued in September 2005 is for the recovery of additional rate case expense to be approved in this proceeding.

In sum, the Company is requesting a very reasonable level of rate case expense considering the nature, timing and complexity of the subject proceedings. RUCO has remained silent. Staff's recommendation is illogical, arbitrary and punitive in light of the Court of Appeals' decision and mandate. The Company should be authorized to recover $100,000 in rate case expense for this remand proceeding.

VII. CONCLUSION

For the foregoing reasons, Chaparral City requests that its proposed rate adjustments be approved and that it be allowed to implement its proposed surcharge to recover the revenue deficiency that resulted from the Commission's prior failure to set rates based on the fair value, together with additional rate case expense incurred from October 1, 2005 through the conclusion of this remand proceeding in the amount of $100,000.

RESPECTFULLY SUBMITTED this 5th day of March, 2008.

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Water Company

ORIGINAL and 13 copies of the foregoing
delivered for filing this 5th day of March, 2008, to:

Docket Control
Arizona Corporation Commission
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Phoenix, AZ 85007

COPY hand-delivered this 5th day of March, 2008, to:

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By: M House

Chaparral City Water Company
Test Year Ended December 31, 2003
Computation Increase in Gross Revenue and Revenue Deficiency
Requirements As Adjusted

Exhibit
Final Remand
Schedule A-1
Page 1

Line No.		Per Decision 68176	Remand	
1	Fair Value Rate Base	$ 20,340,298	$ 20,340,298	
2				
3	Adjusted Operating Income	614,247	614,247	
4				
5	Current Rate of Return	3.02%	3.02%	
6				
7	Required Operating Income	$ 1,294,338	$ 1,545,863	
8				
9	Required Rate of Return on Fair Value Rate Base	6.36%	7.60%	
10				
11	Operating Income Deficiency	$ 680,091	$ 931,616	
12				
13	Gross Revenue Conversion Factor	1.6286	1.6286	
14				
15	Increase in Gross Revenue			
16	Requirement	$ 1,107,596	$ 1,517,262	
17				
18	**Computation of Amount to be Recovered**			
19	Required Increase	$ 1,517,262		
20	Increase per Decision 68176 (Sept. 30, 2005)	1,107,596		
21	Annual Deficiency Before Interest	$ 409,666		
22				
23	Number of Years[1]	2.67		
24	Annual Interest Rate[2]	7.60%		
25	First Year Deficiency	$ 409,666		
26	First Year Deficiency Money Factor	1.2157		
27	Total First Year Deficiency Interest October 2005 Through May 2008.		$ 498,031	
28	Second Year Deficiency	$ 409,666		
29	Second Year Deficiecny Money Factor	1.1298		
30	Total Second Year Deficiency Interest October 2006 Through May 2008.		$ 462,841	
31				
32	Average Balance of Deficiency During Recovery Period	$ 480,436		
33	Annual Interest Rate	7.60%		
34	Interest during recovery period		$ 36,513	
35	Subtotal			$ 997,384
36				
37	Additional Rate Case Expense			100,000
38	Total Amount to be Recovered Through Surcharge			$ 1,097,384
39				

40 [1] Assumes recovery period starts May 2008.
41 [2] Carrying cost of money assmed to be weighted cost of capital.
42 [3] Assumes recovery period starts May 2008 and proceeds for a period of 12 months or when full recovery is made.

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Chaparral City Water Company
Test Year Ended December 31, 2003
Computation of Surcharge for Recovery of Revenue Deficiency and Rate Impact

Exhibit
Final Remand
Schedule A-1
Page 2

Line No.				
1	**Commodity Surcharge**			
2				
3	Total Amount to be Recovered (from A-1 Page 1)	$	1,097,384	[1]
4				
5	Gallons Sold During 2007 (in 1,000's)		1,960,436	[2]
6				
7	**Commodity Rate per 1,000 gallons**	**$**	**0.560**	[3] = [1] divided by [2]
8				
9	Computation of Impact on Average 3/4 Inch Metered Residential Customer			
10				
11	Average Use for 3/4 Inch Metered Customer		9,187	[4]
12				
13	Surcharge at Average Use for 3/4 Inch Customer	$	5.14	[5] = [4] times [3] divied by 1,000
14				
15	Computation of Impact on Average 3/4 Inch Metered Residential Customer			
16				
17	Average Bill at Rates Approved In Decision 68176	$	34.33	[6]
18				
19	Average Bill at Revised Rates per Remand (excluding surcharge)	$	36.28	[7]
20				
21	Increase in Average 3/4 Inch Metered Customer Bill at Remand Rates	$	1.95	[8] = [7] minus [6]
22				
23	Percent increase in Average 3/4 Inch Metered Customer Bill at Remand Rates		5.69%	[9] = [8] divided by [6] times 100
24				
25	Average Bill at Revised Rates per Remand (including surcharge)	$	41.42	[10] = [7] plus [8]
26				
27	Increase in Average 3/4 Inch Metered Customer Bill (including surcharge)	$	7.10	[11] = [10] minus [6]
28				
29	Percent increase in 3/4 Inch Metered Customer Bill at Remand Rates		20.67%	[12] = [11] divided by [6] times 100
30				
31	SUPPORTING SHCEDULES			
32	Final Remand A-1 page 1			
33	Final Remand Schedule H-1			
34	Final Remand Schedule H-2			
35	Final Remand Schedule H-3			
36	Final Remand Schedule H-4			

Chaparral City Water Company - Remand
Test Year Ended December 31, 2003
Revenue Summary
With Annualized Revenues to Year End Number of Customers

Exhibit
Final Remand Schedule H-1
Page 1
Witness: Bourassa

Line No.	Meter Size	Class	Zone	Decision 68176 Revenues	Remand Revenues	Dollar Change	Percent Change	Percent of Present Water Revenues	Percent of Remand Water Revenues
1	3/4 Inch	Residential	Zone 1	$ 2,040,509	$ 2,156,703	$ 116,194	5.69%	29.32%	29.32%
2	3/4 Inch	Residential	Zone 2	932,860	985,793	52,933	5.67%	13.40%	13.40%
3	3/4 Inch	Residential	Zone 3	609,258	643,796	34,538	5.67%	8.75%	8.75%
4	1 Inch	Residential	Zone 1	438,162	462,977	24,815	5.66%	6.30%	6.29%
5	1 Inch	Residential	Zone 2	825,588	872,257	46,668	5.65%	11.86%	11.86%
6	1 Inch	Residential	Zone 3	464,253	490,527	26,273	5.66%	6.67%	6.67%
7	1.5 Inch	Residential	Zone 1	14,449	15,263	814	5.63%	0.21%	0.21%
8	1.5 Inch	Residential	Zone 2	11,228	11,862	633	5.64%	0.16%	0.16%
9	1.5 Inch	Residential	Zone 3	3,435	3,628	193	5.61%	0.05%	0.05%
10	2 Inch	Residential	Zone 1	80,518	85,046	4,528	5.62%	1.16%	1.16%
11	2 Inch	Residential	Zone 2	34,185	36,106	1,921	5.62%	0.49%	0.49%
12	2 Inch	Residential	Zone 3	896	948	52	5.75%	0.01%	0.01%
13	3 Inch	Residential	Zone 1	7,357	7,770	413	5.61%	0.11%	0.11%
14	3 Inch	Residential	Zone 2	5,830	6,161	331	5.67%	0.08%	0.08%
15	3 Inch	Residential	Zone 3					0.00%	0.00%
16		Subtotal		$ 5,468,529	$ 5,778,835	$ 310,306	5.67%	78.57%	78.56%
17									
18	3/4 Inch	Commercial	Zone 1	$ 61,358	$ 64,813	$ 3,455	5.63%	0.88%	0.88%
19	3/4 Inch	Commercial	Zone 2	8,325	8,793	469	5.63%	0.12%	0.12%
20	3/4 Inch	Commercial	Zone 3			-		0.00%	0.00%
21	1 Inch	Commercial	Zone 1	61,018	64,462	3,444	5.65%	0.88%	0.88%
22	1 Inch	Commercial	Zone 2	7,954	8,403	449	5.64%	0.11%	0.11%
23	1 Inch	Commercial	Zone 3	1,692	1,788	96	5.68%	0.02%	0.02%
24	1.5 Inch	Commercial	Zone 1	79,326	83,796	4,469	5.63%	1.14%	1.14%
25	1.5 Inch	Commercial	Zone 2	42,671	45,067	2,396	5.61%	0.61%	0.61%
26	1.5 Inch	Commercial	Zone 3			-		0.00%	0.00%
27	2 Inch	Commercial	Zone 1	161,456	170,539	9,083	5.63%	2.32%	2.32%
28	2 Inch	Commercial	Zone 2	43,561	46,015	2,454	5.63%	0.63%	0.63%
29	2 Inch	Commercial	Zone 3	10,083	10,650	567	5.62%	0.14%	0.14%
30	3 Inch	Commercial	Zone 1	12,195	12,886	691	5.67%	0.18%	0.18%
31	3 Inch	Commercial	Zone 2	4,098	4,330	232	5.65%	0.06%	0.06%
32	3 Inch	Commercial	Zone 3			-		0.00%	0.00%
33	4 Inch	Commercial	Zone 1	7,249	7,658	409	5.64%	0.10%	0.10%
34	4 Inch	Commercial	Zone 3	13,108	13,843	736	5.61%	0.19%	0.19%
35		Subtotal		$ 514,094	$ 543,043	$ 28,948	5.63%	7.39%	7.38%
36									
37	1 Inch	Industrial	Zone 3	$ 2,900	$ 3,063	$ 163	5.62%	0.04%	0.04%
38									
39	3/4 Inch	Irrigation	Zone 1	$ 77,141	$ 81,584	$ 4,442	5.76%	1.11%	1.11%
40	3/4 Inch	Irrigation	Zone 3	59	62	3	5.74%	0.00%	0.00%
41	1 Inch	Irrigation	Zone 1	177,982	188,251	10,269	5.77%	2.56%	2.56%
42	1 Inch	Irrigation	Zone 2	45	48	3	5.77%	0.00%	0.00%
43	1 Inch	Irrigation	Zone 3	208	220	12	5.77%	0.00%	0.00%
44	1.5 Inch	Irrigation	Zone 1	115,020	121,648	6,629	5.76%	1.65%	1.65%
45	2 Inch	Irrigation	Zone 1	153,803	162,669	8,866	5.76%	2.21%	2.21%
46	3 Inch	FHMeterIrr	Zone 3	1,644	1,739	95	5.76%	0.02%	0.02%
47	4 Inch	Irrigation		77,265	81,720	4,456	5.77%	1.11%	1.11%
48	6 Inch	Irrigation		248,148	262,461	14,313	5.77%	3.57%	3.57%
49		Subtotal		$ 851,314	$ 900,402	$ 49,088	5.77%	12.23%	12.24%
50									
51	3/4 Inch	Construction	No Zone	$ 32,660	$ 34,544	$ 1,884	5.77%	0.47%	0.47%
51	3/4 Inch	Construction	Zone 1	179	189	$ 10	5.74%	0.00%	0.00%
52	1 Inch	Construction	Zone 1	829	877	48	5.77%	0.01%	0.01%
53	3 Inch	Construction	Zone 1	400	423	23	5.76%	0.01%	0.01%
54	1 Inch	Construction	Zone 2	502	531	29	5.77%	0.01%	0.01%
55		Subtotal		$ 34,570	$ 36,564	$ 1,994	5.77%	0.50%	0.50%

Chaparral City Water Company - Remand
Test Year Ended December 31, 2003
Revenue Summary
With Annualized Revenues to Year End Number of Customers

Exhibit
Final Remand Schedule H-1
Page 2
Witness: Bourassa

Line No.	Meter Size	Class	Zone	Decision 68176 Revenues	Remand Revenues	Dollar Change	Percent Change	Percent of Present Water Revenues	Percent of Remand Water Revenues
1	N/A	Fire Hydrant Meter	Zone 1	$ 32,208	$ 34,029	$ 1,821	5.65%	0.46%	0.46%
2	N/A	Fire Hydrant Meter	Zone 2	6,673	7,052	379	5.68%	0.10%	0.10%
3	N/A	Fire Hydrant Meter	Zone 3	44,354	46,878	2,524	5.69%	0.64%	0.64%
4		Subtotal		$ 83,236	$ 87,960	$ 4,724	5.68%	1.20%	1.20%
5									
6	N/A	Fire Sprinkler	Zone 1	4,823	4,823	$ 0	0.00%	0.07%	0.07%
7	N/A	Fire Sprinkler	Zone 2	240	240	-	0.00%	0.00%	0.00%
8	N/A	Fire Sprinkler	Zone 3	120	120	-	0.00%	0.00%	0.00%
9		Subtotal		$ 5,183	$ 5,183	$ 0	0.00%	0.07%	0.07%
10									
11	1 Inch	Bypass Meter	Zone 1	$ 272	$ 288	$ 16	5.77%	0.00%	0.00%
12	1.5 Inch	Bypass Meter	Zone 1	272	288	16	5.77%	0.00%	0.00%
13		Subtotal		$ 545	$ 576	$ 31	5.77%	0.01%	0.01%
14									
15		Subtotal		$ 6,960,371	$ 7,355,626	$ 395,255	5.68%	100.00%	100.00%
16									
17					Revenue Annualization				
18				Decision				Additional	Additional Gallons to
19	Meter			68176	Remand	Dollar	Percent	Bills to be	be Pumped
20	Size	Class	Zone	Revenues	Revenues	Change	Change	Issued	(In 1,000's)
21	3/4 Inch	Residential	Zone 1	$ 19,332	$ 20,433	1,100	5.69%	1,539	11,329
22	3/4 Inch	Residential	Zone 2	5,371	5,676	305	5.68%	142	1,466
23	3/4 Inch	Residential	Zone 3	1,472	1,556	84	5.67%	35	411
24	1 Inch	Residential	Zone 1	20,433	21,590	1,157	5.66%	450	4,055
25	1 Inch	Residential	Zone 2	10,731	11,338	607	5.65%	216	2,313
26	1 Inch	Residential	Zone 3	29,054	30,699	1,645	5.66%	628	5,872
27	1.5 Inch	Residential	Zone 1	204	216	12	5.64%	2	45
28	1.5 Inch	Residential	Zone 2	-	-	-		-	-
29	1.5 Inch	Residential	Zone 3	-	-	-		-	-
30	2 Inch	Residential	Zone 1	1,061	1,121	60	5.62%	5	276
31	2 Inch	Residential	Zone 2	-	-	-		-	-
32	2 Inch	Residential	Zone 3	-	-	-		-	-
33	3 Inch	Residential	Zone 1	(490)	(517)	(28)	5.61%	(1)	(137)
34	3 Inch	Residential	Zone 2	-	-	-		-	-
35	3 Inch	Residential	Zone 3			-			
36		Subtotal		87,169	92,110	4,941	5.67%		
37									
38	3/4 Inch	Commercial	Zone 1	52	55	3	5.62%	1	14
39	3/4 Inch	Commercial	Zone 2	49	52	3	5.62%	1	13
40	3/4 Inch	Commercial	Zone 3			-			
41	1 Inch	Commercial	Zone 1	691	730	39	5.65%	13	157
42	1 Inch	Commercial	Zone 2	(270)	(286)	(15)	5.62%	(3)	(77)
43	1 Inch	Commercial	Zone 3	304	322	17	5.70%	9	40
44	1.5 Inch	Commercial	Zone 1	1,709	1,805	96	5.63%	14	425
45	1.5 Inch	Commercial	Zone 2	-	-	-		-	-
46	1.5 Inch	Commercial	Zone 3			-			
47	2 Inch	Commercial	Zone 1	2,002	2,114	112	5.61%	8	570
48	2 Inch	Commercial	Zone 2	-	-	-		-	-
49	2 Inch	Commercial	Zone 3	-	-	-		-	-
50	3 Inch	Commercial	Zone 1	193	204	11	5.71%	1	19
51	3 Inch	Commercial	Zone 2	-	-	-		-	-
52	3 Inch	Commercial	Zone 3	-		-			
53	4 Inch	Commercial	Zone 1	-	-	-		-	-
54	4 Inch	Commercial	Zone 3	-	-	-		-	-
55		Subtotal		4,730	4,996	266	5.63%		

Chaparral City Water Company - Remand
Test Year Ended December 31, 2003
Revenue Summary
With Annualized Revenues to Year End Number of Customers

Exhibit
Final Remand Schedule H-1
Page 3
Witness: Bourassa

Line No.	Meter Size	Class	Zone	Revenue Annualization Decision 68176 Revenues	Remand Revenues	Dollar Change	Percent Change	Additional Bills to be Issued	Additional Gallons to be Pumped (In 1,000's)
1									
2	1 Inch	Industrial	Zone 3	-	-	-		-	-
3				-					
4	3/4 Inch	Irrigation	Zone 1	1,656	1,751	95	5.76%	44	678
5	3/4 Inch	Irrigation	Zone 3	(59)	(62)	(3)	5.74%	(4)	(3)
6	1 Inch	Irrigation	Zone 1	(415)	(439)	(24)	5.77%	(4)	(208)
7	1 Inch	Irrigation	Zone 2	227	240	13	5.77%	10	-
8	1 Inch	Irrigation	Zone 3	(208)	(220)	(12)	5.77%	(6)	(46)
9	1.5 Inch	Irrigation	Zone 1	3,592	3,799	207	5.76%	24	1,604
10	2 Inch	Irrigation	Zone 1	3,268	3,456	188	5.76%	14	1,440
11	3 Inch	FHMeterIrr	Zone 3	2,069	2,188	119	5.75%	14	16
11	4 Inch	Irrigation	0	-	-	-		-	-
12	6 Inch	Irrigation	0	59,942	63,400	3,457	5.77%	10	35,514
13		Subtotal		70,073	74,114	4,041	5.77%		
14									
15	3/4 Inch	Construction	No Zone	16,728	17,693	965	5.77%	19	10,558
16	3/4 Inch	Construction	Zone 1	-	-	-		-	-
17	1 Inch	Construction	Zone 1	(99)	(105)	(6)	5.77%	(2)	(35)
18	3 Inch	Construction	Zone 1	(400)	(423)	(23)	5.76%	-1	(163)
19	1 Inch	Construction	Zone 2	-	-				
19		Subtotal		16,229	17,165	936	5.77%		
20									
21	N/A	Fire Hydrant Meter	Zone 1	7,736	8,173	436	5.64%	22	1,795
22	N/A	Fire Hydrant Meter	Zone 2	(3,933)	(4,156)	(223)	5.68%	(17)	(576)
23	N/A	Fire Hydrant Meter	Zone 3	7,853	8,298	446	5.67%	32	1,262
24		Subtotal		11,657	12,315	658	5.65%		
25									
26	N/A	Fire Sprinkler	Zone 1	100	100	-	0.00%	10	-
27	N/A	Fire Sprinkler	Zone 2	-	-	-		-	-
28	N/A	Fire Sprinkler	Zone 3	-	-	-		-	-
29		Subtotal		100	100	-	0.00%		
30	Totals			189,957	200,800	21,686	11.42%	3,225	78,629
31	Total Revenues with Revenue Annualization			7,150,328	7,556,426	406,098	5.68%	3,225	78,629
32	Miscellaneous Revenues			102,269	102,269	-	0.00%		
33	Reconciling Difference to Decision			57,843	57,843	-	0.00%		
34	Total Revenues			$ 7,310,440	$ 7,716,538	$ 406,098	5.56%		

Chaparral City Water Company - Remand
Test Year Ended December 31, 2003
Analysis of Revenue by Detailed Class

Exhibit
Final Remand Schedule H-2
Page 1
Witness: Bourassa

Line No.	Meter Size, Class, and Zone			(a) Average Number of Customers at 12/31/2003	Average Consumption	Revenues Present Rates	Revenues Reb. Remand Rates	Remand Increase Dollar Amount	Remand Increase Percent Amount
1	3/4 Inch	Residential	Zone 1	5,274	7,656	$ 30.37	$ 32.10	1.73	5.70%
2	3/4 Inch	Residential	Zone 2	1,820	11,437	41.15	43.48	2.33	5.67%
3	3/4 Inch	Residential	Zone 3	1,084	13,000	45.88	48.48	2.60	5.67%
4	1 Inch	Residential	Zone 1	770	9,544	46.75	49.40	2.65	5.66%
5	1 Inch	Residential	Zone 2	1,294	11,752	52.32	55.27	2.96	5.65%
6	1 Inch	Residential	Zone 3	789	10,215	48.44	51.18	2.74	5.66%
7	1.5 Inch	Residential	Zone 1	10	29,839	120.59	127.38	6.79	5.63%
8	1.5 Inch	Residential	Zone 2	9	23,157	103.76	109.61	5.85	5.64%
9	1.5 Inch	Residential	Zone 3	1	89,000	284.47	300.41	15.94	5.60%
10	2 Inch	Residential	Zone 1	24	78,060	269.71	284.84	15.13	5.61%
11	2 Inch	Residential	Zone 2	12	64,458	235.44	248.66	13.22	5.62%
12	2 Inch	Residential	Zone 3	1	667	74.68	78.97	4.29	5.75%
13	3 Inch	Residential	Zone 1	1	162,615	555.79	586.96	31.17	5.61%
14	3 Inch	Residential	Zone 2	2	38,458	242.92	256.70	13.78	5.67%
15	3 Inch	Residential	Zone 3					-	0.00%
16		Subtotal		11,090					
17									
18	3/4 Inch	Commercial	Zone 1	101	13,037	48.51	51.24	2.73	5.62%
19	3/4 Inch	Commercial	Zone 2	13	14,103	51.74	54.65	2.91	5.62%
20	3/4 Inch	Commercial	Zone 3					-	0.00%
21	1 Inch	Commercial	Zone 1	79	15,468	61.68	65.15	3.48	5.63%
22	1 Inch	Commercial	Zone 2	8	20,384	74.07	78.23	4.16	5.62%
23	1 Inch	Commercial	Zone 3	3	7,795	42.34	44.74	2.40	5.67%
24	1.5 Inch	Commercial	Zone 1	47	35,206	134.12	141.66	7.54	5.62%
25	1.5 Inch	Commercial	Zone 2	9	121,472	382.86	404.32	21.46	5.61%
26	1.5 Inch	Commercial	Zone 3					-	0.00%
27	2 Inch	Commercial	Zone 1	44	83,244	282.78	298.63	15.85	5.61%
28	2 Inch	Commercial	Zone 2	14	67,030	241.92	255.50	13.58	5.62%
29	2 Inch	Commercial	Zone 3	3	77,639	268.65	283.72	15.07	5.61%
30	3 Inch	Commercial	Zone 1	4	44,298	257.63	272.23	14.60	5.67%
31	3 Inch	Commercial	Zone 2	1	72,417	328.49	347.03	18.54	5.64%
32	3 Inch	Commercial	Zone 3					-	0.00%
33	4 Inch	Commercial	Zone 1	1	142,583	586.31	619.33	33.02	5.63%
34	4 Inch	Commercial	Zone 3	1	322,417	1,039.49	1,097.69	58.20	5.60%
35		Subtotal		328					
36									
37	1 Inch	Industrial	Zone 3	1	75,000	237.71	251.05	13.34	5.61%
38									
39	3/4 Inch	Irrigation	Zone 1	144	19,833	44.54	47.10	2.56	5.76%
40	3/4 Inch	Irrigation	Zone 3	0	750	14.77	15.62	0.85	5.74%
41	1 Inch	Irrigation	Zone 1	159	45,059	92.99	98.36	5.37	5.77%
42	1 Inch	Irrigation	Zone 2	0	-	22.70	24.01	1.31	5.77%
43	1 Inch	Irrigation	Zone 3	1	7,667	34.66	36.66	2.00	5.77%
44	1.5 Inch	Irrigation	Zone 1	63	68,425	152.14	160.91	8.77	5.76%
45	2 Inch	Irrigation	Zone 1	52	111,712	247.27	261.53	14.25	5.76%
46	(a) Average number of customers of less than one (1), indicates that less than 12 bills were issued during the year.								

Chaparral City Water Company - Remand
Test Year Ended December 31, 2003
Analysis of Revenue by Detailed Class

Exhibit
Final Remand Schedule H-2
Page 2
Witness: Bourassa

Line No.	Meter Size, Class, and Zone			(a) Average Number of Customers at 12/31/2003	Average Consumption	Revenues Present Rates	Revenues Reb. Remand Rates	Remand Increase Dollar Amount	Remand Increase Percent Amount
1	3 Inch	FHMeterIrr	Zone 3	1	11,800	164.41	173.87	9.46	5.76%
2	4 Inch	Irrigation	Zone 1	4	886,333	1,609.68	1,702.51	92.83	5.77%
3	6 Inch	Irrigation	Zone 1	3	3,895,000	6,530.20	6,906.87	376.67	5.77%
4		Subtotal		428					
5									
6	3/4 Inch	Construction	No Zone	7	226,517	366.97	388.13	21.17	5.77%
7	3/4 Inch	Construction	Zone 1	1	833	14.90	15.76	0.86	5.74%
8	1 Inch	Construction	Zone 1	1	23,429	59.25	62.67	3.42	5.77%
9	3 Inch	Construction	Zone 1	0	163,000	400.28	423.35	23.07	5.76%
10	1 Inch	Construction	Zone 2	1	12,250	41.81	44.22	2.41	5.77%
11		Subtotal		11					
12									
13	N/A	Fire Hydrant Meter	Zone 1	9	58,255	292.80	309.36	16.56	5.65%
14	N/A	Fire Hydrant Meter	Zone 2	2	33,379	230.12	243.19	13.07	5.68%
15	N/A	Fire Hydrant Meter	Zone 3	17	26,683	213.24	225.38	12.14	5.69%
16		Subtotal		29					
17									
18	N/A	Fire Sprinkler	Zone 1	40	2	10.01	10.01	0.00	0.00%
19	N/A	Fire Sprinkler	Zone 2	2	-	10.00	10.00	-	0.00%
20	N/A	Fire Sprinkler	Zone 3	1	-	10.00	10.00	-	0.00%
21		Subtotal		43					
22									
23	1 Inch	Bypass Meter	Zone 1	1	0	22.70	24.01	1.31	5.77%
24	1.5 Inch	Bypass Meter	Zone 1	1	0	22.7	24.01	1.31	5.77%
25		Subtotal		2					
26									
27			Totals	11,931					
28									
29									
30	(a) Average number of customers of less than one (1), indicates that less than 12 bills were issued during the year.								

Chaparral City Water Company - Remand
Test Year Ended December 31, 2003
Present and Proposed Rates

Exhibit
Final Remand
Schedule H-3
Page 1
Witness: Bourassa

Line No.	Monthly Usage Charge for:	Present Rates	Proposed Rates	Change	Percent Change
1	Meter Size (All Zones and Classes):				
2	3/4 Inch	$ 13.60	$ 14.38	$ 0.78	5.74%
3	1 Inch	13.60	14.38	0.78	5.74%
4	1 1/2 Inch	22.70	24.01	1.31	5.77%
5	2 Inch	45.40	48.01	2.61	5.75%
6	3 Inch	73.00	77.20	4.20	5.75%
7	4 Inch	146.00	154.40	8.40	5.75%
8	6 Inch	227.00	240.06	13.06	5.75%
9	8 Inch	454.00	480.12	26.12	5.75%
10	10 Inch	730.00	772.00	42.00	5.75%
11	12 Inch	1,043.00	1,103.01	60.01	5.75%
12					
13					
14	Fire Hydrants Basic Service	$ -	$ -	-	0.00%
15					
16	Fire Hydrants Used for Irrigation	$ 146.00	$ 154.40	8.40	5.75%
17					
18	Monthly Service Charge for Fire Sprinkler				
19	4 inch or smaller	$ 10.00	$ 10.00	-	0.00%
20	6 inch	$ 10.00	$ 10.00	-	0.00%
21	8 Inch	$ 10.00	$ 10.00	-	0.00%
22	10 inch	$ 10.00	$ 10.00	-	0.00%
23	Larger than 10 inch	$ 10.00	$ 10.00	-	0.00%
24					
25					
26	Gallons In Minimum (All Zones and Classes)	-	-		
27					
28			(Per 1,000 gallons)		
29			Present	Proposed	Percent
30	**Commodity Rates**	**Block**	**Rate**	**Rate**	**Change**	**Change**
31						
32	5/8 Inch and 3/4 Inch Meter (Residential)	0 gallons to 3,000 gallons	$ 1.68	$ 1.78	$ 0.10	5.95%
33		3,001 gallons to 9,000 gallons	$ 2.52	$ 2.66	$ 0.14	5.56%
34		over 9,000 gallons	$ 3.03	$ 3.20	$ 0.17	5.61%

Chaparral City Water Company - Remand
Test Year Ended December 31, 2003
Present and Proposed Rates

Exhibit
Final Remand
Schedule H-3
Page 2
Witness: Bourassa

Line No.	Commodity Rates	Block	(Per 1,000 gallons) Present Rate	Proposed Rate	Change	Percent Change
5	3/4 Inch Meter (Commercial and Industrial)	0 gallons to 9000 gallons	$ 2.52	$ 2.660	$ 0.140	5.56%
		over 9,000 gallons	$ 3.03	$ 3.200	$ 0.170	5.61%
7	1 Inch Meter (Residential, Commercial, Industrial)	0 gallons to 24,000 gallons	$ 2.52	$ 2.660	$ 0.140	5.56%
		over 24,000 gallons	$ 3.03	$ 3.200	$ 0.170	5.61%
9	1.5 Inch Meter (Residential, Commercial, Industrial)	0 gallons to 60,000 gallons	$ 2.52	$ 2.660	$ 0.140	5.56%
		over 60,000 gallons	$ 3.03	$ 3.200	$ 0.170	5.61%
11	2 Inch Meter (Residential, Commercial, Industrial)	0 gallons to 100,000 gallons	$ 2.52	$ 2.660	$ 0.140	5.56%
		over 100,000 gallons	$ 3.03	$ 3.200	$ 0.170	5.61%
13	3 Inch Meter (Residential, Commercial, Industrial)	0 gallons to 225,000 gallons	$ 2.52	$ 2.660	$ 0.140	5.56%
		over 225,000 gallons	$ 3.03	$ 3.200	$ 0.170	5.61%
15	4 Inch Meter (Residential, Commercial, Industrial)	0 gallons to 350,000 gallons	$ 2.52	$ 2.660	$ 0.140	5.56%
		over 350,000 gallons	$ 3.03	$ 3.200	$ 0.170	5.61%
17	6 Inch Meter (Residential, Commercial, Industrial)	0 gallons to 725,000 gallons	$ 2.52	$ 2.660	$ 0.140	5.56%
		over 725,000 gallons	$ 3.03	$ 3.200	$ 0.170	5.61%
19	8 Inch Meter (Residential, Commercial, Industrial)	0 gallons to 1,125,000 gallons	$ 2.52	$ 2.660	$ 0.140	5.56%
		over 1,125,000 gallons	$ 3.03	$ 3.200	$ 0.170	5.61%
21	10 Inch Meter (Residential, Commercial, Industrial)	0 gallons to 1,500,000 gallons	$ 2.52	$ 2.660	$ 0.140	5.56%
		over 1,500,000 gallons	$ 3.03	$ 3.200	$ 0.170	5.61%
23	12 Inch Meter (Residential, Commercial, Industrial)	0 gallons to 2,250,000 gallons	$ 2.52	$ 2.660	$ 0.140	5.56%
		over 2,250,000 gallons	$ 3.03	$ 3.200	$ 0.170	5.61%
26	**Irrigation/Bulk**	All gallons	$ 1.56	$ 1.650	$ 0.090	5.77%
28	**Fire Hydrant Irrig./Construction**	All gallons	$ 1.56	$ 1.650	$ 0.090	5.77%
30	**Standpipe (Fire Hydrants)**	All gallons	$ 2.52	$ 2.660	$ 0.140	5.56%
32	**Fire Sprinklers**	All gallons	$ 2.52	$ 2.660	$ 0.140	5.56%

Chaparral City Water Company - Remand
Bill Comparison Present and RJ. Remand Rates
Meter Size: 3/4 Inch Residential

Exhibit
Final Remand Schedule H-4
Page 1

Line No.	Usage	Decision 68176 Present Bill	Proposed Bill	Dollar Increase	Percent Increase
1	-	$ 13.60	$ 14.38	$ 0.78	5.74%
2	1,000	15.28	16.16	$ 0.88	5.76%
3	2,000	16.96	17.94	$ 0.98	5.78%
4	3,000	18.64	19.72	$ 1.08	5.79%
5	4,000	21.16	22.38	$ 1.22	5.77%
6	5,000	23.68	25.04	$ 1.36	5.74%
7	6,000	26.20	27.70	$ 1.50	5.73%
8	7,000	28.72	30.36	$ 1.64	5.71%
9	8,000	31.24	33.02	$ 1.78	5.70%
10	9,000	33.76	35.68	$ 1.92	5.69%
11	10,000	36.79	38.88	$ 2.09	5.68%
12	12,000	42.85	45.28	$ 2.43	5.67%
13	14,000	48.91	51.68	$ 2.77	5.66%
14	16,000	54.97	58.08	$ 3.11	5.66%
15	18,000	61.03	64.48	$ 3.45	5.65%
16	20,000	67.09	70.88	$ 3.79	5.65%
17	25,000	82.24	86.88	$ 4.64	5.64%
18	30,000	97.39	102.88	$ 5.49	5.64%
19	35,000	112.54	118.88	$ 6.34	5.63%
20	40,000	127.69	134.88	$ 7.19	5.63%
21	45,000	142.84	150.88	$ 8.04	5.63%
22	50,000	157.99	166.88	$ 8.89	5.63%
23	60,000	188.29	198.88	$ 10.59	5.62%
24	70,000	218.59	230.88	$ 12.29	5.62%
25	80,000	248.89	262.88	$ 13.99	5.62%
26	90,000	279.19	294.88	$ 15.69	5.62%
27	100,000	309.49	326.88	$ 17.39	5.62%
28					
29					
30	Average Usage				
31	9,187	$ 34.33	$ 36.28	$ 1.95	5.69%
32	Median Usage				
33	4,501	$ 22.42	$ 23.71	$ 1.29	5.75%
34					

Present Rates:

Monthly Minimum:		$	13.60
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	3,000	$	1.68
Up to	9,000	$	2.52
Over	9,000	$	3.03

Proposed Rates:

Monthly Minimum:		$	14.38
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	3,000	$	1.78
Up to	9,000	$	2.66
Over	9,000	$	3.20

Chaparral City Water Company
Money Factors for Revenue Deficiency

Post-Hearing
Schedule

1st Year Revenue Deficiency Factors

Key Components:	
Interest Rate	7.60%
1st Year Revenue Deficiency	$ 409,666
Money Factor (October 2005 through May 2008)	1.2157
1st Year Revenue Deficiency plus Interest through May 2008	$ 498,031

Months Beyond May 2008	Factor	Total 1st Year Deficiency With Interest	Additional Interest Beyond May 2008	Monthly Increase
1	1.2232	$ 501,103	$ 3,072	$ 3,072
2	1.2307	504,176	6,145	3,072
3	1.2382	507,248	9,217	3,072
4	1.2458	510,362	12,331	3,113
5	1.2534	513,475	15,444	3,113
6	1.2611	516,630	18,599	3,154
7	1.2688	519,784	21,753	3,154
8	1.2766	522,979	24,949	3,195
9	1.2844	526,175	28,144	3,195
10	1.2922	529,370	31,339	3,195

2nd Year Revenue Deficiency Factors

Key Components:	
Interest Rate	7.60%
2nd Year Revenue Deficiency	$ 409,666
Money Factor (October 2006 through May 2008)	1.1298
2nd Year Revenue Deficiency plus Interest through May 2008	$ 462,841

Months Beyond May 2008	Factor	Total 2nd Year Deficiency With Interest	Additional Interest Beyond May 2008	Monthly Increase
1	1.1368	$ 465,708	$ 2,868	$ 2,868
2	1.1437	468,535	5,694	2,827
3	1.1507	471,403	8,562	2,868
4	1.1578	474,311	11,471	2,909
5	1.1649	477,220	14,379	2,909
6	1.172	480,128	17,288	2,909
7	1.1792	483,078	20,237	2,950
8	1.1864	486,028	23,187	2,950
9	1.1937	489,018	26,178	2,991
10	1.201	492,009	29,168	2,991