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BEFORE THE ARIZONA CORPORATION COMMISSION

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COMMISSIONERS

MIKE GLEASON, Chairman
WILLIAM A. MUNDELL
JEFF HATCH-MILLER
KRISTIN K. MAYES
GARY PIERCE

IN THE MATTER OF THE APPLICATION OF
CHAPARRAL CITY WATER COMPANY, INC.,
AN ARIZONA CORPORATION, FOR A
DETERMINATION OF THE 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-07-0551

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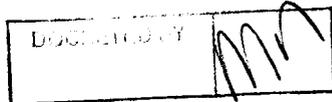
Staff of the Arizona Corporation Commission ("Staff") hereby files the Direct Testimony of
Gordon L. Fox, Pedro M. Chaves, Marvin E. Millsap and Marlin Scott, Jr. of the Utilities Division in
the above-referenced matter

RESPECTFULLY SUBMITTED this 3rd day of October, 2008.

Arizona Corporation Commission

DOCKETED

OCT - 8 2008



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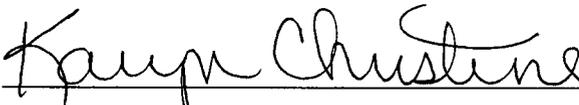
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DIRECT

TESTIMONY

OF

GORDON L. FOX

PEDRO M. CHAVES

MARVIN E. MILLSAP

MARLIN SCOTT, JR

DOCKET NO. W-02113A-07-0551

**IN THE MATTER OF THE APPLICATION OF
CHAPPARAL CITY WATER COMPANY, INC.,
AN ARIZONA CORPORATION, FOR A
DETERMINATION OF THE FAIR VALUE OF
ITS UTILITY PLANT AND PROPERTY AND
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OCTOBER 3, 2008

BEFORE THE ARIZONA CORPORATION COMMISSION

MIKE GLEASON
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. W-02113A-07-0551
CHAPARRAL CITY WATER COMPANY, INC.,)
AN ARIZONA CORPORATION, FOR A)
DETERMINATION OF THE FAIR VALUE OF)
ITS UTILITY PLANT AND PROPERTY AND)
FOR INCREASES IN ITS RATES AND)
CHARGES FOR UTILITY SERVICE BASED)
THEREON)

DIRECT
TESTIMONY
OF
GORDON L. FOX
PUBLIC UTILITIES ANALYST MANAGER
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

OCTOBER 3, 2008

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. OPERATING INCOME METHOD	2

**EXECUTIVE SUMMARY
CHAPARRAL CITY WATER COMPANY
DOCKET NO. W-02113A-07-0551**

The direct testimony of Staff witness Gordon L. Fox addresses the following issues:

Operating Income Calculation – Staff recommends that the Commission adopt a method of calculating operating income that largely follows the method adopted in Chaparral City Water Company, Inc.’s (“Chaparral City” or “Applicant”) remand proceeding (Decision No. 70441). Staff’s specific recommendation modestly refines the previously adopted method to more closely follow financial theory and to symmetrically match the inflation components recognized in the fair value rate of return (“FVROR”) and fair value rate base (“FVRB”).

Staff further recommends that the Commission reject the Applicant’s proposal to calculate operating income by multiplying the weighted average cost of capital (“WACC”) by the fair value rate base (“FVRB”) for the same reason that method was rejected in Decision No. 70441 – it overstates the impact of inflation resulting in rates that are not just and reasonable.

1 **I. INTRODUCTION**

2 **Q. Please state your name, occupation, and business address.**

3 A. My name is Gordon L. Fox. I am a Public Utilities Analyst Manager employed by the
4 Arizona Corporation Commission ("ACC" or "Commission") in the Utilities Division
5 ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

6

7 **Q. Briefly describe your responsibilities as a Public Utilities Analyst Manager.**

8 A. In my capacity as a Public Utilities Analyst Manager, I supervise analysts whose duties
9 include preparation of testimonies to provide the Commission with Staff recommendations
10 regarding rate base, operating income, cost of capital, rate design, securities issuance and
11 other financial regulatory matters.

12

13 **Q. Please describe your educational background and professional experience.**

14 A. I have eighteen years of regulatory utility auditing and rate analysis experience (15 years
15 at the Commission and 3 years at RUCO) and four years of experience with a cable TV
16 utility with responsibility for preparing and presenting rate applications before
17 jurisdictional authorities. I have master and bachelor degrees in Accounting, and I have
18 earned the following professional accounting and finance certifications: Certified Public
19 Accountant ("CPA"), Certified Management Accountant ("CMA") and Certified in
20 Financial Management ("CFM").

21

22 **Q. What is the purpose of your testimony in this case?**

23 A. The purpose of my testimony is to present Staff's recommended method for calculating
24 the operating income for Chaparral City Water Company, Inc. ("Chaparral City" or
25 "Applicant") in this proceeding.

1 **II. OPERATING INCOME METHOD**

2 **Q. Has the method for calculating operating income been a contentious issue in**
3 **Chaparral City's prior rate case?**

4 A. Yes. In the Applicant's prior rate case, the Commission issued Decision No. 68176, dated
5 September 30, 2005, authorizing rates that included an operating income that was
6 determined in a manner consistent with many traditional similar decisions. That is, the
7 operating income was determined by multiplying the weighted average cost of capital
8 ("WACC") by the original cost rate base. The resulting product was then divided by the
9 fair value rate base ("FVRB") to determine a fair value rate of return ("FVROR"). Under
10 this method, the operating income determined by multiplying the fair value rate base times
11 the fair value rate of return provides the same operating income as multiplying the WACC
12 by the original cost rate base.

13
14 Chaparral City objected to this method of calculating operating income, and it appealed
15 the Commission's decision to the Arizona Court of Appeals, arguing that the Commission
16 did not use the fair value of the Company's assets in determining its rates.

17
18 **Q. What did the Arizona Court of Appeals conclude?**

19 A. On February 13, 2007, the Arizona Court of Appeals issued a Memorandum Decision,
20 affirming in part, vacating, and remanding Decision No. 68176 to the Commission for
21 further determination. The Arizona Court of Appeals found that the Commission did not
22 comply with Article 15, Section 14, of the Arizona Constitution when it set the
23 Company's rates based on original cost instead of the fair value of Chaparral City's
24

1 property. However, the Arizona Court of Appeals pointed out that: "If the Commission
2 determines that the cost of capital analysis is not the appropriate methodology to
3 determine the rate of return to be applied to the Fair Value Rate Base ("FVRB"), the
4 Commission has the discretion to determine the appropriate methodology."¹
5

6 **Q. Did the Commission conduct a remand proceeding and establish rates using a**
7 **different method of calculating operating income than the method used in Decision**
8 **No. 68176?**

9 A. Yes. The Commission issued Decision No. 70441, dated July 28, 2008, finding a revised
10 operating income based on a method of calculating operating income that is different from
11 the method used in Decision No. 68176.
12

13 **Q. Please describe the method of calculating operating income adopted in Decision**
14 **No. 70441.**

15 A. The Commission calculated the operating income by multiplying the FVROR times the
16 FVRB. The Commission used a FVRB that reflects a 50/50 weighting of the original cost
17 rate base ("OCRB") and the reconstruction cost new rate base ("RCND"). This issue was
18 not disputed by the parties.
19

20 By contrast, the method for determining the FVROR was in dispute. The Applicant urged
21 the Commission to apply the WACC to the FVRB. Both Staff and RUCO presented
22 various alternatives. The Commission adopted a FVROR based on the WACC modified to
23 reflect a 2.00 percent reduction to the cost of equity but not to the cost of debt as shown in
24 Table 1 below.

¹ Arizona Court of Appeals, Memorandum Decision, Page 13, Paragraph 17.

Table 1

Description	Weight (%)	Cost	Inflation Adjustment	Net Cost	FVROR
Debt	41.27%	5.1%	0.00%	5.1%	2.11%
Equity	58.73%	9.3%	2.00%	7.3%	4.29%
Total	100.00%				6.40%

I refer to this method as "Method One" going forward.

Q. How did Staff approach the determination of the fair value rate of return in this proceeding?

A. In reading Decision No. 70441, Staff concluded that the Commission had established Method One as its fundamentally preferred method at this time. This method uses the fair value of property to determine operating income with no direct connection to the original cost of the plant. Staff also interpreted the Commission's decision to recognize that this new method may benefit from refinements and that refinements were envisioned and invited.

Q. Does Staff recommended method in this case largely follows Method One?

A. Yes. Staff's recommended fair value calculation of operating income in this proceeding follows the general framework of Method One with some minor changes. Staff's method is consistent with Method One in that it continues to use a FVRB that is the average of the OCRB and the RCND, and it uses the fair value of property to determine operating income with no direct connection to the original cost of the plant. Staff's method also reduces the cost of capital for inflation. The mechanics of Staff's the inflation adjustment to the cost of capital reflect a refinement from Method One.

1 **Q. Why did Staff modify the mechanics of the inflation adjustment component of the**
2 **FVROR?**

3 A. Decision No. 70441 states, "Although we believe that the cost of debt may reflect the
4 effects of inflation, we are not convinced that the evidence presented in this proceeding is
5 developed sufficiently to make that determination with certainty."² Thus, the Commission
6 elected not to reduce the cost of debt for inflation due to inadequacies in the record as
7 opposed to any conceptual deficiency. As discussed below, inflation is a widely
8 recognized component of the cost of debt. Accordingly, Staff recommends a FVROR that
9 includes an adjustment to remove the inflation component, i.e., an "accretion return" from
10 the cost of debt.

11
12 **Q. Is inflation widely recognized as a component of debt cost?**

13 A. Yes. Recognition of inflation as a component of the cost of debt is ubiquitous in financial
14 literature. A review of financial references regularly used by Staff revealed no position
15 contradicting that inflation is a component of debt cost. To the contrary, the references
16 that discuss debt components are in unanimous agreement that inflation is a component of
17 debt cost. Dr. Erich A Helfert, a former faculty member at the Harvard Graduate School
18 of Business, in his popular book *Techniques of Financial Analysis* made the following
19 statement that captures the effect of inflation on debt and other securities (i.e., equity):

² P. 36.

1 “The risk-free return on a government bond does implicitly allow for the expected level of
2 inflation inasmuch as expectations about future inflationary conditions affect the yield
3 from such securities. When inflation abates, the yields decline – as dramatically occurred
4 in the mid-1980s and early 1990s. When inflation expectations rise, so do bond yields.
5 The same is true of yield from other financial instruments.

6
7 The spectrum of returns ranging from risk-free bonds to those
8 on speculative securities is also consistent in reflecting the effects
9 of inflation”³

10
11 As Dr. Helfert explained, inflation is a component of the returns for all debt and equity
12 securities.

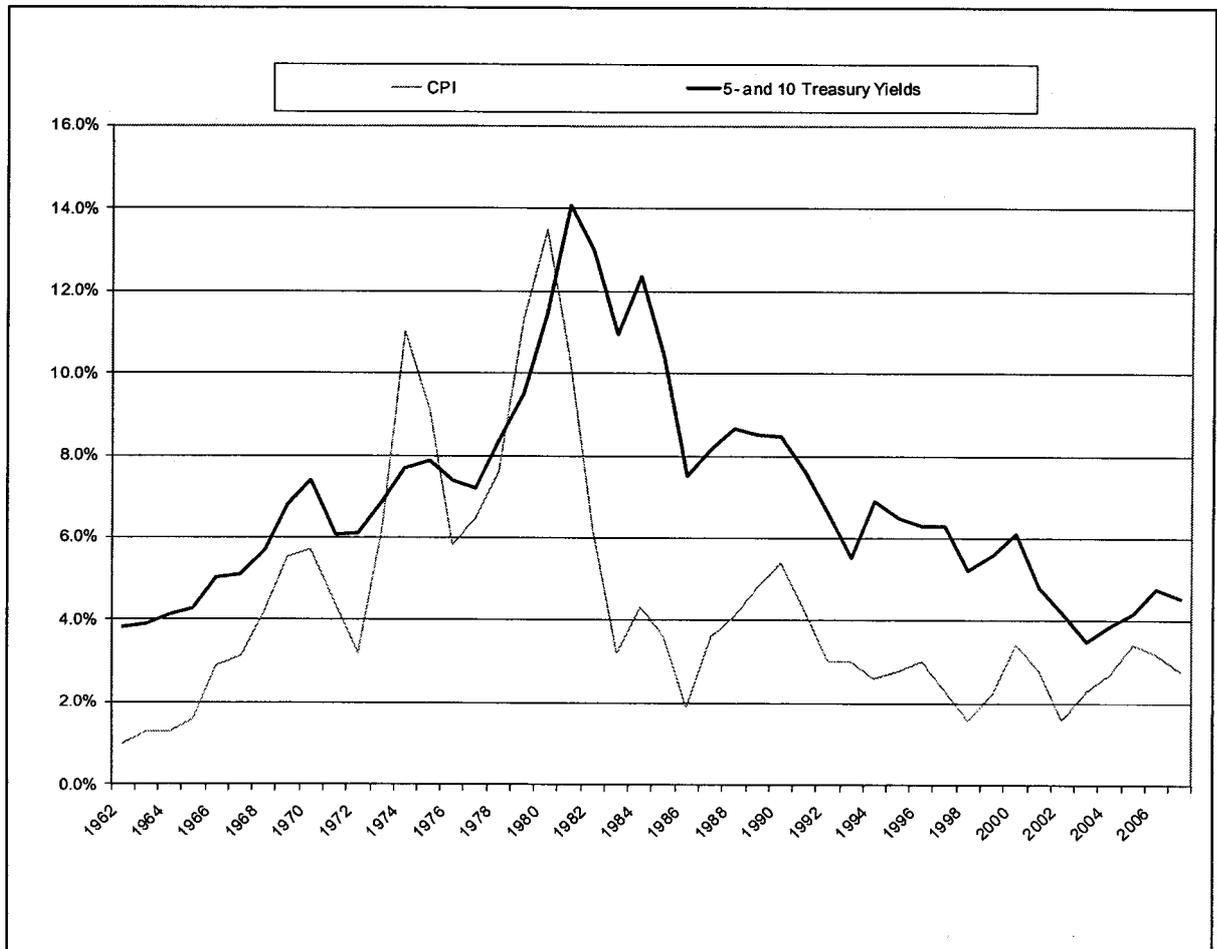
13
14 **Q. Did Staff compile any empirical evidence to demonstrate the correlation between**
15 **inflation and the cost of debt?**

16 **A.** Yes. Due to the lag between inflation and market responses realized as changes in the cost
17 of debt, the correlation between inflation and the cost of debt is best demonstrated
18 graphically. Chart 1 below presents the average of 5- and 10-year interest rates on U.S.
19 Treasuries and the Consumer Price Index – All Urban Consumers (a commonly used
20 measure of inflation) for the years 1962 through 2007.

³ Helfert, Erich A., Techniques of Financial Analysis. 1994. IRWIN. pp. 363-64.

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Chart 1



The Chart shows a high correlation of interest rates with inflation.

Q. Do the mechanics of Staff's the inflation adjustment component differ from Method One in any way other than that it reduces the cost of debt as well as the cost of equity?

A. Yes. While Staff recommends removal of an inflation component from the cost of equity and the cost of debt, only half of the inflation component should be removed.

1 **Q. Please explain why Staff recommends removing only half of the inflation component**
2 **from capital costs.**

3 A. Method One uses a FVRB that is the average of the OCRB and the RCND. The OCRB
4 includes no inflation factor. Thus, if the inflation adjustment is made for the entire
5 inflation component of capital costs, the downward adjustment to the FVROR will be
6 greater than the upward inflation recognized in the FVRB for reasons other than market
7 forces. As a result of this lack of symmetry, when the FVROR is multiplied by the FVRB
8 to compute operating income, the calculation will be skewed downward. Removing only
9 half of the inflation component from the equity and debt costs maintains symmetry
10 between the FVROR and the FVRB while continuing to use a FVRB that is an average of
11 the OCRB and the RCND to maintain consistency with Method One. Staff witness Pedro
12 M. Chaves provides testimony on the calculation of the additional return required by
13 investors due to inflation. The importance of maintaining symmetry in the inflation
14 adjustment relative to the FVRB is better understood by recognizing the relationship
15 between the WACC and the FVROR.

16
17 **Q. What is the relationship between the WACC and the FVROR?**

18 A. The WACC is a financial construct that represents the opportunity cost of foregone
19 earnings or returns resulting from a choice of one investment over others with equivalent
20 risk. In contrast, FVROR is a peculiar requirement of Arizona regulation that represents
21 the rate applied to a fair value rate base that results in a fair return. The WACC and
22 FVROR do have one commonality – each should facilitate determination of a fair return.
23 The underlying objectives of a fair return, and therefore the revenue requirement, are
24 materially unaltered regardless of whether the WACC or FVROR is applied.

1 The Commission appropriately recognized the distinction between the WACC and
2 FVROR in Decision No. 70441, stating that: “Because the weighted average cost of
3 capital includes inflation, if the Commission were to apply that cost of capital as the
4 FVROR to the FVRB (which includes inflation in the RCND portion), then the impact of
5 inflation would be overstated, and the resulting revenues would compensate the utility for
6 more than the fair value of its property, resulting in rates and charges that were not just
7 and reasonable.”

8
9 As the Commission recognized, the market determines the return required by investors.
10 Investors in water utilities cannot expect to earn a return in excess of the market
11 determined rate. That is, investors do not require a higher return due to the use of FVRB
12 versus OCRB in ratemaking. Therefore, investors do not expect to earn their total return
13 through current rates when they can simultaneously anticipate a return from the
14 appreciation of utility plant that is subsequently included in rate base – which is the effect
15 of using RCND as a component of FVRB. An alternate way to see this is that investors
16 earn their total return (in this case, 8.8 percent WACC) through appreciation (1.2 percent
17 accretion return) and current rates (7.6 percent FVROR).

18
19 **Q. Please summarize Staff’s recommended method for calculating operating income.**

20 A. Staff recommends calculating the operating income by multiplying the FVROR times the
21 FVRB where the FVRB reflects a 50/50 weighting of the original cost rate base
22 (“OCRB”) and the reconstruction cost new rate base (“RCND”) and the FVROR is the
23 WACC reduced by half the inflation/accretion return factor as shown in Table 2 below.

Table 2

Description	Weight (%)	Cost	Inflation Adjustment	Net Cost	FVROR
Debt	24.4%	5.0%	1.2%	3.8%	0.9%
Equity	75.6%	10.0%	1.2%	8.8%	6.7%
Total	100.00%				7.6%

I refer to this method as "Method Two" going forward.

Q. Explain how Method Two introduces a fair value element to the ratemaking process.

A. Under Method Two, a utility will benefit through higher returns when its property appreciates at a rate exceeding the additional return required by investors due to inflation. On the contrary, when a utility experiences property appreciation at a rate less than the additional return required by investor due to inflation, it will receiver lower returns. This fair value element represents a fundamental change from the "prudent investment" or "historical cost" approach (where a utility is compensated for the actual cost prudently invested). This is the concept to which the Applicant took exception in its last full rate case as end-result oriented.

Q. What is the revenue requirement difference between Method One and Method Two?

A. The revenue requirement under Method Two exceeds the revenue requirement under Method One by approximately \$318,000 or 3.6 percent.

1 **Q. Does Method Two represent a universal fair value methodology applicable for future**
2 **determinations of just and reasonable rates for utilities?**

3 A. Not necessarily. Just and reasonable rates must be considered within the context of the
4 particular circumstances of each utility and rate proceeding. Also, Staff recommends that
5 the Commission encourage pursuit of further refinements that may enhance the goal of
6 establishing just and reasonable rates.

7
8 **Q. Is Chaparral City's proposed method of calculating operating income in this case**
9 **consistent with Method One?**

10 A. No. The Applicant's application proposed \$2,678,233 operating income is the product of
11 multiplying a 9.32 percent rate of return by a \$28,736,406 fair value rate base (Schedule
12 A-1 of the application). The proposed fair value rate base is an average of the OCRB and
13 RCND (Schedule B-1 of the application) which is consistent with Method One. However,
14 contrary to Method One, the proposed rate of return is equal to the proposed WACC and
15 does not reflect an inflation reduction to the cost of equity, the notable feature of Method
16 One.

17
18 The Applicant's proposal to apply the unadjusted WACC to the FVRB was rejected by the
19 Commission in Decision Nos. 68176 and 70441. The Commission concluded: "Because
20 the weighted average cost of capital includes inflation, if the Commission were to apply
21 that cost of capital as the FVROR to the FVRB (which includes inflation in the RCND
22 portion), then the impact of inflation would be overstated, and the resulting revenues
23

1 would compensate the utility for more than the fair value of its property, resulting in rates
2 and charges that were not just and reasonable.”⁴ The Commission should reject the
3 Applicants proposed method of calculating operating income in this case for the same
4 reason.

5

6 **Q. Does this conclude your direct testimony?**

7 A. Yes, it does.

⁴ Decision No. 70441, p. 33.

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PUBLIC UTILITIES ANALYST III
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

OCTOBER 3, 2008

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
Summary of Testimony and Recommendations	2
Applicant's Proposed Overall Rate of Return	3
II. THE WEIGHTED AVERAGE COST OF CAPITAL	3
III. CAPITAL STRUCTURE	5
Background	5
Applicant's Capital Structure	6
IV. RETURN ON EQUITY	7
Background	7
Risk	10
V. ESTIMATING THE COST OF EQUITY	12
Introduction	12
Discounted Cash Flow Model Analysis	13
<i>The Constant-Growth DCF</i>	15
<i>The Multi-Stage DCF</i>	24
Capital Asset Pricing Model	26
VI. SUMMARY OF STAFF'S COST OF EQUITY ANALYSIS	31
VII. FINAL COST OF EQUITY ESTIMATES	34
VIII. FINAL WEIGHTED AVERAGE COST OF CAPITAL	35
IX. FAIR VALUE RATE OF RETURN RECOMMENDATION	36
X. STAFF RESPONSE TO THE APPLICANT'S COST OF CAPITAL WITNESS	37
XI. CONCLUSION	44

SCHEDULES

Capital Structure and Weighted Cost of Capital.....	PMC-1
Fair Value Rate of Return.....	PMC-2
Final Cost of Equity Estimates for Sample Water Utilities.....	PMC-3
Average Capital Structure of Sample Water Utilities.....	PMC-4
Growth in Earnings & Dividends of Sample Water Utilities.....	PMC-5
Sustainable Growth for Sample Water Utilities.....	PMC-6
Selected Financial Data of Sample Water Utilities.....	PMC-7
Calculation of Expected Infinite Annual Growth in Dividends.....	PMC-8
Multi-Stage DCF Estimates.....	PMC-9
Chaparral City's Capitalization.....	PMC-10

**EXECUTIVE SUMMARY
CHAPARRAL CITYWATER COMPANY
DOCKET NO. W-02113A-07-0551**

The direct testimony of Staff witness Pedro M. Chaves addresses the following issues:

Capital Structure – Staff recommends that the Commission adopt a capital structure for Chaparral City Water Company, Inc. (“Chaparral City” or “Applicant”) for this proceeding consisting of 24.4 percent debt and 75.6 percent equity.

Cost of Equity – Staff recommends that the Commission adopt a 10.0 percent return on equity (“ROE”) for the Applicant. Staff’s estimated ROE for the Applicant is based on cost of equity estimates for the sample companies ranging from 9.3 percent for the discounted cash flow method (“DCF”) to 14.3 percent for the capital asset pricing model (“CAPM”). Staff’s ROE recommendation includes a 1.8 percent downward adjustment due to the lower financial risk reflected in the Applicant’s capital structure in relation to that of the sample companies.

Cost of Debt – Staff recommends that the Commission adopt a 5.0 percent cost of debt.

Fair Value Rate of Return – Staff recommends that the Commission adopt a fair value rate of return (“FVROR”) of 7.6 percent.

Mr. Bourassa’s Testimony – The Commission should reject the Applicant’s proposed capital structure, composed of 23.4 percent debt and 76.6 percent equity, and requested 5.5 percent cost of debt since they represent outdated information. The Commission should also reject the Applicant’s proposed 10.5 percent ROE for the following reasons: 1) Mr. Bourassa’s DCF estimates rely exclusively on analyst’s forecasts; 2) Mr. Bourassa does not use dividend per share growth in his DCF estimates; and 3) Mr. Bourassa’s recommendation relies on forecasted interest rates.

1 **I. INTRODUCTION**

2 **Q. Please state your name, occupation, and business address.**

3 A. My name is Pedro M. Chaves. I am a Public Utilities Analyst employed by the Arizona
4 Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business
5 address is 1200 West Washington Street, Phoenix, Arizona 85007.

6

7 **Q. Briefly describe your responsibilities as a Public Utilities Analyst.**

8 A. In my position as a Public Utilities Analyst, I perform studies to estimate the cost of
9 capital component of the overall revenue requirement calculation in rate filings. I also
10 perform analyses regarding requests for financing authorization and other financial
11 regulatory matters.

12

13 **Q. Please describe your educational background and professional experience.**

14 A. I am a graduate of Arizona State University and received a Bachelor of Science degree in
15 Global Business with a specialization in finance. My course of studies included classes in
16 corporate and international finance, investments, accounting, statistics, and economics. I
17 began employment as a Staff Public Utilities Analyst in December 2005.

18

19 **Q. What is the scope of your testimony in this case?**

20 A. I provide Staff's recommended capital structure, cost of debt, return on equity ("ROE")
21 and fair value rate of return ("FVROR") in this case. I discuss the appropriate capital
22 structure, cost of debt, ROE and FVROR for establishing the revenue requirement for
23 Chaparral City Water Company, Inc. ("Chaparral City" or "Applicant").

1 **Summary of Testimony and Recommendations**

2 **Q. Briefly summarize how Staff's cost of capital testimony is organized.**

3 A. Staff's cost of capital testimony is presented in ten sections. Section I is this introduction.
4 Section II discusses the concept of weighted average cost of capital ("WACC"). Section
5 III presents the concept of capital structure and presents Staff's recommended capital
6 structure for Chaparral City in this proceeding. Section IV discusses the concepts of ROE
7 and risk. Section V presents the methods employed by Staff to estimate Chaparral City's
8 ROE. Section VI presents the findings of Staff's ROE analysis. Section VII presents
9 Staff's final cost of equity estimates for Chaparral City. Section VIII presents Staff's
10 weighted average cost of capital. Section IX presents Staff's FVROR recommendation.
11 Section X presents Staff's comments on the direct testimony of Mr. Thomas J. Bourassa in
12 support of the Applicant's proposed cost of capital ("Mr. Bourassa's Direct Testimony").
13 Lastly, Section XI presents the conclusions.

14
15 **Q. Have you prepared any exhibits to accompany your testimony?**

16 A. Yes. I prepared ten schedules (PMC-1 to PMC-10) that support Staff's cost of capital
17 analysis.

18
19 **Q. What is Staff's weighted average cost of capital for Chaparral City?**

20 A. Staff's WACC is 8.8 percent and it is calculated in Schedule PMC-1. Staff's WACC is
21 based on cost of equity estimates for Chaparral City that range from 9.3 percent to 14.3
22 percent. Staff's ROE recommendation includes a 1.8 percent downward adjustment due
23 to the lower financial risk reflected in the Applicant's capital structure in relation to that of
24 the sample companies.

1 **Q. What is Staff's recommended fair value rate of return for Chaparral City?**

2 A. Staff recommends a 7.6 percent FVROR. Staff's recommended 7.6 percent FVROR is
3 calculated in Schedule PMC-2.

4

5 **Applicant's Proposed Overall Rate of Return**

6 **Q. Briefly summarize the Applicant's proposed capital structure, cost of debt, return on**
7 **equity and overall rate of return for this proceeding.**

8 A. Table 1 summarizes the Applicant's proposed hypothetical capital structure, cost of debt,
9 return on equity and overall cost of capital and FVROR in this proceeding:

10

11

Table 1

	Weight	Cost	Weighted Cost
Long-term Debt	23.4%	5.5%	1.3%
Common Equity	76.6%	10.5%	<u>8.0%</u>
Cost of Capital (FVROR)			9.3%

12

Chaparral City is proposing an overall cost of capital, i.e., FVROR of 9.3 percent.

13

14 **II. THE WEIGHTED AVERAGE COST OF CAPITAL**

15 **Q. Please define the cost of capital concept.**

16 A. The cost of capital is the opportunity cost represented by anticipated returns or earnings
17 that are foregone by choosing one investment over others with equivalent risk. In other
18 words, the cost of capital is the return that shareholders expect for committing their
19 resources in a determined business enterprise.

1 **Q. What is the overall cost of capital?**

2 A. The overall cost of capital is equal to the weighted average cost of capital.

3

4 **Q. How is the WACC calculated?**

5 A. The WACC is calculated by adding the weighted expected returns of a firm's securities.

6 Equation 1 that follows presents the WACC as a mathematical expression.

7

Equation 1.

8

9

$$\text{WACC} = \sum_{i=1}^n W_i * r_i$$

10

11

12 In this equation, W_i is the weight given to the i^{th} security (the proportion of the i^{th} security
13 relative to the portfolio) and r_i is the expected return on the i^{th} security.

14

15 **Q. Can you provide an example demonstrating application of Equation 1?**

16 A. Yes. For this example, assume that an entity has a capital structure composed of 35
17 percent debt and 65 percent equity. Also, assume that the embedded cost of debt is 6.0
18 percent and the expected return on equity, i.e. the cost of equity, is 10.0 percent.

19 Calculation of the WACC is as follows:

20

$$\text{WACC} = (35\% * 6.0\%) + (65\% * 10.0\%)$$

21

$$\text{WACC} = 2.10\% + 6.50\%$$

22

$$\text{WACC} = 8.60\%$$

23

24 The weighted average cost of capital in this example is 8.60 percent. The entity in this
25 example would need to earn an overall rate of return of 8.60 percent to cover its cost of
26 capital.

1 **III. CAPITAL STRUCTURE**

2 **Background**

3 **Q. Please explain the capital structure concept.**

4 A. The capital structure of a firm is the relative proportions of short-term debt, long-term debt
5 (including capital leases), preferred stock and common stock that are used to finance the
6 firm's assets.

7
8 **Q. How is the capital structure expressed?**

9 A. The capital structure of a company is expressed as the percentage of each component of
10 the capital structure (capital leases¹, short-term debt, long-term debt, preferred stock and
11 common stock) relative to the total capital (the total sum of all the components of the
12 capital structure).

13
14 For instance, the capital structure for an entity that is financed by \$5,000 of short-term
15 debt, \$15,000 of capital leases, \$30,000 of long-term debt, \$10,000 of preferred stock and
16 \$40,000 of common stock is shown in Table 2.

17
18 **Table 2**

Component			%
Short-Term Debt	\$5,000	(\$5,000/\$100,000)	5.0%
Capital Leases	\$15,000	(\$15,000/\$100,000)	15.0%
Long-Term Debt	\$30,000	(\$30,000/\$100,000)	30.0%
Preferred Stock	\$10,000	(\$10,000/\$100,000)	10.0%
Common Stock	\$40,000	(\$40,000/\$100,000)	40.0%
Total	\$100,000		100%

¹ Capital leases are a specific form of long-term debt.

1 The capital structure in this example is composed of 5.0 percent short-term debt, 15.0
2 percent capital leases, 30.0 percent long-term debt, 10.0 percent preferred stock and 40.0
3 percent common stock.

4
5 **Applicant's Capital Structure**

6 **Q. What capital structure does the Applicant propose?**

7 A. The Applicant proposes a hypothetical capital structure composed of 23.4 percent debt and
8 76.6 percent common equity.

9
10 **Q. What capital structure does Staff recommend?**

11 A. Staff recommends a capital structure of 24.4 percent debt and 75.6 percent equity, to
12 reflect Chaparral City's most recent debt and equity positions, as displayed in Schedule
13 PMC-10 and summarized in Table 3, below.

14 **Table 3**

Chaparral City Water Company, Inc. Capitalization		
	<u>Amount outstanding as of 6/30/2008</u>	<u>Percentage of Capital Structure</u>
Total Debt	\$ 8,635,000.00	24.4%
Total Common Equity	\$ 26,690,000	75.6%
Total Capitalization	\$ 35,325,000	100.0%

15
16 **Q. How does Chaparral City's actual capital structure compare to capital structures of
17 publicly traded water utilities?**

18 A. The Applicant's actual capital structure is composed of 24.4 percent debt and 75.6 percent
19 equity. Schedule PMC-4 shows the capital structures of six publicly traded water

1 companies (“sample water companies”) as of March 31, 2008². The average capital
2 structure for the sample water utilities is comprised of approximately 49.9 percent debt
3 and 50.1 percent equity.
4

5 **IV. RETURN ON EQUITY**

6 **Background**

7 **Q. Please define the term “cost of equity capital.”**

8 A. The cost of equity capital is determined by the market. It is the rate of return that
9 investors expect to earn on their equity investment in an entity given its risk. In other
10 words, the cost of equity to an entity is the investors’ expected rate of return on other
11 investments of similar risk.
12

13 **Q. Is there any relationship between interest rates and the cost of equity capital?**

14 A. Yes. The cost of equity tends to move in the same direction as interest rates. This
15 relationship is integral to the capital asset pricing model (“CAPM”) formula. The CAPM
16 is a market based model used for estimating the cost of equity capital that is discussed in
17 Section V of this testimony. Therefore, a comparison of current interest rates to historical
18 interest rates provides insight for how the current cost of equity capital might be compared
19 to the cost of equity capital historically.
20

21 **Q. What has been the general trend of interest rates in recent years?**

22 A. A chronological chart of interest rates is a good tool to show interest rate history and
23 identify trends. Chart 1 graphs intermediate U.S. treasury rates from July 2002 to July
24 2008.

² Value Line Summary & Index. 7-25-08

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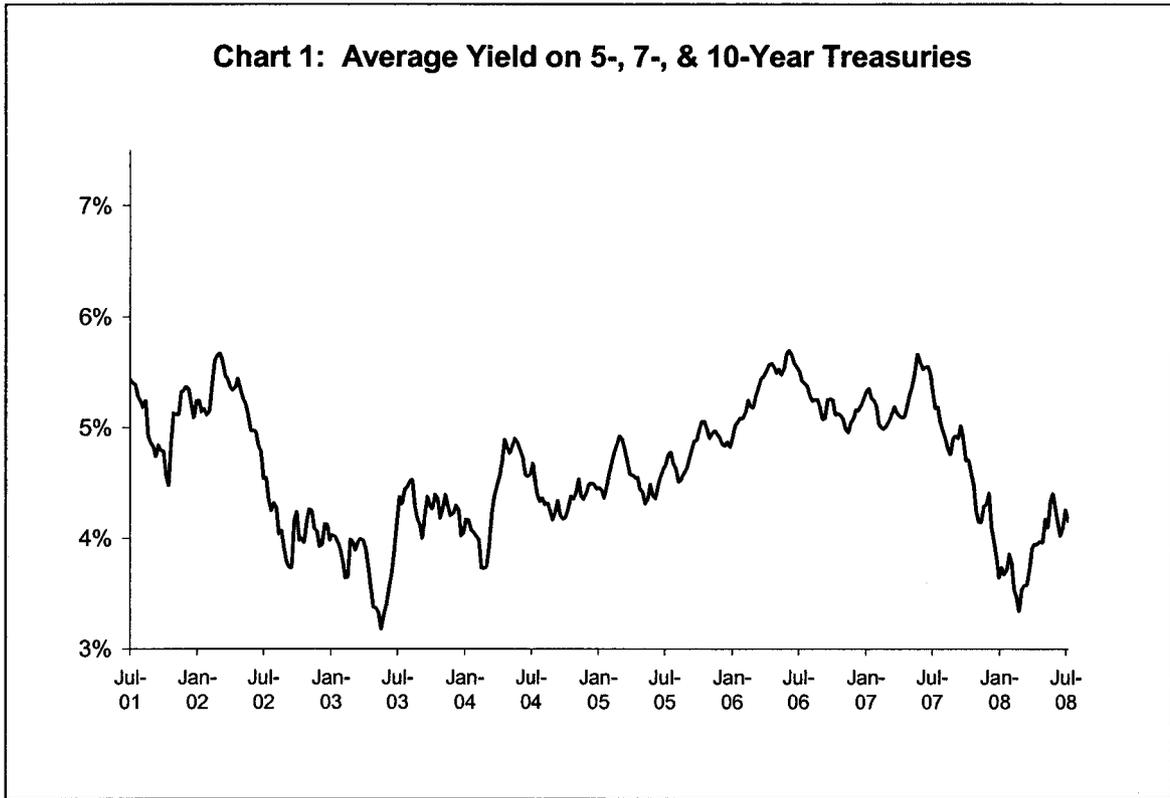
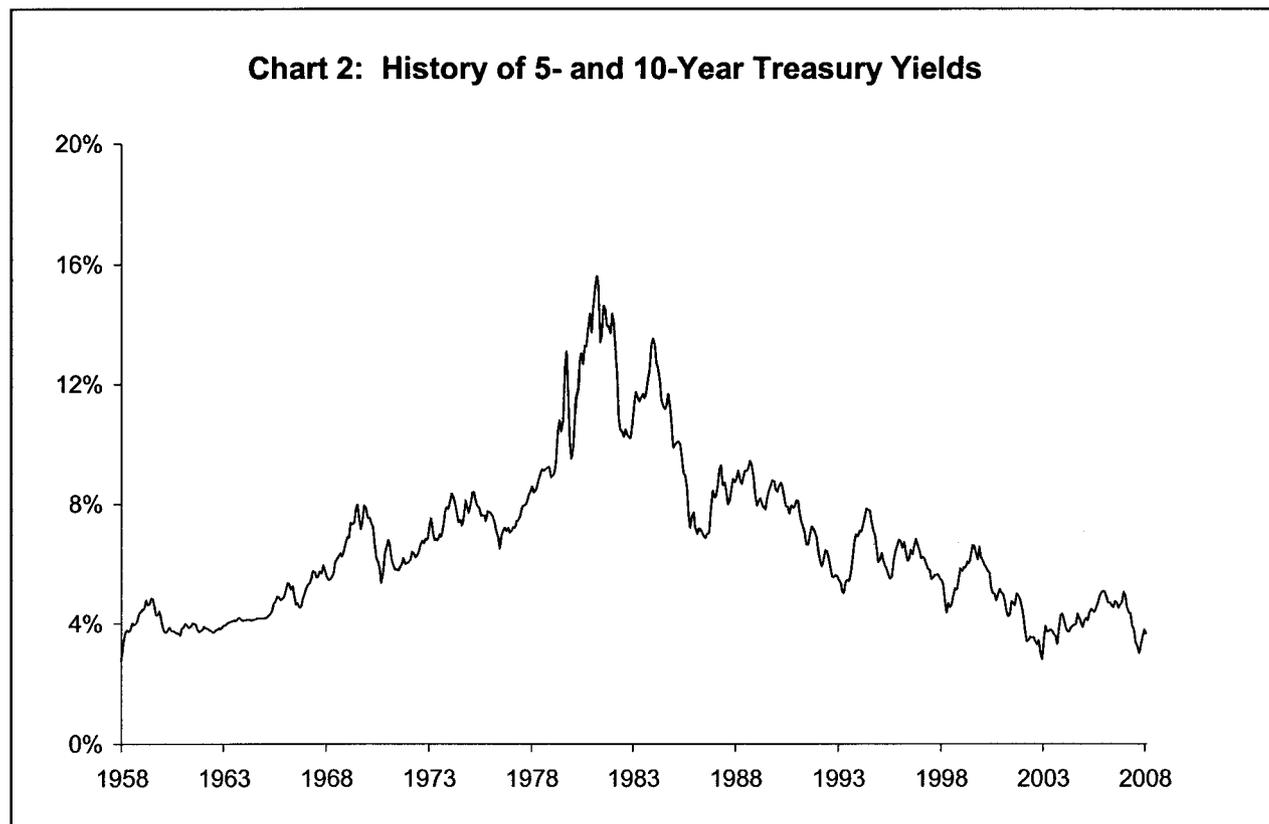


Chart 1 shows that intermediate interest rates trended downward from 2001 to mid-2003; then, trended upward to mid-2006; subsequently, remained relatively steady at about 5 percent to mid-2007; and have declined since then to about 4 percent.

Q. How do current interest rates compare to a longer term history of interest rates, and what does it suggest for capital costs?

A. Chart 2 shows that interest rates have trended downward in the immediate past period of approximately 25 years. It also shows that interest rates over the past 40 years have been higher than currently. The inference from the relationship between interest rates and the cost of equity capital is that current capital costs are low in comparison to historical capital costs.



Source: Federal Reserve

14
15 **Q. Do actual returns represent the cost of equity?**

16 A. No. The cost of equity represents investors' *expected* returns not realized accounting
17 returns.

18
19 **Q. Is there any information available that leads to an understanding of the relationship
20 between the equity returns required for a regulated water utility versus the market?**

21 A. Yes. A comparison of betas, a component of the CAPM discussed in Section V, for the
22 water utility industry and the market provides insight into this relationship. The average
23 beta (1.01)³ for a water utility is about the same than the theoretical average beta for all
24 stocks (1.0). According to the CAPM formula, the cost of equity capital moves in the
25 same direction as beta. Since the beta for the water utility industry is about the same than

³ See Schedule PMC-7

1 the beta for the market, the implication is that the required return on equity for a regulated
2 water utility is approximately the average required return on the market.

3
4 **Risk**

5 **Q. Please define risk.**

6 A. Risk, as it relates to an investment, is generally recognized as the variability or uncertainty
7 of the returns on the investment. Risk is often separated into two components. Those
8 components are market risk (systematic risk) and non-market risk (unique risk).

9
10 **Q. What is market risk?**

11 A. Market risk or systematic risk is the risk that changes in the stock market as a whole will
12 cause changes in the stock price of a particular entity. Market risk is related to the
13 economy-wide perils that affect all business such as inflation, interest rates, and general
14 business cycles. Market risk affects all stocks and it cannot be eliminated by
15 diversification, i.e., it is non-diversifiable. However, the impact on each entity is not
16 necessarily the same. Accordingly, market risk is the only risk that affects the cost of
17 equity.

18
19 **Q. Is there a measure for market risk?**

20 A. Yes. Market risk is measured by the beta. Beta reflects both the business risk and
21 financial risk of an entity.

22
23 **Q. How are business and financial risks defined?**

24 A. Business risk is that risk which is associated with the fluctuation in earnings due to the
25 basic nature of an entity's business. Financial risk is that risk which affects shareholders
26 due to a firm's use of fixed obligation (i.e., debt) financing.

1 **Q. Is the cost of equity affected by both business and financial risk?**

2 A. Yes.

3

4 **Q. What is the relationship between the capital structure of a firm and its financial**
5 **risk?**

6 A. As previously discussed, the relative proportions of short-term debt, long-term debt
7 (including capital leases), preferred stock and common stock used to finance an entity's
8 assets represent its capital structure. Financial risk increases as an entity includes a greater
9 proportion of fixed obligation financing in its capital structure (i.e., as it becomes more
10 leveraged). An increase in financial risk is reflected in the market risk measured by beta
11 resulting in an increase in an entity's cost of equity.

12

13 **Q. How does Chaparral City's financial risk compare to the sample water companies'**
14 **financial risk from the perspective of an investor?**

15 A. From an investor's perspective Chaparral City's capital structure is composed of
16 approximately 24.4 percent debt and 75.6 percent equity. Schedule PMC-4 shows the
17 capital structures of six publicly traded water companies ("sample water companies") as
18 of March 31, 2008, as well as Chaparral City's actual capital structure. As of March 31,
19 2008, the sample water utilities were capitalized with approximately 49.9 percent debt and
20 50.1 percent equity, while Chaparral City's actual capital structure consists of
21 approximately 24.4 percent debt and 75.6 percent equity. Consequently, Chaparral City's
22 shareholders bear less financial risk than the shareholders of the sample water companies.

23

24 **Q. What is non-market risk?**

25 A. Non-market (unique risk) is risk related to an individual entity. There is no correlation
26 among entities for unique risk; accordingly, it can be eliminated through diversification.

1 Specifically, investors can eliminate unique risk by holding a diversified investment
2 portfolio.

3
4 **Q. Is unique risk measured by beta?**

5 A. No. Unique risk is not measured by beta.

6
7 **Q. Is the cost of equity affected by unique risk?**

8 A. No. Since unique or firm-specific risk can be eliminated through diversification, it does
9 not affect the cost of equity capital.

10
11 **Q. What additional return can investors expect to account for unique risk?**

12 A. None. Investors who hold diversified portfolios can eliminate unique risk, and
13 consequently do not require any related additional return. Since investors who choose to
14 be less than fully diversified must compete in the market with fully diversified investors,
15 the former cannot expect to be compensated for unique risk.

16
17 **V. ESTIMATING THE COST OF EQUITY**

18 **Introduction**

19 **Q. Did Staff directly estimate the cost of equity for the Applicant?**

20 A. No. Staff did not directly estimate Chaparral City's cost of equity for two reasons. First,
21 Chaparral City's stock is not publicly traded; therefore, its cost of equity cannot be
22 estimated because the required information is not available to perform the analysis.
23 Second, using an average of a representative sample group reduces the potential for
24 random fluctuations resulting in a more reliable estimate, vis-à-vis relying on a single
25 entity.

1 **Q. What companies did Staff select as proxies or comparables for Chaparral City?**

2 A. Staff selected six publicly traded water utilities shown in Schedule PMC-4. Staff chose
3 these six entities because they derive most of their earnings from regulated operations, and
4 they are currently analyzed by *The Value Line Investment Survey Small and Mid Cap*
5 *Edition* (“*Value Line Small Cap*”) and *The Value Line Investment Survey* (“*Value Line*”)
6 making available the necessary information to perform a cost of capital estimation for
7 Chaparral City.

8
9 **Q. What models did Staff implement to estimate Chaparral City’s cost of equity?**

10 A. The cost of equity is determined by the market; therefore, Staff used two market-based
11 models to estimate the cost of equity for Chaparral City: the discounted cash flow model
12 (“DCF”) and the CAPM.

13
14 **Q. Explain why Staff chose the DCF and CAPM?**

15 A. Staff chose to use the DCF and CAPM because they are widely recognized as appropriate
16 market-based models and have been used extensively to estimate the cost of equity. A
17 description of the DCF and then the CAPM begins immediately below.

18
19 **Discounted Cash Flow Model Analysis**

20 **Q. Please provide a brief summary of the theory underlying use of the DCF to estimate**
21 **the cost of equity.**

22 A. The theory underlying use of the DCF to estimate the cost of capital is that the cost of
23 equity is that discount rate which equates the current market price to all future cash flows
24 expected by investors. That is, the cost of equity is the rate that future expected cash
25 flows (primarily dividends) must be discounted to equal a given market price.

1 In the 1960s, Professor Myron Gordon pioneered the use of the DCF method to estimate
2 the cost of capital for a public utility. The DCF model has become widely used due to its
3 theoretical merit and its simplicity.
4

5 **Q. How is the DCF model applied?**

6 A. The DCF model is applied via a mathematical formula where the current market price, the
7 expected dividend, and projected dividend growth rate are inputs, while the discount rate
8 (cost of equity) is the result. The formula can be applied to a sample of companies that
9 exhibit similar risk to the entity whose cost of equity is being estimated and the results
10 averaged to arrive at an estimate of the cost of equity for the subject entity.
11

12 **Q. Did Staff apply more than one version of the DCF?**

13 A. Yes. Staff applied two versions of the DCF: the constant-growth DCF and the multi-stage
14 or non-constant growth DCF. The constant-growth DCF assumes that an entity will grow
15 indefinitely at the same rate. Alternately, the non-constant growth DCF does not assume
16 one constant, indefinite dividend growth rate.

1 The Constant-Growth DCF

2 **Q. What is the mathematical formula used in Staff's constant-growth DCF analysis?**

3 A. The constant-growth DCF formula used in Staff's analysis is:

Equation 2 :

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

where : K = the cost of equity
 D_1 = the expected annual dividend
 P_0 = the current stock price
 g = the expected infinite annual growth rate of dividends

4

5 Equation 2 assumes that the entity has a constant earnings retention rate and that its
6 earnings are expected to grow at a constant rate. According to Equation 2, a stock with a
7 current market price of \$10 per share, an expected annual dividend of \$0.39 per share and
8 an expected dividend growth rate of 5.0 percent per year has a cost of equity to the entity
9 of 8.9 percent reflected by the sum of the dividend yield ($\$0.39 / \$10 = 3.9$ percent) and the
10 5.0 percent annual dividend growth rate.

11

12 **Q. How did Staff calculate the dividend yield component (D_1/P_0) of the constant-growth**
13 **DCF formula?**

14 A. Staff calculated the yield component of the DCF formula by dividing the expected annual
15 dividend⁴ (D_1) by the spot stock price (P_0) after the close of the market August 6, 2008, as
16 reported by *MSN money*.

⁴ Value Line Summary & Index. 7-25-08

1 **Q. Why did Staff use the spot stock price rather than a historical average stock price to**
2 **calculate the dividend yield component of the DCF formula?**

3 A. Use of the current market stock price (spot stock price) is consistent with finance theory,
4 i.e., the efficient market hypothesis. This hypothesis asserts that the current stock price
5 reflects information investors use to form expectations of future returns. Use of a
6 historical average of stock prices illogically discounts the most recent information in favor
7 of less recent information. The latter is stale and is representative of underlying
8 conditions that may have changed.

9
10 **Q. How did Staff estimate the dividend growth (g) component of the constant-growth**
11 **DCF model represented by Equation 2?**

12 A. The dividend growth component for Staff's constant-growth DCF model is the average of
13 six different estimation methods as shown in Schedule PMC-8. Staff computed both
14 historical and projected growth estimates on dividend-per-share ("DPS")⁵, earnings-per-
15 share ("EPS")⁶ and sustainable growth bases.

16
17 **Q. Why did Staff examine EPS growth to estimate the dividend growth component of**
18 **the constant-growth DCF model?**

19 A. Staff examined EPS growth (both historical and projected) because dividends are
20 dependent on earnings. Dividend distribution in excess of earnings results in capital
21 contraction. Continued capital contraction is not sustainable in the long run, and it is
22 inconsistent with the constant-growth DCF model. Therefore, EPS growth is an
23 appropriate consideration for estimating expected dividend growth.

⁵ Derived from information provided by *Value Line*

⁶ Derived from information provided by *Value Line*

1 **Q. How did Staff estimate historical DPS growth?**

2 A. Staff estimated historical DPS growth by calculating the average rate of growth in DPS of
3 the sample water companies from 1997 to 2007. The results of that calculation are shown
4 in Schedule PMC-5. Staff calculated an average historical DPS growth rate of 2.9 percent
5 for the sample water utilities for the period 1997 to 2007.

6

7 **Q. How did Staff estimate the projected DPS growth?**

8 A. Staff calculated an average of the projected DPS growth rates for the sample water utilities
9 from *Value Line*. The average projected DPS growth rate is 4.2 percent as shown in
10 Schedule PMC-5.

11

12 **Q. How did Staff calculate the historical EPS growth rate?**

13 A. Staff estimated historical EPS growth by calculating the average rate of growth in EPS of
14 the sample water companies from 1997 to 2007. The results of that calculation are shown
15 in Schedule PMC-5. Staff calculated an average historical EPS growth rate of 3.6 percent
16 for the sample water utilities for the period 1997 to 2007.⁷

17

18 **Q. How did Staff estimate the projected EPS growth?**

19 A. Staff calculated an average of the projected EPS growth rates for the sample water utilities
20 from *Value Line*. The average projected EPS growth rate is 8.4 percent as shown in
21 Schedule PMC-5.

⁷ Staff has excluded one data input from the calculation. EPS from the period of 1997 to 2007 for California Water resulted in a negative 2.0 percent EPS growth rate. Staff excluded the negative result of the calculation of average growth in EPS for the sample companies in that period, because negative growth is inconsistent with the DCF model.

1 **Q. How did Staff calculate its historical and projected sustainable growth rates?**

2 A. Staff's historical and projected sustainable growth rates were calculated by adding their
3 respective retention growth rate terms (br) to their respective stock financing growth rate
4 terms (vs) as shown in Schedule PMC-6.

5

6 **Q. What is retention growth?**

7 A. Retention growth is the growth in dividends due to the retention of earnings. Viewed
8 differently, an entity cannot expect to grow dividends if it does not retain any earnings.
9 Retention growth is dependent on the percentage of earnings retained (retention ratio) and
10 the value of earnings. Mathematically, the retention growth rate is the product of the
11 retention ratio and the book/accounting return on equity.

12

13 **Q. What is the formula for the retention growth rate?**

14 A. The retention growth rate formula is:

15

Equation 3 :

$$\text{Retention Growth Rate} = br$$

where : b = the retention ratio (1 – dividend payout ratio)
 r = the accounting/book return on common equity

16

17 **Q. How did Staff calculate the average historical retention growth rate (br) for the**
18 **sample water utilities?**

19 A. First, Staff calculated the retention rate for each of the sample water companies from 1998
20 to 2007. Then Staff calculated the mean of those results. The historical average retention
21 (br) growth for the sample water utilities is 2.9 percent as shown in Schedule PMC-6.

1 **Q. How did Staff determine projected retention growth rate (br) for the sample water**
2 **utilities?**

3 A. Staff used the retention growth projections for the sample water utilities for the period
4 2011 to 2013 from *Value Line*. The projected average retention growth rate for the sample
5 water utilities is 5.5 percent as shown in Schedule PMC-5.

6
7 **Q. When can retention growth provide a reasonable estimate of future dividend**
8 **growth?**

9 A. The retention growth rate is a reasonable estimate of future dividend growth when the
10 retention ratio is reasonably constant and the entity's market price to book value ("market-
11 to-book ratio") is expected to be 1.0. The average retention ratio has been reasonably
12 constant in recent years. However, the market-to-book ratio for the sample water utilities
13 is 2.0, notably higher than 1.0, as shown in Schedule PMC-7.

14
15 **Q. Is there any financial implication of a market-to-book ratio greater than 1.0?**

16 A. Yes. A market-to-book ratio greater than 1.0 implies that investors expect an entity to
17 earn an accounting/book return on its equity that exceeds its cost of equity. The
18 relationship between required returns and expected cash flows is readily observed in the
19 fixed securities market. For example, assume an entity contemplating issuance of bonds
20 with a face value of \$10 million at either 5 percent or 7 percent, and thus, paying annual
21 interest of \$500,000 or \$700,000, respectively. Regardless of investors' required return on
22 similar bonds, investors will be willing to pay more for the bonds if issued at 7 percent
23 than if the bonds are issued at 5 percent. For example, if the current interest rate required
24 by investors is 5 percent, then they would bid \$10 million for the 5 percent bonds and
25 more than \$10 million for the 7 percent bonds. Similarly, if equity investors require a 7
26 percent return and expect an entity to earn accounting/book returns of 11 percent, the

1 market will bid up the price of the entity's stock to provide the required return of 7
2 percent.

3
4 **Q. How has Staff generally recognized a market-to-book ratio exceeding 1.0 in its cost of
5 equity analyses in recent years?**

6 A. First, Staff has assumed that investors expect the market-to-book ratio to remain greater
7 than 1.0. Given that assumption, Staff has added a stock financing growth rate (vs) term
8 to the retention ratio (br) term to calculate its historical and projected sustainable growth
9 rates.

10

11 **Q. Do the historical and projected sustainable growth rates Staff uses to develop its
12 DCF cost of equity in this case continue to include a stock financing growth rate
13 term?**

14 A. Yes.

15

16 **Q. What is stock financing growth?**

17 A. Stock financing growth is the growth in an entity's dividends due to the sale of stock by
18 that entity. Stock financing growth is a concept derived by Myron Gordon and discussed
19 in his book *The Cost of Capital to a Public Utility*.⁸ Stock financing growth is the product
20 of the fraction of the funds raised from the sale of stock that accrues to existing
21 shareholders (v) and the fraction resulting from dividing the funds raised from the sale of
22 stock by the existing common equity (s).

23

24

⁸ Gordon, Myron J. *The Cost of Capital to a Public Utility*. MSU Public Utilities Studies, Michigan, 1974. pp 31-35.

1 **Q. What is the mathematical formula for the stock financing growth rate?**

2 A. The mathematical formula for stock financing growth is:

Equation 4 :

$$\text{Stock Financing Growth} = vs$$

where : v = Fraction of the funds raised from the sale of stock that accrues
to existing shareholders

s = Funds raised from the sale of stock as a fraction of the existing
common equity

3

4 **Q. How is the variable v presented above calculated?**

5 A. Variable v is calculated as follows:

6

Equation 5 :

$$v = 1 - \left(\frac{\text{book value}}{\text{market value}} \right)$$

7

8 For example, assume that a share of stock has a \$40 book value and is selling for \$50.

9 Then, to find the value of v , the formula is applied:

$$v = 1 - \left(\frac{40}{50} \right)$$

10

11 In this example, v is equal to 0.20.

1 **Q. How is the variable s presented above calculated?**

2 A. Variable s is calculated as follows:

3

4

Equation 6:

5

6

$$s = \frac{\text{Funds raised from the issuance of stock}}{\text{Total existing common equity before the issuance}}$$

7

8

9

For example, assume that an entity has \$100 in existing equity, and it sells \$10 of stock.

10

Then, to find the value of s , the formula is applied:

$$s = \left(\frac{10}{100} \right)$$

11

12

In this example, s is equal to 10.0 percent.

13

14

Q. What is the vs term when the market-to-book ratio is equal to 1.0?

15

A. A market-to-book ratio equal to 1.0 reflects that investors expect an entity to earn a book/accounting return on their equity investment equal to the cost of equity. When the market-to-book ratio is equal to 1.0, none of the funds raised from the sale of stock by the entity accrues to the benefit of existing shareholders, i.e., the term v is equal to zero (0.0). Consequently, the vs term is also equal to zero (0.0). When stock financing growth is zero, dividend growth depends solely on the br term.

21

22

Q. What is the effect of the vs term when the market-to-book ratio is greater than 1.0?

23

A. A market-to-book ratio greater than 1.0 reflects that investors expect an entity to earn a book/accounting return on their equity investment greater than the cost of equity.

24

1 Equation 5 shows that when the market-to-book ratio is greater than 1.0 the v term is also
2 greater than zero. The excess by which new shares are issued and sold over book value
3 per share of outstanding stock is a contribution that accrues to existing stockholders in the
4 form of a higher book value. The resulting higher book value leads to higher expected
5 earnings and dividends. Continued growth from the vs term is dependent upon the
6 continued issuance and sale of additional shares at a price that exceeds book value per
7 share.

8
9 **Q. What vs estimate did Staff calculate from its analysis of the sample water utilities?**

10 A. Staff estimated an average stock financing growth of 2.5 percent for the sample water
11 utilities as shown in Schedule PMC-6.

12
13 **Q. What would occur if an entity had a market-to-book ratio greater than 1.0 due to
14 investors expecting earnings to exceed the cost of equity capital and the entity
15 subsequently experienced newly authorized rates equal to its cost of equity capital?**

16 A. There would be downward pressure on the entity's stock price to reflect the change in
17 future expected cash flows because, in theory, the market-to-book ratio should decline to
18 1.0.

19
20 **Q. What is implied by Staff's continued use of the vs term in the historical and projected
21 sustainable growth rates Staff uses to develop its DCF cost of equity in this case?**

22 A. The implication is that there are expectations regarding the market-to-book ratio
23 continuing to exceed 1.0, and that the water utilities will continue to issue and sell stock at
24 prices exceeding book value to provide benefits to existing shareholders. If the authorized
25 ROEs for water utilities are established at the cost of equity capital, the market-to-book
26 ratio should decline to 1.0. If that occurs, the stock financing term would no longer be

1 necessary. If investors expect the average market-to-book ratio of the sample water
2 utilities to fall to 1.0 due to authorized ROEs equaling the cost of equity capital, then
3 Staff's inclusion of the *vs* term in its constant-growth DCF analysis might result in an over
4 estimate of its sustainable dividend growth rate and the resulting DCF ROE estimate.
5

6 **Q. What are Staff's historical and projected sustainable growth rates?**

7 A. Staff's estimated historical sustainable growth rate is 5.4 percent based on an analysis of
8 earnings retention for the sample water companies. Staff's projected sustainable growth
9 rate is 9.0 percent based on retention growth projected by *Value Line*. Schedule PMC-6
10 presents Staff's estimates of the sustainable growth rate.
11

12 **Q. What is Staff's expected infinite annual growth rate in dividends?**

13 A. Staff averaged historical and projected DPS, EPS, and sustainable growth estimates to
14 calculate the expected infinite annual growth rate in dividends. Schedule PMC-8 presents
15 the calculation of the expected infinite annual growth rate in dividends. Staff's estimate is
16 5.6 percent.
17

18 **Q. What is Staff's constant-growth DCF estimate?**

19 A. Staff's constant-growth DCF estimate is 8.8 percent, which is shown in Schedule PMC-3.
20

21 *The Multi-Stage DCF*

22 **Q. Why did Staff implement the multi-stage DCF to estimate Chaparral City's cost of**
23 **equity?**

24 A. As previously stated, Staff used the multi-stage DCF to consider the assumption that
25 dividends may not grow at a constant rate. Staff's multi-stage DCF incorporates two
26 growth rates: a near-term growth rate and a long-term growth rate.

1 **Q. What is the mathematical formula for the multi-stage DCF?**

2 A. The multi-stage DCF formula is shown in the following equation:

Equation 7 :

$$P_0 = \sum_{t=1}^n \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n} \left[\frac{1}{(1+K)} \right]^n$$

Where : P_0 = current stock price
 D_t = dividends expected during stage 1
 K = cost of equity
 n = years of non - constant growth
 D_n = dividend expected in year n
 g_n = constant rate of growth expected after year n

3

4 As mentioned above, Staff incorporated two growth rates. This assumes that investors
5 expect dividends to grow at a one rate in the near-term ("Stage-1 growth") and another
6 rate in the long-term ("Stage-2 growth").

7

8 **Q. What steps did Staff take to implement its multi-stage DCF cost of equity model?**

9 A. First, Staff projected a stream of dividends for each of the sample water utilities using
10 near-term and long-term growth rates. Second, Staff calculated the rate (cost of equity)
11 which equates the present value of the forecasted stream of dividends to the current stock
12 price for each of the sample water utilities. Then, Staff calculated an average of the
13 individual sample company cost of equity estimates.

14

15 **Q. How did Staff calculate near-term (stage-1) growth?**

16 A. Staff projected four years of dividends for each of the sample water utilities. Projections
17 for the first twelve months, to the extent available, were from *Value Line*. The dividend

1 projections for the remainder of stage 1 reflect the average dividend growth rate calculated
2 in Staff's constant growth DCF analysis, or 5.6 percent, as shown in Schedule PMC-8.

3
4 **Q. How did Staff estimate long-term (stage-2) growth?**

5 A. Staff used the arithmetic average rate of growth in gross domestic product ("GDP") from
6 1929 to 2007⁹. Using the GDP growth rate assumes that the water utility industry is
7 expected to grow at the same rate as the overall economy.

8
9 **Q. What is the historical GDP growth rate that Staff used to estimate stage-2 growth?**

10 A. Staff used 6.7 percent to estimate the stage-2 growth rate.

11
12 **Q. What is Staff's multi-stage DCF estimate?**

13 A. Staff's multi-stage DCF estimate is 9.8 percent as shown in Schedule PMC-9.

14
15 **Q. What is Staff's overall DCF estimate?**

16 A. Staff's overall DCF estimate is 9.3 percent. Staff calculated the overall DCF estimate by
17 averaging the constant growth DCF (8.8 percent) and multi-stage DCF (9.8 percent)
18 estimates as shown in Schedule PMC-3.

19
20 **Capital Asset Pricing Model**

21 **Q. Please describe the Capital Asset Pricing Model.**

22 A. The CAPM is concerned with the determination of the prices of capital assets in a
23 competitive market. The CAPM model describes the relationship between a security's
24 investment risk and its market rate of return. This relationship identifies the expected rate
25 of return which investors expect a security to earn so that its market return is comparable

⁹ www.bea.doc.gov

1 with the market returns earned by other securities of similar risk.¹⁰ The CAPM model
2 assumes that investors require a return that is commensurate with the level of risk
3 associated with a particular security. The model also assumes that investors will
4 sufficiently diversify their investments to eliminate any non-systematic or unique risk.¹¹
5 In 1990, Professors Harry Markowitz, William Sharpe, and Merton Miller earned the
6 Nobel Prize in Economic Sciences for their contribution to the development of the CAPM.

7
8 **Q. What sample did Staff use to compute the CAPM to estimate Chaparral City's cost
9 of equity?**

10 A. Staff used the same sample water utilities for its CAPM computation that it used for its
11 DCF analysis.

12
13 **Q. What is the mathematical formula for the CAPM?**

14 A. The mathematical formula for the CAPM is:

15

Equation 8:

$$K = R_f + \beta (R_m - R_f)$$

where: R_f = risk free rate
 R_m = return on market
 β = beta
 $R_m - R_f$ = market risk premium
 K = expected return

16

¹⁰ David C. Purcell; Cost of Capital – A Practitioner's Guide Pg. 6-1.

¹¹ The CAPM makes the following assumptions: 1. single holding period 2. perfect and competitive securities market 3. no transaction costs 4. no restrictions on short selling or borrowing 5. the existence of a risk-free rate 6. homogeneous expectations.

1 The equation shows that the expected return (K) on a risky asset is equal to the risk-free
2 interest rate (“ R_f ”) plus the product of the market risk premium (“ R_p ”) ($R_m - R_f$)
3 multiplied by beta (β) where beta represents the riskiness of the investment relative to the
4 market.

5
6 **Q. What did Staff use as an estimate for the risk-free rate of interest in its historical**
7 **market risk premium CAPM method?**

8 A. Staff calculated an estimate of the risk-free rate of interest by averaging three (five-,
9 seven- and ten-year) intermediate-term U.S. Treasury securities’ spot rates on August 6,
10 2008, to correspond with the date Staff selected the sample companies’ stock spot market
11 prices. Staff’s estimated risk-free rate for use in its historical market risk premium CAPM
12 method is 3.7 percent¹² as shown in Schedule PMC-3.

13
14 **Q. What did Staff use as an estimate for the risk-free rate of interest in its current**
15 **market risk premium CAPM method?**

16 A. Staff used the August 6, 2008, spot rate on 30-year U.S. Treasury notes as presented in the
17 U.S. Treasury Department website.

18
19 **Q. Why do U.S. Treasury security spot rates provide an appropriate representation of**
20 **the risk-free rate?**

21 A. U.S. Treasury spot rates represent a good estimate of a risk free rate because they have
22 virtually no chance of default and are backed by the U.S. Government. Besides, they are
23 verifiable, objective and readily available.

¹² Average yield on 5-, 7-, and 10-year Treasury notes according to the U.S. Treasury Department website at www.ustreas.gov: 3.30%, 3.62% and 4.06%, respectively.

1 **Q. What does beta measure?**

2 A. Beta measures the systematic risk of a particular entity's stock relative to the market's
3 beta which is 1.0. Systematic risk is the only risk that cannot be diversified away;
4 therefore, it is the only risk that is relevant when estimating an entity's required return.
5 Since the market's beta is 1.0, a security with a beta higher than 1.0 is riskier than the
6 market and a security with a beta lower than 1.0 is less risky than the market.

7
8 **Q. How did Staff estimate a proxy for Chaparral City's beta?**

9 A. Staff averaged the *Value Line* betas of the sample water utilities and used this average as a
10 proxy for Chaparral City's beta. Schedule PMC-7 shows the *Value Line* betas for each of
11 the sample water utilities. Staff's estimated beta for Chaparral City is 1.01.

12
13 **Q. What is a descriptive explanation for the expected market risk premium ($R_m - R_f$)?**

14 A. Descriptively, the expected market risk premium is the expected return on all common
15 stocks minus the risk free rate. It is the additional amount of return over the risk-free rate
16 that investors expect to receive from investing in the market (or an average-risk security).
17 Staff used two approaches to calculate the market risk premium: the historical market risk
18 premium approach and the current market risk premium approach.

19
20 **Q. What is the historical market risk premium estimate approach used by Staff?**

21 A. The historical market risk premium estimate approach assumes that if the long-run
22 average market risk premium is used consistently to estimate the expected market risk
23 premium, it should, on average, yield the correct premium. In this approach, Staff
24 assumed that the average historical market risk premium estimate is a reasonable estimate
25 of the expected market risk premium.

1 **Q. How did Staff calculate the historical market risk premium?**

2 A. Staff calculated the historical market risk premium by averaging the historical arithmetic
3 differences between the S&P 500 and the intermediate-term government bond income
4 returns published in Morningstar's¹³ *Ibbotson Stocks, Bonds, Bills, and Inflation 2008*
5 *Classic Yearbook* for the period 1926-2007. Morningstar calculated the historical risk
6 premium by averaging the historical arithmetic differences between the S&P 500 and the
7 intermediate-term government bond income returns. Staff's historical market risk
8 premium estimate is 7.5 percent as shown in Schedule PMC-3.

9
10 **Q. How did Staff calculate the current market risk premium estimate?**

11 A. Staff first derived a DCF ROE of 17.3 (2.3 + 15.02¹⁴) percent using the expected dividend
12 yield (2.3 percent over the next twelve months) and the annual per share growth rate
13 (15.02 percent) that *Value Line* projects for all dividend-paying stocks under its review
14 (August 15, 2008) as inputs. Then, Staff used the DCF-derived ROE (17.3 percent), the
15 current long-term risk-free rate (4.7 percent 30-year Treasury note) and the market's
16 average beta of 1.0 as inputs into equation 8 to solve for the implied current market risk
17 premium of 12.6 percent.¹⁵

18
19 **Q. What is the range of Staff's expected market risk premium estimates?**

20 A. Staff's market risk premium estimates range from 7.5 percent to 12.6 percent.

¹³ Formerly published by Ibbotson Associates.

¹⁴ The three to five year price appreciation is 75%. $1.75^{0.25} - 1 = 15.02\%$

¹⁵ $17.32\% = 4.68 + (1) (12.64)$

1 **Q. What is Staff's overall CAPM estimate?**

2 A. Staff's overall CAPM estimate is 14.3 percent. Staff's overall CAPM estimate is the
3 average of the historical market risk premium CAPM (11.2 percent) and the current
4 market risk premium CAPM (17.4 percent) estimates as shown in Schedule PMC-3.

5

6 **VI. SUMMARY OF STAFF'S COST OF EQUITY ANALYSIS**

7 **Q. What is the result of Staff's constant-growth DCF analysis to estimate of the cost of**
8 **equity to the sample water utilities?**

9 A. Schedule PMC-3 shows the result of Staff's constant-growth DCF analysis. The result of
10 Staff's constant-growth DCF analysis is as follows:

11 $k = \text{Dividend yield} + \text{Expected dividend growth}$

12 $k = 3.2\% + 5.6\%$

13

14 $k = 8.8\%$

15

16 Staff's constant-growth DCF estimate of the cost of equity to the sample water utilities is
17 8.8 percent.

1 **Q. What is the result of Staff's multi-stage DCF analysis to estimate the cost of equity**
2 **for the sample utilities?**

3 A. Schedule PMC-9 shows the result of Staff's multi-stage DCF analysis. The result of
4 Staff's multi-stage DCF analysis is:

5	Company	Equity Cost
6		Estimate (k)
7	American States Water	9.4%
8	California Water	9.8%
9	Aqua America	9.8%
10	Connecticut Water	10.2%
11	Middlesex Water	10.7%
12	SJW Corp	<u>9.2%</u>
13	Average	9.8%
14		
15		

16
17 Staff's multi-stage DCF estimate of the cost of equity for the sample water utilities is 9.8
18 percent.

19
20 **Q. What is Staff's overall DCF estimate of the cost of equity for the sample utilities?**

21 A. Staff's overall DCF estimate of the cost of equity for the sample utilities is 9.3 percent.
22 Staff's overall DCF estimate was calculated by averaging Staff's constant growth DCF
23 (8.8 percent) and Staff's multi-stage DCF (9.8 percent) estimates as shown in Schedule
24 PMC-3.

1 **Q. What is the result of Staff's historical market risk premium CAPM analysis to**
2 **estimate of the cost of equity for the sample utilities?**

3 A. Schedule PMC-3 shows the result of Staff's CAPM analysis using the historical risk
4 premium estimate. The result is as follows:

5

$$K = R_f + \beta (R_m - R_f)$$

6

$$K = 3.7\% + 1.01 * 7.5\%$$

7

$$K = 11.2\%$$

8

9

10 Staff's CAPM estimate (using the historical market risk premium) of the cost of equity to
11 the sample water utilities is 11.2 percent.

12

13 **Q. What is the result of Staff's current market risk premium CAPM analysis to**
14 **estimate the cost of equity for the sample utilities?**

15 A. Schedule PMC-3 shows the result of Staff's CAPM Analysis using the current market risk
16 premium estimate. The result is:

17

$$K = R_f + \beta (R_m - R_f)$$

18

$$K = 4.7\% + 1.01 * 12.6\%$$

19

$$K = 17.4\%$$

20

21

22 Staff's CAPM estimate (using the current market risk premium) of the cost of equity to the
23 sample water utilities is 17.4 percent.

24

1 **Q. What is Staff's overall CAPM estimate of the cost of equity for the sample utilities?**

2 A. Staff's overall CAPM estimate for the sample utilities is 14.3 percent. Staff's overall
3 CAPM estimate is the average of the historical market risk premium CAPM (11.2 percent)
4 and the current market risk premium CAPM (17.4 percent) estimates as shown in
5 Schedule PMC-3.

6

7 **Q. Please summarize the results of Staff's cost of equity analysis for the sample utilities.**

8 A. The following table shows the results of Staff's cost of equity analysis:

9

10

Table 4

Method	Estimate
Average DCF Estimate	9.3%
Average CAPM Estimate	14.3%
Overall Average	11.8%

11

12 Staff's average estimate of the cost of equity to the sample water utilities is 11.8 percent.

13

14 **VII. FINAL COST OF EQUITY ESTIMATES**

15 **Q. Has Staff quantified the effect of the difference in financial risk between Chaparral**
16 **City and the sample water utilities on its cost of equity?**

17 A. Yes. Staff used the methodology developed by Professor Robert Hamada of the
18 University of Chicago, which incorporates capital structure theory with the CAPM, to
19 estimate the effect of Chaparral City's capital structure on its cost of equity. Staff
20 calculated a financial risk adjustment for Chaparral City of negative 180 basis points.
21 Staff estimated a 10.0 percent cost of equity for Chaparral City by addition of the financial
22 risk adjustment to Staff's average estimate of the cost of equity to the sample water
23 utilities.

1 The calculation is as follows:

2 Equation 9:

3 Adjusted ROE = Overall average estimated ROE + Financial risk adjustment

4 Adjusted ROE for Chaparral City = 11.8% + (- 1.8%)

5 Adjusted ROE for Chaparral City = 10.0%

6
7
8 **Q. What is Staff's ROE estimate for Chaparral City?**

9 A. Staff determined a ROE estimate of 10.0 percent for the Applicant based on cost of equity
10 estimates for the sample companies ranging from 9.3 percent for the DCF to 14.3 percent
11 for the CAPM and a 180 basis point downward adjustment for the relatively smaller
12 financial risk in Chaparral City's capital structure compared to the sample companies.

13
14 **VIII. FINAL WEIGHTED AVERAGE COST OF CAPITAL**

15 **Q. What weighted average cost of capital did Staff determine for Chaparral City?**

16 A. Staff determined a 8.8 percent WACC for the Applicant as shown in Schedule PMC-1 and
17 Table 5 below:

18
19 **Table 5**

	Weight	Cost	Weighted Cost
Long-term Debt	24.4%	5.0%	1.2%
Common Equity	75.6%	10.0%	<u>7.6%</u>
Weighted Average Cost of Capital			<u>8.8%</u>

1 **IX. FAIR VALUE RATE OF RETURN (“FVROR”) RECOMMENDATION**

2 **Q. What FVROR does the Company propose in this proceeding?**

3 A. The Company proposes a 9.32 percent FVROR, which equates its proposed WACC. The
4 Company continues to propose that the WACC be multiplied by the FVRB in order to
5 calculate its operating margin.

6
7 **Q. What fair value rate of return does Staff recommend for Chaparral City?**

8 A. Staff recommends a 7.6 percent FVROR for the Applicant as shown in Schedule PMC-2.
9

10 **Q. How did Staff calculate the FVROR?**

11 A. Staff’s method for calculating the FVROR is discussed in the Direct Testimony of Mr.
12 Gordon L. Fox. In short, the FVROR is equal to the WACC less an Inflation
13 Adjustment/Accretion Return, as discussed below.

14
15 **Q. How did Staff calculate the Inflation Adjustment/Accretion Return?**

16 A. Staff first calculated the difference between the treasury yields for 20-year securities, and
17 the treasury real yields for 20-year securities, to estimate the additional return required by
18 investors due to inflation for a long-term (20-year) horizon (Inflation
19 Adjustment/Accretion Return).¹⁶ Then, Staff multiplied the Accretion return by a 50
20 percent factor.¹⁷ Finally, Staff calculated the FVROR by subtracting the modified
21 Inflation Adjustment/Accretion Factor from the WACC.

22

¹⁶ As of August 8, 2008, 20-year Treasury yield (4.71%) minus 20-year Treasury real yield (2.25%) equals the return required due to inflation (2.46%) according to the U.S. Treasury Department website at www.ustreas.gov.

¹⁷ See further, Direct Testimony of Mr. Gordon L. Fox.

1 **Q. Why did Staff use U.S. Treasury securities' spot rates rather than a historical**
2 **average and/or forecasted rates to estimate the Inflation Adjustment/Accretion**
3 **Return?**

4 A. Staff used U.S. Treasury securities' spot rates on August 6, 2008, to correspond with the
5 date Staff selected the sample companies' stock spot market prices. Use of the current
6 bond yield is consistent with finance theory, i.e., the efficient market hypothesis. Further,
7 as explained in Section X of this testimony, the best estimate of tomorrow's yield is
8 simply today's yield.

9
10 **Q. If Staff had adjusted only the cost of equity for inflation, as implemented in Decision**
11 **No. 70441, what would have been the resulting FVROR?**

12 A. In that instance, the resulting FVROR would be 6.9 percent as illustrated in Table 7,
13 below.

14
15 Table 7

Description	Weight (%)	Cost	Weighted Cost
Debt	24.4%	5.0%	1.2%
Common Equity	75.6%	7.5% ¹⁸	5.7%
		FVROR	6.9%

16
17 **X. STAFF RESPONSE TO THE APPLICANT'S COST OF CAPITAL WITNESS**

18 **Q. Please summarize Bourassa's analyses and recommendations.**

19 A. Mr. Bourassa proposes a 9.32 percent WACC/FVROR based on a capital structure
20 consisting of 23.44 percent debt (at 5.5 percent) and 76.56 percent common equity (at 10.5
21 percent.

22

¹⁸ Cost of Equity (10%) minus inflation adjustment (2.5%).

1 Mr. Bourassa's proposed 10.5 percent ROE is based on analyses for single and multi-stage
2 DCF models, as well as historical and current market risk premium CAPM for the same
3 sample of water companies selected by Staff.

4
5 Mr. Bourassa's ROE results are summarized below:

	<u>Range</u>	<u>Midpoint</u>
6 DCF Constant Growth	8.1% - 13.6%	10.9%
7 Multi-Stage Growth Model	9.3% - 12.4%	10.9%
8 CAPM	11.4% - 11.5%	11.5%

9
10
11 **Q. Does Staff have any comments on Mr. Bourassa's proposed capital structure?**

12 A. Yes. Mr. Bourassa's capital structure is out of date. Staff used in its analysis Chaparral's
13 capital structure as of June 31, 2008. Using an updated capital structure provides a more
14 accurate measurement of the Company's capitalization and cost of debt.

15
16 **Q. Does Staff have any comments on Mr. Bourassa's constant growth DCF estimates?**

17 A. Yes. Mr. Bourassa relies solely on analysts' forecasts to estimate growth in his constant
18 growth DCF estimates. Analysts' forecasts are known to be overly optimistic. Sole use of
19 analysts' forecasts to calculate the growth in dividends ("g") causes inflated growth, and
20 consequently, inflated cost of equity estimates. Furthermore, sole reliance on analysts'
21 forecasts of earnings growth to forecast DPS is inappropriate because it assumes that
22 investors do not look at other relevant information such as past dividend and earnings
23 growth. In addition, the Commission has previously recognized that analysts' forecasts
24 are overstated.¹⁹

25

¹⁹ Decision No. 66849, Page 22.

1 **Q. How does Staff respond to Mr. Bourassa's statement, "To the extent that past results**
2 **provide useful indications of future growth prospects, analysts' forecasts would**
3 **already incorporate that information."?**²⁰

4 A. The appropriate growth rate to use in the DCF formula is the dividend growth rate
5 expected by investors, not analysts. Therefore, while analysts may have considered
6 historical measures of growth, it is reasonable to assume that investors also rely on past
7 growth. This calls for consideration of both analysts' forecasts as well as past growth.

8
9 **Q. Does Staff have any comments on the study cited by Mr. Bourassa, conducted by**
10 **David A. Gordon, Myron J. Gordon and Lawrence I. Gould**²¹ **that Mr. Bourassa**
11 **asserts support exclusive use of analysts' forecasts in the DCF model?**

12 A. Yes. The article cited by Mr. Bourassa does not conclude that investors ignore past
13 growth when pricing stocks; therefore, it does not support the sole use of analysts' forecast
14 in the DCF model.

15
16 **Q. Does Professor Gordon recommend relying exclusively on analysts' forecasts as the**
17 **measure of growth in the DCF model?**

18 A. No. Subsequent to the study cited by Mr. Bourassa, Professor Gordon provided the
19 keynote address at the 30th Financial Forum of the Society of Utility and Regulatory
20 Financial Analysts, in which he stated:

21 "I understand that companies coming before regulatory agencies
22 liked and advocated the high growth rates in security analyst
23 forecasts for arriving at their cost of equity capital. Instead of
24 rejecting these forecasts, I understand that FERC and other
25 regulatory agencies have decided to compromise with them. In
26 particular, in arriving at the cost of equity for company X, the
27 FERC has decided to arrive at the growth rate in my dividend

²⁰ Bourassa's Direct Testimony, Page 30, lines 6 - 8.

²¹ Gordon, David A., Myron J. Gordon, Lawrence I. Gould. "Choice Among Methods of Estimating Share Yield." *The Journal of Portfolio Management*. Spring 1989. pp. 50-55. (Mr. Bourassa's Direct Testimony, page 30.)

1 growth model by using an average of two growth rates. One is
2 security analysts forecast of the short-term growth rate in earnings
3 provided by IBES or Value Line and the other a more long run and
4 typically lower figure such as the past growth in GNP.

5 Such an average can be questioned on various grounds. However,
6 my judgment is that between the short-term forecast alone and its
7 average with the past growth rate in GNP, *the latter may be a more*
8 *reasonable figure.*²² (Emphasis added)

9 Simply stated, Professor Gordon would temper the typically higher
10 analysts' forecasts with the typically lower GNP growth rate by averaging
11 the two.

12
13 **Q. Can Staff provide further evidence to support its assertion that exclusive reliance on**
14 **analysts' forecasts of earnings growth in the DCF model would result in inflated cost**
15 **of equity estimates?**

16 A. Yes. Experts in the financial community have commented on the optimism in analysts'
17 forecasts of future earnings.²³ A study cited by David Dreman in his book *Contrarian*
18 *Investment Strategies: The Next Generation* found that *Value Line* analysts were
19 optimistic in their forecasts by 9 percent annually, on average for the 1987 – 1989 period.
20 Another study conducted by David Dreman found that between 1982 and 1997, analysts
21 overestimated the growth of earnings of companies in the S&P 500 by 188 percent.

22 In addition, Burton Malkiel of Princeton University studied the one-year and five-year
23 earnings forecasts made by some of the most respected names in the investment business.
24 His results showed that the five-year estimates of professional analysts, when compared

²² Gordon, M. J. Keynote Address at the 30th Financial Forum of the Society of Utility and Regulatory Financial Analysts. May 8, 1998. Transparency 3.

²³ See Siegel, Jeremy J. *Stocks for the Long Run*. 2002. McGraw-Hill. New York. p. 100. Dreman, David. *Contrarian Investment Strategies: The Next Generation*. 1998. Simon & Schuster. New York. pp. 97-98. Malkiel, Burton G. *A Random Walk Down Wall Street*. 2003. W.W. Norton & Co. New York. p. 175.

1 with actual earnings growth rates, were much worse than the predictions from several
2 naïve forecasting models, such as the long-run rate of growth of national income. In the
3 following excerpt from Professor Malkiel's book *A Random Walk Down Wall Street*, he
4 discusses the results of his study:

5 When confronted with the poor record of their five-year growth
6 estimates, *the security analysts honestly, if sheepishly, admitted*
7 *that five years ahead is really too far in advance to make reliable*
8 *projections.* They protested that although long-term projections
9 are admittedly important, they really ought to be judged on their
10 ability to project earnings changes one year ahead. Believe it or
11 not, it turned out that their one-year forecasts were even worse than
12 their five-year projections.

13 The analysts fought back gamely. They complained that it was
14 unfair to judge their performance on a wide cross section of
15 industries, because earnings for high-tech firms and various
16 "cyclical" companies are notoriously hard to forecast. "*Try us on*
17 *utilities,*" *one analyst confidently asserted. At the time they were*
18 *considered among the most stable group of companies because of*
19 *government regulation. So we tried it and they didn't like it. Even*
20 *the forecasts for the stable utilities were far off the mark.*²⁴
21 (Emphasis added)

²⁴ Malkiel, Burton G. *A Random Walk Down Wall Street*. 2003. W.W. Norton & Co. New York. p. 175

1 **Q. Does Staff have any concerns regarding Mr. Bourassa's omission of historical and**
2 **forecasted DPS in his DCF constant growth estimates?**

3 A. Yes. The omission of DPS growth in a DCF analysis implies that investors do not take
4 into account dividend growth when pricing stocks. As previously mentioned on Section V
5 of this testimony, the current market price of a stock is equal to the present value of all
6 expected future dividends, not future earnings. Professor Jeremy Siegel from the Wharton
7 School of Finance stated:

8
9 Note that the price of the stock is always equal to the present value
10 of all future *dividends* and not the present value of future earnings.
11 Earnings not paid to investors can have value only if they are paid
12 as dividends or other cash disbursements at a later date. Valuing
13 stock as the present discounted value of future earnings is
14 manifestly wrong and greatly overstates the value of the firm.²⁵
15

16 In other words, investors pay attention to earnings as long as they are paid as dividends.
17 Earnings can easily be overstated, but if investors do not receive dividends or other cash
18 disbursement at a later date, then such earnings are meaningless.

19
20 **Q. Does Staff have any comments on Mr. Bourassa's statement: "More recent data**
21 **suggest the 10-year Treasury Bond and 30 year Treasury bond yields are on the rise?**
22 **On June 13, 2007, for example, the 10-year Treasury bond and 30 year Treasury**
23 **bond yields were 5.20 percent and 5.28 percent, respectively."**²⁶

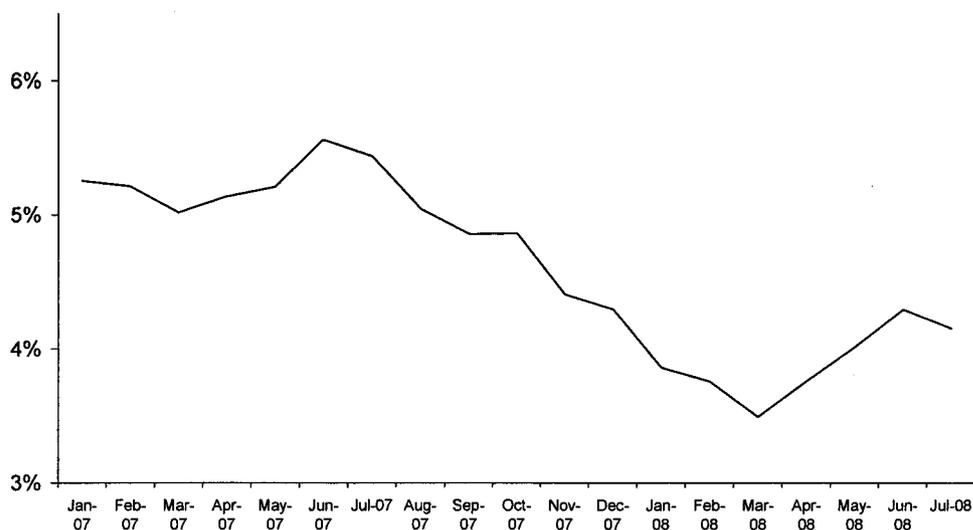
24 A. Yes. Mr. Bourassa's correctly points out that there *was* an upward trend in bond yields
25 until mid-2007. However, Mr. Bourassa erroneously assumes that such upward trend will
26 continue. As evident in Chart 3 (below) the average yield on 10-year and 30-year
27 treasuries has decreased since then.

²⁵ Siegel, Jeremy J. *Stocks for the Long Run*. 2002. McGraw-Hill. New York. P. 93.

²⁶ Mr. Bourassa's Direct Testimony, page 9, lines 14 - 17.

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Chart 3: Average Yield on 10 & 30-Year Treasuries



It is important to consider that analysts who forecast future rates do not have any more information about the future than what is already reflected in the current rate.

According to Nancy L. Jacob of the University of Washington and R. Richardson Pettit of the University of Houston:

While we know something about many of the factors that determine interest rates (money supply, the demand for loanable funds, etc.) little evidence exists to suggest these factors can be predicted with enough accuracy to successfully predict the rates.²⁷

As previously stated, the best forecast of tomorrow's yield is simply today's yield. "Professional forecasts of financial variables are notoriously unreliable and appear to be

²⁷ Jacob, Nancy L., R. Richardson Pettit. *Investments*. Irwin. Homewood, Ill. 1988. p. 499.

1 getting worse, not better, over time.” “The direction of interest rates [bond yields] cannot
2 be predicted any better than by the flip of a coin.”²⁸

3
4 **Q. What comment does Staff have in response to the Company’s assertion that Staff’s
5 current market risk premium is extremely volatile?**

6 A. Changes in Staffs current market risk premium results over time are a reflection of
7 changes in the market’s current risk premium rather than instability in Staff’s method.

8
9 **Q. Should DPS growth be considered in a DCF analysis?**

10 A. Yes. The omission of historical DPS growth in a DCF analysis implies that investors do
11 not take into account dividend growth when pricing stocks. The current market price of a
12 stock is equal to the present value of all expected future dividends, not future earnings.

13
14 **XI. CONCLUSION**

15 **Q. Please summarize Staff’s recommendations.**

16 A. Staff recommends that the Commission adopt an 8.8 percent WACC for Chaparral City in
17 this proceeding based on capital structure composed of 24.4 percent debt (at 5.0 percent)
18 and 75.6 percent equity (at 10.0 percent).

19
20 Staff further recommends that the Commission adopt a 7.6 percent FVROR for the
21 Applicant, reflecting a 1.2 percent inflation deduction (Accretion Return) from the WACC
22 as shown in Schedule PMC-2.

23
24 **Q. Does this conclude your direct testimony?**

25 A. Yes, it does.

²⁸ Kihm, Steven G. “The Superiority of Spot Yields in Estimating Cost of Capital.” *Public Utilities Fortnightly*.
February 1, 1996. pp. 42-45.

Chaparral City Water Company, Inc.
 Capital Structure
 And Weighted Average Cost of Capital
 Staff Recommended and Company Proposed

[A] <u>Description</u>	[B] <u>Weight (%)</u>	[C] <u>Cost</u>	[D] <u>Weighted Cost</u>
Staff Recommended Structure			
Debt	24.4%	5.0%	1.2%
Common Equity	75.6%	10.0%	7.6%
Weighted Average Cost of Capital			8.8%
Company Proposed Structure			
Debt	23.4%	5.5%	1.3%
Common Equity	76.6%	10.5%	8.0%
Weighted Average Cost of Capital			9.3%

[D] : [B] x [C]
 Supporting Schedules: PMC-3 and PMC-4.

Chaparral City Water Company, Inc.
 Inflation Adjustment (Accretion Return) and
 Resulting Fair Value Rate of Return

Description	
Weighted Average Cost of Capital	8.8% ¹
Minus: Modified Inflation Adjustment/Accretion Return	<u>-1.2% ²</u>
Fair Value Rate of Return	<u>7.6%</u>

1: Schedule PMC-1

2: Calculation of Modified Inflation Adjustment/Accretion Return:

20-year Treasury Yield ³	4.7%
20-year Treasury Real Yield ³	<u>2.3%</u>
Return Required by Investors due to Inflation (Accretion Return)	<u>2.5%</u>
Times a 50% Factor	0.5
Modified Inflation Adjustment/Accretion Return	1.2% ⁴

3: <http://www.ustreas.gov> as of 8/6/08.

4: Direct Testimony of Mr. Gordon L. Fox.

Chaparral City Water Company, Inc.
 Final Cost of Equity Estimates
 Sample Water Utilities

[A]	[B]	[C]	[D]	[E]
DCF Method				
Constant Growth DCF Estimate		D/P_n^1	+	g^2
Multi-Stage DCF Estimate		3.2%	+	5.6%
Average of DCF Estimates				9.3%
CAPM Method				
Historical Market Risk Premium ³	R_f	+	β^5	\times (R_p)
Current Market Risk Premium ⁴	3.7%	+	1.01	\times 7.5% ⁶
Average of CAPM Estimates	4.7%	+	1.01	\times 12.6% ⁷
				14.3%
				11.8%
			Average	11.8%
			Financial risk adjustment	-1.8%
			Total	10.0%

1 MSN Money and Value Line
 2 Schedule PMC-8
 3 Risk-free rate (Rf) for 5, 7, and 10 year Treasury rates from the U.S. Treasury Department at www.ustreas.gov
 4 Risk-free rate (Rf) for 30 Year Treasury bond rate from the U.S. Treasury Department at www.ustreas.gov
 5 Value Line
 6 Historical Market Risk Premium (Rp) from Ibbotson Associates S&P 500 2008 Yearbook
 7 Testimony

Chaparral City Water Company, Inc.
Average Capital Structure of Sample Water Utilities

[A]	[B]	[C]	[D]
<u>Company</u>	<u>Debt</u>	<u>Common Equity</u>	<u>Total</u>
American States Water	50.9%	49.1%	100.0%
California Water	43.8%	56.2%	100.0%
Aqua America	55.0%	45.0%	100.0%
Connecticut Water	50.5%	49.5%	100.0%
Middlesex Water	51.5%	48.5%	100.0%
SJW Corp	<u>47.6%</u>	<u>52.4%</u>	<u>100.0%</u>
Average Sample Water Utilities	49.9%	50.1%	100.0%
Chaparral City Water Company, Inc.	24.4%	75.6%	100.0%

Source:
Sample Water Companies from Value Line

Chaparral City Water Company, Inc.
 Growth in Earnings and Dividends
 Sample Water Utilities

[A] Company	[B] Dividends Per Share 1997 to 2007 <u>DPS¹</u>	[C] Dividends Per Share Projected <u>DPS¹</u>	[D] Earnings Per Share 1997 to 2007 <u>EPS¹</u>	[E] Earnings Per Share Projected <u>EPS¹</u>
American States Water	1.5%	4.6%	4.5%	4.8%
California Water	0.9%	0.8%	-2.0%	9.4%
Aqua America	7.2%	7.2%	7.6%	11.1%
Connecticut Water	1.2%	No Projection	0.5%	No Projection
Middlesex Water	1.9%	No Projection	2.6%	No Projection
SJW Corp	<u>4.8%</u>	<u>No Projection</u>	<u>2.7%</u>	<u>No Projection</u>
Average Sample Water Utilities	2.9%	4.2%	3.6%	8.4%

¹ Value Line

² Note that the figure -2.0% has been excluded from the calculation. This has been done as negative growth is inconsistent with the DCF model.

Chaparral City Water Company, Inc.
Sustainable Growth
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]
Company	Retention Growth 1998 to 2007 br	Retention Growth Projected br	Stock Financing Growth vs	Sustainable Growth 1998 to 2007 br + vs	Sustainable Growth Projected br + vs
American States Water	2.8%	5.7%	1.6%	4.5%	7.4%
California Water	1.8%	5.5%	4.5%	6.4%	10.0%
Aqua America	4.5%	5.3%	4.3%	8.8%	9.6%
Connecticut Water	2.6%	No Projection	1.2%	3.8%	No Projection
Middlesex Water	1.3%	No Projection	3.5%	4.7%	No Projection
SJW Corp	4.4%	No Projection	0.1%	4.5%	No Projection
Average Sample Water Utilities	2.9%	5.5%	2.5%	5.4%	9.0%

[B]: Value Line
 [C]: Value Line
 [D]: Value Line and MSN Money
 [E]: [B]+[D]
 [F]: [C]+[D]

Chaparral City Water Company, Inc.
Selected Financial Data of Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]	[G]
Company	Symbol	Spot Price 8/6/2008	Book Value	Mkt To Book	Value Line Beta β	Raw Beta β_{raw}
American States Water	AWR	37.70	17.62	2.1	1.05	1.04
California Water	CWT	38.16	18.94	2.0	1.15	1.19
Aqua America	WTR	16.48	7.66	2.2	0.95	0.90
Connecticut Water	CTWS	25.50	12.40	2.1	0.85	0.75
Middlesex Water	MSEX	17.88	10.31	1.7	0.90	0.82
SJW Corp	SJW	26.23	13.35	2.0	1.15	1.19
Average				2.0	1.01	0.98

[C]: Msn Money

[D]: Value Line

[E]: [C] / [D]

[F]: Value Line

[G]: (-0.35 + [F]) / 0.67

Chaparral City Water Company, Inc.
 Calculation of Expected Infinite Annual Growth in Dividends
 Sample Water Utilities

[A]	[B]
<u>Description</u>	<u>g</u>
DPS Growth - Historical ¹	2.9%
DPS Growth - Projected ¹	4.2%
EPS Growth - Historical ¹	3.6%
EPS Growth - Projected ¹	8.4%
Sustainable Growth - Historical ²	5.4%
<u>Sustainable Growth - Projected²</u>	<u>9.0%</u>
Average	5.6%

¹ Schedule PMC-5

² Schedule PMC-6

Chaparral City Water Company, Inc.
Multi-Stage DCF Estimates
Sample Water Utilities

[A] Company	[B] Current Mkt. Price (P ₀) ¹ 8/6/2008	[C] d ₁	[D] d ₂	[E] d ₃	[F] d ₄	[H] Stage 2 growth ³ (g _n)	[I] Equity Cost Estimate (K) ⁴
American States Water	37.7	1.04	1.10	1.16	1.23	6.7%	9.4%
California Water	38.2	1.20	1.27	1.34	1.42	6.7%	9.8%
Aqua America	16.5	0.53	0.56	0.59	0.62	6.7%	9.8%
Connecticut Water	25.5	0.92	0.97	1.03	1.08	6.7%	10.2%
Middlesex Water	17.9	0.73	0.77	0.81	0.86	6.7%	10.7%
SJW Corp	26.2	0.66	0.70	0.74	0.78	6.7%	9.2%

Average 9.8%

$$P_0 = \sum_{t=1}^n \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n} \left[\frac{1}{(1+K)} \right]^n$$

Where : P₀ = current stock price

D_t = dividends expected during stage 1

K = cost of equity

n = years of non - constant growth

D_n = dividend expected in year n

g_n = constant rate of growth expected after year n

1 [B] see Schedule PMC-7

2 Derived from Value Line Information

3 Average annual growth in GDP 1929 - 2005 in current dollars.

4 Internal Rate of Return of Projected Dividends

Chaparral City Water Company, Inc.					
Capitalization					
	<u>Interest Rate</u>	<u>Annual Interest</u>	<u>Amount outstanding</u> <u>as of 6/30/2008</u>	<u>Percentage of</u> <u>Capital Structure</u>	
Long-Term Debt					
Bonds due 2011	5.2%	\$ 52,000	\$ 1,000,000		
Bonds due 2022	5.4%	\$ 248,940	4,610,000		
Bonds due 2022	5.3%	\$ 51,675	975,000		
Long-Term Debt	5.4%	352,615	\$ 6,585,000	18.6%	
Short-Term Debt					
Short-Term Debt	3.8%	78,857	2,050,000		
Short-Term Debt	3.8%	78,857	\$ 2,050,000	5.8%	
Total Debt	5.0%	\$ 431,472	\$ 8,635,000.00	24.4%	
Common Equity					
Common Shares Outstanding			4,603,000		
Paid in Capital			14,950,000		
Retained Earnings			7,137,000		
Total Common Equity			\$ 26,690,000	75.6%	
Total Capitalization			\$ 35,325,000	100.0%	

BEFORE THE ARIZONA CORPORATION COMMISSION

MIKE GLEASON
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

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)
BASED THEREON)
_____)

DOCKET NO. W-02113A-07-0551

DIRECT
TESTIMONY
OF
MARVIN E. MILLSAP
PUBLIC UTILITIES ANALYST IV
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

OCTOBER 03, 2008

TABLE OF CONTENTS

	<u>Page</u>
Introduction.....	1
Background.....	4
Summary of Testimony and Recommendations.....	4
Rate Base	10
Rate Base Adjustment No. 1 – Settlement Proceeds for Wells Taken Out-of-Service.....	11
Rate Base Adjustment No. 2 – Deferred Regulatory Assets.....	15
Rate Base Adjustment No. 3 - Test Year General Office (“GO”)Plant Allocation.....	18
Rate Base Adjustment No. 4 – Accumulated Depreciation	20
Rate Base Adjustment No. 5 – Removal of Working Capital Components.....	22
Rate Base Adjustment No. 6. – Expensed Plant (Capitalize Charges to Outside Services).....	24
Rate Base Adjustment No. 7 – Utility Plant-In-Service, Wells and Other Plant to be Retired.....	25
Operating Income.....	27
Operating Income Summary	27
Operating Income Adjustment No. 1 – Amortization of Well Settlement Proceeds.....	27
Operating Income Adjustment No. 2 – Purchased Water Expense.....	27
Operating Income Adjustment No. 3 – Depreciation Expense	28
Operating Income Adjustment No. 4 – Miscellaneous Expenses	29
Operating Income Adjustment No. 5 – Reversal of Company Pro Forma Adjustment No. 13, which amortizes the cost of the additional CAP Allotment.....	30
Operating Income Adjustment No. 6 – Rate Case Expense.....	31
Operating Income Adjustment No. 7 – Normalization of Chemicals Expenses	33
Operating Income Adjustment No. 8 – Normalization of Repairs and Maintenance.....	34
Operating Income Adjustment No. 9 – Normalization of General Liability Insurance Expense.....	34
Operating Income Adjustment No. 10 – Outside Services Expenses.....	35
Operating Income Adjustment No. 11 – Water Testing Expense	37
Operating Income Adjustment No. 12 – Property Taxes	37
Operating Income Adjustment No. 13 – Income Taxes	37
Revenue Requirement.....	38
Basis For Revenue Requirement.....	38
Rate Design.....	39
Consumer Services.....	45

SCHEDULES

Revenue Requirement.....	MEM-1
Gross Revenue Conversion Factor.....	MEM-2
Fair Value Rat Base Comparison.....	MEM FVRB-1
Fair Value Rat Base Computation – Company and Staff	MEM FVRB-2
Fair Value Rat Base Computation - Staff	MEM FVRB-3
Rate Base – Original Cost.....	MEM-3
Summary of Original Cost Rate Base Adjustments.....	MEM-4
Original Cost Rate Base Adj. No. 1 – Allocate 100% of Well Settlement Proceeds to Ratepayers	MEM-5
Original Cost Rate Base Adj. No. 2 – Reclassify CAP Allotment to Land and Land Rights.	MEM-6
Original Cost Rate Base Adj. No. 3 – Increase General Office Plant Allocation to 4%	MEM-7
Original Cost Rate Base Adj. No. 4 – Recalculation of Accumulated Depreciation....	MEM-8
Original Cost Rate Base Adj. No. 5 – Eliminate Working Capital Components	MEM-9
Original Cost Rate Base Adj. No. 6 – Capitalize Outside Services to Plant	MEM-10
Original Cost Rate Base Adj. No. 7 – Retire Plant Not in Service and Reclassify to Proper Categories.	MEM-11
Rate Base – Reconstruction Cost.....	MEM RCN-1
Summary of Reconstruction Cost Rate Base Adjustments.....	MEM RCN-2
Reconstruction Cost Rate Base Adj. No. 1 – Allocate 100% of Well Settlement Proceeds to Ratepayers.....	MEM-5
Reconstruction Cost Rate Base Adj. No. 2 – Reclassify CAP Allotment to Land and Land Rights.....	MEM-6
Reconstruction Cost Rate Base Adj. No. 3 – General Office Plant Allocation	MEM RCN-3

Reconstruction Cost Rate Base Adj. No. 4 – Accumulated Depreciation	MEM RCN-4
Reconstruction Cost Rate Base Adj. No. 5 – Eliminate Working Capital Components.....	MEM-9
Reconstruction Cost Rate Base Adj. No. 6 – Plant Additions and Retirements....	MEMRCN-5
Operating Income Statement – Adjusted Test Year and Staff Recommended.....	MEM-12
Summary of Operating Income Statement Adjustments – Test Year.....	MEM-13
Operating Income Adj. No. 1 – Well Settlement Proceeds to Ratepayers	MEM-14
Operating Income Adj. No. 2 – Purchased Water Expense.....	MEM-15
Operating Income Adj. No. 3 – Depreciation Expense	MEM-16
Operating Income Adj. No. 4 – Miscellaneous Expenses	MEM-17
Operating Income Adj. No. 5 – Additional CAP Allocation Amortization Reversal..	MEM-18
Operating Income Adj. No. 6 – Normalization of Rate Case Expense.....	MEM-19
Operating Income Adj. No. 7 – Normalization of Chemicals Expense.....	MEM-20
Operating Income Adj. No. 8 – Normalization of Repairs and Maintenance Expense	MEM-21
Operating Income Adj. No. 9 – Normalization of Insurance Expense	MEM-22
Operating Income Adj. No. 10 – Outside Services Expense	MEM-23
Operating Income Adj. No. 11 – Water Testing Expense	MEM-24
Operating Income Adj. No. 12 – Property Taxes	MEM-25
Operating Income Adj. No. 13 – Income Taxes	MEM-26
Rate Design.....	MEM-27
Typical Bill Analysis	MEM-28
Typical Bill Analysis – Average and Median Usage Costs.....	MEM-29

EXECUTIVE SUMMARY
CHAPARRAL CITY WATER COMPANY, INC.
DOCKET NO. W-02113A-07-0551

Chaparral City Water Company, Inc. ("Chaparral City" or "Company") is an Arizona-based corporation that provides water utility service to the Town of Fountain Hills which is located along the eastern city limits of Scottsdale within Maricopa County. The Company served approximately 13,500 customers during the test year ended December 31, 2006. The Company's current rates were approved in Decision No. 68176, dated September 30, 2005, and became effective on October 1, 2005. Chaparral City's sole shareholder is American States Water Company, which is publicly traded on the New York Stock Exchange.

The Company proposes rates that would produce operating revenue of \$10,515,017 and operating income of \$2,681,268 for a 9.32 percent rate of return on a fair value rate base ("FVRB") of \$28,768,975. The Company's proposal would increase annual operating revenues by \$3,068,317, or 41.20 percent, over test year revenues of \$7,446,700. Under the Company's proposed rates, the average residential 3/4-inch meter customer consuming 8,450 gallons per month would experience an \$11.79, or 36.41 percent, increase in his/her monthly bill from \$32.37 to \$44.16.

Staff recommends total annual operating revenue of \$9,181,965 and operating income of \$2,055,831 for a 7.60 percent rate of return on a FVRB of \$27,050,414. Staff's recommended revenue represents an increase of \$1,735,265, or 23.30 percent, over test year revenues of \$7,446,700. Under Staff's recommended rates, the average residential 3/4-inch meter customer consuming 8,450 gallons per month would experience a \$4.09, or 12.63 percent, increase in his/her monthly bill from \$32.37 to \$36.46.

Staff's recommended rates would have a residential 3/4-inch meter customer consuming the median usage of 5,500 gallons per month paying \$27.85, or \$2.91 more than the current \$24.94 for a 11.67 percent increase. By comparison, a residential 3/4-inch meter customer consuming the median usage of 5,500 gallons per month under the Company's proposed rates would be billed \$34.03, or \$9.09 more than the current \$24.94 for a 36.43 percent increase.

1 **INTRODUCTION**

2 **Q. Please state your name, occupation, and business address.**

3 A. My name is Marvin E. Millsap. I am a Public Utilities Analyst IV employed by the
4 Arizona Corporation Commission ("ACC" or "Commission") in the Utilities Division
5 ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.
6

7 **Q. Briefly describe your responsibilities as a Public Utilities Analyst IV.**

8 A. In my capacity as a Public Utilities Analyst IV, I analyze and examine accounting,
9 financial, statistical and other information and prepare reports based on my analyses that
10 present Staff's recommendations to the Commission on utility revenue requirements, rate
11 design and other matters.
12

13 **Q. Please describe your educational background and professional experience.**

14 A. In 1991, I received a Masters degree in Business Administration, with a major in
15 management. My studies included courses in economics, finance, research, information
16 systems, entrepreneurship and marketing. In 1970, I graduated from Arizona State
17 University, receiving a Bachelor of Science degree in Accounting. I am a Certified Public
18 Accountant licensed to practice Public Accounting with the Arizona State Board of
19 Accountancy. I have previously been licensed to practice Public Accounting with the
20 Kansas and South Carolina State Boards of Accountancy. In addition, I am a Certified
21 Government Financial Manager ("CGFM") as designated by the Association of
22 Government Accountants ("AGA"). I have attended various seminars and classes on such
23 subjects as accounting, auditing, financial reporting, management of people and
24 organizations, taxation, financing of water and wastewater systems and utility regulatory
25 issues sponsored by the National Association of Regulatory Utility Commissioners',
26 American Institute of Certified Public Accountants and the AGA. I am a member of the

1 American Institute of Certified Public Accountants and the Association of Government
2 Accountants. I have also attained the designations of "Competent Communicator" and
3 "Competent Leader" with Toastmasters, International.

4
5 I joined the Commission as a Public Utilities Analyst in October of 2007. Previously, I
6 was employed by the Kansas Corporation Commission from May 1993 to May 1997, as a
7 Managing Regulatory Utility Auditor and the Arizona Corporation Commission from
8 November 1989 through May 1993, first as a Utilities Auditor and subsequently as a Rate
9 Analyst and Senior Rate Analyst. In May 1997, I began working as a Senior Auditor with
10 the Federal Communications Commission in Washington, DC, and subsequently became a
11 Public Utilities Specialist with the Western Area Power Administration in Phoenix where I
12 worked in Power Marketing and purchased power contract management. Most recently I
13 worked for the U. S. State Department in Charleston, SC, as a Post Allotment Accountant
14 and assisted with training of the Budget and Finance Staff at several Embassies in Europe,
15 Africa and South America.

16
17 Prior to accepting State regulatory positions, I was employed with national and local
18 Certified Public Accounting firms for approximately 12 years performing financial and
19 operational audits, as well as providing tax and accounting services. Additionally, I was
20 involved with municipal electric, natural gas, water and waste water utility system operations
21 and accounting for approximately 8 years at the City of Mesa and the Town of Wickenburg,
22 Arizona. My experience includes being Chief Financial Officer of a construction company
23 and a real estate development company, as well as managing commercial and residential
24 construction projects. I have also been a Business Law instructor for the Lambers CPA
25 Review Course.

1 **Q. Have you previously testified as an expert witness?**

2 A. Yes. I have testified before the Kansas Corporation Commission in several electric and gas
3 utilities' rate cases, and regarding telecommunications issues. In addition, I have testified
4 before the Arizona Corporation Commission. I have also testified as an expert witness before
5 the Interstate Commerce Commission.

6
7 **Q. What is the scope of your testimony in this case?**

8 A. I am presenting Staff's analysis and recommendations regarding Chaparral City Water
9 Company, Inc.'s ("CCWC," "Chaparral City" or "Company") application for a
10 determination of the current fair value of its utility plant and property and a permanent rate
11 increase. I am presenting testimony and schedules addressing rate base, operating
12 revenues and expenses, revenue requirement, and rate design. Staff witness Mr. Pedro M.
13 Chaves is presenting Staff's cost of capital and capital structure analysis and
14 recommendations. Mr. Marlin Scott, Jr. is presenting Staff's engineering analysis and
15 recommendations.

16
17 **Q. What is the basis of your testimony in this case?**

18 A. I performed a regulatory audit of the Company's application and records. The regulatory
19 audit consisted of examining and testing financial information, accounting records, and
20 other supporting documentation and verifying that the accounting principles applied were
21 in accordance with the Commission adopted National Association of Regulatory Utility
22 Commissioners ("NARUC") Uniform System of Accounts ("USOA").

1 **BACKGROUND**

2 **Q. Would you please provide the background of this application?**

3 A. Chaparral City is an Arizona-based corporation that provides water utility service to the
4 Town of Fountain Hills which is located along the eastern city limits of Scottsdale within
5 Maricopa County. The Company served approximately 13,500 customers during the test
6 year ended December 31, 2006. The Company's last full rate case resulted in Decision
7 No. 68176, dated September 30, 2005, which became effective on October 1, 2005. An
8 Appeal and Remand case resulted in Decision No. 70441, dated July 17, 2008, which
9 granted CCWC \$12,143 in additional revenues. Chaparral City's sole shareholder is
10 American States Water Company, which is publicly traded on the New York Stock
11 Exchange.

12
13 On September 26, 2007, Chaparral City filed an application requesting determination of
14 the current fair value of its utility plant and property and a permanent rate increase. On
15 October 26, 2007, Staff filed a letter declaring the application sufficient and classifying
16 the Company as a Class A utility.

17
18 **SUMMARY OF TESTIMONY AND RECOMMENDATIONS**

19 **Q. Please summarize the Company's filing.**

20 A. The Company proposes rates that would produce operating revenue of \$10,515,017 and
21 operating income of \$2,681,268 for a 9.32 percent rate of return on a fair value rate base
22 ("FVRB") of \$28,768,975. The Company's proposal would increase annual operating
23 revenues by \$3,068,317, or 41.20 percent, over test year revenues of \$7,446,700. It
24 should be noted that \$32,536 in adjustments to plant in service per Decision No. 68176
25 had to be added to original cost rate base ("OCRB") and FVRB because this amount did
26 not get carried forward from Exhibit Schedule B-2, Page 3c, where it was included in the

1 beginning balance from the Decision, to Exhibit Schedule B-2, Page 1. Exhibit Schedule
2 B-2, Page 1 develops the Company's OCRB that is reflected in Exhibit Schedule B-1,
3 Page 1, which also develops the Company's FVRB. FVRB then flows through to Exhibit
4 Schedule A-1, Page 1, where it is used to calculate the gross revenue requirement. The
5 Company acknowledged the omission of the \$32,536.

6
7 **Q. Please summarize Staff's recommendations.**

8 A. Staff recommends total annual operating revenue of \$9,181,965 and operating income of
9 \$2,055,831 for a 7.60 percent fair value rate of return on a FVRB of \$27,050,414. Staff's
10 recommended revenue represents an increase of \$1,735,265, or 23.30 percent, over test
11 year revenues of \$7,446,700.

12
13 **Q. Please summarize the rate base recommendations and adjustments addressed in
14 your testimony.**

15 A. My testimony addresses the following issues:

16
17 Shared Gain on Well – This adjustment increases the unamortized portion (\$646,000) of
18 the settlement proceeds by \$570,000. The settlement proceeds received from Fountain
19 Hills Sanitation District for discontinuing the use of Wells 8 and 9 ("Wells"), which are
20 fully depreciated, have been characterized as a gain on the sale of property. However,
21 close examination of the transaction indicates that no transfer of property occurred. The
22 Company proposed an equal sharing with the ratepayers and a ten-year amortization. In
23 Staff's opinion, the transaction is not a sale, so a 50 – 50 sharing is not appropriate. Thus
24 the entire settlement proceeds should be recognized in such a way as to benefit ratepayers
25 and amortize the proceeds over a ten-year period beginning in 2005. This adjustment is
26 the same for OCRB and the reconstruction cost rate base ("RCRB").

1 Deferred Regulatory Assets – This adjustment decreases deferred regulatory assets related
2 to OCRB by \$1,280,000 and the RCRB by \$1,280,000. This adjustment removes the
3 Company’s pro forma adjustment that added the cost of the additional Central Arizona
4 Project (“CAP”) allocation acquired in 2007. Staff recommends reclassifying the cost of
5 the additional CAP allocation as a water right in Land and Land Rights due to its attribute
6 of existing into perpetuity.

7
8 General Office Plant Allocation – This adjustment increases the General Office plant
9 allocation OCRB by \$124,299 and RCRB by \$174,963. This adjustment removes a
10 portion of the Company’s pro forma adjustment for General Office (“GO”) plant relating
11 to studies mandated by the California Public Utilities Commission or California Statutes
12 and made before the acquisition of CCWC, thus benefiting only California operations.
13 This adjustment also removes the cost of luxury vehicles from GO plant. This adjustment
14 also reflects an increase from 3.21% to 4.0% in the allocation percentage used to allocate
15 GO plant.

16
17 Accumulated Depreciation – This adjustment increases Accumulated Depreciation related
18 to the GO plant allocation percentage. CCWC plant accumulated depreciation is reduced
19 due to the retirement of plant and increased for the capitalization of plant items that had
20 been expensed in error for a net decrease of \$2,031,950. This adjustment decreases
21 Accumulated Depreciation related to the RCRB by \$2,506,970. This adjustment reflects
22 the difference between Staff’s and the Company’s calculation of RCND Accumulated
23 Depreciation and the additions and retirements of CCWC plant and the changes related to
24 GO plant mentioned above.

1 Elimination of Working Capital Components – This adjustment decreases Unamortized
2 Debt Issuance Costs, Prepayments and Materials and Supplies Inventory related to OCRB
3 by \$424,010, \$192,485 and \$14,521, respectively. These items are normally considered
4 working capital components. This adjustment decreases these items as related to the
5 RCRB by \$424,010, \$192,485 and \$14,521, respectively. The Company has not requested
6 a cash working capital allowance and did not submit a lead/lag study to determine what
7 allowance should be made for cash working capital, so including other components of
8 working capital in rate base is inappropriate.

9
10 Capitalize Outside Services Expenses – This adjustment increases plant-in-service by
11 \$37,673 to reclassify test year expenditures that had been included in operating expenses.
12 It was determined that these purchases would benefit more than one accounting period and,
13 thus, should be capitalized and depreciated ratably over their estimated useful lives.

14
15 Retire Wells and Other Plant Not-In-Use – This adjustment reduces plant-in-service by
16 \$2,118,334 to remove plant items which are not used and useful. Among these items are
17 Wells and a water treatment facility. For RCRB purposes these two OCRB adjustments
18 have been combined, along with the CAP allocation purchase, into one adjustment that
19 also incorporates the retirements and reclassifications discussed in Marlin Scott, Jr.'s
20 testimony.

1 **Q. Please summarize the operating income recommendations and adjustments**
2 **addressed in your testimony.**

3 A. My testimony addresses the following issues:

4
5 Well Settlement Proceeds – This adjustment increases the Company’s negative expense by
6 a negative \$76,000, to a negative \$152,000. This adjustment reflects recognition of the
7 allocation of one hundred percent of the proceeds from the settlement with Fountain Hills
8 Sanitation District for removing two wells from service to ratepayers, not providing a
9 replacement well and amortizing the proceeds over ten years.

10
11 Purchased Water – This adjustment decreases expenses by \$20,306. This adjustment
12 accounts for known and measurable changes in rates from the Central Arizona Project and
13 Central Arizona Groundwater Replenishment District (“CAGR”) and the expenses
14 related to the additional CAP water allotment that is fifty-percent used and useful.

15
16 Depreciation Expense – This adjustment decreases expenses by \$86,188 to reflect the
17 retirement of plant, capitalization of plant items expensed in the test year, increase in the
18 GO plant allocation from 3.21 percent to 4.0 percent and application of Staff’s composite
19 depreciation rate to contributions in aid of construction (“CIAC”).

20
21 Miscellaneous Expense – This adjustment increases expenses by \$38,164 to reflect an
22 increase in the GO expense allocation from 3.74 percent to 4.0 percent, and removes \$950
23 of lobbying costs included in membership dues paid during the test year for a net increase
24 of \$37,214.

1 CAP Amortization – This adjustment decreases expenses by \$64,000. This adjustment
2 removes \$64,000 related to the purchase of the additional CAP allocation that has been
3 determined to be an intangible asset not eligible for amortization.

4
5 Rate Case Expense – This adjustment decreases expenses by \$61,538 to reflect a
6 normalized amount of \$83,333.

7
8 Chemicals Expense – This adjustment decreases expenses by \$27,630 to reflect a
9 normalized amount of \$99,827.

10
11 Repairs & Maintenance – This adjustment decreases expenses by \$19,018. This amount
12 includes the disallowance of \$5,543 in expenses related to the purchase of beverages as an
13 employee benefit and to reflect a normalized amount of \$85,591.

14
15 Insurance – This adjustment increases expenses by \$3,654 to reflect a normalized amount
16 of \$2,360.

17
18 Outside Services – This adjustment decreases expenses by \$38,048 to remove disallowed
19 expenses and capitalize costs expensed that should have been classified as plant-in-
20 service.

21
22 Water Testing Expense – This adjustment decreases expenses by \$17,820 to reflect a
23 normalized amount of \$25,638.

24

1 Property Tax Expense – This adjustment decreases expenses by \$33,413 to reflect Staff’s
2 calculation using the modified Arizona Department of Revenue property tax calculation
3 methodology.

4
5 Income Tax Expense – This adjustment increases expenses by \$197,275 to reflect
6 application of statutory state and federal income tax rates to Staff’s taxable income.

7
8 **RATE BASE**

9 **Q. Please review Chaparral City’s proposed rate base.**

10 A. The Company is proposing a FVRB of \$28,768,975 based upon an equal weighting of its
11 OCRB and RCRB as shown on Schedule MEM FVRB-2.

12
13 **Q. Is Staff recommending any changes to the Company’s proposed rate base?**

14 A. Yes. Staff recommends a FVRB of \$27,050,414 based upon an equal weighting of Staff’s
15 OCRB and RCRB as shown on Schedule MEM FVRB-2, a reduction of \$1,718,560 from
16 the Company’s proposed FVRB.

17
18 **Q. How many rate base adjustments is Staff recommending?**

19 A. Staff recommends seven adjustments to rate base as shown on Schedules MEM-3 and
20 MEM-4. Each adjustment described below is made to the OCRB, with a corresponding
21 adjustment made to the RCRB as shown on Schedules MEM RCN-1 and MEM RCN-2.
22 A detailed explanation of Staff’s adjustments follows below.

1 **Rate Base Adjustment No. 1 – Settlement Proceeds for Wells Taken Out-of-Service.**

2 **Q. What are the circumstances which resulted in the settlement with the Fountain Hills**
3 **Sanitation District for taking Wells 8 and 9 (“Wells”) out of service?**

4 A. Fountain Hills Sanitary District (“District”) needed an aquifer storage and recovery well
5 (“effluent storage well”) to pump and store its effluent. The effluent storage well would
6 be located near the Wells, a potable water source. The close proximity of the effluent
7 storage well to the potable water source posed a contamination risk, so the prior owners of
8 CCWC, MCO Properties (“MCO”), and the District began negotiations in order to remove
9 any possible adverse consequences to the Company’s customers.

10
11 MCO and the District reached an agreement to exchange wells. One of the key terms of
12 the agreement was that the District would provide a new replacement well with similar
13 water quality and production capacity as the Wells. After the replacement well was built
14 and the new effluent storage well became operational, the Wells would be taken out of
15 service and physically isolated from the system. Unfortunately, the District was unable to
16 construct an adequate replacement well and a new agreement had to be negotiated.

17
18 **Q. What was the new agreement?**

19 A. In February, 2005, CCWC and the District reached an agreement wherein the District paid
20 CCWC \$1,520,000 in exchange for the Wells no longer being used to provide potable
21 water service.

22
23 **Q. When were Wells 8 and 9 put in service?**

24 A. Wells 8 and 9 were put in service in 1971 and 1972, respectively.
25

1 **Q. Are these Wells fully depreciated?**

2 A. Yes, they became fully depreciated in 2001 and 2002 according to the Company's
3 response to Data Request MEM 7.3. The useful life assigned to "Wells and Springs" is 30
4 years but, because CCWC uses the group depreciation method, the cost of the wells is still
5 included in the calculation of depreciation expense and the determination of rate base until
6 new rates become effective as a result of the instant rate case.

7
8 **Q. Has CCWC been compensated for the risk it incurred in making the investment in
9 the Wells?**

10 A. Yes, the ratepayers, through the depreciation expense and return on rate base included in
11 their water service rates, have paid the Company for the original cost of the Wells, and
12 have continued to pay because CCWC uses the "group depreciation method", which will
13 be addressed later in my testimony.

14
15 **Q. Does the \$1.52 million payment represent a gain on the sale of utility property?**

16 A. No, it does not. The Company did not sell the Wells. The Company continues to own the
17 wells. Therefore, no gain was realized. The \$1.52 million payment is the proceeds from a
18 settlement agreement. Consequently, any characterization of the settlement proceeds as a
19 "gain" is incorrect. Additionally, the Company could potentially sell the Wells at some
20 point in the future. Although the agreement gives the District an option to acquire well 8
21 for no additional consideration, this had not occurred at the time of Staff's on-site visit on
22 April 3, 2008.

1 **Q. How was the settlement amount of \$1.52 million determined?**

2 A. According to the testimony of Mr. Robert N. Hanford, District Manager of CCWC, the
3 \$1.52 million represents the “equivalent cost of water to replace that amount the Wells
4 would have produced over the remainder of its useful life” (page 10, at line 12).

5
6 **Q. Has the Company replaced the water supply that would have served customers from
7 the Wells with more expensive CAP water?**

8 A. Yes. The Company has replaced the water that would have been pumped from Well 9 to
9 serve customers with part of the 6,978 acre feet of CAP water from its 1984 CAP contract.
10 CAP water, which is significantly more expensive than the cost of using water from Well
11 9. Moreover, the customers have fully paid for the well and the approximately \$1.52
12 million in water contained in it. The \$1.52 million was meant to compensate the
13 Company for an equal amount of water regardless of where the Company actually
14 obtained the water. The \$1.52 million would effectively lower the cost of the more
15 expensive CAP water to that of the less expensive water that would have been pumped
16 from Well 9; therefore, making the customers whole.

17
18 **Q. Why was the well water replaced with the CAP water?**

19 A. The Company’s 6,978 acre feet of CAP water, in most prior years, was actually more than
20 that needed to serve its test year customers. Therefore, since it had an excess of water
21 from its underutilized CAP allocation, and would have had to pay the same amount for the
22 CAP water regardless of the amount it used, the Company made a management decision to
23 stop using water from well 9. This decision effectively replaced Well 9 water with CAP
24 water.

1 **Q. Will the CCWC customers have to pay higher rates because CAP water is used?**

2 A. Yes, because CAP water is more expensive than pumping ground water.
3

4 **Q. Is there another reason for utilizing CAP water?**

5 A. Yes, CAP water is a renewable resource and its use is encouraged by the Arizona
6 Department of Water Resources ("ADWR") as being in the public interest.
7

8 **Q. What ratemaking treatment does the Company propose for the \$1.52 million in
9 settlement proceeds?**

10 A. The Company proposes a 50 - 50 sharing between the ratepayers and the shareholders.
11 Specifically, the Company proposes to set up a regulatory liability to reduce rate base by
12 one-half of the \$1.52 million (or \$760,000). The regulatory liability would be amortized
13 over 10 years and would have the effect of reducing operating expenses by one-tenth (or
14 approximately \$76,000) each year for ten years. The total amount the Company has
15 proposed is \$646,000 which represents the \$760,000 amortized over two years [i.e.,
16 $\$760,000 - (\$76,000/2) - \$76,000 = \$646,000$].
17

18 **Q. What is the basis for the Company's proposal?**

19 A. The Company states that "There is precedent by this Commission to share extraordinary
20 gains equally between the Company's shareholders and its rate payers." See Arizona
21 Water Company - Eastern Group Decision No. 66849 (March 19, 2004) at 32-35 . . ."
22 (Bourassa, page 11, at line 5).

1 **Q. Does Staff believe that this settlement is similar or identical to the Arizona Water**
2 **case cited above?**

3 A. No. Although both involve a settlement, the Arizona Water case results in a monetary
4 payment being received in addition to replacement water. In the CCWC case, the
5 settlement proceeds represent the anticipated cost of replacement water.

6

7 **Q. For ratemaking purposes, how should the \$1.52 million be treated?**

8 A. Staff is recommending that all of the \$1.52 million in settlement proceeds (which
9 represents the cost to replace the Wells' water supply that customers had fully paid for)
10 flow through to rate payers to compensate them for the higher rates they are paying and
11 will continue to pay for the CAP water that replaced the Wells' water supply.

12

13 **Q. What is Staff's adjustment to rate base?**

14 A. Staff recommends reducing rate base by \$1.52 million less the amortization expense for
15 2005 and 2006 leaving a regulatory liability balance of \$1,216,000.

16

17 **Rate Base Adjustment No. 2 – Deferred Regulatory Assets**

18 **Q. Briefly discuss the Company's Central Arizona Project ("CAP") water allocations.**

19 A. The Company has two CAP allocations. One is a 6,978 acre feet allocation that was
20 purchased in 1984 and used to serve test year customers. The other is a 1,931 acre feet
21 allocation purchased in 2007.

22

23 **Q. What is the Company proposing regarding Deferred Regulatory Assets?**

24 A. The Company has made a pro-forma adjustment to include in rate base, at the end of the
25 2006 test year, the cost of the additional allotment of 1,931 acre feet of Municipal and
26 Industrial ("M&I") water that has been purchased from the United States Bureau of

1 Reclamation and Central Arizona Water Conservation District in 2007. A payment of
2 \$1,280,000 for prior capital charges was required by December 1, 2007. As an alternative,
3 CCWC could have selected an interest-free five-year installment payment plan.
4

5 **Q. What ratemaking treatment is the Company proposing for its 2007 CAP allocation?**

6 A. The Company is proposing to include the 2007 CAP allocation in rate base as a regulatory
7 asset to be amortized to expense over a twenty-year period (\$64,000 per year).
8

9 **Q. What are the Company's reasons for including the 2007 CAP allocation in rate base?**

10 A. The Company claims that the 2007 CAP allocation is revenue neutral and used and useful.
11

12 **Q. Does Staff agree that the Commission should recognize the cost of the additional
13 CAP allotment as a regulatory asset?**

14 A. No. Staff believes that the additional CAP Allotment should be recognized as part of
15 "post test year" ("PTY") plant rather than a deferred asset. Further, the Company is in
16 agreement with Staff that the CAP allotment purchased in 2007 is PTY plant (Bourassa
17 Direct, page 11, at line 25).
18

19 **Q. What is Staff's recommendation regarding the rate base treatment of the additional
20 CAP allotment?**

21 A. Staff recommends that the Company's pro-forma adjustment to increase rate base by
22 \$1,280,000 be reversed on the basis that the allocation has properties more associated with
23 a water right and, thus, should be reclassified to plant-in-service as an intangible asset not
24 subject to amortization.

1 **Q. Why does Staff believe the additional CAP allotment is a water right?**

2 A. Because CCWC has entered into a contract with the United States Bureau of Reclamation
3 and Central Arizona Water Conservation District for delivery of 8,909 acre feet of water
4 (the original 6,978 plus the additional 1,931) dated March 7, 2007, “for a period of 100
5 years beginning January 1 of the Year following that which the subcontract becomes
6 effective,” per Article 4.2 of the subcontract. This Article also provides for annual
7 renewals of the contract at the option of CCWC. The 8,909 acre feet quantity is described
8 in Article 4.12(a) of the contract as an: “Entitlement to Project M & I Water”. The term
9 of the contract and renewal provisions indicates that CCWC can receive 8,909 acre feet of
10 water per year forever, or into perpetuity

11

12 **Q. Why does Staff believe that the cost of the additional allotment should not be**
13 **amortized?**

14 A. Staff believes that the cost of the additional allotment is an intangible asset that will not
15 decline or diminish in value. The value of the allocation may increase but the Bureau of
16 Reclamation prohibits CAP allocations from being sold for more than the accumulated M
17 & I charges.

18

19 **Q. Is the additional CAP water used and useful?**

20 A. Partially. A detailed explanation can be found on page 9 of the Engineering Report of
21 Staff witness Mr. Marlin Scott, Jr.’s direct testimony. He has determined that fifty-percent
22 of the additional CAP allocation of 1,931 acre feet of water is used and useful.

1 **Q. Has the Commission previously allowed recovery of PTY plant costs?**

2 A. Yes. However, the Commission typically does not allow recovery of PTY plant costs
3 when there is no plan for use in the near future, especially when the plant is not used to
4 serve test year customers.

5
6 **Q. Does Staff believe that CCWC has acted prudently in the purchase of the additional
7 CAP allotment?**

8 A. Yes, because the reallocation of CAP water occurs infrequently, and because the CAP
9 water is oversubscribed, it becomes imperative to secure an allotment when it is available.
10 Another factor in considering the purchase prudent is that CAP reallocations have to be
11 taken in whole as presented – it is an all or none situation. Also, the additional allotment
12 of 1,931 acre feet will allow CCWC to limit, or eliminate, the use of groundwater to serve
13 its customers.

14
15 **Q. Does Staff characterize the CAP entitlement as a renewable resource?**

16 A. Yes.

17
18 **Q. What is Staff's adjustment regarding the cost of the additional CAP allocation
19 purchased in 2007?**

20 A. Staff has reclassified the "Deferred Regulatory Assets" balance of \$1,280,000 to NARUC
21 USOA number 303, Land and Land Rights, as a plant-in-service component.

22
23 **Rate Base Adjustment No. 3 - Test Year General Office ("GO") Plant Allocation**

24 **Q. What is the Company proposing for Plant in Service?**

25 A. The Company is proposing a total of \$51,053,252 for Plant in Service relating to its
26 OCRB. The Company is proposing all plant, property and equipment that were in service

1 during the test year, plus an allocation of \$751,171 related to GO plant for a total of
2 \$51,804,423.

3
4 **Q. Is Staff in agreement with the Company's proposed amount of Plant in Service,**
5 **including the GO plant?**

6 A. No, during its regulatory audit of GO plant, several luxury vehicles were discovered, as
7 well as two studies that originated before acquisition of CCWC and, based on the
8 Company's response to a data request, relate strictly to the parent company's California
9 operations. At the 3.21 percentage allocation rate used by the Company, the value of
10 these items amounts to \$48,608 that Staff proposes to remove from GO plant.

11
12 **Q. Is Staff in agreement with the Company's proposed allocation percentage for the GO**
13 **plant?**

14 A. No, during Staff's review of the allocation percentage assigned to CCWC relative to all of
15 American States Water Company's ("AWR") operations it was determined that it should
16 be 4.0 percent for the test year 2006 using the same four factor formula proposed by the
17 Company. The Company has proposed an allocation of GO plant of 3.21 percent based on
18 a four factor formula consisting of (1) number of customers; (2) value of utility plant-in-
19 service; (3) operating expenses; and (4) labor costs. Staff discovered that the 3.21 percent
20 was based on using data as of September, 2005, in the four factor formula. Staff requested
21 data as of the end of the test year and believes that this is more accurate given the
22 expansion of non-regulated operations and the inconsistency of the Company's proposed
23 GO allocation percentage – 3.21 percent for plant and 3.74 percent for operating expenses,
24 which will be discussed later in my testimony.

1 **Q. Why is Staff recommending removal of the cost of studies included in GO plant?**

2 A. In both cases the studies were completed before the acquisition of CCWC and were
3 ordered by the CPUC or mandated by California Statutes. One is a management audit
4 ordered by the CPUC that was completed in 1995 and cost \$420,000. The other cost,
5 \$820,254, to be excluded is for water management plans completed in 1998 in conjunction
6 with California Water Code Sections 10610 through 10657.

7
8 **Q. What is the amount of Staff's adjustment to increase the allocation of GO plant to**
9 **CCWC?**

10 A. After removing the cost of the luxury vehicles and the studies that do not benefit Arizona
11 ratepayers and applying the 4.0 allocation percentage, GO plant in service original cost is
12 increased by \$124,299, or \$174,963 RCN. Thus, \$875,470, or \$1,167,091 RCN, of GO
13 plant is included in CCWC's rate base. The details of this adjustment are presented on
14 Schedule MEM-7.

15

16 **Rate Base Adjustment No. 4 – Accumulated Depreciation**

17 **Q. Would you please explain Staff's rate base adjustment No. 4.**

18 A. Staff's adjustment reduces Accumulated Depreciation by \$2,031,950 from the Company's
19 amount of \$15,877,022 to reflect Staff's calculated Accumulated Depreciation of
20 \$13,845,072. The reason for this difference is related to Staff using the 4.0 GO plant
21 allocation percentage and the plant additions and retirements discussed in Rate Base
22 Adjustments No. 6 and No. 7. Changing the GO allocation increased accumulated
23 depreciation by \$84,561. Plant additions increased accumulated depreciation by \$1,823
24 and retirements decreased accumulated depreciation by \$2,118,334 as shown on Schedule
25 MEM-8. Plant additions and retirements are discussed on Schedule MEM-10 and MEM-
26 11.

1 **Q. What additional adjustment has Staff included on Schedule MEM-8?**

2 A. Staff witness Mr. Marlin Scott, Jr.'s direct testimony indicates that several plant items
3 have been incorrectly classified in the Company's records and describes the correct
4 category for these items. Part of Staff's adjustment on Schedule MEM-8 reclassifies the
5 accumulated depreciation for the listed items into the proper NARUC account numbers.
6

7 **Q. How did Staff determine the amount of accumulated depreciation to reclassify?**

8 A. Staff used the acquisition dates mentioned in Staff witness Mr. Marlin Scott, Jr.'s direct
9 testimony and recalculated the annual depreciation expense for each year since then
10 through the test year, which was then summed to derive the accumulated depreciation
11 balance. Since the reclassification entailed the reduction of some account balances and
12 increases in others by the exact same amounts, there is no impact on the overall
13 accumulated depreciation balance.
14

15 **Q. What is Staff's recommendation?**

16 A. Staff recommends reducing Original Cost New ("OCN") Accumulated Depreciation by
17 \$2,031,950, from \$15,877,022 to \$13,845,072 as shown on Schedule MEM-8.
18

19 **Q. What additional recommendation is Staff making regarding OCN plant accounting
20 and accumulated depreciation?**

21 A. Staff recommends that CCWC adopt, on a going forward basis, the "Group Depreciation"
22 method in which the additions for each year and for each plant account are considered a
23 separate "group." This will facilitate the identification of the cost of specific assets, and
24 their associated accumulated depreciation, so that the proper amounts can be retired when
25 appropriate.

1 **Q. Is there a corresponding adjustment for Reconstruction Cost New plant?**

2 A. Yes. Staff discovered that the OCN accumulated depreciation totals by NARUC Account
3 Number presented in on Exhibit Schedule B-2, Page 3d did not agree with the OCN totals
4 used on Exhibit Schedule B-4, the RCN calculation schedule. Staff proposes two
5 adjustments to RCN: the first is a decrease of \$2,620,789, as shown on Schedule MEM-
6 RCN-2, which results from additions and retirements of plant. The second adjustment is
7 an increase of \$113,818 resulting from the change in GO allocation percentage but this is
8 offset by the decrease of \$2,620,789 so the net decrease in RCN accumulated depreciation
9 is \$2,506,970.

10

11 **Q. What is Staff's recommendation regarding RCN accumulated depreciation?**

12 A. Staff recommends decreasing RCN Accumulated Depreciation by \$2,506,970, from
13 \$25,894,686 per Exhibit Schedule B-3, Page 1 to \$23,387,716 as shown on Schedule
14 MEM-RCN-2.

15

16 **Rate Base Adjustment No. 5 – Removal of Working Capital Components.**

17 **Q. Would you please explain Staff's rate base adjustment No. 5?**

18 A. Yes. Staff's adjustment accounts for a decrease to rate base by removing Unamortized
19 Debt Issuance Costs, \$424,010, Prepayments, \$192,485, and Materials and Supplies
20 Inventory, \$14,521. These balances are considered in working capital calculations along
21 with a cash working capital component derived from a lead/lag study, for overall inclusion
22 in rate base.

1 **Q. Why did Staff disallow the Unamortized Debt Issuance Costs from being included in**
2 **rate base?**

3 A. Debt issuance costs are a "below the line" expense the same as interest and, thus, should
4 be paid from the return on rate base portion of the charges to ratepayers. Consequently,
5 the unamortized debt issuance costs are attributable to the shareholders, did not require an
6 outlay of cash by the shareholders and from a ratemaking standpoint should not be
7 allowed to earn a rate of return by being included in ratebase.

8

9 **Q. Did CCWC request a cash working capital allowance as part of its rate base?**

10 A. No, and the Company did not prepare a lead/lag study to determine what the amount of
11 cash working capital should be.

12

13 **Q. What is Staff's rationale for its recommendation to disallow Prepayments and**
14 **Material and Supplies Inventory from rate base?**

15 A. The Company failed to provide a lead/lag study to determine the cash working capital
16 component. Since the vital portion of working capital is missing, it is inappropriate to
17 consider other components of working capital.

18

19 **Q. What is Staff's recommendation?**

20 A. Staff recommends that Unamortized Debt Issuance Costs, \$424,010, Prepayments,
21 \$192,485, and Materials and Supplies Inventory, \$14,521 be excluded from the rate base.

1 **Q. Does Staff have additional recommendations regarding a cash working capital**
2 **allowance?**

3 A. Yes, Staff recommends that the Company be ordered to perform and submit a Lead/Lag
4 Study in conjunction with its next rate adjustment request application in order to meet the
5 sufficiency requirement of that filing.

6
7 **Rate Base Adjustment No. 6. – Expensed Plant (Capitalize Charges to Outside Services)**

8 **Q. Please provide guidelines that companies should use in determining whether a cost**
9 **should be capitalized by recording it in a plant account or treated as an operating**
10 **expense.**

11 A. The Arizona Administrative Code R14-2-411 D.2 requires water companies to maintain
12 their accounting records in accordance with the NARUC USOA. It states that “Each
13 utility shall maintain its books and records in conformity with the Uniform System of
14 Accounts for Class A, B, C and D Water Utilities” (emphasis added).

15
16 Further, the NARUC USOA provides a listing of plant accounts and the types of costs that
17 should be recorded in each account. Utilities should use the plant account listing and
18 Accounting Instruction No. 14 “Utility Plant – Components of Construction Costs” to
19 determine what costs should be recorded as plant.

20
21 **Q. Did CCWC propose to expense costs that should be recorded in plant accounts?**

22 A. Yes, according to the NARUC USOA, the Company expensed plant costs incurred for
23 irrigation installation, fence installation, and pumps as shown on Schedule MEM-10 and
24 MEM-23.

1 **Q. What is the effect of expensing plant?**

2 A. If the NARUC USOA is not complied with, the result is an overstatement of operating
3 expenses and understatement of rate base. Adherence to the matching principle and the
4 NARUC USOA requires that the cost of an asset that benefits more than one accounting
5 period be capitalized (by recording it in a plant account) and depreciated over the asset's
6 useful life.

7

8 **Q. What is Staff's recommendation?**

9 A. Staff recommends increasing plant in service by \$37,673 to reclassify plant that was
10 incorrectly recorded as an operating expense as shown on Schedule MEM-23. This
11 adjustment to OCRB is reflected on Schedule MEM – 10, and the adjustment to RCRB is
12 presented on Schedule MEM RCN-5, page 2 of 2.

13

14 **Rate Base Adjustment No. 7 – Utility Plant-In-Service, Wells and Other Plant to be Retired**

15 **Q. Were the Wells discussed in Rate Base Adjustment No. 1 used and useful during the**
16 **test year?**

17 A. No, they were not. As Staff discussed earlier, the wells were taken out of service in
18 accordance with the well settlement agreement. Further, there are no pumps on the wells
19 so they cannot be used as a back-up source of water when the CAP water is shut down
20 for repair and maintenance.

21

22 **Q. What is the Company's proposed treatment of the Wells?**

23 A. The Company proposes to include the Wells in plant in service.

1 **Q. What is the effect of CCWC's proposal to include the Wells in rate base?**

2 A. CCWC's proposal to include the Wells, with a combined cost for OCRB purposes of
3 \$103,468, or RCRB of \$434,984, in rate base over-states the revenue requirement, and
4 ultimately, the rates paid by the Company's customers.

5
6 **Q. Does CCWC have other plant in service which is not considered used and useful?**

7 A. Yes. As described on Table 8 of Exhibit MSJ, attached to Marlin Scott, Jr.'s Testimony,
8 there is an additional \$2,014,866 of plant not used and useful. This plant is primarily
9 related to the water treatment facility acquired in 1986 through 1989. The RCN of this
10 non-used and useful plant is \$3,269,076.

11
12 **Q. What is the appropriate ratemaking treatment for plant that is not used and useful
13 in the test year?**

14 A. For ratemaking purposes, plant that is not used to provide service to customers during the
15 test year should be removed from rate base.

16
17 **Q. What is Staff's recommendation?**

18 A. Staff recommends decreasing plant in service by \$2,118,334, RCN \$2,480,011, to remove
19 the wells and other plant that is not used and useful from rate base as shown on Schedules
20 MEM-11 and MEM RCN-5.

1 **OPERATING INCOME**

2 **Operating Income Summary**

3 **Q. What are the results of Staff's analysis of test year revenues, expenses, and operating**
4 **income?**

5 A. Staff's analysis resulted in adjusted test year revenues of \$7,446,700, expenses of
6 \$6,443,612, and operating income of \$1,003,088 as shown on Schedules MEM-12 and
7 MEM-13. Staff made thirteen adjustments to operating income.

8
9 **Operating Income Adjustment No. 1 – Amortization of Well Settlement Proceeds.**

10 **Q. Would you please explain Staff's operating income adjustment No. 1?**

11 A. Staff's adjustment increases the negative amortization expense related to the "Gain on
12 Well" by \$76,000, from \$76,000 to \$152,000, as discussed in Rate Base Adjustment No.
13 1. As discussed in Staff's rate base adjustment, the Company has mischaracterized the
14 settlement proceeds as a "gain" but they are actually from the settlement to remove the
15 Wells from service. Staff's calculation of the "Amortization of Well Settlement Proceeds"
16 is shown on Schedule MEM-14 and MEM 5.

17
18 **Q. What is Staff's recommendation?**

19 A. Staff recommends increasing "Amortization of the Well Settlement Proceeds" by \$76,000,
20 from \$76,000 to \$152,000, which will allocate all of the proceeds received by CCWC for
21 taking the Wells out of service to the ratepayers and amortize the proceeds over ten years.

22
23 **Operating Income Adjustment No. 2 – Purchased Water Expense.**

24 **Q. Would you please explain Staff's operating income adjustment No. 2?**

25 A. Staff's adjustment reduces Purchased Water Expense by \$20,306, from \$831,656 to
26 \$811,351. Staff removed \$20,306 due to the finding that the additional CAP allocation is

1 only fifty percent used and useful. The Company's Pro Forma Adjustment No. 5 included
2 an increase for the operating expenses related to the additional CAP allocation but did not
3 isolate that portion of the adjustment so it cannot simply be reversed. Schedule MEM-15
4 shows Staff's calculation of this adjustment.

5
6 **Q. What is Staff's recommendation?**

7 A. Staff recommends reducing Purchased Water Expense by \$20,306, from \$831,656 to
8 \$811,351.

9
10 **Operating Income Adjustment No. 3 – Depreciation Expense**

11 **Q. Would you please explain Staff's operating income adjustment No. 3?**

12 A. Staff's adjustment decreases Depreciation Expense by \$86,188, from \$1,608,019 to
13 \$1,521,831. The primary difference in depreciation expense is related to Staff's GO
14 allocation percentage increase and the retirement of CCWC Wells 8 and 9 plus
15 capitalization of outside services per rate base adjustments discussed in that portion of my
16 testimony. Additionally, a portion of the difference is related to Staff's calculated CIAC
17 amortization, which results from a larger composite depreciation rate. Schedule MEM-16
18 shows Staff's calculation of Depreciation Expense.

19
20 **Q. What is Staff's recommendation?**

21 A. Staff recommends decreasing Depreciation Expense by \$86,188, from \$1,608,019 to
22 \$1,521,831.

1 **Operating Income Adjustment No. 4 – Miscellaneous Expenses**

2 **Q. Would you please explain Staff's operating income adjustment no. 4?**

3 A. Staff's adjustment increases Miscellaneous Expense by \$37,214, from \$1,259,948 to
4 \$1,297,162. There are two components that comprise this adjustment: the allocation of
5 GO expenses and membership dues.

6
7 **Q. Please discuss Staff's adjustments to the GO Expense Allocation.**

8 A. First, \$251,538 was removed from the GO expense pool of \$34,557,114 because it
9 represented the cost of memberships in organizations that only benefited California
10 ratepayers, and/or portions of membership dues which Staff could identify as being for
11 lobbying costs. Also, the GO expense pool was reduced by \$1,040,585 to disallow
12 expenses incurred for the exclusive benefit of the shareholders. Third, as discussed in
13 Rate Base Adjustment 3, Staff believes that the 4.0 percent allocation based on the four
14 factor methodology is more appropriate than the 3.74 percent allocation proposed by the
15 Company, thus 4.0 percent was applied to the revised GO expense pool of \$33,264,981 to
16 derive \$1,330,600. Schedule MEM-17 shows Staff's calculation of this adjustment. The
17 difference between the Company's proposed GO expense allocation of \$1,292,436 and
18 Staff's \$1,330,600 is \$38,164. Although Miscellaneous Expense is not where most of the
19 GO expense was accounted for during the test year in CCWC's records, Staff has chosen
20 to use it because this is the account to which the Company's year-end adjustment was
21 posted.

22
23 **Q. Did the Company and Staff use the same test year for the components of the four
24 factor allocation methodology used to calculate the GO expense amount?**

25 A. No, during Staff's review of the Company's derivation of the 3.74 percent allocation
26 submitted in response to Staff Data Request No. 4.1, it was discovered that the four factors

1 used were based on a 2001 test year. This will result in a mismatch of revenues and
2 expenses in the 2006 test year and is incorrect to use. Staff used the 2006 test year.
3

4 **Q. Please discuss Staff's remaining adjustment to Miscellaneous Expenses.**

5 A. CCWC is a member of the Investor Owned Water Utility Association and the Water
6 Utility Association of Arizona, both organizations conduct lobbying activities and the
7 amount included in the dues paid in the test year was \$950 based on the Company's
8 response to Data Request No. 125. Staff recommends that miscellaneous expenses be
9 reduced by the \$950.
10

11 **Q. What is Staff's recommendation?**

12 A. Staff recommends increasing Miscellaneous Expenses of CCWC by \$37,214 (the sum of
13 \$38,164 less \$950) from \$1,259,948 to \$1,297,162.
14

15 **Operating Income Adjustment No. 5 – Reversal of Company Pro Forma Adjustment No. 13,**
16 **which amortizes the cost of the additional CAP Allotment.**

17 **Q. Would you please explain Staff's operating income adjustment No. 5?**

18 A. Staff's adjustment reduces the amortization expense related to the additional CAP
19 allotment by \$64,000, from \$64,000 to \$0.00. As discussed in Rate Base Adjustment No.
20 2, the additional CAP allotment purchased in 2007 is an intangible asset and not subject to
21 amortization. Consequently, the Company's Pro Forma Adjustment No. 13 is reversed by
22 Staff Adjustment No. 5. Schedule MEM-18 shows Staff's calculation of this adjustment.
23

24 **Q. What is Staff's recommendation?**

25 A. Staff recommends reducing Amortization of Additional CAP Allotment by \$64,000, from
26 \$64,000 to \$0.

1 **Operating Income Adjustment No. 6 – Rate Case Expense.**

2 **Q. Would you please explain Staff's operating income adjustment No. 6?**

3 A. Staff's adjustment reduces the Rate Case Expense by \$61,558 from \$144,871 to \$83,333.
4 Schedule MEM-19 shows Staff's calculation of this adjustment.

5

6 **Q. Did CCWC include Rate Case Expense only for the instant case?**

7 A. No, part of CCWC's rate case expense in the current case is an "un-recovered" portion of
8 from the prior rate case.

9

10 **Q. What is the amount of "un-recovered" Rate Case Expense proposed by the**
11 **Company?**

12 A. The Company claimed that it is \$154,613.

13

14 **Q. Please explain the difference between normalizing and amortizing?**

15 A. When a cost is amortized, it is prorated over the number of accounting periods it is
16 expected to benefit. Normalizing is a term used in ratemaking to flatten the effects of
17 operating expense levels that fluctuate from year to year. The amount included in the
18 revenue requirement for a "test year" is an amount which represents an average of several
19 years' experience of a given expense, which then represents the amount "normally"
20 incurred annually by the Company.

21

22 **Q. Was normalizing versus amortizing of rate case expense specifically addressed in the**
23 **prior rate case?**

24 A. No. Staff recommended and the Commission approved the Company's requested amount.
25 Amortization is used for capital items. However, this and other operating expenses are
26 normalized therefore there is no unamortized portion.

1 **Q. What has the Company proposed for Rate Case Expense in the instant case.**

2 A. CCWC has projected rate case expense for the current case to be \$280,000.

3

4 **Q. What is Staff recommending for current Rate Case Expense?**

5 A. Based on the rate case expense approved by the Commission in cases of comparable sized
6 utilities, Staff believes that \$150,000 is an appropriate amount for recovery through just
7 and reasonable rates in the instant rate case.

8

9 **Discussion of Appeal and Remand ("Remand") Rate Case Expense.**

10 **Q. What has the Company proposed for the Appeal and Remand of Commission**
11 **Decision No. 68176 Remand Rate Case Expense?**

12 A. In a recent "Notice of Filing" (Docketed September 8, 2008) the Company has requested
13 recovery of \$258,511 for expenses incurred for the Remand proceeding, which it alleges is
14 approximately fifty-percent of the total.

15

16 **Q. Did CCWC revise its proposed Remand rate case expense?**

17 A. Yes, prior to its filing of September 8, 2008, the Company had agreed to only seek
18 recovery of \$100,000 of the \$300,000 in claimed expenses. Staff recommends normalizing
19 this \$100,000 cost over three-years, the same as the cost of the instant case.

20

21 **Q. How is CCWC proposing recovery of Remand rate case expense?**

22 A. Through a surcharge of \$0.124 per one-thousand gallons added to the Company's
23 proposed commodity rate until the \$258,511 has been collected. CCWC has estimated
24 that the surcharge would be effective for twelve months.

1 **Q. Does Staff agree with CCWC's proposed recovery methodology?**

2 A. No, because the additional revenues that will be generated from the result of the Remand
3 Case will benefit CCWC into perpetuity a twelve-month recovery period is a mis-match.
4 Staff recommends the three-year normalization period recommended in the instant case.

5

6 **Q. What is Staff's recommendation for normalizing the current Rate Case Expense?**

7 A. Staff recommends Rate Case Expense of \$150,000 for the instant case and \$100,000 for
8 the Remand Case, which equals \$250,000. Normalized over a three-year period this will
9 result in \$83,333 being included in the revenue requirement for the instant case. Schedule
10 MEM-19 shows Staff's calculation of this adjustment.

11

12 **Operating Income Adjustment No. 7 – Normalization of Chemicals Expenses**

13 **Q. Would you please explain Staff's operating income adjustment No. 7?**

14 A. Staff's adjustment reduces Chemicals Expenses by \$27,630, from \$127,457 to \$99,827.
15 Staff's regulatory audit found that Chemicals Expenses have more than doubled since
16 2003, the prior rate case test year. Because of the fluctuation, Staff believes it is
17 appropriate to normalize Chemicals Expenses by taking an average of the previous three-
18 year's expenses to mitigate any extenuating circumstances which may have lead to this
19 significant increase. Staff's regulatory audit also found that the expense balance included
20 two large invoices for chemicals delivered in late December, 2006. Schedule MEM-20
21 shows Staff's calculation of this adjustment.

22

23 **Q. What is Staff's recommendation?**

24 A. Staff recommends reducing Chemicals Expenses by \$27,630, from \$127,457 to \$99,827.

25

1 **Operating Income Adjustment No. 8 – Normalization of Repairs and Maintenance.**

2 **Q. Would you please explain Staff's operating income adjustment No. 8?**

3 A. Staff's adjustment decreases Repairs and Maintenance Expense by \$19,018, from
4 \$104,609 to \$85,591. Since Repairs and Maintenance Expenses have fluctuated from
5 \$96,152 in 2004, to \$72,640 in 2005, to \$104,609 in the test year; Staff took the three-year
6 average of Repairs and Maintenance Expense to mitigate any extenuating circumstances
7 which may have lead to this significant increase over 2005. Staff's regulatory audit found
8 that \$5,543 of Pepsi Cola products were purchased in the test year for employees of the
9 Company. In the prior rate case, the Company stated this is the type of benefit that allows
10 the Company to attract and maintain qualified and motivated staff to better serve customer
11 needs. Staff does not argue that this may be the case; however, Staff believes this is a cost
12 of doing business that the shareholders should be paying for rather than the ratepayers.
13 Thus, Staff's adjustment consists of two parts: \$13,475 to normalize Repairs and
14 Maintenance Expense and \$5,543 to remove the cost of beverages provided to employees.
15 Staff's calculation of this \$19,018 adjustment is shown on Schedule MEM-21.

16
17 **Q. What is Staff's recommendation?**

18 A. Staff recommends reducing Repairs and Maintenance Expense by \$19,018, from \$104,609
19 to \$85,591.

20
21 **Operating Income Adjustment No. 9 – Normalization of General Liability Insurance**
22 **Expense**

23 **Q. Would you please explain Staff's operating income adjustment No. 9?**

24 A. Staff's adjustment increases General Liability Insurance Expense by \$3,654, from
25 \$(1,294) to \$2,360. In response to Staff's data request MEM 1.44, the Company stated
26 that it is self insured for deductibles less than \$500,000 and \$350,000 for general liability

1 and automobile liability, respectively, per occurrence. A Third Party Administrator
2 (“TPA”) is used to administer and pay claims on behalf of American States Water
3 Company, CCWC’s parent. The parent company, AWR, maintains an “Injuries and
4 Damages Reserve” that is adjusted monthly based on loss reports received from the TPA.
5 Incurred but not reported claims are also estimated and used in setting the reserve balance.
6 Although the reserve balance was zero at the end of the test year, a claim of \$2,682 was
7 paid during 2006, and Staff believes that General Liability Insurance Expense should be
8 normalized to take into consideration the fact that, on an average, claims will be made and
9 paid. For the purposes of normalizing General Liability Insurance Expense, Staff used the
10 period 2003 – 2007. Schedule MEM-22 shows Staff’s calculation of this adjustment.

11
12 **Q. What is Staff’s recommendation?**

13 A. Staff recommends increasing General Liability Insurance Expense by \$3,654, from
14 \$(1,294) to \$2,360.

15
16 **Operating Income Adjustment No. 10 – Outside Services Expenses**

17 **Q. What did the Company propose for outside services expense?**

18 A. The Company proposed \$266,544 as shown on Schedule MEM-23.

19
20 **Q. Did the Company include in outside services, costs that should have been capitalized
21 and depreciated?**

22 A. Yes, as Staff discussed in Rate Base Adjustment No. 6, Expensed Plant, CCWC recorded
23 as operating expenses \$37,673 in costs which, according to the NARUC USOA and the
24 matching principle, should be capitalized and depreciated as shown on Schedule MEM-23.

1 **Q. What is Staff's recommendation?**

2 A. Staff recommends decreasing outside services expense by \$37,673 representing plant that
3 should be capitalized, as shown on Schedule MEM-23.

4
5 **Q. What is the effect of expensing plant?**

6 A. If the NARUC USOA is not complied with, the result is an overstatement of operating
7 expenses and understatement of rate base. Adherence to the matching principle and the
8 NARUC USOA requires that the cost of an asset that benefits more than one accounting
9 period be capitalized (by recording it in a plant account) and depreciated over the asset's
10 useful life.

11
12 **Q. Did CCWC also include in outside services, non-recurring costs that are not
13 representative of an average year?**

14 A. Yes, Staff discovered payments charged to outside services for an ACC penalty related to
15 filing its Annual Report late and an appellate court filing fee. The ACC penalty was \$45
16 for late filing of the 2005 Annual Report and the appellate court cost was \$330, which
17 sums to \$375.

18
19 **Q. What is Staff's recommendation?**

20 A. Staff recommends decreasing outside services expense by \$375 for non-recurring
21 expenses.

22
23 **Q. What is Staff's overall recommendation for this account?**

24 A. Staff recommends reducing Outside Services Expenses by \$38,048, from \$266,544 to
25 \$228,496.

1 **Operating Income Adjustment No. 11 – Water Testing Expense**

2 **Q. Would you please explain Staff's operating income adjustment No. 11?**

3 A. Staff's adjustment reduces Water Testing by \$17,820, from \$43,458 to \$25,638. An
4 explanation of this adjustment can be found in Table E-1 on page 17 of Staff witness Mr.
5 Marlin Scott, Jr.'s direct testimony.

6
7 **Q. What is Staff's recommendation?**

8 A. Staff recommends reducing Water Testing by \$17,820, from \$43,458 to \$25,638 as shown
9 on Schedule MEM-24.

10

11 **Operating Income Adjustment No. 12 – Property Taxes**

12 **Q. Would you please explain Staff's operating income adjustment No. 12?**

13 A. Staff's adjustment reduces Property Taxes by \$33,413, from \$295,813 to \$262,400. The
14 primary difference between the Company's and Staff's Property Taxes is due to the
15 differences in the proposed and recommended revenue requirements. Schedule MEM-25
16 shows Staff's calculation of Property Taxes.

17

18 **Q. What is Staff's recommendation?**

19 A. Staff recommends reducing Property Taxes by \$33,413, from \$295,813 to \$262,400.

20

21 **Operating Income Adjustment No. 13 – Income Taxes**

22 **Q. Would you please explain Staff's operating income adjustment No. 13?**

23 A. Staff's adjustment increases Income Taxes by \$197,275, from \$270,020 to \$467,295. The
24 two main reasons for the difference between Staff's and the Company's calculation of
25 Income Taxes is the difference in test year operating expenses and that the Company
26 applied its weighted cost of debt to the FVRB. The appropriate calculation of

1 synchronized interest expense is made by applying the weighted cost of debt to the OCRB.
2 A company's debts do not increase due to inflation or an increase in value of the property
3 related to the debt. Therefore, applying the weighted cost of debt to the FVRB is
4 inappropriate for calculating the synchronized interest expense. Staff's calculation of
5 Income Taxes and synchronized interest expense are shown in Schedule MEM-2, Line 52,
6 Column A and Schedule MEM-2, Line 56, Column A respectively. Schedule MEM-26
7 shows Staff's calculation of the adjustment.

8
9 **Q. What is Staff's recommendation?**

10 A. Staff recommends increasing Income Taxes by \$197,275, from \$270,020 to \$467,295.

11
12 **REVENUE REQUIREMENT**

13 **Q. Would you please summarize the Company's proposed revenue requirement?**

14 A. The Company's rate filing proposes annual revenues of \$10,515,017, an increase of
15 \$3,068,317, or 41.20 percent, over test year adjusted revenues of \$7,446,700 as shown on
16 Schedule MEM-1.

17
18 **Q. Would you please summarize Staff's recommended revenue requirement?**

19 A. Staff recommends annual revenue of \$9,181,965, an increase of \$1,735,265, or 23.30
20 percent, over test year adjusted revenues of \$7,446,700, as shown on Schedule MEM-1.

21
22 **BASIS FOR REVENUE REQUIREMENT**

23 **Q. How did Staff calculate its recommended revenue requirement?**

24 A. The appropriate revenue requirement is the result of multiplying the Staff recommended
25 FVRB (as per Schedule MEM FVRB-2) by the Staff recommended Fair Value Rate of
26 Return.

1 **RATE DESIGN**

2 **Q. Have you prepared a schedule summarizing the present, Company proposed, and**
3 **Staff recommended rates and service charges?**

4 **A. Yes. A summary of the present, Company proposed, and Staff recommended rates and**
5 **service charges are provided on Schedule MEM-27.**

6
7 **Q. Would you please summarize the present rate design?**

8 **A. The present monthly minimum charges by meter size are as follows: 3/4-inch \$13.60; 1-**
9 **inch \$22.70; 1 1/2-inch \$45.40; 2-inch \$73.00; 3-inch \$146.00; 4-inch \$227.00; 6-inch**
10 **\$454.00; 8-inch \$730.00; 10-inch \$1,043.00; and 12-inch \$1,980.00. No gallons are**
11 **included in the monthly minimum charge. The present residential commodity rate is**
12 **\$1.68 per thousand gallons for zero to 3,000 gallons, \$2.52 per thousand gallons for 3,001**
13 **to 9,000 gallons, and \$3.03 per thousand gallons for any consumption over 9,000 gallons.**
14 **The present commercial and industrial commodity rate tiers vary by meter size, but are**
15 **generally \$2.52 per thousand gallons for the first tier, and \$3.03 per thousand gallons for**
16 **any consumption over the first tier.**

17
18 **For irrigation customers, the monthly minimum charge is the same based upon meter size**
19 **with zero gallons included in the monthly minimum charge and a commodity rate of \$1.56**
20 **per thousand gallons.**

21
22 **The charge for fire sprinkler service is \$10.00 per month regardless of meter size. The**
23 **commodity rates for sprinkler service is the same as residential, commercial and**
24 **industrial. There are zero gallons included in the monthly minimum charge.**

1 **Q. Would you please summarize the Company's proposed rate design?**

2 A. The Company's proposed monthly minimum charges by meter size are as follows: 3/4-
3 inch \$18.56; 1-inch \$30.97; 1 1/2-inch \$71.95; 2-inch \$99.61; 3-inch \$199.21; 4-inch
4 \$309.74; 6-inch \$619.47; 8-inch \$996.07; 10-inch \$1,423.15; and 12-inch \$2,701.67.
5 Zero gallons are included in the monthly minimum charge. The Company proposes a
6 residential commodity rate of \$2.292 per thousand gallons for zero to 3,000 gallons,
7 \$3.438 per thousand gallons for 3,001 to 9,000 gallons, and \$4.134 per thousand gallons
8 for any consumption over 9,000 gallons. The proposed commercial and industrial
9 commodity rate tiers vary by meter size, but are generally \$3.438 per thousand gallons for
10 the first tier, and \$4.134 per thousand gallons for any consumption over the first tier.

11

12 For irrigation customers, the Company's proposed monthly minimum charge is the same
13 based upon meter size with zero gallons included in the monthly minimum charge and a
14 commodity rate of \$3.438 per thousand gallons.

15

16 The proposed charge for fire sprinkler service remains at \$10.00 per month regardless of
17 meter size. The commodity rate for fire sprinkler service for all consumption is \$3.438
18 per thousand gallons. There are zero gallons included in the monthly minimum charge.

19

20 The Company is proposing that customers that use fire hydrants as a source of water for
21 irrigation or construction should also pay a meter charge. This results in a substantial
22 increase as the customer would pay the 3-inch monthly minimum of \$199.21.

1 **Q. Does Staff agree with the Company's proposal that fire hydrant meters be charged a**
2 **monthly minimum based on meter size?**

3 A. No, unless the customer owns, or retains possession of the meter. A customer using a
4 meter on a fire hydrant is usually only connected to the system for a short time period and
5 pays the same rate for all gallons consumed and this is intended to compensate for the
6 additional demand placed on the system.

7

8 **Q. Does the Company currently have a hook-up fee charge?**

9 A. Yes.

10

11 **Q. Does the CCWC propose any changes to the current hook-up fee?**

12 A. CCWC proposes to maintain the same level of fee but to treat all funds collected as CIAC.

13

14 **Q. What is Staff's recommendation?**

15 A. Staff recommends that the amounts collected by the Company pursuant to the off-site
16 hook-up fee charge shall be non-refundable CIAC, as this is the typical regulatory
17 treatment of hook-up fee charges of this nature. Staff also recommends that all funds
18 collected by the Company as off-site hook-up fees be deposited into a separate interest
19 bearing account and used solely for the purposes of paying for the costs of the off-site
20 facilities, including repayment of loans obtained for the installation of off-site facilities
21 that will benefit the entire water system, and that the Company shall annually file, by
22 February 28th, a calendar year report with Docket Control of the ACC, detailing all
23 changes in the account.

1 **Q. In addition to including the 2008 CAP allocation in rate base and earning a return on**
2 **it, has the Company also proposed a hook-up fee to recover costs related to the**
3 **allocation?**

4 A. Yes. The Company has proposed a "CAP Hook-up Fee" on new water installations as
5 shown on Schedule H-3, page 3, lines 22 and 30.
6

7 **Q. Is it appropriate to use a hook-up fee to reimburse the Company for a CAP**
8 **allocation?**

9 A. No, it is not. Hook up fees are intended to fund back-bone plant. The CAP allocation has
10 been fully paid for by the Company and is not back-bone plant. Additionally, if CCWC
11 decides to give up this allotment, it will be reimbursed by CAWCD and U. S. Bureau of
12 Reclamation for the capital costs paid during the time the allotment was held. The CAP
13 hook-up fee would allow the Company to potentially receive the CAP allocation cost
14 twice, thus, its use as a reimbursement mechanism is not appropriate.
15

16 **Q. What is Staff recommending?**

17 A. Staff recommends denial of the CAP hook-up fee tariff.
18

19 **Q. Has the Company also proposed any other inappropriate charges?**

20 A. Yes. The Company has proposed that gross-up taxes be included with service line and
21 meter installation charges as shown on Schedule H-3, page 4, lines 27 - 29.
22

23 **Q. Has the Company given a justification for this proposal?**

24 A. Yes. The Company has made the following statement: "As meters and service lines are
25 now taxable income for income purposes, the Company shall collect income taxes on the

1 meter and service line charges. Any tax collected will be refunded each year as the meter
2 deposit is refunded.”

3
4 **Q. Does Staff agree with the Company’s proposal?**

5 A. No. The Company has not cited the authority for declaring that meter and service lines are
6 now taxable income and Staff is not aware of any ACC rules changes or changes in the
7 Internal Revenue Service Regulations mandating this treatment.

8
9 **Q. What is Staff recommending?**

10 A. Staff recommends denial of the tariff provision allowing meter and service line installation
11 charges to be grossed-up for income taxes.

12
13 **Q. Would you please summarize Staff’s recommended rate design?**

14 A. Yes. Staff recommends the Staff’s rates and charges presented on Schedule MEM-27.
15 Briefly, Staff’s recommended monthly minimum charges by meter size are as follows:
16 3/4-inch \$15.00; 1-inch \$25.00; 1 1/2-inch \$48.00; 2-inch \$77.00; 3-inch \$150.00; 4-inch
17 \$230.00; 6-inch \$460.00; 8-inch \$925.00; 10-inch \$1,300.00; and 12-inch \$2,300.00.
18 Zero gallons are included in the monthly minimum charge. Staff recommends an inverted
19 tier rate design that consists of three tiers for the residential commodity rate of \$1.85 per
20 thousand gallons for zero to 3,000 gallons, \$2.92 per thousand gallons for 3,001 to 9,000
21 gallons, and \$3.33 per thousand gallons for any consumption over 9,000 gallons. The
22 additional tier for the residential 3/4-inch meters is for the first 3,000 gallons, an estimate
23 of residential non-discretionary use. Except for the 3,000 gallon break-over point for the
24 non-discretionary tier, break-over points increase by meter size. Staff’s recommended
25 commercial and industrial commodity rate tiers vary by meter size, but are generally \$2.92

1 per thousand gallons for the first tier, and \$3.33 per thousand gallons for any consumption
2 over the first tier.

3
4 Also, Staff's recommended rates have increased the irrigation rate to \$2.75 for all gallons.
5 This rate is a smaller increase than that proposed by the Company and moves irrigation
6 customers' rates closer to the commodity rates paid by other customers.

7
8 Efficiency in water use is encouraged by producing a higher customer bill with increased
9 consumption or use of a larger meter. A typical bill analysis for residential 3/4 inch meter
10 customer is provided in Schedule MEM-28, and typical bills for average and median use
11 under present, Company proposed, and Staff recommended rates are presented on
12 Schedule MEM-29.

13
14 **Q. What is the rate impact on a 3/4-inch meter residential customer using an average
15 consumption of 8,450 gallons?**

16 A. The average usage of residential 3/4-inch meter customers is 8,450 gallons per month.
17 The average residential 3/4-inch meter customer would experience an \$11.79 or 36.41
18 percent increase in his/her monthly bill from \$32.37 to \$44.16 under the Company's
19 proposed rates and a \$4.09 or 12.63 percent increase in his/her monthly bill from \$32.37
20 to \$36.46 under Staff's recommended rates.

21
22 **Q. What is the rate impact on a 3/4-inch meter residential customer using a median
23 consumption of 5,500 gallons?**

24 A. The median usage of residential 3/4-inch meter customers is 5,500 gallons per month. The
25 average residential 3/4-inch meter customer would experience a \$9.09 or 36.43 percent
26 increase in his or her monthly bill from \$24.94 to \$34.03 under the Company's proposed

1 rates and a \$2.91 or 11.67 percent increase in his/her monthly bill from \$24.94 to \$27.85
2 under Staff's recommended rates.

3

4 **Q. Did Decision No. 70441 authorize a surcharge allowing CCWC to collect the**
5 **additional revenues not collected during the time period of the Appeal and Remand**
6 **process?**

7 A. Yes, and Staff will address this in Surrebuttal Testimony.

8

9 **CONSUMER SERVICES**

10 **Q. Please provide a brief history of customer complaints received by the Commission**
11 **regarding the Company. Additionally, please discuss customer responses to**
12 **Chaparral City's proposed rate increase.**

13 A. Staff reviewed the Commission's records and found 12 complaints, 8 inquiries and 26
14 opinions during the past three and three quarters' years. The complaints concerned 12
15 billing issues. The Company is in good standing with the Corporations Division of the
16 Commission. Consumer Services has received 26 opinions through September 11, 2008,
17 all opposed to the Company's proposed rate increases.

18

19 **Q. Does this conclude your direct testimony?**

20 A. Yes, it does.

CHAPARRAL CITY WATER COMPANY, INC.
Docket No. W-02113A-07-0551
Test Year Ended December 31, 2006

DIRECT TESTIMONY OF MARVIN MILLSAP

TABLE OF CONTENTS TO SCHEDULES MEM

<u>SCH #</u>	<u>TITLE</u>
MEM-1	Revenue Requirement
MEM-2	Gross Revenue Conversion Factor
MEM FVRB-1	Fair Value Rate Base Comparison - Company versus Staff
MEM FVRB-2	Company and Staff Fair Value Rate Base Computation
MEM FVRB-3	Staff Fair Value Rate Base Computation
MEM-3	Rate Base - Original Cost
MEM-4	Summary of Original Cost Rate Base Adjustments
MEM-5	Rate Base Adjustment #1 - Allocate 100% of Well Settlement Proceeds to Ratepayers
MEM-6	Rate Base Adjustment #2 - Reclassify CAP Allotment to Land and Land Rights
MEM-7	Rate Base Adjustment #3 - Increase General Office Plant Allocation to 4%
MEM-8	Rate Base Adjustment #4 - Recalculation of Accumulated Depreciation
MEM-9	Rate Base Adjustment #5 - Eliminate Working Capital Components
MEM-10	Rate Base Adjustment #6 - Capitalize Outside Services Expenses
MEM-11	Rate Base Adjustment #7 - Retire Plant Not in Service and Reclassify Plant to Proper Categories
MEM RCN-1	Rate Base - Reconstruction Cost New
MEM RCN-2	Summary of Reconstruction Cost New Rate Base Adjustments
MEM-5	RCN Rate Base Adjustment #1 - Allocate 100% of Well Settlement Proceeds to Ratepayers
MEM-6	RCN Rate Base Adjustment #2 - Reclassify CAP Allotment to Land and Land Rights
MEM RCN-3	RCN Rate Base Adjustment #3 - General Office Plant Allocation
MEM RCN-4	RCN Rate Base Adjustment #4 - Accumulated Depreciation
MEM-9	RCN Rate Base Adjustment #5 - Eliminate Working Capital Components
MEM RCN-5	RCN Rate Base Adjustment #6 - Plant Additions and Retirements per Staff Adjustments to Rate Base
MEM-12	Summary of Income Statement - Test Year and Staff Recommended
MEM-13	Summary of Operating Income Adjustments - Test Year
MEM-14	Operating Adjustment #1 - Well Settlement Proceeds to Ratepayers
MEM-15	Operating Adjustment #2 - Purchased Water Expense
MEM-16	Operating Adjustment #3 - Depreciation Expense
MEM-17	Operating Adjustment #4 - Miscellaneous Expenses
MEM-18	Operating Adjustment #5 - Additional CAP Allocation Amortization Reversal
MEM-19	Operating Adjustment #6 - Normalization of Rate Case Expense
MEM-20	Operating Adjustment #7 - Normalization of Chemicals Expense
MEM-21	Operating Adjustment #8 - Normalization of Repairs and Maintenance Expense
MEM-22	Operating Adjustment #9 - Normalization of Insurance Expense
MEM-23	Operating Adjustment #10 - Outside Services Expense
MEM-24	Operating Adjustment #11 - Water Testing Expense
MEM-25	Operating Adjustment #12 - Property Tax Expense
MEM-26	Operating Adjustment #13 - Income Tax Expense
MEM-27	Rate Design
MEM-28	Typical Bill Analysis
MEM-29	Typical Bill Analysis - Average and Median Cost Comparison

CHAPARRAL CITY WATER COMPANY, INC.
 Docket No. W-02113A-07-0551
 Test Year Ended December 31, 2006

Schedule MEM-1

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COMPANY FAIR VALUE	(B) STAFF FAIR VALUE
1	Adjusted Rate Base	\$ 28,768,975	\$ 27,050,414
2	Adjusted Operating Income (Loss)	\$ 797,271	\$ 1,003,088
3	Current Rate of Return (L2 / L1)	2.77%	3.71%
4	Required Rate of Return	9.32%	7.60%
5	Required Operating Income (L4 * L1)	\$ 2,681,268	\$ 2,055,831
6	Operating Income Deficiency (L5 - L2)	\$ 1,883,997	\$ 1,052,744
7	Gross Revenue Conversion Factor	1.6286	1.6483
8	Required Revenue Increase (L7 * L6)	\$ 3,068,317	\$ 1,735,265
9	Adjusted Test Year Revenue	\$ 7,446,700	\$ 7,446,700
10	Proposed Annual Revenue (L8 + L9)	\$ 10,515,017	\$ 9,181,965
11	Required Increase in Revenue (%)	41.20%	23.30%

References:

Column (A): Company Schedule A-1
 Column (B): Staff Schedule MEM-3.1

GROSS REVENUE CONVERSION FACTOR

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<i>Calculation of Gross Revenue Conversion Factor:</i>					
1	Revenue	100.0000%			
2	Uncollectible Factor (Line 11)	0.0000%			
3	Revenues (L1 - L2)	100.0000%			
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	39.3324%			
5	Subtotal (L3 - L4)	60.6676%			
6	Revenue Conversion Factor (L1 / L5)	1.648327			
<i>Calculation of Uncollectible Factor:</i>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 23)	38.5989%			
9	One Minus Combined Income Tax Rate (L7 - L8)	61.4011%			
10	Uncollectible Rate	0.0000%			
11	Uncollectible Factor (L9 * L10)	0.0000%			
<i>Calculation of Effective Tax Rate:</i>					
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.9680%			
14	Federal Taxable Income (L12 - L13)	93.0320%			
15	Applicable Federal Income Tax Rate (Line 55)	34.0000%			
16	Effective Federal Income Tax Rate (L14 x L15)	31.6309%			
17	Combined Federal and State Income Tax Rate (L13 +L16)		38.5989%		
<i>Calculation of Effective Property Tax Factor</i>					
18	Unity	100.0000%			
19	Combined Federal and State Income Tax Rate (L17)	38.5989%			
20	One Minus Combined Income Tax Rate (L18-L19)	61.4011%			
21	Property Tax Factor (MEM-16, L21)	1.1947%			
22	Effective Property Tax Factor (L20*L21)		0.7335%		
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			39.3324%	
24	Required Operating Income (Schedule MEM-1, Line 5)	\$ 2,055,831			
25	Adjusted Test Year Operating Income (Loss) (Schedule MEM-11, Line 28)	1,003,088			
26	Required Increase in Operating Income (L24 - L25)		\$ 1,052,744		
27	Income Taxes on Recommended Revenue (Col. [E], L52)	\$ 1,129,086			
28	Income Taxes on Test Year Revenue (Col. [B], L52)	467,295			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		661,791		
30	Recommended Revenue Requirement (Schedule MEM-1, Line 10)	\$ 9,181,965			
31	Uncollectible Rate (Line 10)	0.0000%			
32	Uncollectible Expense on Recommended Revenue (L30*L31)	\$ -			
33	Adjusted Test Year Uncollectible Expense	\$ -			
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32-L33)		-		
35	Property Tax with Recommended Revenue (MEM-16, Col B, L16)	\$ 283,131			
36	Property Tax on Test Year Revenue (MEM-16, Col A, L16)	262,400			
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		20,731		
38	Total Required Increase in Revenue (L26 + L29 + L34 + L37)		\$ 1,735,265		
<i>Calculation of Income Tax:</i>					
39	Revenue (Schedule MEM-11, Col. [C], Line 5 & Sch. MEM-1, Col. [D] Line 10)	\$ 7,446,700	\$ 1,735,265	\$ 9,181,965	
40	Operating Expenses Excluding Income Taxes	\$ 5,976,317		\$ 5,997,048	
41	Synchronized Interest (L56)	\$ 259,739		\$ 259,739	
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 1,210,645		\$ 2,925,179	
43	Arizona State Income Tax Rate	6.9680%		6.9680%	
44	Arizona Income Tax (L42 x L43)	\$ 84,358		\$ 203,827	
45	Federal Taxable Income (L42 - L44)	\$ 1,126,287		\$ 2,721,353	
46	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ 7,500		\$ 7,500	
47	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ 6,250		\$ 6,250	
48	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ 8,500		\$ 8,500	
49	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ 91,650		\$ 91,650	
50	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ 269,038		\$ 811,360	
51	Total Federal Income Tax	\$ 382,938		\$ 925,260	
52	Combined Federal and State Income Tax (L44 + L51)	\$ 467,295		\$ 1,129,086	
53	Applicable Federal Income Tax Rate [Col. [E], L51 - Col. [B], L51] / [Col. [E], L45 - Col. [B], L45]			34.0000%	
<i>Calculation of Interest Synchronization:</i>					
54	Rate Base (Schedule MEM-3, Col. (C), Line 17)	\$ 21,644,877			
55	Weighted Average Cost of Debt (Schedule MEM-17, Col. [F], L1 + L2)	1.2000%			
56	Synchronized Interest (L45 X L46)	\$ 259,739			

CHAPARRAL CITY WATER COMPANY, INC.
Docket No. W-02113A-07-0551
Test Year Ended December 31, 2006

Schedule MEM FVRB -1

FAIR VALUE RATE BASE COMPARISON - COMPANY VS STAFF

LINE NO.	(A) COMPANY AS FILED	(B) STAFF AS ADJUSTED	(C) DIFFERENCE
1	\$ 66,310,296	\$ 64,803,291	\$ (1,507,005)
2	20,885,854	18,616,394	(2,269,460)
3	<u>\$ 45,424,442</u>	<u>\$ 46,186,897</u>	<u>\$ 762,455</u>
4			
5	<u>LESS:</u>		
6			
7	Contributions in Aid of Construction (CIAC)		
8	Less: Accumulated Amortization		
9	Net CIAC	\$ 7,780,241	\$ (0)
10			
11	Advances in Aid of Construction (AIAC)	8,394,501	(0)
12			
13	Customer Meter Deposits	819,845	-
14			
15	Deferred Income Tax Credits	925,896	-
16			
17	Shared Gain on Well	646,000	1,216,000
18			
19	<u>ADD:</u>		
20			
21	Unamortized Debt Issuance Costs	424,010	(424,010)
22			
23	Prepayments	192,485	(192,485)
24			
25	Materials and Supplies	14,521	(14,521)
26			
27	Deferred Regulatory Assets	1,280,000	(1,280,000)
28			
29	Working Capital	-	-
30			
31			
32	Original Cost Rate Base	<u>\$ 28,768,975</u>	<u>\$ (1,718,560)</u>

References:

Column (A), Company Schedule B-1
Column (B): Schedule MEM FVRB-2
Column (C): Column (A) - Column (B)

CHAPARRAL CITY WATER COMPANY, INC.
Docket No. W-02113A-07-0551
Test Year Ended December 31, 2006

Schedule MEM FVRB -2

FAIR VALUE RATE BASE COMPUTATION - COMPANY AND STAFF

LINE NO.	(A) COMPANY AS FILED	(B) STAFF AS ADJUSTED
1 OCN Rate Base per MEM-3	\$ 22,770,304	\$ 21,644,877
2 RCN Rate Base per MEM RCN -1	34,767,581	32,455,951
3		
4	<u>\$ 57,537,885</u>	<u>\$ 54,100,828</u>
5 OCN and RCN weighted 50% each to		
6 calculate Fair Value Rate Base (FVRB)	<u>\$ 28,768,943</u>	<u>\$ 27,050,414</u>

References:

Column (A), Schedule MEM 3
Column (B): Schedule MEM RCN-1

CHAPARRAL CITY WATER COMPANY, INC.
Docket No. W-02113A-07-0551
Test Year Ended December 31, 2006

Schedule MEM FVRB -3

FAIR VALUE RATE BASE COMPUTATION - STAFF

LINE NO.	(A) STAFF OCN AS ADJUSTED	(B) STAFF RCN AS ADJUSTED	(C) STAFF FAIR VALUE RATE BASE
1	\$ 51,128,062	\$ 78,478,520	\$ 64,803,291
2	13,845,072	23,387,716	18,616,394
3	<u>\$ 37,282,990</u>	<u>\$ 55,090,804</u>	<u>\$ 46,186,897</u>
4			
5	<u>LESS:</u>		
6			
7	\$ -		\$ -
8	-		-
9	<u>\$ 6,119,129</u>	<u>\$ 9,441,352</u>	<u>\$ 7,780,241</u>
10	\$ -		
11	6,557,243	10,231,760	8,394,502
12	-		
13	819,845	819,845	819,845
14	-		
15	925,896	925,896	925,896
16	-		
17	1,216,000	1,216,000	1,216,000
18			
19	<u>ADD:</u>		
20			
21	-	-	-
22			
23	-	-	-
24			
25	-	-	-
26			
27	-	-	-
28			
29	-	-	-
30			
31			
32	<u>\$ 21,644,877</u>	<u>\$ 32,455,951</u>	<u>\$ 27,050,414</u>

References:

Column (A), Schedule MEM 3.2
Column (B): Schedule MEM RCN-1
Column (C): Column (A) + Column (B) divided by 2

RATE BASE - ORIGINAL COST

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	Adj. No.	(C) STAFF AS ADJUSTED
1	Plant in Service	\$ 51,804,423	2, 3, 6, 7	\$ 51,128,062
2	Less: Accumulated Depreciation	15,877,022	4	13,845,072
3	Net Plant in Service	<u>\$ 35,927,401</u>		<u>\$ 37,282,990</u>
LESS:				
4	Contributions in Aid of Construction (CIAC)	\$ -		\$ 6,288,097
5	Less: Accumulated Amortization	-		168,968
6	Net CIAC	<u>6,119,129</u>		<u>\$ 6,119,129</u>
7	Advances in Aid of Construction (AIAC)	6,557,243		6,557,243
8	Customer Meter Deposits	819,845		819,845
9	Deferred Income Tax Credits	925,896		925,896
10	Shared Gain on Well	646,000	1	1,216,000
ADD:				
11	Unamortized Debt Issuance Costs	424,010	5	-
12	Prepayments	192,485	5	-
13	Materials and Supplies	14,521	5	-
14	Deferred Regulatory Assets	1,280,000	2	-
15	Working Capital	-		-
16	Original Cost Rate Base	<u>\$ 22,770,304</u>		<u>\$ 21,644,877</u>

References:

Column (A), Company Schedule B-1
Column (B): Schedule MEM-4
Column (C): Column (A) + Column (B)

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	ACCT. NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) Well Settlement ADJ.#1	(C) CAP Allocation ADJ.#2	(D) GO Plant ADJ.#3	(E) Acc Depr ADJ.#4	(F) Working Capitalize ADJ.#5	(G) Expenses ADJ.#6	(H) Retire Wells ADJ.#7	(I) STAFF ADJUSTED
PLANT IN SERVICE:											
1	301	Organization	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	302	Franchises	-	-	-	-	-	-	-	-	-
3	303	Land and Land Rights	305,920	-	1,280,000	-	-	-	-	(34,062)	1,551,658
4	304	Structures & Improvements	1,518,848	-	-	-	-	11,590	-	(6,548)	1,529,642
5	305	Collecting & Impounding Reservoirs	6,548	-	-	-	-	-	-	-	-
6	306	Lakes, Rivers, Other Intakes	-	-	-	-	-	-	-	-	-
7	307	Wells and Springs	332,065	-	-	-	-	-	-	(172,438)	159,627
8	308	Infiltration Galleries and Tunnels	-	-	-	-	-	-	-	-	-
9	309	Supply Mains	-	-	-	-	-	-	-	-	-
10	310	Power Generation Equipment	-	-	-	-	-	-	-	-	-
11	311	Pumping Equipment	1,506,908	-	-	-	-	26,084	-	55,254	1,588,246
12	312	Water Treatment Plant	7,763,500	-	-	-	-	-	-	(1,976,860)	5,786,640
13	320	Distribution Reservoirs & Standpipes	6,170,420	-	-	-	-	-	-	(1,659,272)	6,512,148
14	330	Transmission & Distribution Mains	17,450,634	-	-	-	-	-	-	1,302,420	18,953,054
15	331	Services	7,389,930	-	-	-	-	-	-	106,409	7,496,339
16	333	Meters & Meter Installation	2,725,673	-	-	-	-	-	-	11,193	2,736,866
17	334	Hydrants	1,171,633	-	-	-	-	-	-	53,352	1,224,985
18	335	Backflow Prevention Devices	-	-	-	-	-	-	-	-	-
19	336	Other Plant & Misc. Equipment	1,610,687	-	-	-	-	-	-	106,542	1,717,229
20	339	Office Furniture & Equipment	270,359	-	-	-	-	-	-	1,814	272,173
21	340	Transportation Equipment	535,315	-	-	-	-	-	-	-	535,315
22	341	Stores Equipment	-	-	-	-	-	-	-	-	-
23	342	Tools, Ship & Garage Equipment	149,365	-	-	-	-	-	-	-	149,365
24	343	Laboratory Equipment	-	-	-	-	-	-	-	-	-
25	344	Power Operated Equipment	-	-	-	-	-	-	-	-	-
26	345	Communication Equipment	39,105	-	-	-	-	-	-	-	39,105
27	346	Miscellaneous Equipment	106,542	-	-	-	-	-	-	(106,542)	-
28	347	Other Tangible Plant	-	-	-	-	-	-	-	-	-
29	348		-	-	-	-	-	-	-	-	-
30			51,053,252	-	1,280,000	-	-	-	37,674	(2,118,334)	50,252,592
31			-	-	-	-	-	-	-	-	-
32			-	-	-	-	-	-	-	-	-
33			-	-	-	-	-	-	-	-	-
34	Add:	General Office Plant Allocation	751,171	-	-	124,299	-	-	-	-	875,470
35			-	-	-	-	-	-	-	-	-
36			-	-	-	-	-	-	-	-	-
37			-	-	-	-	-	-	-	-	-
38			-	-	-	-	-	-	-	-	-
39		Total Plant in Service	\$ 51,804,423	\$ -	\$ 1,280,000	\$ 124,299	\$ (2,031,950)	\$ -	\$ 37,674	\$ (2,118,334)	\$ 51,128,062
40		Less: Accumulated Depreciation	15,877,022	-	-	-	-	-	-	-	13,845,072
41			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
42		Net Plant in Service (L59 - L 60)	\$ 35,927,401	\$ -	\$ 1,280,000	\$ 124,299	\$ 2,031,950	\$ -	\$ 37,674	\$ (2,118,334)	\$ 37,282,990
43			-	-	-	-	-	-	-	-	-
44		LESS:	-	-	-	-	-	-	-	-	-
45		Contributions in Aid of Construction (CIAC)	-	-	-	-	-	-	-	-	-
46		Less: Accumulated Amortization	-	-	-	-	-	-	-	-	-
47		Net CIAC (L25 - L26)	6,119,129	-	-	-	0	-	-	-	6,119,129
48		Advances in Aid of Construction (AIAC)	6,557,243	-	-	-	-	-	-	-	6,557,243
49		Customer Meter Deposits	819,845	-	-	-	-	-	-	-	819,845
50		Deferred Income Taxes	925,896	-	-	-	-	-	-	-	925,896
51		Shared Gain on Well (Settlement Agreement Not to Use Wells)	646,000	570,000	-	-	-	-	-	-	1,216,000
52			-	-	-	-	-	-	-	-	-
53		ADD:	-	-	-	-	-	-	-	-	-
54		Unamortized Debt Issuance Costs	424,010	-	-	-	-	(424,010)	-	-	-
55		Prepayments	162,485	-	-	-	-	(162,485)	-	-	-
56		Materials and Supplies	14,521	-	-	-	-	(14,521)	-	-	-
57		Deferred Regulatory Assets	1,280,000	-	(1,280,000)	-	-	-	-	-	-
58		Working Capital	-	-	-	-	-	-	-	-	-
59		Original Cost Rate Base	\$ 22,770,304	\$ (570,000)	\$ -	\$ 124,299	\$ 2,031,950	\$ (631,016)	\$ 37,674	\$ (2,118,334)	\$ 21,644,877

ADJ.#
 1 Allocate 100% of Well Settlement Proceeds to Ratepayers.
 2 CAP Abolition Reclassified to Account 303..
 3 Increase General Office allocation to 4.0%.
 4 Recalculation of Accumulated Depreciation.
 5 Eliminate Working Capital Components
 6 Capitalize Outside Services Expenses
 7 Retire Wells 8 & 9 that are no longer used and useful

References:
 Schedule MEM-5
 Schedule MEM-6
 Schedule MEM-7
 Schedule MEM-8
 Schedule MEM-9
 Schedule MEM-10
 Schedule MEM-11

RATE BASE ADJUSTMENT #1 - Adjustment to recognize the Well Settlement Proceeds as a regulatory liability that is allocated 100 percent to the ratepayers and subject of a ten year amortization period.

Line No.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1	Well settlement proceeds mischaracterized as "Shared gain on well."	\$ 646,000	\$ 570,000	\$ 1,216,000
2				
3				
4	<u>References:</u>			
5	Col [A]: Company Schedule B-2			
6	Col [B]: Col [C] - Col [A]			
7	Col [C]: Explanation below. Testimony - MEM.			
8				
9				
10				
11				
12				
13				
14				
15	Explanation of Adjustment:			
16	Agreement signed 02/05/2005 with Fountain Hills Sanitation District to take Wells 8 & 9 out of service due to			
17	possible contamination from sewage treatment facility in exchange for \$1,520,000. Proceeds to be allocated 100% to ratepay			
18	because the wells were fully depreciated, thus the original cost had been paid by the depreciation included in rates throughout			
19	the 30 year useful life assigned, which expired in 2001 and 2002. To be amortized over 10 years.			
20				
21				
22	Original Amount of settlement proceeds.			\$ 1,520,000
23	2005 amortization			(152,000)
24	2006 amortization			(152,000)
25				<u>1,216,000</u>
26	Test year-end balance			<u>\$ 1,216,000</u>

RATE BASE ADJUSTMENT #1 - Adjustment to recognize the Well Settlement Proceeds as a regulatory liability that is allocated 100 percent to the ratepayers and subject of a ten year amortization period.

Line No.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1	Well settlement proceeds mischaracterized as "Shared gain on well."	\$ 646,000	\$ 570,000	\$ 1,216,000
2				
3				
4	<u>References:</u>			
5	Col [A]: Company Schedule B-2			
6	Col [B]: Col [C] - Col [A]			
7	Col [C]: Explanation below. Testimony - MEM.			
8				
9				
10				
11				
12				
13				
14				
15	Explanation of Adjustment:			
16	Agreement signed 02/05/2005 with Fountain Hills Sanitation District to take Wells 8 & 9 out of service due to			
17	possible contamination from sewage treatment facility in exchange for \$1,520,000. Proceeds to be allocated 100% to ratepay			
18	because the wells were fully depreciated, thus the original cost had been paid by the depreciation included in rates throughout			
19	the 30 year useful life assigned, which expired in 2001 and 2002. To be amortized over 10 years.			
20				
21				
22	Original Amount of settlement proceeds.			\$ 1,520,000
23	2005 amortization			(152,000)
24	2006 amortization			(152,000)
25				<u>1,216,000</u>
26	Test year-end balance			<u>\$ 1,216,000</u>

RATE BASE ADJUSTMENTS #2 - Reclassify additional CAP Allocation purchased that is an intangible asset in the form of a water right.

Line No.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1	Deferred Regulatory Assets	\$ 1,280,000	\$ (1,280,000)	\$ -
2				
3				
4				

- 5 References:
 6 Col [A]: Company Schedule B-1
 7 Col [B]: Col [C] - Col [A]
 8 Col [C]: Testimony - MEM.
 9

10
 11 Explanation of Staff Adjustment
 12 Staff has determined that approximately 50% of the additional CAP Allocation of 1,931 acre feet of water purchased in 2007 will
 13 be used and useful by 2012. The contract with CAWCD and CAP for water deliveries is 100 years with renewal provisions so
 14 the purchase has the characteristics of an intangible asset similar to water rights associated with land. Given its attributes, this
 15 purchase should not be treated as having a value which is consumed over time and benefits future periods. The purpose of this
 16 adjustment is to reclassify the cost of the CAP Allocation to NARUC Account #303, Land and Land Rights.
 17

18 NOTE: This adjustment also applies to the RCN schedules.
 19

RATE BASE ADJUSTMENT #3 - Reduce General Office plant for disallowed items and increase four-factor allocation to 4%.

LINE NO.	ACCT NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED	[D]	[E]
1		General office plant allocation	\$ 751,171	\$ 124,299	875,469		
2		Totals	\$ 751,171	\$ 124,299	875,469		

[A]: Company Schedule B-2, Page 3 and B-3, Page 3 and below Line 26, Column C.
 [B]: Testimony - MEM and below calculations and Line 47, Column E.
 [C]: Col [B] + Col [A]

Explanation of Staff Adjustment

10 As Originally Filed:

LINE NO.	DESCRIPTION	Per Exhibit Schedule B-2, Page 3	Allocation Factor	Original Allocation
12	Home Office Plant Allocated			
13	301 Organization	16,452	3.21%	528
14	302 Franchise Cost and Other Intangible Plant	1,089,237	3.21%	34,965
15	304 Structures & Improvements	5,802,813	3.21%	186,270
16	311 Electric Pumping Equipment	(916)	3.21%	(29)
17	339 Other Plant & Misc. Equipment	847,382	3.21%	27,201
18	340 Office Furniture & Equipment	14,268,765	3.21%	458,027
19	341 Transportation Equipment	552,719	3.21%	17,742
20	343 Tools, Ship & Garage Equipment	405,643	3.21%	13,021
21	344 Laboratory Equipment	4,061	3.21%	130
22	345 Power Operated Equipment	249,261	3.21%	8,001
23	346 Communication Equipment	165,561	3.21%	5,315
24	Note Below		3.21%	-
25		<u>23,400,978</u>		<u>751,171</u>

LINE NO.	DESCRIPTION	Per Exhibit Schedule B-2, Page 3	Staff Adjustment A	Adjusted for Allocation	Allocation Factor	Staff Recommended
29	Home Office Plant Allocated					
30	301 Organization	16,452		16,452	4.00%	658
31	302 Franchise Cost and Other Intangible Plant	1,089,237	(420,000)	669,237	4.00%	26,769
32	304 Structures & Improvements	5,802,813		5,802,813	4.00%	232,113
33	311 Electric Pumping Equipment	(916)		(916)	4.00%	(37)
34	339 Other Plant & Misc. Equipment	847,382	(820,254)	27,128	4.00%	1,085
35	340 Office Furniture & Equipment	14,268,765		14,268,765	4.00%	570,751
36	341 Transportation Equipment	552,719	(274,001)	278,718	4.00%	11,149
37	343 Tools, Ship & Garage Equipment	405,643		405,643	4.00%	16,226
38	344 Laboratory Equipment	4,061		4,061	4.00%	162
39	345 Power Operated Equipment	249,261		249,261	4.00%	9,970
40	346 Communication Equipment	165,561		165,561	4.00%	6,622
41	Note Below				4.00%	-
42		<u>23,400,978</u>	<u>(1,514,255)</u>	<u>21,886,723</u>		<u>875,469</u>
43					As original filed	<u>751,171</u>
44						
45					Staff Adjustment to Increase General Office Plant	<u>124,299</u>

47 Items Removed from General Office Plant In Staff Adjustment:

48	CPUC Management Audit - Completed in 1995, thus not applicable to CCWC.	420,000
49	Water Management Plans - Completed in 1998, thus not applicable to CCWC.	820,254
50	Luxury Vehicles - Detail listed below.	274,001
51		<u>1,514,255</u>

54 Note: Consultant's schedule of GO Plant is \$7,979 less than the listing in AWR's GL as furnished by the Company. Due to its immateriality Staff did not investigate this difference.

LINE NO.	Vehicles Found by Staff to be Imprudent	Date Acquired	Price	Per MEM DR 7.5	Accum. Depr.
60	Ford Explorer - 2004	3/26/2004	\$ 45,639	Per MEM DR 7.5	5,988
61	Infiniti GX35 - 2004	8/13/2004	\$ 40,039	Per MEM DR 7.5	5,253
62	Ford Expedition - 2004	8/13/2004	\$ 40,785	Per MEM DR 7.5	5,351
63	Acura MDX 2001	11/21/2002	\$ 38,319	Per MEM DR 7.5	10,055
64	Infiniti QX4	12/11/2002	\$ 50,077	Per MEM DR 7.5	13,140
65	Audi S4 Avant - 2005	7/6/2005	\$ 59,143	Per MEM DR 7.5	3,880
66			<u>\$ 274,001</u>		<u>\$ 43,667</u>

RATE BASE ADJUSTMENT #4 - ACCUMULATED DEPRECIATION

LINE NO.	DESCRIPTION	[A]	[B]	[C]	[D]	[E]
		COMPANY AS FILED	STAFF ADJUSTMENT A	STAFF ADJUSTMENT B	TOTAL OF STAFF ADJUSTMENTS	STAFF RECOMMENDED
1	General office plant allocation	\$ 15,877,022	\$ 84,561	\$ 2,116,511	\$ (2,031,950)	13,845,072
2	Totals	\$ 15,877,022	\$ 84,561	\$ 2,116,511	\$ (2,031,950)	\$ 13,845,072

[A]: Company Schedule B-2, Page 3 and B-3, Page 3 and below Line 63, Column C.
[B]: Testimony - MEM and below calculations and Line 99, Column E.
[C]: Testimony - MEM and below calculations and line 175, Column E.
[D]: Col [B] + Col [C]
[E]: Testimony - MEM

13	Acct. No.	Description	CCWC Plant OCN Accum. Depr. Per Exh. Sch. B-2 Page 3d
14	301	Organization	-
15	302	Franchises	-
16	303	Land and Land Rights	-
17	304	Structures & Improvements	357,961
18	305	Collecting & Impounding Reservoirs	573
19	306	Lakes, Rivers, Other Intakes	-
20	307	Wells and Springs	183,252
21	308	Infiltration Galleries and Tunnels	-
22	309	Supply Mains	-
23	310	Power Generation Equipment	-
24	311	Pumping Equipment	879,456
25	320	Water Treatment Plant	2,304,464
26	330	Distribution Reservoirs & Standpipes	1,996,014
27	331	Transmission & Distribution Mains	7,154,728
28	333	Services	1,060,764
29	334	Meters & Meter Installation	990,763
30	335	Hydrants	235,514
31	336	Backflow Prevention Devices	-
32	339	Other Plant & Misc. Equipment	135,962
33	340	Office Furniture & Equipment	45,958
34	341	Transportation Equipment	60,636
35	342	Stores Equipment	-
36	343	Tools, Ship & Garage Equipment	34,980
37	344	Laboratory Equipment	25
38	345	Power Operated Equipment	-
39	346	Communication Equipment	883
40	347	Miscellaneous Equipment	31,899
41	348	Other Tangible Plant	-
42			15,473,832
43		Rounding	2
44		Total CCWC Plant Accumulated Depreciation Per Exhibit Schedule B-2. Page 3d.	15,473,834

49	General Office Plant Allocated - Accum Depr OCN	Per Exhibit Schedule B-4-A	Allocation Factor	Allocation
50	301 Organization	3,046	3.21%	98
51	302 Franchise Cost and Other Intangible Plant	211,596	3.21%	6,792
52	304 Structures & Improvements	2,354,430	3.21%	75,577
53	311 Electric Pumping Equipment		3.21%	-
54	339 Other Plant & Misc. Equipment	162,569	3.21%	5,218
55	340 Office Furniture & Equipment	8,664,647	3.21%	278,135
56	341 Transportation Equipment	552,718	3.21%	17,742
57	343 Tools, Shop & Garage Equipment	192,488	3.21%	6,179
58	344 Laboratory Equipment	4,062	3.21%	130
59	345 Power Operated Equipment	249,257	3.21%	8,001
60	346 Communication Equipment	165,561	3.21%	5,315
61	Total GO Accum. Depr. - Exh. Sch. B-2. Pg 4, Line 33.	12,560,374		403,188
62				
63	Total Accumulated Depreciation Per Exhibit Schedule B-2. Page 1, Line 6.			15,877,022

64 **Explanation of Staff Adjustment A**

65 As Originally Filed::

	Per Exhibit	Allocation	Original
	Sch. B-2, Page 4	Factor	Allocation
68 301 Organization	3,046	3.21%	98
69 302 Franchise Cost and Other Intangible Plant	211,596	3.21%	6,792
70 304 Structures & Improvements	2,354,430	3.21%	75,577
71 311 Electric Pumping Equipment	-	3.21%	-
72 339 Other Plant & Misc. Equipment	162,569	3.21%	5,218
73 340 Office Furniture & Equipment	8,664,647	3.21%	278,135
74 341 Transportation Equipment	552,718	3.21%	17,742
75 343 Tools, Ship & Garage Equipment	192,488	3.21%	6,179
76 344 Laboratory Equipment	4,062	3.21%	130
77 345 Power Operated Equipment	249,257	3.21%	8,001
78 346 Communication Equipment	165,561	3.21%	5,315
79	<u>12,560,374</u>		<u>403,188</u>

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	Per Exhibit	Staff	Adjusted for	Allocation	Staff
	Schedule B-2, Page 4	Adjustment A	Allocation	Factor	Recommended
83 Home Office Plant Accumulated Depreciation					
84 301 Organization	3,046	(3,046)	-	4.00%	-
85 302 Franchise Cost and Other Intangible Plant	211,596	(153,888)	57,708	4.00%	2,308
86 304 Structures & Improvements	2,354,430		2,354,430	4.00%	94,177
87 311 Electric Pumping Equipment	-		-	4.00%	-
88 339 Other Plant & Misc. Equipment	162,569	(166,019)	(3,450)	4.00%	(138)
89 340 Office Furniture & Equipment	8,664,647		8,664,647	4.00%	346,586
90 341 Transportation Equipment	552,718	(43,667)	509,051	4.00%	20,362
91 343 Tools, Ship & Garage Equipment	192,488		192,488	4.00%	7,700
92 344 Laboratory Equipment	4,062		4,062	4.00%	162
93 345 Power Operated Equipment	249,257		249,257	4.00%	9,970
94 346 Communication Equipment	165,561		165,561	4.00%	6,622
95	<u>12,560,374</u>	<u>(366,620)</u>	<u>12,193,754</u>		<u>487,750</u>
96			As original filed		<u>403,188</u>

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100 Items Removed from General Office Plant Accumulated Depreciation In Staff Adjustment A:		Accum Depr
101 CRC Valuation - Inappropriate accumulated depreciation for intangible	3,046	Per DR MEM 7.4 & 7.5
102 CPUC Management Audit - Completed in 1995, thus not applicable to CCWC.	153,888	
103 Water Management Plans - Completed in 1998, thus not applicable to CCWC.	166,019	
104 Luxury Vehicles - Detail listed below.	<u>43,667</u>	
105	<u>366,620</u>	

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Vehicles Found by Staff to be l	Date Acquired	Price	Accum. Depr.
Ford Explorer - 2004	3/26/2004	\$ 45,639	5,988
Infiniti GX35 - 2004	8/13/2004	\$ 40,039	5,253
Ford Expedition - 2004	8/13/2004	\$ 40,785	5,351
Acura MDX 2001	11/21/2002	\$ 38,319	10,055
Infiniti QX4	12/11/2002	\$ 50,077	13,140
Audi S4 Avant - 2005	7/6/2005	\$ 59,143	3,880
		<u>\$ 274,001</u>	<u>\$ 43,667</u>

122 **Explanation of Staff Adjustment B**

123 Explanation of Adjustment:
124 Agreement signed 02/05/2005 with Fountain Hills Sanitation District to take Wells 8 & 9 out of service and retire other
125 Plant identified by Staff as not being used and useful. Also to reclassify plant and accumulated depreciation.
126

127 Acct.	No.	Description	Cost	Accum Depr
128				(193)
129	304	Staff adjustment to Structures and addition to accum depr based on half-year conve	11,590	
130	304	Well No. 9 - Install exhaust fan	596	596
131		Subtotal	12,186	403
132				
133	307	Fully depreciated Cost of Well #8 per response to DR MEM-7.3	\$ 49,329	\$ 49,329
134	307	Fully depreciated Cost of Well #9 per response to DR MEM-7.3	54,139	54,139
135	307	Engine Well	3,348	3,348
136		Subtotal	106,816	106,816
137				
138	311	Staff adjustment to pumping equipment and addition to accum depr based on half-y	26,083	(1,630)
139		Subtotal	26,083	(1,630)
140				
141	320	CAP Plant #1 1986	1,320,562	1,320,562
142	320	CAP Plant #1 - Treatment Equipment 1987	288,612	288,612
143	320	CAP Plant #1 - Treatment Equipment 1989	397,339	397,339
144	320	CAP Plant #1 - Treatment Equipment 19889	4,409	4,409
145		Subtotal	2,010,922	2,010,922
146				
147	305	Collecting and Impounding Reservoirs	(6,548)	(1,801)
148	307	Wells and Springs (250 hp sub.)	(65,622)	(18,727)
149	311	Pumping Equipment (250 hp sub. In 1996 Less Fire hydrant in 1996 and DIP in 200	55,254	24,434
150	320	Water Treatment Equipment (Water Treatment Study in 2004)	34,062	2,908
151	330	Distribution Reservoirs and Standpipes (Water Services in 1996 and mains in 2005	(1,658,272)	(104,710)
152	331	Transmission and Distribution Mains (16" main in 2005 and fh Blvd main in 2006)	1,502,420	46,451
153	333	Services (Water Services in 1996 less Conference Room Table and Chairs in 1993	106,409	30,253
154	334	Meters and Meter Installation (Meter installation in 1973 less service line in 1994)	11,193	16,154
155	335	Hydrants (Fire hydrant in 1996 and DIP in 2005)	53,352	10,940
156	340	Office Furniture and Equipment (Conference Room Table and Chairs in 1993)	1,814	585
157	303	Land and Land Rights (A/C #348 for RCN)	(34,062)	(6,487)
158			-	-
159	339	Other Plant & Misc. Equip.	106,542	31,889
160	347	Miscellaneous Equipment	(106,542)	(31,889)
161			-	-
162			\$ 2,156,007	\$ 2,116,511

163 **Summary of Staff Adjustment B**

164	Plant Additions -	Line 132	Structures and Improvements	(193)
165		Line 141	Pumping equipment	(1,630)
166			Subtotal of Additions	(1,823)
167	Plant Retirements -	Line 133	Structures and Improvements	596
168		Line 139	Wells and Springs	106,816
169		Line 148	Water Treatment Equipment	2,010,922
170			Subtotal of Retirements	2,118,334
171			Total reduction to Column C above	2,116,511
172				

CHAPARRAL CITY WATER COMPANY, INC.
 Docket No. W-02113A-07-0551
 Test Year Ended December 31, 2006

Schedule MEM-9

RATE BASE ADJUSTMENT #5 - Eliminate Working Capital Elements

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1	Unamortized Debt Issuance Costs	\$ 424,010	\$ (424,010)	\$ -
2	Prepayments	192,485	(192,485)	-
3	Materials and Supplies	14,521	(14,521)	\$ -
		<u>\$ 631,016</u>	<u>\$ (631,016)</u>	<u>\$ -</u>

References:

Col [A]: Company Schedule B-2
 Col [B]: Col [C] - Col [A]
 Col [C]: MEM Testimony

CHAPARRAL CITY WATER COMPANY, INC.
 Docket No. W-02113A-07-0551
 Test Year Ended December 31, 2006

Schedule MEM-10

RATE BASE ADJUSTMENT #6 - Capitalize Outside Services Expenses

LINE NO.	ACCT NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1	304	Structures and Improvements	\$ -	\$ 11,590	\$ 11,590
2	311	Electric Pumping Equipment	\$ -	\$ 26,084	\$ 26,084
3		TOTAL	\$ -	\$ 37,674	\$ 37,674

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8 References:
9 Col [A]: Company Schedule B-2
10 Col [B]: Col [C] - Col [A]
11 Col [C]: MEM Testimony
12

13 **PLANT COSTS REMOVED FROM OUTSIDE SERVICES (MEM 8.1)**

LINE NO.	Acct. No.	Description	Amount
14			
15	304-Struct & Imprvmnts	New irrigation installation	\$ 2,500
16	304-Struct & Imprvmnts	Installation of 30' x 6' fencing w/pane	\$ 4,375
17	304-Struct & Imprvmnts	Professional survey for new fence lin	\$ 4,715
18		Total for Structures and Improvements	\$ 11,590
19			
20	311 - Elec Pumping Equip	Recondition motor	\$ 7,448
21	311 - Elec Pumping Equip	Removal & repair of pump	\$ 5,513
22	311 - Elec Pumping Equip	Removal & repair of motor and pump	\$ 13,123
23		Total for Electric Pumping Equipment	\$ 26,084
24			
25		Total expensed plant	\$ 37,674

**RATE BASE ADJUSTMENT #7 - Retire Wells #8 and #9 and Other Plant that is not used and useful.
Also reclassify plant into more appropriate NARUC account categories.**

LINE NO.	ACCT NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	304	Structures and Improvements	\$ -	\$ (596)	\$ (596)
2	307	Wells and Springs	\$ -	\$ (106,816)	\$ (106,816)
3	320	Water Treatment Equipment	\$ -	(2,010,922)	\$ (2,010,922)
4	305	Collecting and Impounding Reservoirs	\$ -	(6,548)	\$ (6,548)
5	307	Wells and Springs	\$ -	(65,622)	\$ (65,622)
6	311	Pumping Equipment	\$ -	55,254	\$ 55,254
7	320	Water Treatment Equipment	\$ -	34,062	\$ 34,062
8	330	Distribution Reservoirs and Standpipes	\$ -	(1,658,272)	\$ (1,658,272)
9	331	Transmission and Distribution Mains	\$ -	1,502,420	\$ 1,502,420
10	333	Services	\$ -	106,409	\$ 106,409
11	334	Meters and Meter Installation	\$ -	11,193	\$ 11,193
12	335	Hydrants	\$ -	53,352	\$ 53,352
13	340	Office Furniture and Equipment	\$ -	1,814	\$ 1,814
14	303	Land and Land Rights (A/C #348 for RCN)	\$ -	(34,062)	\$ (34,062)
15	339	Other Plant & Misc. Equip.	\$ -	106,542	\$ 106,542
16	347	Miscellaneous Equipment	\$ -	(106,542)	\$ (106,542)
17		TOTAL	\$ -	\$ (2,118,334)	\$ (2,118,334)

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25

References:

- Col [A]: Company Schedule B-2
- Col [B]: Col [C] - Col [A]
- Col [C]: MEM Testimony

26 Explanation of Adjustment:

27 Agreement signed 02/05/2005 with Fountain Hills Sanitation District to take Wells 8 & 9 out of service and retire other
28 Plant identified by Staff as not being used and useful. Also to reclassify plant and accumulated depreciation.

29

30 Acct.

31 No.	Description	Cost	Accum Depr
32	Fully depreciated Cost of Well #8 per response to DR MEM-7.3	\$ 49,329	\$ 49,329
33	307 Fully depreciated Cost of Well #9 per response to DR MEM-7.3	54,139	54,139
34	307 Engine Well	3,348	3,348
35	Subtotal	106,816	106,816
36	320 CAP Plant #1 1986	1,320,562	1,320,562
37	320 CAP Plant #1 - Treatment Equipment 1987	288,612	288,612
38	320 CAP Plant #1 - Treatment Equipment 1989	397,339	397,339
39	320 CAP Plant #1 - Treatment Equipment 19889	4,409	4,409
40	Subtotal	2,010,922	2,010,922
41	304 Well No. 9 - Install exhaust fan	596	596
42			
43	305 Collecting and Impounding Reservoirs	(6,548)	(1,801)
44	307 Wells and Springs (250 hp sub.)	(65,622)	(18,727)
45	311 Pumping Equipment (250 hp sub. In 1996 Less Fire hydrant in 1996 and DIP in	55,254	24,434
46	320 Water Treatment Equipment (Water Treatment Study in 2004)	34,062	2,908
47	330 Distribution Reservoirs and Standpipes (Water Services in 1996 and mains in 20	(1,658,272)	(104,710)
48	331 Transmission and Distribution Mains (16" main in 2005 and fh Blvd main in 200	1,502,420	46,451
49	333 Services (Water Services in 1996 less Conference Room Table and Chairs in 1'	106,409	30,253
50	334 Meters and Meter Installation (Meter installation in 1973 less service line in 199	11,193	16,154
51	335 Hydrants (Fire hydrant in 1996 and DIP in 2005)	53,352	10,940
52	340 Office Furniture and Equipment (Conference Room Table and Chairs in 1993)	1,814	585
53	303 Land and Land Rights (A/C #348 for RCN)	(34,062)	(6,487)
54		-	-
55	339 Other Plant & Misc. Equip.	106,542	31,889
56	347	(106,542)	(31,889)
57			
58		\$ 2,118,334	\$ 2,118,334
59			

CHAPARRAL CITY WATER COMPANY, INC.
Docket No. W-02113A-07-0551
Test Year Ended December 31, 2006

Schedule MEM RCN -1

RATE BASE - RECONSTRUCTION COST NEW

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	Adj. No.	(C) STAFF AS ADJUSTED
1	\$ 80,816,104	(2,337,584)	2, 3, 5	\$ 78,478,520
2	25,894,686	(2,506,970)	4	23,387,716
3	<u>\$ 54,921,418</u>	<u>169,386</u>		<u>\$ 55,090,804</u>
4				
5	<u>LESS:</u>			
6				
7	Contributions in Aid of Construction (CIAC) \$ -	\$ -		\$ -
8	Less: Accumulated Amortization -	-		-
9	Net CIAC <u>9,441,352</u>	<u>-</u>		<u>\$ 9,441,352</u>
10				
11	Advances in Aid of Construction (AIAC) 10,231,760			\$ 10,231,760
12				
13	Customer Meter Deposits 819,845	-		\$ 819,845
14				
15	Deferred Income Tax Credits 925,896	-		925,896
16				
17	Shared Gain on Well 646,000	570,000	1	1,216,000
18				
19	<u>ADD:</u>			
20				
21	Unamortized Debt Issuance Costs 424,010	(424,010)	5	-
22				
23	Prepayments 192,485	(192,485)	5	-
24				
25	Materials and Supplies 14,521	(14,521)	5	-
26				
27	Deferred Regulatory Assets 1,280,000	(1,280,000)	2	-
28				
29	Working Capital -	-		-
30				
31				
32	<u>\$ 34,767,581</u>	<u>\$ (2,311,630)</u>		<u>\$ 32,455,951</u>
33				
34				

35 References:

36 Column (A), Company Schedule B-3

37 Column (B): Schedule MEM RCN-2

38 Column (C): Column (A) + Column (B)

SUMMARY OF RECONSTRUCTION COST (RCN) RATE BASE ADJUSTMENTS

LINE NO.	ACCT. NO.	DESCRIPTION	(A) COMPANY ASSELED	(B) Well Settlement ADJ.#1	(C) CAP Allocation ADJ.#2	(D) GO Plant ADJ.#3	(E) Acc Depr ADJ.#4	(F) Working Capital ADJ.#5	(G) Plant Adj. ADJ.#6	(I) STAFF ADJUSTED
PLANT IN SERVICE:										
1		Decision No. 68178 Plant adjustments not booked but included in Staff RCN balances	\$ 32,538							
2	301	Organization								
3	302	Franchises								
4	303	Land and Land Rights	305,920						1,245,937	1,551,857
5	304	Structures & Improvements	1,865,394						10,793	1,976,187
6	305	Collecting & Impounding Reservoirs								
7	306	Lakes, Res., Other Intakes								
8	307	Wells and Springs	808,287						(528,244)	380,043
9	308	Infiltration Galleries and Tunnels								
10	309	Supply Mains								
11	310	Power Generation Equipment	3,160,802						105,725	3,266,527
12	311	Pumping Equipment	9,869,130						(3,226,536)	6,742,594
13	320	Water Treatment Plant	13,002,689						(1,932,286)	11,070,383
14	330	Distribution Reservoirs & Standpipes	31,920,448						1,601,082	33,521,530
15	331	Transmission & Distribution Mains	9,304,078						146,911	9,450,989
16	333	Services	3,891,833						16,310	3,908,143
17	334	Meters & Meter Installation	2,192,853						77,763	2,270,616
18	335	Hydrants								
19	336	Backflow Prevention Devices								
20	338	Other Plant & Misc. Equipment	1,814,021							1,814,021
21	340	Office Furniture & Equipment	349,449						2,544	351,993
22	341	Transportation Equipment	663,541							663,541
23	342	Stores Equipment								
24	343	Tools, Ship & Garage Equipment	195,755							195,755
25	344	Laboratory Equipment								
26	345	Power Operated Equipment								
27	346	Communication Equipment								
28	347	Miscellaneous Equipment	57,138							57,138
29	348	Other Tangible Plant								
30			79,823,976						(2,480,011)	77,311,429
31										
32	ADD:									
33		General Office Plant Allocation	992,128			174,963				1,167,091
34	LESS:									
35										
36										
37										
38		Total Plant in Service	\$ 80,816,104	\$ 174,963	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 76,478,520
39		Less: Accumulated Depreciation	25,894,986		(2,506,970)					23,387,718
40			\$ 54,921,118	\$ 174,963	\$ 2,506,970	\$ -	\$ -	\$ -	\$ -	\$ 55,090,804
41		Net Plant in Service (L59 - L 60)								
42	LESS:									
43		Contributions in Aid of Construction (CIAC)								
44		Less: Accumulated Amortization								
45		Net CIAC (L25 - L26)	10,231,760							10,231,760
46		Advances in Aid of Construction (AIAC)	9,441,352							9,441,352
47		Customer Meter Deposits	819,845							819,845
48		Deferred Income Taxes	925,666							925,666
49		Shared Gain on Well	646,000	570,000						1,216,000
50										
51										
52	ADD:									
53		Unamortized Debt Issuance Costs	424,010					(424,010)		
54		Prepayments	192,465					(192,465)		
55		Materials and Supplies	14,521					(14,521)		
56		Deferred Regulatory Assets	1,280,000		(1,280,000)					
57		Working Capital								
58										
59		Original Cost Rate Base	\$ 34,767,581	\$ (570,000)	\$ (1,280,000)	\$ 174,963	\$ 2,506,970	\$ (631,016)	\$ (2,480,011)	\$ 32,455,951
60										
61										
62										
63										
64										
65										
66										
67										
68										
69										
70	References:									
71		Column (A), Company Schedule B-3 and B-4								
72		Column (B), Schedule MEM RCN-2								
73		Column (C), Column (A) + Column (B) through								

ADJ.#	Reference:
1	Allocate 100% of Well Settlement to Ratepayers.
2	CAP Abolition Reclassification.
3	Increase General Office Allocation.
4	Recalculation of Accumulated Depreciation.
5	Eliminate Working Capital Components.
6	Plant Additions & Retirements per Staff Adjustments.

ADJ.#	Reference:
1	Schedule MEM-5
2	Schedule MEM-6
3	Schedule MEM RCN 3
4	Schedule MEM RCN 4
5	Schedule MEM-9
6	Schedule MEM RCN 5

RCN RATE BASE ADJUSTMENT #3 - Reduce General Office plant allocation for disallowed items and increase four-factor allocation to 4%.

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	General office plant allocation @ RCN	\$ 992,128	\$ 174,963	1,167,091
2	Totals	\$ 992,128	\$ 174,963	\$ 1,167,091

[A]: Company Schedule B-3, Page 3 and B-4 and below Line 27, Column C.
[B]: Testimony - MEM and below calculations and Line 48, Column E.
[D]: Col [B] + Col [C]

Explanation of Staff Adjustment

12 As Originally Filed::

RCN Per Exhibit Schedule B-4-A	Allocation Factor	RCN Original Allocation
\$ 172,003	3.21%	5,521
16,452	3.21%	528
917,234	3.21%	29,443
9,379,730	3.21%	301,089
(1,860)	3.21%	(60)
1,055,403	3.21%	33,878
17,188,237	3.21%	551,742
606,575	3.21%	19,471
663,298	3.21%	21,292
15,358	3.21%	493
634,172	3.21%	20,357
260,818	3.21%	8,372
<u>\$ 30,907,420</u>		<u>992,128</u>

RCN Per Exhibit Schedule B-4-A	Staff Adjustment	Adjusted for Allocation	Allocation Factor	Staff Recommended
\$ 172,003		172,003	4.00%	6,880
16,452		16,452	4.00%	658
917,234	(420,000)	497,234	4.00%	19,889
9,379,730		9,379,730	4.00%	375,189
(1,860)		(1,860)	4.00%	(74)
1,055,403	(1,015,146)	40,257	4.00%	1,610
17,188,237		17,188,237	4.00%	687,529
606,575	(295,002)	311,573	4.00%	12,463
663,298		663,298	4.00%	26,532
15,358		15,358	4.00%	614
634,172		634,172	4.00%	25,367
260,818		260,818	4.00%	10,433
<u>\$ 30,907,420</u>	<u>(1,730,148)</u>	<u>29,177,272</u>		<u>1,167,091</u>

As originally filed 992,128

Staff Adjustment to Increase General Office Plant

174,964

50 Items Removed from General Office Plant In Staff Adjustment A:

	OCN	Cost RCN
51 CPUC Management Audit - Completed in 1995, thus not applicable to CCW	420,000	420,000
52 Water Management Plans - Completed in 1998, thus not applicable to CCW	820,254	1,015,146
53 Luxury Vehicles - Detail listed below.	274,001	295,002
	<u>1,514,255</u>	<u>1,730,148</u>

Vehicles Found by Staff to be Imprudent	Date Acquired	RCN Per Exhibit Schedule B-4-A
60 Ford Explorer - 2004	3/26/2004	\$ 48,615
62 Infiniti GX35 - 2004	8/13/2004	\$ 43,242
64 Ford Expedition - 2004	8/13/2004	\$ 43,444
66 Acura MDX 2001	11/21/2002	\$ 42,917
68 Infiniti QX4	12/11/2002	\$ 56,086
70 Audi S4 Avant - 2005	7/6/2005	\$ 60,698
		<u>\$ 295,002</u>

RCND RATE BASE ADJUSTMENT #4 - ACCUMULATED DEPRECIATION

LINE NO.	DESCRIPTION	[A]	[B]	[C]	[D]	[E]
		COMPANY AS FILED	STAFF ADJUSTMENT A	STAFF ADJUSTMENT B	TOTAL OF STAFF ADJUSTMENTS	STAFF RECOMMENDED
1	RCN Accumulated Depreciation	\$ 25,894,686	\$ 113,818	\$ (2,620,789)	\$ (2,506,970)	23,387,716
2	Totals	\$ 25,894,686	\$ 113,818	\$ (2,620,789)	\$ (2,506,970)	\$ 23,387,716

[A]: Company Schedule B-2, B-3 and B-4 and below Line 65, Column E.
[B]: Testimony - MEM and below calculations and Line 145, Column E.
[C]: Testimony - MEM and below calculations and line 193, Column E.
[D]: Col [B] + Col [C]
[E]: Col [A] + Col [D], and line 199, Column E.

Acct. No.	Description	CCWC Plant OCN	CCWC Plant OCN	Ratio of RCN to Original Cost	RCN Accum. Depr.
		Accum. Depr. Per Exh. Sch. B-2 Page 3d	Accum. Depr. Per Exh. Sch. B-4	Per Exh. Sch. B-4	Per Exh. Sch. B-4
16 301	Organization	-	-	-	-
17 302	Franchises	-	-	-	-
18 303	Land and Land Rights	-	-	-	-
19 304	Structures & Improvements	357,961	376,155	1.2942	486,820
20 305	Collecting & Impounding Reservoirs	573	-	-	-
21 306	Lakes, Rivers, Other Intakes	-	-	-	-
22 307	Wells and Springs	183,252	54,932	2.7353	150,255
23 308	Infiltration Galleries and Tunnels	-	-	-	-
24 309	Supply Mains	-	-	-	-
25 310	Power Generation Equipment	-	-	-	-
26 311	Pumping Equipment	879,456	834,457	2.0976	1,750,363
27 320	Water Treatment Plant	2,304,464	2,099,307	1.2841	2,695,725
28 330	Distribution Reservoirs & Standpipes	1,996,014	1,431,816	1.5902	2,276,817
29 331	Transmission & Distribution Mains	7,154,728	7,103,657	1.8292	12,993,907
30 333	Services	1,060,764	1,228,978	1.2590	1,547,309
31 334	Meters & Meter Installation	990,763	1,032,186	1.4609	1,507,882
32 335	Hydrants	235,514	246,174	1.8716	460,745
33 336	Backflow Prevention Devices	-	-	-	-
34 339	Other Plant & Misc. Equipment	135,962	262,340	1.0564	277,127
35 340	Office Furniture & Equipment	45,958	66,702	1.2925	86,215
36 341	Transportation Equipment	60,636	140,176	1.2395	173,753
37 342	Stores Equipment	-	-	-	-
38 343	Tools, Ship & Garage Equipment	34,980	43,635	1.3106	57,187
39 344	Laboratory Equipment	25	-	-	-
40 345	Power Operated Equipment	-	-	-	-
41 346	Communication Equipment	883	25,603	1.4612	37,410
42 347	Miscellaneous Equipment	31,899	-	-	-
43 348	Other Tangible Plant	-	639	1.0000	639
44		15,473,832	14,946,757		24,502,155
45	Rounding	2	-		(12)
46	Total CCWC Plant Accumulated Depreciation	15,473,834	14,946,757		24,502,143

General Office Plant Allocated - Accum Depr OCN	Per Exhibit Schedule B-4-A	Allocation Factor	Allocation	Ratio of RCN to Original Cost Per Exh. Sch. B-4-A	G. O. RCN Accum. Depr.
	51 301	Organization	3,046	3.21%	98
52 302	Franchise Cost and Other Intangible Plant	211,596	3.21%	6,792	6,792
53 304	Structures & Improvements	2,354,430	3.21%	75,577	122,164
54 311	Electric Pumping Equipment	-	3.21%	-	-
55 339	Other Plant & Misc. Equipment	162,569	3.21%	5,218	6,500
56 340	Office Furniture & Equipment	8,664,647	3.21%	278,135	335,043
57 341	Transportation Equipment	552,718	3.21%	17,742	19,471
58 343	Tools, Shop & Garage Equipment	192,488	3.21%	6,179	10,104
59 344	Laboratory Equipment	4,062	3.21%	130	493
60 345	Power Operated Equipment	249,257	3.21%	8,001	20,357
61 346	Communication Equipment	165,561	3.21%	5,315	8,372
62	Total GO Accum. Depr. - Exh. Sch. B-2. Pg 4, Line 33.	12,560,374		403,188	529,393
63				15,877,022	25,031,536
64	Company Pro-forma RCN Rate Base Adjustment No. 1 for difference between General Ledger and Depreciation Detail Schedules.				863,150
65	Total RCN Accumulated Depreciation Per Exhibit Schedule B-2. Page 1, Line 7 - To Line 1, Column A above				25,894,686

66 **Explanation of Staff Adjustment A**

67 As Originally Filed:

	Per Exhibit	Allocation	Original
	Sch. B-2, Page 4	Factor	Allocation
68			
69	Home Office Plant Accumulated Depreciation		
70	301 Organization	3,046	98
71	302 Franchise Cost and Other Intangible Plant	211,596	6,792
72	304 Structures & Improvements	2,354,430	75,577
73	311 Electric Pumping Equipment	-	-
74	339 Other Plant & Misc. Equipment	162,569	5,218
75	340 Office Furniture & Equipment	8,664,647	278,135
76	341 Transportation Equipment	552,718	17,742
77	343 Tools, Ship & Garage Equipment	192,488	6,179
78	344 Laboratory Equipment	4,062	130
79	345 Power Operated Equipment	249,257	8,001
80	346 Communication Equipment	165,561	5,315
81		<u>12,560,374</u>	<u>403,188</u>

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	Per Exhibit	Staff	Adjusted for	Allocation
	Schedule B-2, Page 3	Adjustment A	Allocation	Factor
85	Home Office Plant Accumulated Depreciation			
86	301 Organization	3,046	(3,046)	4.00%
87	302 Franchise Cost and Other Intangible Plant	211,596	(153,888)	4.00%
88	304 Structures & Improvements	2,354,430		4.00%
89	311 Electric Pumping Equipment	-		4.00%
90	339 Other Plant & Misc. Equipment	162,569	(166,019)	4.00%
91	340 Office Furniture & Equipment	8,664,647	8,664,647	4.00%
92	341 Transportation Equipment	552,718	(43,667)	4.00%
93	343 Tools, Ship & Garage Equipment	192,488	192,488	4.00%
94	344 Laboratory Equipment	4,062	4,062	4.00%
95	345 Power Operated Equipment	249,257	249,257	4.00%
96	346 Communication Equipment	165,561	165,561	4.00%
97		<u>12,560,374</u>	<u>(366,620)</u>	<u>12,193,754</u>

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Items Removed from General Office Plant Accumulated Depreciation in Staff Adjustment A:	Accum Depr
103 CRC Valuation - Inappropriate accumulated depreciation for intangible	3,046 Per DR MEM 7.4 & 7.5
104 CPUC Management Audit - Completed in 1995, thus not applicable to CCWC.	153,888
105 Water Management Plans - Completed in 1998, thus not applicable to CCWC.	166,019
106 Luxury Vehicles - Detail listed below.	43,667
107	<u>366,620</u>

108

Vehicles Found by Staff to be Imprudent	Date Acquired	Price	Accum. Depr.
111 Ford Explorer - 2004	3/26/2004	\$ 45,639	5,988
112 Infiniti GX35 - 2004	8/13/2004	\$ 40,039	5,253
115 Ford Expedition - 2004	8/13/2004	\$ 40,785	5,351
117 Acura MDX 2001	11/21/2002	\$ 38,319	10,055
119 Infiniti QX4	12/11/2002	\$ 50,077	13,140
121 Audi S4 Avant - 2005	7/6/2005	\$ 59,143	3,880
123		<u>\$ 274,001</u>	<u>\$ 43,667</u>

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	Staff Adjusted	Ratio of RCN to Original Cost Per Exh. Sch. B-4-A	Staff Recommended G. O. RCN Accum. Depr.
129	301 Organization	-	1,0000
130	302 Franchise Cost and Other Intangible Plant	2,308	1,0000
131	304 Structures & Improvements	94,177	1,6164
132	311 Electric Pumping Equipment	-	0,0000
133	339 Other Plant & Misc. Equipment	(138)	1,2455
134	340 Office Furniture & Equipment	346,586	1,2046
135	341 Transportation Equipment	20,362	1,0974
136	343 Tools, Ship & Garage Equipment	7,700	1,6352
137	344 Laboratory Equipment	162	3,7818
138	345 Power Operated Equipment	9,970	2,5442
139	346 Communication Equipment	6,622	1,5754
140		<u>487,750</u>	<u>643,211</u>

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As originally filed Per Exhibit Schedule B-3, Page 4, Line 37 529,393

Staff Adjustment A to Reduce General Office Plant Accumulated depreciation for disallowed items and increase allocation to 4 percent. To line 1, Column B 113,818

145 **Explanation of Staff Adjustment B**

		CCWC Plant OCN			Staff		Difference - Staff Adjustment B
		CCWC Plant OCN	Accum. Depr.	Ratio of RCN to Original Cost	Recommended CCWC RCN	RCN Accum. Depr.	
149 Acct.	Description	Accum. Depr. Per Exh. Sch. B-2, Page 3	Per Staff Sched. MEM-8	Per Exh. Sch. B-4	Accum. Depr.	Per Exh. Sch. B-4	
150 No.							
151 301	Organization	-	-	-	-	-	-
152 302	Franchises	-	-	-	-	-	-
153 303	Land and Land Rights	-	-	-	-	-	-
154 304	Structures & Improvements	357,961	(403)	1.2942	462,752	486,820	(24,068)
155 305	Collecting & Impounding Reservoirs	573	(573)	1.0000	-	-	-
156 306	Lakes, Rivers, Other Intakes	-	-	-	-	-	-
157 307	Wells and Springs	183,252	(125,543)	2.7353	157,851	150,255	7,596
158 308	Infiltration Galleries and Tunnels	-	-	-	-	-	-
159 309	Supply Mains	-	-	-	-	-	-
160 310	Power Generation Equipment	-	-	-	-	-	-
161 311	Pumping Equipment	879,456	26,064	2.0976	1,899,419	1,750,363	149,056
162 320	Water Treatment Plant	2,304,464	(2,008,014)	1.2841	380,671	2,695,725	(2,315,054)
163 330	Distribution Reservoirs & Standpipes	1,996,014	(104,710)	1.5902	3,007,552	2,276,817	730,735
164 331	Transmission & Distribution Mains	7,154,728	46,451	1.8292	13,172,397	12,993,907	178,489
165 333	Services	1,060,764	30,253	1.2590	1,373,590	1,547,309	(173,719)
166 334	Meters & Meter Installation	990,763	16,154	1.4609	1,471,005	1,507,882	(36,876)
167 335	Hydrants	235,514	10,940	1.8716	461,263	460,745	518
168 336	Backflow Prevention Devices	-	-	-	-	-	-
169 339	Other Plant & Misc. Equipment	135,962	-	1.0564	143,630	277,127	(133,497)
170 340	Office Furniture & Equipment	45,958	585	1.2925	60,157	86,215	(26,059)
171 341	Transportation Equipment	60,636	-	1.2395	75,158	173,753	(98,595)
172 342	Stores Equipment	-	-	-	-	-	-
173 343	Tools, Ship & Garage Equipment	34,980	-	1.3106	45,845	57,187	(11,342)
174 344	Laboratory Equipment	25	-	1.0000	25	-	25
175 345	Power Operated Equipment	-	-	-	-	-	-
176 346	Communication Equipment	883	-	1.4612	1,290	37,410	(36,120)
177 347	Miscellaneous Equipment	31,899	-	1.0000	31,899	-	31,899
178 348	Other Tangible Plant	-	-	1.0000	-	639	(639)
179		15,473,832	-	-	22,744,505	24,502,155	(1,757,651)
180	Rounding	2	-	-	-	(12)	12
181		15,473,834	-	-	-	-	-
182	Total CCWC Plant RCN Accumulated Depreciation				22,744,505	24,502,143	
183	Difference between detail plant schedules and General Ledger accumulated depreciation balances and Company RCN ratios applied to detail balances.						(1,757,639)
184							
185	Less Company RCND Rate Base pro-forma adjustment No. 1 to account for the difference between General Ledger A/D and detail schedules.						863,150
186							
187	Staff Adjustment B to decrease CCWC Plant RCN Accumulated Depreciation Based on Company Supplied RCN Rates. To Line 1, Column C						(2,620,789)
188							
189							
190							
191	Summary of Staff Recommended RCN Accumulated Depreciation:						
192	Staff recommended CCWC RCN Accumulated Depreciation Calculated Below					22,744,505	
193	Staff recommended General Office RCN Accumulated Depreciation					643,211	
194	Staff recommended Total RCN Accumulated Depreciation to Column E, Line 1 above					23,387,716	

RCN RATE BASE ADJUSTMENT #6 - Record Plant Additions and Retirements per Staff Adjustments

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	301 Organization	\$ -	-	-
2	302 Franchises	-	-	-
3	303 Land and Land Rights	305,920	1,245,937	1,551,857
4	304 Structures & Improvements	1,965,394	10,793	1,976,187
5	305 Collecting & Impounding Reservoirs	-	-	-
6	306 Lakes, Rivers, Other Intakes	-	-	-
7	307 Wells and Springs	908,287	(528,244)	380,043
8	308 Infiltration Galleries and Tunnels	-	-	-
9	309 Supply Mains	-	-	-
10	310 Power Generation Equipment	-	-	-
11	311 Pumping Equipment	3,160,902	105,725	3,266,627
12	320 Water Treatment Plant	9,969,130	(3,226,536)	6,742,594
13	330 Distribution Reservoirs & Standpipes	13,002,689	(1,932,296)	11,070,393
14	331 Transmission & Distribution Mains	31,920,448	1,601,082	33,521,530
15	333 Services	9,304,078	146,911	9,450,989
16	334 Meters & Meter Installation	3,981,833	16,310	3,998,143
17	335 Hydrants	2,192,853	77,763	2,270,616
18	336 Backflow Prevention Devices	-	-	-
19	339 Other Plant & Misc. Equipment	1,814,021	-	1,814,021
20	340 Office Furniture & Equipment	349,449	2,544	351,993
21	341 Transportation Equipment	663,541	-	663,541
22	342 Stores Equipment	-	-	-
23	343 Tools, Ship & Garage Equipment	195,755	-	195,755
24	344 Laboratory Equipment	-	-	-
25	345 Power Operated Equipment	-	-	-
26	346 Communication Equipment	57,138	-	57,138
27	347 Miscellaneous Equipment	-	-	-
28	348 Other Tangible Plant	-	-	-
29		<u>79,791,438</u>	<u>(2,480,011)</u>	<u>77,311,427</u>

[A]: Company Schedule B-4, and below Line 23 - 26, Column A.
[B]: Testimony - MEM and Schedule MEM-6 and Schedule MEM-23.
[C]: Col [B] + Col [C]

LINE NO.	DESCRIPTION	Company	Per Below Analysis	Difference -
		RCN Per Exhibit Schedule B-4	Staff Adjusted RCN	Staff Adjustment
40	301 Organization	\$ -	-	\$ -
41	302 Franchises	-	-	-
42	303 Land and Land Rights	305,920	1,551,857	(1,245,937)
43	304 Structures & Improvements	1,965,394	1,976,187	(10,793)
44	305 Collecting & Impounding Reservoirs	-	-	-
45	306 Lakes, Rivers, Other Intakes	-	-	-
46	307 Wells and Springs	908,287	380,043	528,244
47	308 Infiltration Galleries and Tunnels	-	-	-
48	309 Supply Mains	-	-	-
49	310 Power Generation Equipment	-	-	-
50	311 Pumping Equipment	3,160,902	3,266,627	(105,725)
51	320 Water Treatment Plant	9,969,130	6,742,594	3,226,536
52	330 Distribution Reservoirs & Standpipes	13,002,689	11,070,393	1,932,296
53	331 Transmission & Distribution Mains	31,920,448	33,521,530	(1,601,082)
54	333 Services	9,304,078	9,450,989	(146,911)
55	334 Meters & Meter Installation	3,981,833	3,998,143	(16,310)
56	335 Hydrants	2,192,853	2,270,616	(77,763)
57	336 Backflow Prevention Devices	-	-	-
58	339 Other Plant & Misc. Equipment	1,814,021	1,814,021	-
59	340 Office Furniture & Equipment	349,449	351,993	(2,544)
60	341 Transportation Equipment	663,541	663,541	-
61	342 Stores Equipment	-	-	-
62	343 Tools, Ship & Garage Equipment	195,755	195,755	-
63	344 Laboratory Equipment	-	-	-
64	345 Power Operated Equipment	-	-	-
65	346 Communication Equipment	57,138	57,138	-
66	347 Miscellaneous Equipment	-	-	-
67	348 Other Tangible Plant	-	-	-
		<u>79,791,438</u>	<u>77,311,427</u>	<u>2,480,011</u>

	Staff Adjusted RCN Per MSJ	From Sch MEM 23	From Sch MEM-6	Staff Adjusted RCN
68 301 Organization	-			-
69 302 Franchises	-			-
70 303 Land and Land Rights	271,857		1,280,000	1,551,857
71 304 Structures & Improvements	1,964,597	11,590		1,976,187
72 305 Collecting & Impounding Reservoirs	-			-
73 306 Lakes, Rivers, Other Intakes	-			-
74 307 Wells and Springs	380,043			380,043
75 308 Infiltration Galleries and Tunnels	-			-
76 309 Supply Mains	-			-
77 310 Power Generation Equipment	-			-
78 311 Pumping Equipment	3,240,544	26,083		3,266,627
79 320 Water Treatment Plant	6,742,594			6,742,594
80 330 Distribution Reservoirs & Standpipes	11,070,393			11,070,393
81 331 Transmission & Distribution Mains	33,521,530			33,521,530
82 333 Services	9,450,989			9,450,989
83 334 Meters & Meter Installation	3,998,143			3,998,143
84 335 Hydrants	2,270,616			2,270,616
85 336 Backflow Prevention Devices	-			-
86 339 Other Plant & Misc. Equipment	1,814,021			1,814,021
87 340 Office Furniture & Equipment	351,993			351,993
88 341 Transportation Equipment	663,541			663,541
89 342 Stores Equipment	-			-
90 343 Tools, Shop & Garage Equipment	195,755			195,755
91 344 Laboratory Equipment	-			-
92 345 Power Operated Equipment	-			-
93 346 Communication Equipment	57,138			57,138
94 347 Miscellaneous Equipment	-			-
95 348 Other Tangible Plant	-			-
96	<u>75,993,754</u>	<u>37,673</u>	<u>1,280,000</u>	<u>77,311,427</u>

OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED

LINE NO.	DESCRIPTION	[A] COMPANY ADJUSTED TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	Adj. No.	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
1	REVENUES:						
2	Metered Water Sales	\$ 7,364,411	\$ -		\$ 7,364,411	\$ 1,735,265	\$ 9,099,676
3	Water Sales - Unmetered	82,289	-		82,289	-	82,289
4	Intentionally Left Blank	-	-		-	-	-
5	Total Operating Revenues	\$ 7,446,700	\$ -		\$ 7,446,700	\$ 1,735,265	\$ 9,181,965
6	OPERATING EXPENSES:						
7	Salaries and Wages	\$ 969,244	\$ -		\$ 969,244	\$ -	\$ 969,244
10	Purchased Water	831,656	(20,306)	2	811,351	-	811,351
11	Purchased Power	602,982	-		602,982	-	602,982
13	Chemicals	127,457	(27,630)	7	99,827	-	99,827
14	Repairs and Maintenance	104,609	(19,018)	8	85,591	-	85,591
15	Office Supplies and Expense	19,800	-		19,800	-	19,800
16	Outside Services	266,544	(38,048)	10	228,496	-	228,496
17	Water Testing	43,458	(17,820)	11	25,638	-	25,638
18	Transportation	70,430	-		70,430	-	70,430
19	General Liability Insurance	(1,294)	3,654	9	2,360	-	2,360
20	Insurance - Health and Life	-	-		-	-	-
21	Regulatory Commission/Rate Case Expense	144,871	(61,538)	6	83,333	-	83,333
22	Miscellaneous Expense	1,259,948	37,214	4	1,297,162	-	1,297,162
23	Depreciation	1,608,019	(86,188)	3	1,521,831	-	1,521,831
24	Amortization of Gain on Well (Settlement Proc	(76,000)	(76,000)	1	(152,000)	-	(152,000)
25	Amortization of Additional CAP Allocation	64,000	(64,000)	5	-	-	-
26	Taxes other than Income	47,873	-		47,873	-	47,873
27	Property Taxes	295,813	(33,413)	12	262,400	20,731	283,131
28	Income Taxes	270,020	197,275	13	467,295	661,791	1,129,086
29	Intentionally Left Blank	-	-		-	-	-
30	Total Operating Expenses	\$ 6,649,430	\$ (205,818)		\$ 6,443,612	\$ 682,522	\$ 7,126,134
31	Operating Income (Loss)	\$ 797,270	\$ 205,818		\$ 1,003,088	\$ 1,052,744	\$ 2,055,831

References:

- Column (A): Company Schedule C-1
- Column (B): Schedule MEM-13
- Column (C): Column (A) + Column (B)
- Column (D): Schedules MEM-1 and MEM-2
- Column (E): Column (C) + Column (D)

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) Well Settlement ADJ.#1	(C) Purchased Water ADJ.#2	(D) Depreciation ADJ.#3	(E) Misc Exp ADJ.#4	(G) CAP Amort. ADJ.#5	(H) Rate Case Exp. ADJ.#6	(I) Chemicals ADJ.#7	(J) Repairs & Maint. ADJ.#8	(K) Insurance ADJ.#9	(L) Outside Services ADJ.#10	(M) Water Testing ADJ.#11	(N) Prop. Tax ADJ.#12	(O) Inc. Tax ADJ.#13	(T) STAFF ADJUSTED
1	REVENUES:															
2	Metered Water Sales	\$ 7,364,411														\$ 7,364,411
3	Water Sales - Unmetered															
4	Other Operating Revenue	82,289														82,289
5	Intentionally Left Blank															
6	Total Operating Revenues	\$ 7,446,700														\$ 7,446,700
7	OPERATING EXPENSES:															
9	Salaries and Wages	\$ 968,244														\$ 968,244
10	Purchased Water	831,656														831,656
11	Purchased Power	602,982														602,982
12	Chemicals	127,457							(27,630)							99,827
13	Repairs and Maintenance	104,909								(19,018)						85,891
14	Office Supplies and Expense	19,900														19,900
15	Outside Services	296,544										(38,048)				258,496
16	Water Testing	43,458											(17,820)			25,638
17	Transportation	70,430									3,854					74,284
18	General Liability Insurance	(1,294)														2,588
19	Insurance - Health and Life	144,871														144,871
20	Regulatory Commission/Rate Case Expense	1,258,948						(61,538)								1,197,410
21	Miscellaneous Expense	1,608,019														1,608,019
22	Depreciation	(76,000)			(86,188)											(162,188)
23	Amortization of Gain on Well (Settlement Proceeds)	64,000														64,000
24	Amortization of Additional CAP Allocation	47,873					(64,000)									(16,127)
25	Taxes other than Income	295,813														295,813
26	Property Taxes	270,020														270,020
27	Income Taxes															
28	Intentionally Left Blank															
29	Total Operating Expenses	\$ 6,649,430														\$ 6,649,430
30	Operating Income (Loss)	\$ 797,270														\$ 797,270

ADJ.#	Reference:
1	Well settlement allocated to ratepayers.
2	Purchased Water Expense
3	Depreciation Expenses
4	Miscellaneous Expenses
5	Additional CAP Allocation Amortization Reversal
6	Normalization of Rate Case Expense
7	Normalization of Chemicals Expense
8	Normalization of Repairs and Maintenance Expense
9	Normalization of Insurance Expense
10	Outside Services Expense
11	Water Testing
12	Property Tax Expense
13	Income Tax Expense

OPERATING INCOME ADJUSTMENT #1 - Well settlement proceeds allocated 100% to ratepayers.

Line No.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1	Well Settlement Proceeds Amortized	\$ (76,000)	\$ (76,000)	\$ (152,000)

References:

Col [A]: Company Schedule C-1
 Col [B]: Col [C] - Col [A]
 Col [C]: Testimony - MEM and worksheet MEM-5.

Explanation of Adjustment:

Agreement signed 02/05/2005 with Fountain Hills Sanitation District to take Wells 8 & 9 out of service due to possible contamination from sewage treatment facility in exchange for \$1,520,000. Gain to be allocated 100% to ratepayers because the wells were fully depreciated, thus the original cost had been paid by the depreciation included in rates through 2002.

Ratepayers share of proceeds

\$ 1,520,000

Based on a ten year amortization, the amount included in instant rate case revenue requirement as "Amortization of Well Settlement Proceeds".

(152,000)

OPERATING INCOME ADJUSTMENT #2 - Decrease Purchased Water Cost

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1	Purchased Water Cost	<u>\$ 831,656</u>	<u>\$ (20,306)</u>	<u>\$ 811,350</u>
References:				
Col [A]: Company Schedule C-2				
Col [B]: Col [C] - Col [A]				
Col [C]: MEM Testimony				
2	From Exhibit Schedule C-2, Page 6 (Proforma Adj #5)			
3				
			<u>Company</u>	<u>Staff</u>
4	CAP water allocation (acre feet)		6,978	6,978
5	Additional CAP allocation		1,931	965.5
6			8,909	7,944
7	2008 capital cost per acre foot		\$ 21	\$21
8	Total capital cost		<u>\$ 187,089</u>	<u>\$166,814</u>
9				
10				
11	CAP water delivered (acre feet) - 6,500 scheduled, 6,978 was delivered		6,978	6,978
12	Excess CAP water delivered		260	260
13	Additional acre feet in annualization		(705)	(705)
14			6,533	6,533
15	2008 delivery cost per acre foot		\$92	\$92
16	Total M&I cost		<u>\$601,036</u>	<u>\$601,036</u>
17				
18	Total CAP purchased water		788,125	767,850
19				
20	Ground water pumper in acre feet		260	260
21	Excess capacity percentage		0.67	0.67
22	Total projected gallons pumped		174	174
23	CAP Replenishment District assessment fee		\$250	\$250
24			<u>\$ 43,550</u>	<u>\$ 43,500</u>
25				
26	Total purchased water cost		<u>\$ 831,656</u>	<u>\$ 811,350</u>
27	Test year purchased water cost per GL		<u>\$ 934,095</u>	<u>\$ 934,095</u>
28	Increase(decrease)		(102,439)	(122,746)
29				(102,439)
30	Staff Adjustment to eliminate portion of expense not used and useful			<u>(20,307)</u> Round to \$20,306
31				
32				
33				
34	Purchased Water Expense per Company		<u>\$ 831,656</u>	
35	Staff Adjustment to eliminate portion of expense not used and useful		<u>(20,307)</u>	
36	Adjusted Purchased Water Expense		<u>\$ 811,350</u>	
37				
38				

OPERATING INCOME ADJUSTMENT #3 - DEPRECIATION EXPENSE

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1	Depreciation Expense	\$ 1,608,019	\$ (86,188)	\$ 1,521,831

Explanation of Adjustment:

Line No.	Account No.	Description	Original Cost Amount	Depreciable Amount	Projected Rate	Expense
Plant In Service						
2	301	Organization	-	\$ -	0.00%	\$ -
3	302	Franchises	-	-	0.00%	-
4	303	Land and Land Rights	1,551,858	1,551,858	0.00%	-
5	304	Structures & Improvements	1,529,642	1,529,642	3.33%	50,937
6	305	Collecting & Impounding Reservoirs	-	-	2.50%	-
7	306	Lakes, Rivers, Other Intakes	-	-	2.50%	-
8	307	Wells and Springs	159,627	159,627	3.33%	5,316
9	308	Infiltration Galleries and Tunnels	-	-	6.67%	-
10	309	Supply Mains	-	-	2.00%	-
11	310	Power Generation Equipment	-	-	5.00%	-
12	311	Pumping Equipment	1,588,246	1,588,246	12.50%	198,531
13	320	Water Treatment Plant	5,786,640	5,786,640	3.33%	192,695
14	330	Distribution Reservoirs & Standpipes	6,512,148	6,512,148	2.22%	144,570
15	331	Transmission & Distribution Mains	18,953,054	17,450,634	2.00%	349,013
16	333	Services	7,496,339	7,389,930	3.33%	246,085
17	334	Meters & Meter Installation	2,736,866	2,736,866	8.33%	227,981
18	335	Hydrants	1,224,985	1,224,985	2.00%	24,500
19	336	Backflow Prevention Devices	-	-	6.67%	-
20	339	Other Plant & Misc. Equipment	1,717,229	1,717,229	6.67%	114,539
21	340	Office Furniture & Equipment	272,173	272,173	6.67%	18,154
22	341	Transportation Equipment	535,315	535,315	20.00%	107,063
23	342	Stores Equipment	-	-	4.00%	-
24	343	Tools, Ship & Garage Equipment	149,365	149,365	5.00%	7,468
25	344	Laboratory Equipment	-	-	10.00%	-
26	345	Power Operated Equipment	-	-	5.00%	-
27	346	Communication Equipment	39,105	39,105	10.00%	3,911
28	347	Miscellaneous Equipment	-	106,542	10.00%	10,654
29	348	Other Tangible Plant	-	-	10.00%	-
30		Subtotal General	\$ 50,252,592	\$ 48,750,305		\$ 1,701,415
31		Less: Non- depreciable Account(s) (L4)	1,551,858	1,551,858		
32		Depreciable Plant (L30-L31)	\$ 48,700,734	\$ 47,198,447		

Line No.	Account No.	Description	Adjusted Allocation	Projected Rate	Expense
Home Office Plant Allocated					
33	301	Organization	658	0.00%	\$ -
34	302	Franchise Cost and Other Intangible Plant	26,769	0.00%	-
35	304	Structures & Improvements	232,113	3.33%	7,729
36	311	Electric Pumping Equipment	(37)	0.00%	-
37	339	Other Plant & Misc. Equipment	1,085	6.67%	72
38	340	Office Furniture & Equipment	570,751	6.67%	38,069
39	341	Transportation Equipment	11,149	20.00%	2,230 Company indic
40	343	Tools, Ship & Garage Equipment	16,226	5.00%	811
41	344	Laboratory Equipment	162	10.00%	16
42	345	Power Operated Equipment	9,970	5.00%	499
43	346	Communication Equipment	6,622	10.00%	- Company indic
44		Subtotal General	\$ 875,469		\$ 49,427
45		Less: Non- depreciable Account(s) (L33 and L34)	34,013		
46		Depreciable Plant (L44-L45)	\$ 841,456		
47		Total Depreciable Plant and Depr. Expense before CIAC	\$ 48,073,916		\$ 1,750,842
48		Contributions-in-Aid-of-Construction (CIAC)	\$ 6,288,097		
49		Composite Depreciation/Amortization Rate	0.0364		
50		Less: Amortization of CIAC (L48 x L49)			\$ 229,011
51		Depreciation Expense - STAFF [Col. (C), L49 - L50]			\$ 1,521,831

OPERATING INCOME ADJUSTMENT #4 - MISCELLANEOUS EXPENSE

LINE NO.	DESCRIPTION	[A]	[B]	[C]	[D]	[E]
		COMPANY AS FILED	STAFF ADJUSTMENT A	STAFF ADJUSTMENT B	TOTAL OF STAFF ADJUSTMENTS	STAFF RECOMMENDED
1	Miscellaneous Expense	\$ 1,259,948	\$ 38,164	\$ (950)	\$ 37,214	\$ 1,297,162
2	Totals	\$ 1,259,948	\$ 38,164	\$ (950)	\$ 37,214	\$ 1,297,162

[A]: Company Schedule B-2, Page 3 and B-3, Page 3 and below Line 26, Column C.

[B]: Testimony - MEM and below calculations and Line 48, Column E.

[C]: Testimony - MEM and below calculations and line 94, Column E.

[D]: Col [B] + Col [C]

[E]: Testimony - MEM and below Line 91, Column E.

Explanation of Staff Adjustment A

12	Total Allocation Pool per worksheet from CCWC	34,557,114
13	Subtract Membership dues that only benefit California ratepayers and the dues used for lobbying listed below	(251,538)
15	Investor related expenses listed below	(1,040,585)
17	Adjusted allocation pool	33,264,991
18	Revised allocation factor	4.00%
20	Revised allocation of GO Expenses	1,330,600

Same percentage used to allocate GO plant. Discussed in MEM Testimony.

GO Expense Allocation Distribution by Account

	Company	Staff Adjustment A	Staff Recommended
26 A&G Other XFR	8880.21	863,799	25,507
27 Cust Other XFR	8885.21	43,252	1,277
28 A&G Labor XFR	6980.00	237,614	7,016
29 Cust Labor XFR	6985.00	68,137	2,012
30 Miscellaneous	8700.00	79,634	2,351
31		1,292,436	38,164
			1,330,600

Miscellaneous expense is being charged for all of this adjustment because this is where the Company made its last adjust ment for the GO allocation.

List of Investor related expenses:

GL Acct No.	TYE Account Balance
7031.15 Printing Shareholder	93,342
7124.15 Supplies Shareholder	2,696
7134.15 OS Other Shareholder	298,596
7153.00 Postage Shareholder	56,478
8301.15 T&E Tran Shareholder	1,462
8301.16 T&E Tran Directors	2,938
8302.15 T&E Meal Directors	11,520
8303.15 T&E Meal Shareholder	2,794
8303.16 T&E Meal Directors	1,738
8304.15 T&E Other Directors	404
8700.16 Other Misc - Director's Fee	568,617
Total Investor related expenses	1,040,585

List of Membership dues that only benefit California ratepayers and dues used for lobbying:

7061.00 Membership Dues Company:		
NAVVC - 19% lobbying (\$119,202x19%)		22,648
California Water Association	Does not benefit CCWC	48,824
California Water Association	Does not benefit CCWC	48,824
California Water Association	Does not benefit CCWC	48,824
California Water Association	Does not benefit CCWC	48,824
California Foundation	Does not benefit CCWC	15,000
California Urban Water Cons	Does not benefit CCWC	13,745
California Chamber of Commerce	Does not benefit CCWC	2,649
Los Angeles Chamber of Commerce	Does not benefit CCWC	2,230
		251,568

Explanation of Staff Adjustment B

	Staff Adjustment B
68 Per Co. response to MEM DR #1.125, lobbying expenses of approximately \$950 were included in dues paid to Investor Owned Water Utility Association and Water Utility Association of Arizona.	\$ 950
	\$ 950

CHAPARRAL CITY WATER COMPANY, INC.
Docket No. W-02113A-07-0551
Test Year Ended December 31, 2006

Schedule MEM-18

**OPERATING INCOME ADJUSTMENT #5 - Reversal of Company pro forma Adjustment #13,
Amortizing Additional CAP Allocation**

<u>LINE</u> <u>NO.</u>	<u>DESCRIPTION</u>	<u>[A]</u> <u>COMPANY</u> <u>PROPOSED</u>	<u>[B]</u> <u>STAFF</u> <u>ADJUSTMENTS</u>	<u>[C]</u> <u>STAFF</u> <u>RECOMMENDED</u>
1	Amortization of Additional CAP Allocation	\$ 64,000	\$ (64,000)	\$ -

References:

Col [A]: Company Schedule C-1
Col [B]: Col [C] - Col [A]
Col [C]: MEM Testimony

OPERATING INCOME ADJUSTMENT #6 - Rate Case Expense

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1		\$ 144,871	\$ (61,538)	\$ 83,333

References:

Col [A]: Company Schedule C-1
Col [B]: Col [C] - Col [A]
Col [C]: MEM Testimony - Normalized Rate Case Expense (/3yrs.)

Rate case expense was amortized in the prior rate case, thus there is an unrecovered amount in the test year but this will have been fully absorbed by the time the rates for the current case become effective so no recognition is warranted.

2	Per Company:			
3	Remaining unrecovered rate case expense from the prior case			
4	per Exhibit Schedule C-2, Page 5:	154,613		
5	Current Estimated rate case expense per C-2, Page 5	280,000		
6		434,613		
7	Amortized over 3 years	144,871		
8				
9	Per Staff:			
10	Remaining unrecovered rate case expense from the prior case			
11	is not recognized because the cost will have been fully			
12	recovered by the time rates for this case become effective.	-		
13	Remand case expenses per Company	100,000		
14	Estimated current rate case expense based on the actual			
15	billings of \$75,032 through October, 2007:	150,000		
16	Normalized over 3 years as this has historically been			
17	the Company's rate increase request frequency:	83,333		
18				
19				
20				
21				
22				

OPERATING INCOME ADJUSTMENT #7 - Normalization of Chemicals Expense

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1	Normalization of Chemicals Expenses	\$ 127,457	\$ (27,630)	\$ 99,827
2	Chemicals expenses - 2004			\$ 66,210
3	Chemicals expenses - 2005			105,814
4	Chemicals expenses - 2006			127,457
5	Normalization of Chemicals Expenses - 3-Year Average			\$ 99,827

References:

- Col [A]: Company Schedule C-1
- Col [B]: Col [C] - Col [A]
- Col [C]: Normalized Chemicals Expense Col [C] L5.

Chemicals for 2007 are \$88,968. Two invoices were dated in 12/2006 for the test year.

CHAPARRAL CITY WATER COMPANY, INC.
 Docket No. W-02113A-07-0551
 Test Year Ended December 31, 2006

Schedule MEM-21

OPERATING INCOME ADJUSTMENT #8 - Repairs and Maintenance

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1	Repairs and Maintenance Expense	\$ 104,609	\$ (19,018)	\$ 85,591

References:

Col [A]: Company Schedule C-1
 Col [B]: Col [C] - Col [A]
 Col [C]: MEM Testimony

Explanation of Staff Adjustment - To Normalize

R&M - 2004	96,152
R&M - 2005	72,640
R&M - 2006	104,609
Staff recommended R & M expense - Normalized.	<u>91,134</u>

Explanation of Staff Adjustment - To Remove the cost of Pepsi purchased as an employee benefit.

Payments to Pepsi Cola Company of Dallas	\$ 5,543
Normalized expense net of Pepsi.	<u>85,591</u>

CHAPARRAL CITY WATER COMPANY, INC.
 Docket No. W-02113A-07-0551
 Test Year Ended December 31, 2006

Schedule MEM-22

OPERATING INCOME ADJUSTMENT #9 - Normalization of General Liability Insurance Expense.

<u>LINE NO.</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY PROPOSED</u>	<u>[B] STAFF ADJUSTMENTS</u>	<u>[C] STAFF RECOMMENDED</u>
1	Normalization of Insurance - General Liability Expense	\$ (1,294)	\$ 3,654	\$ 2,360
2	2003 Insurance - General Liability Expense			-
3	2004 Insurance - General Liability Expense			\$ 775
4	2005 Insurance - General Liability Expense			1,860
5	2006 Insurance - General Liability Expense			-
6	2007 Insurance - General Liability Expense			9,167
7	Normalization of Insurance - General Liability Expense - 5-Year Average			\$ 2,360

References:

Col [A]: Company Schedule C-1

Col [B]: Col [C] - Col [A]

Col [C]: Normalized General Liability Insurance Expense Col [C] L5.

Claim paid for 2006 is \$2,682 per CCWC response to DR 1.44.

OPERATING INCOME ADJUSTMENT #10 -Outside Services Expense

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1	Outside Services Expense	\$ 266,544		\$ 266,544
2	Expensed plant	-	(37,673)	(37,673)
3	Late Filing Penalty for 2005 ACC Annual Report	-	(45)	(45)
4	Rate case expense for appellate court	-	(330)	(330)
5		<u>\$ 266,544</u>	<u>\$ (38,048)</u>	<u>\$ 228,496</u>

- 6
7 References:
8 Column A: Company Schedule C-1
9 Column B: Testimony, MEM, Company Data Request Responses MEM 8.1, MEM 16.2
10 Column C: Column [A] + Column [B]
11
12

PLANT COSTS REMOVED FROM OUTSIDE SERVICES (MEM 8.1)

LINE NO.	Acct. No.	Description	Amount
14			
15	304-Struct & Imprvmnts	New irrigation installation	\$ 2,500.00
16	304-Struct & Imprvmnts	Installation of 30' x 6' fencing w/panels	\$ 4,375.00
17	304-Struct & Imprvmnts - See (A) below.	Professional survey for new fence line	\$ 4,715.00
18		Total for Structures and Improvements	\$ 11,590.00
19			
20	311 - Elec Pumping Equip	Recondition motor	\$ 7,448.00
21	311 - Elec Pumping Equip	Removal & repair of pump	\$ 5,512.62
22	311 - Elec Pumping Equip	Removal & repair of motor and pump	\$ 13,122.67
23		Total for Electric Pumping Equipment	\$ 26,083.29
24			
25		Total expensed plant	\$ 37,673.29

DISALLOWED COSTS REMOVED FROM OUTSIDE SERVICES (MEM 8.1)

LINE NO.	Type of Documentation	Description	Amount
28			
29			
30	Check request - See (B) below.	Penalty for late filing ACC report	\$ 45.00
31	Invoice	Rate case expense for appellate court	\$ 330.00
32		Total Disallowed Costs	\$ 375.00

- 33
34 (A) Fee paid to Morrison, Maierle, Inc. for property line surveying services that is a one-time expenditure.
35 (B) Late filing penalty for 2005 Annual Report to the AZ Corporation Commission

OPERATING INCOME ADJUSTMENT #11 - Water Testing Expense

<u>LINE NO.</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY PROPOSED</u>	<u>[B] STAFF ADJUSTMENTS</u>	<u>[C] STAFF RECOMMENDED</u>
1	Normalization of Water Testing Expense per MSJ	<u>\$ 43,458</u>	<u>\$ (17,820)</u>	<u>\$ 25,638</u>

References:

Col [A]: Company Schedule C-1

Col [B]: Col [C] - Col [A]

Col [C]: Normalized Water Testing Expense Col [C] L1.

CHAPARRAL CITY WATER COMPANY, INC.
 Docket No. W-02113A-07-0551
 Test Year Ended December 31, 2006

Schedule MEM-25

OPERATING INCOME ADJUSTMENT #12 - Property Tax Expense

LINE NO.	Property Tax Calculation	(C)	
		STAFF AS ADJUSTED	STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues - 2006	\$ 7,446,700	\$ 7,446,700
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	14,893,400	\$ 14,893,400
4	Staff Recommended Revenue, Per Schedule MEM-1	7,446,700	\$ 9,181,965
5	Subtotal (Line 4 + Line 5)	22,340,100	24,075,365
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	7,446,700	\$ 8,025,122
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	14,893,400	\$ 16,050,244
10	Plus: 10% of CWIP -	224,140	224,140
11	Less: Net Book Value of Licensed Vehicles	474,678	\$ 474,678
12	Full Cash Value (Line 9 + Line 10 - Line 11)	14,642,862	\$ 15,799,706
13	Assessment Ratio	23.0%	23.0%
14	Assessment Value (Line 12 * Line 13)	3,367,858	\$ 3,633,932
15	Composite Property Tax Rate (Per Company Schedule C-2, Page 3, Line 1)	7.7913%	7.7913%
			\$ -
16	Staff Test Year Adjusted Property Tax (Line 14 * Line 15)	\$ 262,400	
17	Company Proposed Property Tax	295,813	
18	Staff Test Year Adjustment (Line 16-Line 17)	\$ (33,413)	
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$ 283,131
20	Staff Test Year Adjusted Property Tax Expense (Line 16)		\$ 262,400
21	Increase in Property Tax Expense Due to Increase in Revenue Requirement		\$ 20,731
22	Increase to Property Tax Expense		\$ 20,731
23	Increase in Revenue Requirement		1,735,265
24	Increase to Property Tax per Dollar Increase in Revenue (Line19/Line 20)		1.194666%

CHAPARRAL CITY WATER COMPANY, INC.
Docket No. W-02113A-07-0551
Test Year Ended December 31, 2006

Schedule MEM-26

OPERATING INCOME ADJUSTMENT #13 - TEST YEAR INCOME TAXES

<u>LINE NO.</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY PROPOSED</u>	<u>[B] STAFF ADJUSTMENTS</u>	<u>[C] STAFF RECOMMENDED</u>
1	Income Tax Expense	<u>\$ 270,020</u>	<u>\$ 197,275</u>	<u>\$ 467,295</u>

References:

Col [A]: Company Schedule C-1
Col [B]: Col [C] - Col [A]
Col [C]: Schedule MEM-2, Line 52.

RATE DESIGN

Line No.		Present Rates	Company Proposed	Staff Recommended
1	Monthly Minimum			
2	3/4-inch Meter	\$ 13.60	\$ 18.56	\$ 15.00
3	1-inch Meter	\$ 22.70	\$ 30.97	\$ 25.00
4	1 1/2-inch Meter	\$ 45.40	\$ 71.95	\$ 48.00
5	2-inch Meter	\$ 73.00	\$ 99.61	\$ 77.00
6	3-inch Meter	\$ 146.00	\$ 199.21	\$ 150.00
7	4-inch Meter	\$ 227.00	\$ 309.74	\$ 230.00
8	6-inch Meter	\$ 454.00	\$ 619.47	\$ 460.00
9	8-inch Meter	\$ 730.00	\$ 996.07	\$ 925.00
10	10-inch Meter	\$ 1,043.00	\$ 1,423.15	\$ 1,300.00
11	12-inch Meter	\$ 1,980.00	\$ 2,701.67	\$ 2,300.00
12				
13	Fire Hydrants Basic Service			
14				
15	Fire Hydrants Used for Irrigation			
16		Per Meter Size	Per Meter Size	Per Meter Size
17	Monthly Service Charge for Fire Sprinkler			
18	4-inch or Smaller Meter	\$ 10.00	\$ 10.00	\$ 10.00
19	6-inch Meter	\$ 10.00	\$ 10.00	\$ 10.00
20	8-inch Meter	\$ 10.00	\$ 10.00	\$ 10.00
21	10-inch Meter	\$ 10.00	\$ 10.00	\$ 10.00
22	Larger than 10-inch Meter	\$ 10.00	\$ 10.00	\$ 10.00
23				
24				
25	Gallons in the Minimum			
26				
27				
28	Commodity Rates		Per 1,000 Gallons	
29	(Residential, Commercial, Industrial)		Block	
30				
31	3/4-inch Meter Residential	\$ 1.68	\$ 2.292	\$ 1.85
32	3,001 - 9,000 Gallons	\$ 2.52	\$ 3.438	\$ 2.92
33	Over 9,000 Gallons	\$ 3.03	\$ 4.134	\$ 3.33
34				
35	3/4-inch Meter Commercial and Industrial	\$ 2.52	\$ 3.438	\$ 2.92
36	Over 9,000 Gallons	\$ 3.03	\$ 4.134	\$ 3.33
37				
38	1-inch Meter:	\$ 2.52	\$ 3.438	\$ 2.92
39	Over 24,000 Gallons	\$ 3.03	\$ 4.134	\$ 3.33
40				
41	1 1/2-inch Meter:	\$ 2.52	\$ 3.438	\$ 2.92
42	Over 60,000 Gallons	\$ 3.03	\$ 4.134	\$ 3.33
43				
44	2-inch Meter	\$ 2.52	\$ 3.438	\$ 2.92
45	Over 100,000 Gallons	\$ 3.03	\$ 4.134	\$ 3.33
46				
47	3-inch Meter	\$ 2.52	\$ 3.438	\$ 2.92
48	Over 225,000 Gallons	\$ 3.03	\$ 4.134	\$ 3.33
49				
50	4-inch Meter	\$ 2.52	\$ 3.438	\$ 2.92
51	Over 350,000 Gallons	\$ 3.03	\$ 4.134	\$ 3.33
52				
53	6-inch Meter	\$ 2.52	\$ 3.438	\$ 2.92
54	Over 725,000 Gallons	\$ 3.03	\$ 4.134	\$ 3.33
55				
56	8-inch Meter	\$ 2.52	\$ 3.438	\$ 2.92
57	Over 1,125,000 Gallons	\$ 3.03	\$ 4.134	\$ 3.33
58				
59	10-inch Meter	\$ 2.52	\$ 3.438	\$ 2.92
60	Over 1,500,000 Gallons	\$ 3.03	\$ 4.134	\$ 3.33
61				
62	12-inch Meter	\$ 2.52	\$ 3.438	\$ 2.92
63	Over 2,250,000 Gallons	\$ 3.03	\$ 4.134	\$ 3.33
64				
65	Irrigation/Bulk	\$ 1.56	\$ 3.438	\$ 2.75
66				
67	Fire Hydrant Irrigation/Construction	\$ 1.56	\$ 3.438	\$ 2.75
68				
69	Standpipe (Fire Hydrants)	\$ 2.52	\$ 3.438	\$ 2.75
70				
71	Fire Sprinklers	\$ 2.52	\$ 3.438	\$ 2.75
72				
73				
74	Service Charges			
75	Establishment of Service:			
76	Regular Hours	\$ 25.00	\$ 25.00	\$ 25.00
77	After Hours	\$ 35.00	\$ 35.00	\$ 35.00
78	Re-establishment of Service within 12 Months:			
79	Monthly Minimum times Months Disconnected			
80	From the Water System [Per ACC Rule 14-2-403(D)]		*	*
81	Reconnection of Service (Delinquent):			
82	Regular Hours	\$ 35.00	\$ 35.00	\$ 35.00
83	After Hours	\$ 50.00	\$ 50.00	\$ 50.00
84	Water Meter Test (If Correct)	\$ 35.00	\$ 35.00	\$ 35.00
85	Water Meter relocation as Customer Request [Per ACC Rule 14-2-405(B)]	Cost	Cost	Cost
86	Meter Re-Read (If Correct)	\$ 25.00	\$ 25.00	\$ 25.00
87	NSF Check Charge	\$ 25.00	\$ 25.00	\$ 25.00
88	Late Fee Charge	1.5% Per Mon	1.5% Per Mont	1.5% Per Month
89	Deferred Payment Finance Charge	1.5% Per Mon	1.5% Per Mont	1.5% Per Month
90	Service Call - After Hours [Per ACC Rule 14-2-403(D)]	Refer to above charges	Refer to above charges	Refer to above charges
91		**	**	**
92	Deposit Requirements Residential	**	**	**
93	Deposit Requirements Non-Residential	**	**	**
94	Deposit Interest	***	***	***
95				
96				
97	** Residential - two times the average bill. Non-residential - two and one-half times the estimated maximum bill.			
98				
99	*** Interest per [Per ACC Rule 14-2-403(B)]			

100 Off-site Facilities Hook-up Fee:

101	5/8 x 3/4-inch Meter	****	\$ 1,000.00	****
102	3/4-inch Meter	****	\$ 1,500.00	****
103	1-inch Meter	****	\$ 2,500.00	****
104	1 1/2-inch Meter	****	\$ 5,000.00	****
105	2-inch Meter	****	\$ 8,000.00	****
106	3-inch Meter	****	\$ 16,000.00	****
107	4-inch Meter	****	\$ 25,000.00	****
108	6-inch or Larger Meter	****	\$ 50,000.00	****

109
110 **** The fee shall be variable, fixed on January 1 of each calendar year, computed by dividig \$369,404.50 by the
111 number of hook-ups during the previous calendar year, however, in no event shall the hook-up fee be higher than
112 \$1,000 nor less than \$500.
113 2006 filing - New water installations. May be assessed only once per parcel, service connection, or lot within a
114 subdivision. Purpose is to equitably apportion the costs of constructing additional off-site facilities to provide water production,
115 delivery, storage, and pressure among all now service connections.

116
117 CAP Hook-up Fee: NONE
118 New water installations. May be assessed only once per parcel, service connection, or lot within a
119 subdivision. Purpose is to recover the costs of additional 1,931 a.f. of CAP allocation. Fee will be
120 recomputed annually to take into account carrying costs of unrecovered balance and annual payment.

	Present Service Line Charge	Present Meter Installation Charge	Total Present Charge	Proposed Service Line Charge	Proposed Meter Installation Charge	(a) Total Proposed Charge	Staff Proposed Service Line Charge	Staff Proposed Meter Installation Charge	Staff Total Proposed Charge
121									
122									
123									
124									
125									
126	Meter and Service Line Installation Charges								
127	\$ 385.00	\$ 135.00	\$ 520.00	\$ 385.00	\$ 135.00	\$ 520.00	\$ 385.00	\$ 135.00	\$ 520.00
128	\$ 385.00	\$ 215.00	\$ 600.00	\$ 385.00	\$ 215.00	\$ 600.00	\$ 385.00	\$ 215.00	\$ 600.00
129	\$ 435.00	\$ 255.00	\$ 690.00	\$ 435.00	\$ 255.00	\$ 690.00	\$ 435.00	\$ 255.00	\$ 690.00
130	\$ 470.00	\$ 465.00	\$ 935.00	\$ 470.00	\$ 465.00	\$ 935.00	\$ 470.00	\$ 465.00	\$ 935.00
131	\$ 630.00	\$ 965.00	\$ 1,595.00	\$ 630.00	\$ 965.00	\$ 1,595.00	\$ 630.00	\$ 965.00	\$ 1,595.00
132	\$ 630.00	\$ 1,690.00	\$ 2,320.00	\$ 630.00	\$ 1,690.00	\$ 2,320.00	\$ 630.00	\$ 1,690.00	\$ 2,320.00
133	\$ 805.00	\$ 1,470.00	\$ 2,275.00	\$ 805.00	\$ 1,470.00	\$ 2,275.00	\$ 805.00	\$ 1,470.00	\$ 2,275.00
134	\$ 845.00	\$ 2,265.00	\$ 3,110.00	\$ 845.00	\$ 2,265.00	\$ 3,110.00	\$ 845.00	\$ 2,265.00	\$ 3,110.00
135	\$ 1,170.00	\$ 2,350.00	\$ 3,520.00	\$ 1,170.00	\$ 2,350.00	\$ 3,520.00	\$ 1,170.00	\$ 2,350.00	\$ 3,520.00
136	\$ 1,230.00	\$ 3,245.00	\$ 4,475.00	\$ 1,230.00	\$ 3,245.00	\$ 4,475.00	\$ 1,230.00	\$ 3,245.00	\$ 4,475.00
137	\$ 1,730.00	\$ 4,545.00	\$ 6,275.00	\$ 1,730.00	\$ 4,545.00	\$ 6,275.00	\$ 1,730.00	\$ 4,545.00	\$ 6,275.00
138	\$ 1,770.00	\$ 6,280.00	\$ 8,050.00	\$ 1,770.00	\$ 6,280.00	\$ 8,050.00	\$ 1,770.00	\$ 6,280.00	\$ 8,050.00
139	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost

140
141 (a) As meters and service line are now taxable income for income purposes, the Company shall collect income taxes on the meter and service line
142 charges. Any tax collected will be refunded each year as the meter deposit is refunded.

143
144
145 IN ADDITION TO THE COLLECTION OF REGULAR RATES, THE UTILITY WILL COLLECT FROM IT CUSTOMERS A PROPORTIONATE SHARE
146 OF ANY PRIVILEGE, SALES, USE, AND FRANCHISE TAX. PER COMMISSION RULE 14-2-409D(5).

147
148 ALL ADVANCES AND/OR CONTRIBUTIONS ARE TO INCLUDE LABOR, MATERIALS, OVERHEADS, AND ALL APPLICABLE TAXES, INCLUDING
149 ALL GROSS-UP TAXES FOR INCOME TAXES, IF APPLICABLE.

Typical Bill Analysis
General Service 3/4-Inch Meter

Company Proposed	Gallons	Present Rates	Proposed Rates	Dollar Increase	Percent Increase
Average Usage	8,450	\$ 32.37	\$ 44.16	\$ 11.79	36.41%
Median Usage	5,500	24.94	34.03	\$ 9.09	36.43%
Staff Recommended					
Average Usage	8,450	\$ 32.37	\$ 36.46	\$ 4.09	12.63%
Median Usage	5,500	24.94	27.85	\$ 2.91	11.67%

Present & Proposed Rates (Without Taxes)
General Service 3/4-Inch Meter

Gallons	Present Rates	Company Proposed Rates	% Increase	Staff Recommended Rates	% Increase
Consumption					
-	\$ 13.60	\$ 18.56	36.47%	\$ 15.00	10.29%
1,000	15.28	20.85	36.47%	16.85	10.27%
2,000	16.96	23.14	36.46%	18.70	10.26%
3,000	18.64	25.44	36.46%	20.55	10.25%
4,000	21.16	28.87	36.45%	23.47	10.92%
5,000	23.68	32.31	36.44%	26.39	11.44%
5,500	24.94	34.03	36.43%	27.85	11.67%
6,000	26.20	35.74	36.43%	29.31	11.87%
7,000	28.72	39.18	36.42%	32.23	12.22%
8,000	31.24	42.62	36.41%	35.15	12.52%
9,000	33.76	46.05	36.41%	38.07	12.77%
8,450	32.37	44.16	36.41%	36.46	12.63%
10,000	36.79	50.19	36.41%	41.40	12.53%
11,000	39.82	54.32	36.41%	44.73	12.33%
12,000	42.85	58.45	36.42%	48.06	12.16%
13,000	45.88	62.59	36.42%	51.39	12.01%
14,000	48.91	66.72	36.42%	54.72	11.88%
15,000	51.94	70.86	36.42%	58.05	11.76%
16,000	54.97	74.99	36.42%	61.38	11.66%
17,000	58.00	79.12	36.42%	64.71	11.57%
18,000	61.03	83.26	36.42%	68.04	11.49%
19,000	64.06	87.39	36.42%	71.37	11.41%
20,000	67.09	91.53	36.42%	74.70	11.34%
25,000	82.24	112.20	36.43%	91.35	11.08%
30,000	97.39	132.87	36.43%	108.00	10.89%
35,000	112.54	153.54	36.43%	124.65	10.76%
40,000	127.69	174.21	36.43%	141.30	10.66%
45,000	142.84	194.88	36.43%	157.95	10.58%
50,000	157.99	215.55	36.43%	174.60	10.51%
75,000	233.74	318.90	36.43%	257.85	10.31%
100,000	309.49	422.25	36.43%	341.10	10.21%

TYPICAL BILL ANALYSIS AVERAGE AND MEDIAN COST COMPARISONS

LINE NO.	CUSTOMER CLASS	CURRENT RATES			
		AVERAGE		MEDIAN	
		USAGE	DOLLARS	USAGE	DOLLARS
1	Residential 3/4"	8,450	\$ 32.37	5,500	\$ 24.94
2	Residential 1"	10,095	\$ 48.14	7,500	\$ 99.58
3	Residential 1.5"	29,821	\$ 148.15	21,500	\$ 303.58
4	Residential 2"	72,924	\$ 256.77	91,500	\$ 303.58
5	Residential 3"	70,226	\$ 322.97	83,000	\$ 355.16
6					
6	Commerical 3/4"	11,528	\$ 43.94	4,501	\$ 24.94
7	Commerical 1"	17,907	\$ 67.83	5,500	\$ 36.56
8	Commerical 1.5"	47,736	\$ 165.69	13,500	\$ 79.42
9	Commerical 2"	68,389	\$ 245.34	21,500	\$ 127.18
10	Commerical 3"	34,550	\$ 233.07	11,500	\$ 174.98
11	Commerical 4"	186,146	\$ 696.09	79,500	\$ 427.34
12					
13	Industrial 3/4"	5,375	\$ 153.65	3,500	\$ 13.60
14	Industrial 1"	-	\$ 217.68	-	\$ 22.70
15	Industrial 1.5"	8,000	\$ 132.57	-	\$ 45.50
16					
17	Irrigation 3/4"	16,732	\$ 39.70	8,500	\$ 26.86
18	Irrigation 1"	41,781	\$ 87.88	15,500	\$ 46.88
19	Irrigation 1.5"	76,173	\$ 164.23	24,500	\$ 83.62
20	Irrigation 2"	116,346	\$ 254.50	63,000	\$ 171.28
21	Irrigation 4"	1,813,070	\$ 3,055.39	157,000	\$ 471.92
22	Irrigation 6"	5,451,042	\$ 8,957.63	1,312,000	\$ 2,500.72
23					
24	Construction 3/4"	959	\$ 15.10	-	\$ 13.60
25	Construction 1"	11,803	\$ 41.11	11,500	\$ 40.64
26	Construction 2"	36,000	\$ 129.16	59,000	\$ 165.04
27	Construction 3"	180,662	\$ 427.83	19,500	\$ 176.42
28	Construction 4"	94,500	\$ 374.42	106,000	\$ 392.36
29					
30	Fire Hydrant (Standpipe) 3"	26,121	\$ 211.82	9,500	\$ 169.94
31	Fire Hydrant (Standpipe) 4"	516,917	\$ 1,529.63	561,500	\$ 1,641.98
32					
33	Fire Sprinkler 3/4"	3	\$ 10.01	-	\$ 10.00
34	Fire Sprinkler 1"	63	\$ 10.16	-	\$ 10.00
35	Fire Sprinkler 1.5"	28	\$ 10.07	-	\$ 10.00

LINE NO.	CUSTOMER CLASS	COMPANY PROPOSED RATES			
		AVERAGE		MEDIAN	
		USAGE	DOLLARS	USAGE	DOLLARS
1	Residential 3/4"	8,450	\$ 44.17	5,500	\$ 34.03
2	Residential 1"	10,095	\$ 65.68	7,500	\$ 145.87
3	Residential 1.5"	29,821	\$ 202.13	21,500	\$ 414.19
4	Residential 2"	72,924	\$ 350.32	91,500	\$ 414.19
5	Residential 3"	70,226	\$ 440.65	83,000	\$ 484.56
6					
6	Commerical 3/4"	11,528	\$ 59.95	4,501	\$ 34.03
7	Commerical 1"	17,907	\$ 92.53	5,500	\$ 49.88
8	Commerical 1.5"	47,736	\$ 236.07	13,500	\$ 118.36
9	Commerical 2"	68,389	\$ 334.73	21,500	\$ 173.53
10	Commerical 3"	34,550	\$ 317.99	11,500	\$ 238.75
11	Commerical 4"	186,146	\$ 949.71	79,500	\$ 583.06
12					
13	Industrial 3/4"	5,375	\$ 209.64	3,500	\$ 18.56
14	Industrial 1"	-	\$ 296.99	-	\$ 30.97
15	Industrial 1.5"	8,000	\$ 190.73	-	\$ 71.95
16					
17	Irrigation 3/4"	16,732	\$ 76.08	8,500	\$ 47.78
18	Irrigation 1"	41,781	\$ 174.61	15,500	\$ 84.26
19	Irrigation 1.5"	76,173	\$ 333.83	24,500	\$ 156.18
20	Irrigation 2"	116,346	\$ 499.61	63,000	\$ 316.20
21	Irrigation 4"	1,813,070	\$ 6,543.07	157,000	\$ 849.51
22	Irrigation 6"	5,451,042	\$ 19,360.15	1,312,000	\$ 5,130.13
23					
24	Construction 3/4"	959	\$ 21.86	-	\$ 18.56
25	Construction 1"	11,803	\$ 71.55	11,500	\$ 70.51
26	Construction 2"	36,000	\$ 223.38	59,000	\$ 302.45
27	Construction 3"	180,662	\$ 820.33	19,500	\$ 266.25
28	Construction 4"	94,500	\$ 634.63	106,000	\$ 674.17
29					
30	Fire Hydrant (Standpipe) 3"	26,121	\$ 289.01	9,500	\$ 231.87
31	Fire Hydrant (Standpipe) 4"	516,917	\$ 2,086.90	561,500	\$ 2,240.18
32					
33	Fire Sprinkler 3/4"	3	\$ 10.01	-	\$ 10.00
34	Fire Sprinkler 1"	63	\$ 10.22	-	\$ 10.00
35	Fire Sprinkler 1.5"	28	\$ 10.10	-	\$ 10.00

LINE NO.	CUSTOMER CLASS	STAFF RECOMMENDED RATES			
		AVERAGE		MEDIAN	
		USAGE	DOLLARS	USAGE	DOLLARS
1	Residential 3/4"	8,450	\$ 36.46	5,500	\$ 27.85
2	Residential 1"	10,095	\$ 54.48	7,500	\$ 110.78
3	Residential 1.5"	29,821	\$ 164.08	21,500	\$ 344.18
4	Residential 2"	72,924	\$ 289.94	91,500	\$ 344.18
5	Residential 3"	70,226	\$ 355.06	83,000	\$ 392.36
6					
6	Commerical 3/4"	11,528	\$ 49.70	4,501	\$ 28.14
7	Commerical 1"	17,907	\$ 77.29	5,500	\$ 41.06
8	Commerical 1.5"	47,736	\$ 187.39	13,500	\$ 87.42
9	Commerical 2"	68,389	\$ 276.70	21,500	\$ 139.78
10	Commerical 3"	34,550	\$ 250.89	11,500	\$ 183.58
11	Commerical 4"	186,146	\$ 773.55	79,500	\$ 462.14
12					
13	Industrial 3/4"	5,375	\$ 170.27	3,500	\$ 15.00
14	Industrial 1"	-	\$ 242.90	-	\$ 25.00
15	Industrial 1.5"	8,000	\$ 148.89	-	\$ 48.00
16					
17	Irrigation 3/4"	16,732	\$ 63.86	8,500	\$ 39.82
18	Irrigation 1"	41,781	\$ 147.00	15,500	\$ 70.26
19	Irrigation 1.5"	76,173	\$ 270.43	24,500	\$ 119.54
20	Irrigation 2"	116,346	\$ 416.73	63,000	\$ 260.96
21	Irrigation 4"	1,813,070	\$ 5,524.16	157,000	\$ 688.44
22	Irrigation 6"	5,451,042	\$ 16,377.04	1,312,000	\$ 4,291.04
23					
24	Construction 3/4"	959	\$ 17.80	-	\$ 15.00
25	Construction 1"	11,803	\$ 59.46	11,500	\$ 58.58
26	Construction 2"	36,000	\$ 153.12	59,000	\$ 220.28
27	Construction 3"	180,662	\$ 604.53	19,500	\$ 133.94
28	Construction 4"	94,500	\$ 425.94	106,000	\$ 459.52
29					
30	Fire Hydrant (Standpipe) 3"	26,121	\$ 226.27	9,500	\$ 177.74
31	Fire Hydrant (Standpipe) 4"	516,917	\$ 1,739.40	561,500	\$ 1,869.58
32					
33	Fire Sprinkler 3/4"	3	\$ 10.01	-	\$ 10.00
34	Fire Sprinkler 1"	63	\$ 10.18	-	\$ 10.00
35	Fire Sprinkler 1.5"	28	\$ 10.08	-	\$ 10.00

BEFORE THE ARIZONA CORPORATION COMMISSION

MIKE GLEASON
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. W-02113A-07-0551
CHAPARRAL CITY WATER COMPANY, INC.,)
AN ARIZONA CORPORATION, FOR A)
DETERMINATION OF THE FAIR VALUE OF ITS)
UTILITY PLANT AND PROPERTY AND FOR)
INCREASES IN ITS RATES AND CHARGES FOR)
UTILITY SERVICE BASED THEREON.)
_____)

DIRECT
TESTIMONY
OF
MARLIN SCOTT, JR
UTILITIES ENGINEER
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

OCTOBER 3, 2008

TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	i
Conclusions	
Recommendations	
DIRECT TESTIMONY	
Introduction.....	1
Purpose of Testimony	2
Engineering Report	2
EXHIBIT MSJ, Engineering Report	
A. Location of Company	1
B. Description of Water System	1
C. Water Use.....	4
D. Growth	5
E. MCESD Compliance	5
F. ADWR Compliance	6
G. ACC Compliance	6
H. Reproduction Cost New and Original Cost	6
I. Acquisition of Additional CAP Water Allocation	10
J. Depreciation Rates	12
K. Service Line and Meter Installation Charges	12
L. Curtailment Tariff	12
M. Backflow Prevention Tariff	12
FIGURES	
A-1. Maricopa County Map	14
A-2. Certificated Area	15
B-1. System Schematic	16
C-1. Water Use.....	17
D-1. Growth	17
I-1. CAP Water Allocation	18
TABLES	
I-2. Water Pumped and Purchased	18
E-1. Water Testing Cost	19
J-1. Depreciation Rates	21
K-1. Service Line and Meter Installation Charges	22

**EXECUTIVE SUMMARY
CHAPARRAL CITY WATER COMPANY
DOCKET NO. W-02113A-07-0551**

CONCLUSIONS

- A. The Chaparral City Water Company ("Company") water system's current source and storage capacity are adequate to serve the present customer base and reasonable growth.
- B. The Maricopa County Environmental Service Department has reported no major deficiencies and has determined that the Company's system, PWS #07-017, is currently delivering water that meets water quality standards required by the Arizona Administrative Code, Title 18, Chapter 4.
- C. The Company is located in the Arizona Department of Water Resources' ("ADWR") Phoenix Active Management Area and ADWR has reported that the Company is in compliance with its requirements governing water providers and/or community water systems.
- D. The Company has no delinquent Arizona Corporation Commission compliance issues.
- E. The Company has an approved curtailment tariff that became effective on October 1, 2005.
- F. The Company has an approved backflow prevention tariff that became effective on October 1, 2005.

RECOMMENDATIONS

- 1. The Company is aware of its 15.9% water loss amount and believes the Central Arizona Project's ("CAP") intake meter is not accurately registering. For this reason, the Company will be installing its own CAP water meter at its Shea Water Treatment Plant.

Staff recommends that after the Company completes its own CAP water meter installation, the Company should begin a 12-month monitoring exercise of its water system. Staff further recommends that the Company docket the results of the system monitoring as a compliance item in this case by November 1, 2009. If the reported water loss for the period from October 1, 2008 through October 1, 2009, is greater than 10%, the Company shall prepare a report containing a detailed analysis and plan to reduce water loss to 10% or less. If the Company believes it is not cost effective to reduce water loss to less than 10%, it should submit a detailed cost benefit analysis to support its opinion. This report shall be docketed as a compliance item for this proceeding for review and certification by Staff. The above report or cost benefit analysis, if required, shall be docketed by December 31, 2009. In no case shall water loss be allowed to remain at 15% or greater.

2. Staff recommends its average annual cost of \$25,638 be adopted for the water testing expense in this proceeding.
3. Staff recommends its adjusted Original Cost value of \$48,972,590 and Reproduction Cost New value of \$76,031,428 be used as a guideline for purposes of setting rates in this proceeding.
4. Staff recommends that approximately half of the requested CAP Water allocation of 966 acre-feet per year be considered used and useful.
5. Staff recommends that the Company continue to use Staff's depreciation rates by individual National Association of Regulatory Utility Commissioners.
6. Staff recommends that the Company continue to use its unchanged service line and meter installation charges.

1 **INTRODUCTION**

2 **Q. Please state your name, place of employment and job title.**

3 A. My name is Marlin Scott, Jr. My place of employment is the Arizona Corporation
4 Commission ("Commission"), Utilities Division, 1200 West Washington Street, Phoenix,
5 Arizona 85007. My job title is Utilities Engineer.

6
7 **Q. How long have you been employed by the Commission?**

8 A. I have been employed by the Commission since November 1987.

9
10 **Q. Please list your duties and responsibilities.**

11 A. As a Utilities Engineer, specializing in water and wastewater engineering, my
12 responsibilities include: the inspection, investigation, and evaluation of water and
13 wastewater systems; preparing reconstruction cost new and/or original cost studies, cost of
14 service studies and investigative reports; providing technical recommendations and
15 suggesting corrective action for water and wastewater systems; and providing written and
16 oral testimony on rate applications and other cases before the Commission.

17
18 **Q. How many cases have you analyzed for the Utilities Division?**

19 A. I have analyzed approximately 510 cases covering various responsibilities for the Utilities
20 Division.

21
22 **Q. Have you previously testified before this Commission?**

23 A. Yes, I have testified in 71 proceedings before this Commission.

1 **Q. What is your educational background?**

2 A. I graduated from Northern Arizona University in 1984 with a Bachelor of Science degree
3 in Civil Engineering Technology.

4
5 **Q. Briefly describe your pertinent work experience.**

6 A. Prior to my employment with the Commission, I was Assistant Engineer for the City of
7 Winslow, Arizona, for about two years. Prior to that, I was a Civil Engineering
8 Technician with the U.S. Public Health Service in Winslow for approximately six years.

9
10 **Q. Please state your professional membership, registrations, and licenses.**

11 A. I am a member of the National Association of Regulatory Utility Commissioners' Staff
12 Subcommittee on Water.

13
14 **PURPOSE OF TESTIMONY**

15 **Q. Were you assigned to provide Utilities Division Staff's ("Staff") engineering analysis
16 and recommendation for the Chaparral City Water Company ("Company") in this
17 proceeding?**

18 A. Yes. I reviewed the Company's application, reviewed responses to data requests, and
19 inspected the water system on April 3, 2008. This testimony and its attachment present
20 Staff's engineering evaluation.

21
22 **ENGINEERING REPORT**

23 **Q. Please describe the attached Engineering Report, Exhibit MSJ.**

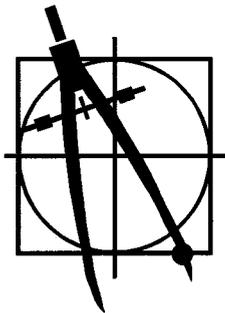
24 A. Exhibit MSJ presents the details and analyses of Staff's findings, and is attached to this
25 direct testimony. Exhibit MSJ contains the following major topics: (1) a description of
26 the water system and the processes, (2) water use, (3) growth, (4) compliance with the

1 rules of the Maricopa County Environmental Services Department, Arizona Department of
2 Water Resources, and the Arizona Corporation Commission, (5) reproduction cost new,
3 (6) Central Arizona Project Water allocation, (7) depreciation rates, (8) service line and
4 meter installation charges, (9) curtailment plan tariff, and (10) backflow prevention tariff.

5
6 My conclusions and recommendations from the Engineering Report are contained in the
7 **“EXECUTIVE SUMMARY”**, above.

8
9 **Q. Does this conclude your direct testimony?**

10 **A. Yes, it does.**



**Engineering Report
For
Chaparral City Water Company
Docket No. W-02113A-07-0551 (Rates)**

September 19, 2008

A. LOCATION OF CHAPARRAL CITY WATER COMPANY (“COMPANY”)

The Company serves the Town of Fountain Hills which is located along the eastern city limits of Scottsdale. Figure A-1 shows the location of the Company within Maricopa County and Figure A-2 shows the approximate 21 square-miles of certificated area.

B. DESCRIPTION OF WATER SYSTEM

The water system was field inspected on April 3, 2008, by Arizona Corporation Commission (“ACC” or “Commission”) Staff members, Marlin Scott, Jr., Dorothy Hains, Marvin Millsap, and Darak Eaddy, in the accompaniment of Robert Hanford, James Moore, and William Vernon, representing the Company.

The operation of the water system consists of a Central Arizona Project (“CAP”) water treatment plant (“WTP”), two wells, nine storage tanks, seven booster stations and a distribution system, with four pressure zones, serving approximately 13,345 customers during the test year ending December 31, 2006. A system schematic is shown in Figure B-1 with detailed plant facility descriptions as follows:

Table 1. CAP Water Canal and Treatment Plant

Name or Description	Plant Items	Location
Canal pumping station & intake	3 each, 450-Hp vertical turbine booster pumps (1 pump @3,000 GPM, 2 pumps @ 6,200 GPM, and 3 pumps @ 8,500 GPM), 10,000 gallon surge tank, 24-inch meter [GPM = gallons per minute]	Shea Blvd./122nd St.
Raw CAP Water Storage Tank	3.5 million gallons	Shea WTP

Treatment Plant 2	15 MGD plant – chemical injections, clarifiers, filters, clearwell, wetwell	Shea WTP
-------------------	---	----------

In the prior rate case with a Test Year ending December 31, 2003, the Company operated the Shea WTP #1, a 3 million gallon per day surface water treatment plant. According to the Company, this Shea WTP #1 was taken out-of-service in 2003 and will not be placed back into service. (See Section H of this report for Staff’s adjustments to the plant-in-service.)

Table 2. Well Data

Well Name Or #	ADWR ID No.	Pump HP	Pump GPM	Casing Size & Depth	Meter Size
#10	55-604786	350 - Turbine	1,700	20/16” x 450/288’	10”
#11	55-604787	250 - Submersible	1,100	20/16” x 300/468’	10”
		TOTAL:	2,800 GPM		

Table 3. Storage Tanks

Capacity Million Gallons (MG)	Quantity (Each)	Location
3.5	1	@ Shea WTP for raw CAP water
1.5	1	@ Lotus
1.25	4	@ Fountain Hills, Mayan, Eagle Ridge & Crestview
500,000 gal.	3	@Blackbird, Golden Eagle & Eagle Nest
Totals: 11.5 MG	9	

Table 4. Booster Systems

Location	Plant Facilities	Storage Tanks (From in Table 3)
Blackbird (Reservoir No. 1)	40 & 60-Hp VT booster pumps 15,000 gal. pressure tank	500,000 gal. storage tank
Fountain Hills (Reservoir No. 2)	75-Hp VT booster pump 100-Hp VT booster pump 10,000 gallon pressure tank	1.25 MG storage tank
Lotus (Reservoir No. 3)	40 & 60-Hp VT booster pumps 1,000 gal. Pressure tank	1.5 MG storage tank
Golden Eagle (Reservoir No. 4)	Two 125-Hp VT booster pumps	500,000 gal. storage tank
Mayan (Reservoir No. 5)	Two 75-Hp VT booster pumps 20-Hp VT booster pump Two 125-Hp VT booster pumps 1,000 gal. & 5,000 gal. pressure tanks	1.25 MG storage tank
Eagle Ridge (Reservoir No. 6)		1.25 MG storage tank
Crestview (Reservoir No. 7)	Two 75-Hp VT booster pumps Two 40-Hp VT booster pumps 2,000 gallon pressure tank	1.25 MG storage tank
Copperwynd (Booster Station No. 8)	40-Hp VT booster pump Two 75-Hp VT booster pumps	
Eagle Nest (Reservoir No. 8)		500,000 gal. storage tank

Table 5. Water Mains

Diameter	Material	Length
4-inch	n/a	57,344 ft.
6-inch	n/a	488,610 ft.
8-inch	n/a	217,628 ft.
10-inch	n/a	4,050 ft.
12-inch	n/a	132,124 ft.
16-inch	n/a	30,045 ft.
18-inch	n/a	27,613 ft.
	Total:	957,414 ft.

Table 6. Customer Meters

Size	Quantity
5/8 x 3/4-inch	-
3/4-inch	8,587
1-inch	4,382
1-1/2-inch	162
2-inch	163
3-inch compound	39
4-inch compound	9
6-inch compound	3
Total:	13,345

Table 7. Fire Hydrants

Size	Quantity
Standard	1,540

C. WATER USE

Water Sold

Based on the information provided by the Company, water use for the year 2006 is presented in Figure C-1. Customer consumption experienced a high monthly average water use

of 605 gallons per day (“GPD”) per connection and a low monthly average water use of 326 GPD per connection for an average annual use of 432 GPD per connection.

Non-Account Water

Non-account water should be 10% or less. The Company reported 2,474,323,000 gallons pumped/purchased and 2,080,213,000 gallons sold, resulting in a water loss of 15.9%. The Company is aware of the percentage of the water loss amount and believes the CAP’s intake meter is not accurately registering. For this reason, the Company will be installing its own CAP water meter at the Shea WTP by September 2008.

Staff recommends that after the Company completes its own CAP water meter installation, the Company should begin a 12-month monitoring exercise of its water system. Staff further recommends that the Company docket the results of the system monitoring as a compliance item in this case by November 1, 2009. If the reported water loss for the period from October 1, 2008 through October 1, 2009, is greater than 10%, the Company shall prepare a report containing a detailed analysis and plan to reduce water loss to 10% or less. If the Company believes it is not cost effective to reduce water loss to less than 10%, it should submit a detailed cost benefit analysis to support its opinion. This report shall be docketed as a compliance item for this proceeding for review and certification by Staff. The report or cost benefit analysis, if required, shall be docketed by December 31, 2009. In no case shall water loss be allowed to remain at 15% or greater.

System Analysis

The water system’s current source capacity of 11,300 GPM and storage capacity of 11.5 million gallons is adequate to serve the present customer base and reasonable growth.

D. GROWTH

Figure D-1 depicts the customer growth using linear regression analysis. The number of service connections was obtained from annual reports submitted to the Commission. During the test year 2006, the Company had 13,345 customers and it is projected that the Company could have approximately 15,350 customers by December 2012.

E. MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT (“MCESD”) COMPLIANCE

Compliance

On May 1, 2008, MCESD reported the Company’s system, PWS #07-017, had no major deficiencies and based on data submitted to MCESD; MCESD has determined that this system is currently delivering water that meets water quality standards required by the Arizona Administrative Code, Title 18, Chapter 4.

Water Testing Expense

The Company reported its water testing expense at \$43,458 for the 2006 test year. Staff has reviewed the Company's reported amount and has made certain adjustments to determine Staff's average annual cost of \$25,638 as shown in Table E-1. Staff's major adjustment relates to the disallowance of testing costs to the Shea water treatment plant #1 that is no longer in service. The Company also did not annualize its testing cost. Staff recommends its average annual cost of \$25,638 be adopted for this proceeding.

F. ARIZONA DEPARTMENT OF WATER RESOURCES ("ADWR") COMPLIANCE

The Company is located in the Phoenix Active Management Area ("AMA"). According to ADWR, ADWR has reported that the Company is in compliance with its requirements governing water providers and/or community water systems.

G. ARIZONA CORPORATION COMMISSION COMPLIANCE

According to the Utilities Division Compliance Section, the Company had no delinquent ACC compliance issues.

H. REPRODUCTION COST NEW AND ORIGINAL COST

The Company submitted a trended reconstruction cost new plant asset listing for the year ending December 31, 2006. Although the Company labeled its trended plant asset listing as "reconstruction", the actual method used was "reproduction", i.e., reproducing Original Cost ("OC") values using trend factors to estimate the Reproduction Cost New ("RCN") values. This OC/RCN exercise reported an OC plant-in-service value of \$51,053,251 and a RCN plant-in-service value of \$79,791,438. Staff has reviewed the Company's OC and RCN values and recommends that these values be accepted with the following adjustments:

Staff's Adjustment #1 – Used and Useful Plant

Through the field inspection and data requests, Staff considered eight plant asset items not used and useful. Staff removed the following plant items from the OC and RCN listings:

Table 8. Plant Not Used and Useful

Acct. No.	Plant item	Acquisition Date	OC	RCN
304	Well #9 - Install exhaust fan	31-Aug-99	595	797
307	Well #8 1971	31-Jan-71	49,329	214,695
307	Well #9 1972	31-Jan-72	54,139	220,589
307	ENGINE WELL	31-Dec-86	3,348	5,388
320	CAP Plant #1 - Plant 1986	31-Dec-86	1,320,562	2,179,720
320	CAP Plant #1 - Treatment equip. 1987	31-Dec-87	288,612	465,965
320	CAP Plant #1 - Treatment equip. 1989	31-Jan-89	397,339	610,432
320	CAP Plant #1 - Treatment equip. 1989	31-Dec-89	4,409	6,774
	Total:		2,118,334	3,704,360

Staff's Adjustment #2 – Reclassification of Plant

Through the review of the RCN asset listing and data requests, Staff reclassified 42 plant asset items (that included recalculation of the RCN values using the reclassified trending factors) from the OC and RCN listings:

Table 9. Plant Reclassification

Acct. No.	Plant item	Acquisit. Date	OC	Trend Source	n base	n factor	RCN
311	From Acct. 307 to: Well #11 – 250 Hp sub.	30-Sep-96	65,622	HW155	619	450	90,267
320	From Acct. 348 to: Water treatment study	2004	34,063	HW155	444	416	36,356
331	From Acct. 330 to: 16" Trans Main	30-Sep-05	1,381,264	HW155	420	392	1,479,926
331	FH Blvd transmiss. main	14-Aug-06	121,156	HW155	420	420	121,156
333	From Acct. 330 to: Wtr svc @ 15038 escab.	31-Oct-96	1,203	HW155	362	263	1,656
333	Wtr svc @ 16637 almont	31-Oct-96	1,309	HW155	362	263	1,802
333	Wtr svc @ twm ctr	31-Oct-96	1,309	HW155	362	263	1,802
333	Wtr svc @ 16353 e. row	31-Oct-96	1,113	HW155	362	263	1,532
333	Wtr svc @ 13804 sguaro	31-Oct-96	1,264	HW155	362	263	1,740
333	Wtr svc @ 13804 sguaro	31-Oct-96	1,301	HW155	362	263	1,791
333	Wtr svc @16850 Nicklus	31-Oct-96	1,353	HW155	362	263	1,862
333	Wtr svc @15361 G/eagle	31-Oct-96	1,203	HW155	362	263	1,656
333	Wtr svc @14213 anguilar	31-Oct-96	1,513	HW155	362	263	2,082
333	Wtr svc @14226 anguilar	31-Oct-96	1,407	HW155	362	263	1,937
333	Wtr svc @Jiffy lub ctr	31-Oct-96	1,407	HW155	362	263	1,937
333	Wtr svc @16418 desert	30-Nov-96	1,097	HW155	362	263	1,510
333	Wtr svc @13221 wendov	30-Nov-96	1,203	HW155	362	263	1,656
333	Wtr svc @11015 inca	30-Nov-96	1,293	HW155	362	263	1,780
333	Wtr svc @11449 inca	30-Nov-96	1,203	HW155	362	263	1,656
333	Wtr svc @LA Fuente apt	30-Nov-96	1,896	HW155	362	263	2,610
333	Wtr svc @12271 Chama	30-Nov-96	1,203	HW155	362	263	1,656
333	Wtr svc @16439 Nicklau	30-Nov-96	1,353	HW155	362	263	1,862
333	Wtr svc @17426 Calico	30-Nov-96	1,097	HW155	362	263	1,510
333	Wtr svc @11214 Prtridge	30-Nov-96	1,118	HW155	362	263	1,539
333	Wtr svc @14218 Saguaro	30-Nov-96	1,248	HW155	362	263	1,718
333	Wtr svc @16932 Parlin	30-Nov-96	1,052	HW155	362	263	1,448
333	Wtr svc @ Plat 202	30-Nov-96	17,773	HW155	362	263	24,463
333	Wtr svc @16629 Almont	30-Nov-96	1,422	HW155	362	263	1,957
333	Wtr svc @ Almont dr (2)	30-Nov-96	1,354	HW155	362	263	1,864
333	Wtr svc @ El Pueblo (2)	30-Nov-96	1,354	HW155	362	263	1,864
333	Wtr svc @17303 el pueblo	30-Nov-96	1,203	HW155	362	263	1,656
333	Wtr svc @17252 el pueblo	30-Nov-96	946	HW155	362	263	1,302
333	Wtr svc @ 12031 Lamont	30-Nov-96	1,203	HW155	362	263	1,656
333	Wtr svc@ 16069 Glenbrk	30-Nov-96	1,602	HW155	362	263	2,205
333	Wtr svc@17005 Enterprise	30-Nov-96	1,203	HW155	362	263	1,656
333	Install copper serv	31-Dec-96	39,965	HW155	362	263	55,007
333	Install copper serv	31-Dec-96	42,556	HW155	362	263	58,574
333	From Acct. 334 to: Service Line 1994	26-Oct-94	12,481	HW155	362	255	17,718
334	From Acct. 330 to: Meter installation	31-Jan-73	23,674	HW155	428	297	34,116

	From Accts; 311 & 333 to:						
335	Fire Hydrant & DIP	31-Mar-05	10,368	HW155	610	564	11,214
335	Install hydrant 1996	31-Dec-96	42,984	HW155	610	394	66,548
	From Acct. 333 to:						
340	Chairs (5) & Conf. Room	31-Dec-93	1,814	CPI	202.6	144.5	2,543

Staff's Adjustment #3 – Capitalization of Expenditures

Staff capitalized six outside service expenditure items that were included in the OC and RCN listings:

Table 10. Capitalization of Expenditures

Acct. No.	Plant item	Acquisit. Date	OC	Trend Source	n base	n factor	RCN
304	New irrigation installation	2006	2,500	HW155	434	434	2,500
304	Installation of 30'x6' fencing	2006	4,375	HW155	434	434	4,375
304	Professional survey for fencing	2006	4,715	HW155	434	434	4,715
	304 Total:		11,590				11,590
311	Recondition motor	2006	7,448	HW155	619	619	7,448
311	Removal & repair pump	2006	5,513	HW155	619	619	5,513
311	Removal & repair motor/pump	2006	13,123	HW155	619	619	13,123
	311 Total:		26,084				26,084
	TOTAL:		\$37,674				\$37,674

Staff's Adjustment to the Plant-in-Service

Based on Staff's above adjustments to the Company's OC and RCN plant-in-service values, Staff recommends the following OC and RCN plant-in-service values be used as a guideline for purposes of setting rates in this proceeding:

Table 11. Staff's Adjustment to Plant-in-Service

Acct. No.	Descriptions	Company's Plant-in-Service		Staff's Recommended Plant-in-Service	
		OC	RCN	OC	RCN
303	Land & Land Rights	271,857	271,857	271,857	271,857
304	Structures & Improvements	1,518,648	1,965,394	1,529,643	1,976,187
307	Wells	332,065	908,287	159,627	380,043
311	Pumping Equipment	1,506,908	3,160,902	1,588,245	3,266,628
320	Water Treatment Equipment	7,763,500	9,969,130	5,786,640	6,742,594
330	Distribution Reservoirs	8,176,967	13,002,689	6,512,148	11,070,393
331	Trans. & Distribution Mains	17,450,634	31,920,448	18,953,054	33,521,530
333	Services	7,389,930	9,304,078	7,496,338	9,450,989
334	Meters	2,725,673	3,981,833	2,736,866	3,998,143
335	Hydrants	1,171,633	2,192,853	1,224,985	2,270,616
339	Other Plant & Misc. Equip.	1,717,230	1,814,021	1,717,230	1,814,021
340	Office Furniture & Equip.	270,358	349,449	272,172	351,993
341	Transportation Equipment	535,315	663,541	535,315	663,541
343	Tools, Shop & Garage Equip.	149,365	195,755	149,365	195,755
346	Communication Equipment	39,105	57,138	39,105	57,138
348	Other Tangible Plant	34,063	34,063	0	0
	Totals:	\$51,053,251	\$79,791,438	\$48,972,590	\$76,031,428

I. ACQUISITION OF ADDITIONAL CAP WATER ALLOCATION

Background

In 1983, the Secretary of the Interior released its decision regarding the final allocation of CAP Water. Under that decision, 638,823 acre-feet of the annual water supply was allocated to municipal and industrial ("M&I") users. However, some entities that were allocated M&I water declined to enter into a subcontract, leaving a total of 80,312 acre-feet of the M&I supply available for reallocation. Of this amount, 14,665 acre-feet was reassigned due to the Indian Tribe Water Rights Settlement Act of 1992, resulting in 65,647 acre-feet of water being available for reallocation of CAP M&I water users.

In 1994, the ADWR initiated a process to develop a recommended reallocation for the 65,647 acre-feet of uncontracted M&I CAP Water. The ADWR solicited applications and a total of 53 entities applied, requesting more than 350,000 acre-feet of water. Using a selected methodology, the ADWR selected 26 applicants that allocated a portion of the 65,647 acre-feet of CAP water. Using this methodology, ADWR apportioned the water to provide a dependable water supply by using a demand rate which reflects the maximum use rates set by the Second Management Plan in the AMAs through the year 2023. However, the process was never

completed due to an intervening lawsuit between the U.S. Bureau of Reclamation and the Central Arizona Water Conservation District ("CAWCD") regarding the CAWCD's repayment obligation for the CAP.

In 1999, after a five year delay, the ADWR reinitiated the reallocation process. Using the same basic methodology that was used to generate the 1994 allocation, the ADWR regenerated the proportionate share of the 65,647 acre-feet relative to the population projections and water demand for the year 2040. However, because the total projected needs of the applicants were considerably greater than the supply, the total amount of water that could be allocated to any applicant was limited to 8,206 acre-feet or 12.5% of the total supply of 65,647 acre-feet.

Of the original 26 applicants considered in the reallocation process, some applicants had elected to not participate in the 1999 reallocation process. As a result, the ADWR made a reallocation recommendation for the remaining 20 applicants. The final recommendation regarding the reallocation of the 65,647 acre-feet of M&I CAP water included the Company receiving 1,931 acre-feet of additional CAP water.

Company's Additional CAP Water Allocation

In its rate application filing with a Test Year ending December 31, 2006, the Company stated that it will be purchasing by January 2008 an additional 1,931 acre-feet per year of CAP Water at a cost of \$1,280,000. The Company purchased this additional allocation in December 2007. The Company currently has a CAP Water allocation of 6,978 acre-feet per year. According to the Company, the additional CAP Water allocation is needed to, a) improve the long-term security of water supplies for its customers, 2) allow the Company to reinforce and continue its reliance on a renewable supply of surface water, and 3) the additional allocation will act as a drought buffer.

Staff has evaluated the additional CAP Water allocation to determine if the additional allocation is needed and if so, how much of the allocation would be needed. To assist in its evaluation, Staff produced Table I-2 and Figure I-1 to show the CAP Water Allocation and its projected use. The data in Table I-2 was taken from the Company's Annual Reports and used to depict the CAP Water purchased using linear regression analysis. Based on Figure I-1, it appears the current CAP Water allocation was exceeded in 2006 and that additional CAP Water is needed. Figure I-1 also shows that approximately half of the requested allocation (314.6 million gallons or 966 acre-feet per year) would be needed within a five-year period.

In Decision No. 68238, dated October 25, 2005, the Company was granted an Order Preliminary ("OP") for a Certificate of Convenience and Necessity ("CC&N") extension. In order to obtain a Final Order granting this CC&N extension, one of the requirements was for the Company to demonstrate sufficient water source capacity for its water system. The OP compliance requirements are due within a three-year timeframe, with a due date of October 25, 2008.

Based on the above discussion, approximately half of the requested CAP Water allocation of 966 acre-feet per year should be considered used and useful.

J. DEPRECIATION RATES

In the prior rate case, the Company adopted Staff's typical and customary depreciation rates. These rates are presented in Table J-1 and it is recommended that the Company continue to use these depreciation rates by individual National Association of Regulatory Utility Commissioners ("NARUC") category.

K. SERVICE LINE AND METER INSTALLATION CHARGES

The Company requested no changes to its service line and meter installation charges. These unchanged installation charges are shown in Table K-1.

L. CURTAILMENT TARIFF

The Company has an approved curtailment tariff that became effective on October 1, 2005.

M. BACKFLOW PREVENTION TARIFF

The Company has an approved backflow prevention tariff that became effective on October 1, 2005.

FIGURES

Maricopa County Map Figure A-1

Certificated Area Figure A-2

System Schematic Figure B-1

Water Use Figure C-1

Growth Figure D-1

CAP Water Allocation Figure I-1

TABLES

Water Testing Cost Table E-1

Water Pumped and Purchased Table I-2

Depreciation Rates Table J-1

Service Line and Meter Installation Charges Table K-1

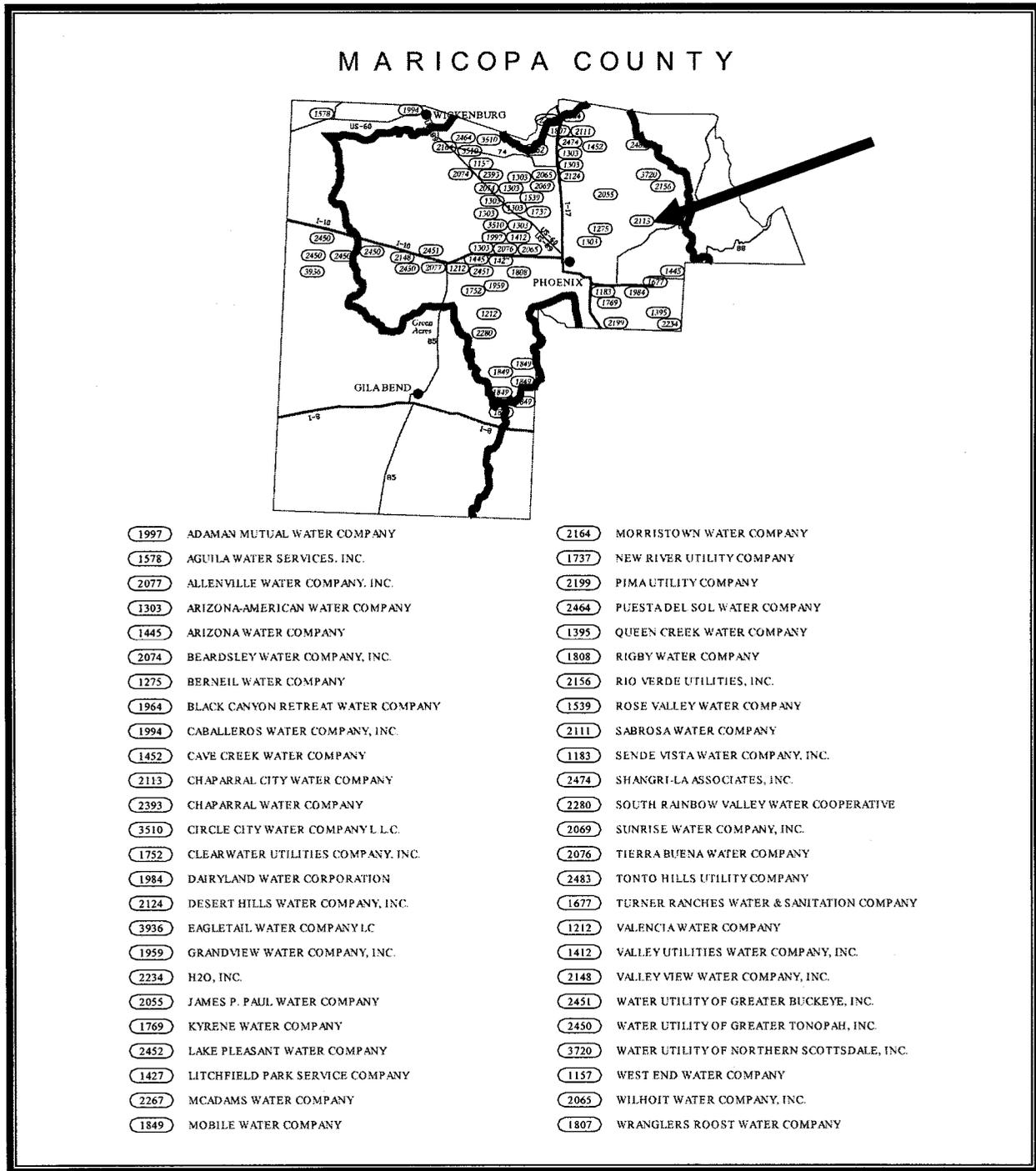


Figure A-1. Maricopa County Map

COUNTY: *Maricopa*

RANGE 6 East

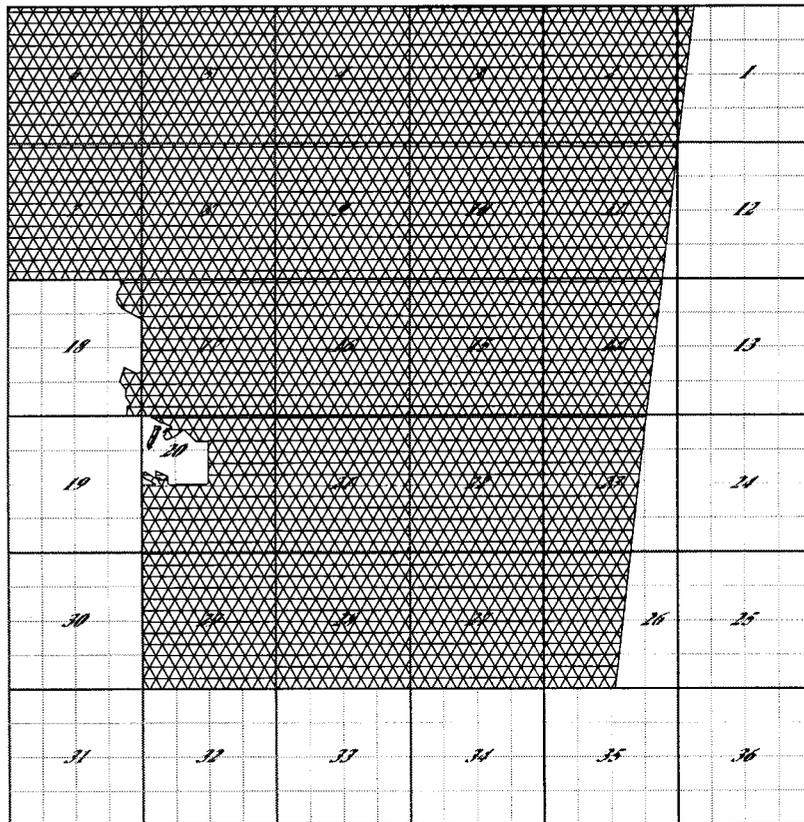


Figure A-2. Certificated Area

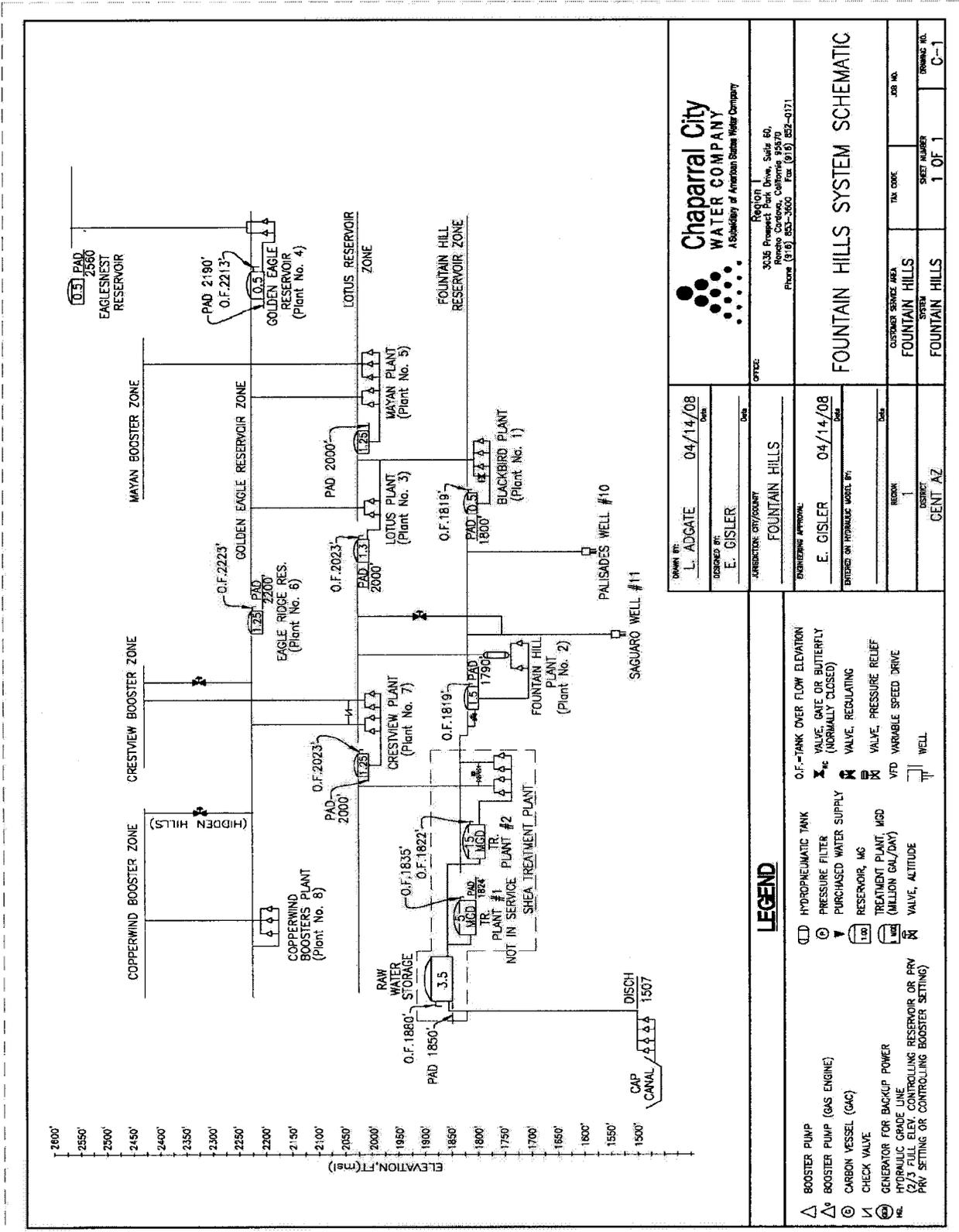


Figure B-1. System Schematic

<p>Chaparral City WATER COMPANY A Subsidiary of American States Water Company</p>	
NAME: L. ADGATE DESIGNED BY: E. GISLER JURISDICTION: CITY/COUNTY: FOUNTAIN HILLS	DATE: 04/14/08 DATE: 04/14/08 OFFICE: FOUNTAIN HILLS
REGION 1 3035 Prospect Park Drive, Suite 60, Phoenix, Arizona, 85018 Phone (602) 952-3600 Fax (602) 952-0771	
FOUNTAIN HILLS SYSTEM SCHEMATIC	
CUSTOMER SERVICE AREA: FOUNTAIN HILLS SHEET NUMBER: 1 OF 1 JOB NO.	TAX CODE: FOUNTAIN HILLS SHEET NUMBER: 1 OF 1 DRAWING NO. C-1

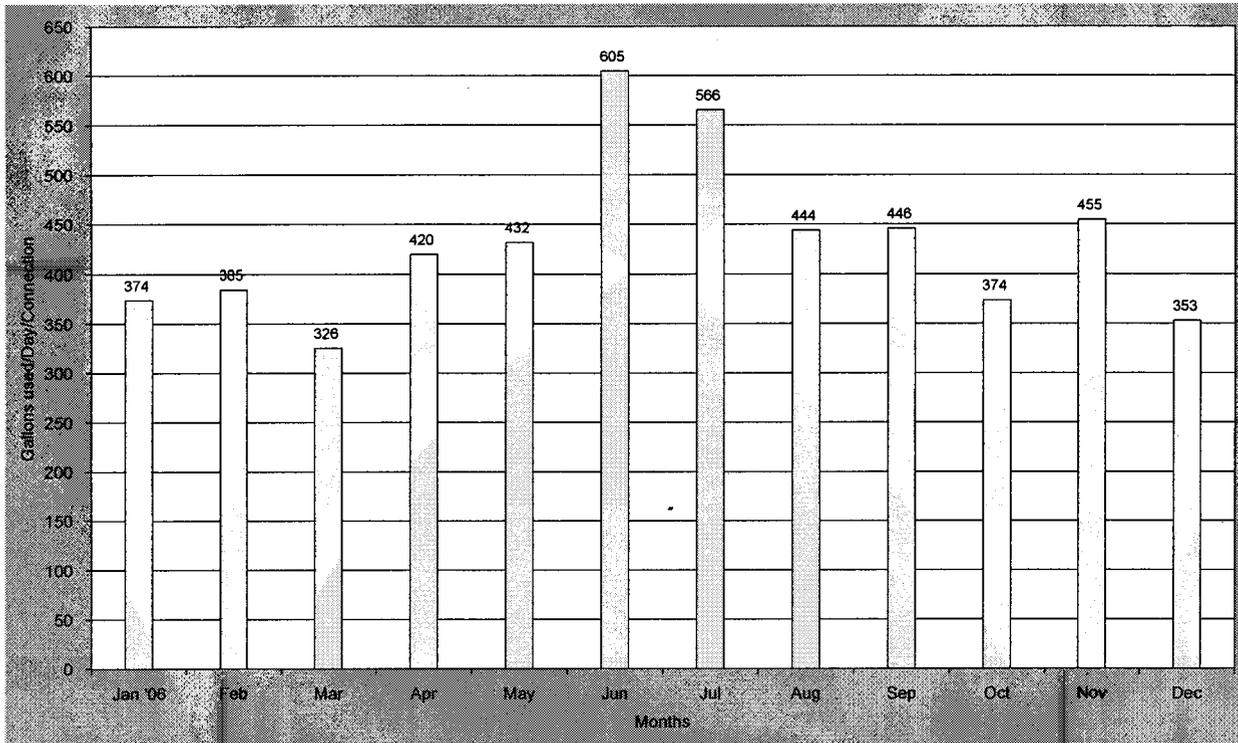


Figure C-1. Water Use

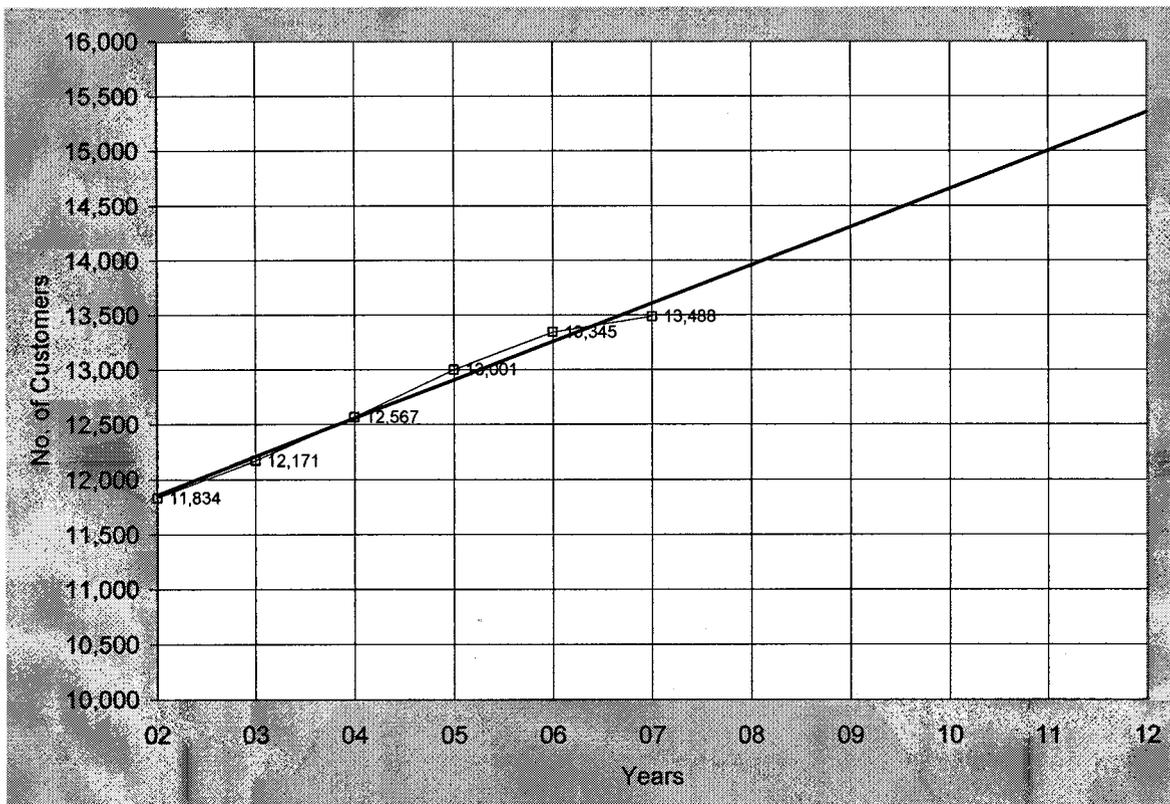


Figure D-1. Growth

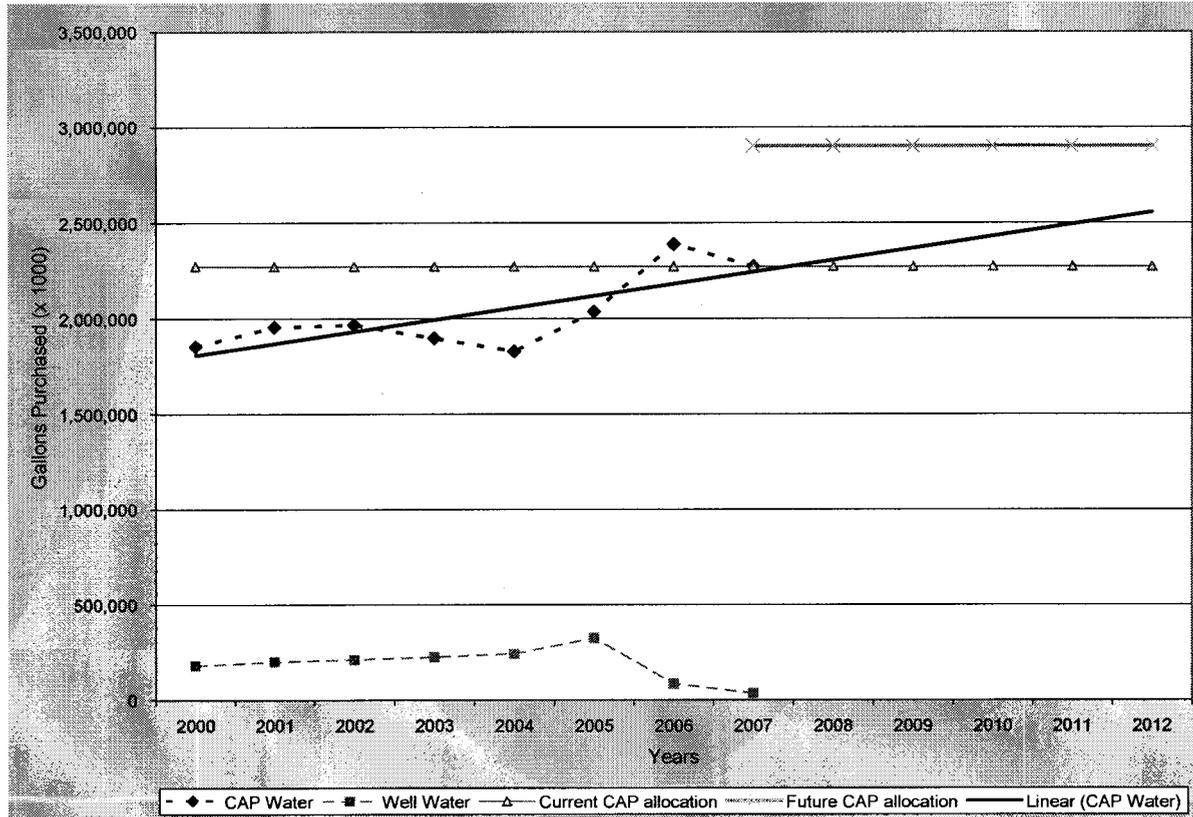


Figure I-1. CAP Water Allocation

Data from Company's Annual Reports							
Year	CAP WTP #1 (x 1000)	CAP WTP #2 (x 1000)	CAP Total (x 1000)	Wells (x 1000)	Total Pumped/ Purchased (x 1000)	Current CAP Allocation (x 1000 Gal.)	Future CAP Allocation (x 1000 Gal.)
2000	695,440	1,158,760	1,854,200	179,924	2,034,124	2,273,633	
2001	753,042	1,204,345	1,957,387	200,486	2,157,873	2,273,633	
2002	781,956	1,186,343	1,968,299	210,625	2,178,924	2,273,633	
2003			*1,898,900	*226,403		2,273,633	
2004	537,110	1,292,390	1,829,500	242,180	2,071,680	2,273,633	
2005		2,037,407	2,037,407	325,400	2,362,807	2,273,633	
2006		2,389,948	2,389,948	84,590	2,474,538	2,273,633	
2007		2,273,633	2,273,633	35,528	2,309,161	2,273,633	2,902,809
2008						2,273,633	2,902,809
2009						2,273,633	2,902,809
2010			* estimate			2,273,633	2,902,809
2011						2,273,633	2,902,809
2012						2,273,633	2,902,809

Table I-2 . Water Pumped & Purchased

Table E-1. Water Testing Cost

CHAPARRAL CITY WATER COMPANY					
Water Testing Cost for TY 2006					
Constituents	Frequency	No. of Samples	Cost per Sample	Total Cost	Average Annual Cost
CAP Intake (Raw)					
Total/Fecal Coliform	weekly	52	\$20	\$1,040	\$1,040
Giardia/Cryptosporidium	quarterly	4	\$0	\$0	\$0
TOC	monthly	12	\$35	\$420	\$420
Total Alkalinity	monthly	12	\$9	\$108	\$108
Perchlorate	monthly	12	\$45	\$540	\$540
Aluminum	quarterly	4	\$11	\$44	\$44
Others/IOC	3-years	1	\$0	\$0	\$0
Well #10 - Palisades (POE #003)					
IOCs	3-years	1	\$393	\$393	\$131
Asbestos	9 -years	1	\$108	\$108	\$12
Nitrate	quarterly	4	\$15	\$60	\$60
Nitrite	9-years	1	\$15	\$15	\$2
VOCs	3-years	1	\$90	\$90	\$30
SOCs	2 qrtrs./3 yrs.	2	\$1,055	\$2,110	\$703
Radiochemical - G.A.	4 qrtrs./4 yrs.	4	\$50	\$200	\$50
Sodium	3-years	1	\$11	\$11	\$4
Nickel	3-years	1	\$11	\$11	\$4
Unregulated (UCMR)	2 qrtrs. In 2006	2	\$0	\$0	\$0
Total Coliform	monthly	12	\$18	\$216	\$216
Others/IOCs	3-years	1	\$0	\$0	\$0
Well #11 - Saguaro (POE #004)					
IOCs	3-years	1	\$393	\$393	\$131
Asbestos	9 -years	1	\$108	\$108	\$12
Nitrate	quarterly	4	\$15	\$60	\$60
Nitrite	9-years	1	\$15	\$15	\$2
VOCs	3-years	1	\$90	\$90	\$30
SOCs	2 qrtrs./3 yrs.	2	\$0	\$0	\$0
Radiochemical - G.A.	4 qrtrs./4 yrs.	4	\$50	\$200	\$50
Sodium	3-years	1	\$11	\$11	\$4
Nickel	3-years	1	\$11	\$11	\$4
Unregulated (UCMR)	2 qrtrs. In 2006	2	\$0	\$0	\$0
Total Coliform	monthly	12	\$20	\$240	\$240
Others/IOCs	3-years	1	\$0	\$0	\$0
Shea SWTP #2 (POE #005)					
IOCs	yearly	1	\$393	\$393	\$393
Asbestos	9 years	1	\$108	\$108	\$12
Nitrate	quarterly	4	\$15	\$60	\$60

Nitrite	9 years	1	\$15	\$15	\$2
VOCs	yearly	1	\$90	\$90	\$90
SOCs	2 qrtrs./3 yrs.	2	\$1,055	\$2,110	\$703
Radiochemical - G.A.	4 qrtrs./4 yrs.	4	\$50	\$200	\$50
Sodium	yearly	1	\$11	\$11	\$11
Nickel	yearly	1	\$11	\$11	\$11
Unregulated (UCMR)	4 qrtrs. In 2006	4	\$0	\$0	\$0
Giardia/Cryptosporidium	quarterly	4	\$0	\$0	\$0
Aluminum	monthly	12	\$11	\$132	\$132
Total alkalinity	monthly	12	\$9	\$108	\$108
Calcium	monthly	12	\$11	\$132	\$132
TOC	monthly	12	\$35	\$420	\$420
Perchlorate	monthly	12	\$45	\$540	\$540
Others/IOC	3-years	1	\$0	\$0	\$0
Distribution System					
Total Coliform	monthly	300	\$18	\$5,400	\$5,400
HAA5s	quarterly	48	\$85	\$4,080	\$4,080
TTHMs	quarterly	48	\$65	\$3,120	\$3,120
Lead & Copper	3-years	30	\$22	\$660	\$220
Asbestos	9 years	2	\$108	\$216	\$24
Shea SWTP WW Discharge					
IOCs	annual	1	\$0	\$0	\$0
VOCs	annual	1	\$90	\$90	\$90
SOCs	annual	1	\$1,055	\$1,055	\$1,055
Miscellaneous:					
Watertrax USA	annual	1	\$3,825	\$3,825	\$3,825
Others	annual	1	\$600	\$600	\$600
MWL - Alkalinity	one time	1	\$130	\$130	\$43
MWL - supplies	one time	1	\$1,865	\$1,865	\$622
TOTALS:				\$31,865	\$25,638

Table J-1. Depreciation Rates

NARUC Acct. No.	Depreciable Plant	Average Service Life (Years)	Annual Accrual Rate (%)
304	Structures & Improvements	30	3.33
305	Collecting & Impounding Reservoirs	40	2.50
306	Lake, River, Canal Intakes	40	2.50
307	Wells & Springs	30	3.33
308	Infiltration Galleries	15	6.67
309	Raw Water Supply Mains	50	2.00
310	Power Generation Equipment	20	5.00
311	Pumping Equipment	8	12.5
320	Water Treatment Equipment		
320.1	Water Treatment Plants	30	3.33
320.2	Solution Chemical Feeders	5	20.0
330	Distribution Reservoirs & Standpipes		
330.1	Storage Tanks	45	2.22
330.2	Pressure Tanks	20	5.00
331	Transmission & Distribution Mains	50	2.00
333	Services	30	3.33
334	Meters	12	8.33
335	Hydrants	50	2.00
336	Backflow Prevention Devices	15	6.67
339	Other Plant & Misc Equipment	15	6.67
340	Office Furniture & Equipment	15	6.67
340.1	Computers & Software	5	20.00
341	Transportation Equipment	5	20.00
342	Stores Equipment	25	4.00
343	Tools, Shop & Garage Equipment	20	5.00
344	Laboratory Equipment	10	10.00
345	Power Operated Equipment	20	5.00
346	Communication Equipment	10	10.00
347	Miscellaneous Equipment	10	10.00
348	Other Tangible Plant	10	10.00

Table K-1. Service Line and Meter Installation Charges

Meter Size	Current Service Line Charges	Current Meter Charges	Current Total Charges
5/8 x3/4-inch	\$385	\$135	\$520
3/4-inch	\$385	\$215	\$600
1-inch	\$435	\$255	\$690
1-1/2-inch	\$470	\$465	\$935
2-inch Turbine	\$630	\$965	\$1,595
2-inch Compound	\$630	\$1,690	\$2,320
3-inch Turbine	\$805	\$1,470	\$2,275
3-inch Compound	\$845	\$2,265	\$3,110
4-inch Turbine	\$1,170	\$2,350	\$3,520
4-inch Compound	\$1,230	\$3,245	\$4,475
6-inch Turbine	\$1,730	\$4,545	\$6,275
6-inch Compound	\$1,770	\$6,280	\$8,050
8-inch & Larger	At Cost	At Cost	At Cost