

ORIGINAL



0000090885

BEFORE THE ARIZONA CORPORATION COMMISSION

2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

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

**STAFF'S NOTICE OF FILING  
SURREBUTTAL TESTIMONY**

Staff of the Arizona Corporation Commission ("Staff") hereby files the Surrebuttal Testimony  
of David C. Parcell of Technical Associates, Inc. in the above-referenced matter.

RESPECTFULLY SUBMITTED this 3<sup>rd</sup> day of December, 2008.

Robin Mitchell, Staff Attorney  
Amanda Ho, Staff Attorney  
Wesley Van Cleve, Staff Attorney  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

Original and thirteen (13) copies of the  
foregoing filed this 3<sup>rd</sup> day of  
December, 2008 with:

Docket Control  
Arizona Corporation Commission  
1200 West Washington  
Phoenix, AZ 85007

Arizona Corporation Commission  
**DOCKETED**

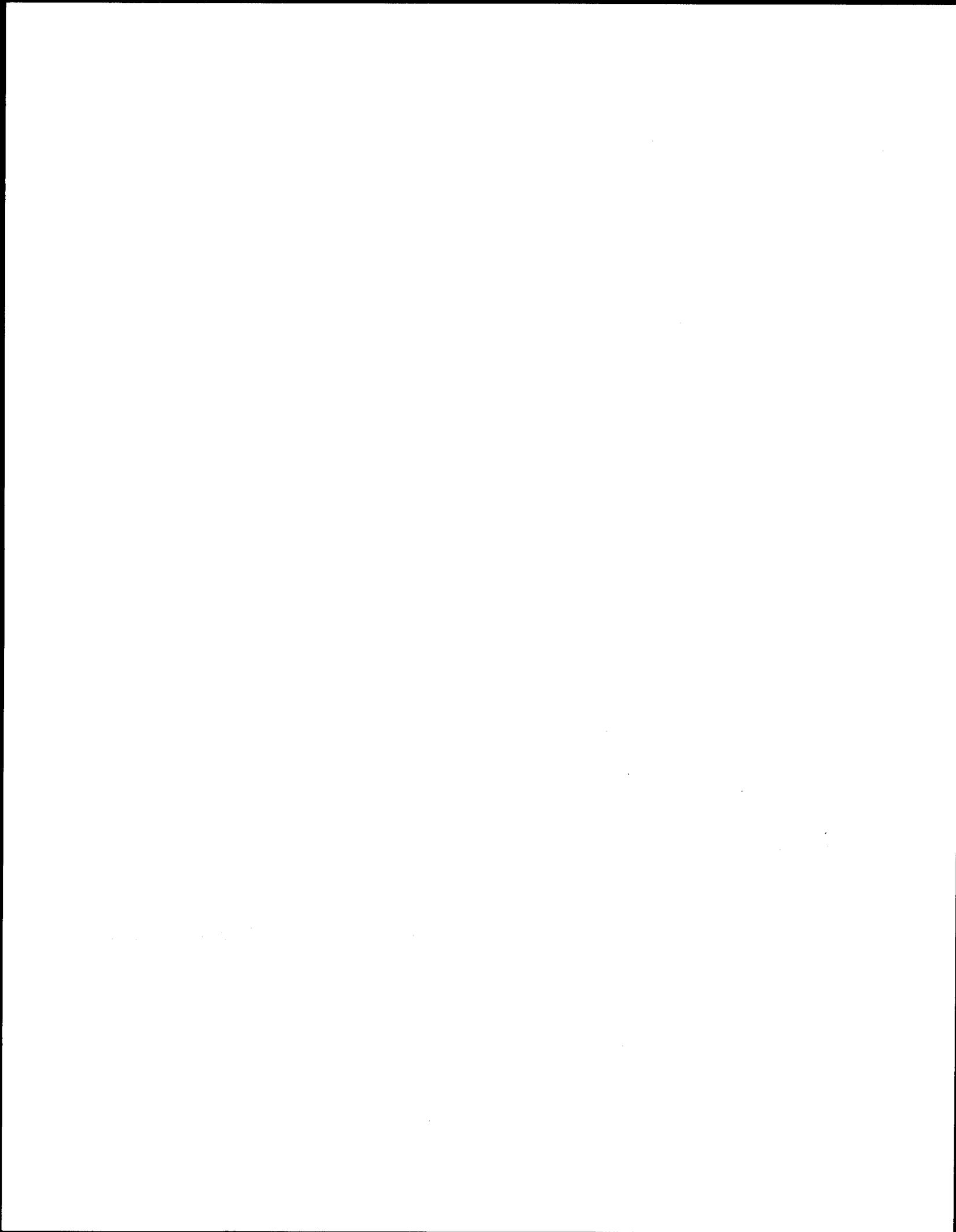
DEC - 3 2008

DOCKETED BY

DOCKET CONTROL  
POST BOX 27

2008 DEC - 3 P 4:30

RECEIVED



1 Copies of the foregoing mailed this  
4th day of December, 2008 to:

2 Norman D. James  
3 Jay L. Shapiro  
FENNEMORE CRAIG  
4 3003 North Central Ave, Suite 2600  
Phoenix, AZ 85012  
5 Attorneys for Chaparral City Water Company

6 Craig A. Marks  
CRAIG A. MARKS, PLC  
7 10645 N. Tatum Blvd.  
Suite 200-676  
8 Phoenix, AZ 85028

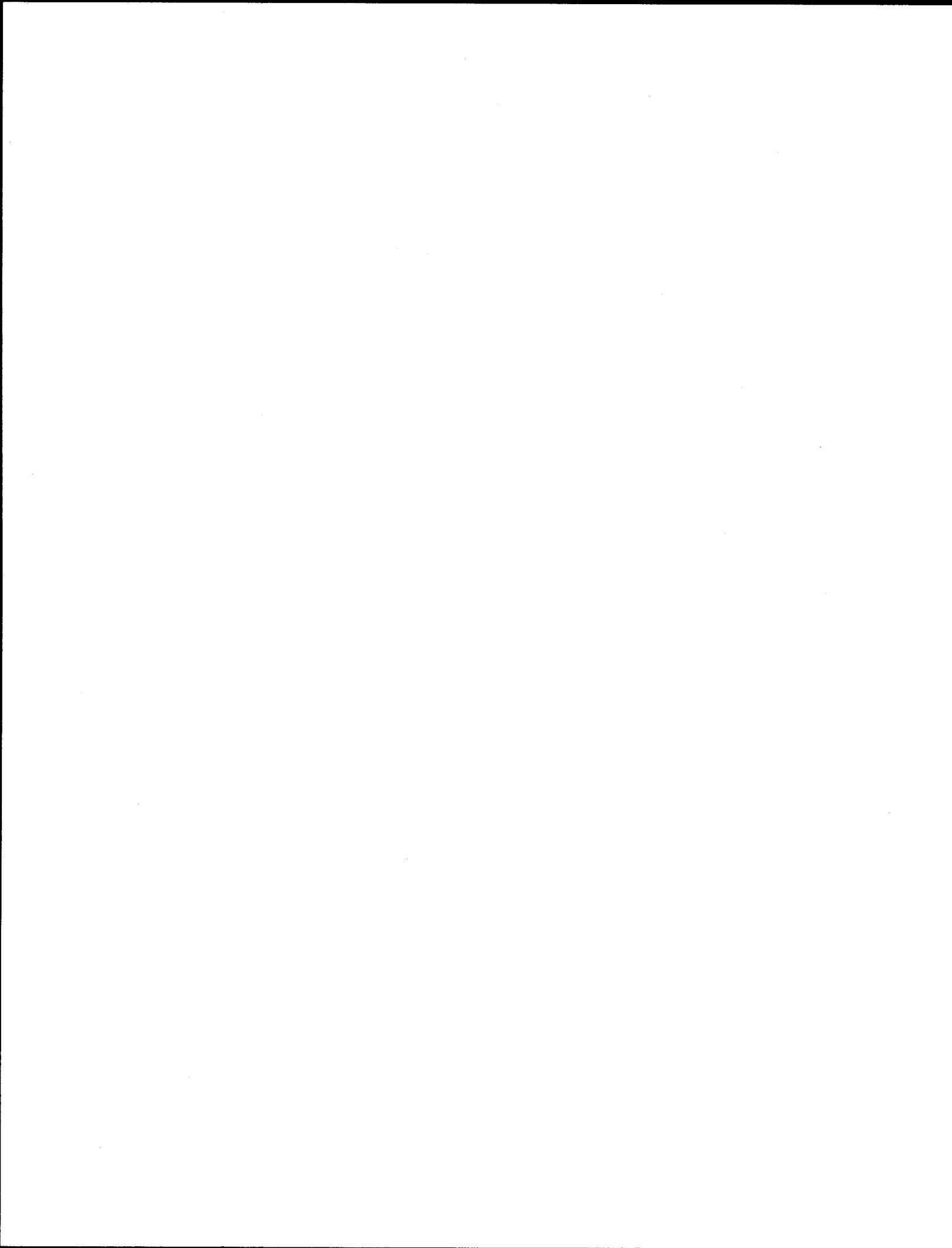
9 Daniel W. Pozefsky, Chief Counsel  
RUCO  
10 1110 West Washington Street, Suite 220  
Phoenix, AZ 85007

11 Phil Green  
12 OB Sports F.B. Management (EM), LLC  
7025 E. Greenway Parkway, Suite 550  
13 Scottsdale, AZ 85254

14 Dale E. Hawley, Assistant Vice President  
Counsel, Law Department  
15 PACIFIC LIFE INSURANCE COMPANY  
700 Newport Center Drive  
16 Newport Beach, CA 92660-6397

17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28





**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 FAIR VALUE OF )  
ITS UTILITY PLANT AND PROPERTY AND )  
FOR INCREASES IN ITS RATES AND )  
FOR INCREASES IN ITS RATES AND )  
CHARGES FOR UTILITY SERVICE BASED )  
THEREON. )

DOCKET NO. W-02113A-07-0551

SURREBUTTAL

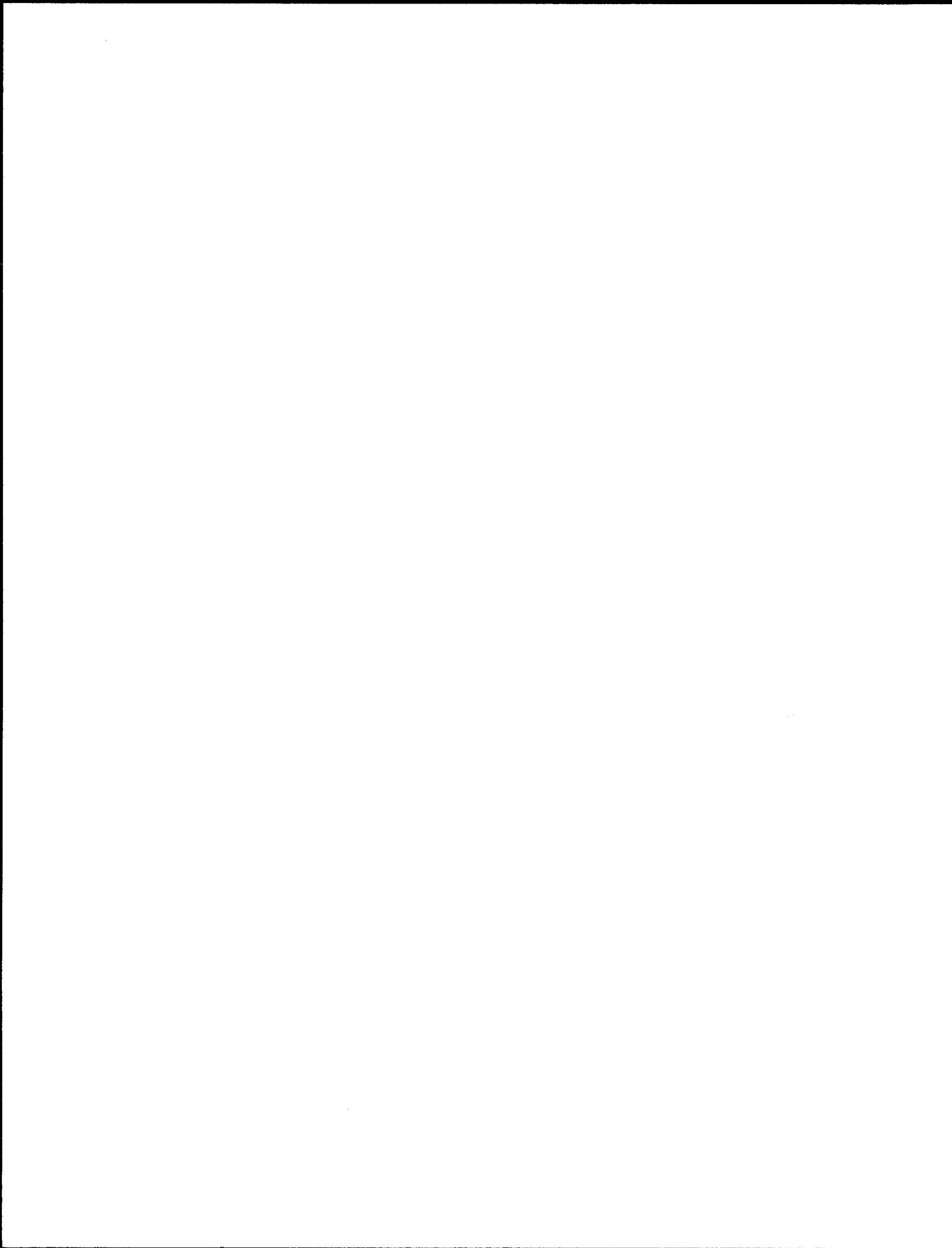
TESTIMONY

OF

DAVID C. PARCELL

TECHNICAL ASSOCIATES, INC.

DECEMBER 3, 2008



**TABLE OF CONTENTS**

**I. INTRODUCTION..... 1**

**II. PROXY GROUP.....3**

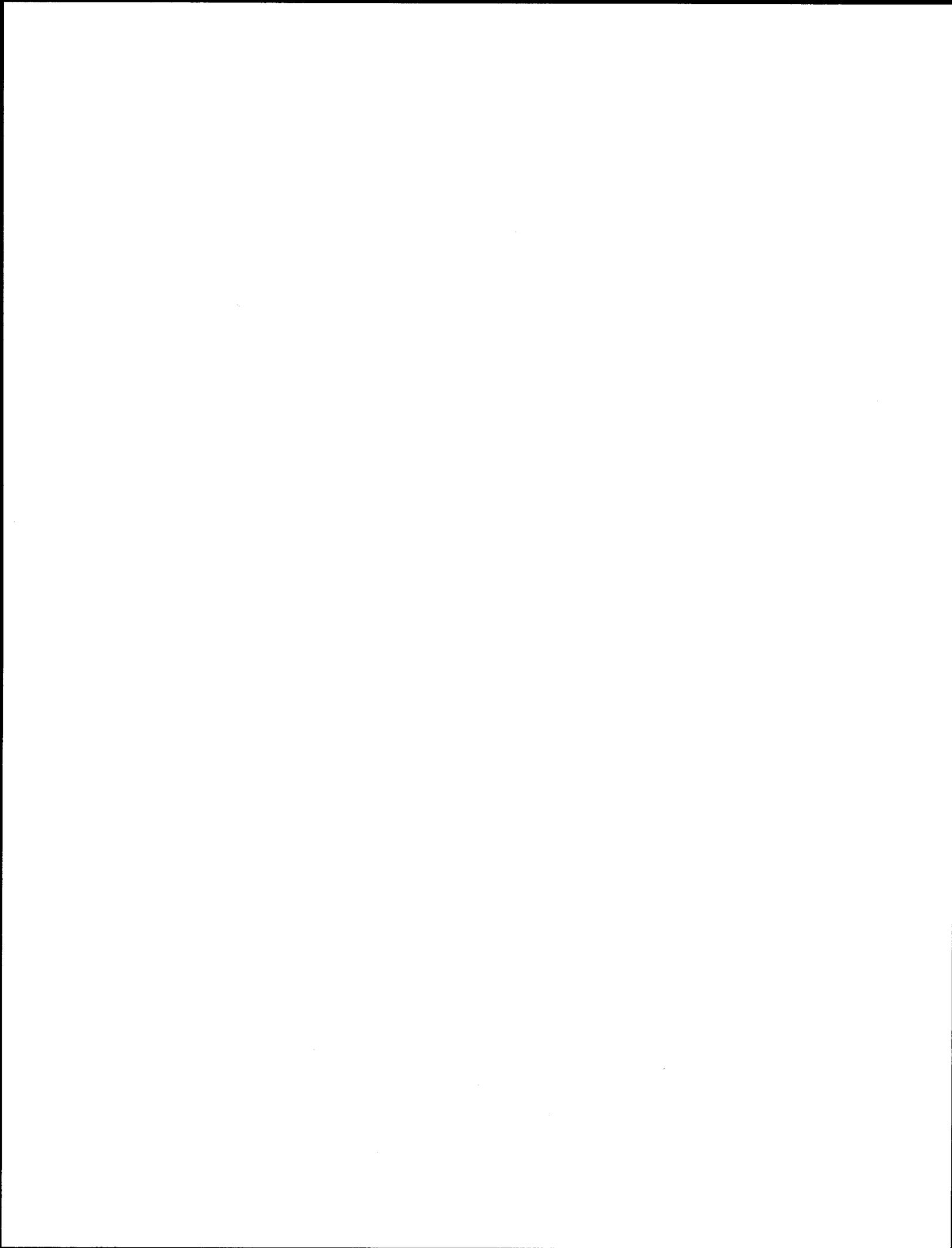
**III. DISCOUNTED CASH FLOW ANALYSIS .....5**

**IV. CAPITAL ASSET PRICING MODEL ANALYSES..... 8**

**V. TOTAL COST OF CAPITAL ..... 13**

**VI. RESPONSE TO CHAPARRAL REBUTTAL TESTIMONY..... 14**

**VII. IMPACT OF CURRENT CAPITAL MARKET CONDITIONS ON COST OF  
CAPITAL ..... 16**



1 **I. INTRODUCTION**

2

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

4 A. My name is David C. Parcell. I am President and Senior Economist of Technical  
5 Associates, Inc. My business address is 1051 East Cary Street, Suite 601, Richmond, VA  
6 23219.

7

8 **Q. Please summarize your educational background and professional experience.**

9 A. I hold B.A. (1969) and M.A. (1970) degrees in economics from Virginia Polytechnic  
10 Institute and State University (VA Tech) and an MBA (1985) from Virginia  
11 Commonwealth University. I have been a consulting economist with Technical  
12 Associates since 1970. The majority of my consulting experience has involved the  
13 provision of cost of capital studies and related expert testimony in public utility rate  
14 proceedings. In connection with this, I have prepared and filed testimony in over 400  
15 utility rate proceedings before more than 40 regulatory agencies in the United States and  
16 Canada. I have previously testified in a number of utility rate proceedings before this  
17 Commission, including several over the past few years.

18

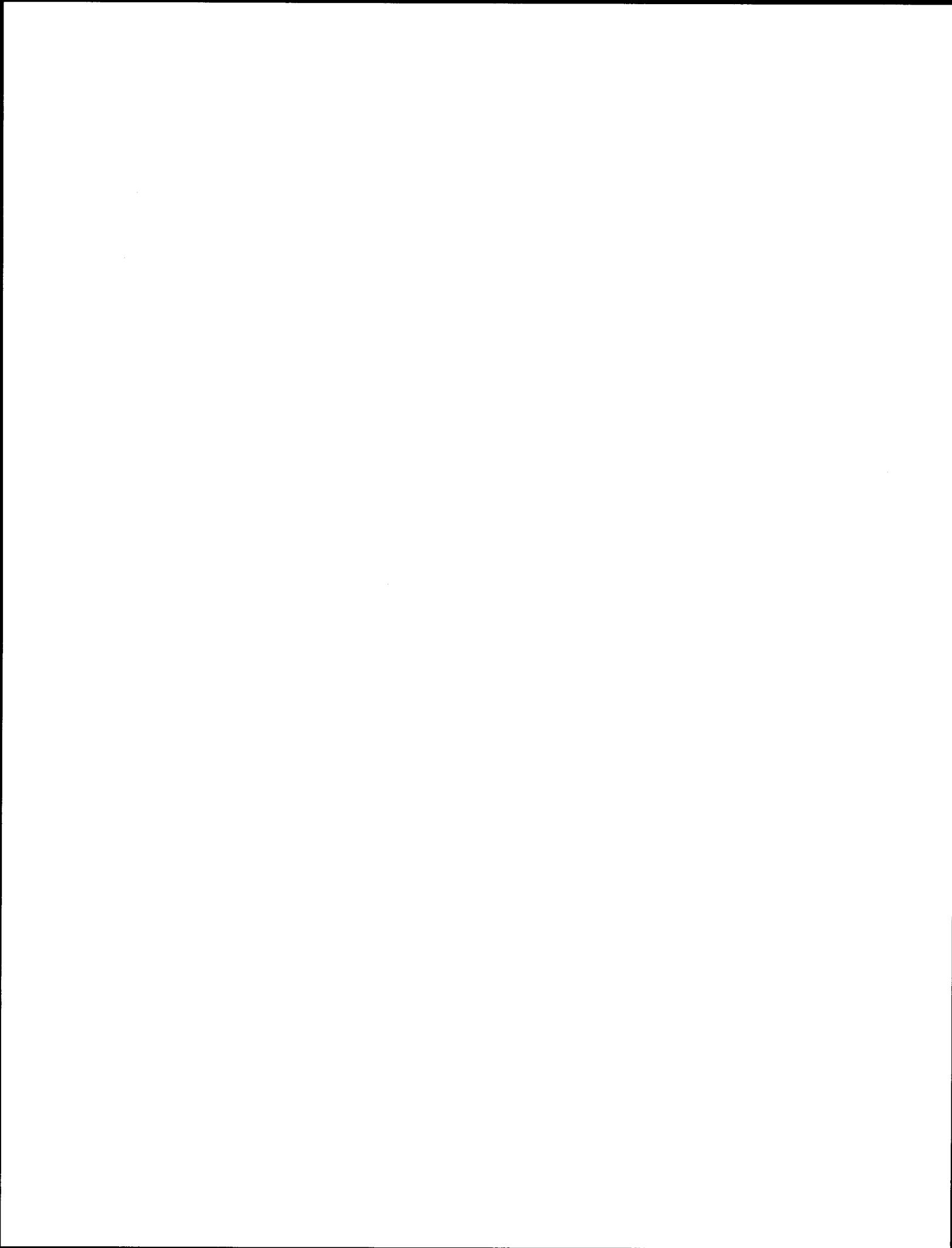
19 **Q. What is the purpose of your testimony in this proceeding?**

20 A. I have been retained by the Utilities Division Staff ("Staff") to review the Direct  
21 Testimony filed on October 3, 2008 by Staff Witness Pedro M. Chaves. I am also  
22 offering my own expert judgment as to the proper cost of capital for Chaparral City  
23 Water Company, Inc. ("Chaparral" or "Company") relative to this proceeding.

24

25 **Q. What do you mean in the previous answer when you state that you have reviewed  
26 Staff's direct testimony?**

27 A. I have reviewed all of Mr. Chavez's Direct Testimony ("Staff Testimony") and I agree  
28 fully with and support his proposed 10.0 percent cost of equity for Chaparral, as well as  
29 his proposed 8.8 percent weighted cost of capital for the Company. I also note that I  
30 consider Staff's Direct Testimony to be well reasoned and properly provides a balance



1           between the interests of ratepayers and investors. However, there are a few inputs in  
2           Staff's discounted cash flow ("DCF") and capital asset pricing model ("CAPM")  
3           analyses that I have not supported in prior testimonies and, as a result, I am not  
4           specifically sponsoring in this proceeding. I emphasize, on the other hand, that my  
5           alternative use of certain inputs does not degrade either the integrity or ultimate results of  
6           the Staff's analysis and conclusions.

7  
8           **Q. Are you adopting Staff's testimony as your own testimony?**

9           A. I am adopting portions of Staff's Testimony, but I am not adopting all of the DCF and  
10           CAPM data inputs utilized in the Staff Testimony. Throughout my Rebuttal Testimony, I  
11           indicate the specific portions of Staff Testimony that I am adopting, as well as the reasons  
12           for not adopting other positions.

13  
14           **Q. Did you state above that you are in agreement with Staff's 10.0 percent cost of  
15           equity recommendation for Chaparral?**

16           A. Yes, I did state that. I believe that a 10.0 percent cost of equity presently represents the  
17           cost of equity for a regulated water utility such as Chaparral. I note, in this regard, that I  
18           have recently testified in several Arizona proceedings involving electric and natural gas  
19           distribution utilities in which my cost of equity recommendation was about 10.0 percent.  
20           These include proceedings involving UNS Gas (Docket No. G-01345A-05-0463), UNS  
21           Electric (Docket No. E-0404A-06-0783), and Southwest Gas (Docket No. G-01551A-07-  
22           0504). In addition, I have recently filed cost of capital testimony in a Delaware Public  
23           Service Commission proceeding involving Artesian Water Company (Docket No. 08-96)  
24           in which I recommended a cost of equity of 10.125 percent, applicable to a capital  
25           structure containing 46.53 percent common equity.

26  
27           **Q. Mr. Parcell, how long have you been providing cost of capital testimony in rate  
28           proceedings for utilities?**

29           A. I have been testifying since 1972. As I indicated previously, I have testified in over 400  
30           utility rate proceedings before more than 40 regulatory agencies.



1 **Q. Is it your belief that the concept of cost of capital has remained the same over the**  
2 **period of your experience?**

3 A. No, it has not remained the same over the past forty years. New methods, such as  
4 CAPM, have come into existence. In addition, the formulation of all the models is not  
5 static, but evolving. For example, years ago there were fewer sources of projections of  
6 individual company data; this indicates that the debate over exclusive use of a single  
7 statistic such as EPS forecasts as the growth rate was not as prevalent as it is today. In  
8 addition, the impact of the business cycle and the trends in corporate profits and interest  
9 rates indicates that the determination of the fair cost of capital is not static.

10

11 **Q. Are you aware of any authoritative sources that support this relationship between**  
12 **economic conditions and the cost of capital for a utility?**

13 A. Yes, I can. A landmark U.S. Supreme Court decision in the *Bluefield Water Works and*  
14 *Improvement Co. v. Public Serv. Comm'n of West Virginia*, 262 U.S. 679 (1923)  
15 established the following links between the cost of capital and economic conditions. In  
16 this decision, the Court stated

17 What annual rate will constitute just compensation depends upon many  
18 circumstances and must be determined by the exercise of fair and enlightened  
19 judgment, having regard to all relevant facts....A rate of return may be reasonable  
20 at on time, and become too high or too low by changes affecting opportunities for  
21 investment, the money market, and business conditions generally.

22

23 **Q. What is the significance of this observation?**

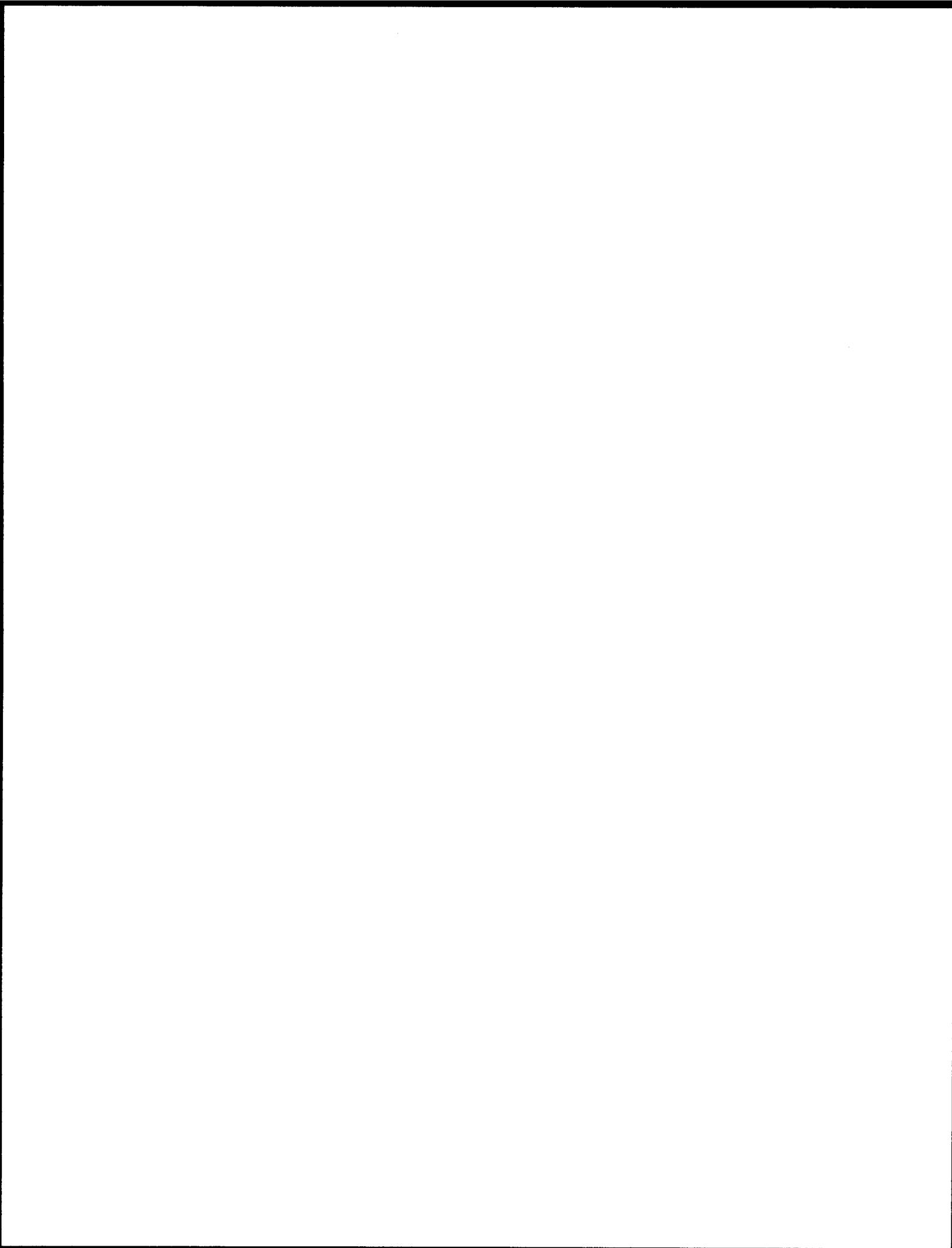
24 A. The significance is that a cost of capital analysis is not a mathematical exercise that uses  
25 the same formulas and data input (weightings) in all types of economic circumstances. A  
26 cost of capital analyst necessarily needs to apply professional judgment in performing  
27 his/her analyses. This is particularly true at the current time which is characterized by  
28 extreme capital market volatility and the formal acceptance that we are in a recession.

29

30 **Q. How is your testimony organized?**

31 A. My testimony is organized into seven sections, as follows:

32



- 1                   ○     Proxy Group,
- 2                   ○     DCF Analyses,
- 3                   ○     CAPM Analyses,
- 4                   ○     Total Cost of Capital,
- 5                   ○     Fair Value Rate of Return,
- 6                   ○     Response to Chaparral Rebuttal Testimony,
- 7                   ○     Impact of Current Capital Market Conditions on Cost of Capital.

8

9   **II.     PROXY GROUP**

10

11   **Q.     What is the purpose of a proxy group in developing a cost of capital analysis?**

12   A.     The purpose of a proxy group is to develop cost of capital models and capital structure  
13           evaluation. A proxy group is determined and utilized in order to consider the cost of  
14           capital and capital structure of publicly-traded utilities that are similar in risk and  
15           operations to the subject company.

16

17   **Q.     What proxy group did Staff utilize in its Direct Testimony?**

18   A.     Staff utilized the following proxy group companies, as is shown on Schedule PMC-4:

19           American States Water;

20           California Water;

21           Aqua America ;

22           Connecticut Water;

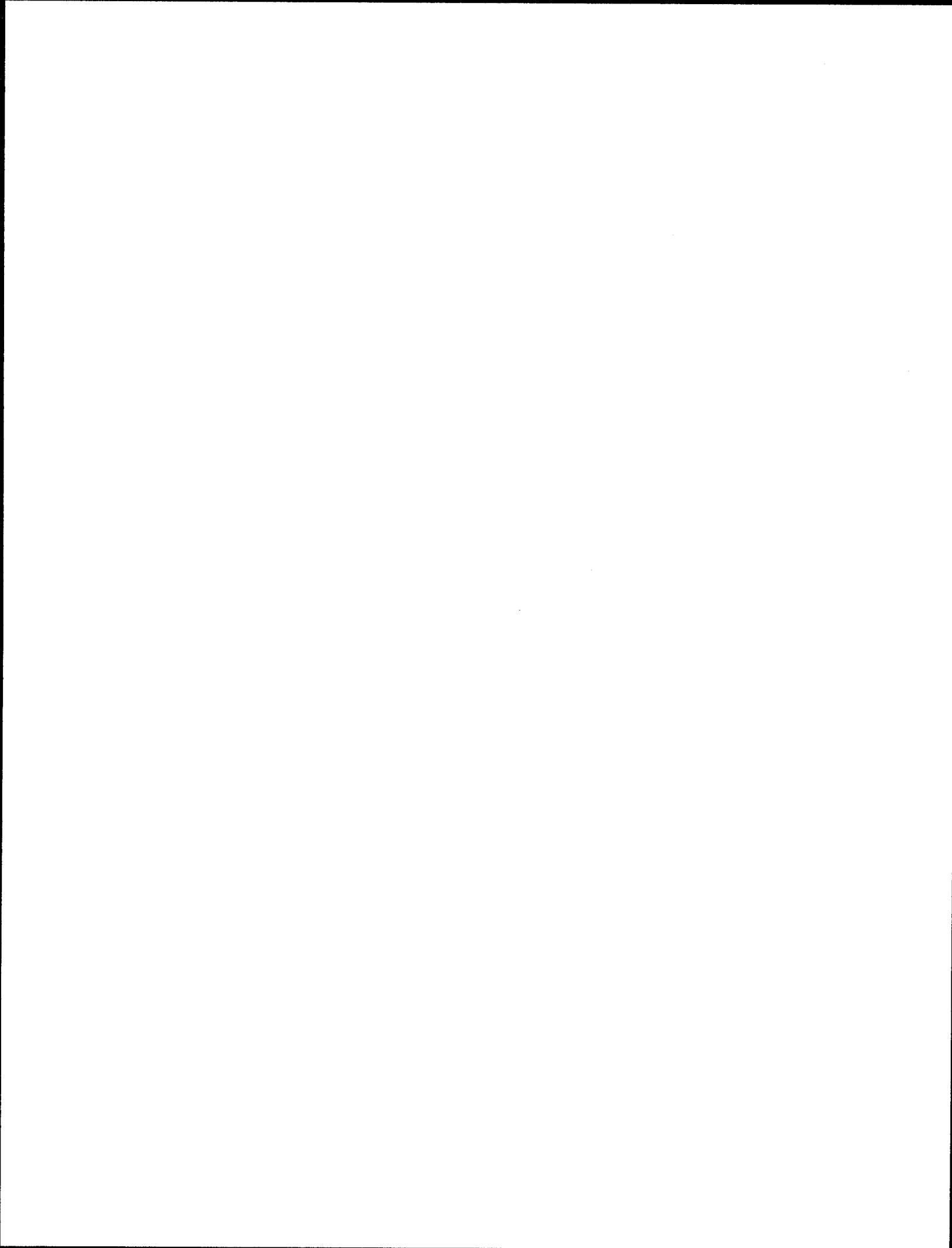
23           Middlesex Water; and,

24           SJW Corp.

25

26   **Q.     Do you approve of this group of proxy water companies?**

27   A.     Yes, I do. I concur with Staff's selection of this proxy group. This group of publicly-  
28           traded water companies is a representative sample of water utilities and is similar to the  
29           proxy group(s) that I have recently utilized in my water utility cost of capital analyses. I  
30           regard this as an appropriate sample of proxy companies for comparison to Chaparral and



1 I adopt the use of this proxy group. I also note that Chaparral witness Bourassa uses this  
2 proxy group in his cost of capital analyses.

3  
4 **Q. The Staff Testimony applied the DCF and CAPM methodologies to the proxy group.  
5 Are these methodologies proper methodologies to estimate the cost of equity for  
6 regulated utilities?**

7 A. Yes, they are. I routinely use both the DCF and CAPM methodologies in my cost of  
8 capital analyses for water and other utilities.

9  
10 **III. DISCOUNTED CASH FLOW ANALYSES**

11  
12 **Q. Please describe your understanding of Staff's DCF analyses.**

13 A. Staff performed two DCF analyses – a constant-growth DCF and a multi-stage DCF. The  
14 constant-growth DCF analysis uses the following inputs:

15  
16 Yield – Spot stock price for each proxy company as of August 6, 2008 and  
17 expected dividends per share (DPS) over the next year.

18  
19 Growth – average of six different growth rates:

- 20 Historic DPS growth over past ten years;  
21 Projected DPS growth rates from data provided in Value Line;  
22 Historic EPS growth over the past ten years;  
23 Projected EPS growth rates from data provided in Value Line;  
24 Historic sustainable growth rates over the past ten years; and,  
25 Projected sustainable growth rates from data provided in Value Line.

26  
27 Staff's multi-stage DCF uses the following inputs:

28 Yield – Spot stock price for each proxy company as of August 6, 2008 and  
29 expected dividends per share over next year.



1 Growth – projections of short-term dividend growth for each proxy  
2 company over two periods

3 Next year – projections from Value Line,

4 Years 2-4 – projections using average dividend growth rate  
5 calculated in Staff's constant growth DCF analysis,

6 Long-term growth – 1926-2007 arithmetic average growth rate of gross  
7 domestic product (GDP).  
8

9 The results of each of these sets of DCF conclusions for the proxy group can be  
10 summarized as follows:  
11

12	Constant growth DCF	8.8%
13	Multi-stage DCF	9.8%
14	Average DCF	9.3%

15

16 **Q. Please provide your comments about Staff's constant growth DCF analysis.**

17 **A.** Staff's constant growth DCF yield uses a spot stock price in the calculation of the  
18 dividend yield, rather than a three-month average stock price that I normally use in my  
19 DCF analyses. In the instant case, however, this distinction is not significant. I have  
20 calculated dividend yields using a three-month average stock price (June-August, 2008)  
21 and have found the results to be very similar to those in the Staff analyses. As a result, I  
22 am adopting the yields in the Staff testimony. I note however, that because I normally  
23 use a 3 month average stock price, I would not use a spot price as is done in the Staff  
24 testimony.  
25

26 I note that, in my own DCF analyses, I also use both historic and prospective growth rates  
27 of DPS, EPS, and sustainable growth. I normally use a five-year historic growth rate for  
28 DPS, EPS and sustainable growth, whereas the Staff Testimony uses ten-year historic  
29 growth. I regard this difference as a matter of professional judgment and do not take  
30 issue with the Staff Testimony and I correspondingly adopt these historic growth rates.



1 I also routinely use Value Line projections of DPS, EPS and sustainable growth. The  
2 Staff Testimony calculates projections of growth from Value Line data, whereas I  
3 normally use Value Line's published projections. However, I do not regard this as a  
4 meaningful distinction and I adopt the Staff Testimony's projected growth rates.

5  
6 **Q. Do you accept and adopt the 8.8 percent constant growth DCF conclusion contained**  
7 **in the Staff Testimony?**

8 A. Yes, I do.

9  
10 **Q. What are your comments concerning the multi-stage DCF analysis in the Staff**  
11 **Testimony?**

12 A. I note, first, that I do not routinely use a multi-stage DCF analysis in preparing cost of  
13 capital testimony. There is an exception to this in preparing cost of capital testimony for  
14 interstate natural gas pipelines before the Federal Energy Regulatory Commission  
15 (FERC). The FERC has established a preferred cost of capital methodology that uses a  
16 two-stage DCF model. When I submit natural gas pipeline testimony before the FERC, I  
17 use a multi-stage DCF model. As a result, I accept the use of a multi-stage DCF model in  
18 the Staff Testimony.

19  
20 The first stage of the multi-stage DCF analysis in the Staff Testimony uses projections of  
21 DPS for the proxy group. I accept this as a valid estimate of the short-term or first stage  
22 of the multi-stage DCF analysis.

23  
24 The second stage of the multi-stage DCF analysis in the Staff Testimony uses the historic  
25 (i.e., 1926-2007) average growth rate of GDP, which is 6.7 percent. My two-stage DCF  
26 analysis, which mirrors the FERC procedure, uses the projections of GDP by the Social  
27 Security Administration (SSA) and Energy Information Administration (EIA). Long-  
28 term projections of GDP by these two U.S. government agencies are as follows:

29 SSA 4.4%

30 EIA 4.8%



1 It is my preference to use projections of GDP growth, rather than historic GDP growth.  
2 As an alternative, both the historic and projected GDP growth could be used. In any  
3 event, I believe that the Staff Testimony's use of historic GDP growth may over-state the  
4 multi-stage DCF results for the proxy group.  
5

6 **IV. CAPITAL ASSET PRICING MODEL ANALYSES**  
7

8 **Q. What is your understanding of the CAPM analyses and conclusions of the Staff**  
9 **Testimony?**

10 A. The Staff Testimony performs two sets of the traditional CAPM methodology. The first  
11 set is a "historical" risk premium CAPM model that employs the following inputs:

12 Risk-free rate ( $R_f$ ) – average of yields of five-year, seven-year, and ten-year U.S.

13 Treasury notes as of August 6, 2008,

14 Beta ( $\beta$ ) – Value Line betas for each proxy group company,

15 Risk-premium ( $R_m - R_f$ ) – differentials between arithmetic averages of long-term  
16 (1926-2007) returns of the S&P 500 stock index and intermediate-term  
17 government bond income returns.  
18

19 The second set of CAPM calculations in the Staff Testimony is a "current" market risk  
20 premium model. This model employs the following inputs:

21 Risk-free rate ( $R_f$ ) – yield on 30-year U.S. Treasury bonds as of August 6, 2008,

22 Beta ( $\beta$ ) – Value Line betas for each proxy group company,

23 Risk-premium ( $R_m - R_f$ ) – differential between a DCF return (expected dividend  
24 yield plus annual per share growth rate for all dividend-paying stocks in Value  
25 Line) and current yield on 30-year U.S. Treasury bonds.  
26

27 **Q. What are your comments concerning the historic risk premium CAPM analyses and**  
28 **conclusions in the Staff Testimony?**

29 A. I fully support the use of Value Line betas, as used in both the historic and current risk  
30 premium CAPM models. For the risk-free rate, I routinely use yields on 20-year U.S.



1 Treasury bonds, as opposed to the average of five-year, seven-year and ten-year U.S.  
2 Treasury bonds yields. The yields on 20-year U.S. Treasury bonds are higher than the  
3 shorter maturities. This implies that my preferred risk-free rate would be higher than that  
4 used in the Staff Testimony.

5  
6 I also note, as I did in my discussion of the DCF model, that I prefer to use a three-month  
7 average of U.S. Treasury yields, as opposed to use of a spot yield as proposed in the Staff  
8 Testimony. However, my comparison of three-month average yields for the three-month  
9 period June-August, 2008 is not significantly different from the August 6, 2008 yield  
10 used in the Staff Testimony. As a result, I do not regard this as a meaningful result in this  
11 instance and correspondingly adopt the risk-free rates in the Staff Testimony. As was the  
12 case in the dividend yield discussion in my DCF comments, use of a spot risk-free rate  
13 could produce inappropriate results.

14  
15 For the risk premium, on the other hand, the Staff Testimony uses the differential  
16 between returns on the S&P 500 and intermediate-term government bonds, whereas I use  
17 the differential between the S&P 500 and long-term government bonds. Since long-term  
18 government bonds have higher long-term returns than intermediate-term government  
19 bonds, this means that the risk differential for intermediate government bonds (i.e., Staff  
20 Testimony) is less than the risk differential for long-term government bonds (i.e., my  
21 preferred methodology). This indicates that there are off-setting impacts of the Staff  
22 Testimony methodology (i.e., use of intermediate-term yields and risk premiums using  
23 intermediate notes) and my preferred methodology (i.e., use of long-term yields and risk  
24 premiums using long-term bonds). As a result, I regard this differential as somewhat of a  
25 “wash” and adopt the use of intermediate-term yields and risk premiums developed using  
26 intermediate-term government securities.

27  
28 I do have two technical concerns with the development of the historic risk premium in the  
29 Staff Testimony.

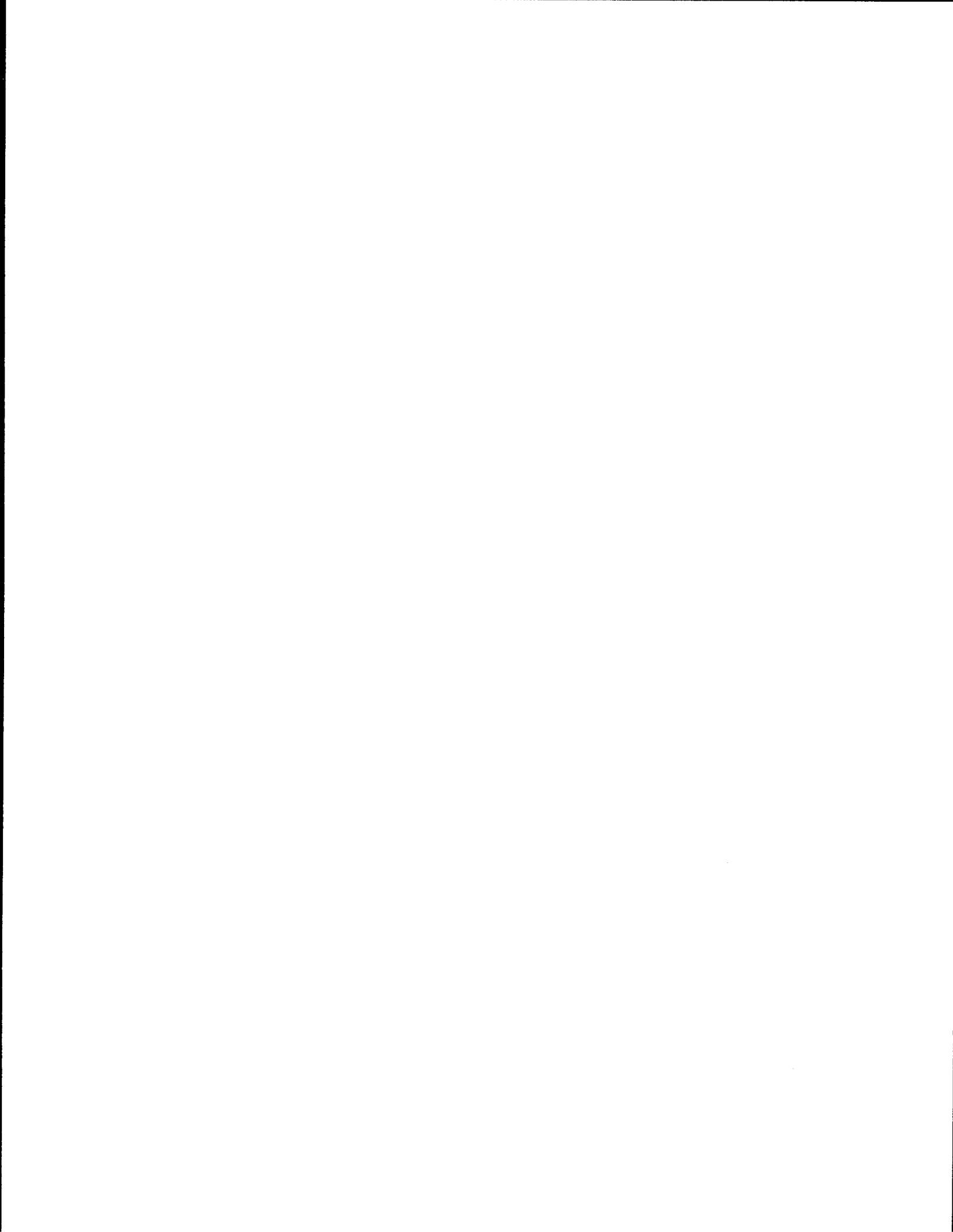


1           Use of arithmetic averages (as opposed to use of both arithmetic and geometric  
2           averages) of historic returns; and,  
3           Use of the income return on bonds, as opposed to the total returns, in developing  
4           the risk premium.

5  
6           The Staff Testimony uses, as a component of its historic risk premium, the arithmetic  
7           average values of total return for the S&P 500 and the arithmetic average values of  
8           income return for government securities. I routinely use both arithmetic and geometric  
9           averages in my calculations of the risk premium. I believe that geometric averages are  
10          relevant, along with arithmetic averages, because investors are regularly provided with  
11          these returns in both reports/prospectuses by mutual funds (as required by the Securities  
12          and Exchange Commission) and by prominent investment advisory services such as  
13          Value Line. In my judgment, investors use both arithmetic and geometric average returns  
14          and both should be considered in the development of a risk premium. I note that  
15          arithmetic averages exceed geometric averages, meaning that exclusive use of arithmetic  
16          averages provide for a higher, and potentially excessive, risk premium. Because of this,  
17          the risk premium, and thus CAPM results, as used in the Staff Testimony may overstate  
18          the cost of capital for the proxy group.

19  
20          I also note that the Staff Testimony uses income returns on bonds and total returns for the  
21          S&P 500. The significance of this is that the total returns for the S&P 500 includes both  
22          dividends and capital gains, whereas the income returns on bonds only includes interest  
23          income (and excludes capital gains). My normal practice is to consider total returns for  
24          both the S&P 500 and bonds in my risk premium calculations, which treats the S&P 500  
25          and bonds on a consistent basis. I note that the use of only income returns on bonds, in  
26          this context, has the impact of creating a higher risk premium, and thus higher CAPM  
27          results than the method I routinely use.

28  
29          The impact of these two factors has the effect of creating a higher risk premium, and  
30          higher CAPM cost rate, than does the methodology I employ in my CAPM analyses.



1 **Q. Do you have any comments concerning the current risk premium as used in the**  
2 **Staff Testimony?**

3 A. Yes, I do. I cannot support, or adopt, the current risk premium as contained in the Staff  
4 Testimony. My primary concern with the current risk premium CAPM is the use of a  
5 DCF-derived return on equity (ROE) for “all dividend-paying stocks” as reported in  
6 Value Line. The growth component of this DCF-derived ROE is the “appreciation  
7 potential” of all 1700 stocks covered by Value Line, where the appreciation potential  
8 refers to the “estimated median price” of these stocks in the “hypothesized economic  
9 environment of 3 of 5 years hence.” In other words, the growth component of this DCF  
10 analysis is based upon a potential increase in stock prices for the 1700 stocks covered by  
11 Value Line.

12  
13 I have two concerns with this procedure for estimating the cost of equity for the “market”  
14 (i.e.,  $R_m$  component of risk premium). First, I do not believe that it is appropriate to  
15 determine utility rates based upon an anticipated increase in stock prices for a group of  
16 largely unregulated firms. This is speculative. Second, even if it were deemed  
17 appropriate to use such a methodology, its use at the current time (i.e., August of 2008) is  
18 from a low base as a result of the significant decline in stock prices in 2008. As a result,  
19 use of a appreciation potential from a low base naturally reflects a higher-than-normal  
20 growth rate, as evidenced by the 15.02 percent annual potential appreciation over the next  
21 four years, as assumed in the Staff testimony. As an example of this, consider that the  
22 historic (i.e., 1926-2007) average total returns for the S&P 500 (i.e., dividends plus  
23 capital appreciation) has only been 12.3 percent on an arithmetic basis and 10.4 percent  
24 on a geometric basis.

25

26

27

28

29



1 **Q. Please describe, in detail, using your professional judgment, how you arrived at a**  
2 **10.0 percent cost of equity for Chaparral, without adjusting for financial risk.**

3 A. I have accepted the proxy group from the Staff Testimony (as does Chaparral). I have  
4 also accepted the 9.3 percent DCF conclusion in the Staff Testimony, although I note that  
5 the multi-stage DCF may slightly over-state the second-stage growth rate. I generally  
6 adopt the historical risk premium CAPM of the Staff Testimony (11.2 percent) but I do  
7 not agree with: (1) use of only arithmetic averages in deriving the risk premium, rather  
8 preferring to use both arithmetic and geometric averages; and, (2) using only the income  
9 return on bonds, rather than total returns, in deriving the risk premium. As a result, I  
10 propose a historical risk premium CAPM result of 10.75 percent, a slight reduction from  
11 the 11.2 percent conclusion in the Staff Testimony.

12  
13 In addition, by combining my adopted 9.3 percent DCF result and 10.75 percent modified  
14 CAPM, I arrived at a 10.0 percent cost of equity recommendation. I note that this 10.0  
15 percent cost of equity recommendation does not include an adjustment for the very high  
16 equity ratio (i.e., lower risk) of Chaparral.

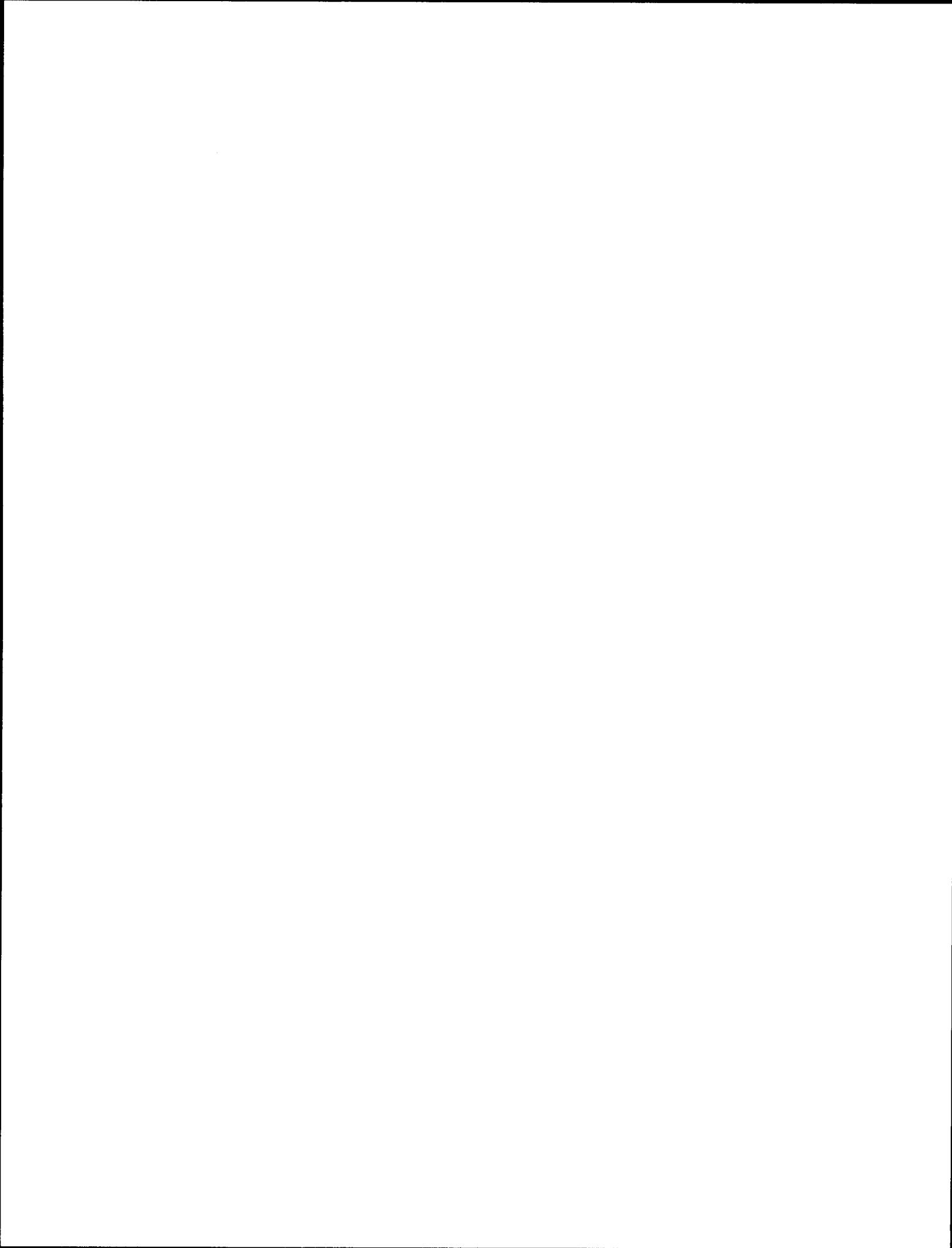
17  
18 **V. TOTAL COST OF CAPITAL**

19  
20 **Q. Please describe the total cost of capital derived in the Staff Testimony.**

21 A. The Staff Testimony develops an 8.8 percent total cost of capital, as is summarized  
22 below:

<u>Capital Item</u>	<u>Percent</u>	<u>Cost</u>	<u>Wgt. Cost</u>
Debt	24.4%	5.0%	1.2%
Common Equity	<u>75.6%</u>	10.0%	<u>7.6%</u>
WACC	100.0%		8.8%

23  
24  
25  
26  
27  
28 The capital structure and cost of debt reflected in the Staff Testimony, as well as in the  
29 Chaparral filing, are hypothetical in nature since the Company receives all of its equity  
30 financing from its parent American States Water. The Staff Testimony and Chaparral



1 filing differ slightly on the capital structure ratios, as a result of the Staff using more  
2 current (i.e., June 30, 2008) information. I accept the capital structure ratios in the Staff  
3 Testimony, although I agree with the position taken in the Staff Testimony that the equity  
4 ratio of Chaparral (i.e., over 75 percent) is much higher than the actual capital structures  
5 for publicly-traded water utilities (i.e., about 50 percent equity). I note that a case could  
6 be made that the proper capital structure for Chaparral should be that of its consolidated  
7 parent, which contains about a 50 percent equity ratio.

8  
9 I also accept the 5.0 percent cost of debt contained in the Staff Testimony. This differs  
10 slightly from the 5.1 percent contained in the Chaparral rebuttal filing.

11  
12 **Q. Do you agree with the Staff Testimony's proposal to recognize the very high equity**  
13 **ratio of Chaparral in the determination of the cost of equity for the Company?**

14 A. Yes, I do. Chaparral's common equity ratio, as noted above, is about 75 percent common  
15 equity, which is about 1 and a half times the 50 percent norm for publicly-traded water  
16 utilities. This is a very significant difference in the capital structures for Chaparral versus  
17 the proxy group that is used to develop its cost of equity. This significant difference in  
18 common equity ratios is reflective in a risk differential between Chaparral and the proxy  
19 group - a risk differential that should be recognized in the cost of equity for the  
20 Company. I also note that Chaparral's parent company, American States Water, has a  
21 common equity ratio that is similar to the proxy group (i.e., about 50 percent equity) and  
22 is much less equity than is the case for Chaparral.

23  
24 **Q. Do you endorse and adopt the 8.8 percent total cost of capital as proposed in the**  
25 **Staff Testimony?**

26 A. Yes, I do.  
27  
28  
29  
30

1 **VI. RESPONSE TO CHAPARRAL REBUTTAL TESTIMONY**

2

3 **Q. Have you reviewed the Rebuttal Testimony of Chaparral witness Bourassa that**  
4 **addresses the Staff Testimony on Cost of Capital Issues?**

5 A. Yes, I have.

6

7 **Q. Do you wish to respond to any of the assertions made by Mr. Bourassa in his**  
8 **Rebuttal Testimony?**

9 A. Yes, I do. I have a number of comments concerning the assertions made by Mr.  
10 Bourassa. These include the following topics:

11 His updated cost of capital analyses, which use spot yields as of October 2, 2008,  
12 His use of stock price growth as the growth component in his DCF analyses,  
13 His conclusion that Chaparral's cost of equity has increased over the past year by  
14 100 basis points, notwithstanding the fact that current economic conditions have  
15 decreased returns for virtually all other types of companies, and  
16 His position that a the Company's cost of capital be applied to its fair value rate  
17 base.

18

19 **Q. What is your response to Mr. Bourassa's updated cost of capital analyses?**

20 A. Mr. Bourassa's updated DCF analyses have a number of flaws, all of which cause him to  
21 over-state the cost of equity for Chaparral. These include:

22 His updated dividend yield uses spot stock prices as of October 2, 2008, a date in  
23 the middle of the market volatility. In fact, by using the closing prices as of this  
24 date, he used only a single moment in time, not even a day in time.

25 His growth rate relies heavily on the historical growth in stock prices. As I  
26 indicated previously, growth in stock prices is not a proper measure of the DCF  
27 growth rate, especially during a period of market volatility.

28 His "total market returns" (Exhibit 2) and "capital appreciation returns" (Exhibit  
29 3) end in 2007 – the latest available calendar year. While this is generally  
30 appropriate, it should be noted that 2008 is an abysmal year for the stock markets

1 and, when market compound growth rates are updated for 2008, the results will  
2 undoubtedly be much lower, and perhaps near zero or even negative. Given that  
3 the cost of capital is forward-looking, this is information that should be  
4 considered in a DCF analysis at this time, especially one described as “updated.”  
5

6 Mr. Bourassa’s updated CAPM analyses also overstate the cost of capital. This is true for  
7 the following reasons:

8 His historical market risk premium CAPM

9 His current market premium CAPM suffers from the same flaw as his DCF  
10 growth rates – the reliance on growth in stock prices.  
11

12 **Q. Why do you take issue with Mr. Bourassa’s contention that Chaparral’s cost of**  
13 **equity has increased over the past year?**

14 A. As I noted above, Mr. Bourassa’s DCF and CAPM analyses rely heavily on growth in  
15 stock prices for various periods ending in 2007. Therefore, his claim that the cost of  
16 capital has increased over the past year really applies to 2007, not 2008.  
17

18 **Q. Are there any other aspects of Mr. Bourassa’s rebuttal testimony that you wish to**  
19 **respond to?**

20 A. Yes. The bulk of Mr. Bourassa’s rebuttal testimony relates to the issue of Fair Value  
21 Rate Base (“FVRB”) and the proper Fair Value Rate of Return (“FVROR”). Mr.  
22 Bourassa maintains that Chaparral’s weighted average capital cost (“WACC”) should be  
23 applied to its FVRB. This issue has been recently examined by the Commission in the  
24 remand phase of Docket No. W-02113A-04-0616, a proceeding in which both Mr.  
25 Bourassa and I testified. In its decision in that proceeding, the Commission determined  
26 that inflation should be removed from the cost of capital in order to determine a FVROR  
27 to be applicable to a FVRB. I will not repeat all of my testimony on this subject in this  
28 present testimony, but do call the Commission’s attention to the arguments I raised in that  
29 proceeding.  
30

1 **VII. IMPACT OF CURRENT CAPITAL MARKET CONDITIONS ON COST OF**  
2 **CAPITAL**

3  
4 **Q. Please indicate your views as to the impact of the current state of the economy and**  
5 **the financial markets as they relate to the cost of capital for Chaparral and other**  
6 **public utilities.**

7 **A.** The current state of the economy and financial markets can be generally characterized by  
8 the following:

9  
10 The U.S. and global economies are presently in a recession, perhaps the most serious  
11 recession in many years. This recession is characterized by:

12  
13 High unemployment, as the current unemployment rate is the highest in recent  
14 years;

15  
16 Declining housing values and potentially deflation across broad sectors of the  
17 economy;

18  
19 Widespread foreclosures on residential and commercial properties;

20  
21 A somewhat devastated financial sector, as evidenced by the failure and/or bail-  
22 outs of venerable financial institutions such as Fannie Mae, Freddie Mac, Bear  
23 Stearns, Merrill Lynch, AIG and Wachovia, with the potential list growing;

24  
25 Potential bail-outs expected for several other sectors of the economy;

26  
27 Stock prices that have declined precipitously in 2008; and,

28  
29 Very low short-term U.S. Treasury rates, low U.S. Treasury intermediate- and  
30 long-term rates, but high corporate bond rates, reflecting a "flight to quality"; and,

31  
32 Unprecedented actions being taken by the U.S. and global governments to  
33 hopefully minimize the impacts of this recession and avoid a more serious  
34 worldwide depression.

35  
36 Against this backdrop, it is important to understand the implications of current economic  
37 and financial conditions on capital costs in general and as they pertain to Chaparral. Any  
38 consideration of current economic and financial conditions should consider their impact  
39 on regulated utilities from two perspectives: 1) how these conditions impact utility

1 ratepayers and the extent to which utilities should be insulated from the negative impacts  
2 that affect their ratepayers; and 2) the extent to which these conditions are temporary and  
3 not representative of the period that utility rates will be in effect.  
4

5 **Q. Please describe this first perspective.**

6 A. The current economic downturn appears to be the worst in recent memory and the  
7 implications are global. It is clear that Chaparral's ratepayers are negatively impacted by  
8 this downturn. For example, working ratepayers face the prospects of lower  
9 earnings/unemployment/uncertainty while retired ratepayers face the likelihood of  
10 significantly reduced value of retirement income due to declines in the stock market  
11 which negatively impact their 401-K or IRA values. It would be unfair for Chaparral to  
12 claim that its risk and/or required return should be higher at this time, which would create  
13 a doubly negative impact on its ratepayers. Stated differently, Chaparral's cost of capital  
14 and water/wastewater rates should not be higher due to the economic downturn. Such a  
15 situation would clearly not be a balancing of the interests of ratepayers and investors as is  
16 dictated by the Bluefield and Hope decisions.  
17

18 I note that this perspective can be referred to as the "fairness" perspective. In essence, it  
19 indicates that the conditions that contribute to the misfortunes of the utility's ratepayers  
20 should not be used as a rationale to provide higher returns to the utility, in essence  
21 insulating it from the economic conditions that affect virtually all other aspects of the  
22 economy, both individuals and businesses.  
23

24 **Q. What do you mean by the second perspective stated above?**

25 A. It is widely recognized that the cost of capital concept, whether for a regulated utility or a  
26 competitive firm, is prospective in nature. The prospective nature of cost of capital is  
27 partially based on the concept that current capital market conditions reflect expectations  
28 of the future. At the present time, there is unprecedented uncertainty in the capital  
29 markets, as is evidenced by the extreme volatility in stock prices and yields on debt

1 securities. This volatility reflects and incorporates the reaction to the seemingly never-  
2 ending stream of negative news about the world-wide economies.

3  
4 At the present time, no one knows the length and severity of the downturn, but what  
5 should be clear is that the present situation should not be accepted as the norm for the  
6 future. It must be assumed that the economy will turn around sometime within the next  
7 year, especially with the unprecedented stimulus that has and is being applied by U.S.  
8 and global governments. As a result, it is proper to take a more "long-term" view of  
9 economic and financial conditions at this time. I believe that my recommendations in  
10 this proceeding, as well as the impact of the Staff Testimony perspective, is proper in this  
11 account. This is the case since both the Staff Testimony and my recommendation are not  
12 overly-reflective of the unusual and transitory conditions of the past two months.

13  
14 I do not, on the other hand, think it is proper to focus on very short-term perspectives,  
15 such as stock prices and corporate interest rates over the past two months. This is the  
16 case since these prices and rates are overly influenced by the turmoil and uncertainty  
17 associated with the global economic crisis.

18  
19 **Q. You have stated that current and recent economic conditions are not normal, but**  
20 **are unusual and transitory. Can you provide any examples of why this is so?**

21 A. Yes, I can. As an example of the seriousness of the current economic/financial situation,  
22 the Federal Reserve and U.S. government have taken extraordinary actions to minimize  
23 the impacts of the financial crisis and to attempt to stabilize the U.S. and global  
24 economies. The U.S. Congress authorized \$700 billion as a "bail out" of the financial  
25 system in order to create confidence in the financial system and encourage lending in the  
26 economy. The Federal Reserve and U.S. government have taken the following actions:

27 Fannie Mae and Freddie Mac were effectively nationalized in an effort to  
28 strengthen the housing market,

29 AIG received over \$100 billion in loans to AIG, essentially bailing it out of  
30 potential bankruptcy,

1 Goldman Sachs and Morgan Stanley were allowed to become bank holding  
2 companies, making them eligible for federal loans and direct investments from the  
3 federal government,

4 The Federal Funds rate has been lowered in a number of steps, to a level of 1.0  
5 percent, the lowest level ever,

6 Mergers were arranged on an emergency basis to keep Wachovia from potentially  
7 failing, and

8 CitiGroup received loan guarantees in order to prevent its potential failing.  
9

10 **Q. What is the purpose of all these extraordinary actions?**

11 A. The purpose of all of these actions, as well as a number of other actions by the federal  
12 government and Federal Reserve, is to:

13 Provide liquidity to the banking system,

14 Encourage banks to make loans to stimulate the economy,

15 Re-establish confidence in the financial system, and

16 Keep major financial institutions from failing.  
17

18 The significance of these actions is that they are collectively designed to lower the cost of  
19 capital in the U.S. and worldwide in order to get the economies back on a growth tract.  
20 Clearly, these actions should not be used as a rationale to make utilities insulated from  
21 the negative impacts of the downturn and raise their cost of capital at the same time that  
22 efforts are being undertaken to lower the cost of capital.  
23  
24

25 **Q. Does this conclude your surrebuttal testimony?**

26 A. Yes, it does.