Decision 09-05-019 May 7, 2009

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of California Water Service Company (U60W) for Authority to Establish its authorized Cost of Capital for the period from January 1, 2009 through December 31, 2011.	Application 08-05-002 Filed May 1, 2008
Application of California-American Water Company (U21OW) For an Authorized Cost of Capital for Utility Operations for 2009.	Application 08-05-003 Filed May 1, 2008
Application of Golden State Water Company for Authority to Establish Its Authorized Cost of Capital and Rate of Return for Utility Operations for 2009 – 2011.	Application 08-05-004 Filed May 1, 2008

DECISION ON BASE YEAR 2009 COST OF CAPITAL FOR THE THREE LARGE MULTI-DISTRICT CLASS A WATER UTILITIES: CALIFORNIA WATER SERVICE COMPANY, CALIFORNIA AMERICAN WATER, AND GOLDEN STATE WATER COMPANY

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1. Summary

This decision establishes the base year 2009 ratemaking return on common equity for California Water Service Company (California Water), California American Water Company (California American) and Golden State Water Company (Golden State). This is the first proceeding for these three companies where the sole subject is cost of capital, separated from a general rate case, pursuant to Decision (D.) 07-05-062, the most recent rate case plan for the class A water utilities. The rate case plan also intended to establish a common return on equity for each company rather than the past practice of district-by-district decisions.

We adopt a return on equity of 10.20% for all three applicants along with an individual capital structure and weighted cost of capital for each. Additionally, for all three companies we adopt for 2009, 2010, and 2011, a temporary interest rate balancing account as an enhanced risk reduction. We take note of the financial markets' dislocation and therefore consider whether there are any extenuating circumstances of sufficient importance to warrant a departure form our normal procedures. Absent these considerations, we would have adopted a return on equity near the mid-point of the range of 9.50% to 10.50%. That range reflects the risk reductions inherent in the Water Revenue Adjustment Mechanism and Modified Cost Balancing Account, recently adopted in D.08-08-030, although consideration of these risk reductions are not reflected in the results of any financial modeling to date. Based on our consideration of all

circumstances, we will adopt a return of 10.20%, at the middle-to-upper end of the range.

Unusual times require a flexible outlook. We believe that an interim or temporary interest rate balancing account, the just and reasonable cost of capital we adopt in this decision, and the careful consideration in phase 2 of a proposed all-party settlement to adopt an adjustment mechanism for cost of capital, are all reasonable and measured responses to ensure that these three California water utilities remain viable enterprises capable of attracting and retaining investment capital. Additionally, we modified the scope of phase 2 by a separate ruling to take additional evidence addressing the impact of the financial dislocation. We will address that evidentiary hearing in a separate phase 2 decision.

This consolidated proceeding remains open for phase 2.

2. Jurisdiction and Background

Applicants are public utilities subject to the jurisdiction of this Commission as defined in Section 218 of the Public Utilities Code.[1] Applicants seek adoption of a base year 2009 cost of capital which will apply to all of their California-jurisdictional operations.

The applications were consolidated pursuant to Rule 7.4 of the Commission's Rules of Practice and Procedure. The consolidation of these applications does not necessarily mean that a uniform return on equity should be applied to each of the utilities. This is because each of these utilities needs to be considered both individually and as part of an industry before arriving at a reasonable return.

[1] All statutory references are to the Public Utilities Code unless otherwise stated.

2.1. Motion for Judicial Notice

The Division of Ratepayer Advocated (DRA) was directed to address Investigation (I.) 07-01-022 *et seq,* in its testimony by an email ruling dated July 17, 2008.[2] Applicants were subsequently able to serve rebuttal on the DRA testimony. DRA served testimony on August 8, 2008 and included a recommendation to adjust the cost of equity to reflect a reduction of risk as a result of adopting water revenue adjustment mechanisms (WRAM) and modified cost balancing accounts (MCBA) for the applicants. On September 17, 2008 after the conclusion of evidentiary hearings DRA filed a motion seeking to incorporate by reference the record in I.07-01-022. As provided for by the assigned ALJ, the applicants filed a joint response on September 24, 2008 opposing the motion. The motion was denied by e-mail ruling on September 26, 2008. DRA had the opportunity, but did not present any witness or re-serve any exhibit from I.07-01-022 concurrent with its cost of capital testimony served on August 8, 2008. We will rely on D.08-08-030 for guidance concerning the investigation. We discuss this issue in the section on Regulatory Risks.

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[2] "On July 10, ALJ Grau and Comm. Bohn mailed proposed and alternate proposed decisions in I.07-01-022 and related applications. I realize now that these two proposals have outcomes which could impact the recommendations and the final outcome of the consolidated rate of return proceedings.

Therefore, I'd like to clarify that intervenors (especially DRA) should specifically include in testimony for the cost of capital proceedings (due August 8, 2008) any relevant explanations or recommendations addressing the impact of the investigation on the cost of capital applications.

I assume that the Commission will adopt a decision in the investigation well before submission in the cost of capital proceedings' phase 1, and therefore we can timely deal with that decision in an informed manner."

3. 2008 Financial Markets Dislocation

The financial markets in the United States are suffering a significant and prolonged dislocation in large part due to the home mortgage lending market and other credit market problems which directly led to the failures or mergers of many long-standing financial institutions: Merrill Lynch was bought by Bank of America; Bear Stearns and Washington Mutual were bought by J.P. MorganChase. Other transactions have occurred and may still occur. Additionally, there has been the federal government's massive intervention: the "Emergency Economic Stabilization Act of 2008,'' H.R. 1424 (Public Law 110-343), with a stated purpose, amongst others, "to immediately provide authority and facilities that the Secretary of the Treasury can use to restore liquidity and stability to the financial system of the United States."[3] This followed closely on the heels of the "Housing and Economic Recovery Act of 2008" HR 3221 (Public Law 110-289).[4] The world-wide financial markets have all suffered massive losses and turmoil: it is not simply an American or Californian problem and economic recovery will not be instantaneous. We are seeing further actions now by the new President's administration early in base year 2009,

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[3] http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:h1424enr.txt.pdf

See Section 2(1); and also:

SEC. 101. PURCHASES OF TROUBLED ASSETS. (a) Offices; Authority
(1) AUTHORITY- The Secretary is authorized to establish the Troubled Asset Relief Program (or 'TARP') to purchase, and to make and fund commitments to purchase, troubled assets from any financial institution, on such terms and conditions as are determined by the Secretary, and in accordance with this Act and the policies and procedures developed and published by the Secretary.

[4] http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_public_laws&docid=f:publ289.110.pdf.

including the American Recovery and Reinvestment Act of 2009 (Public Law 111-5).[5] This act was intended to make "supplemental appropriations for job preservation and creation, infrastructure investment, energy efficiency and science, assistance to the unemployed, and State and local fiscal stabilization, for the fiscal year ending September 30, 2009, and for other purposes."

We do not yet know the long-term implications for the national, state, or even worldwide economy. Nevertheless we are obliged now to use our best judgment, knowledge and experience to adopt and include in 2009 rates a just and reasonable return on equity and a ratemaking cost of capital for California Water, California American, and Golden State. So we must look to what we do know and make an informed judgment.

We know that our regulatory framework for the class-A water utilities, including California Water, California American, and Golden State, as the three large multi-district companies in California, is a strong and responsive framework and is recognized as such. It provides stable and predictable reviews in the form of general rate cases where we examine in detail and adopt a revenue requirement sufficient to provide an opportunity to recover reasonable operating costs. Additionally, we carefully review and determine an appropriate cost of capital and return on equity. This consolidated proceeding is a specific regulatory enhancement adopted in the latest rate case plan for water utilities. Finally, we provide a comprehensive array of balancing accounts and memorandum accounts which assure recovery of reasonably incurred costs and provide an opportunity to address numerous unpredictable events ill-suited to

[5] http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h1enr.txt.pdf.

inclusion in general rate cases. Thus, the regulatory framework provides timely reasonableness reviews of these numerous balancing and memorandum accounts that recover significant portions of the companies' costs free of the forecast risk inherent in general rate cases.

We know that California depends on having financially viable public utilities, and therefore all of our decisions must ensure that these regulated entities have a reliable process to recover just and reasonable costs and an opportunity to earn a fair return.

4. Capital Structure

Ratemaking capital structure is long-term debt, preferred stock, and common equity.[6] Because the level of financial risk that the utilities face is determined in part by the proportion of their debt to permanent capital, or the degree of financial leverage, we must ensure that the utilities' adopted equity ratios are sufficient to maintain reasonable credit ratings and to attract capital without incurring unnecessary costs for an excessive amount of expensive equity.

Generally, long term debt is the least expensive form of capital but the utility must ensure that it timely meets every interest payment and maintains any required terms or conditions of the loan agreements or mortgage indentures, and that, it can refinance or refund the debt when it matures. Preferred stock is generally more expensive than debt and may or may not have a maturity or refund provision. Interest may usually be deferred but it then accumulates and takes preference over payment of dividends to common equity owners. Thus, equity owners assume more risk, including the risk of losing their entire

investment, and therefore equity investors require the highest return. The capital structures proposed in this proceeding are presented below:

Proposed Capital Structures		
	Company	**DRA**
California Water		
Long Term Debt	45.02%	46.62%
Preferred Stock	0.38%	0.38%
Equity	54.60%	53.00%
Total	100%	100%
California American		
Long Term Debt	58.00%	58.00%
Equity	42.00%	42.00%
Total	100%	100%
Golden State		
Long Term Debt	46.40%	49.00%
Equity	53.60%	51.00%
Total	100%	100%

4.1. Discussion

There are variations to the capital structures proposed by DRA for California Water and Golden State Water which are relatively minor: a 1.60% downward difference in equity for California Water from 54.60% to 53.00% and a 2.60% downward difference in equity for Golden State from 53.60% to 51.00%. DRA's proposals are based on Value-Line projections for 2009 - 2011. Both applicants object to using the Value-Line projections arguing their own testimony is more reliable. Golden State argues that Value-Line reflects the parent company's capital structure and not that of the utility subsidiary, which may be different. (Golden State Opening Brief pp. 5 - 7.) We note that Value-Line projections reflect the expectations of expert analysts on behalf of investors and therefore these projects would be acceptable to the market.

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[6] Debt due within one year, *i.e.*, short-term debt, is excluded.

Further, we have a responsibility to ensure that the ratemaking capital structures are realistic – investors cannot directly invest in Golden State, they are only able to invest in the parent. We note too that the internal projections of California Water and Golden State to rely on more equity would lead to these companies continuing to have equity ratios substantially above 50%.

We find equity components in excess of 50% to be problematic and have concerns about equity ratios less than 45%. It is this Commission's responsibility to establish a safe range within which a company's capital ratio may move and against which the cost of capital may be measured. In this case, there is a significant cost differential, compounded by the tax consequences of equity, which lead us to consider carefully whether two of the companies, California Water and Golden State, may have proposed too high an equity ratio, at 54.6% and 53.6%, respectively. California American is more than 10% lower at 42%. We note that recently Southern California Edison Company, San Diego Gas & Electric Company (SDG&E), and Pacific Gas and Electric Company (PG&E) were authorized equity ratios of 48%, 49% and 52%, respectively, all lower than either California Water or Golden State. When an equity ratio falls significantly below 45%, we are concerned about the financial community's reaction to interest coverage and the risks of high leverage generally. California American requests an equity ratio of 42%, and DRA did not object (in contrast to its objections to the over 50% ratios proposed by California American and Golden State). We note our concerns, but we will not impute an equity ratio above that requested by an applicant.

Based on Golden State's application the pre-tax cost of capital would be 15.15% but falls to 14.78% (as shown in the tables below) when using DRA's Value-Line capital structure, which is a 37 basis point difference (15.15% - 14.78%

= 0.37%), a significant cost savings. The pretax cost of capital shows the gross revenue requirement included in rates to yield an after-tax return to shareholders. Even when we fine-tune DRA's proposal to fund the increased debt entirely at Golden State's forecast incremental rate of 8.3% for debt the impact is a 2 basis point increase in the cost of capital but it still saves ratepayers 35 basis points over Golden State's proposal (14.80% - 14.78% = 0.02%). Golden State has a combined 2007 rate base of $35,857,300 (Ex. GS-1, p. 11) so a 35 basis point savings is a ratepayer savings of $125,501. A similar cost differential exists for California Water.

Golden State's Proposed Pre-Tax Cost of Capital					
2009	**Ratio**	**Cost**	**Weighted**	**Net to Gross**	**Pre-Tax Cost**
Long-Term Debt	46.40%	7.49%	3.48%		3.48%
Equity	53.60%	12.10%	6.49%	1.80[7]	11.67%
	100%		9.96%		15.15%

DRA's Proposed Capital Structure for Golden State's Cost of Capital Using Applicant's Return on Equity					
2009	Ratio	Cost	**Weighted**	**Net to Gross**	**Pre-Tax Cost**
Long-Term Debt	49.00%	7.49%	3.67%		3.67%
Equity	51.00%	12.10%	6.17%	1.80	11.11%
	100%		9.84%		14.78%

Golden State Cost of Capital – Using DRA's Proposed Capital Structure, Applicant's Full Incremental Cost of New Debt and Return on Equity					
2009	**Ratio**	**Cost**	**Weighted**	**Net to Gross**	**Pre-Tax Cost**
Long-Term Debt	46.00%	7.49%	3.45%		3.45%
Incremental Debt [8]	3.00%	8.30%	0.25%		0.25%

[7] The net to gross multiplier used here is an arithmetic average from D.08-01-043, and other recent proceedings, D.07-11-037 and D.06-01-025.

[8] Golden State's incremental cost of debt of 8.3% is found in Ex. GSW-2 table 6. This example rounds up the incremental debt which benefits Golden State.

Equity	51.00%	12.10%	6.17%	1.80	11.11%
	100%		9.87%		14.80%

None of the applicants specifically justify the reasonableness of their specific equity ratios, only that they are what they are. DRA offered testimony to reduce the equity ratios slightly for California Water and Golden State. We believe the existing regulatory framework ensures that these utilities are an attractive and safe investment opportunity for investors seeking to invest in debt or equity instruments. Therefore, we will adopt DRA's forecast 2009 capital structure for both California Water and Golden State. While we conclude in this proceeding that the adopted capital structures are within an acceptable range, we expect that these ratios may change over time for good and sufficient business reasons. In the next cost of capital applications for California Water, California American, and Golden State, applicants shall be required to justify in far greater detail a rationale for their proposed capital structure.

5. Long-Term Debt and Preferred Stock Costs

Long-term debt and preferred stock costs are based on actual, or embedded, costs. Future interest rates must be anticipated to reflect projected changes in a utility's cost caused by the issuance and retirement of long-term debt and preferred stock during the year. This is because the rate of return is established on a forecast basis.

We recognize that actual interest rates do vary and that our task is to determine "reasonable" debt cost rather than actual cost based on an arbitrary selection of a past figure.[9] In this regard, we conclude that the latest available interest rate forecast should be used to determine the forecast of additional debt

[9] 38 CPUC2d 233 at 242 and 243 (1990).

included in the embedded debt for the forecast period. (*See* recently, D.07-12-049, and 38 CPUC2d 233, where 18 years ago, the Commission definitively discussed the need for, and use of, a reliable forecast of future interest costs.) We therefore adopt the companies' 2009 forecast of the incremental cost of debt, subject to the additional protection of the temporary interest rate balancing account discussed below.

5.1. Discussion

There is no opposition by DRA to the utilities' proposed long-term debt and preferred stock costs for the base year 2009. We have reviewed these undisputed costs and find that the following long-term debt and preferred stock costs for the utilities are consistent with the law, in the public interest and should be adopted.

Debt Costs			
Adopted Embedded Costs			
Rates	California Water	California American	Golden State
Long-Term Debt	6.72%	6.48%	7.49%
Preferred Stock	4.19%	0.00%	0.00%
Adopted 2009 Cost of Debt Embedded in Utility Capital Structure			
2009 Debt (Company)	6.72%[10]	8.22%[11]	8.30%[12]
Adopted 2009 Incremental Debt to Adjust Capital Structure			
2009 Incremental	8.30%	NA	8.30%

[10] Ex. CW-1, pp. 23-38 through 27-38 (for 2010).

[11] Ex. CA-1, Table 3.

[12] Ex. GS-2, Table 6.

5.1.1. Cost For Incremental Debt In Adopted Capital Structure

The debt cost projected by California Water is substantially below the rates forecast by California American and Golden State, therefore we will use the highest rate (to ensure a sufficient allowance in rates for incremental borrowing subject to the balancing account discussed elsewhere), as forecast by Golden State along with the DRA Value-Line forecast capital structure and the temporary interest rate balancing account discussed below to set the 2009 base year cost of capital for California Water. The highest 8.3% cost of incremental debt is used for DRA's increased portion of debt while the embedded cost of debt for the 45.02% of capital structure as proposed by California Water includes the applicant's proposed embedded cost of 6.72%.

California Water Cost of Capital – Using DRA's Proposed Capital Structure and an 8.30%[13] Incremental Cost of New Debt and Applicant's Requested Return on Equity					
2009	**Ratio**	**Cost**	**Weighted**	**Net to Gross**	**Pre-Tax Cost**
Long-Term Debt	45.02%	6.72%	3.03%		3.03%
Incremental Debt	1.60%	8.30%	0.13%		0.13%
Preferred Stock	0.38%	4.19%	0.02%		0.02%
Equity	53.00%	12.57%	6.66%	1.79	11.93%
	100.00%		9.84%		15.10%

6. Return on Common Equity

The legal standard for setting the fair rate of return has been established by the United States Supreme Court in the *Bluefield* and *Hope* cases.[14] The Bluefield decision states that a public utility is entitled to earn a return upon the value of

[13] Golden State's incremental cost of debt of 8.3% is found in Ex. GSW-2 Table 6. We use it here as the highest forecast debt cost.

[14] Federal Power Commission v. Hope Natural Gas Company, 320 U.S. 591 (1944) and Bluefield Water Works & Improvement Company v. Public Service Commission of the State of Virginia, 262 U.S. 679 (1923).

its property employed for the convenience of the public, and sets forth parameters to assess a reasonable return. Such return should be equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings attended by corresponding risks and uncertainties. That return should also be reasonably sufficient to ensure confidence in the financial soundness of the utility, and adequate, under efficient management, to maintain and support its credit and to enable it to raise the money necessary for the proper discharge of its public duties.

Hope held that the value of a utility's property could be calculated based on the amount of prudent investment minus depreciation, which we call rate base. *Hope* reinforces the *Bluefield* decision and emphasizes that such returns should be sufficient to cover operating expenses and capital costs of the business. The capital cost of business includes debt service and stock dividends. The return should also be commensurate with returns available on alternative investments of comparable risks. However, in applying these parameters, we must not lose sight of our duty to utility ratepayers to protect them from unreasonable risks including risks of imprudent management.

We attempt to set the return on equity at a level of return commensurate with market returns on investments having corresponding risks, and adequate to enable a utility to attract investors to finance the replacement and expansion of a utility's facilities to fulfill its public utility service obligation. To accomplish this objective, we have consistently evaluated analytical financial models as a starting point to arrive at a fair return on equity.

6.1. Financial Models

The financial models commonly used in water utility cost of capital proceedings[15] are the Discounted Cash Flow Analysis and Capital Asset Pricing Model. Various other models and measures of risk premium analysis have also been proposed by the parties. None of the models are independently reliable – in terms of measuring return without subjective input and interpretation - or persuasive on their own. All of the models are highly susceptible to subjective inputs such as the proxy groups, growth rate, or earnings assumption. Therefore, the Commission has historically reviewed an array of models with varied assumptions before exercising its judgment in adopting a return on equity.

6.1.1. Proxy Groups

A proxy is a substitute. Companies selected as a proxy for a particular utility (or group of utilities) should have characteristics similar to the utilities that the companies are selected to represent. In order to assess comparability and reasonableness of financial model results, there should be no deviation from financial model to financial model of the companies selected for a proxy group. For each model the applicants and DRA used data from the particular proxy groups they rely on as input to the model to derive their proposed return on equity.

In this proceeding we had a mix of proxy groups and as we discuss here, find significant problems with the use of gas distribution companies as a proxy for water utilities, as proposed by both California Water and California

[15] Previously as a part of a general rate case.

American, and we find problems too with several of the additional companies included in DRA's study.

These five proxy water companies were used by California Water and Golden State for financial modeling:

- American States Water Company (parent of Golden State),
- Aqua America Water,
- Connecticut Water Service,
- Middlesex Water, and
- San Jose Water Corp.

To this group California American and DRA added:

- California Water Service Company,
- Southwest Water Company, and
- York Water Company.

Finally, DRA alone added two more companies:

- Artesian Water Company, and
- Pennichuck Corp.

California Water objected to DRA's inclusion of several companies. First, California Water objects to the inclusion of Southwest Water Company which derives less than half of its revenue from regulated water operations. (California Water Opening Brief, p. 8 citing Ex. CW-2, p. 2.) Secondly, California Water objects to including Artesian Resources Corporation, York Water Company, and Pennichuck Corporation arguing they are too small and too thinly traded, well below the average of the usual proxy group. (*Id.*)

It is ironic that California Water objects to Southwest Water Company because too little of that company's business is water-related when two of the applicants, California Water and California American, have repeatedly

included natural gas distribution companies as a proxy group despite the Commission consistently rejecting this proxy group analysis. We reject this attempt here in the absence of any new argument or demonstration of any change of fact or condition that would warrant our re-examining natural gas distribution companies as a reasonable proxy for water companies. Accordingly, we assign no weight to the testimony that relies on the natural gas distribution companies as a proxy.

The first five companies have been consistently used in the past. We question whether there are only five companies across the country to constitute a valid proxy group given that any proposed proxy company has its own unique local issues and corporate history and, importantly, may face a different regulatory framework. Therefore we strongly urge all parties to separately use the base group of five companies, then consider DRA's expanded group of ten, and finally, consider any additional third grouping of water utilities in the next proceeding as a part of their analysis. We expect a full discussion and description of all companies included in any proxy group with a view to identifying both similarities and unique differences between the proxy companies and the applicants. The parties could have been more detailed here in justifying the inclusion or exclusion of a company from their proxy groups.

6.1.2. Discounted Cash Flow Model

According to the Discounted Cash Flow model (DCF), the current stock price is equal to the discounted value of all future dividends that investors expect to receive from investment in the firm. As such, stockholders' returns ultimately result from current as well as future dividends. Common stockholders are entitled to a pro-rata share of the firm's earnings. The DCF model presumes that earnings not paid out in dividends are reinvested in the

firm to provide for future growth in earnings and dividends. This model, for example, does not consider capital gains on future sale of the stock. The rate at which investors discount future dividends reflects the timing and riskiness of the expected cash flows, and is interpreted as the market's expected or required return on the common stock. Therefore, this discount rate represents the cost of common equity. All three companies and DRA performed a DCF analysis as a part of their recommendations.

The applicants and DRA developed the following ranges from the DCF analysis and from these ranges make the following recommendations based on their individual application and interpretation of this model:

	Range/Recommended
California Water	11.55%[16]
California American	11.5% - 13.5%[17]
Golden State	12.1% – 12.2%[18]
DRA	8.8% -9.6%[19]

DRA derived its DCF recommendation return on equity of 9.6%[20] based on a Dividend Yield of 3.1% for its water proxy group (discussed above), and a Growth Rate[21] of 6.5% (Ex. DRA-2, Attachment JRW-6).

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[16] California Water rebuttal to DRA, Opening Brief., p. 12 citing Ex. CW-2, p. 37.

[17] California American Opening Brief, p. 3, citing Ex. CA-5, pp. 36-37.

[18] Golden State estimated a DCF equity cost range of 12.1 % to 12.2% for itself, which includes a thirty basis point risk premium adjustment. (Opening Brief, p. 13, citing Ex. GS-6, p. 18.)

[19] Ex. DRA-2, p. 53.

[20] Dividend Yield 3.1% + Growth Rate 6.5% = 9.6%.

[21] The growth rate is an annualized percentage rate of change, often presumed to be upwards, that a particular stock's dividend undergoes over a period of time.

Dr. Zepp estimated a DCF equity cost range of 12.1% to 12.2% for Golden State (these figures include a thirty basis point risk premium[22] adjustment) and Dr. Vilbert recommended a range from 11.5% to 13.5% for the return on equity. From this range, California American Water chose to request a return on equity of 11.5%.

6.1.3. Capital Asset Pricing Model

The Capital Asset Pricing Model (CAPM) is a risk premium analysis to gauge the cost of equity. As a theory,[23] it examines the risk and returns associated with holding common stocks. It addresses two risks: firm-specific risk[24] and market risk[25] which is measured by a firm's beta.[26] Investors receive a return for bearing the systematic risk.

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[22] A risk premium is a return in excess of the risk-free rate of return that an investment is expected to yield. An asset's risk premium is a form of compensation for investors who tolerate the extra risk - compared to that of a risk-free asset. The risk-free rate represents the interest an investor would expect from an absolutely risk-free investment over a specified period of time.

[23] The goal of CAPM is to determine a required rate of return to justify acquiring a stock compared to an already well-diversified portfolio (many stocks in varied industries), considering that incremental stock's non-diversifiable risk (unique to that stock). It takes into account the non-diversifiable market risks or beta in addition the expected return of a risk-free asset.

[24] The risk that is specific to an industry or firm. Examples include losses caused by labor problems, nationalization of assets, or weather conditions.

[25] The risk caused by factors that affect the prices of virtually all securities, although in different proportions. Examples of market risk include changes in interest rates and consumer prices.

[26] Beta is a mathematical measure of the sensitivity of rates of return on a portfolio or a given stock compared with rates of return on the market as a whole. A high beta (greater than 1.0) indicates moderate or high price volatility. A beta of 1.5 forecasts a 1.5% change in the return on an asset for every 1% change in the return on the market.

$E_s = R_f + B_s(R_M - R_f)$

Where:

E_s = The expected return for a security.
R_f = The expected risk-free return.
B_s = The sensitivity to market risk for the security.
R_M = The historical return of the stock market/equity market.
$(R_M - R_f)$ = The risk premium over risk free assets.

Estimating the required cost of equity using the CAPM requires three inputs: the risk-free rate of interest (typically measured by looking at the returns on long-term treasury bonds), the beta, and the expected market risk premium. Of these three inputs, the most difficult to measure is the expected market risk premium because data on both Treasury bond interest rates and various measures of beta are readily available, but disputed. An expected market risk premium is a highly subjective forecast of future market returns. California Water, California American, Golden State, and DRA performed a CAPM analysis as a part of their recommendations.

Capital Asset pricing Model Results	
California Water	9.2%[27]
California American	11.2%[28]
Golden State	12.6%[29]
DRA	8.8%

DRA derived its CAPM recommendation of 8.8%[30] return on equity based on a Risk Free Rate of 4.75% adjusted by its proxy group's Beta of

[27] Recalculating DRA's results with California Water's Beta.

[28] California Water Opening Brief, pp. 13–14, for its recalculation of DRA's recommendation for California American.

[29] Golden State Opening Brief, p. 14, citing to Ex. GS-6, p. 33.

[30] Beta Adjusted Risk Free Rate 4.2% + Equity Risk Premium 4.60% = 8.80%.

0.89 (R_f 4.75% x 0.89 B_s = 4.2%), plus an Ex Ante Equity Risk Premium[31] of 4.60%. (Ex. DRA-2, Attachment JRW-7.)

California Water argues that DRA's proxy group results in an inappropriate lower Beta of 0.89 but that by using California Water's proxy group the Beta should be 1.01. (Opening Brief, p. 15.) If we substitute California Water's Beta it would restate DRA's CAPM return to 9.2% (4.75% x 1.01 B_s 4.8% plus 4.6% = 9.2%).

6.1.4. Risk Premium Model

The equity or market risk premium, $(E(R_m) - R_f)$, is equal to the expected return on the stock market generally (*e.g.*, the expected return on the S&P 500 ($E(R_m)$) minus the risk-free rate of interest (R_f). The equity premium is the difference in the expected total return between investing in equities and investing in "safe" fixed-income assets, such as long-term government bonds. However, while the equity risk premium is easy to define conceptually, it is difficult to measure because it requires an estimate of the expected return on the market.

Golden State presented a range of risk premium measurements ranging from 10.6% to 11.6% based on a presumption that Golden State faced "above average" risks:

> [Golden State] presented evidence of [returns on equity] ROEs calculated by employing five different risk premium analyses [including CAPM discussed elsewhere in the brief] …. The first method is an update

[31] An ex ante risk premium is an additional return expected in the future, beyond some base measurement, for the assumption of risk.

> of the risk premium analysis DRA presented in San Jose Water Company's general rate case, (A.06-02-014), in 2006 ("DRA Staff Approach"). The updated analysis, adjusting for [Golden State's] above-average risk, estimates a ROE of 10.6% to 10.8%. The DRA Staff Approach is limited, however, by the fact that poor weather, delays in rate increases, and an asymmetric earnings test have depressed realized ROEs. The second risk premium analysis calculates estimated cost of equity based on authorized ROEs as proxies for the costs of equity and results in an estimated ROE for [Golden State] of 10.9% to 11.3%. The third risk premium analysis, based on DCF equity cost estimates of the proxy group, indicates a cost of equity range of 11.3% to 11.6%. The fourth risk premium analysis estimates cost of equity based on averages of past earned ROE for the proxy group. Based on this analysis, the expected cost of equity is 10.9% for [Golden State]. (Golden State Opening Brief, pp. 14-15, referring to Ex. GS-6 pp. 26-33. Internal citations omitted.)

We are not persuaded that Golden State faces above average risks and therefore are not persuaded that an increase over the currently authorized return is warranted. It is our belief that we include reasonable allowances in rates for all costs of doing business; thus, assertions of risk due to needs for infrastructure, (California American Opening Brief, p. 2), or water quality and supply or customer growth are not persuasive because these are all suitable costs to be addressed in general rate proceedings or other specific applications, these are not costs that we expect to absorbed by the return on equity. We find that these risks have long been present and are already fully factored into investor expectations and market prices.

6.1.5. After-Tax Weighted-Averaged Cost of Capital

California American introduced a new model into the cost of capital discussion, the "After-Tax Weighted-Average Cost of Capital" (ATWACC) which is a model used overseas in other regulatory agencies but not within the United States. (Ex. CA-5, pp. 11–12, and Appendix E.) This model posits that there is a wide range of acceptable capital structures for an industry and therefore "the economically appropriate cost of equity for a regulated firm is the quantity that, when applied to the *regulatory* capital structure, produces the same ATWACC" as an industry sample's average. (Ex. CA-5, p. 12, lines 3-5. (Emphasis in original.) Thus, we have the elegant formula:[32]

$$ATWACC = r_D(1 - T_c)D + r_E E$$

Where r_D = market cost of debt
r_E = market cost of equity
T_c = corporate marginal income tax rate
D = percentage of debt in the capital structure
E = percentage of equity in the capital structure

An alternative presentation of the formula is:

$$r_E = \frac{(ATWACC - r_D(1 - T_c)D)}{E}$$

California American admits the formula and its use is not common practice in California or anywhere else where its witness, Dr. Vilbert, has presented the model. (Ex. DRA-2, p. 81.) DRA argues the ATWACC method adds as much as 500 basis points to Dr. Vilbert's recommendation. (Ex. DRA-2, p. 80.)

[32] Ex. CA-5, p. 12, however, the exhibit's presentation of the equation is simplified in this decision.

The Commission has never adopted a single preferred cost of capital model because no one model is perfect and the results produced by all models are highly susceptible to various input assumptions. Like the others, the results of the ATWACC are also subject to the effects of the comparison group or proxy group of companies, and so we will not adopt it as a preferred model either. Moreover, we have no current record on the ATWACC's validity, and parties focused primarily on the fact that it has not yet been accepted elsewhere. For example, there is no discussion of why other overseas jurisdictions allegedly rely on it and no thorough citations to their decisions.

The Commission did consider and decline to adopt ATWACC in a prior cost of capital proceeding when PG&E proposed its use. (D.99-06-057.) In that proceeding PG&E argued the ATWACC would hold constant the overall after-tax cost of capital regardless of the capital structure – as debt increases the degree of leveraging the cost of equity would rise and thus, offset the tax benefits of more debt in the capital structure.[33] DRA's predecessor, The Office of Ratepayer Advocates, opposed using ATWACC arguing PG&E had not met its burden to show that the model was useful and there was an absence of comparable data to show whether it was a reliable predictor of a fair return on equity. The Commission found:

> We will not reject a proposal merely because it is new, nor need we wait for other Commissions to pronounce upon it. But the evidence presented does not give us confidence that it is more accurate or useful than other methods with which we are comfortable. As we consider the ATWACC, as presented in this proceeding,

[33] *See* § 6.2.1 for a discussion of capital structure.

> its proponent adds one full percentage point for subjective competitive risks which we cannot find, and it produces an ROE that its sponsor, PG&E, prudently reduces. (D.99-06-057.) [34]

We note that in 1999 the Commission found the same problem that we find here – ATWACC tends to result in a higher recommendation when compared to the traditional models. Therefore we will accord it little weight at this time. California American and others are free to include the ATWACC in future cost of capital proceedings as one of multiple measures for return on equity but we would expect them to be far more comprehensive in presentation and justification.

6.1.6. Financial Models Summary

Although the parties argue that the results from financial models as calculated by each party are objective, the results are very dependent on subjective inputs, as we have addressed in our prior financial models discussion. From these broad financial models results the parties advance arguments in support of their respective analyses and in criticism of the input assumptions used by other parties. It should be noted that none of the parties agreed with the financial model results of the others.

In the final analysis, it is the application of informed judgment, not the precision of financial models, which is the key to selecting a specific ROE estimate. We affirmed this view in D.89-10-031, noting that all these models have their flaws and, as we have routinely stated in past decisions, the models should not be used rigidly or as definitive proxies for the determination of the investor-required return on equity. Consistent with that skepticism, we find no reason to adopt the financial

[34] 1999 Cal. PUC LEXIS 315, *71 - *72.

modeling of any one party. The models are only helpful as rough gauges of the range of reasonable outcomes.

6.2. Additional Risk Factors

We also consider additional risk factors not specifically included in the financial models. Those additional risk factors fall into three categories: financial, business and regulatory. We find that, except for the recently created WRAM and the MCBA, the other forms of risk have long been present and are already fully factored into investor expectations and market prices.

6.2.1. Financial Risk

Financial risk is tied to the utility's capital structure. The proportion of its debt to permanent capital determines the level of financial risk that a utility faces. As a utility's debt ratio significantly increases, a higher return on equity may be needed to compensate for that increased risk – the risk of sufficient and timely ongoing earnings to pay interest expenses. However, at some point, the equity ratio can be unnecessarily high and result in excessive costs to ratepayers – paying an unneeded premium for equity when debt will do.

California Water argued:

> Funds from operations will be insufficient to cover the construction budget and dividends, SoCal Water will need to raise $305 million, $260 million of which will come from debt financing and $45 million from equity financing. [Citation omitted] Because a large portion of this construction budget will be financed through debt financing, financial risk will increase and the dividend growth will be lowered, which makes the common stock less attractive. In order to achieve the goals put forth within the Water Action Plan as put forth by the Commission in December 2005, Cal Water needs to be able to attract new investors to supply the necessary capital, which would require the 12.57% return on

common equity. (Opening Brief, p. 18, citing to Ex. CW-1, p. 8.)

California Water does not and cannot demonstrate how it derived a required return on equity of 12.57% from these assertions regarding its construction capital needs. California Water's proposed return on equity represents an increase of 237 basis points from the currently authorized return of 10.20% and 137 basis points higher than DRA recommends. In fact, to the extent the Commission authorizes its construction budget in various rate proceedings, California Water will recover from ratepayers a reasonable revenue requirement including its cost of capital. The existence of a large construction budget does not justify a 23% increase in the return on equity (from 10.20% to 12.57%) when the existing regulatory mechanisms allow for the timely recovery of reasonable operating costs and capital investments for construction. Thus construction programs do not by themselves lead to any need to increase the return on equity in this proceeding because the applicants have the ability to recover the costs of capital additions in rates.

We see no unique or specific financial risks applicable to applicants which would ratchet the reasonable return on equity upwards when compared to the proxy group. Any incremental risk as a subsidiary of a holding or parent company should be borne by investors and not ratepayers: affiliate relationships are shareholder decisions and ratepayers should be held harmless from such shareholder choices.

6.2.2. Business Risk

Business risk pertains to uncertainties resulting from competition and the economy. That is, a utility that has the most variability in operating results has the most business risk. An increase in business risk can be caused by a variety of events that include deregulation (*i.e.,* the removal of regulatory protections), poor

management, and greater fixed costs in relationship to sales volume. We discuss the question of "regulatory risk" in more detail in § 6.2.4.

The applicants did not discuss examples of significant business risks for water utilities where those risks are not already considered in various regulatory mechanisms. Many of the business risks discussed are addressed by regulatory mechanisms including general rate cases, balancing accounts or specific-purpose applications filed with the Commission. We discuss these issues here as business risks, the risks of operations, and discuss separately the question of regulatory risk, which is a risk of a consistent, reliable, and predictable response by the regulator.

Golden State offers the argument that it faces four unique risks compared to the non-Californian proxy group companies: (1) investors have a perception that California presents a risky regulatory environment, (2) the general rate case cycle effectively denies Golden State the ability to file rate cases if costs increase unexpectedly, (3) Golden State bears the risk of litigating water quality lawsuits, and (4) Golden State is small compared to other utilities. (Golden State Opening Brief citing to Ex. GS-6, p. 17.) Similar arguments are offered by California Water and California American to suggest these three companies are riskier than a national proxy group.

We find these arguments are not supported by any factual analysis and quantification. First, we believe California has a robust regulatory environment that is responsive to the utilities' needs, as shown by the number of balancing and memorandum accounts, and a regular cycle for rate cases. Second, no utility is prohibited from filing an application to address new or unusual problems. Many variable or volatile costs, such as energy for pumping or water purchases, are recoverable through existing balancing accounts. Third, the utilities

here in California and elsewhere in the country are obligated to provide safe drinking water. The risks of water quality litigation are not unique to Golden State or the other two applicants. Finally, Golden State is one of the largest water companies in California and is part of a larger national parent company. None of these companies – with or without considering the parent companies - are shoestring operations facing the specific risks of very small companies. We therefore conclude that these companies are not highly risky and do not face unique increased risks because they operate in California.

We note that California Water, California American and Golden State, respectively, have numerous specific balancing accounts and memorandum accounts in their tariffs, discussed below. Thus the applicants are insulated by balancing and memo accounts from the variations between forecast and actual results for many activities – protections which do not exist for more competitive industries. Therefore, we see no unique or specific business risks applicable to applicants which would ratchet the reasonable return upwards when compared to the proxy group.

The Commission has a history of protecting ratepayers while providing the utilities an opportunity to recover costs and earn a fair return. There is no basis to conclude that we will do otherwise in the future. The most telling example for California Water, California American, and Golden State was the recent creation of the WRAM and the MCBA. We will discuss this recent development separately in detail.

6.2.3. Balancing Accounts and Memorandum Accounts

As a general proposition the purpose of memorandum accounts and balancing accounts is to reduce or eliminate some specific risk for the regulated utility. Without a balancing or memorandum account the company would face a

myriad of unforeseeable risks due to forecast error, uncontrollable outside events including price increases and inflation generally, weather-induced changes in either consumption or supply, and even catastrophic events such as fires, floods and earthquakes. The limited but important protection for ratepayers is that the utility must be able to demonstrate that it behaved in an informed and reasonable manner; that is, the memorandum and balancing accounts should not protect the utility from poor management or failure to exercise sound professional judgment or follow sound business practices.

Sample of Balancing Accounts And Memorandum Accounts			
	California Water	**California American**	**Golden State**
Catastrophic Event Memo Account	Yes	Yes	Yes
Outside Services Memo Account			Yes
Simi Valley Purchased Water Memo			Yes
Orange County Annexation Memo			Yes
California Alternative Rates Balancing	Yes	Yes	Yes
Credit Card Memo Account		Yes	
Endangered Species Memo Account		Yes	
Employee Retirement Income Security Act Memo Account		Yes	
Recycled Water Memo Account	Yes		
Wausau (Litigation) Memo Account	Yes		
WRAM	Yes	Yes	Yes
MCBA	Yes	Yes	Yes

What this sample table above shows is that California Water, California American, and Golden State have numerous regulatory mechanisms that protect them from a wide variety of risks normally faced by a competitive industry or by a regulated entity with fewer of California's risk-reducing tools. While many of these illustrative mechanisms are memorandum accounts, and the utility must still meet its burden of proof for recovery, these mechanisms make recovery possible when recovery would otherwise be unlikely or more risky.

6.2.4. Regulatory Risk

Regulatory risk pertains to the risks that investors may face from future regulatory actions that we, and other regulatory agencies, might take, *i.e.*, whether there is a consistent, reliable, and predictable response by the regulators. Examples include the risk of potential disallowance of operating expenses or rate base additions, the risk that the utility will not earn a return on equity comparable to other utility returns on equity throughout the United States, and rating agencies' outlooks for the California regulatory environment. California utilities receive favorable balancing and memorandum account treatment and the potential for the failure to recover operating expenses is low given the utilities' ability to recover a substantial portion of their revenue requirements through balancing and memorandum accounts. Plant additions are added to rate base, subject to a reasonableness review for prudent management and a determination that the additions were necessary to provide safe and reliable service. Additionally, we adopted a Distribution System Infrastructure Charge for California American where we expect timely recovery of plant investments because a surcharge is implemented that is tied directly to the installation of new infrastructure. (D.07-08-030.)

Imprudent costs are never recoverable from ratepayers and the risks associated with imprudent costs should never form the basis of authorizing higher returns on equity to offset any past or potential disallowances for imprudent costs. The authorized return on equity is compensation for prudent management and is not inclusive of imprudent actions. Thus a disallowance of imprudent costs should lead to the utility earning less than the authorized return.

Theapplicants failed to show any persuasive evidence that California is a "risky" regulatory environment, or what risk adversely affects them. In fact,

the regulatory environment in California is generally regarded as comparatively consistent and forward-looking. Finally, they are generally rated as "buy" or "hold" and the three companies all have solid investment-grade debt ratings directly or through their parent companies.

6.2.5. Water Revenue Adjustment Mechanism and Modified Cost Balancing Account

The Commission issued D.08-08-030 on August 21, 2008 in I.07-01-022 and found that this cost of capital proceeding was the appropriate venue to address any impact on the return on equity as a result of adopting WRAM and MCBA for the applicants.[35] The decision held in Conclusions of Law 3 and 4:

> 3. Implementation of WRAMs and MCBAs may result in a diminution of shareholder risk relative to ratepayers, other things being equal.
>
> 4. It is reasonable to delay quantification of [a return on equity] adjustment until it can be reviewed comprehensively with other risk changes in a cost of capital proceeding.

In addition, the decision made the following relevant Findings of Fact:

> 13. The Commission has found that balancing accounts relieve a company of additional variability in its revenues and/or expenses and that future proceedings would weigh that impact in determining risk and adopting a return on equity.
>
> 14. WRAMs that decouple sales from revenues eliminate almost all variations in earnings due to

[35] *Mimeo.*, p. 36.

sales fluctuations. MCBAs ensure predictable cost recovery.

15. The effect of WRAMs and MCBAs adopted in Phase 1 of this proceeding will not be reflected in market data of California utilities contained in financial models examined in cost of capital reviews.

16. Implementation of the WRAMs will greatly reduce utilities' earnings volatility compared to the situation that would prevail in their absence. Whether they reduce earnings volatility below that which would remain in the absence of other conservation-inducing policies is not clear.

19. The Commission generally has found that decoupling mechanisms reduce risk, all other things being equal.

The only new regulatory risk issue before us is the impact of "decoupling mechanisms." A decoupling mechanism, in this context, removes the connection between sales and revenue recovery. If a balancing account assures recovery of a specific amount of revenue, then the utility is absolutely certain of its recovery regardless of errant sales forecasts and rate designs or deliberate acts (*e.g.,* new conservation requirements) which impact sales. For the applicants, the decoupling in question is a combination of a new mechanism (WRAM) and an adjustment to an existing mechanism (MCBA)[36] to fully protect California Water, California American, and Golden State from adverse impacts

[36] The MCBAs will capture the cost savings and cost increases associated with purchased water, purchased power, and pump taxes by tracking the difference between actual and adopted variable costs. The MCBAs will replace the existing supply cost balancing account, which only tracks cost changes attributable to changes in unit price. (D.08-08-030, p. 15.)

on revenue due to the aggressive implementation of water conservation measures.

We find here, as found already in D.08-08-030, that the WRAM and MCBA reduce the risks faced by the applicants. All three applicants argued that the WRAM and MCBA only restored the status quo which existed before the Commission adopted conservation programs. But this is clearly understating the impact.[37] By adopting the WRAM, we have not and cannot completely segregate the effect of conservation on revenue from all other forecast risk or variance between forecast and actual sales that would have happened regardless of conservation.

By adopting the MCBA we offset cost recovery risks (for all covered costs in the account) for every risk, not just the new conservation program's risk because the MCBA now covers more than just changes in unit costs, it also includes changes in the number of units as well. Thus, the MCBA offsets more than conservation risks to revenues, all other sales volume forecast risks are offset by the MCBA.

The remaining question is whether we can quantify that risk reduction with sufficient precision as an adjustment to the return on equity that

[37] We acknowledge that the key purpose of the WRAM was to offset the loss of revenue when tiered rates, with a high-priced upper tier for high levels of usage, cause a decline in sales because of successfully implemented conservation measures. Many utility costs are fixed and not variable or based on consumption. But conservation pricing requires that higher consumption levels to be priced well above cost to provide a price incentive for customers to conserve. The WRAM assures recovery of the revenue shortfall caused by successful conservation. It also assures recovery of revenues which were previously lost due to differences between forecast and actual sales, weather impacts on sales, and other factors.

would be otherwise reasonable but for this reduction in risk. DRA offers a range of impacts and proposes here that a 25 basis points reduction should be made to the otherwise reasonable return on equity (Ex. DRA-1, pp. 2, 4 and 5, and Ex. DRA-2) while the companies argue there is no extra beneficial risk reduction impact to warrant an adjustment.

All of the business and regulatory risks that the applicants cite are encompassed in the market evaluation and reflected in the DCF and other models before us. However, the WRAM and MCBA are too new and therefore are not reflected in the market data and thus they provide some un-captured risk reduction for this rate cycle.

6.2.6. Risk Summary

In addition to addressing the risk factors above, we could analyze each of the risks identified by the utilities to determine any appropriate risk adjustment to the financial model results. However, irrespective of the final result of any such exercise, the utilities are being increasingly driven by business and regulatory factors that include water supply concerns; ability to attract capital to raise money for the proper discharge of their public utility duties; and the desirability of maintaining investment-grade creditworthiness, all of which are important components of the *Hope* and *Bluefield* decisions. Based on the above financial, business and regulatory risks discussion, and using our informed judgment, our duty to utility shareholders and to ratepayers is to provide for a reasonable opportunity for shareholders to earn a return on equity commensurate with the risks they face consistent with our parallel duty to protect ratepayers. There is no persuasive evidence that the returns on equity adopted in this proceeding warrant an upward adjustment for risk.

6.3. Adopted Return on Equity

6.3.1. Summary

No one can precisely determine a perfect return: we rely on the wide ranges of the models and our own best judgment to fulfill our regulatory obligation of adopting a just and reasonable return. After considering the evidence on market conditions, trends, creditworthiness, interest rate forecasts, quantitative financial models, additional risk factors, and interest coverage presented by the parties and applying our informed judgment, we could adopt a return on equity within the range of 9.50% to 10.50%. It has been our consistent belief that the adopted return on equity should usually be set at the mid-range we find to be just and reasonable. Therefore, we would normally start at the mid range of 9.50% to 10.50% for the return on equity for California Water, California American, and Golden State and then adjust for any special circumstances to the extent we can quantify their impact. Based on the current uncertainty surrounding the capital markets, we will instead hold constant the highest currently authorized return of 10.2% for California Water and Golden State, and adopt an increase in return to 10.20% for California American to ensure the companies are able to attract and retain capital in these times of economic hardship.

We find no viable and measurable distinctions in risk warranting different returns on equity for the three companies, except for the differences in capital structure. However, the world is different since this proceeding was filed, and therefore, this decision adopts a return on equity of 10.20% for California Water, California American, and Golden State. This is adjusted upwards above the mid-point of an otherwise reasonable range of 9.50% to 10.50% in a deliberate move to provide stability and to attract and retain capital.

Summary of Equity Ratios and Returns As Proposed and As Adopted					
	Proposed Equity Ratio	Adopted Equity Ratio	Proposed Equity Return	Current Equity Return	Adopted Equity Return
California Water	54.60%	53%	12.57%	10.20%	10.20%
California American	42.00%	42%	11.50%	10.15%	10.20%
Golden State	53.60%	51%	12.10%	10.20%	10.20%
DRA	As adopted		9.00%		

6.3.2. Adopted Range of 9.5% to 10.5% Return on Equity

There was an incredible range of recommendations for return on equity: California Water asked for 12.57%; California American asked for 11.50%; Golden State asked for 12.10%; and DRA recommended 9.00% for all three companies. The companies' current returns on equity are 10.15% for California American and 10.20% for California Water and Golden State.[38] Thus, we have a range of 357 basis points (9.00% to 12.57%) in the recommendations for a return on equity. None of the applicants proposed a downward adjustment to the return on equity for any reductions in any forms of risk, but, as discussed elsewhere, they all included various increases for perceived extra risks above the proxy results derived from their own financial models. None of the companies were persuasive that there is a quantifiable need for a unique risk premium for the return on equity.

We reject all of the arguments by the applicants for any risk premium beyond the returns that are derived from the financial models. For the reasons explained above, we are not convinced by the applicants' arguments supporting the level of risk premiums they request. Reducing the requested risk

[38] D.08-03-022, D.07-12-055, and D.08-01-043, respectively.

premiums places the reasonable range below any of the applicants' recommended ranges.

We find DRA's measurement of beta of 0.89 (a measurement of risk) is more persuasive than applicants' estimates including California Water's beta of 1.01. (*See* § 6.1.3.)

We believe that using DRA's larger proxy group provides us a broader range of industry comparison. Using a larger proxy group and a lower beta for risk would result in returns below those proposed by the applicants.

We cannot find with the same precision as DRA that a 25 basis point adjustment for the WRAM and MCBA is reasonable. We therefore find the return on equity should be higher than DRA's recommendation of 9.0%. (*See* § 6.3.3.)

Based on the ranges of results from the DCF and CAPM models, all considerations for risk and the current credit and financial markets' dislocation, we find a necessary and reasonable return on equity of 10.20%, for the three companies, which will continue to provide a stable and reliable return which should enable these companies to attract and retain capital in these turbulent times. We find that absent the credit and financial dislocation the reasonable equity return should be 9.50% to 10.50%. The parties' studies and testimony pre-date the worst of the market upheavals. The adopted 10.20% return on equity is adjusted upward from the mid-range to provide market attractive rates and stability. The 10.20% returns, at the high end of the otherwise reasonable mid-range return on equity recommendation are after consideration of the new WRAM and MCBA which have not yet been incorporated in the market's assessment of risk. We have not adopted a specific basis point adjustment as recommended by DRA. In subsequent cost of capital proceedings the parties

should address whether or not the market returns derived in the various financial models have adequately incorporated the effects of the WRAM and MCBA.

6.3.3. WRAM and MCBA Impact On Return

DRA proposed no increase for extra risk for any of the companies but it included in its 9.00% recommendation a uniform 25 basis point reduction to the otherwise reasonable return on equity to account for the new WRAM and MCBA. We find DRA persuasive that the results of the cost of capital models do not reflect the WRAM and MCBA but conclude that an adjustment would only be reasonable if we were able to quantify any risk mitigation.

We do not, therefore, adopt a specific metric for the WRAM and MCBA because DRA's range is subjective: in I.07-01-022 DRA proposed as much as a 100 basis point adjustment and in this proceeding, with no further analytical support, it recommends 25 basis points. It is likely there is some reduction to risk but we cannot rise to the precision of a specific measure of 15, or 25 or 50 basis points. Absent an analytical justification for a 25 point adjustment we will not make an arbitrary adjustment.

We knowingly adopt a return at the high end of a reasonable range after finding the applicants' requested returns of 11.50% to 12.57% were all extremely high and not reasonable. We settle on 10.20% knowing that it imposes a high-range cost on ratepayers in order to ensure that the companies remain viable and it does not reduce the highest of the currently authorized returns during this period of financial dislocation. We would note that only a regulated environment ensures a company of a revenue stream designed to result in an opportunity to earn a specific return.

6.3.4. Impact of Equity Ratios on Return

We would normally expect a company with a higher equity ratio, all other things being equal, to require a lower return on equity than a similarly situated company with a lower equity ratio because of the financial risk[39] due to its resultant higher debt ratio. For the first time ever in this proceeding, we simultaneously examine cost of capital for the three large multi-district Class A water companies which will ensure a consistent cost of capital for every district of each company. We note that California American, with a significantly lower equity ratio, has the lowest authorized return on equity entering this proceeding. We also find no compelling arguments by applicants to significantly differentiate their risks, which would result in a quantifiable differential in return. Thus, while we find the current world wide financial situation leads us to adopt a high range return for the reasons we discuss in this decision, we therefore find it just and reasonable to continue in place an equity return of 10.20% for California Water and Golden State and raise California American's return to 10.20%. We cannot sustain a lower equity return in light of California American's lower equity ratio and therefore we raise its return to the same level as the other two large multi-district Class A companies. We would otherwise have adopted lower returns for California Water and Golden State reflective of the high equity ratios compared to California American's. In subsequent multiple company cost of capital proceedings we will no doubt address the impact of equity ratio on return.

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[39] The risk of a higher debt ratio is the liquidity risk to make timely interest payments and avoid default. Conversely, equity return is rarely paid in full in dividends, some earnings are retained, and the company can if needed reduce dividends without default.

California Water Adopted Base Year 2009 – A.08-05-002					
	Ratio	**Cost**	**Weighted**	**Net to Gross**	**Pre-Tax Cost**
Long-Term Debt	45.02%	6.72%	3.03%		3.03%
Incremental Debt	1.60%	8.30%	0.13%		0.13%
Preferred Stock	0.38%	4.19%	0.02%		0.02%
Equity	53.00%	10.20%	5.41%	1.79	9.68%
	100.00%		8.58%		12.85%

California American Adopted Base Year 2009 – A.08-05-003					
	Ratio	**Cost**	**Weighted**	**Net to Gross**	**Pre-Tax Cost**
Long-Term Debt	58%	6.48%	3.76%		3.76%
Incremental Debt	0%	0.00%	0.00%		0.00%
Equity	42%	10.20%	4.28%	1.75	7.50%
	100%		8.04%		11.26%

Golden State Adopted Base Year 2009 – A.08-05-004					
	Ratio	Cost	Weighted	Net to Gross	Pre-Tax Cost
Long-Term Debt	46.00%	7.49%	3.45%		3.45%
Incremental Debt (a)	3.00%	8.30%	0.25%		0.25%
Equity	51.00%	10.20%	5.20%	1.80	9.36%
	100%		8.90%		13.06%

7. Interim Measure – Temporary Interest Rate Balancing Account

On our own motion, in a prudent but proactive response to the highly unusual problems in the 2008 financial markets we have discussed elsewhere, we adopt here a temporary interest rate balancing account. A temporary interest rate balancing account for California Water, California American, and Golden State, is authorized to record any difference between the forecast incremental cost of debt included in the cost of capital adopted herein.[40]

[40] California Water forecast 6.7% (2010), California American forecast 8.2% (2009) and Golden State forecast 8.3% (2009), respectively. These forecast rates, respectively, are adopted in this decision as a part of the adopted 2009 cost of capital.

The temporary interest rate balancing account shall record the difference in interest expense between the actual interest cost for long-term debt for debt issued after January 1, 2009, and the interest cost included in the adopted cost of capital for debt issues in 2009 or later. This account shall include interest costs from the effective date of this decision forward and remain in effect until the next cost of capital proceeding for each company, in an appropriate venue, to end the balancing account. Any recovery shall be subject to a standard reasonableness review of the interest costs actually incurred.

In Phase 2 we intend to determine a just and reasonable adjustment mechanism, if any, to change the adopted cost of capital for the two years between the 2009 base year and the next cost of capital proceeding for base year 2012. (Scoping Memo, p. 4.) We have already determined that each applicant, and any intervenor that proposes an adjustment mechanism, must present in testimony a specific comparison of its proposed post-base year adjustment mechanism to cost of capital to the adopted post-base year adjustment mechanism for the major energy utilities as adopted in D.08-05-035. (Scoping memo, pp. 5–6.) We take note that the parties filed a proposed all-party settlement on a Phase 2 adjustment mechanism and we will address that in a separate decision.

Unusual times require a flexible outlook: we believe that a temporary interest rate balancing account, the just and reasonable cost of capital we adopt in this decision, and the careful consideration in Phase 2 of a proposed settlement, are all reasonable and measured responses to ensure that the three large multi-district California water utilities remain viable enterprises capable of attracting and retaining investment capital.

8. Procedural Matters

By Resolution ALJ 176-3213, the Commission preliminarily determined that the applications were ratesetting proceedings and that hearings were expected. This ratesetting classification was subsequently affirmed in the assigned Commissioner's Scoping Memo and Ruling. The Scoping Memo and Ruling designated Administrative Law Judge (ALJ) Long as the principal hearing officer, established a bifurcated evidentiary hearing schedule and determined the issues in this proceeding.

Phase 2 will determine whether to adopt a proposed all-party settlement for a mechanism to adjust the cost of capital for California Water, California American, and Golden State in the years between the 2009 base year and the next cost of capital proceeding. Phase 2 will also address the February 13, 2009 evidentiary hearing on the impact of the financial and credit dislocation on the applicants.

There were three days of evidentiary hearings, September 8 – 10, 2008. Applicants and DRA timely filed opening and reply briefs. There are no residual phase 1 issues. The Monterey Peninsula Water Management District filed a timely protest but unconditionally withdrew it by a subsequent motion filed on August 8, 2008. The assigned ALJ granted the motion to withdraw on the first day of evidentiary hearings. (Transcript, p. 1.)

9. Comments on Proposed Decision

The proposed decision of the ALJ on Phase 1 in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Timely comments and replies were filed by California Water, California American, Golden State, DRA, and the California Water Association.

Various changes and clarifications were made to the decision to reflect the comments.

Assignment of Proceeding

John A. Bohn is the assigned Commissioner and Douglas M. Long is the assigned Administrative Law Judge in this proceeding.

Findings of Fact

1. Applicants are public utilities subject to the jurisdiction of this Commission.
2. The applications were consolidated pursuant to Rule 7.4.
3. The capital structure proposed by DRA with a debt ratio reflecting the Value-Line forecast is reasonable for California Water's likely 2009 capital structure.
4. The capital structure proposed by California American is reasonable.
5. The capital structure proposed by DRA with a debt ratio reflecting the Value-Line forecast is reasonable for Golden State's likely 2009 capital structure.
6. A return on equity is set at a level of return commensurate with market returns on investments having corresponding risks, and adequate to enable a utility to attract investors to finance the replacement and expansion of a utility's facilities to fulfill its public utility obligation.
7. Quantitative financial models are commonly used as a starting point to estimate a fair return on equity.
8. An important consideration under the *Hope* and *Bluefield* decisions is that the utilities have the ability to attract capital to raise money for the proper discharge of their public utility duties and to maintain creditworthiness.

9. The parties used Discounted Cash Flow Analysis, the Capital Asset Pricing Model, risk premium analysis, while California American also used ATWACC, to support their respective return on equity recommendations.

10. The financial models employed in our cost of capital proceedings should not be determinative and must be tempered with a great deal of judgment. The DCF model, risk premium analysis, and CAPM model cannot be relied upon exclusively to develop a particular return on equity, but may be helpful in developing a range of reasonable values. They are useful in establishing a range of required returns to consider in selecting the authorized return and in evaluating trends of investor expectations.

11. The ATWACC model is unproven and is not accepted by other United States regulatory jurisdictions.

12. Companies selected for a proxy group should have basic characteristics similar to the utility that they are selected to proxy.

13. DRA's larger proxy group provided a more persuasive comparison of similar utilities.

14. Natural gas distribution utilities are not reasonable proxy companies for a Class A water company.

15. None of the utilities proposed a major change in their capital structures. DRA proposed the use of more recent capital structure forecasts.

16. Financial risk is tied to the utility's capital structure.

17. Business risk pertains to uncertainties resulting from competition and the economy.

18. Regulatory risk pertains to uncertainties resulting from the regulatory regime imposed on a utility.

19. Applicants were not persuasive and could not quantify their risk premium proposals.

20. DRA's calculation of beta, a risk measurement, is persuasive, as is its use of a larger proxy group.

21. All of the business and regulatory risks that the applicants cite are encompassed in the financial market's evaluation and reflected in the discounted cashflow and other financial models presented.

22. The WRAM and the MCBA have reduced the revenue recovery risks for the applicants caused by adopting conservation programs and other inherent risks of recovery such as forecast differences and weather.

23. The market data for the proxy group has not recognized the risk reduction for the applicants caused by the Commission's adoption of a WRAM and MCBA.

24. The reasonable range for return on equity is below any of the applicants' recommended ranges.

25. We cannot determine a precise adjustment to risk for the newly adopted WRAM and MCBA and therefore do not adopt DRA's proposed adjustment of 0.25%. The reasonable range for return on equity should therefore be higher than DRA's recommendation.

26. The reasonable range for return on equity is between 9.5% and 10.5%.

27. Based on the current uncertainty surrounding the capital markets, we will hold the highest currently authorized return constant and adopt a return of 10.20% to ensure the companies are able to attract and retain capital in these times of economic hardship.

28. The financial market and credit dislocations are extraordinary events which are not reflected in the cost of capital models in the record.

29. A temporary interest rate balancing account will remove the uncertainty of debt financing costs during the current financial market and credit dislocation.

Conclusions of Law

1. The consolidation of these applications does not imply that a uniform return on equity should automatically be applied to each of the utilities; however a uniform return may be applied if it is consistent with the record.

2. The legal standard for setting the fair return on equity has been established by the United States Supreme Court in the *Bluefield* and *Hope* cases.

3. The capital structure proposed by DRA is reasonable for California Water.

4. The capital structure proposed by California American is reasonable.

5. The capital structure proposed by DRA is reasonable for Golden State.

6. The proxy companies in financial models must be a reasonable approximation of applicants.

7. Financial models are dependent on subjective inputs therefore it is reasonable to apply informed judgment when considering financial modeling results.

8. The Commission should recognize the current financial dislocation in setting the return on equity to set a return that provides stability and attracts capital in times of economic uncertainty.

9. The Commission should create the temporary interest rate balancing account to record the difference in interest expense between the actual interest cost for long-term debt for debt issued after January 1, 2009, and the interest cost included in the adopted cost of capital for debt issues in 2009 or later subject to a standard reasonableness review.

10. The temporary interest rate balancing account should be effective from the date of this decision and include interest costs from the effective date forward.

11. The temporary interest rate balancing account should terminate with the next cost of capital proceeding.

12. This decision should be effective immediately with the cost of capital effective in rates on the first day of the full month following this decision.

13. These proceedings should remain open for Phase 2.

O R D E R

IT IS ORDERED that:

1. California Water Service Company's cost of capital for its base year 2009 operations is as follows:

California Water Adopted Base Year 2009 – A.08-05-002					
	Ratio	**Cost**	**Weighted**	**Net to Gross**	**Pre-Tax Cost**
Long-Term Debt	45.02%	6.72%	3.03%		3.03%
Incremental Debt	1.60%	8.30%	0.13%		0.13%
Preferred Stock	0.38%	4.19%	0.02%		0.02%
Equity	53.00%	10.20%	5.41%	1.79	9.68%
	100.00%		8.58%		12.85%

2. California American Water Company's cost of capital for its base year 2009 operations is as follows:

California American Adopted Base Year 2009 – A.08-05-003					
	Ratio	**Cost**	**Weighted**	**Net to Gross**	**Pre-Tax Cost**
Long-Term Debt	58%	6.48%	3.76%		3.76%
Incremental Debt	0%	0.00%	0.00%		0.00%
Equity	42%	10.20%	4.28%	1.75	7.50%
	100%		8.04%		11.26%

3. Golden State Water Company's (Golden State) cost of capital for its base year 2009 operations is as follows:

Golden State Adopted Base Year 2009 – A.08-05-004					
	Ratio	Cost	Weighted	Net to Gross	Pre-Tax Cost
Long-Term Debt	46.00%	7.49%	3.45%		3.45%
Incremental	3.00%	8.30%	0.25%		0.25%

Debt (a)					
Equity	51.00%	10.20%	5.20%	1.80	9.36%
	100%		8.90%		13.06%

4. The temporary interest rate balancing account described in Conclusions of Law 9, 10, and 11 is adopted.

5. California Water Service Company shall file a Tier 1 advice letter to implement the rate changes to reflect the change in the cost of capital and modify its preliminary statement to implement the temporary interest rate balancing account adopted herein.

6. California Water Service Company shall file a Tier 1 advice letter to implement the rate changes to reflect the change in the cost of capital and modify its preliminary statement to implement the temporary interest rate balancing account adopted herein.

7. Golden State Water Company shall file a Tier 1 advice letter to implement the rate changes to reflect the change in the cost of capital and modify its preliminary statement to implement the temporary interest rate balancing account adopted herein.

8. All advice letters required in Ordering Paragraphs 5, 6, and 7 shall be filed within 30 days of the date of this order, the rate changes to reflect the change in the cost of capital shall be effective on the date of the filing subject to the determination by the Division of Water and Audits that the advice letters are in compliance with this decision.

9. These proceedings remain open for Phase 2.

This order is effective today.

Dated May 7, 2009, at San Francisco, California.

MICHAEL R. PEEVEY

President
DIAN M. GRUENEICH
JOHN A. BOHN
RACHELLE B. CHONG
TIMOTHY ALAN SIMON
Commissioners