

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Water and wastewater  
industry annual reestablishment  
of authorized range of return on  
common equity of water and  
wastewater utilities pursuant to  
Section 367.081(4)(f), F.S.

DOCKET NO. 010006-WS  
ORDER NO. PSC-01-1226-PAA-WS  
ISSUED: June 1, 2001

The following Commissioners participated in the disposition of  
this matter:

E. LEON JACOBS, JR., Chairman  
J. TERRY DEASON  
LILA A. JABER  
BRAULIO L. BAEZ  
MICHAEL A. PALECKI

NOTICE OF PROPOSED AGENCY ACTION ORDER  
ESTABLISHING AUTHORIZED RANGE OF RETURNS ON COMMON EQUITY

BY THE COMMISSION:

NOTICE is hereby given by the Florida Public Service  
Commission that the action discussed herein is preliminary in  
nature and will become final unless a person whose interests are  
substantially affected files a petition for a formal proceeding,  
pursuant to Rule 25-22.029, Florida Administrative Code.

RANGE OF RETURNS ON COMMON EQUITY

Section 367.081(4)(f), Florida Statutes, authorizes this  
Commission to establish, not less than once each year, a leverage  
formula to calculate a reasonable range of returns on equity (ROE)  
for water and wastewater (WAW) utilities. We established the  
current leverage formula by Proposed Agency Action (PAA) Order No.  
PSC-00-1162-PAA-WS, issued June 26, 2000, in Docket No. 000006-WS,  
which was made final and effective by Consummating Order No. PSC-  
00-1299-CO-WS, issued July 18, 2000.

DOCUMENT NUMBER-DATE

06872 JUN 15

F.P.S.C.-RECORDS/REPORTING

The appropriate leverage formula is as follows:

$$\text{Return on Common Equity} = 8.41\% + 0.731/\text{Equity Ratio}$$

Where the Equity Ratio = Common Equity / (Common Equity + Preferred Equity + Long-Term and Short-Term Debt)

Range: 9.14% @ 100% equity to 10.24% @ 40% equity

Except for one minor correction and one minor modification to the existing methodology, specifically to the capital asset pricing model (CAPM) market return, we find it appropriate to retain the existing leverage formula methodology for the following reasons.

The current leverage formula methodology reflects current capital market conditions; i.e., interest rates, stock prices, dividend forecasts, and investor expectations. This is the appropriate prudent cost basis for determining a utility's required return on equity. The current method is flexible in that we can update it in response to changes in the cost of capital. It is an objective method for estimating the cost of equity for WAW utilities. Moreover, the current leverage formula methodology reflects business risk conditions specific to the water utility industry.

We find it appropriate to make a minor correction to include a 3% flotation cost allowance in the calculation of the market return in the CAPM model. The existing CAPM model does not have a flotation cost allowance. We also find it appropriate to make a minor modification to add 10 basis points to the market return in the CAPM model to allow for the quarterly compounding of dividends. This adjustment is appropriate for non-regulated firms. Most of the firms used to calculate the market return are non-regulated. The correction and modification together add about six basis points to the approved range for the ROE.

The leverage formula depends on four basic assumptions. They are: 1) Business risk is similar for all WAW utilities; 2) The cost of equity is a function of the equity ratio; 3) The marginal weighted average cost of investor capital is constant over the equity ratio range of 40% to 100%; and 4) The cost rate at an assumed Moody's Baa3 bond rating plus 50 basis points represents

the average marginal cost of debt to a Florida WAW utility over an equity ratio range of 40% to 100%.

In addition, the leverage formula is assumed to be appropriate for the average Florida WAW utility. The leverage formula relies on two return on equity models and several adjustments for differences in risk and debt cost to conform the model results to the average Florida WAW utility. The models are as follows: an annual Discounted Cash Flow (DCF) model applied to an index of four water utilities that have publicly traded stock and are followed by the Value Line Investment Survey (Value Line) and have prospective growth rates; and a CAPM using a market return for a large number of dividend paying stocks followed by Value Line, the yield on 30-year Treasury Bonds projected by the Blue Chip Financial Forecasts, and the average beta of the index of water utilities.

The results of the above models are averaged and adjusted in the following manner: a bond yield differential reflecting the difference in yields between an A+/A1 rated bond, which is the average bond rating for the water company index, and a BBB-/Baa3 rated bond. Florida WAW utilities are assumed to be comparable to water companies with the lowest investment grade bond rating, which is Baa3. This adjustment compensates for the difference between credit quality of the water company index and the assumed credit quality of Florida WAW utilities. We find that regulated utilities should be at least investment grade. Moreover, a private placement premium of 50 basis points reflects the difference in yields on publicly traded debt and privately placed debt, which is illiquid. Investors require a premium for the lack of liquidity of privately placed debt.

After the above adjustments, the resulting cost of equity estimate is included in the average capital structure for the water utilities. The cost of equity is determined at a 40% equity ratio, and the leverage formula is derived. The leverage formula derived using the current methodology as modified and updated financial data is presented on Attachment 1.

For the foregoing reasons, we find it appropriate to base the authorized range of returns on common equity for Florida WAW utilities on the following formula:

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Return on Common Equity = 8.41% + 0.731/Equity Ratio

We further limit the authorized return on common equity to a maximum of 10.24% for all equity ratios of less than 40%. The approved leverage formula produces a range of returns on common equity from 9.14% to 10.24%.

Upon expiration of the protest period, if a timely protest is not received from a substantially affected person, this Order shall become final and effective upon the issuance of a Consummating Order. However, this docket shall remain open to allow our staff to monitor the movement in capital costs and to readdress the reasonableness of the leverage formula as conditions warrant, until next year's docket is opened.

Based on the foregoing, it is

ORDERED by the Florida Public Service Commission that the appropriate formula for measuring returns on common equity for water and wastewater utilities shall be as set forth in the body of this Order. It is further

ORDERED that returns on common equity are hereby capped at 10.24 percent for all water and wastewater utilities with equity ratios of less than 40 percent in order to discourage imprudent financial risk. It is further

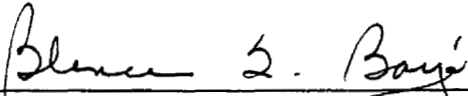
ORDERED that all matters contained in Attachment 1 of this Order are incorporated herein by reference. It is further

ORDERED that the provisions of this Order, issued as proposed agency action, shall become final and effective upon the issuance of a Consummating Order unless an appropriate petition, in the form provided by Rule 28-106.201, Florida Administrative Code, is received by the Director, Division of Records and Reporting, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, by the close of business on the date set forth in the "Notice of Further Proceedings" attached hereto. It is further

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ORDERED that this docket shall remain open to allow this Commission to monitor the movement in capital costs and to readdress the reasonableness of the leverage formula as conditions warrant, until next year's docket is opened.

By ORDER of the Florida Public Service Commission this 1st day of June, 2001.

  
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BLANCA S. BAYÓ, Director  
Division of Records and Reporting

( S E A L )

RRJ

DISSENT

Commissioner Jaber dissented from the Commission's decision with the following opinion:

We hold each regulated industry to the same standard as it relates to their responsibility to provide efficient quality of service and to maintain consumer protections. This is appropriate. However, we currently hold only water and wastewater utilities to the strict application of return on equity (ROE) models that incorrectly assume that business risk is similar for all water and wastewater utilities. We wrongly assume that water and wastewater utilities are less risky than other rate base regulated industries. In fact, we calculate the current leverage formula used here in Florida by applying the model to an index of out-of-state water utilities that have publicly traded stock. Moreover, just by their size alone, Florida water and wastewater companies seem to have more risk. Accordingly, I believe that the current regulatory treatment in the calculation of the leverage formula is no longer appropriate.

The water and wastewater industry is a rising cost industry with similar characteristics of the electric industry. For example, both industries are expected to fully comply with all environmental regulations. These businesses are expected to be financially viable and responsible. Therefore, I believe that the leverage formula methodology to determine the appropriate rate of return on equity for the water and wastewater industry could, as our staff's recommendation suggests, incorporate the use of an electric and gas composite authorized return on equity. This approach is a deviation from current practice and would yield a higher return on equity than under the existing leverage formula methodology. I believe that this would result in a fairer treatment among industries with regard to the issue of return on equity. In supporting this change, I would continue to hold this industry to the same standard that we expect of all of the utilities we regulate, which is to provide its customers with adequate, safe, and reliable service.

NOTICE OF FURTHER PROCEEDINGS OR JUDICIAL REVIEW

The Florida Public Service Commission is required by Section 120.569(1), Florida Statutes, to notify parties of any administrative hearing that is available under Section 120.57, Florida Statutes, as well as the procedures and time limits that apply. This notice should not be construed to mean all requests for an administrative hearing will be granted or result in the relief sought.

Mediation may be available on a case-by-case basis. If mediation is conducted, it does not affect a substantially interested person's right to a hearing.

The action proposed herein is preliminary in nature. Any person whose substantial interests are affected by the action proposed by this order may file a petition for a formal proceeding, in the form provided by Rule 28-106.201, Florida Administrative

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Code. This petition must be received by the Director, Division of Records and Reporting, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, by the close of business on June 22, 2001.

In the absence of such a petition, this order shall become final and effective upon the issuance of a Consummating Order.

Any objection or protest filed in this docket before the issuance date of this order is considered abandoned unless it satisfies the foregoing conditions and is renewed within the specified protest period.

SUMMARY OF RESULTS  
Leverage Formula Update

	<u>2000</u>	<u>2001</u>
(A) Allowed ROE		
(B) DCF ROE for Water Index	8.63%	9.27%
(C) CAPM ROE for Water Index	<u>9.33%</u>	<u>9.08%</u>
AVERAGE	8.98%	9.18%
Bond Yield Differential	.43%	.41%
Private Placement Premium	.50%	.50%
Adjustment to Reflect Required Equity		
Return at a 40% Equity Ratio	<u>.03%</u>	<u>.15%</u>
Cost of Equity for Average Florida WAW		
Utility at a 40% Equity Ratio	<u>9.94%</u>	<u>10.24%</u>

2000 Leverage Formula

Return on Common Equity	=	8.99% + .376/ER
Range of Returns on Equity	=	9.37% - 9.94%

2001 Leverage Formula

Return on Common Equity	=	8.41% + .731/ER
Range of Returns on Equity	=	9.14% - 10.24%



Marginal Cost of Investor Capital  
 Average Water and Wastewater Utility

<u>Capital Component</u>	<u>Ratio</u>	<u>Marginal Cost Rate</u>	<u>Weighted Marginal Cost Rate</u>
Common Equity	43.66%	10.09%	4.40%
Total Debt	<u>56.34%</u>	8.41% *	<u>4.74%</u>
	100.00%		9.14%

A 40% equity ratio is the floor for calculating the required return on common equity. The return on equity at a 40% equity ratio is  $8.41\% + 0.731/.40 = 10.24\%$

Marginal Cost of Investor Capital  
 Average Water & Wastewater Utility at 40% Equity Ratio

<u>Capital Component</u>	<u>Ratio</u>	<u>Marginal Cost Rate</u>	<u>Weighted Marginal Cost Rate</u>
Common Equity	40.00%	10.24%	4.10%
Total Debt	<u>60.00%</u>	8.41% *	<u>5.05%</u>
	100.00%		9.14%

Where:  $ER = \text{Equity Ratio} = \frac{\text{Common Equity}}{(\text{Common Equity} + \text{Preferred Equity} + \text{Long-Term Debt} + \text{Short-Term Debt})}$

\* Assumed Baa3 rate for March 2001 plus a 50 basis point private placement premium.

Source: Moody's Credit Perspectives

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COST OF EQUITY

Attachment 1  
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VALUE LINE WATER UTILITY INDUSTRY

YEAR 2001 Quarter: 1st

Value Line Issue: Ed. 9, Feb 2, 2001

MARCH

COMPANY	DIV1	DIV2	DIV3	DIV4	EPS4	ROE4	GR1-4	GR4+	HI-PR
AMERICAN STATES WATER	1.30	1.33	1.37	1.40	2.40	10.50	1.0250	1.0438	33.49
AMERICAN WATER WORKS	0.94	0.98	1.02	1.06	2.45	11.00	1.0409	1.0624	33.50
CALIFORNIA WATER SVC	1.12	1.14	1.16	1.18	2.15	15.00	1.0175	1.0677	28.60
PHILADELPHIA SUBURBAN	0.62	0.65	0.68	0.72	1.30	12.50	1.0511	1.0558	24.24
AVERAGE	0.9950	1.0256	1.0572	1.0900 1.1526	2.08	12.2500	1.0336	1.0574	

APRIL

S&P STOCK  
 GUIDE: APR.  
 2001 with  
 March Stock  
 Prices

Annual DCF Results

9.27%

Stock Price Less  
 Flootation

\$26.68

PV of Cash Flows

\$26.68 = 0.92204 + 0.86976 + 0.82056 + 0.77762 + 23.29472

Source:

S&P April Stock Guide

Value Line Issue Ed. 9, Feb 2, 2001

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ANNUAL DISCOUNTED CASH FLOW MODEL

\$26.68 = March 2001 average stock price  
less 3% flotation cost

9.27% = Cost of equity required to match  
the current stock price with the  
expected cash flows

Sources:

1. Stock Prices - S&P Stock Guide, April 2001 Edition
2. DPS, EPS, ROE - Value Line Edition 9, February 2, 2001.

Capital Asset Pricing Model Cost of Equity for  
Water and Wastewater Industry

CAPM analysis formula

$$K = RF + \text{Beta}(\text{MR} - \text{RF})$$

K = Investor's required rate of return

RF = Risk-free rate (Blue Chip forecast for 30-year Treasury bond)

Beta = Measure of industry-specific risk (Average for water utilities followed by Value Line)

MR = Market return

$$\underline{9.08\%} = 5.34\% + .61(11.47\% - 5.34\%)$$

**Note:** The Commission estimated the market return using an annual DCF model for a large number of dividend paying stocks followed by Value Line. For March 2001 stock prices, the result was 11.37% including the 3% flotation cost allowance. The Commission added 10 basis points to allow for the quarterly compounding of dividends. The resulting market return is 11.47%.

Source: Blue Chip Financial Forecasts, April 1, 2001  
Value Screen CD 2.0, April 2001

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BOND YIELD  
 DIFFERENTIALS  
 Public Utility Long Term Bond Yield  
 Averages  
 Source: Moody's Credit Perspectives  
 Long-Term Corporate Bond Yield Averages - Avg. Public  
 Utility

UPDATED: 04/23/20  
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120 Month Average -		0.0905	0 0905	0.0464	0.0464	0.0464	0.0916	0.0916	0 0916	0.0916										
YEAR	MONTH	Aaa	SPREA D	Aa1	SPREA D	Aa2	SPREA D	Aa3	SPREA D	A1	SPREA D	A2	SPREA D	A3	SPREA D	Baa1	SPREA D	Baa2	SPREA D	Baa3
	MAR	7.31	0 10	7.41	0 10	7.51	0 06	7.57	0 06	7.62	0 06	7.68	0 06	7.74	0 06	7.79	0 06	7.85	0 06	7.91
	FEB	7.46	0 08	7.54	0 08	7.62	0 04	7.66	0 04	7.70	0 04	7.74	0 07	7.81	0 07	7.87	0 07	7.94	0 07	8.01
	JAN	7.53	0 10	7.63	0 10	7.73	0 02	7.75	0 02	7.78	0 02	7.80	0 06	7.86	0 06	7.93	0 06	7.99	0 06	8.05
	DEC	7.51	0 14	7.65	0 14	7.79	0 02	7.81	0 02	7.82	0 02	7.84	0 06	7.90	0 06	7.95	0 06	8.01	0 06	8.07
	NOV	7.71	0 16	7.87	0 16	8.03	0 03	8.06	0 03	8.08	0 03	8.11	0 05	8.16	0 05	8.20	0 05	8.25	0 05	8.30
	OCT	7.80	0 14	7.94	0 14	8.08	0 02	8.10	0 02	8.12	0 02	8.14	0 05	8.19	0 05	8.24	0 05	8.29	0 05	8.34
	SEP	7.95	0 08	8.03	0 08	8.11	0 04	8.15	0 04	8.19	0 04	8.23	0 03	8.26	0 03	8.29	0 03	8.32	0 03	8.35
	AUG	7.89	0 03	7.92	0 03	7.95	0 06	8.01	0 06	8.07	0 06	8.13	0 04	8.17	0 04	8.21	0 04	8.25	0 04	8.29
	JULY	8.00	0 05	8.05	0 05	8.10	0 05	8.15	0 05	8.20	0 05	8.25	0 03	8.28	0 03	8.30	0 03	8.33	0 03	8.36
	JUNE	7.96	0 07	8.03	0 07	8.10	0 09	8.19	0 09	8.27	0 09	8.36	0 04	8.40	0 04	8.43	0 04	8.47	0 04	8.51
	MAY	8.22	0 11	8.33	0 11	8.44	0 09	8.53	0 09	8.61	0 09	8.70	0 05	8.75	0 05	8.81	0 05	8.86	0 05	8.91
	APR	7.95	0 11	8.06	0 11	8.17	0 06	8.23	0 06	8.29	0 06	8.35	0 02	8.37	0 02	8.38	0 02	8.40	0 02	8.42
	MAR	7.87	0 06	7.93	0 06	7.99	0 10	8.09	0 10	8.18	0 10	8.28	0 04	8.32	0 04	8.36	0 04	8.40	0 04	8.44
	FEB	7.82	0 09	7.91	0 09	7.99	0 09	8.08	0 09	8.16	0 09	8.25	0 03	8.28	0 03	8.30	0 03	8.33	0 03	8.36
2000	JAN	7.95	0 11	8.06	0 11	8.17	0 06	8.23	0 06	8.29	0 06	8.35	0 02	8.37	0 02	8.38	0 02	8.40	0 02	8.42
	DEC	7.74	0 13	7.87	0 13	8.00	0 05	8.05	0 05	8.09	0 05	8.14	0 05	8.19	0 05	8.23	0 05	8.28	0 05	8.33
	NOV	7.56	0 13	7.69	0 13	7.82	0 04	7.86	0 04	7.90	0 04	7.94	0 06	8.00	0 06	8.06	0 06	8.12	0 06	8.18
	OCT	7.73	0 11	7.85	0 11	7.96	0 03	7.99	0 03	8.03	0 03	8.06	0 09	8.15	0 09	8.23	0 09	8.32	0 09	8.41
	SEP	7.55	0 14	7.69	0 14	7.82	0 04	7.86	0 04	7.89	0 04	7.93	0 09	8.02	0 09	8.10	0 09	8.19	0 09	8.28
	AUG	7.54	0 14	7.68	0 14	7.82	0 03	7.85	0 03	7.88	0 03	7.91	0 08	7.99	0 08	8.08	0 08	8.16	0 08	8.24
	JULY	7.34	0 14	7.48	0 14	7.62	0 03	7.65	0 03	7.68	0 03	7.71	0 09	7.80	0 09	7.88	0 09	7.97	0 09	8.06
	JUNE	7.37	0 15	7.52	0 15	7.67	0 02	7.69	0 02	7.72	0 02	7.74	0 10	7.84	0 10	7.93	0 10	8.03	0 10	8.13
	MAY	7.09	0 15	7.24	0 15	7.38	0 03	7.41	0 03	7.44	0 03	7.47	0 09	7.56	0 09	7.65	0 09	7.74	0 09	7.83
	APR	6.80	0 16	6.96	0 16	7.11	0 04	7.15	0 04	7.18	0 04	7.22	0 10	7.32	0 10	7.41	0 10	7.51	0 10	7.61
	MAR	6.78	0 17	6.95	0 17	7.11	0 05	7.16	0 05	7.21	0 05	7.26	0 10	7.36	0 10	7.45	0 10	7.55	0 10	7.65
	FEB	6.56	0 19	6.75	0 19	6.94	0 05	6.99	0 05	7.04	0 05	7.09	0 11	7.20	0 11	7.30	0 11	7.41	0 11	7.52
1999	JAN	6.41	0 21	6.62	0 21	6.82	0 05	6.87	0 05	6.92	0 05	6.97	0 11	7.08	0 11	7.19	0 11	7.30	0 11	7.41
	DEC	6.43	0 18	6.61	0 18	6.78	0 04	6.82	0 04	6.87	0 04	6.91	0 11	7.02	0 11	7.13	0 11	7.24	0 11	7.35
	NOV	6.59	0 15	6.74	0 15	6.89	0 05	6.94	0 05	6.98	0 05	7.03	0 09	7.12	0 09	7.22	0 09	7.31	0 09	7.40
	OCT	6.64	0 08	6.72	0 08	6.80	0 05	6.85	0 05	6.91	0 05	6.96	0 06	7.02	0 06	7.07	0 06	7.13	0 06	7.19
	SEP	6.66	0 06	6.72	0 06	6.78	0 05	6.83	0 05	6.88	0 05	6.93	0 07	7.00	0 07	7.06	0 07	7.13	0 07	7.20
	AUG	6.75	0 06	6.81	0 06	6.87	0 04	6.91	0 04	6.96	0 04	7.00	0 07	7.07	0 07	7.13	0 07	7.20	0 07	7.27
	JULY	6.80	0 06	6.86	0 06	6.91	0 04	6.95	0 04	6.99	0 04	7.03	0 07	7.10	0 07	7.16	0 07	7.23	0 07	7.30
	JUNE	6.80	0 06	6.86	0 06	6.91	0 04	6.95	0 04	6.99	0 04	7.03	0 06	7.09	0 06	7.15	0 06	7.21	0 06	7.27
	MAY	6.94	0 04	6.98	0 04	7.02	0 05	7.07	0 05	7.11	0 05	7.16	0 06	7.22	0 06	7.28	0 06	7.34	0 06	7.40
	APR	6.94	0 04	6.98	0 04	7.02	0 05	7.07	0 05	7.11	0 05	7.16	0 07	7.23	0 07	7.30	0 07	7.37	0 07	7.44
	MAR	6.96	0 04	7.00	0 04	7.04	0 04	7.08	0 04	7.12	0 04	7.16	0 07	7.23	0 07	7.30	0 07	7.37	0 07	7.44
	FEB	6.91	0 04	6.95	0 04	6.99	0 04	7.03	0 04	7.08	0 04	7.12	0 08	7.20	0 08	7.28	0 08	7.36	0 08	7.44
1998	JAN	6.85	0 05	6.90	0 05	6.94	0 04	6.98	0 04	7.01	0 04	7.05	0 08	7.13	0 08	7.20	0 08	7.28	0 08	7.36

12/31/00 Equity Ratios of Water Index Companies

	Common Equity (,000)	Total Debt (,000)	Preferred Equity (,000)	Equity Ratio
American States Water Co.	\$192,723.0	\$222,187.0	\$1,920.0	46.24%
American Water Works	\$1,669,677.0	\$2,844,739.0	\$52,693.0	36.56%
California Water Service Co.	\$198,834.0	\$204,577.0	\$3,475.0	48.87%
Philadelphia Suburban Corp.	\$432,347.0	\$573,706.0	\$0.0	<u>42.97%</u>
			Average	43.66

Source: Utilities' December 31, 2000, 4th quarters - S.E.C. 10-Qs