

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

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

DOCKET NO. 000006-WS
ORDER NO. PSC-00-1162-PAA-WS
ISSUED: June 26, 2000

The following Commissioners participated in the disposition of this matter:

JOE GARCIA, Chairman
J. TERRY DEASON
SUSAN F. CLARK
E. LEON JACOBS, JR.
LILA A. JABER

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 for water and wastewater (WAW) utilities. We established the current leverage formula by Order No. PSC-99-1382-CO-WS, issued July 19, 1999. This order made Order No. PSC-99-1224-PAA-WS, which presented the current leverage formula, final and effective on June 21, 1999.

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FPSC-RECORDS/REPORTING

Using current financial data, our calculation of the current leverage formula is as follows:

$$\text{Return on Common Equity} = 8.99\% + 0.376/\text{Equity Ratio}$$

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

Range: 9.37% @ 100% equity to 9.94% @ 40% equity

The leverage formula depends on four basic assumptions:

- 1) Business risk is similar for all WAW utilities.
- 2) The cost of equity is an exponential 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%.
- 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:

- A Discounted Cash Flow (DCF) model applied to an index of six WAW utilities that have publicly traded stock and are followed by the Value Line Investment Survey (Value Line). The DCF model is an annual model and uses prospective growth rates.
- A Capital Asset Pricing Model (CAPM) using a market return for all 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 WAW utilities.

The results of the above models are averaged and the resulting estimate is 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 WAW company index, and a BBB-/Baa3 rated bond. Florida WAW utilities are assumed to be comparable to WAW companies with the lowest investment grade bond rating, which is Baa3. This adjustment compensates for the difference between credit quality of the WAW company index and the assumed credit quality of Florida WAW utilities.
- A private placement premium of 50 basis points that 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 WAW 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 with updated financial data is presented on Attachment 1.

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

$$\text{Return on Common Equity} = 8.99\% + 0.376/\text{Equity Ratio}$$

We further limit the authorized return on common equity to a maximum of 9.94% for all equity ratios of less than 40%. The approved leverage formula produces a range of returns on common equity from 9.37% to 9.94%. Attachment 1, page 1, presents the calculation of the approved 2000 leverage formula.

If a timely protest is not received upon expiration of the protest period, this Order shall become final and effective upon the issuance of a Consummating Order. This docket should 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

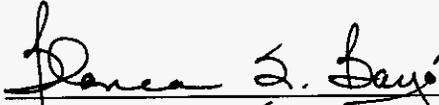
ORDERED that returns on common equity are hereby capped at 9.94 percent for all water and wastewater utilities with equity ratios of less than 40 percent in order to discourage imprudent financial risk. It is further

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

ORDERED that upon expiration of the protest period and subsequent to the issuance of a Consummating Order, 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 26th day of June, 2000.



BLANCA S. BAYÓ, Director
Division of Records and Reporting

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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 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 July 17, 2000.

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>1999</u>	<u>2000</u>
(A) DCF ROE for WAW Index	8.77%	8.63%
(B) CAPM ROE for WAW Index	<u>9.19%</u>	<u>9.33%</u>
AVERAGE [(A+B)/2]	8.98%	8.98%
Bond Yield Differential	.42%	.43%
Private Placement Premium	.50%	.50%
Adjustment to Reflect Required Equity		
Return at a 40% Equity Ratio	<u>.22%</u>	<u>.03%</u>
Cost of Equity for Average Florida WAW		
Utility at a 40% Equity Ratio	<u>10.12%</u>	<u>9.94%</u>

1999 Leverage Formula (Currently in effect)

Return on Common Equity	=	8.14% + 0.789/ER
Range of Returns on Equity	=	8.93% - 10.12%

2000 Leverage Formula (Commission Approved)

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

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	41.32%	9.91%	4.09%
Total Debt	<u>58.68%</u>	8.99% *	<u>5.28%</u>
	100.00%		9.37%

A 40% equity ratio is the floor for calculating the required return on common equity. The return on equity at a 40% equity ratio = $8.99\% + 0.376/.40 = 9.94\%$

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%	9.94%	3.97%
Total Debt	<u>60.00%</u>	8.99% *	<u>5.40%</u>
	100.00%		9.37%

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

* Assumed Baa3 rate for March 2000 plus a 50 basis point private placement premium.

Source: Moody's Credit Perspectives

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COST OF EQUITY FOR WAW INDEX COMPANIES COST OF

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VALUE LINE WAW UTILITY INDUSTRY

COMPANY	2000 Quarter 1st				Value line Edition 9, February						
	DIV1	DIV2	DIV3	DIV4	Value Line Ed. 9 - 2/04/00 EPS4	ROE4	GR1-4	GR4+	MARCH		
									HI-PR	LO-PR	AVER-PR
AMERICAN WATER WORKS	0.94	1.01	1.08	1.15	2.30	12.00	1.07	1.06	23.75	18.94	21.34
AMERICAN STATES	1.32	1.35	1.37	1.40	2.25	11.00	1.02	1.04	31.81	26.00	28.91
CALIFORNIA WATER SVC	1.10	1.12	1.13	1.15	2.25	13.00	1.01	1.06	26.88	22.25	24.56
E'TOWN (CONSUMERS	2.04	2.12	2.21	2.30	3.30	10.00	1.04	1.03	65.00	63.25	64.13
PHILADELPHIA	0.74	0.77	0.81	0.85	1.50	12.50	1.05	1.05	19.25	16.50	17.88
UNITED WATER RESOURCES	0.96	0.97	0.99	1.00	1.55	12.50	1.01	1.04	34.94	34.00	34.47
AVERAGE	1.1833	1.2232	1.2648	1.3083 1.3724	2.1917		1.0343	1.0490			31.8802

COST OF EQUITY					March						
8.72% Quarter					8.63% Annual						
0.2917	0.2857	0.2798	0.2740	0.2774	0.2716	0.2660	0.2605	0.2638	0.2584	0.2530	
0.2478	0.2510	0.2458	0.2407	0.2357							
					1.1030	1.0497	0.9992	0.9538			
30.9238											

Source: April 2000 S&P STOCK GUIDE with March Stock

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ANNUAL DISCOUNTED CASH FLOW MODEL

\$30.92 = March 2000 average stock price less 3% flotation costs, or $P_0(1-fc)$
8.63% = Cost of equity required to match the current stock price with the expected cash flows

Sources:

1. Stock Prices - S&P Stock Guide , April 2000 Edition
2. DPS, EPS, ROE - Value Line Edition 9, February 4, 2000.

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 WAW
utilities followed by Value Line)

MR = Market return

$$\underline{9.33\%} = 6.08\% + .55(11.98\% - 6.08\%)$$

Source: Blue Chip Financial Forecasts, April 1, 2000
Value Screen CD 2.0, April 2000

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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

120 Month Average -		0.0910	0.0910	0.0496	0.0496	0.0496	0.0939	0.0939	0.0939	0.0939	0.0939	0.0939	0.0939	0.0939	0.0939	0.0939	0.0939	0.0939	0.0939	0.0939
YEAR	MONTH	Aaa	SPREAD	Aa1	SPREAD	Aa2	SPREAD	Aa3	SPREAD	A1	SPREAD	A2	SPREAD	A3	SPREAD	Baa1	SPREAD	Baa2	SPREAD	Baa3
2000	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
	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

12/31/99 Equity Ratios of WAW Index Companies

	Common Equity (Thousands)	Total Debt (Thousands)	Preferred Equity (Thousands)	Equity Ratio
American States Water Co.	\$158,846.0	\$188,663.0	\$2,000.0	45.45%
American Water Works	\$1,634,798.0	\$2,671,316.0	\$93,811.0	37.16%
California Water Service Co.	\$177,182.0	\$172,822.0	\$3,475.0	50.13%
E'Town Water Co.	\$229,233.0	\$356,009.0	\$12,227.0	38.37%
Philadelphia Suburban Corp.	\$367,141.0	\$529,015.0	\$1,760.0	40.89%
United Water Resource	\$468,790.0	\$794,136.0	\$42,104.0	<u>35.92%</u>
			Average	41.32%

Source: Utilities' December 31, 1999, 4 th quarter - S.E.C. 10-Qs