

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Annual reestablishment ) DOCKET NO. 940006-WS  
of authorized range of returns ) ORDER NO. PSC-94-1051-FOF-WS  
on common equity for water and ) ISSUED: August 29, 1994  
wastewater utilities, pursuant )  
to Section 367.081 (4)(f), )  
Florida Statutes. )  
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The following Commissioners participated in the disposition of this matter:

J. TERRY DEASON, Chairman  
SUSAN F. CLARK  
JULIA L. JOHNSON  
DIANE K. KIESLING

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 proposed herein is preliminary in nature and will become final unless a person whose interests are substantially affected files a petition for a formal proceeding in accordance with Rule 25-22.029, Florida Administrative Code.

Pursuant to Section 367.081(4)(f), Florida Statutes, this Commission is authorized to establish, not less than once each year, a leverage formula to calculate a reasonable range of returns on common equity for water and wastewater utilities. We last revised the leverage formula by Order No. PSC-93-1107-FOF-WS, issued July 29, 1993, in Docket No. 930006-WS.

In calculating the updated leverage formula, we have utilized the same methodologies used in prior leverage formula dockets. The basic assumptions are that: business risk is similar for all water and wastewater utilities; the cost of equity is an exponential function of the equity ratio; the marginal weighted average cost of investor capital is constant over the 40% to 100% equity ratio range; and given adequate management and effective regulation, a Moody's Baa2 bond rating is representative of the average marginal cost of debt to a Florida water and wastewater utility over a 40% to 100% equity ratio range.

DOCUMENT APPROVED-DATE

08866 AUG 29 1994

FPSC-RECORDS/REPORTING

Our calculation of an updated leverage formula results in a range of returns on equity from 9.81 percent to 11.34 percent based on a formula of 8.80 percent + 1.014/Equity Ratio. The midpoint of the 9.81 percent to 11.34 percent range has increased by 44 basis points when compared to the existing midpoint.

The difference between the existing leverage formula and the updated formula is the result of changes in underlying market conditions; that is, changes in bond yields and required rates of return. The top of the updated range of returns (the 11.34 percent at a 40 percent equity ratio) has been moderated by the fact that the equity ratio of the index of companies has declined from last year's ratio (from 47.8 percent to 45.7 percent). A lower equity ratio for the index of companies lowers the top of the range of returns for the water and wastewater leverage formula.

The 11.34 percent return on common equity can be divided into three segments. First, we derived a 10.61 percent return on equity by averaging the results of the Discounted Cash Flow (DCF) model and Risk Premium model. We applied the DCF model to an index of publicly traded water and wastewater utilities and the Risk Premium model to an index of publicly traded natural gas utilities. Second, we added a bond yield differential adjustment of 41 basis point to reflect the difference in risk between the indices of companies used in the DCF and Risk Premium models and an average water and wastewater utility in Florida. Third, we added an adjustment of 32 basis points to reflect the required return on equity at a 40 percent equity ratio.

The bond yield differential adjustment of 41 basis points is comprised of the bond yield differential between the yield on A1-rated bonds and the yield on Baa2-rated bonds. The A1 rating is the average bond rating for the natural gas index and water and wastewater index, and the Baa2 rating is the bond rating assumed for the average water and wastewater utility in Florida.

The 32 basis point adjustment represents the difference between the required return on equity at a 40.0 percent equity ratio and the required rate of return at the 45.7 percent equity ratio average for the index of water and wastewater utilities and natural gas utilities. Using the most recently available capital structure for the index of publicly traded water and wastewater utilities and natural gas utilities as a proxy for the capital structure of an average water and wastewater utility in Florida, we calculated the marginal cost of investor capital for an average water and wastewater utility in Florida to be 9.81 percent.

Our analyses are appended to this Order as Attachment 1.

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Based on the foregoing, we find that the appropriate formula for measuring authorized range of returns on common equity for the Florida water and wastewater utilities is as follows:

Return on Common Equity = 8.80% + 1.014/Equity Ratio

In order to discourage imprudent financial risk, we find it appropriate to limit the authorized return on common equity to a maximum of 11.34 percent for all equity ratios of less than 40 percent.

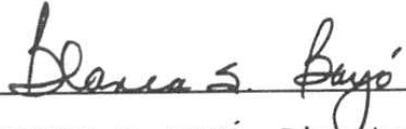
Based on the foregoing, it is, therefore,

ORDERED by the Florida Public Service Commission that the provisions of this Order are issued as proposed agency action and will become final unless an appropriate petition is filed with the Division of Records and Reporting, 101 East Gaines Street, Tallahassee, Florida, 32399-0870, by close of business on the date indicated in the Notice of Further Proceedings or Judicial Review. It is further

ORDERED 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 11.34 percent for all water and wastewater utilities with equity ratios of less than 40 percent in order to discourage imprudent financial risk.

By ORDER of the Florida Public Service Commission, this 29th day of August, 1994.

  
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BLANCA S. BAYÓ, Director  
Division of Records and Reporting

( S E A L )

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NOTICE OF FURTHER PROCEEDINGS OR JUDICIAL REVIEW

The Florida Public Service Commission is required by Section 120.59(4), Florida Statutes, to notify parties of any administrative hearing or judicial review of Commission orders that is available under Sections 120.57 or 120.68, 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 or judicial review will be granted or result in the relief sought.

The action proposed herein is preliminary in nature and will not become effective or final, except as provided by Rule 25-22.029, Florida Administrative Code. Any person whose substantial interests are affected by the action proposed by this order may file a petition for a formal proceeding, as provided by Rule 25-22.029(4), Florida Administrative Code, in the form provided by Rule 25-22.036(7)(a) and (f), Florida Administrative Code. This petition must be received by the Director, Division of Records and Reporting, 101 East Gaines Street, Tallahassee, Florida 32399-0870, by the close of business on September 19, 1994.

In the absence of such a petition, this order shall become effective on the day subsequent to the above date as provided by Rule 25-22.029(6), Florida Administrative Code.

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.

If this order becomes final and effective on the date described above, any party substantially affected may request judicial review by the Florida Supreme Court in the case of an electric, gas or telephone utility or by the First District Court of Appeal in the case of a water or wastewater utility by filing a notice of appeal with the Director, Division of Records and Reporting and filing a copy of the notice of appeal and the filing fee with the appropriate court. This filing must be completed within thirty (30) days of the effective date of this order, pursuant to Rule 9.110, Florida Rules of Appellate Procedure. The notice of appeal must be in the form specified in Rule 9.900(a), Florida Rules of Appellate Procedure.

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SUMMARY OF RESULTS

Leverage Formula Update

	<u>1993</u>	<u>1994</u>
DCF Cost of Equity for Water Index	9.83%	10.50%
Risk Premium Cost of Equity for Gas Index	<u>10.38%</u>	<u>10.72%</u>
AVERAGE	10.11%	10.61%
Bond Yield Differential	.41%	0.41%
Adjustment to Reflect Required Equity Return at a 40% Equity Ratio	<u>.45%</u>	<u>.32%</u>
Cost of Equity for Average Florida Water and Wastewater Utility at a 40% Equity Ratio	<u>10.97%</u>	<u>11.34%</u>

Existing Leverage Formula

Return on Common Equity =  $8.18\% + 1.116/ER$   
Range of Returns on Equity =  $9.30\% - 10.97\%$

Updated Leverage Formula

Return on Common Equity =  $8.80\% + 1.014/ER$   
Range of Returns on Equity =  $9.81\% - 11.34\%$

DCF Analysis of Water Index

	1986	1987	1988	1989	1990	1991	1992	1993	Arithmetic Average Growth Rate	Current Dividend	Current Average Stock Price
American Water Works	0.56	0.64	0.68	0.74	0.80	0.86	0.93	1.00	8.66%	1.08	27.63
Aquarion Company	1.39	1.44	1.51	1.57	1.60	1.62	1.62	1.62	2.23%	1.62	24.06
California Water Services Co.	1.40	1.47	1.60	1.68	1.74	1.80	1.86	1.92	4.63%	1.98	35.38
Consumers Water Company	0.84	0.90	0.98	1.05	1.09	1.11	1.13	1.15	4.56%	1.16	16.63
Philadelphia Suburban Corp.	0.91	0.94	0.94	0.94	1.00	1.00	1.04	1.07	2.37%	1.12	18.13
United Water Resources	0.70	0.77	0.84	0.88	0.88	0.91	0.92	0.92	4.05%	0.92	13.50
Average									4.42%	1.31	22.56

DCF Analysis

$K = D(1)/P(0) + g$

K = Investors' required rate of return

$D(1) = \text{Dividend expected next period} = \$1.31 \times 1.0442 = \$1.37$

$P(0) = \text{Current stock price} = \$22.56$

$g = \text{Projected long-term growth in dividends} = 4.42\%$

$K = \$1.37 / \$22.56 + 4.42\%$

$K = 10.50\%$

Source: Standard & Poor's Stock Guide, August 1994 Edition

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$$\text{Leverage Formula} = 8.80\% + 1.014 / \text{ER}^*$$

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	45.66%	11.02%	5.03%
Total Debt	<u>54.35%</u>	8.80% **	<u>4.78%</u>
	100.00%		9.81%

A 40% equity ratio is the floor for calculating the required return on common equity.  
The return on equity at a 40% equity ratio =  $8.80\% + 1.014 / .40 = 11.34\%$

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%	11.34%	4.53%
Total Debt	<u>60.00%</u>	8.80% **	<u>5.28%</u>
	100.00%		9.81%

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

\*\* Average Baa rate for July 1994  
Source: Moody's Bond Survey, 8/8/94

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Risk Premium Cost of Equity for Moody's Natural Gas  
Distribution Index

Estimated Monthly Risk Premium	3.183 %
Blue Chip Forecast for 30-Year Treasury Bond	<u>7.540 %</u>
	<u>10.723 %</u>

\* Blue Chip Financial Forecasts, August 1, 1994



ESTIMATED MONTHLY RISK PREMIUMS  
 MOODY'S NATURAL GAS DISTRIBUTION INDEX  
 SEPTEMBER 1984 - AUGUST 1994

YEAR	MONTH	Quarterly Cost of Equity Gas	Risk Free Rate	Risk Premium
1984	SEP	16.453	12.63	3.823
	OCT	16.508	12.34	4.168
	NOV	15.927	12.00	3.927
	DEC	15.640	11.55	4.090
1985	JAN	15.290	11.51	3.780
	FEB	15.051	11.46	3.591
	MAR	14.917	11.56	3.357
	APR	14.673	11.92	2.753
	MAY	14.694	11.55	3.144
	JUN	14.588	11.08	3.508
	JUL	14.886	10.48	4.406
	AUG	15.017	10.62	4.397
	SEP	15.604	10.70	4.904
	OCT	15.030	10.78	4.250
	NOV	15.122	10.66	4.462
	DEC	14.672	10.19	4.482
1986	JAN	13.857	9.68	4.177
	FEB	13.780	9.59	4.190
	MAR	13.644	9.26	4.384
	APR	12.944	8.15	4.794
	MAY	12.684	7.58	5.104
	JUN	12.726	8.13	4.596
	JUL	11.818	8.27	3.548
	AUG	11.683	7.88	3.803
	SEP	11.653	7.74	3.913
	OCT	11.408	8.10	3.308
	NOV	11.617	8.06	3.557
	DEC	11.336	7.82	3.516
1987	JAN	11.847	7.66	4.187
	FEB	11.642	7.62	4.022
	MAR	11.563	7.71	3.853
	APR	11.293	7.64	3.653
	MAY	11.759	8.35	3.409
	JUN	11.903	8.85	3.053
	JUL	11.738	8.67	3.068
	AUG	11.856	8.77	3.086
	SEP	11.858	9.06	2.798
	OCT	12.148	9.67	2.478
	NOV	12.926	9.73	3.196
	DEC	13.078	9.10	3.978

ESTIMATED MONTHLY RISK PREMIUMS (continued)

YEAR	MONTH	Quarterly Cost of Equity Gas	Risk Free Rate	Risk Premium
1988	JAN	13.226	9.23	3.996
	FEB	12.850	8.93	3.920
	MAR	12.416	8.48	3.936
	APR	12.396	8.64	3.756
	MAY	12.398	8.97	3.428
	JUN	12.378	9.30	3.078
	JUL	12.049	9.11	2.939
	AUG	12.027	9.28	2.747
	SEP	12.314	9.42	2.894
	OCT	12.070	9.14	2.930
	NOV	12.036	8.96	3.076
	DEC	12.088	9.09	2.998
1989	JAN	12.028	9.10	2.928
	FEB	12.050	9.05	3.000
	MAR	12.060	9.15	2.910
	APR	12.580	9.31	3.270
	MAY	12.480	9.17	3.310
	JUN	12.312	8.93	3.382
	JUL	12.071	8.37	3.701
	AUG	11.882	8.37	3.752
	SEP	11.788	8.13	3.558
	OCT	11.450	8.29	3.160
	NOV	11.462	8.12	3.342
	DEC	11.320	8.00	3.320
1990	JAN	10.978	8.00	2.978
	FEB	11.130	8.37	2.760
	MAR	11.252	8.63	2.622
	APR	11.416	8.73	2.686
	MAY	11.620	8.92	2.700
	JUN	11.710	8.87	2.840
	JUL	11.468	8.60	2.868
	AUG	11.550	8.62	2.930
	SEP	11.830	8.93	2.900
	OCT	11.160	9.08	2.080
	NOV	11.340	8.89	2.450
	DEC	11.070	8.58	2.490

ESTIMATED MONTHLY RISK PREMIUMS (continued)

YEAR	MONTH	Quarterly Cost of Equity Gas	Risk Free Rate	Risk Premium
1991	JAN	11.031	8.27	2.761
	FEB	11.186	8.31	2.876
	MAR	11.171	8.09	3.081
	APR	10.864	8.36	2.504
	MAY	10.810	8.26	2.550
	JUN	10.820	8.31	2.510
	JUL	10.797	8.52	2.277
	AUG	10.783	8.47	2.313
	SEP	10.680	8.15	2.530
	OCT	10.988	7.95	3.038
	NOV	10.742	7.86	2.882
	DEC	10.719	7.80	2.919
1992	JAN	10.580	7.55	3.030
	FEB	10.640	7.46	3.180
	MAR	10.698	7.76	2.938
	APR	10.684	7.90	2.784
	MAY	10.810	7.85	2.960
	JUN	10.740	7.77	2.970
	JUL	10.525	7.70	2.825
	AUG	10.351	7.37	2.981
	SEP	10.170	7.15	3.020
	OCT	9.812	7.05	2.762
	NOV	10.032	7.24	2.792
	DEC	10.113	7.40	2.713
1993	JAN	9.653	7.29	2.363
	FEB	9.518	7.16	2.358
	MAR	9.306	6.87	2.436
	APR	9.086	6.63	2.456
	MAY	9.222	6.63	2.592
	JUN	9.338	6.67	2.668
	JUL	9.547	6.54	3.007
	AUG	8.769	6.33	2.439
	SEP	8.774	6.16	2.614
	OCT	8.813	5.93	2.883
	NOV	8.843	5.89	2.953
	DEC	9.136	6.23	2.906
1994	JAN	9.133	6.26	2.873
	FEB	8.805	6.23	2.575
	MAR	8.885	6.44	2.445
	APR	9.126	6.89	2.236
	MAY	9.431	7.30	2.131
	JUN	9.550	7.47	2.080
	JUL	9.737	7.42	2.317
	AUG	9.723	7.60	2.123
AVERAGE				3.183

SOURCES: Value Line Investment Survey  
 S&P Stock Guide  
 Moody's Bond Survey

BOND YIELD DIFFERENTIALS  
 Public Utility Bond Yield Averages  
 Source: Moody's Bond Survey

120 Month Average - 0.0834		0.1092		0.1092		0.1092				
YEAR	MON	A1 SPREAD	A2 SPREAD	A3 SPREAD	Baa1 SPREAD	Baa2				
	JUL	8.44	0.03	8.47	0.11	8.58	0.11	8.69	0.11	8.80
	JUN	8.28	0.03	8.31	0.11	8.42	0.11	8.53	0.11	8.64
	MAY	8.30	0.03	8.33	0.09	8.42	0.09	8.52	0.09	8.61
	APR	8.19	0.03	8.22	0.08	8.30	0.08	8.39	0.08	8.47
	MAR	7.81	0.04	7.85	0.09	7.94	0.09	8.02	0.09	8.11
	FEB	7.43	0.04	7.47	0.10	7.57	0.10	7.66	0.10	7.76
1994	JAN	7.28	0.05	7.33	0.11	7.44	0.11	7.55	0.11	7.66
	DEC	7.29	0.05	7.34	0.13	7.47	0.13	7.60	0.13	7.73
	NOV	7.26	0.04	7.30	0.13	7.43	0.13	7.56	0.13	7.69
	OCT	6.98	0.05	7.03	0.08	7.11	0.08	7.19	0.08	7.27
	SEP	6.99	0.05	7.04	0.10	7.14	0.10	7.25	0.10	7.35
	AUG	7.19	0.06	7.25	0.11	7.36	0.11	7.48	0.11	7.59
	JUL	7.49	0.05	7.54	0.13	7.67	0.13	7.80	0.13	7.93
	JUN	7.68	0.07	7.75	0.10	7.85	0.10	7.95	0.10	8.05
	MAY	7.79	0.07	7.86	0.11	7.97	0.11	8.07	0.11	8.18
	APR	7.75	0.06	7.81	0.10	7.91	0.10	8.01	0.10	8.11
	MAR	7.85	0.05	7.90	0.07	7.97	0.07	8.03	0.07	8.10
	FEB	8.00	0.04	8.04	0.09	8.13	0.09	8.22	0.09	8.31
1993	JAN	8.23	0.04	8.27	0.10	8.37	0.10	8.47	0.10	8.57
	DEC	8.39	0.04	8.43	0.09	8.52	0.09	8.60	0.09	8.69
	NOV	8.59	0.04	8.63	0.08	8.71	0.08	8.78	0.08	8.86
	OCT	8.50	0.04	8.54	0.07	8.61	0.07	8.69	0.07	8.76
	SEP	8.36	0.04	8.40	0.05	8.45	0.05	8.49	0.05	8.54
	AUG	8.39	0.05	8.44	0.05	8.49	0.05	8.53	0.05	8.58
	JUL	8.53	0.04	8.57	0.04	8.61	0.04	8.65	0.04	8.69
	JUN	8.73	0.05	8.78	0.04	8.82	0.04	8.86	0.04	8.90
	MAY	8.81	0.06	8.87	0.05	8.92	0.05	8.96	0.05	9.01
	APR	8.87	0.06	8.93	0.06	8.99	0.06	9.05	0.06	9.11
	MAR	8.92	0.05	8.97	0.06	9.03	0.06	9.10	0.06	9.16
	FEB	8.87	0.06	8.93	0.05	8.98	0.05	9.04	0.05	9.09
1992	JAN	8.77	0.07	8.84	0.05	8.89	0.05	8.93	0.05	8.98
	DEC	8.82	0.06	8.88	0.06	8.94	0.06	9.01	0.06	9.07
	NOV	8.99	0.06	9.05	0.08	9.13	0.08	9.20	0.08	9.28
	OCT	9.05	0.07	9.12	0.07	9.19	0.07	9.25	0.07	9.32
	SEP	9.09	0.07	9.16	0.06	9.22	0.06	9.28	0.06	9.34
	AUG	9.21	0.08	9.29	0.06	9.35	0.06	9.41	0.06	9.47
	JUL	9.45	0.10	9.55	0.05	9.60	0.05	9.64	0.05	9.69
	JUN	9.49	0.10	9.59	0.07	9.66	0.07	9.72	0.07	9.79
	MAY	9.35	0.09	9.44	0.07	9.51	0.07	9.57	0.07	9.64
	APR	9.35	0.11	9.46	0.06	9.52	0.06	9.58	0.06	9.64
	MAR	9.44	0.11	9.55	0.06	9.61	0.06	9.68	0.06	9.74
	FEB	9.37	0.10	9.47	0.07	9.54	0.07	9.61	0.07	9.68
1991	JAN	9.60	0.11	9.71	0.08	9.79	0.08	9.88	0.08	9.96
	DEC	9.63	0.10	9.73	0.08	9.81	0.08	9.88	0.08	9.96
	NOV	9.80	0.10	9.90	0.07	9.97	0.07	10.05	0.07	10.12
	OCT	9.96	0.09	10.05	0.08	10.13	0.08	10.20	0.08	10.28
	SEP	10.04	0.08	10.12	0.07	10.19	0.07	10.25	0.07	10.32
	AUG	9.87	0.05	9.92	0.07	9.99	0.07	10.05	0.07	10.12
	JUL	9.70	0.05	9.75	0.06	9.81	0.06	9.86	0.06	9.92
	JUN	9.73	0.07	9.80	0.05	9.85	0.05	9.91	0.05	9.96
	MAY	9.94	0.06	10.00	0.05	10.05	0.05	10.11	0.05	10.16
	APR	9.88	0.04	9.92	0.07	9.99	0.07	10.06	0.07	10.13
	MAR	9.77	0.08	9.85	0.07	9.92	0.07	9.99	0.07	10.06
	FEB	9.70	0.06	9.76	0.07	9.83	0.07	9.89	0.07	9.96
1990	JAN	9.50	0.06	9.56	0.06	9.62	0.06	9.68	0.06	9.74
	DEC	9.38	0.06	9.44	0.05	9.49	0.05	9.55	0.05	9.60
	NOV	9.42	0.09	9.51	0.04	9.55	0.04	9.60	0.04	9.64
	OCT	9.45	0.09	9.54	0.03	9.57	0.03	9.61	0.03	9.64
	SEP	9.50	0.08	9.58	0.04	9.62	0.04	9.66	0.04	9.70
	AUG	9.44	0.08	9.52	0.04	9.56	0.04	9.60	0.04	9.64
	JUL	9.41	0.09	9.50	0.05	9.55	0.05	9.59	0.05	9.64

BOND YIELD DIFFERENTIALS  
 Public Utility Bond Yield Averages  
 Source: Moody's Bond Survey

		120 Month Average - 0.0834		0.1092		0.1092		0.1092		
YEAR	MON	A1 SPREAD		A2 SPREAD		A3 SPREAD		Baa1 SPREAD		Baa2
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	JUN	9.55	0.09	9.64	0.05	9.69	0.05	9.75	0.05	9.80
	MAY	9.92	0.07	9.99	0.10	10.09	0.10	10.19	0.10	10.29
	APR	10.13	0.05	10.18	0.10	10.28	0.10	10.39	0.10	10.49
	MAR	10.17	0.06	10.23	0.09	10.32	0.09	10.41	0.09	10.50
	FEB	10.02	0.05	10.07	0.10	10.17	0.10	10.28	0.10	10.38
1989	JAN	10.02	0.06	10.08	0.10	10.18	0.10	10.28	0.10	10.38
	DEC	10.01	0.05	10.06	0.13	10.19	0.13	10.31	0.13	10.44
	NOV	9.91	0.06	9.97	0.11	10.08	0.11	10.20	0.11	10.31
	OCT	9.87	0.03	9.90	0.15	10.05	0.15	10.20	0.15	10.35
	SEP	10.52	0.09	10.61	0.17	10.78	0.17	10.96	0.17	11.13
	AUG	11.06	0.11	11.17	0.17	11.34	0.17	11.52	0.17	11.69
	JUL	10.95	0.09	11.04	0.16	11.20	0.16	11.36	0.16	11.52
	JUN	10.70	0.09	10.79	0.16	10.95	0.16	11.11	0.16	11.27
	MAY	10.72	0.09	10.81	0.19	11.00	0.19	11.19	0.19	11.38
	APR	10.46	0.08	10.54	0.23	10.77	0.23	11.00	0.23	11.23
	MAR	10.03	0.06	10.09	0.20	10.29	0.20	10.49	0.20	10.69
	FEB	10.04	0.06	10.10	0.18	10.28	0.18	10.47	0.18	10.65
1988	JAN	10.68	0.08	10.76	0.19	10.95	0.19	11.15	0.19	11.34
	DEC	10.91	0.07	10.98	0.19	11.17	0.19	11.36	0.19	11.55
	NOV	10.75	0.07	10.82	0.19	11.01	0.19	11.21	0.19	11.40
	OCT	11.26	0.08	11.34	0.19	11.53	0.19	11.72	0.19	11.91
	SEP	11.03	0.19	11.22	0.12	11.34	0.12	11.46	0.12	11.58
	AUG	10.32	0.13	10.45	0.15	10.60	0.15	10.75	0.15	10.90
	JUL	10.00	0.15	10.15	0.16	10.31	0.16	10.46	0.16	10.62
	JUN	9.88	0.14	10.02	0.15	10.17	0.15	10.31	0.15	10.46
	MAY	9.82	0.09	9.91	0.16	10.07	0.16	10.24	0.16	10.40
	APR	9.30	0.08	9.38	0.16	9.54	0.16	9.69	0.16	9.85
	MAR	8.83	0.10	8.93	0.09	9.02	0.09	9.10	0.09	9.19
	FEB	8.90	0.10	9.00	0.08	9.08	0.08	9.16	0.08	9.24
1987	JAN	8.84	0.11	8.95	0.11	9.06	0.11	9.16	0.11	9.27
	DEC	9.02	0.10	9.12	0.12	9.24	0.12	9.37	0.12	9.49
	NOV	9.19	0.09	9.28	0.14	9.42	0.14	9.55	0.14	9.69
	OCT	9.43	0.09	9.52	0.14	9.66	0.14	9.81	0.14	9.95
	SEP	9.44	0.08	9.52	0.15	9.67	0.15	9.81	0.15	9.96
	AUG	9.20	0.09	9.29	0.14	9.43	0.14	9.56	0.14	9.70
	JUL	9.26	0.11	9.37	0.11	9.48	0.11	9.58	0.11	9.69
	JUN	9.53	0.09	9.62	0.14	9.76	0.14	9.89	0.14	10.03
	MAY	9.52	0.07	9.59	0.14	9.73	0.14	9.88	0.14	10.02
	APR	9.05	0.09	9.14	0.16	9.30	0.16	9.47	0.16	9.63
	MAR	9.37	0.11	9.48	0.14	9.62	0.14	9.77	0.14	9.91
	FEB	10.17	0.09	10.26	0.16	10.42	0.16	10.58	0.16	10.74
1986	JAN	10.67	0.12	10.79	0.15	10.94	0.15	11.09	0.15	11.24
	DEC	10.84	0.13	10.97	0.17	11.14	0.17	11.31	0.17	11.48
	NOV	11.36	0.13	11.49	0.18	11.67	0.18	11.86	0.18	12.04
	OCT	11.88	0.13	12.01	0.17	12.18	0.17	12.35	0.17	12.52
	SEP	11.98	0.15	12.13	0.20	12.33	0.20	12.52	0.20	12.72
	AUG	11.97	0.16	12.13	0.20	12.33	0.20	12.53	0.20	12.73
	JUL	11.90	0.17	12.07	0.21	12.28	0.21	12.49	0.21	12.70
	JUN	11.98	0.15	12.13	0.18	12.31	0.18	12.48	0.18	12.66
	MAY	12.96	0.16	13.12	0.17	13.29	0.17	13.45	0.17	13.62
	APR	13.46	0.15	13.61	0.17	13.78	0.17	13.94	0.17	14.11
	MAR	13.75	0.12	13.87	0.11	13.98	0.11	14.08	0.11	14.19
	FEB	13.01	0.07	13.08	0.12	13.20	0.12	13.32	0.12	13.44
1985	JAN	12.89	0.10	12.99	0.12	13.11	0.12	13.24	0.12	13.36
	DEC	12.99	0.12	13.11	0.12	13.23	0.12	13.34	0.12	13.46
	NOV	13.15	0.08	13.23	0.16	13.39	0.16	13.56	0.16	13.72
	OCT	13.66	0.14	13.80	0.12	13.92	0.12	14.05	0.12	14.17
	SEP	13.92	0.25	14.17	0.11	14.28	0.11	14.40	0.11	14.51
	AUG	14.18	0.25	14.43	0.12	14.55	0.12	14.67	0.12	14.79

3/94 Equity Ratios of Water Index Companies

	Book Value Per Share	Common Shares Outstanding	Common Equity	Total Debt	Preferred Equity	Equity Ratio
American Water Works	\$21.04	31.62	\$665.2	\$1,382.10	\$102.9	30.94%
Aquarion Company	\$17.08	6.51	\$111.2	\$122.80	\$0.0	47.53%
California Water Services Co.	\$21.52	5.70	\$122.6	\$143.10	\$3.5	45.54%
Consumers Water Company	\$11.95	8.12	\$97.1	\$148.40	\$1.1	39.36%
Philadelphia Suburban Corp.	\$12.04	11.37	\$137.0	\$155.10	\$10.0	45.34%
United Water Resources	\$6.84	30.13	\$206.1	\$310.70	\$32.8	37.50%
Average						41.04%

Source: Value Line Investment Survey  
 Edition 9 August 12, 1994  
 C. A. Turner Utility Reports August 1994

3/94 Equity Ratios of Natural Gas Index Companies

	Book Value Per Share	Common Shares Outstanding	Common Equity	Total Debt	Preferred Equity	Equity Ratio
Atlanta Gas & Light	\$20.37	25.12	\$511.8	\$569.50	\$58.7	44.89%
Bay State Gas	\$16.15	13.09	\$211.5	\$227.30	\$5.4	47.61%
Brooklyn Union Gas	\$16.16	47.14	\$761.8	\$702.80	\$7.2	51.76%
Indiana Energy	\$11.93	22.56	\$269.1	\$178.70	\$0.0	60.09%
Laclede Gas	\$12.64	15.63	\$197.6	\$200.20	\$2.0	49.42%
Northwest Natural Gas	\$19.62	13.24	\$259.8	\$307.90	\$43.6	42.50%
Peoples Energy	\$18.72	34.85	\$652.4	\$631.00	\$0.0	50.83%
Washington Gas & Light	\$23.06	20.94	\$482.8	\$365.90	\$28.5	55.04%
<b>Average</b>						50.27%

Source: Value Line Investment Survey  
 Edition 3 July 1, 1994  
 C. A. Turner Utility Reports July 1994